U.S. Army Injury Surveillance 2016 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. 12-110-0520: Annual Injury Surveillance Report 2016 Summary. July 2019. <insert DTIC link post-PAC>

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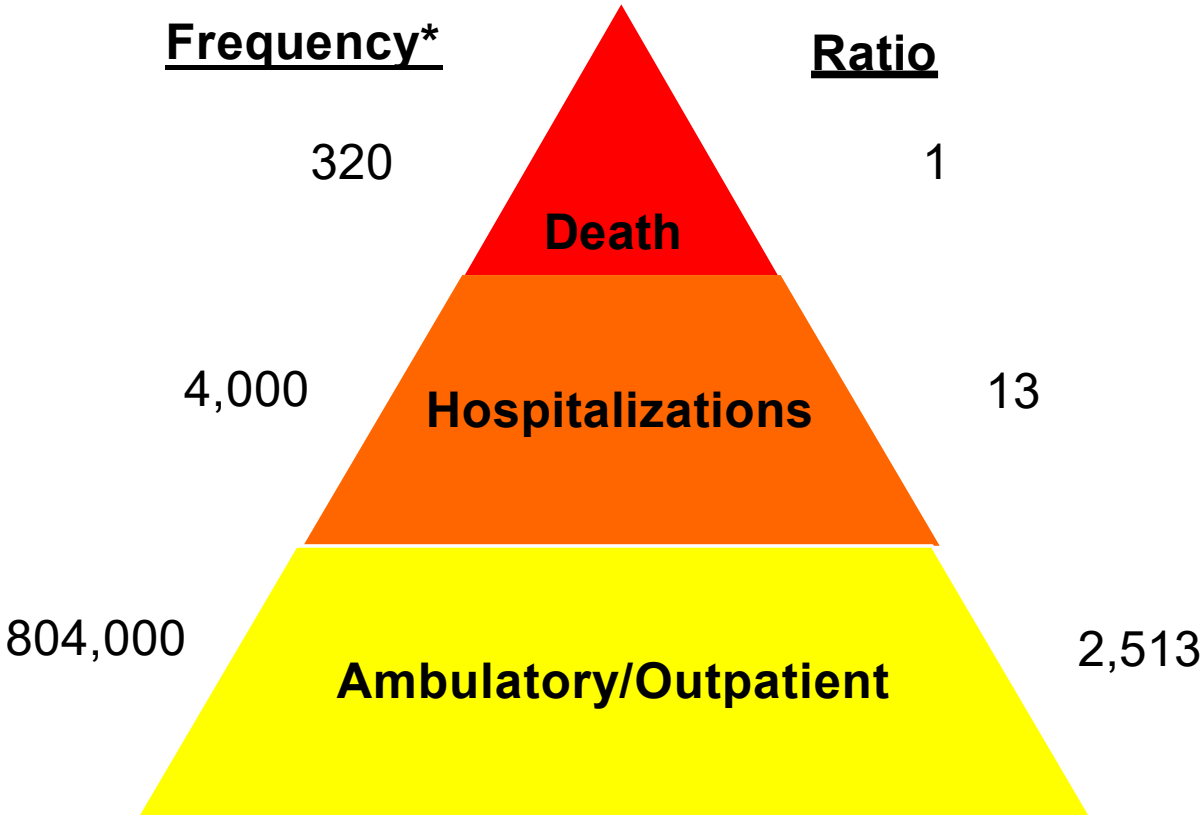
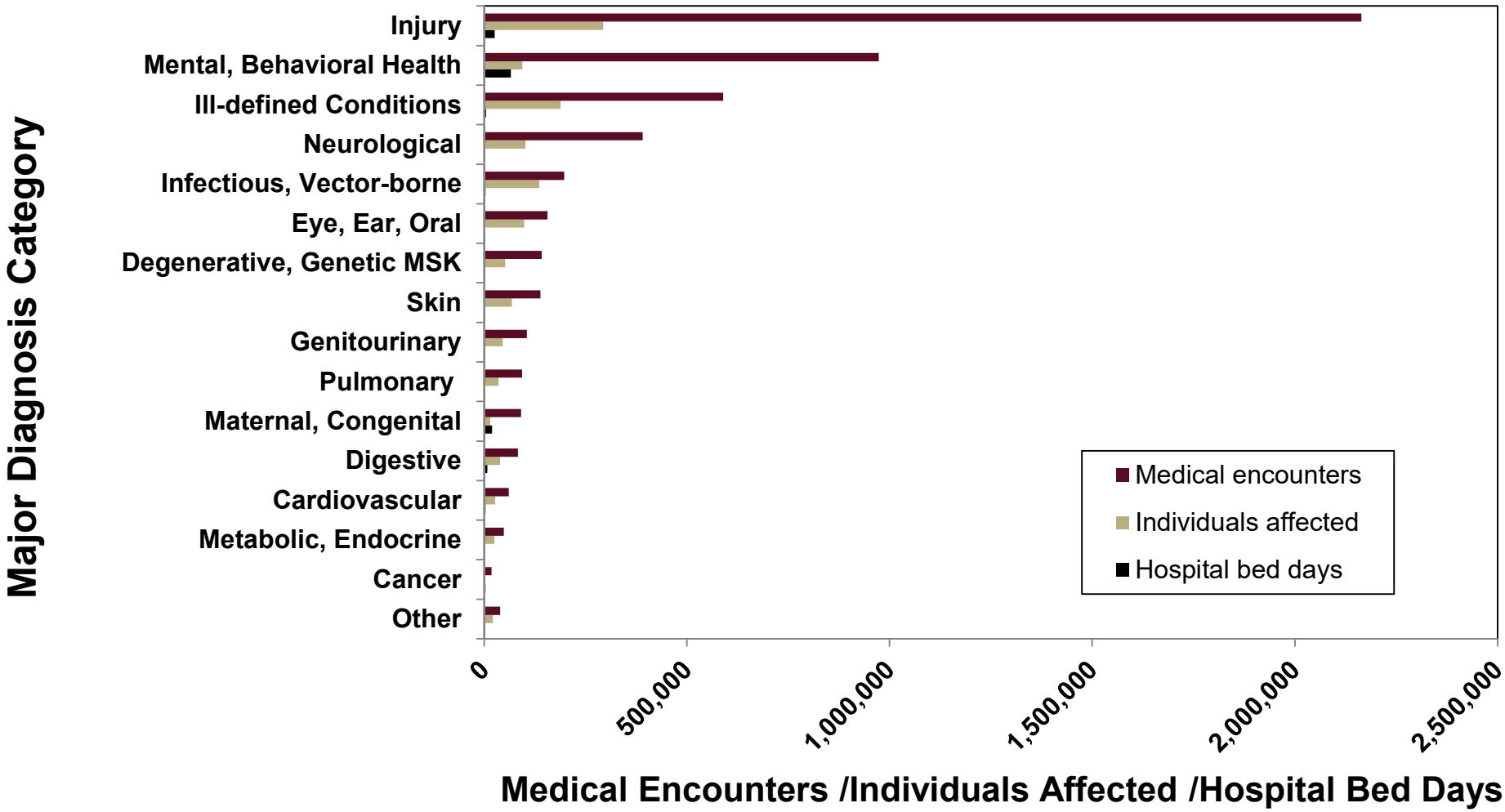
Injury Pyramid
U.S. Army Active Duty 2016



