

# U.S. Army Injury Surveillance Summary 2013



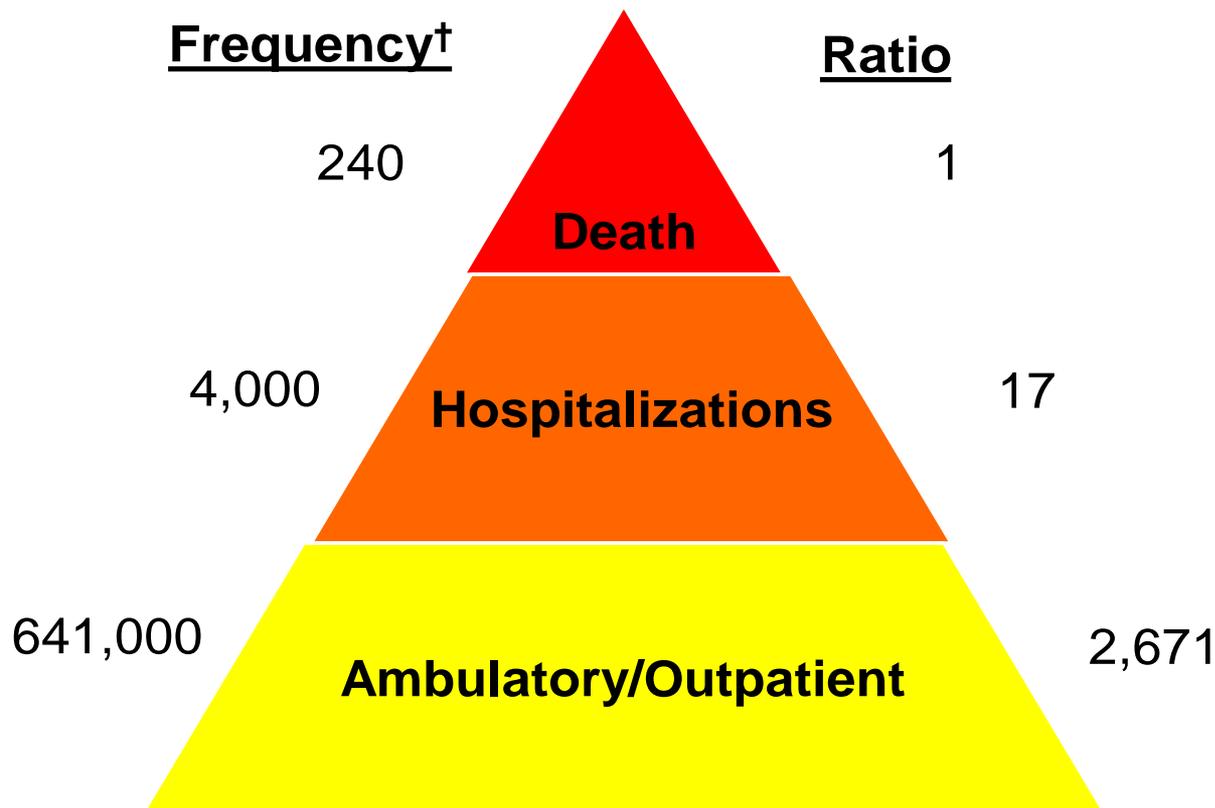
**ARMY PUBLIC HEALTH CENTER** (Provisional)

Epidemiology and Disease Surveillance Portfolio  
Injury Prevention Program

Website: <http://phc.amedd.army.mil/organization/hq/deds/Pages/InjuryPreventionProgram.aspx>

Email: [usarmy.apg.medcom-phc.mbx.injuryprevention@mail.mil](mailto:usarmy.apg.medcom-phc.mbx.injuryprevention@mail.mil)

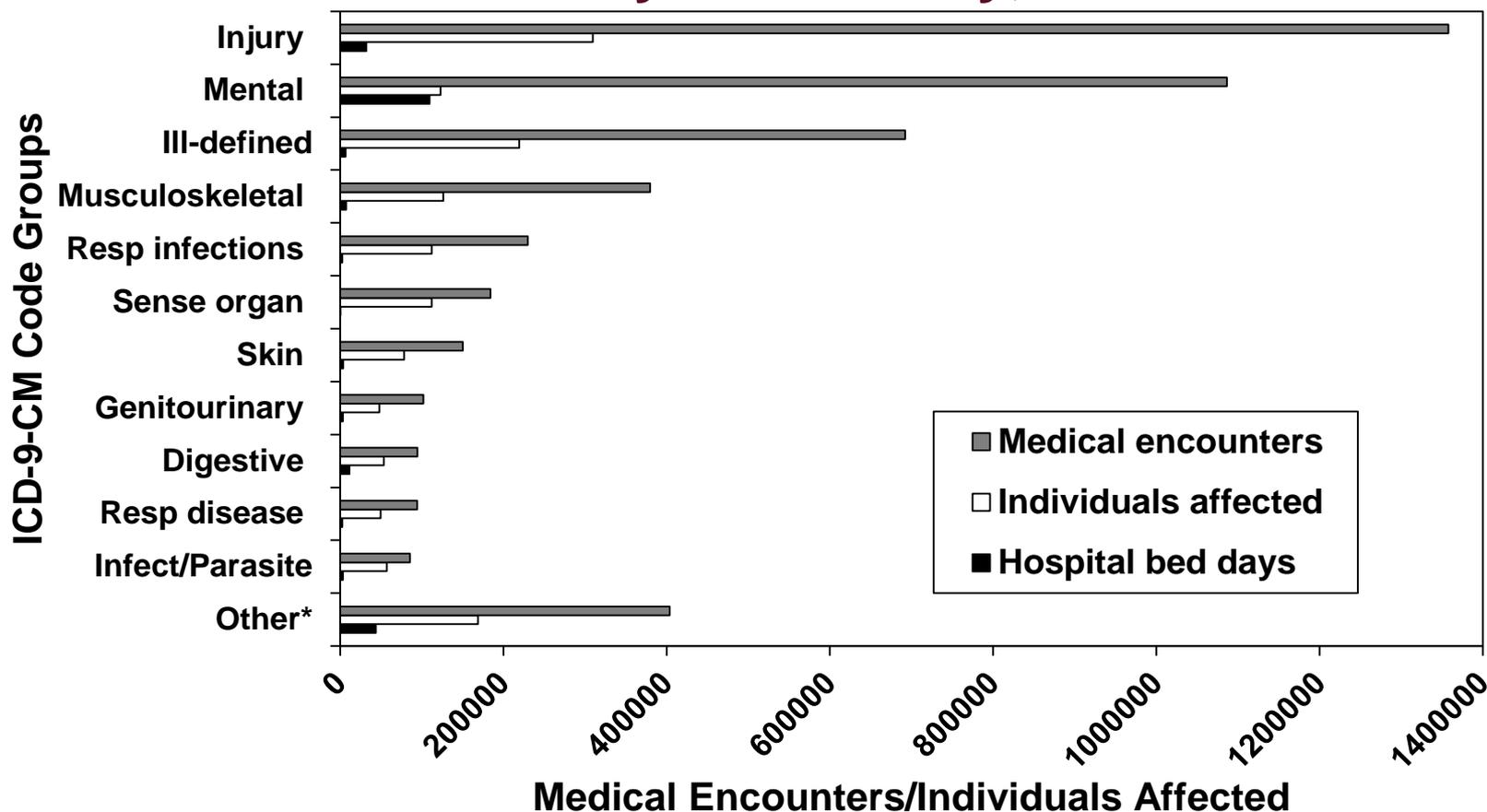
# Injury Pyramid, U.S. Army Active Duty, 2013



<sup>†</sup>Frequencies are rounded

Data source: Defense Medical Surveillance System, 2013; Prepared by Army Public Health Center (Provisional), Injury Prevention Program

# Relative Burden of Injuries and Diseases U.S. Army Active Duty, 2013

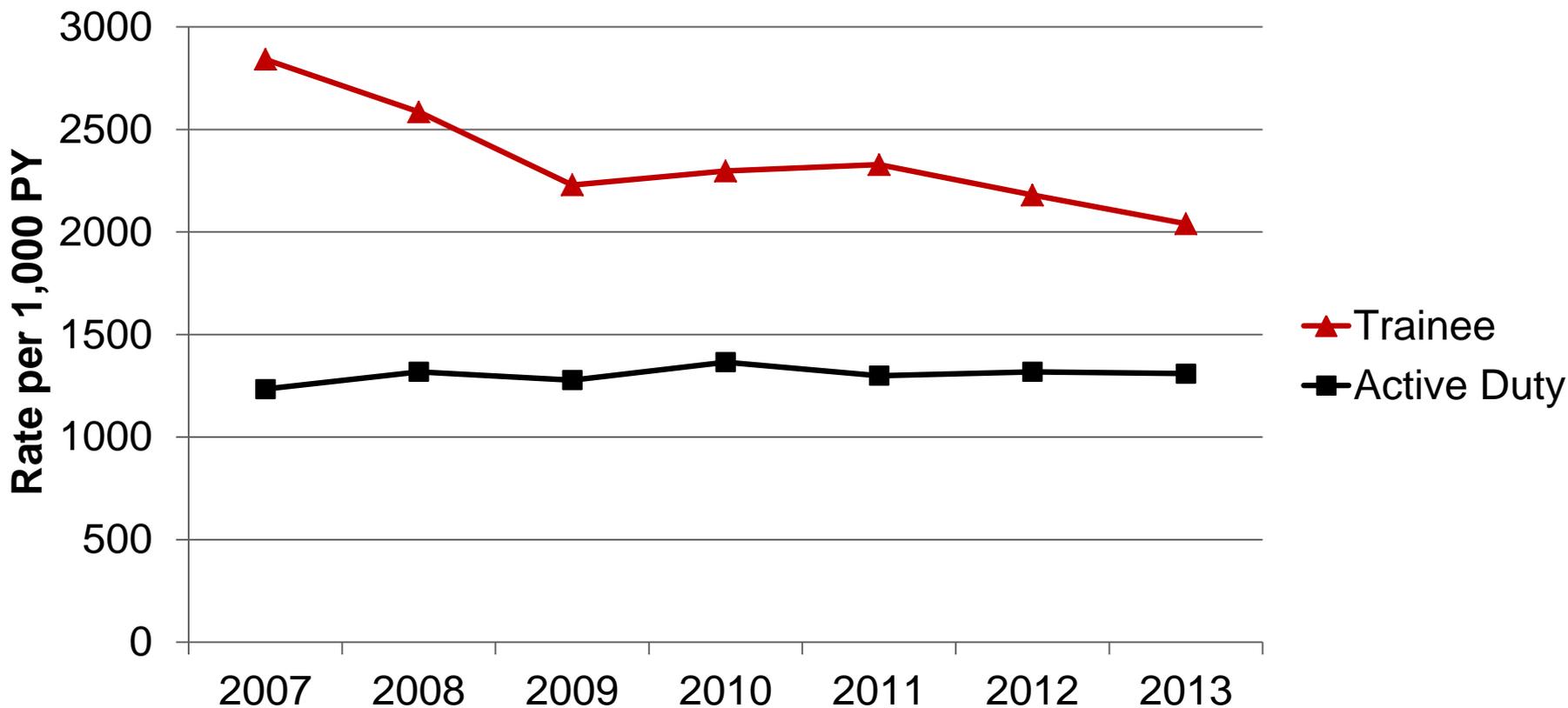


\*Includes all ICD-9-CM code groups with less than 80,000 medical encounters

Diagnosis group Injury contains both injury and injury-related musculoskeletal conditions

