

U.S. Army Injury Surveillance 2018 Summary



Clinical Public Health and Epidemiology
Injury Prevention

Website: <https://phc.amedd.army.mil/topics/discond/ptsaip/Pages/default.aspx>

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Background

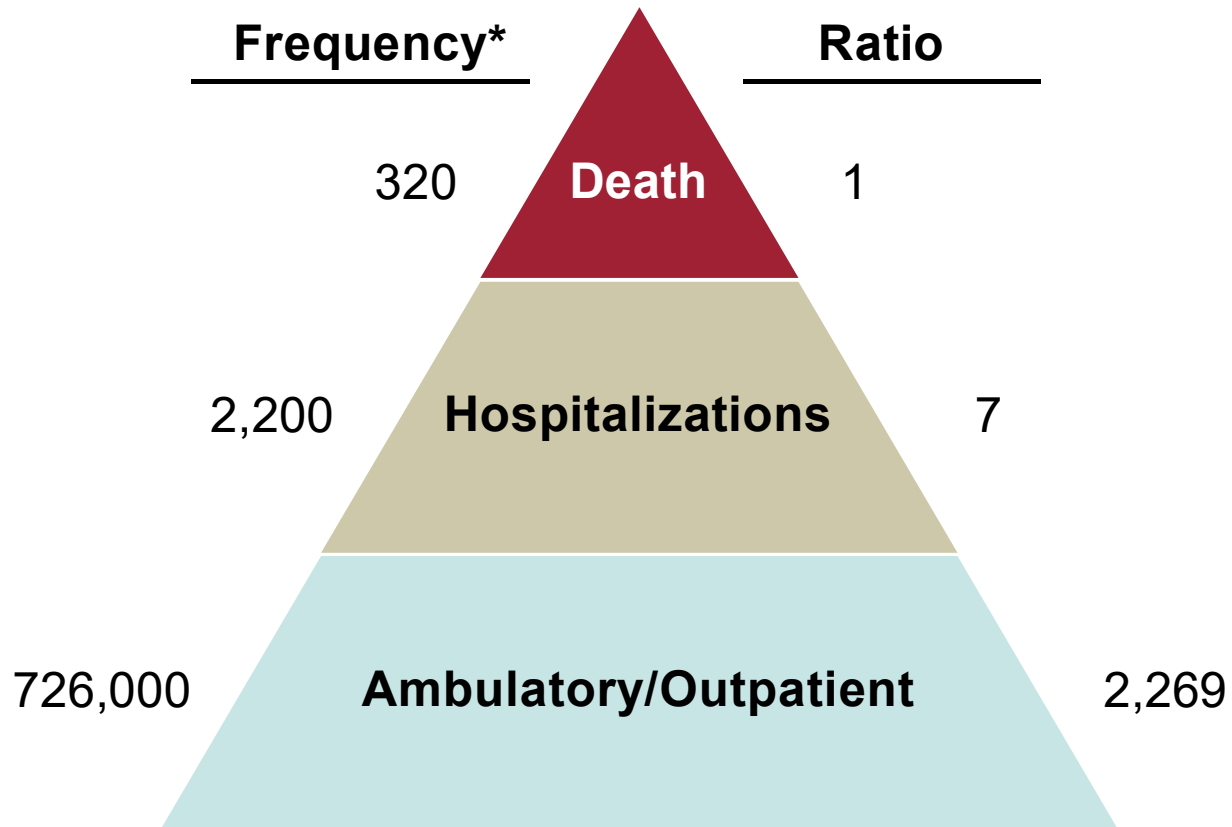


- This document provides a summary of injury medical encounter surveillance data for Active Duty Soldiers from Calendar Year (CY) 2018
- Injuries are defined using the U.S. Army Public Health Center (APHC) Taxonomy of Injuries¹
- This summary highlights Army Active Duty injury rates and distribution of injuries resulting from the applied Taxonomy of Injuries
- For additional details about data contained in these slides, please see the associated Technical Information Paper²

¹APHC Public Health Information Paper (PHIP) No. 12-01-0717: A Taxonomy of Injuries for Public Health Monitoring & Reporting. December 2017. <https://apps.dtic.mil/sti/citations/AD1039481>

²APHC Technical Information Paper (TIP) No. 12-113-0820: Annual Injury Surveillance Report 2018 Summary. DTIC Accession number AD1136406. January 2021. <https://apps.dtic.mil/sti/citations/AD1136406>