*Frequencies are rounded
Data sources: Defense Medical Surveillance System (DMSS) and Armed Forces Medical Examiner System (AFMES); injuries defined using the APHC Taxonomy of Injuries
Prepared by Defense Health Agency Army Satellite, U.S. Army Public Health Center, Injury Prevention Program

Relative Burden of Injuries and Diseases
U.S. Army Active Duty, 2016



Diagnosis group "Other" includes adverse effects of drugs, blood disorders, and other neoplasms (not cancer)
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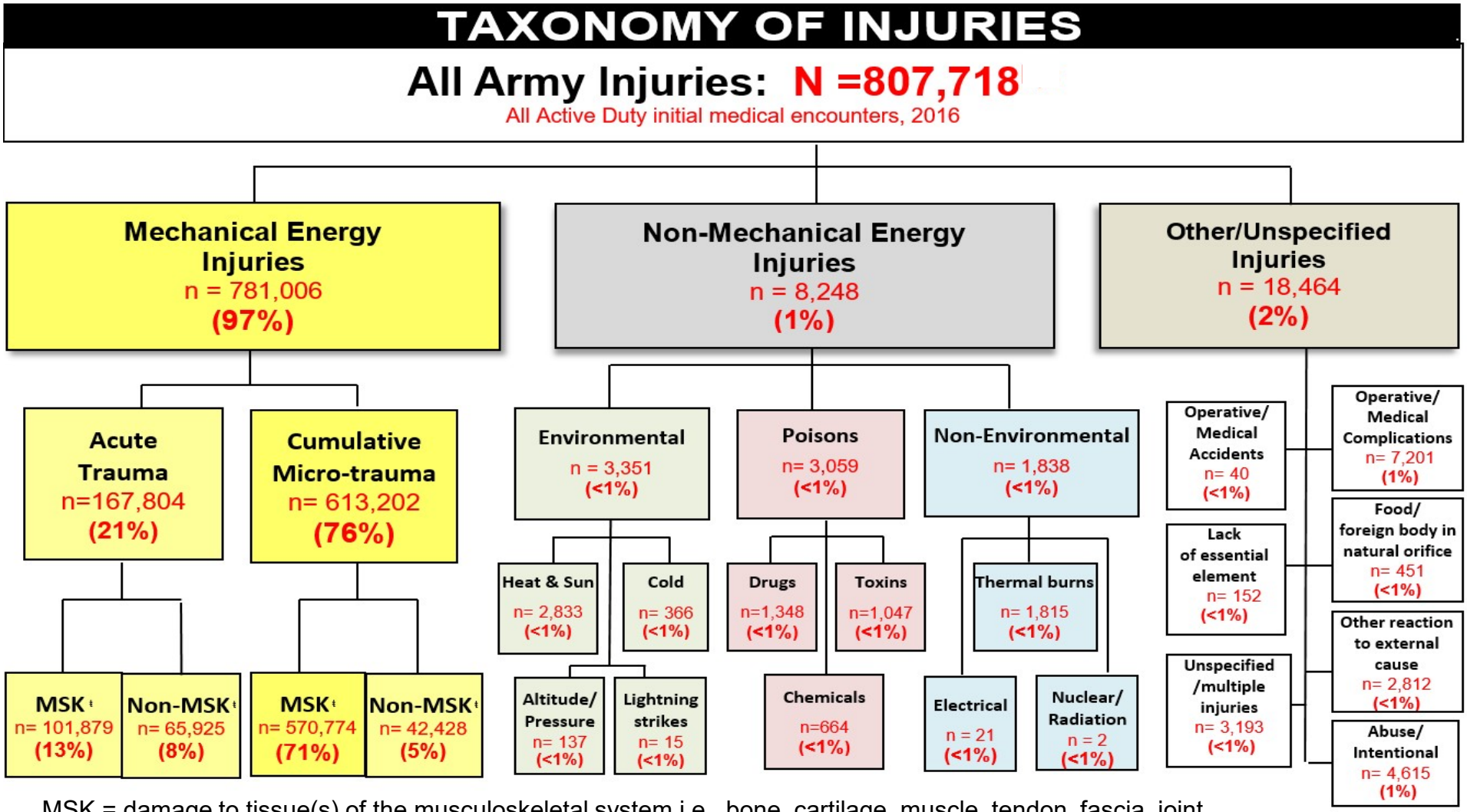
Taxonomy of Injuries
U.S. Army Active Duty, 2016