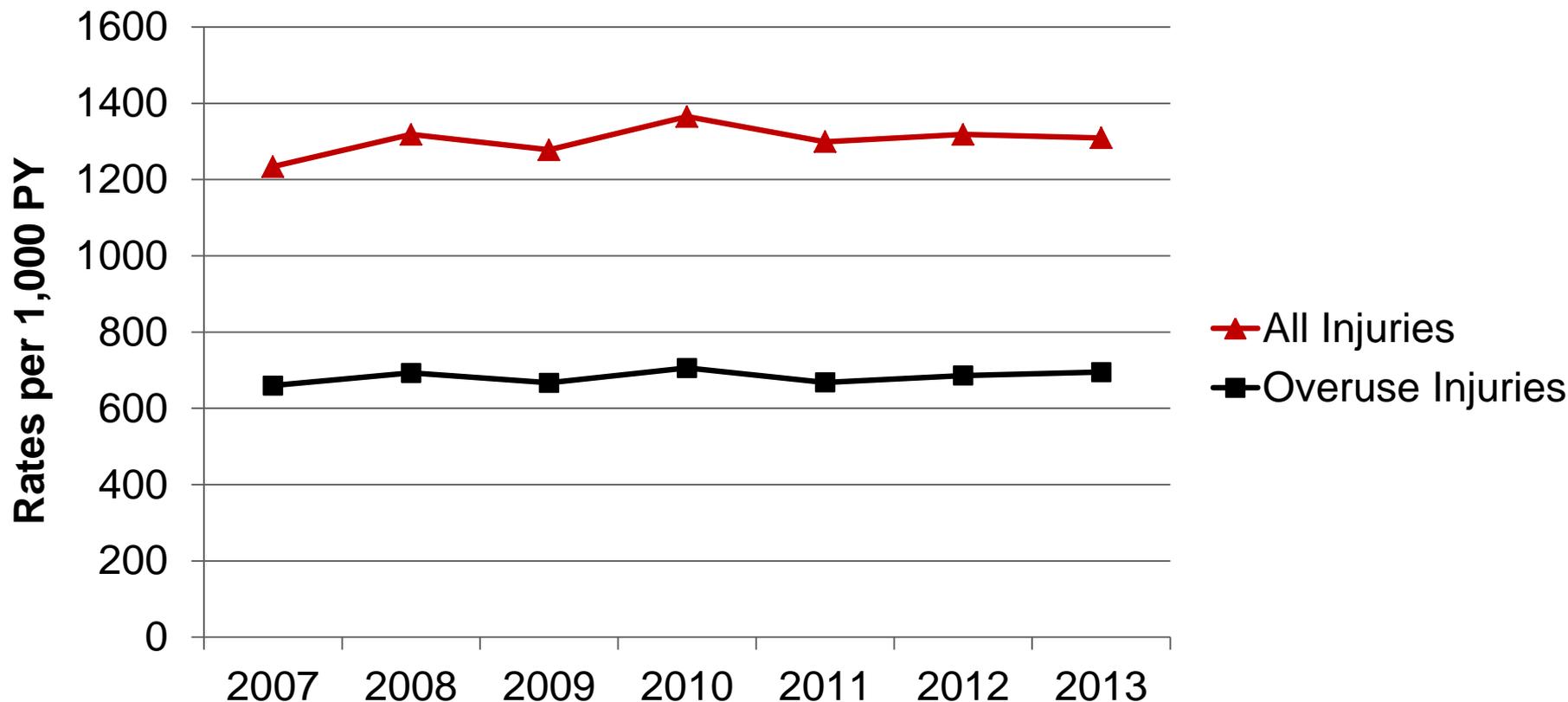
Data source: Defense Medical Surveillance System, 2014; Prepared by Army Public Health Center (Provisional), Injury Prevention Program

## U.S. Army Active Duty vs. Trainee Overall Injury Visit Rates, 2007-2013



Active Duty injury adjusted to remove deployed injury and deployed person-time  
 Data source: Defense Medical Surveillance System, 2014; Prepared by Army Public Health Center (Provisional), Injury Prevention Program

## U.S. Army Active Duty Injury and Overuse Injury Visit Rates, 2007-2013

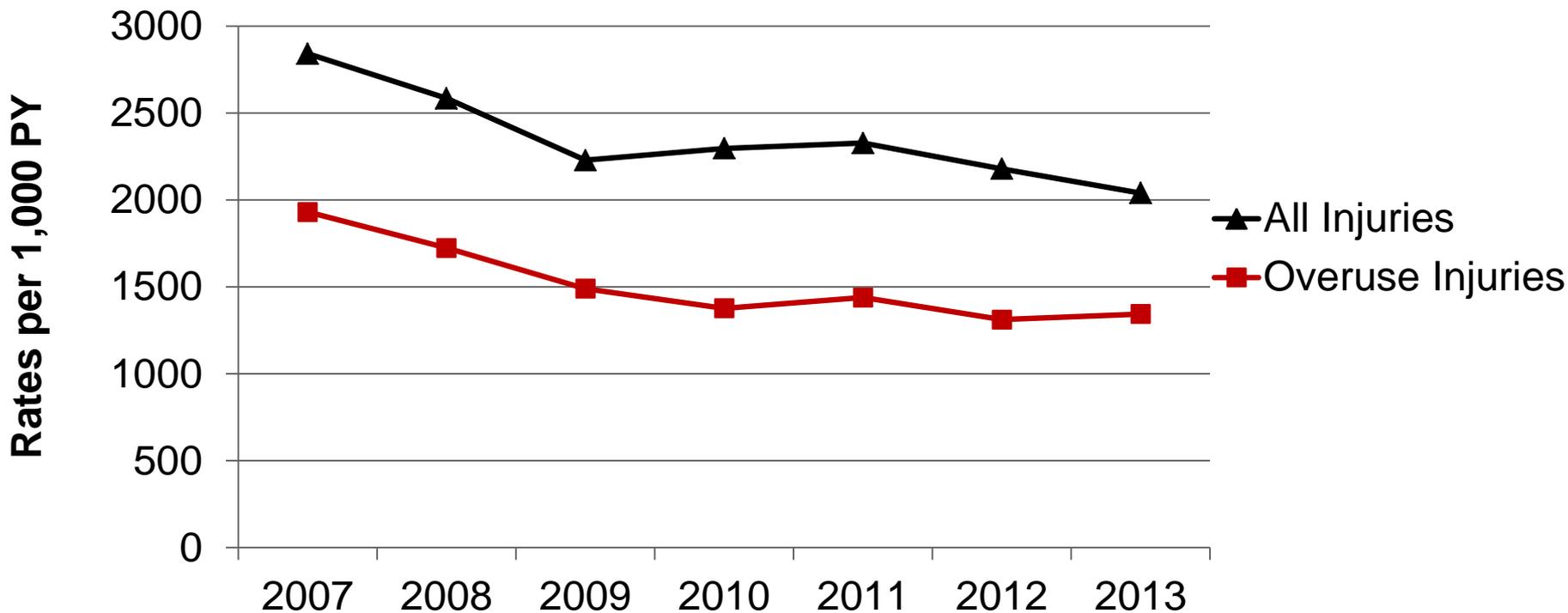


Active Duty injury adjusted to remove deployed injury and deployed person-time

Overuse injuries of the lower extremity

Data source: Defense Medical Surveillance System, 2014; Prepared by Army Public Health Center (Provisional), Injury Prevention Program

## U.S. Army Trainee Injury and Overuse Injury Visit Rates, 2007-2013

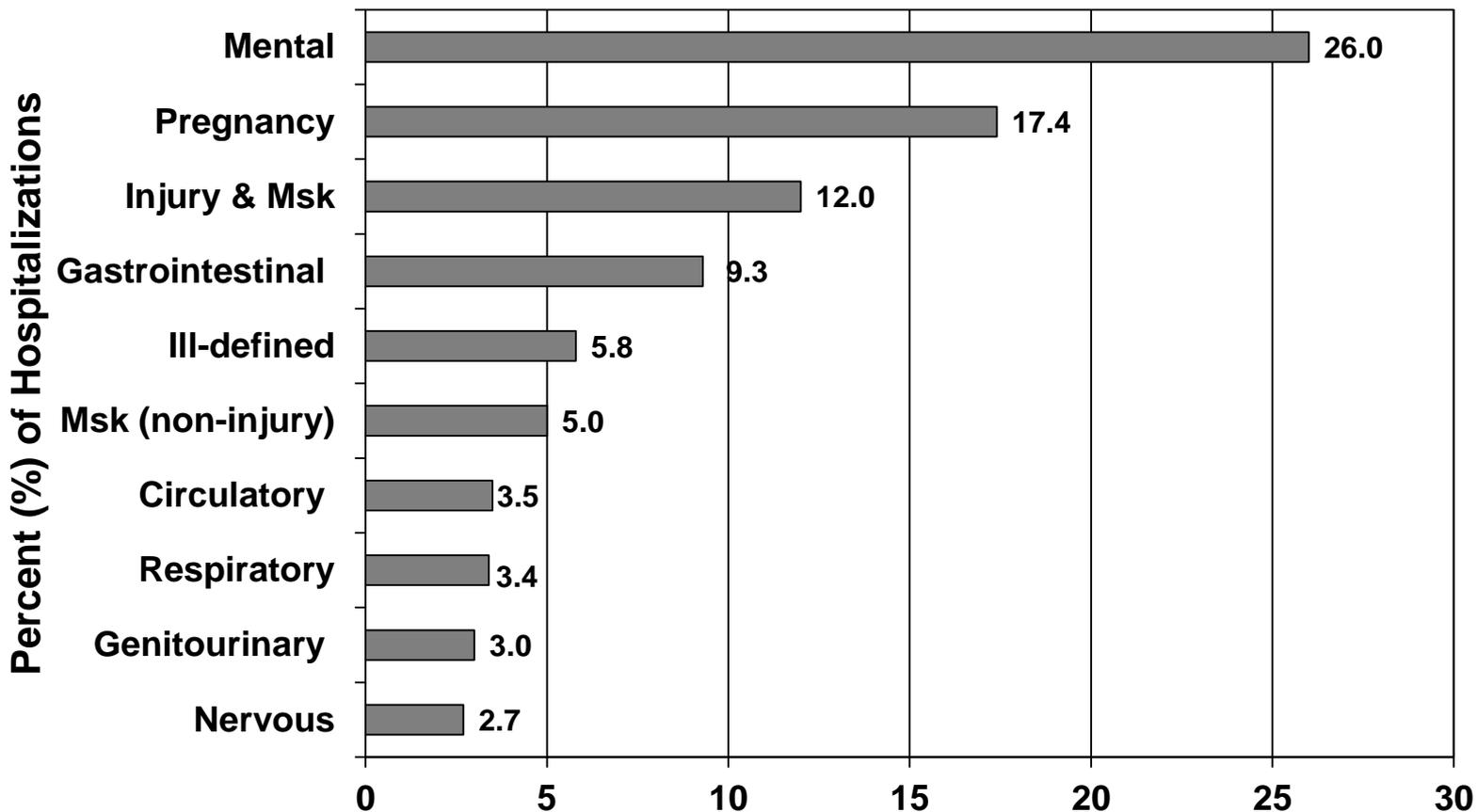


Overuse injury of the lower extremity

Data source: Defense Medical Surveillance System, 2014; Prepared by Army Public Health Center (Provisional), Injury Prevention Program