Injury Pyramid U.S. Army Active Duty, 2018

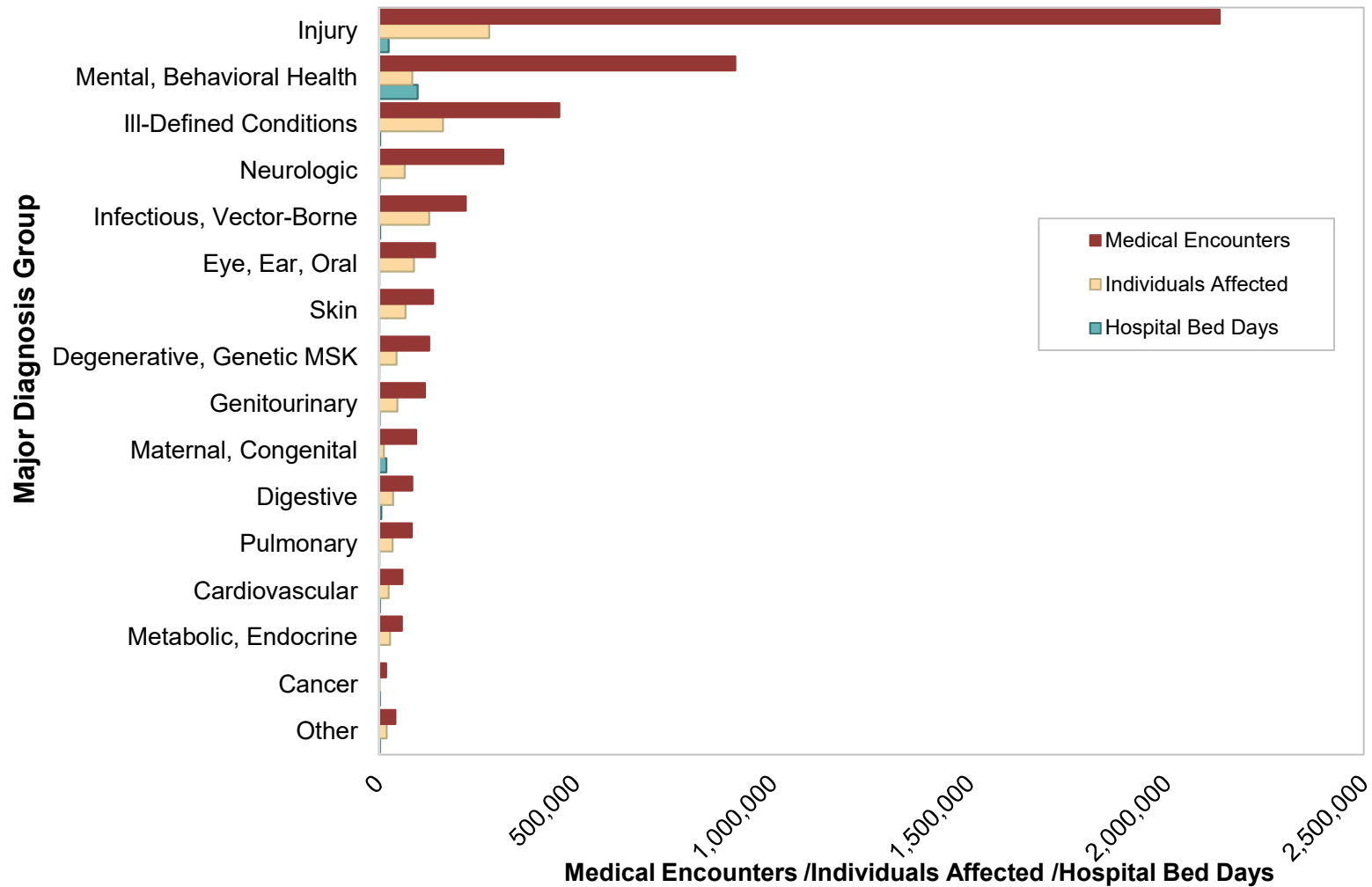


*Frequencies are rounded and represent incident injury visits

Data source: Military Health System Data Repository (MDR) 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, 2018

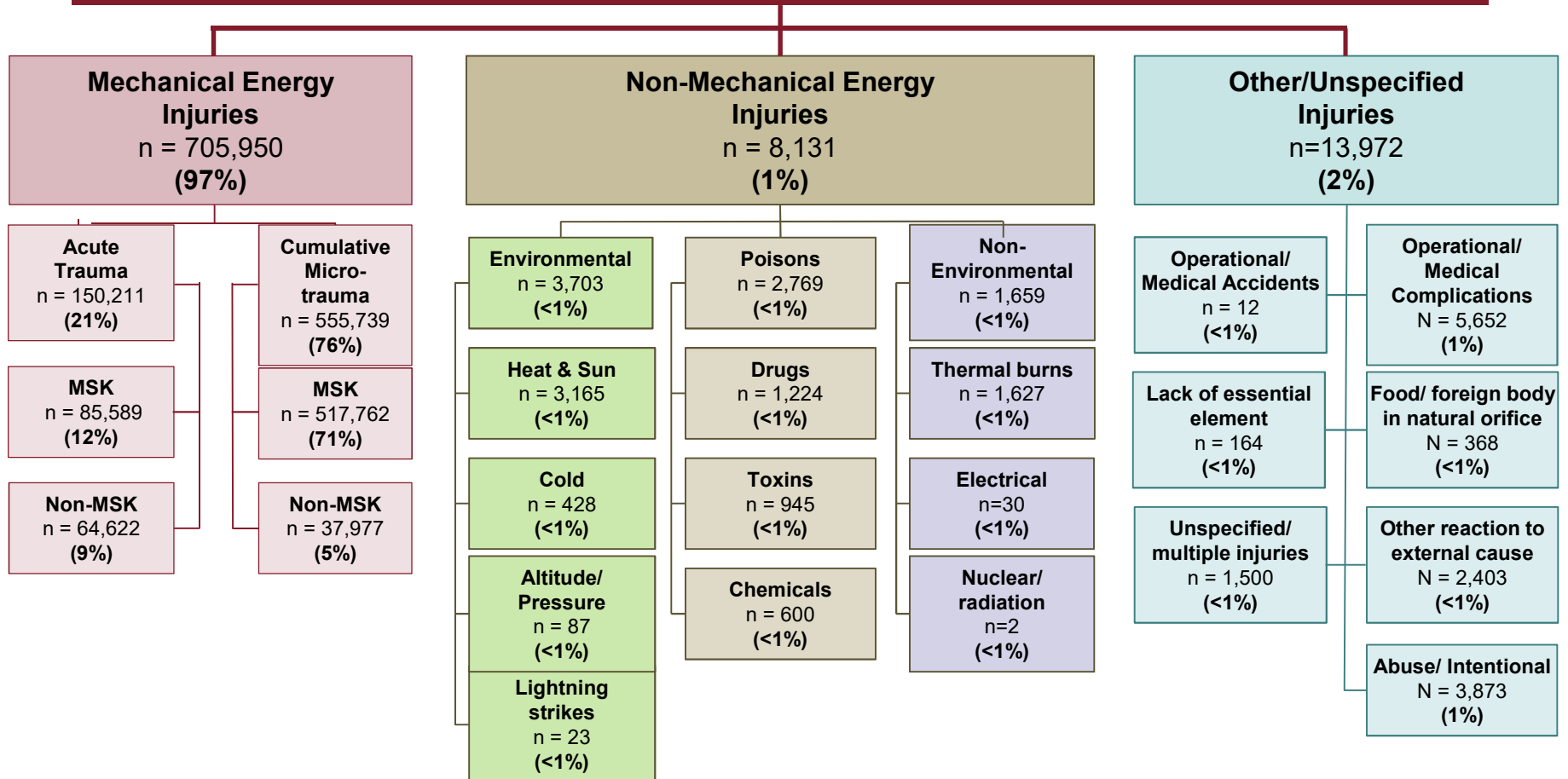


Diagnosis group "Other" includes adverse effects of drugs, blood disorders, and other neoplasms (not cancer)
 Data source: Military Health System Data Repository (MDR); injuries defined using the APHC Taxonomy of Injuries
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Taxonomy Distribution of Injuries