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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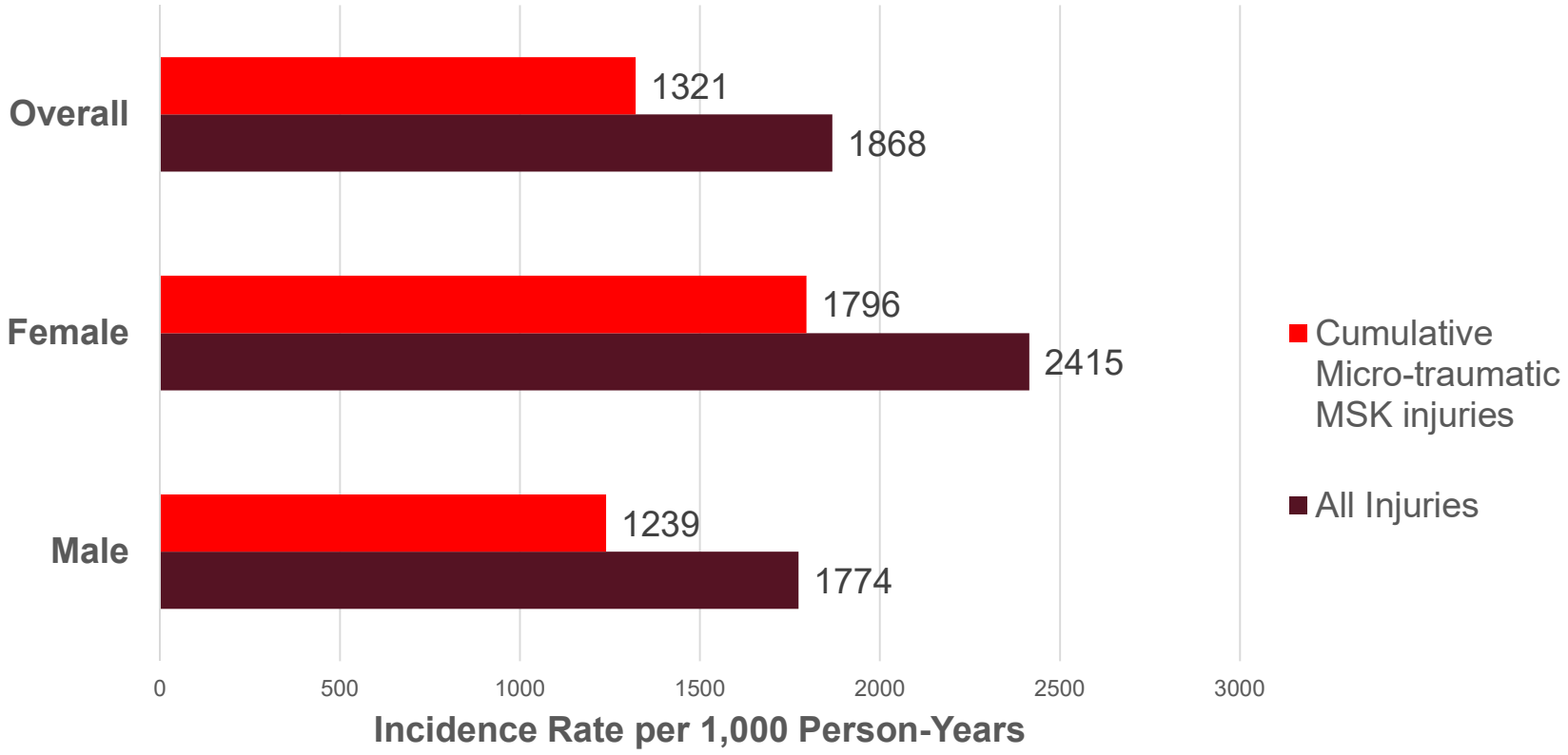
Injury Visit Rates by Sex