# Conditions Resulting in Hospitalization

## Top 10 ICD-9 Categories, U.S. Army Active Duty, 2013

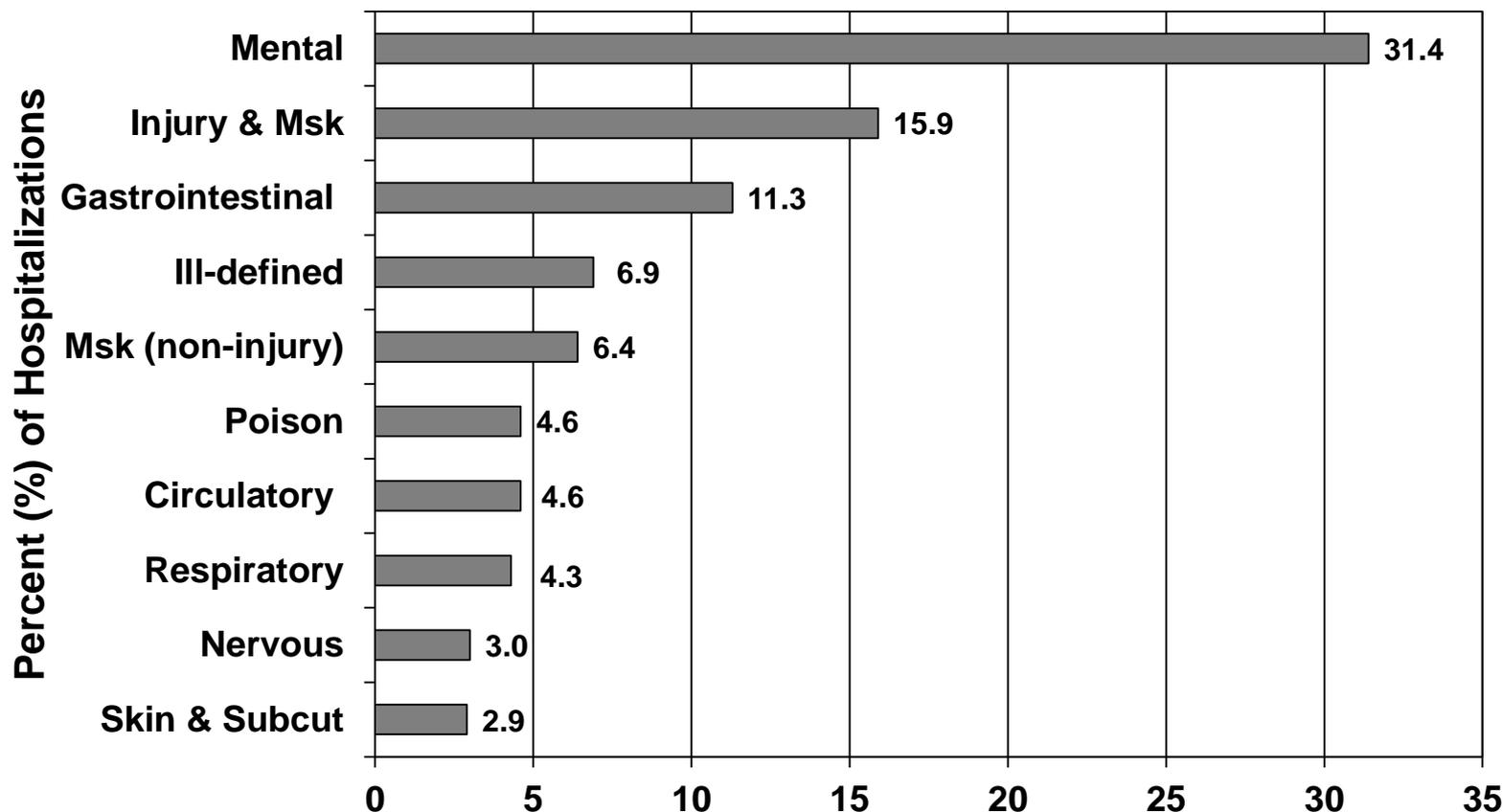


Total number of incident hospitalizations= 32,842

Data source: Defense Medical Surveillance System, 2014; Prepared by Army Public Health Center (Provisional), Injury Prevention Program

# Conditions Resulting in Hospitalization

## Top 10 ICD-9 Categories, U.S. Army Active Duty Males, 2013

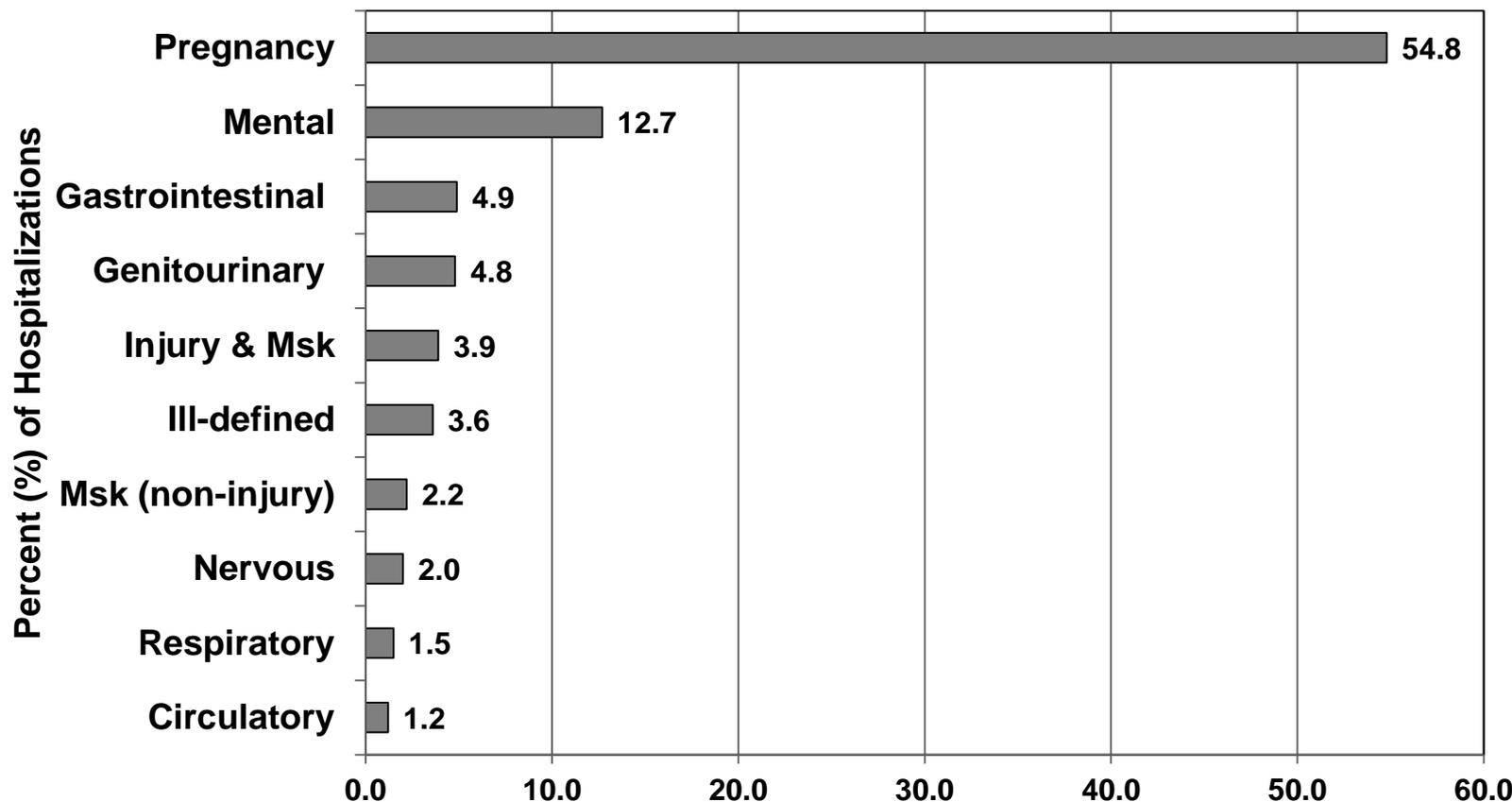


Total number of incident hospitalizations= 23,055

Data source: Defense Medical Surveillance System, 2014; Prepared by Army Public Health Center (Provisional), Injury Prevention Program

# Conditions Resulting in Hospitalization

## Top 10 ICD-9 Categories, U.S. Army Active Duty Females, 2013

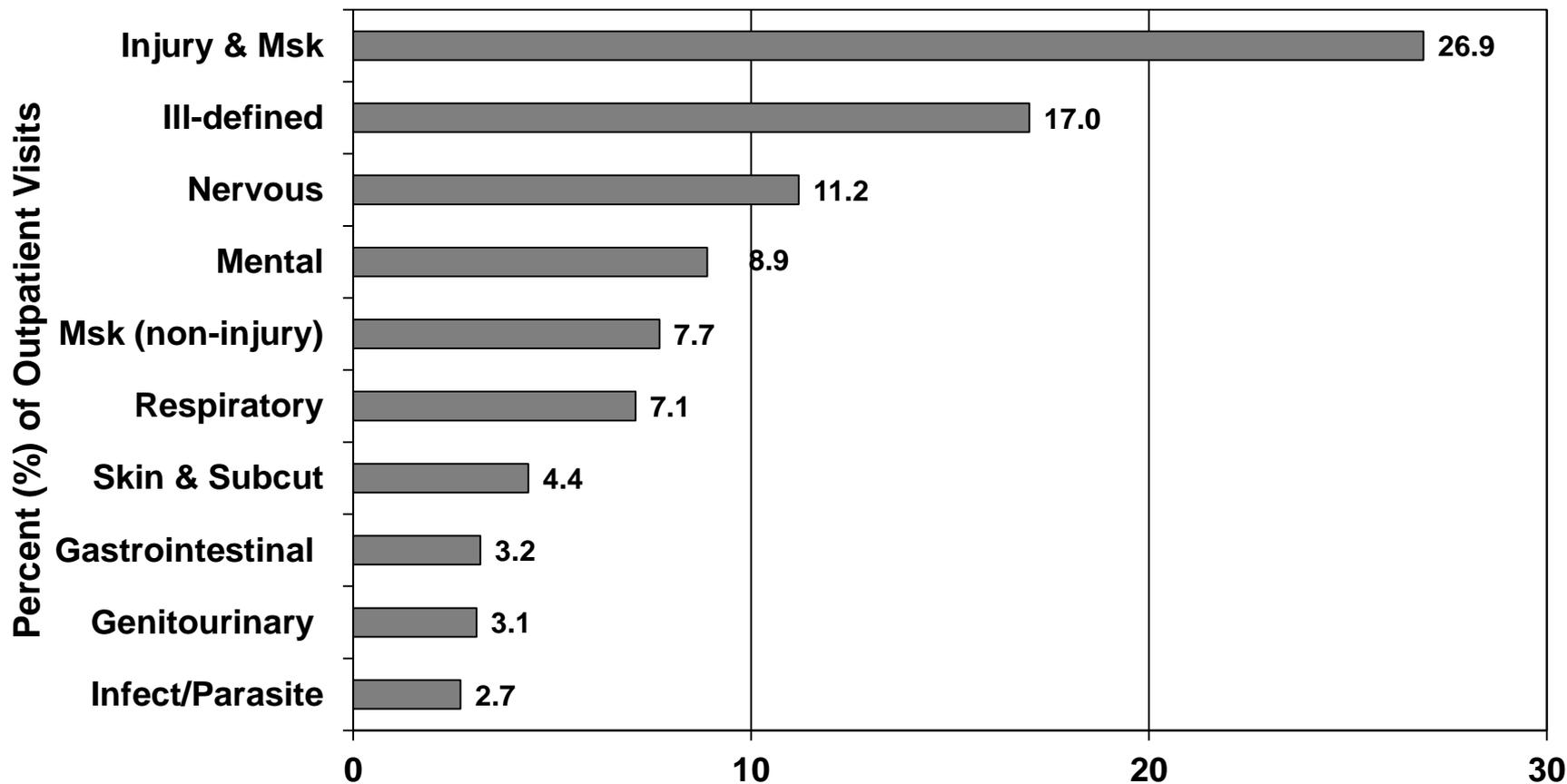


Total number of incident hospitalizations= 10,767

Data source: Defense Medical Surveillance System, 2014; Prepared by Army Public Health Center (Provisional), Injury Prevention Program