U.S. Army Active Duty, 2018

All Active Duty Army Injuries, Initial Medical Encounters: N = 728,053



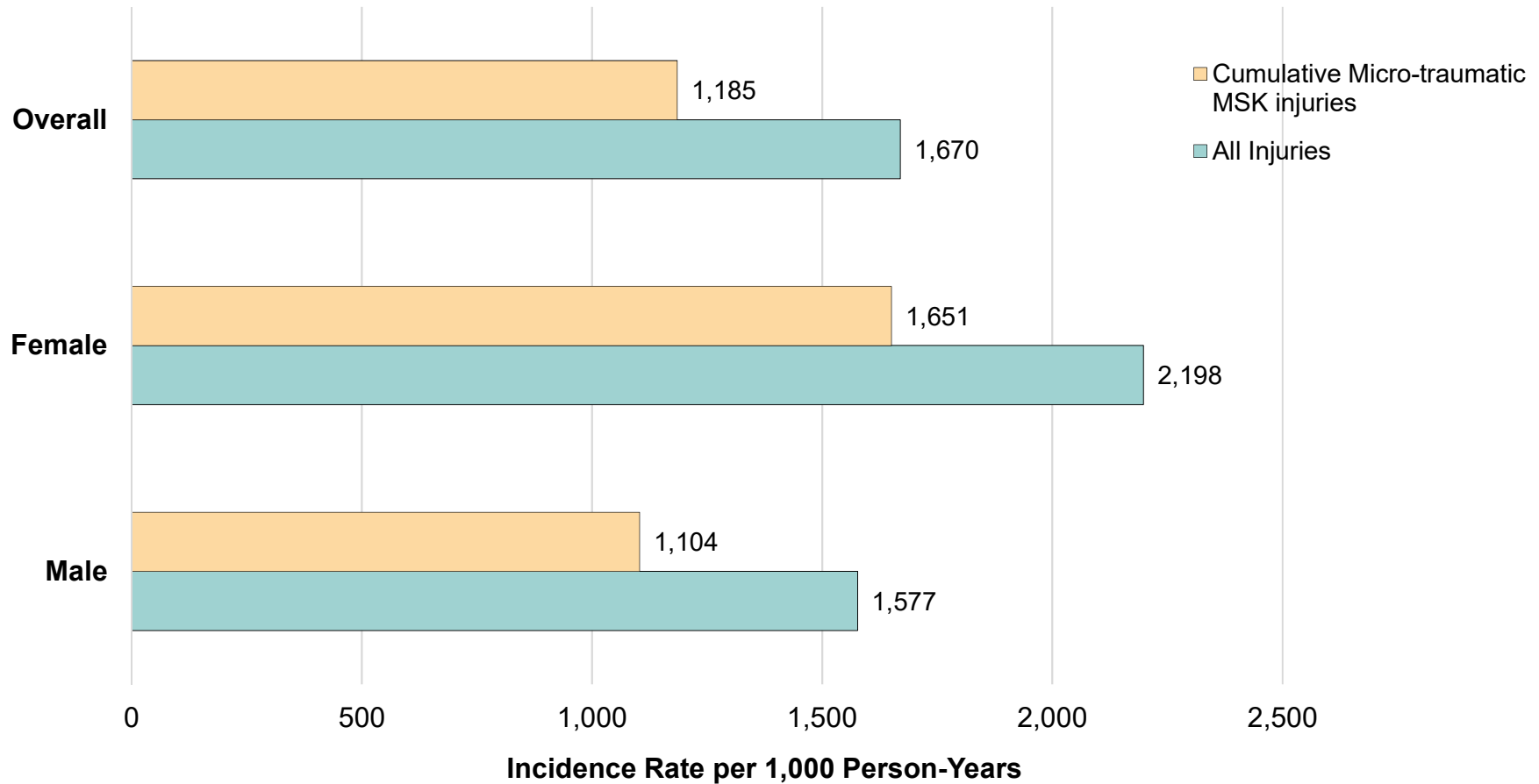
MSK = damage to tissue(s) of the musculoskeletal system i.e., bone, cartilage, muscle, tendon, fascia, joint, ligament, bursa, synovium

Data source: Military Health System Data Repository (MDR); injuries defined using the APHC Taxonomy of Injuries

Prepared by Army Public Health Center, Injury Prevention



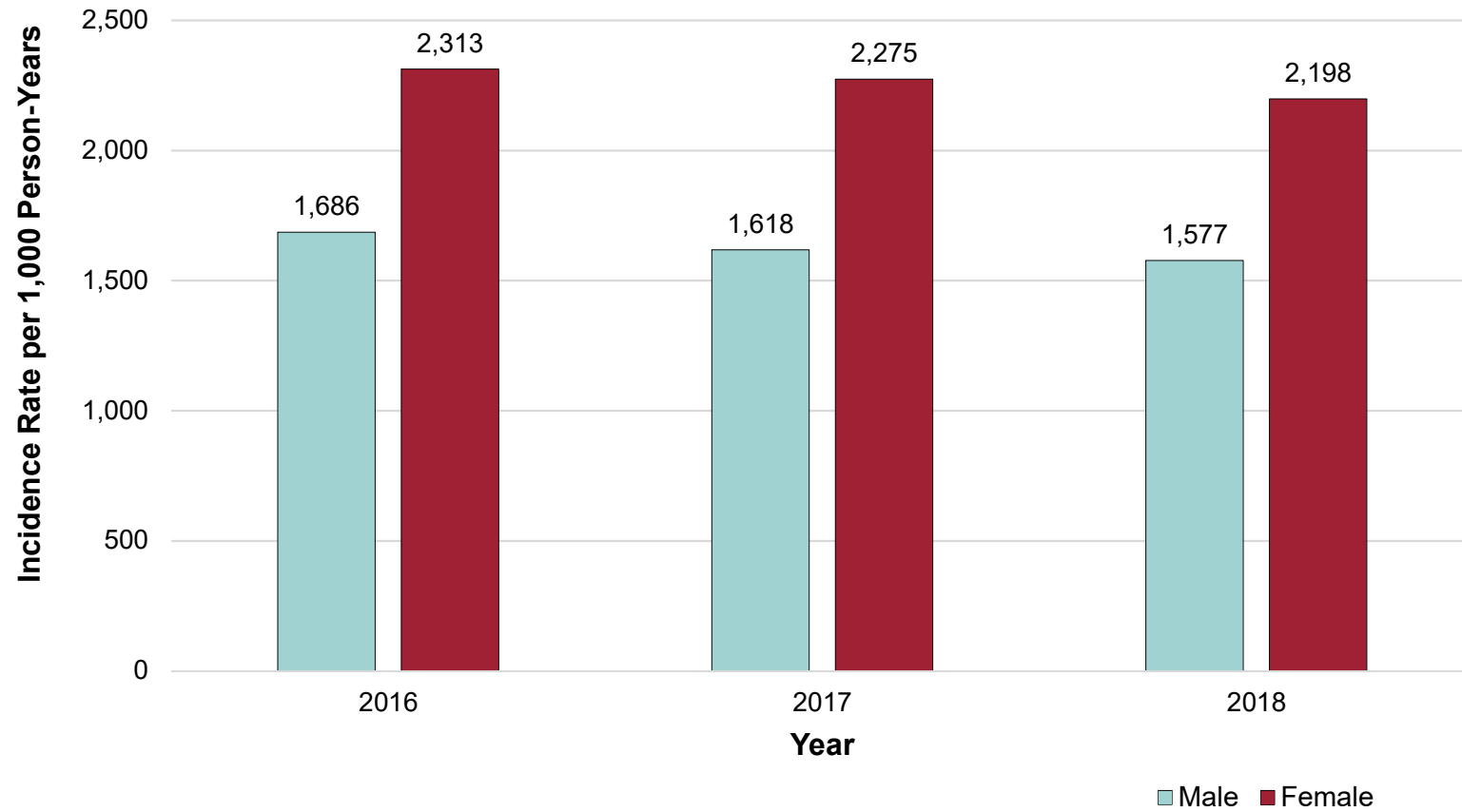
All Injury and Cumulative Micro-traumatic Musculoskeletal (MSK) Incident Injury Visit Rates by Sex U.S. Army Active Duty, 2018