Data source: Defense Medical Surveillance System (DMSS); injuries defined using the APHC Taxonomy of Injuries
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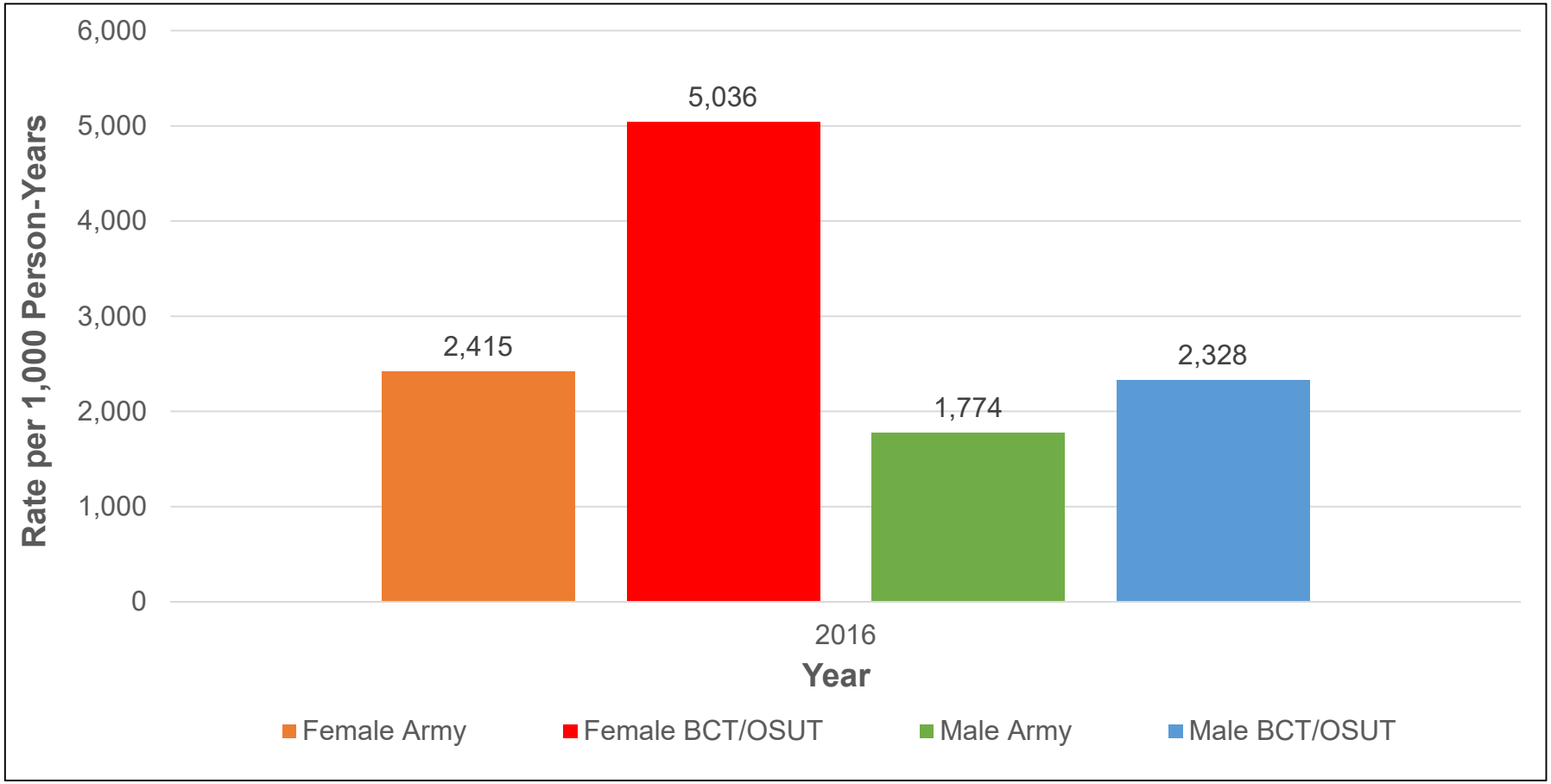
Overall Incident Injury Visit Rates
U.S. Army Active Duty vs. Trainee, 2016



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, 2016

Body Region	Acute Traumatic (Trauma)	Cumulative Micro-traumatic (Overuse)	All
Lower Extremity	69,740 (41.6%)	288,891 (47.4%)	361,273 (46.3%)
Spine & Back	9,068 (5.4%)	176,350 (28.9%)	185,418 (23.7%)
Upper Extremity	53,830 (32.1%)	115,201 (18.9%)	169,724 (21.7%)
Head, Face & Neck	25,367 (15.1%)	16,324 (2.7%)	41,691 (5.3%)
Torso	9,298 (5.5%)	823 (0.1%)	10,121 (1.3%)
Other	501 (0.3%)	12,244 (2.0%)	12,779 (1.6%)
Total	**167,804 (100%)**	**609,833 (100%)**	**781,006 (100%)**

Injuries defined using the APHC Injury Taxonomy
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 Visits
U.S. Army Active Duty, 2016