# Conditions Resulting in Outpatient Visits

## Top 10 ICD-9 Categories, U.S. Army Active Duty, 2013

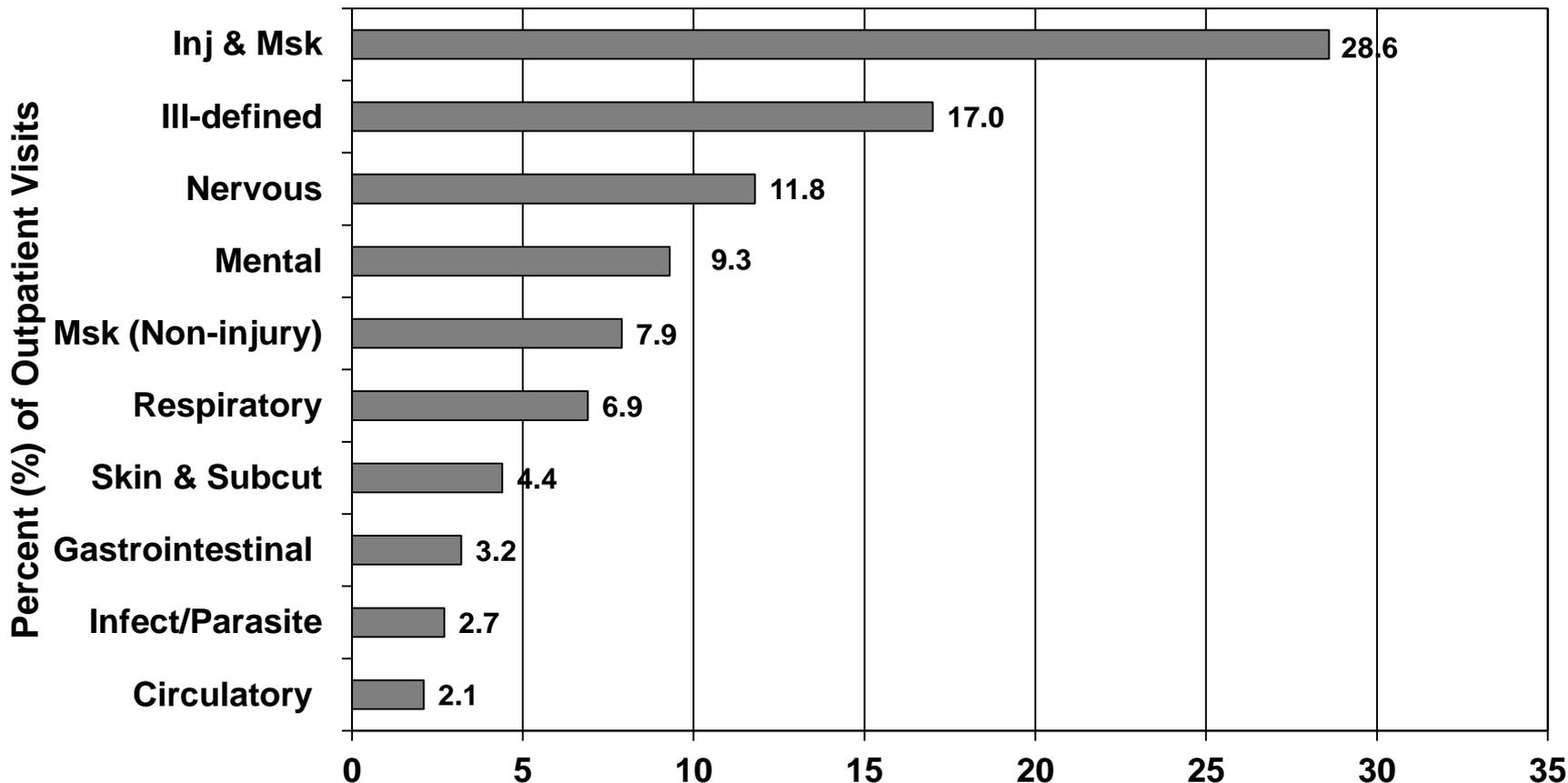


Total number of incident outpatient visits= 2,378,513

Data source: Defense Medical Surveillance System, 2014; Prepared by Army Public Health Center (Provisional), Injury Prevention Program

# Conditions Resulting in Outpatient Visits

## Top 10 ICD-9 Categories, U.S. Army Active Duty Males, 2013

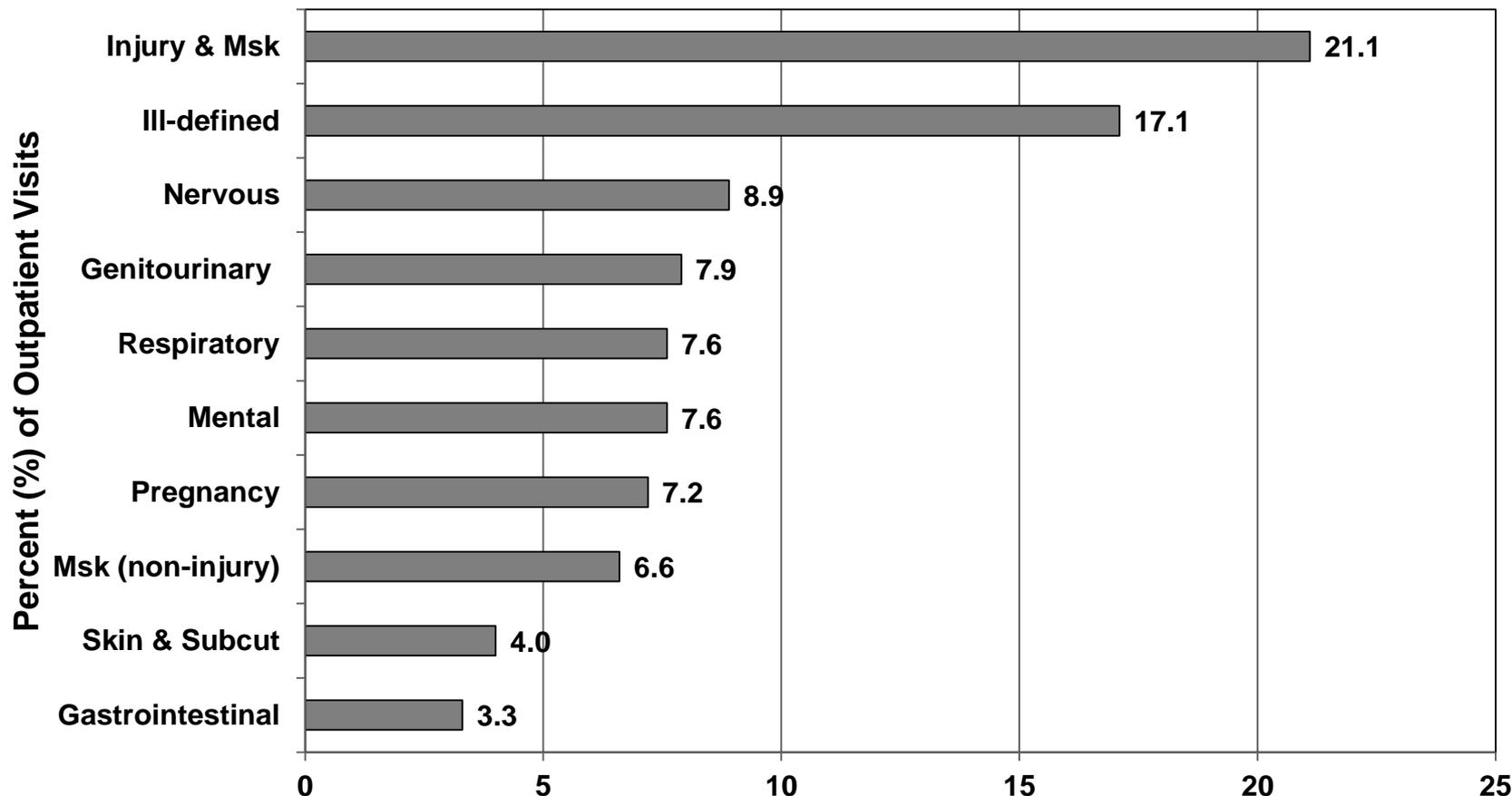


Total number of incident outpatient visits= 1,857,867

Data source: Defense Medical Surveillance System, 2014; Prepared by Army Public Health Center (Provisional), Injury Prevention Program