Rates for all injuries and cumulative micro-traumatic MSK injuries were both significantly higher among women ($p < 0.001$).
Data source: Military Health System Data Repository (MDR); injuries defined using the APHC Taxonomy of Injuries
Prepared by Army Public Health Center, Injury Prevention



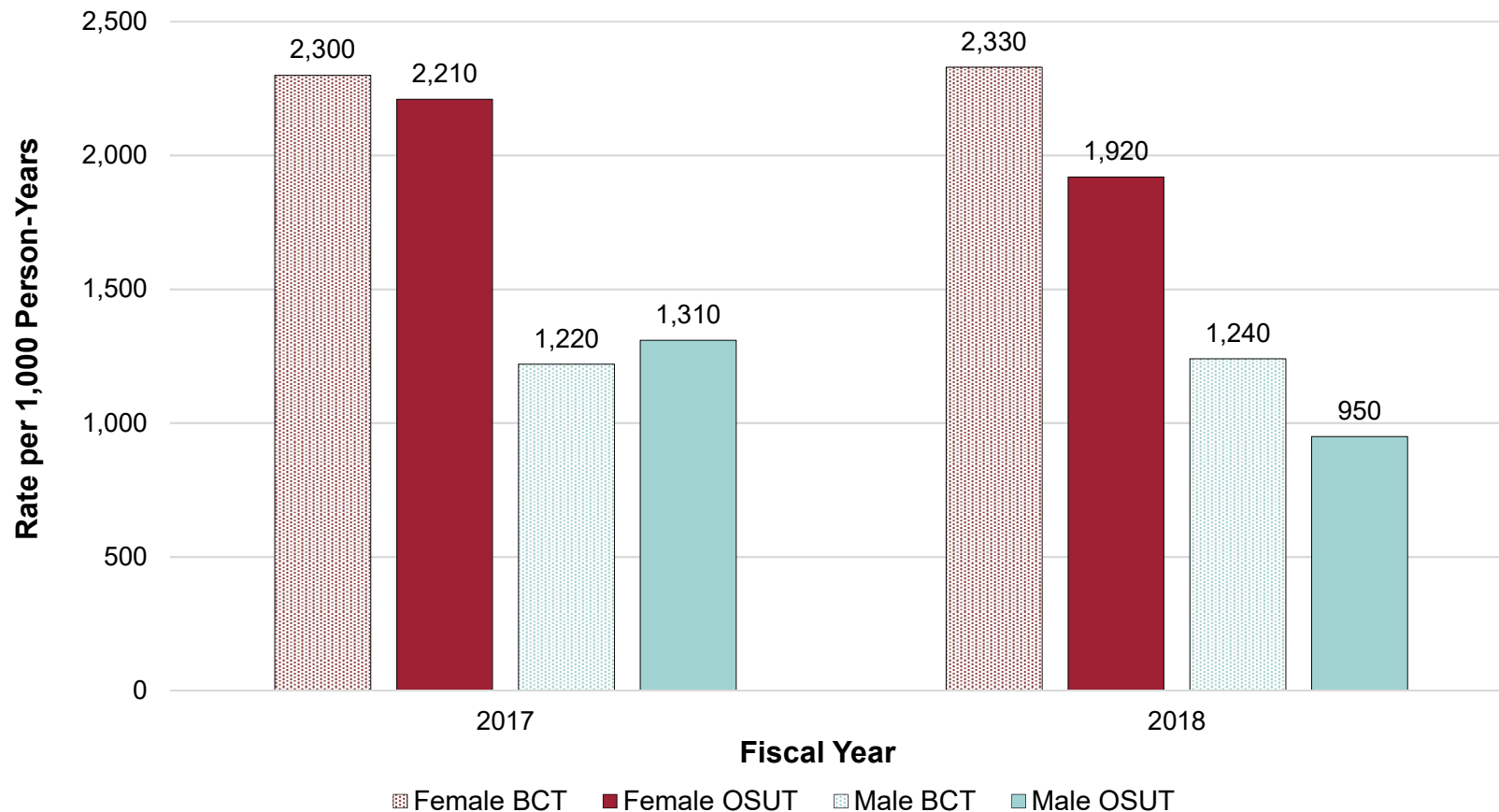
Overall Incident Injury Visit Rates U.S. Army Active Duty, 2016-2018



The rates of incident injuries among female Army Soldiers were consistently and significantly higher than male Soldiers from 2016 to 2018 ($p < 0.001$). No significant changes in rates were observed for either gender 2016-2018 ($p > 0.05$). Active Duty injury adjusted to remove deployed injury and deployed person-time
Data source: Military Health System Data Repository (MDR); injuries defined using the APHC Taxonomy of Injuries
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Overall Incident Injury Visit Rates U.S. Army Trainee, FY2017-FY2018



Incident injury rates among female trainees in Basic Combat Training (BCT) and One Station Unit Training (OSUT) were significantly higher than male trainees in both 2017 and 2018 ($p < 0.001$); in 2018, injury rates during BCT were significantly higher than rates during OSUT for both males and females ($p < 0.001$).