Diagnosis	Head, Face & Neck		Spine & Back		Torso		Upper Extremity		Lower Extremity		Other		Total	% Total
	Acute (ACT)	Cumulative (CMT)	ACT	CMT	ACT	CMT	ACT	CMT	ACT	CMT	ACT	CMT		
MSK Tissue Damage	36	0	55	159,080	52	3	3,736	106,303	5,580	282,817	165	12,138	**569,965**	**73.0%**
Sprain/Joint Damage	8	0	2,775	0	911	0	8,384	693	29,235	2,642	53	34	**44,735**	**5.7%**
Tissue Damage, Other	6,350	16,274	1,619	0	1,627	0	4,006	0	3157	0	230	3	**33,266**	**4.3%**
Strain/Tear	2,619	0	3,477	0	2,125	0	6,285	4,348	11,916	13	53	7	**30,843**	**3.9%**
Nerve	32	0	26	17,253	4	447	3,989	4,407	1,111	1,078	0	0	**28,347**	**3.6%**
Contusion/Superficial	5,823	50	0	0	2,553	21	6,453	123	7,371	2,772	0	0	**25,166**	**3.2%**
Fracture	1,023	0	969	17	830	352	9,421	20	7,630	2,211	0	96	**22,569**	**2.9%**
Open Wound	4,348	0	0	0	426	0	8,060	0	2,654	0	0	0	**15,488**	**2.0%**
Internal Organ & Blood Vessel	5,109	0	107	0	709	0	120	0	20	0	0	0	**6,065**	**0.8%**
Dislocation	5	0	40	0	45	0	2,661	0	827	0	0	0	**3,578**	**0.5%**
Crush	8	0	0	0	14	0	524	0	204	0	0	0	**750**	**0.1%**
Amputation	6	0	0	0	2	0	191	0	35	0	0	0	**234**	**<0.1%**
Total	**25,367**	**16,324**	**9,068**	**176,350**	**9,298**	**823**	**53,830**	**115,894**	**69,740**	**291,533**	**501**	**12,278**	**781,006**	
% Total	**3.2%**	**2.1%**	**1.2%**	**22.6%**	**1.2%**	**0.1%**	**6.9%**	**14.8%**	**8.9%**	**37.3%**	**0.1%**	**1.6%**		**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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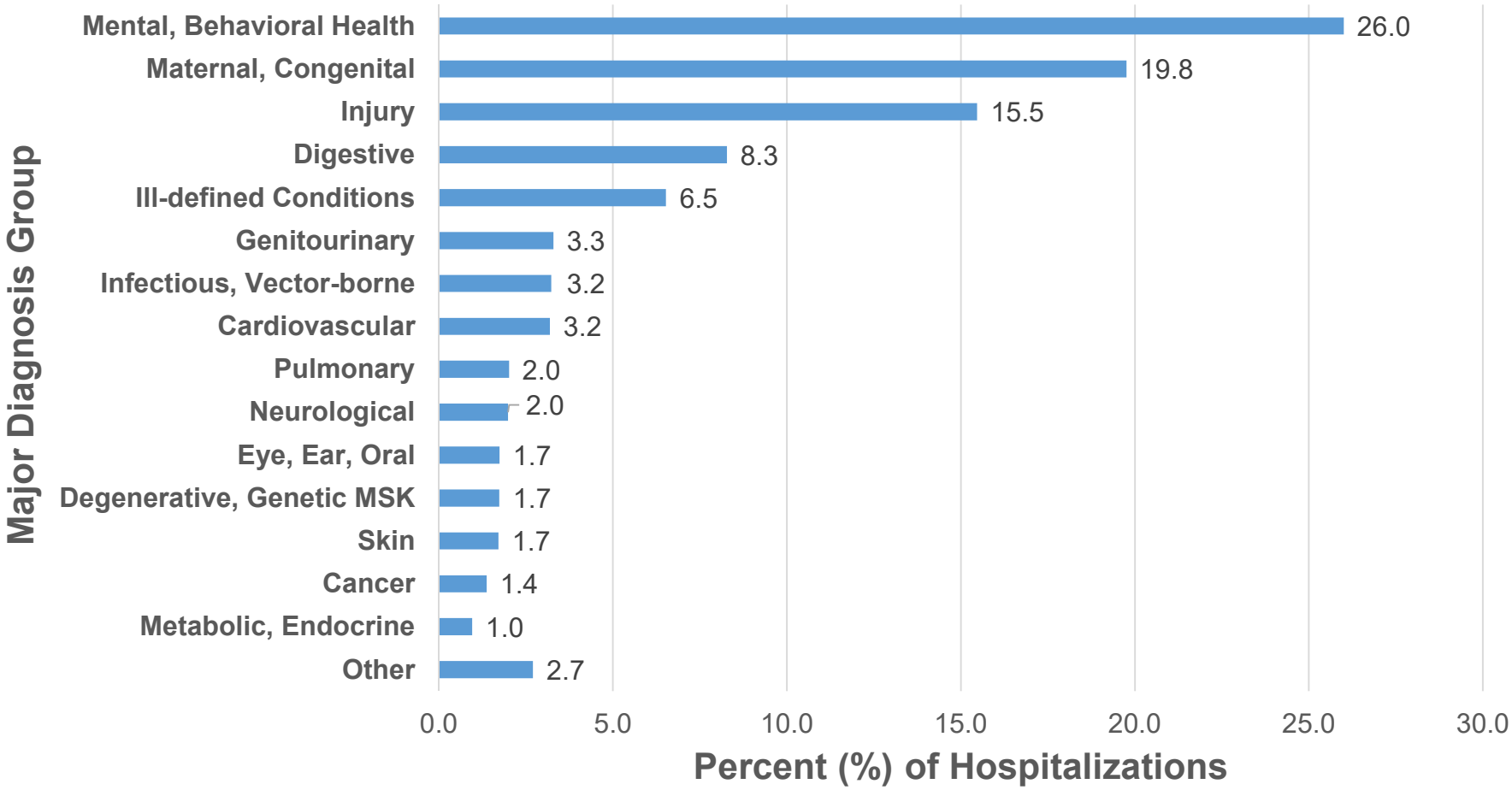
Major Diagnosis Groups Resulting in Hospitalizations
U.S. Army Active Duty, 2016