# Conditions Resulting in Outpatient Visits

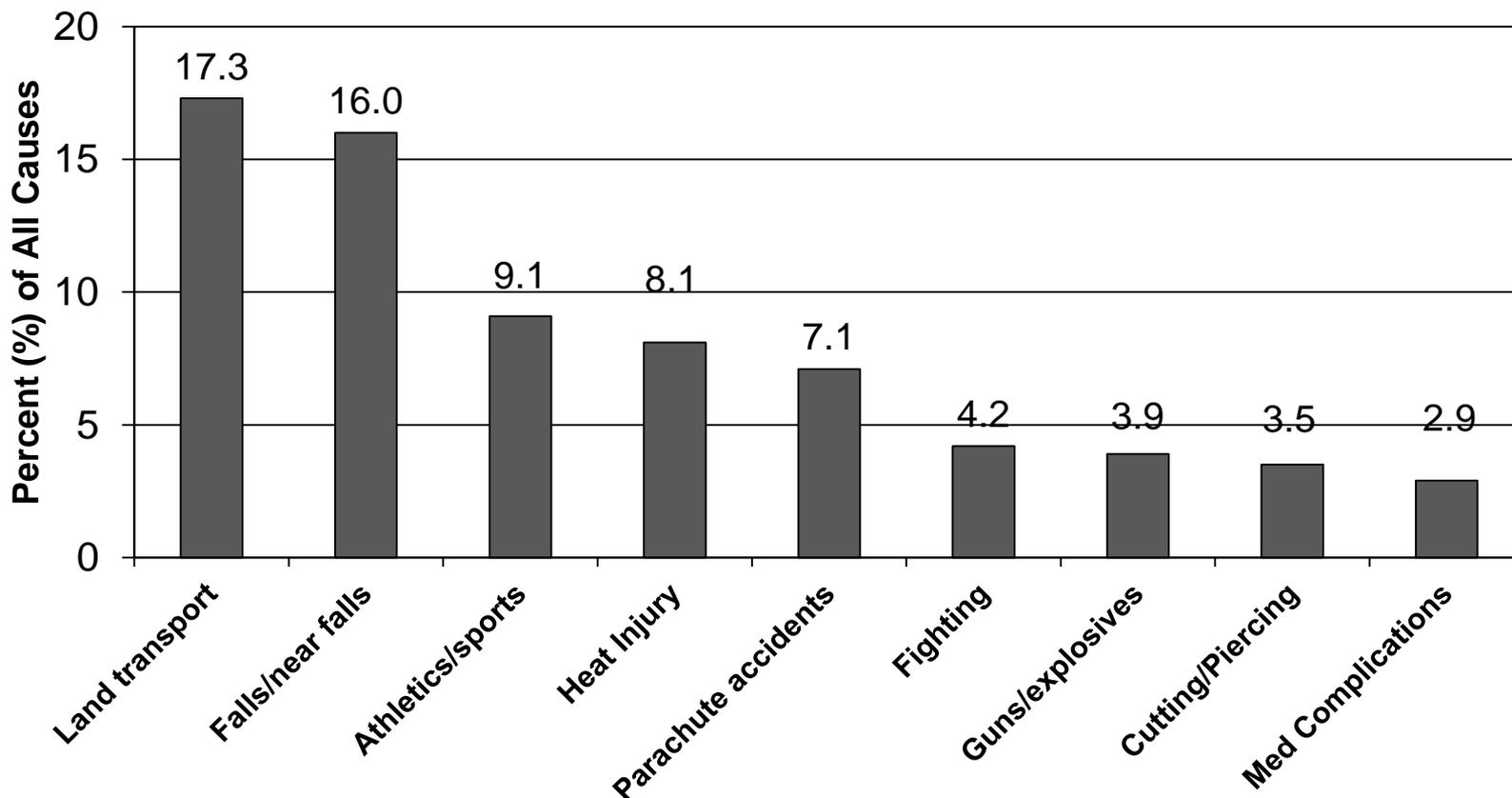
## Top 10 ICD-9 Categories, U.S. Army Active Duty Females, 2013



Total number of incident outpatient visits= 525,400

Data source: Defense Medical Surveillance System, 2014; Prepared by Army Public Health Center (Provisional), Injury Prevention Program

# Leading Causes of Unintentional Injury Hospitalizations U.S. Army Active Duty, 2013

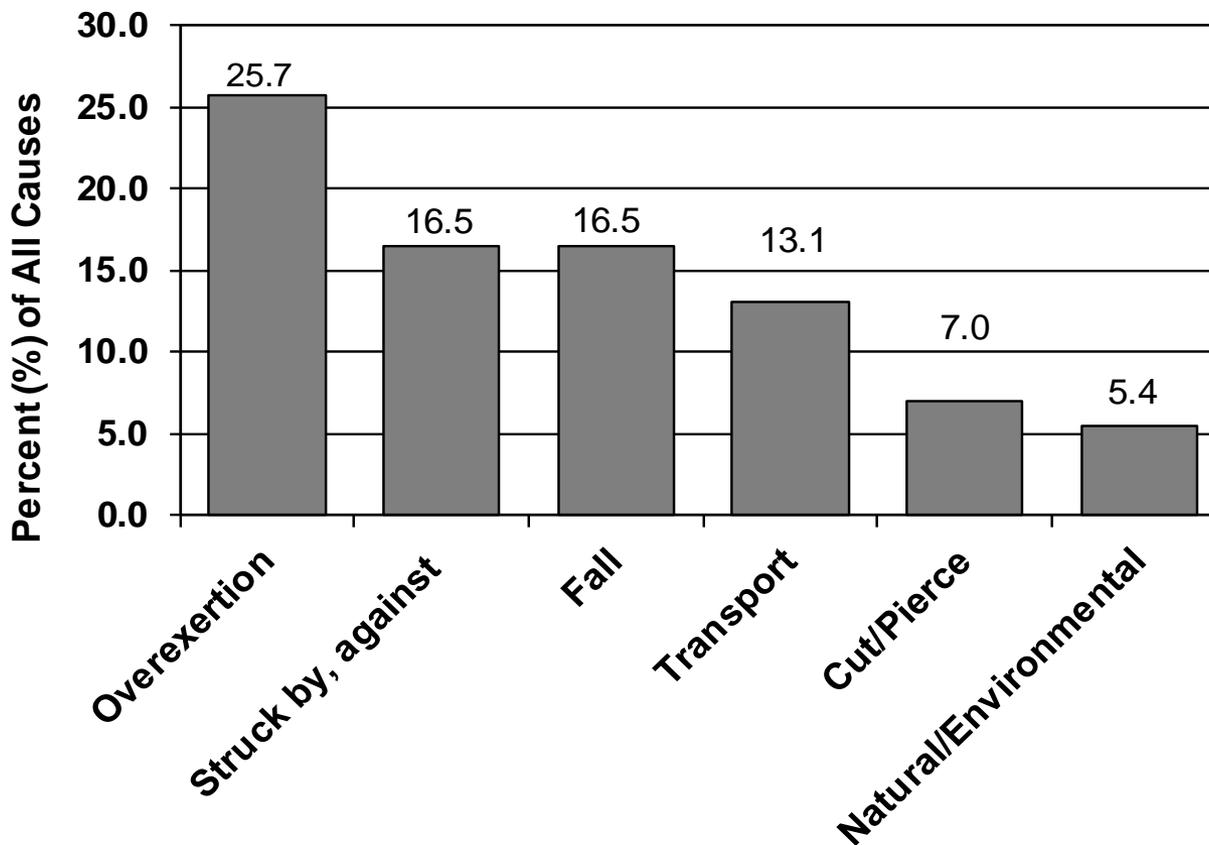


Total number of cause-coded unintentional injury hospitalizations is 1,553

Land transport includes both traffic and nontraffic related and military and nonmilitary related incidents

Data source: Defense Medical Surveillance System, 2014; Prepared by Army Public Health Center (Provisional), Injury Prevention Program

# Leading Causes of Unintentional Injury Outpatient Visits U.S. Army Active Duty, 2013



Total number of cause-coded unintentional outpatient visits is 74,847

Data source: Defense Medical Surveillance System, 2014; Prepared by Army Public Health Center (Provisional), Injury Prevention Program

# Frequency of Acute Injuries by Location and Diagnosis (Barell Matrix) Hospitalizations, U.S. Army Active Duty, 2013

			DIAGNOSIS													Total	% by body region					
			Fracture	Dislocation	Sprains/ Strains	Internal	Open Wound	Ampu- tations	Blood Vessel	Contusion/ Superficial	Crush	Burns	Nerves	Unspec	System- wide & late effects							
BODY REGION	Head and Neck	Traumatic Brain Injury (TBI)	Type 1 TBI	0	0	0	0	0	0	0	0	0	0	0	0	19	0	19	14.1%			
			Type 2 TBI	44	0	0	134	0	0	0	0	0	0	0	0	0	0	0		178		
			Type 3 TBI	20	0	0	127	0	0	0	0	0	0	0	0	0	0	0		147		
			TBI Unspec.	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0		6		
		Other Head, Face, Neck	Other head	0	0	0	0	23	0	0	0	0	0	0	0	0	0	0		0	23	
			Face	165	1	0	0	20	0	0	0	0	6	0	0	0	0	0		0	192	
			Eye	0	0	0	0	8	0	0	7	0	1	0	0	0	0	0		0	16	
			Neck	1	0	0	0	2	0	0	0	0	1	1	0	0	0	0		0	5	
	Spine and Back	Spinal Cord (SCI)	Head, Face, Neck Unspec.	0	0	0	0	0	0	4	20	1	9	0	5	0	0	0	39	11.1%		
			Cervical SCI	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0		3	
			Thoracic/Dorsal SCI	5	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0		6	
			Lumbar SCI	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		3	
			Sacrum Coccyx SCI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	
		Vertebral Column (VCI)	Spine, Back Unspec. SCI	1	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0		9	0.8%
			Cervical VCI	23	2	11	0	0	0	0	0	0	0	0	0	0	0	0	0		36	
			Thoracic/Dorsal VCI	23	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0		24	
			Lumbar VCI	40	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0		41	
			Sacrum Coccyx VCI	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0		8	
			Spine, Back Unspec. VCI	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		3	
Torso	Torso	Chest (thorax)	26	0	0	59	3	0	2	7	0	3	0	0	0	0	0	0	100	11.2%		
		Abdomen	0	0	0	85	11	0	0	3	0	1	1	0	0	0	0	0	101			
		Pelvis, Urogenital	32	1	2	8	1	0	0	4	0	0	0	0	0	0	0	0	48			
		Trunk	0	0	0	0	0	0	0	7	0	1	0	7	0	0	0	0	15			
		Back, Buttock	0	0	1	0	3	0	0	10	0	1	0	0	0	0	0	0	15			
		Extremities	Upper	Shoulder, Upper Arm	62	20	23	0	7	0	0	3	1	4	0	1	0	0	0		121	18.5%
Forearm, Elbow	77			2	0	0	25	0	0	2	1	6	0	0	0	0	0	0	113			
Wrist, Hand, Fingers	91			8	4	0	69	12	0	4	9	12	0	3	0	0	0	0	212			
Other & Unspec.	0			0	0	0	2	0	3	1	0	3	1	5	0	0	0	0	15			
Lower	Hip		26	3	8	0	0	0	0	4	0	0	0	0	0	0	0	0	41			
	Upper leg, Thigh		51	0	0	0	0	3	0	2	1	2	0	0	0	0	0	0	59			
	Knee		8	24	47	0	0	0	0	4	0	1	0	0	0	0	0	0	84			
	Lower leg, Ankle		290	5	30	0	0	3	0	6	3	5	0	0	0	0	0	0	342			
	Foot, toes		60	3	1	0	14	1	0	9	0	2	0	0	0	0	0	0	90			
	Other & Unspec.		1	0	20	0	50	1	0	4	0	0	0	13	0	0	0	0	89			
	Other/Multiple Unspecified		0	0	0	0	0	0	1	0	0	1	1	0	0	0	0	0	3	0.1%		
Unclas s. by Site	System-wide & late effects	Unspec. Site	3	1	6	0	13	0	0	5	0	6	1	42	0	0	0	77	3.1%			
		System-wide & late effects	0	0	0	0	0	0	0	0	0	0	0	0	205	0	0	205	8.2%			
Total			1,069	72	154	424	251	20	10	102	16	65	5	95	205	2,488	100%					
% Total			43.0%	2.9%	6.2%	17.0%	10.1%	0.8%	0.4%	4.1%	0.6%	2.6%	0.2%	3.8%	8.2%	100%	100%					

Data source: Defense Medical Surveillance System, 2014; Prepared by Army Public Health Center (Provisional), Injury Prevention Program

# Frequency of Acute Injuries by Location and Diagnosis (Barell Matrix) Hospitalizations, U.S. Army Active Duty Males, 2013