US Army Public Health Center. 2020. Public Health Report No. S.0047783-19 Injury Surveillance and Longitudinal Studies for Gender Integration in the Army: Fourth Annual Assessment, 2019.

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

Prepared by Army Public Health Center, Injury Prevention



Incident Mechanical Injuries by Body Region and Acute/Overuse U.S. Army Active Duty, 2018



Body Region	Acute Traumatic (Trauma)	Cumulative Micro-traumatic (Overuse)	All
Lower Extremity	60,108 (40.0)	268,383 (48.3)	328,491 (46.5)
Spine & Back	8,382 (5.6)	158,045 (28.4)	166,436 (23.6)
Upper Extremity	47,575 (31.7)	104,242 (18.8)	151,817 (21.5)
Head, Face & Neck	25,314 (16.9)	15,124 (2.7)	40,438 (5.7)
Torso	8,241 (5.5)	699 (0.1)	8,940 (1.3)
Other	591 (0.4)	9,237 (1.7)	9,828 (1.4)
Total	150,211 (100)	555,739 (100)	705,950 (100)

Injuries defined using the APHC Injury Taxonomy; Acute traumatic (Trauma) and cumulative micro-traumatic (Overuse) injuries
Data source: Military Health System Data Repository (MDR); injuries defined using the APHC Taxonomy of Injuries
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Incident Mechanical Injury Diagnoses by Body Region U.S. Army Active Duty, 2018