Total number of hospitalizations = 29,561
Diagnosis group "Other" includes adverse effects of drugs, blood disorders, and other neoplasms (not cancer)
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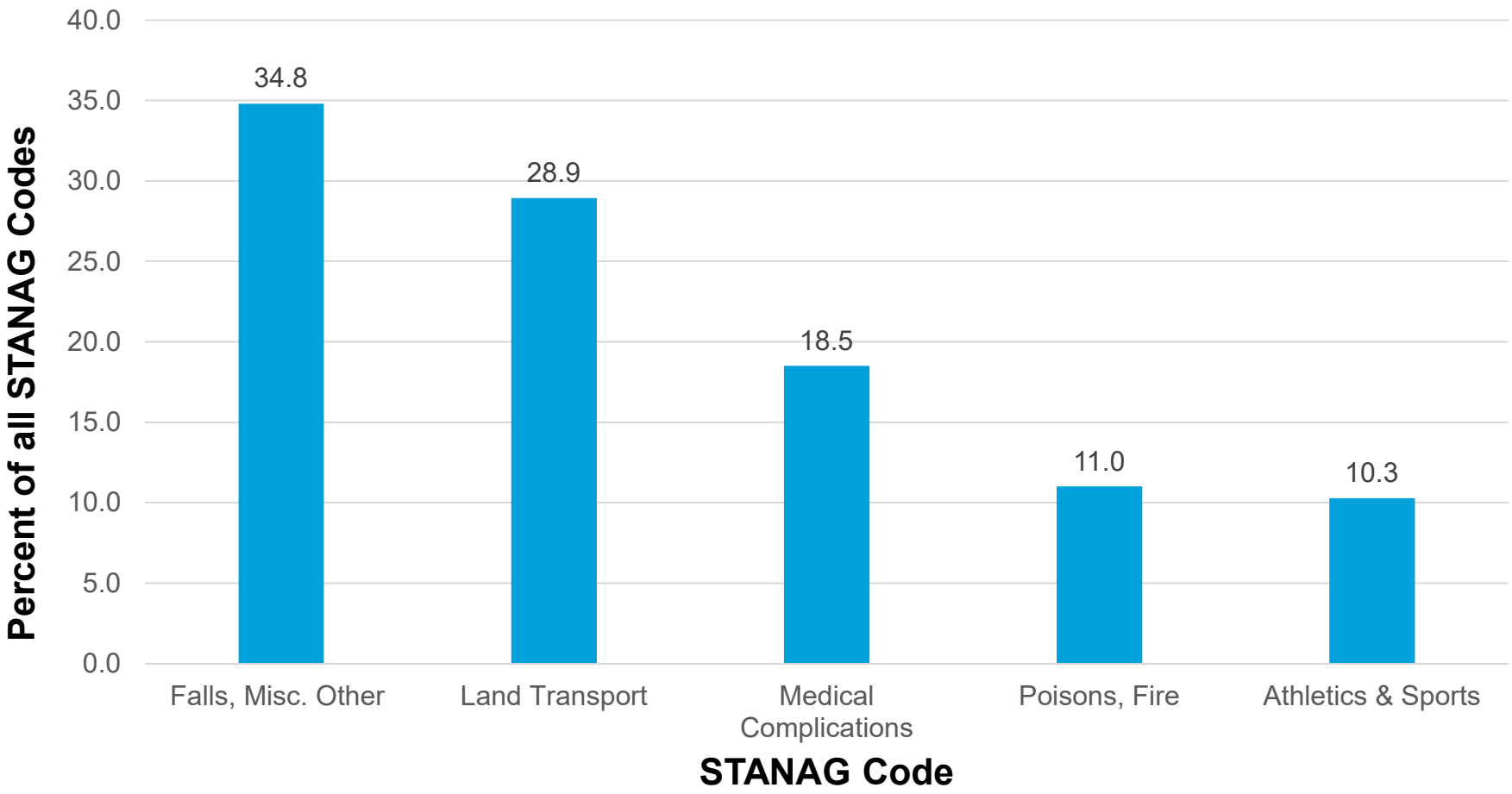
Leading Standardized Agreement (STANAG) Cause Codes for Injury Hospitalizations
U.S. Army Active Duty, 2016