			DIAGNOSIS													Total	% by body region
			Fracture	Dislocation	Sprains/ Strains	Internal	Open Wound	Ampu- tations	Blood Vessel	Contusion/ Superficial	Crush	Burns	Nerves	Unspec	System- wide & late effects		
Head and Neck	Traumatic Brain Injury (TBI)	Type 1 TBI	0	0	0	0	0	0	0	0	0	0	0	19	0	19	13.2%
		Type 2 TBI	43	0	0	120	0	0	0	0	0	0	0	0	0	163	
		Type 3 TBI	20	0	0	106	0	0	0	0	0	0	0	0	0	126	
		TBI Unspec.	5	0	0	0	0	0	0	0	0	0	0	0	0	5	
		Other head	0	0	0	0	24	0	0	0	0	0	0	0	0	24	
	Other Head, Face, Neck	Face	159	1	0	0	16	0	0	0	4	0	0	0	180		
		Eye	0	0	0	0	8	0	0	7	0	1	0	0	16		
		Neck	1	0	0	0	2	0	0	0	1	1	1	0	6		
		Head, Face, Neck Unspec.	0	0	0	0	0	0	4	18	1	9	0	5	37		
Spine and Back	Spinal Cord (SCI)	Cervical SCI	2	0	0	2	0	0	0	0	0	0	0	0	4	0.9%	
		Thoracic/Dorsal SCI	4	0	0	1	0	0	0	0	0	0	0	0	5		
		Lumbar SCI	3	0	0	0	0	0	0	0	0	0	0	0	3		
		Sacrum Coccyx SCI	0	0	0	0	0	0	0	0	0	0	0	0	0		
		Spine, Back Unspec. SCI	1	0	0	8	0	0	0	0	0	0	0	0	9		
	Vertebral Column (VCI)	Cervical VCI	21	2	9	0	0	0	0	0	0	0	0	0	32		
		Thoracic/Dorsal VCI	20	0	1	0	0	0	0	0	0	0	0	0	21		
		Lumbar VCI	35	1	0	0	0	0	0	0	0	0	0	0	36		
		Sacrum Coccyx VCI	6	0	0	0	0	0	0	0	0	0	0	0	6		
		Spine, Back Unspec. VCI	2	0	0	0	0	0	0	0	0	0	0	0	2		
Torso	Torso	Chest (thorax)	26	0	0	60	4	0	2	7	0	4	0	0	103	11.2%	
		Abdomen	0	0	0	79	10	0	0	2	0	1	1	0	93		
		Pelvis, Urogenital	27	1	2	7	1	0	0	3	0	0	0	0	41		
		Trunk	0	0	0	0	0	0	0	7	0	1	0	7	15		
		Back, Buttock	0	0	0	0	3	0	0	10	0	1	0	0	14		
Extremities	Upper	Shoulder, Upper Arm	63	20	22	0	7	1	0	3	1	4	0	1	122	19.2%	
		Forearm, Elbow	72	2	0	0	23	0	0	1	1	6	0	0	105		
		Wrist, Hand, Fingers	90	8	3	0	63	12	0	4	9	13	0	4	206		
		Other & Unspec.	0	0	0	0	3	0	4	1	0	3	4	6	21		
	Lower	Hip	20	3	9	0	0	0	0	3	0	0	0	0	35		
		Upper leg, Thigh	51	0	0	0	0	4	0	2	1	1	0	0	59		
		Knee	10	21	44	0	0	0	0	4	0	1	0	0	80		
		Lower leg, Ankle	278	5	29	0	0	3	0	5	3	5	0	0	328		
		Foot, toes	61	2	1	0	13	2	0	6	0	2	0	0	87		
Unclass. by Site	Other, Unspecified System-wide & late effects	Other/Multiple	0	0	0	0	0	0	1	0	0	1	3	0	5	0.2%	
		Unspec. Site	3	1	7	0	12	0	0	4	0	5	2	38	72	3.0%	
			0	0	0	0	0	0	0	0	0	0	0	200	200	8.4%	
Total			1,024	67	145	383	239	24	11	91	18	63	11	92	200	2,368	100%
% Total			43.2%	2.8%	6.1%	16.2%	10.1%	1.0%	0.5%	3.8%	0.8%	2.7%	0.5%	3.9%	8.4%	100%	

Data source: Defense Medical Surveillance System, 2014; Prepared by Army Public Health Center (Provisional), Injury Prevention Program

# Frequency of Acute Injuries by Location and Diagnosis (Barell Matrix) Hospitalizations, U.S. Army Active Duty Females, 2013

			DIAGNOSIS													Total	% by body region		
			Fracture	Dislocation	Sprains/ Strains	Internal	Open Wound	Ampu- tations	Blood Vessel	Contusion/ Superficial	Crush	Burns	Nerves	Unspec	System- wide & late effects				
BODY REGION	Head and Neck	Traumatic Brain Injury (TBI)	Type 1 TBI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19.0%
			Type 2 TBI	3	0	0	14	0	0	0	0	0	0	0	0	0	0	17	
			Type 3 TBI	0	0	0	23	0	0	0	0	0	0	0	0	0	0	23	
			TBI Unspec.	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
		Other Head, Face, Neck	Other head	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			Face	8	0	0	0	4	0	0	0	0	2	0	0	0	0	14	
			Eye	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			Neck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			Head, Face, Neck Unspec.	0	0	0	0	0	0	0	3	0	2	0	0	0	0	5	
			Head, Face, Neck Unspec.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Spine and Back	Spinal Cord (SCI)	Cervical SCI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5%	
			Thoracic/Dorsal SCI	1	0	0	0	0	0	0	0	0	0	0	0	0	1		
			Lumbar SCI	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
			Sacrum Coccyx SCI	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
			Spine, Back Unspec. SCI	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		Vertebral Column (VCI)	Cervical VCI	2	0	2	0	0	0	0	0	0	0	0	0	0	4		
			Thoracic/Dorsal VCI	4	0	0	0	0	0	0	0	0	0	0	0	0	4		
			Lumbar VCI	4	0	0	0	0	0	0	0	0	0	0	0	0	4		
			Sacrum Coccyx VCI	1	1	0	0	0	0	0	0	0	0	0	0	0	2		
			Spine, Back Unspec. VCI	1	0	0	0	0	0	0	0	0	0	0	0	0	1		
	Torso	Torso	Chest (thorax)	2	0	0	1	0	0	0	0	0	0	0	0	3	10.6%		
			Abdomen	0	0	0	6	2	0	0	1	0	1	0	0	10			
			Pelvis, Urogenital	6	0	0	0	0	0	0	1	0	0	0	0	7			
			Trunk	0	0	0	0	0	0	0	0	0	0	2	0	2			
			Back, Buttock	0	0	1	0	0	0	0	0	0	0	0	0	1			
			Back, Buttock	0	0	1	0	0	0	0	0	0	0	0	0	1			
Extremities	Upper	Shoulder, Upper Arm	3	0	1	0	1	0	0	0	0	0	0	0	5	13.4%			
		Forearm, Elbow	8	0	0	0	3	0	0	0	0	0	0	0	11				
		Wrist, Hand, Fingers	4	0	1	0	7	1	0	0	0	0	0	0	13				
		Other & Unspec.	0	0	0	0	0	0	0	0	0	0	0	0	0				
	Lower	Hip	7	0	2	0	0	0	0	1	0	0	0	0	10				
		Upper leg, Thigh	3	0	0	0	0	0	0	0	0	1	0	0	4				
		Knee	0	3	5	0	0	0	0	0	0	0	0	0	8				
		Lower leg, Ankle	25	0	2	0	0	0	0	1	0	0	0	0	28				
		Foot, toes	4	1	0	0	2	0	0	3	0	0	0	0	10				
		Other & Unspec.	0	0	2	0	0	0	0	0	0	0	1	0	3				
	Unclassified by Site	Other, Unspecified System-wide & late effects	Other/Multiple	0	0	0	0	0	0	1	0	0	0	0	1		0.5%		
			Other/Unspec. Site	0	0	0	0	0	0	0	1	0	1	0	4		6	2.8%	
			Other/Unspec. Site	0	0	0	0	0	0	0	0	0	0	0	0		0	0.0%	
			System-wide & late effects	0	0	0	0	0	0	0	0	0	0	0	18		18	8.3%	
Total			87	5	16	44	19	1	1	11	0	7	0	7	18	216	100%		
% Total			40.3%	2.3%	7.4%	20.4%	8.8%	0.5%	0.5%	5.1%	0.0%	3.2%	0.0%	3.2%	8.3%	100%			

Data source: Defense Medical Surveillance System, 2014; Prepared by Army Public Health Center (Provisional), Injury Prevention Program

# Frequency of Acute Injuries by Location and Diagnosis (Barell Matrix) Outpatient Visits, U.S. Army Active Duty, 2013

				DIAGNOSIS													Total	% by body region		
				Fracture	Dislocation	Sprains/ Strains	Internal	Open Wound	Amputations	Blood Vessel	Contusion/ Superficial	Crush	Burns	Nerves	Unspec	System-wide & late effects				
BODY REGION	Head and Neck	Traumatic Brain Injury (TBI)	Type 1 TBI	0	0	0	0	0	0	0	0	0	0	0	0	2,762	0	2,762	4.1%	
			Type 2 TBI	102	0	0	1,807	0	0	0	0	0	0	3	0	0	1,912	0		1,912
			Type 3 TBI	126	0	0	4,200	0	0	0	0	0	0	0	0	0	4,326	0		4,326
			TBI Unspec.	48	0	0	0	0	0	0	0	0	0	0	0	0	48	0		48
		Other Head, Face, Neck	Other head	0	0	0	0	1,158	0	0	0	0	3	34	0	0	1,195	0	1,195	6.7%
			Face	1,239	37	48	0	3,356	0	0	0	0	59	0	0	0	4,739	0	4,739	
			Eye	0	0	0	0	326	0	0	3,639	0	124	28	0	0	4,117	0	4,117	
			Neck	6	0	3	0	72	0	0	0	14	30	5	0	0	130	0	130	
			Head, Face, Neck Unspec.	0	0	0	0	0	0	43	3,051	11	122	2	1,438	0	4,667	0	4,667	
BODY REGION	Spine and Back	Spinal Cord (SCI)	Cervical SCI	26	0	0	22	0	0	0	0	0	0	0	0	0	0	48	0.1%	
			Thoracic/Dorsal SCI	42	0	0	7	0	0	0	0	0	0	0	0	0	49	0		49
			Lumbar SCI	19	0	0	10	0	0	0	0	0	0	0	0	29	0	29		
			Sacrum Coccyx SCI	3	0	0	3	0	0	0	0	0	0	0	0	6	0	6		
			Spine, Back Unspec. SCI	6	0	0	58	0	0	0	0	0	0	0	0	64	0	64		
		Vertebral Column (VCI)	Cervical VCI	123	11	4,639	0	0	0	0	0	0	0	0	0	0	4,773	0	4,773	6.5%
			Thoracic/Dorsal VCI	213	1	1,683	0	0	0	0	0	0	0	0	0	0	1,897	0	1,897	
			Lumbar VCI	273	11	6,901	0	0	0	0	0	0	0	0	0	0	7,185	0	7,185	
			Sacrum Coccyx VCI	146	26	301	0	0	0	0	0	0	0	0	0	0	473	0	473	
			Spine, Back Unspec. VCI	59	0	0	0	0	0	0	0	0	0	0	0	0	59	0	59	
BODY REGION	Torso	Torso	Chest (thorax)	677	37	1,682	227	91	0	8	1,413	0	28	0	0	0	4,163	8.1%		
			Abdomen	0	0	0	243	138	0	1	196	0	25	18	0	0	621		0	621
			Pelvis, Urogenital	205	14	4,259	50	264	0	3	147	11	11	1	0	0	4,965		0	4,965
			Trunk	10	0	0	0	50	0	0	1,003	2	28	3	3,789	0	4,885		0	4,885
			Back, Buttock	0	0	2,593	0	83	0	0	635	4	39	0	0	0	3,354		0	3,354
		Upper	Shoulder, Upper Arm	947	2,035	16,168	0	228	8	0	1,062	8	46	0	1,703	0	22,205	25.9%		
			Forearm, Elbow	1,203	57	1,088	0	787	15	0	724	24	186	0	0	0	4,084		0	4,084
			Wrist, Hand, Fingers	5,759	603	6,610	0	7,239	136	0	4,660	608	545	0	1,738	0	27,898		0	27,898
			Other & Unspec.	24	0	0	0	226	12	62	1,052	7	78	471	1,260	0	3,192		0	3,192
Lower	Hip	173	43	8,016	0	0	0	0	428	4	0	0	0	0	8,664	38.5%				
	Upper leg, Thigh	210	0	0	0	0	74	0	250	6	36	0	0	0	576		0	576		
	Knee	148	4,210	4,078	0	0	0	0	1,442	10	16	0	0	0	9,904		0	9,904		
	Lower leg, Ankle	2,821	68	19,696	0	0	135	0	746	32	79	0	0	0	23,577		0	23,577		
	Foot, toes	3,475	135	2,984	0	1,308	12	0	5,626	184	82	0	0	0	13,806		0	13,806		
Other & Unspec.	150	0	17,526	0	1,798	120	47	2,311	16	47	0	6,855	0	28,870	0	28,870				
Uncl. s. by Site	Other, Unspecified	14	0	0	0	0	0	0	0	0	3	184	0	0	201	0.1%				
	Unspec. Site	404	50	5,846	166	1,376	0	6	7,224	56	532	137	1,173	0	16,970	7.7%				
	System-wide & late effects	0	0	0	0	0	0	0	0	0	0	0	0	5,340	2.4%					
Total				18,651	7,338	104,121	6,793	18,500	512	170	35,609	997	2,119	886	20,718	5,340	221,754	100%		
% Total				8.4%	3.3%	47.0%	3.1%	8.3%	0.2%	0.1%	16.1%	0.4%	1.0%	0.4%	9.3%	2.4%	100%			