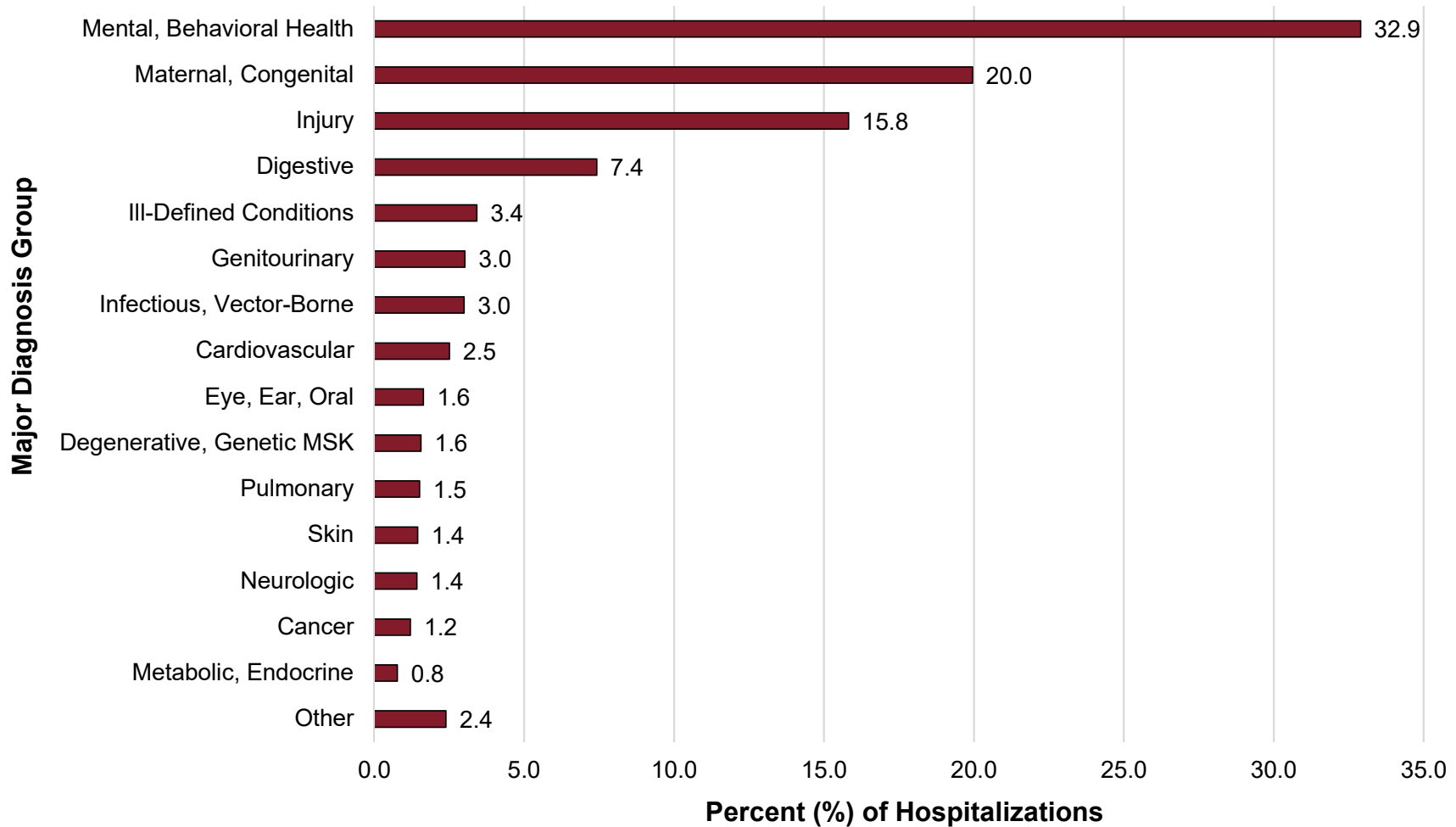


Diagnosis	Head, Face & Neck		Spine & Back		Torso		Upper Extremity		Lower Extremity		Other		Total	% Total
	Acute (ACT)	Cumulative (CMT)	ACT	CMT	ACT	CMT	ACT	CMT	ACT	CMT	ACT	CMT		
MSK Tissue Damage	47	22	68	143,700	60	3	3,279	96,285	7,625	259,359	151	9,091	519,690	73.6
Sprain/Joint Damage	10	0	1,912	0	625	0	6,249	545	23,795	2,435	60	29	35,660	5.1
Tissue Damage, Other	7,500	15,074	1,998	0	1,634	0	4,678	0	3,686	0	363	1	34,934	4.9
Contusion/Superficial	5,044	28	0	0	2,123	15	6,094	109	6,870	3,582	0	0	23,865	3.4
Nerve	50	0	26	14,337	5	380	3,530	3,675	927	776	0	0	23,706	3.4
Strain/Tear	2,314	0	3,404	0	1,954	0	4,692	3,616	7,315	5	17	11	23,328	3.3
Fracture	1,429	0	811	17	686	301	8,593	12	6,725	2,226	0	105	20,905	3.0
Open Wound	3,924	0	0	0	410	0	7,556	0	2,324	0	0	0	14,214	2.0
Internal Organ & Blood Vessel	4,954	0	116	0	702	0	81	0	17	0	0	0	5,870	0.8
Dislocation	30	0	47	0	34	0	2,108	0	616	0	0	0	2,835	0.4
Crush	7	0	0	0	8	0	565	0	173	0	0	0	753	0.1
Amputation	5	0	0	0	0	0	150	0	35	0	0	0	190	<0.1
Total	25,314	15,124	8,382	158,054	8,241	699	47,575	104,242	60,108	268,383	591	9,237	705,950	
% Total	3.6%	2.1%	1.2%	22.4%	1.2%	0.1%	6.7%	14.8%	8.5%	38.0%	0.1%	1.3%		100.0

Injuries defined using the APHC Injury Taxonomy; Acute traumatic (Trauma) and cumulative micro-traumatic (Overuse) injuries
 Data source: Military Health System Data Repository (MDR); injuries defined using the APHC Taxonomy of Injuries
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Major Diagnosis Groups Resulting in Hospitalizations U.S. Army Active Duty, 2018



Total number of hospitalizations = 26,710

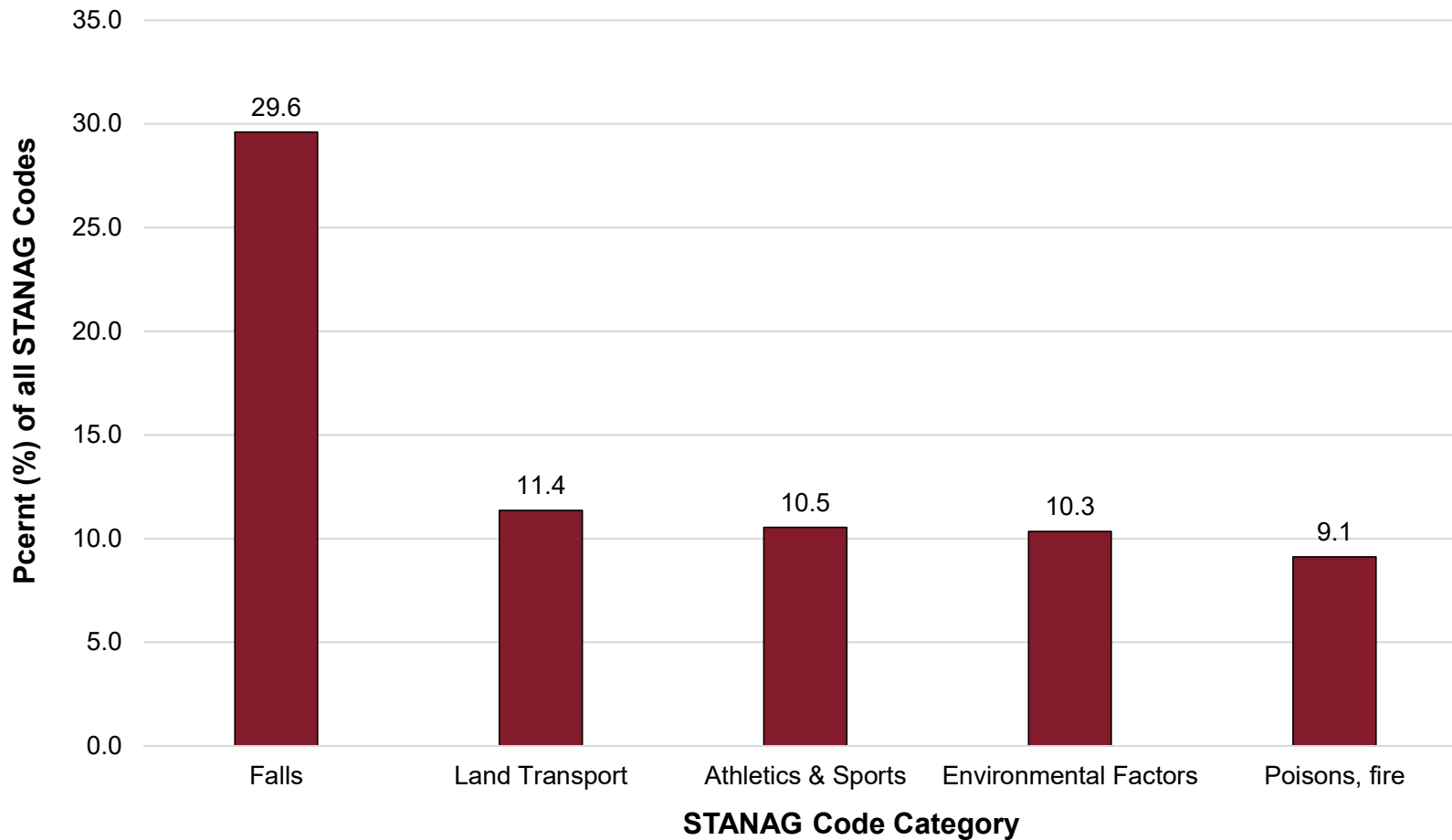
Diagnosis group "Other" includes adverse effects of drugs, blood disorders, and other neoplasms (not cancer)