Total number of STANAG-coded injury hospitalizations = 681; 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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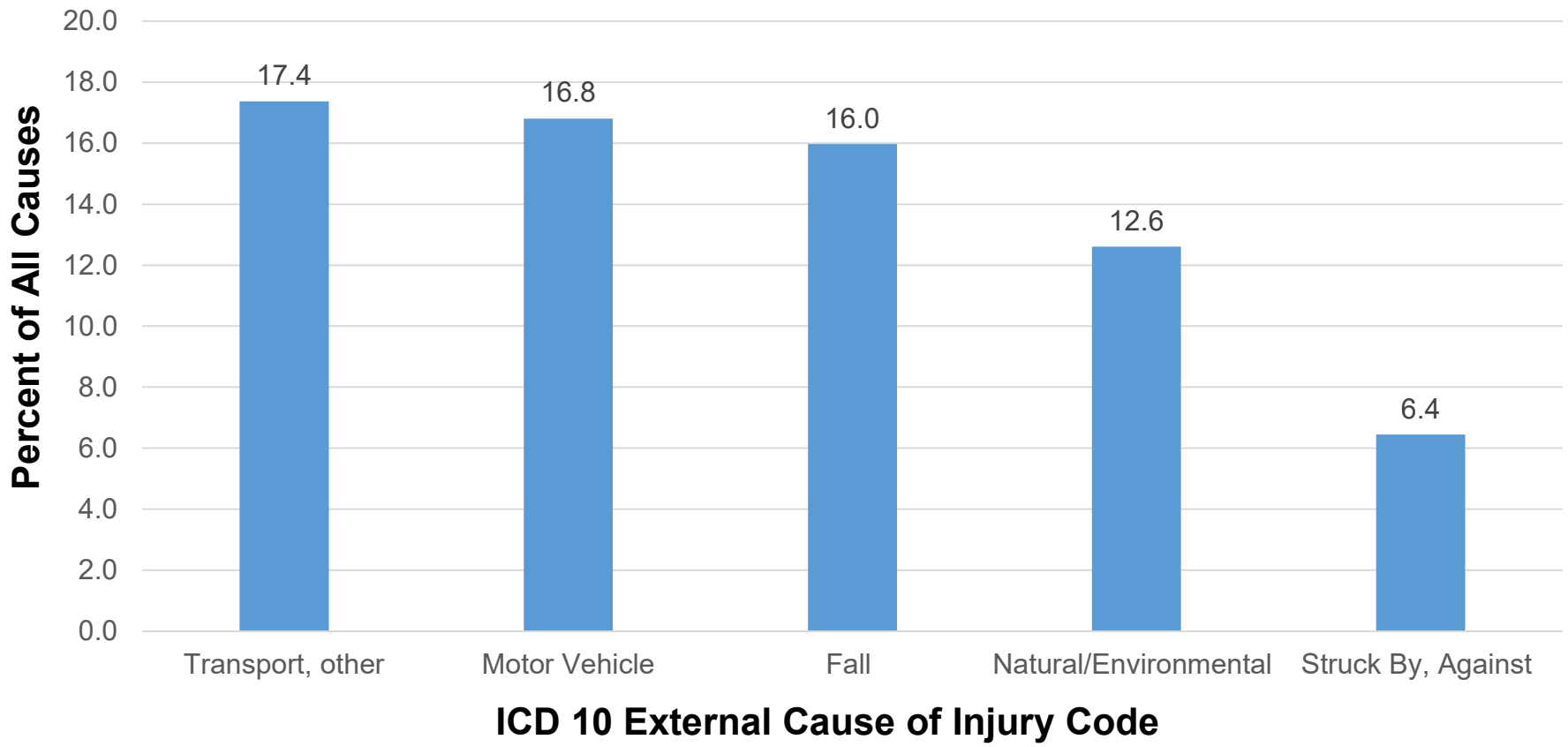
Leading External Causes of Unintentional Injury Hospitalizations
U.S. Army Active Duty, 2016



Total number of cause-coded unintentional injury hospitalizations = 357; 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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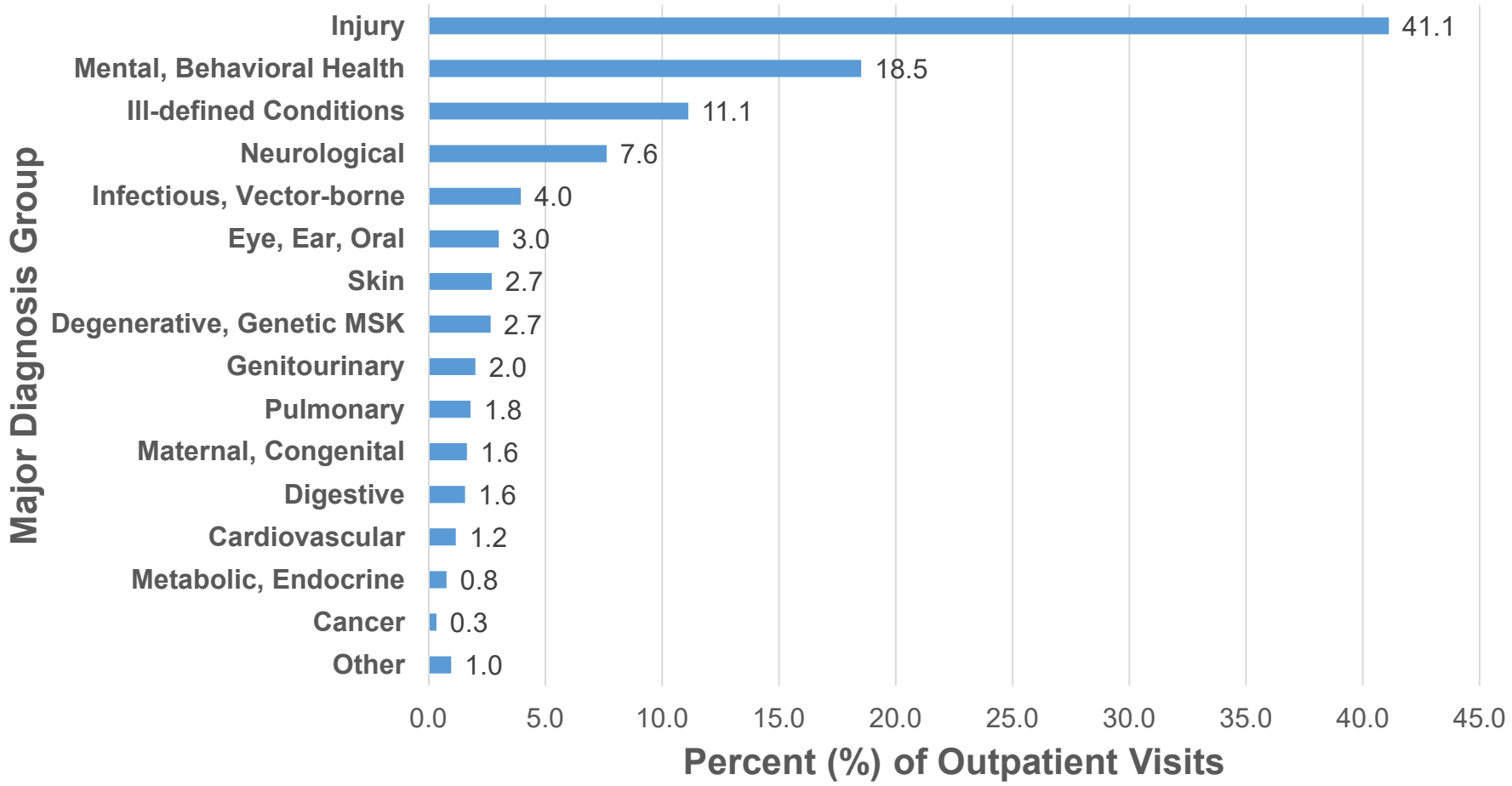
Major Diagnosis Groups Resulting in Outpatient Visits
U.S. Army Active Duty, 2016