Data source: Defense Medical Surveillance System, 2014; Prepared by Army Public Health Center (Provisional), Injury Prevention Program

# Frequency of Acute Injuries by Location and Diagnosis (Barell Matrix) Outpatient Visits, U.S. Army Active Duty Males, 2013

			DIAGNOSIS													Total	% by body region		
			Fracture	Dislocation	Sprains/ Strains	Internal	Open Wound	Ampu- tations	Blood Vessel	Contusion/ Superficial	Crush	Burns	Nerves	Unspec	System- wide & late effects				
BODY REGION	Head and Neck	Traumatic Brain Injury (TBI)	Type 1 TBI	0	0	0	0	0	0	0	0	0	0	0	2,328	0	2,328	4.3%	
			Type 2 TBI	98	0	0	1,690	0	0	0	0	0	0	2	0	0	0		1,790
			Type 3 TBI	129	0	0	3,719	0	0	0	0	0	0	0	0	0	0		3,848
			TBI Unspec.	46	0	0	0	0	0	0	0	0	0	0	0	0	0		46
		Other Head, Face, Neck	Other head	0	0	0	0	1,099	0	0	0	0	0	1	27	0	0		1,127
	Face		1,148	32	39	0	3,099	0	0	0	0	49	0	0	0	0	4,367		
	Eye		0	0	0	0	314	0	0	3,099	0	106	24	0	0	0	3,543		
	Neck		6	0	3	0	70	0	0	0	9	22	4	0	0	0	114		
	Head, Face, Neck Unspec.		0	0	0	0	0	0	0	40	2,510	9	101	1	1,192	0	3,853		6.9%
	Spine and Back	Spinal Cord (SCI)	Cervical SCI	24	0	0	20	0	0	0	0	0	0	0	0	0	0		44
Thoracic/Dorsal SCI			38	0	0	6	0	0	0	0	0	0	0	0	0	0	44		
Lumbar SCI			16	0	0	10	0	0	0	0	0	0	0	0	0	0	26		
Sacrum Coccyx SCI			3	0	0	3	0	0	0	0	0	0	0	0	0	0	6		
Spine, Back Unspec. SCI			6	0	0	51	0	0	0	0	0	0	0	0	0	0	57		
Vertebral Column (VCI)		Cervical VCI	113	11	3,621	0	0	0	0	0	0	0	0	0	0	0	3,745		
		Thoracic/Dorsal VCI	204	1	1,422	0	0	0	0	0	0	0	0	0	0	0	1,627		
		Lumbar VCI	256	11	5,886	0	0	0	0	0	0	0	0	0	0	0	6,153		
		Sacrum Coccyx VCI	107	18	209	0	0	0	0	0	0	0	0	0	0	0	334		
		Spine, Back Unspec. VCI	50	0	0	0	0	0	0	0	0	0	0	0	0	0	50	6.3%	
Torso	Torso	Chest (thorax)	620	35	1,500	223	67	0	7	1,293	0	25	0	0	0	0	3,770	8.1%	
		Abdomen	0	0	0	224	116	0	1	165	0	17	15	0	0	0	538		
		Pelvis, Urogenital	142	12	3,490	41	216	0	2	137	11	11	1	0	0	0	4,063		
		Trunk	7	0	0	0	45	0	0	785	2	24	3	3,247	0	0	4,113		
		Back, Buttock	0	0	2,198	0	81	0	0	510	3	35	0	0	0	0	2,827		
Extremities	Upper	Shoulder, Upper Arm	891	1,893	14,201	0	209	8	0	898	7	42	0	1,532	0	0	19,681	26.8%	
		Forearm, Elbow	1,051	50	961	0	699	14	0	598	22	150	0	0	0	0	3,545		
		Wrist, Hand, Fingers	5,345	586	5,600	0	6,426	123	0	3,852	516	451	0	1,545	0	0	24,444		
		Other & Unspec.	21	0	0	0	195	11	52	839	5	58	430	1,083	0	0	2,694		
		Lower	Hip	124	35	6,513	0	0	0	0	352	2	0	0	0	0	0		7,026
	Upper leg, Thigh		186	0	0	0	0	73	0	217	4	21	0	0	0	0	501		
	Knee		141	3,810	3,580	0	0	0	0	1,165	8	13	0	0	0	0	8,717		
	Lower leg, Ankle		2,521	60	16,556	0	0	130	0	634	29	59	0	0	0	0	19,989		
	Foot, toes		2,881	115	2,444	0	1,147	12	0	4,304	166	71	0	0	0	0	11,140		
	Other & Unspec.	133	0	14,484	0	1,644	119	45	1,807	15	42	0	5,878	0	0	24,167	38.0%		
Unclas s. by Site	Other, Unspecified System-wide & late effects	Other/Multiple	15	0	0	0	0	0	0	0	0	2	161	0	0	0	178	0.1%	
		Unspec. Site	364	44	4,719	157	1,218	0	4	5,540	48	461	124	1,041	0	0	13,720	7.3%	
		System-wide & late effects	0	0	0	0	0	0	0	0	0	0	0	0	3,905	0	3,905	2.1%	
Total			16,686	6,713	87,426	6,144	16,645	490	151	28,705	856	1,761	792	17,846	3,905	188,120	100%		
% Total			8.9%	3.6%	46.5%	3.3%	8.8%	0.3%	0.1%	15.3%	0.5%	0.9%	0.4%	9.5%	2.1%	100%			

Data source: Defense Medical Surveillance System, 2014; Prepared by Army Public Health Center (Provisional), Injury Prevention Program

# Frequency of Acute Injuries by Location and Diagnosis (Barell Matrix) Outpatient Visits, U.S. Army Active Duty Females, 2013

			DIAGNOSIS													System-wide & late effects	Total	% by body region	
			Fracture	Dislocation	Sprains/ Strains	Internal	Open Wound	Ampu- tations	Blood Vessel	Contusion/ Superficial	Crush	Burns	Nerves	Unspec					
BODY REGION	Head and Neck	Traumatic Brain Injury (TBI)	Type 1 TBI	0	0	0	0	0	0	0	0	0	0	0	0	471	0	471	3.2%
			Type 2 TBI	2	0	0	126	0	0	0	0	0	0	1	0	0	129		
			Type 3 TBI	4	0	0	510	0	0	0	0	0	0	0	0	0	514		
			TBI Unspec.	2	0	0	0	0	0	0	0	0	0	0	0	0	2		
		Other Head, Face, Neck	Other head	0	0	0	0	67	0	0	0	0	2	7	0	0	76		
	Face		100	5	9	0	284	0	0	0	0	11	0	0	0	409			
	Eye		0	0	0	0	17	0	0	552	0	18	4	0	0	591			
	Neck		0	0	0	0	2	0	0	0	5	7	1	0	0	15			
	Head, Face, Neck Unspec.		0	0	0	0	0	0	3	574	2	22	1	235	0	837			
	Spine and Back	Spinal Cord (SCI)	Cervical SCI	2	0	0	4	0	0	0	0	0	0	0	0	6			
			Thoracic/Dorsal SCI	5	0	0	1	0	0	0	0	0	0	0	0	6			
			Lumbar SCI	2	0	0	0	0	0	0	0	0	0	0	0	2			
			Sacrum Coccyx SCI	0	0	0	0	0	0	0	0	0	0	0	0	0			
			Spine, Back Unspec. SCI	1	0	0	6	0	0	0	0	0	0	0	0	7			
		Vertebral Column (VCI)	Cervical VCI	10	0	1,068	0	0	0	0	0	0	0	0	0	1,078			
Thoracic/Dorsal VCI			14	0	272	0	0	0	0	0	0	0	0	0	286				
Lumbar VCI			16	0	1,022	0	0	0	0	0	0	0	0	0	1,038				
Sacrum Coccyx VCI			40	9	93	0	0	0	0	0	0	0	0	0	142				
Spine, Back Unspec. VCI			6	0	0	0	0	0	0	0	0	0	0	0	6				
Torso	Torso	Chest (thorax)	58	2	183	9	25	0	1	137	0	4	0	0	419				
		Abdomen	0	0	0	25	24	0	0	29	0	7	3	0	88				
		Pelvis, Urogenital	63	2	779	10	48	0	1	10	0	0	0	0	913				
		Trunk	3	0	0	0	4	0	0	223	0	4	0	542	776				
		Back, Buttock	0	0	406	0	3	0	0	128	1	6	0	0	544				
Extremities	Upper	Shoulder, Upper Arm	61	152	1,997	0	21	0	0	177	2	4	0	175	2,589				
		Forearm, Elbow	157	8	132	0	95	1	0	131	2	41	0	0	567				
		Wrist, Hand, Fingers	424	20	1,026	0	871	14	0	834	95	95	0	222	3,601				
		Other & Unspec.	3	0	0	0	35	1	10	221	2	15	44	188	519				
	Lower	Hip	49	9	1,518	0	0	0	0	87	2	0	0	0	1,665				
		Upper leg, Thigh	25	0	0	0	0	1	0	36	1	16	0	0	79				
		Knee	8	418	514	0	0	0	0	285	2	3	0	0	1,230				
		Lower leg, Ankle	311	9	3,181	0	0	6	0	124	3	18	0	0	3,652				
		Foot, toes	599	21	543	0	172	0	0	1,338	20	11	0	0	2,704				
		Other & Unspec.	19	0	3,066	0	165	1	2	514	1	8	0	1,031	4,807				
Unclassified by Site	Other, Unspecified System-wide & late effects	Other/Multiple	0	0	0	0	0	0	0	0	0	23	0	0	23				
		Unspec. Site	53	7	1,134	18	167	0	2	1,699	8	74	13	197	3,372				
		System-wide & late effects	0	0	0	0	0	0	0	0	0	0	0	1,458	1,458				
Total			2,037	662	16,943	709	2,000	24	19	7,099	146	366	97	3,061	1,458	34,621	100%		
% Total			5.9%	1.9%	48.9%	2.0%	5.8%	0.1%	0.1%	20.5%	0.4%	1.1%	0.3%	8.8%	4.2%	100%			