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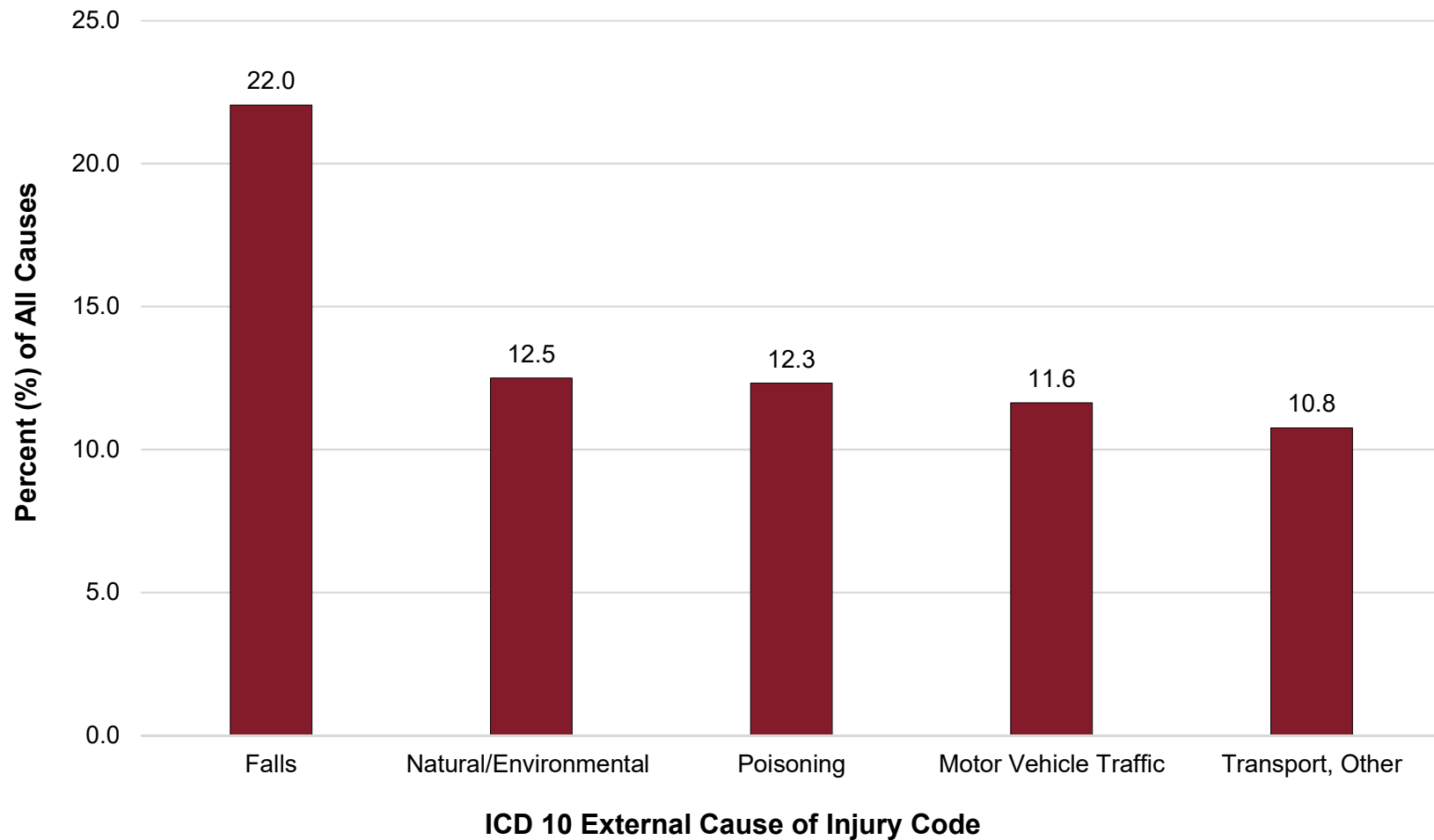
Leading Standardized Agreement (STANAG) Cause Codes for Injury Hospitalizations U.S. Army Active Duty, 2018



Total number of STANAG-coded injury hospitalizations = 493; may not be representative of the distribution of causes for all injuries
Data source: Military Health System Data Repository (MDR); injuries defined using the APHC Taxonomy of Injuries
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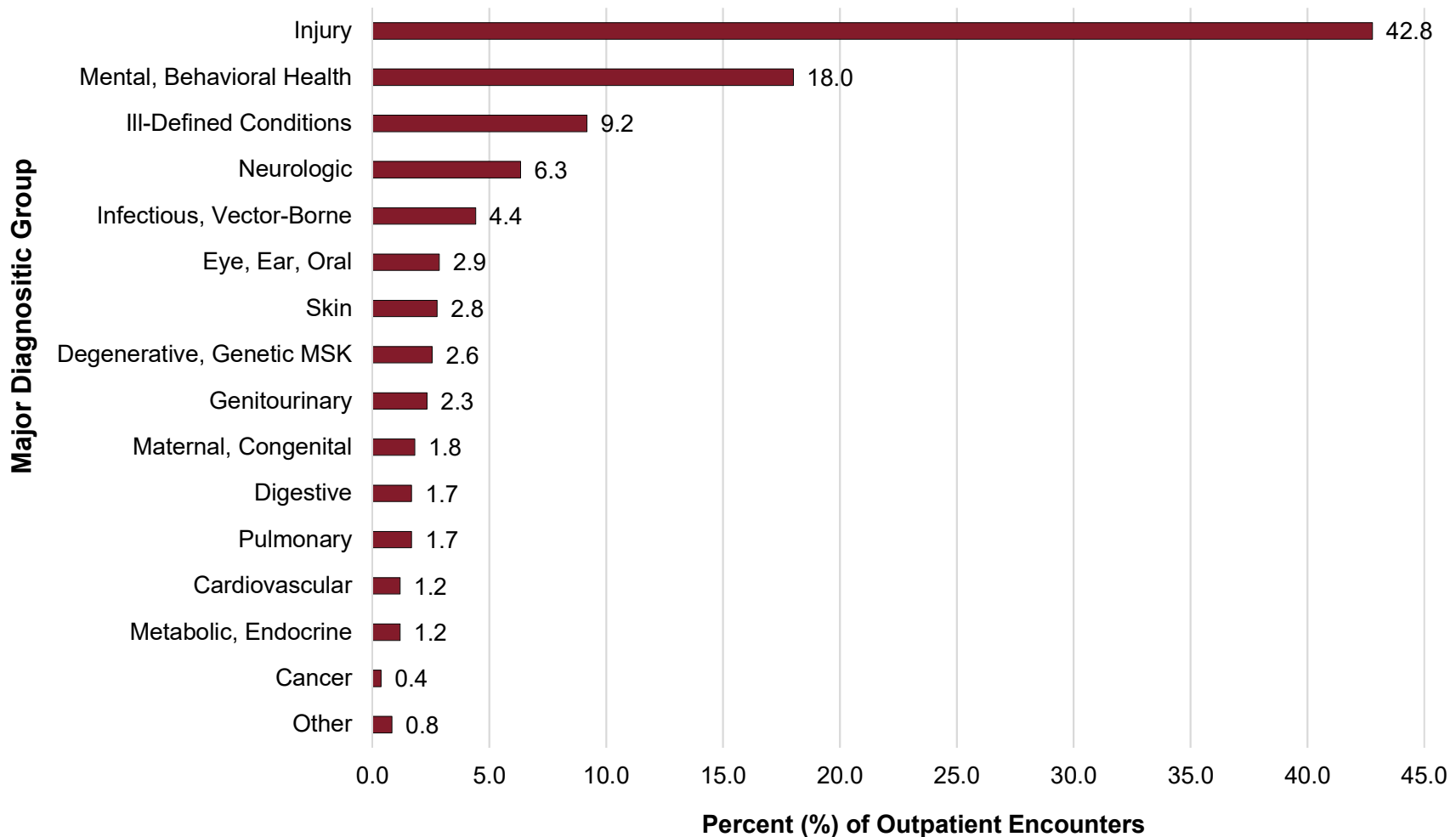
Leading Causes of Unintentional Injury Hospitalizations U.S. Army Active Duty, 2018