Total number of outpatient visits = 5,631,500
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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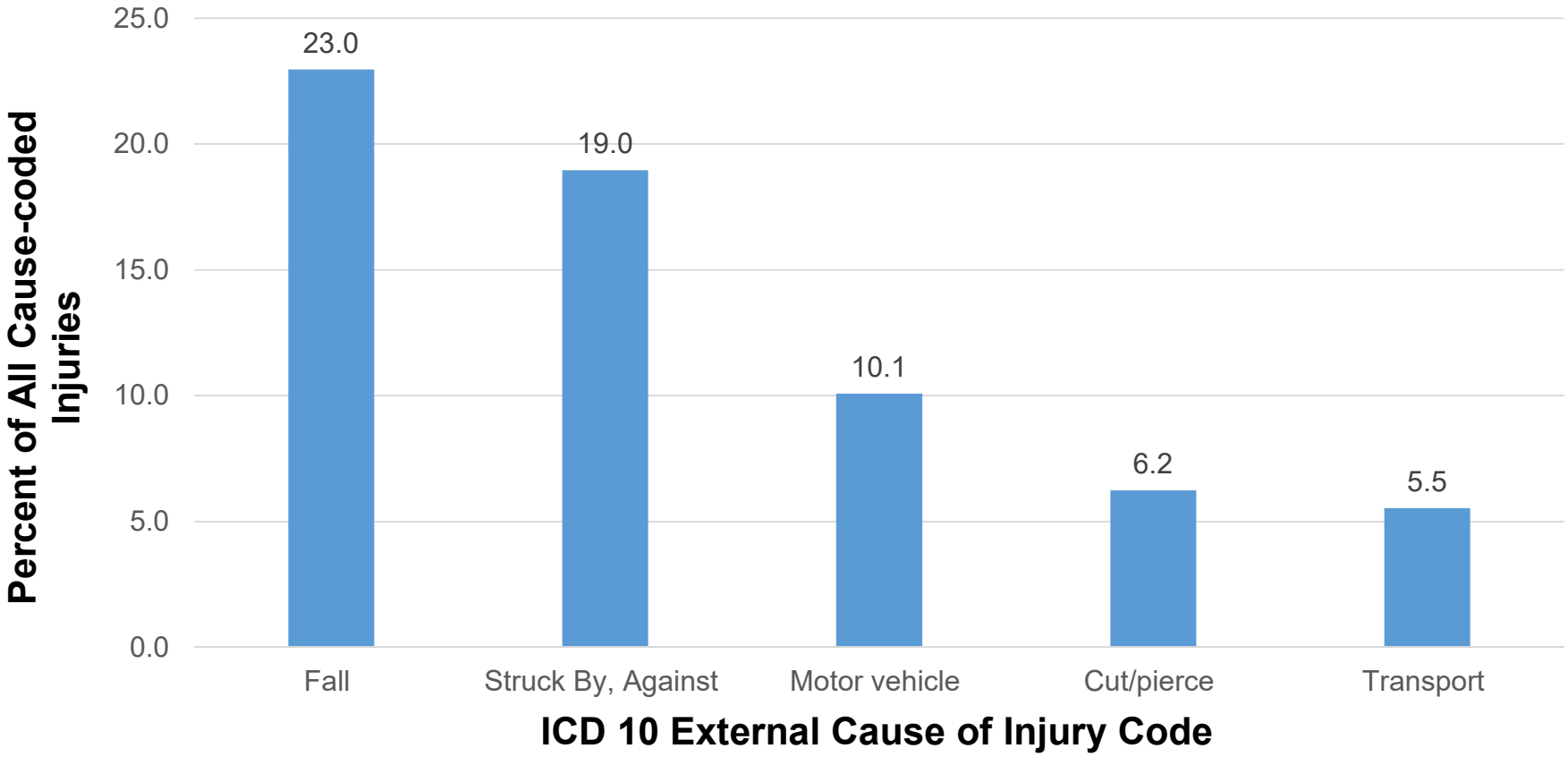
Leading External Causes of Injury Outpatient Visits
U.S. Army Active Duty, 2016



Total number of cause-coded unintentional outpatient visits = 56,385; may not be representative of the distribution of causes for all injuries
Top five causes shown; "Overexertion" code was not available until October 2016.
Data source: Defense Medical Surveillance System (DMSS); injuries defined using the APHC Injury Taxonomy
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