Data source: Defense Medical Surveillance System, 2014; Prepared by Army Public Health Center (Provisional), Injury Prevention Program

## Frequency of Injury-related Musculoskeletal Conditions by Location and Diagnosis Hospitalizations, U.S. Army Active Duty, 2013

Injury Location			DIAGNOSIS						Total	% by body region	
			Inflammation and Pain (Overuse)	Joint Derangement	Joint Derangement with Neurological Involvement	Stress Fracture	Sprains/Strains/Rupture	Dislocation			
<b>BODY REGION</b>	Vertebral Column	Cervical	12	195	68	0	0	0	275	58.1%	
		Thoracic/Dorsal	0	8	39	0	0	0	47		
		Lumbar	57	350	32	0	0	0	439		
		Sacrum, Coccyx	4	0	0	0	0	0	4		
		Spine, Back Unspecified	24	6	2	1	0	0	33		
	Upper extremity	Shoulder	54	42	0	0	2	11	109		9.6%
		Upper arm, Elbow	13	2	0	0	0	1	16		
		Forearm, Wrist	2	3	0	0	0	0	5		
		Hand	1	0	0	0	1	0	2		
	Lower extremity	Pelvis, Hip, Thigh	35	66	0	2	1	3	107		29.6%
		Knee, Lower leg	63	74	0	3	82	2	224		
		Ankle, Foot	31	38	0	1	1	4	75		
	Others and Unspecified	Other specified/Multiple	0	2	0	0	2	1	5		2.7%
		Unspecified Site	28	1	2	1	0	0	32		
		<b>Total</b>	324	787	143	8	89	22	1,373		100%
		<b>% Total</b>	23.6	57.3	10.4	0.6	6.5	1.6			

Data source: Defense Medical Surveillance System, 2014; Prepared by Army Public Health Center (Provisional), Injury Prevention Program

## Frequency of Injury-related Musculoskeletal Conditions by Location and Diagnosis Hospitalizations, U.S. Army Active Duty Males, 2013

Injury Location			DIAGNOSIS						Total	% by body region	
			Inflammation and Pain (Overuse)	Joint Derangement	Joint Derangement with Neurological Involvement	Stress Fracture	Sprains/Strains/Rupture	Dislocation			
<b>BODY REGION</b>	Vertebral Column	Cervical	7	180	66	0	0	0	253	60.0%	
		Thoracic/Dorsal	0	7	37	0	0	0	44		
		Lumbar	45	349	32	0	0	0	426		
		Sacrum, Coccyx	3	0	0	0	0	0	3		
		Spine, Back Unspecified	21	6	2	0	0	0	29		
	Upper extremity	Shoulder	47	39	0	0	1	11	98		
		Upper arm, Elbow	12	2	0	0	0	1	15		
		Forearm, Wrist	1	2	0	0	0	0	3		
		Hand	1	0	0	0	2	0	3		9.5%
	Lower extremity	Pelvis, Hip, Thigh	21	46	0	2	1	3	73		
		Knee, Lower leg	51	71	0	3	80	2	207		
		Ankle, Foot	31	37	0	0	1	2	71		27.9%
	Others and Unspecified	Other specified/Multiple	0	2	0	0	2	1	5		
		Unspecified Site	24	1	2	1	0	0	28		2.6%
		<b>Total</b>	264	742	139	6	87	20	1,258		100%
		<b>% Total</b>	21.0	59.0	11.0	0.5	6.9	1.6			

Data source: Defense Medical Surveillance System, 2014; Prepared by Army Public Health Center (Provisional), Injury Prevention Program

# Frequency of Injury-related Musculoskeletal Conditions by Location and Diagnosis

## Hospitalizations, U.S. Army Active Duty Females, 2013

Injury Location			DIAGNOSIS						Total	% by body region	
			Inflammation and Pain (Overuse)	Joint Derangement	Joint Derangement with Neurological Involvement	Stress Fracture	Sprains/Strains/Rupture	Dislocation			
<b>BODY REGION</b>	Vertebral Column	Cervical	5	23	9	0	0	0	37	51.6%	
		Thoracic/Dorsal	0	1	8	0	0	0	9		
		Lumbar	12	29	1	0	0	0	42		
		Sacrum, Coccyx	1	0	0	0	0	0	1		
		Spine, Back Unspecified	4	1	0	1	0	0	6		
	Upper extremity	Shoulder	8	4	0	0	1	0	13		
		Upper arm, Elbow	1	0	0	0	0	0	1		
		Forearm, Wrist	1	1	0	0	0	0	2		
		Hand	0	0	0	0	0	0	0		
	Lower extremity	Pelvis, Hip, Thigh	14	21	0	0	0	0	35		8.7%
		Knee, Lower leg	14	6	0	0	6	0	26		
		Ankle, Foot	1	4	0	1	0	2	8		
	Others and Unspecified	Other specified/Multiple	0	0	0	0	0	0	0		37.5%
		Unspecified Site	4	0	0	0	0	0	4		
		<b>Total</b>	65	90	18	2	7	2	184		100%
		<b>% Total</b>	35.3	48.9	9.8	1.1	3.8	1.1			

Data source: Defense Medical Surveillance System, 2014; Prepared by Army Public Health Center (Provisional), Injury Prevention Program

## Frequency of Injury-related Musculoskeletal Conditions by Location and Diagnosis Outpatient Visits, U.S. Army Active Duty, 2013

Injury Location		DIAGNOSIS							Total	% by body region
		Inflammation and Pain (Overuse)	Joint Derangement	Joint Derangement with Neurological Involvement	Stress Fracture	Sprains/Strains/Rupture	Dislocation			
<b>BODY REGION</b>	Vertebral Column	Cervical	20,805	2,253	3,330	0	0	0	26,388	33.2%
		Thoracic/Dorsal	0	419	4,598	0	0	0	5,017	
		Lumbar	74,139	9,452	2,488	0	0	0	86,079	
		Sacrum, Coccyx	3,716	0	0	0	0	0	3,716	
		Spine, Back Unspecified	13,610	1,175	191	88	0	0	15,064	
	Upper extremity	Shoulder	51,145	4,198	0	0	608	538	56,489	19.4%
		Upper arm, Elbow	8,270	105	0	1	0	5	8,381	
		Forearm, Wrist	9,731	356	0	7	0	6	10,100	
		Hand	4,157	90	0	0	235	11	4,493	
	Lower extremity	Pelvis, Hip, Thigh	21,398	893	0	8	86	9	22,394	43.8%
		Knee, Lower leg	84,237	6,667	0	1,760	2,966	126	95,756	
		Ankle, Foot	57,155	3,827	0	500	138	53	61,673	
	Others and Unspecified	Other specified/Multiple	1,255	46	0	83	79	11	1,474	3.6%
		Unspecified Site	10,525	112	1,496	1,136	88	4	13,361	
		<b>Total</b>	360,143	29,593	12,103	3,583	4,200	763	410,385	100%
		<b>% Total</b>	87.8	7.2	2.9	0.9	1.0	0.2		

Data source: Defense Medical Surveillance System, 2014; Prepared by Army Public Health Center (Provisional), Injury Prevention Program

## Frequency of Injury-related Musculoskeletal Conditions by Location and Diagnosis Outpatient Visits, U.S. Army Active Duty Males, 2013

Injury Location			DIAGNOSIS							Total	% by body region
			Inflammation and Pain (Overuse)	Joint Derangement	Joint Derangement with Neurological Involvement	Stress Fracture	Sprains/Strains/Rupture	Dislocation			
<b>BODY REGION</b>	Vertebral Column	Cervical	16,461	1,877	2,799	0	0	0	21,137	33.3%	
		Thoracic/Dorsal	0	367	3,890	0	0	0			4,257
		Lumbar	61,959	8,249	1,911	0	0	0	72,119		
		Sacrum, Coccyx	2,439	0	0	0	0	0	2,439		
		Spine, Back Unspecified	10,935	1,036	166	76	0	0	12,213		
	Upper extremity	Shoulder	45,321	3,872	0	0	573	504	50,270		
		Upper arm, Elbow	7,385	98	0	1	0	5	7,489		
		Forearm, Wrist	7,804	308	0	7	0	8	8,127		
		Hand	3,512	76	0	0	218	9	3,815		20.7%
	Lower extremity	Pelvis, Hip, Thigh	12,657	623	0	8	80	5	13,373		
		Knee, Lower leg	70,456	5,960	0	1,373	2,671	105	80,565		
		Ankle, Foot	46,524	3,176	0	363	124	48	50,235		42.8%
	Others and Unspecified	Other specified/Multiple	897	40	0	75	73	11	1,096		
		Unspecified Site	7,610	94	1,232	723	80	3	9,742		3.2%
	<b>Total</b>		293,960	25,776	9,998	2,626	3,819	698	336,877		100%
	<b>% Total</b>		87.3	7.7	3.0	0.8	1.1	0.2			

Data source: Defense Medical Surveillance System, 2014; Prepared by Army Public Health Center (Provisional), Injury Prevention Program

## Frequency of Injury-related Musculoskeletal Conditions by Location and Diagnosis Outpatient Visits, U.S. Army Active Duty Females, 2013

Injury Location			DIAGNOSIS						Total	% by body region	
			Inflammation and Pain (Overuse)	Joint Derangement	Joint Derangement with Neurological Involvement	Stress Fracture	Sprains/Strains/Rupture	Dislocation			
<b>BODY REGION</b>	Vertebral Column	Cervical	4,377	387	538	0	0	0	5,302	32.8%	
		Thoracic/Dorsal	0	48	715	0	0	0	763		
		Lumbar	12,232	1,231	593	0	0	0	14,056		
		Sacrum, Coccyx	1,278	0	0	0	0	0	1,278		
		Spine, Back Unspecified	2,697	145	27	14	0	0	2,883		
	Upper extremity	Shoulder	5,879	326	0	0	37	35	6,277		
		Upper arm, Elbow	888	7	0	0	0	1	896		
		Forearm, Wrist	1,940	46	0	0	0	0	1,986		
		Hand	652	15	0	0	18	2	687		13.3%
	Lower extremity	Pelvis, Hip, Thigh	8,773	274	0	0	7	4	9,058		
		Knee, Lower leg	13,837	713	0	391	308	20	15,269		
		Ankle, Foot	10,697	657	0	135	16	9	11,514		48.4%
	Others and Unspecified	Other specified/Multiple	358	7	0	9	6	0	380		
		Unspecified Site	2,931	17	269	407	7	1	3,632		5.4%
		<b>Total</b>	66,539	3,873	2,142	956	399	72	73,981		100%
		<b>% Total</b>	89.9	5.2	2.9	1.3	0.5	0.1			

Data source: Defense Medical Surveillance System, 2014; Prepared by Army Public Health Center (Provisional), Injury Prevention Program