Total number of cause-coded unintentional injury hospitalizations = 576; may not be representative of the distribution of causes for all injuries
Data source: Military Health System Data Repository (MDR); injuries defined using the APHC Taxonomy of Injuries
Prepared by Army Public Health Center, Injury Prevention



Major Diagnosis Groups Resulting in Outpatient Visits U.S. Army Active Duty, 2018



Total number of outpatient visits = 4,978,279

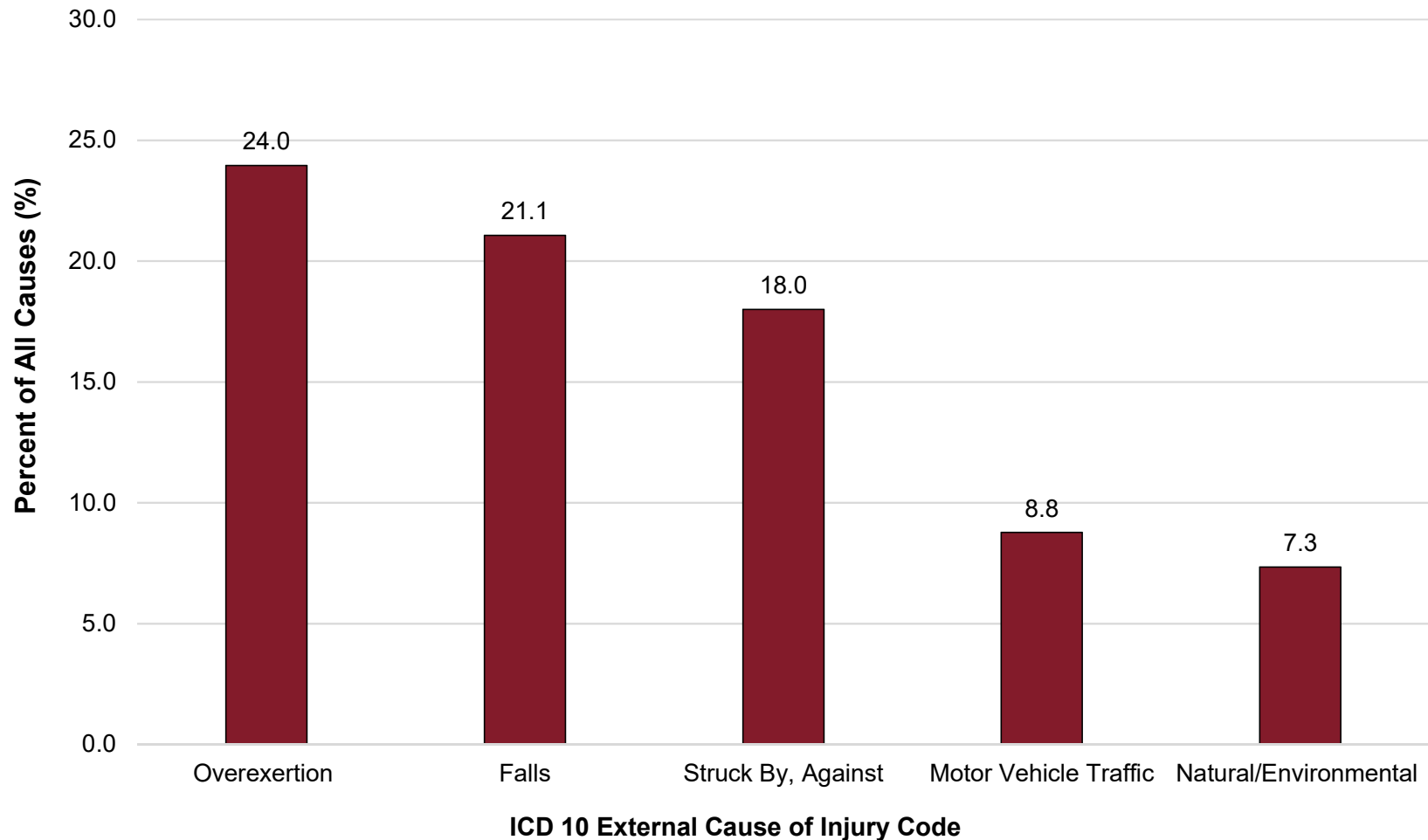
Diagnosis group "Other" includes adverse effects of drugs, blood disorders, and other neoplasms (not cancer)

Data source: Military Health System Data Repository (MDR); injuries defined using the APHC Taxonomy of Injuries

Prepared by Army Public Health Center, Injury Prevention



Leading External Causes of Unintentional Injury Outpatient Visits, U.S. Army Active Duty, 2018



Total number of cause-coded unintentional injury outpatient visits = 62,366; may not be representative of the distribution of causes for all injuries
Data source: Military Health System Data Repository (MDR); injuries defined using the APHC Taxonomy of Injuries
Prepared by Army Public Health Center, Injury Prevention



Points of Contact



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Additional details and interpretation are available in an accompanying 2018 Technical Information Paper. See <https://phc.amedd.army.mil/news/Pages/PeriodicPublications.aspx>; select Active Duty Army Injury Surveillance Summary.