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Application of the Taxonomy of Injuries: Analysis of Army Recruit Injuries, CY 2016

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14. ABSTRACT U.S. Army basic training, known as initial entry training (IET), ensures the physical and mental preparation of recruits prior their enlistment. Recruits have long been recognized as a military population at high-risk of injury because of the physical intensity and repetition of IET activities. Of primary concern are musculoskeletal (MSK) injuries, especially cumulative microtraumatic (overuse) injuries. The volume of medical visits and lost training time from injuries substantially hinders Army training, force strength, and combat readiness. Some overuse injuries (i.e., stress fractures) can even result in medical discharge (in these cases, recruits never become Soldiers, and are no longer available for future military service). This investigation confirmed that over 80% of recruit injuries are to the lower body. Most are to the lower extremities (i.e., knee, ankle, foot, lower leg). Others include lower back injuries and pelvic/hip stress fractures. These injuries are attributed to the substantial on-foot activities required of IET recruits (running, patrolling, and foot marching). Higher-than-expected rates of lower body injuries can indicate excessive distances and/or frequencies of a specific activity and/or of the combined on-foot activities. Though less common, this investigation also found a notable number of shoulder injuries (5%), indicating injuries caused by different activities (possibly weight-training or donning/doffing rucksacks). Results also confirm disparate impacts to men and women for specific injuries (e.g., female pelvic stress fractures). To help reduce injuries that have the largest impact to recruits, routine installation/unit training-related injury reports are available to Army leaders to monitor injury trends.					
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1 PURPOSE

The purpose of this investigation is to document the basis for the U.S. Army Public Health Center (APHC) Injury Prevention Division (IPD) update to the list of International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) medical diagnostic codes that are used to monitor the injuries of Army recruits in Basic Combat Training (BCT) and One Station Unit Training (OSUT). The new ICD-10-CM code system increases the number of potentially relevant injury codes of interest.

2 REFERENCES

References cited are listed in Appendix A.

3 INTRODUCTION

3.1 Approach and Objectives

This investigation used the APHC taxonomy of injuries[1] to identify and categorize the initial injury medical encounters of Army recruits conducting BCT and OSUT in Calendar Year (CY) 2016. The APHC taxonomy of injuries establishes a specific list of diagnostic medical codes that are defined as injuries, and assigns them to general causal categories to better tailor prevention strategies. The taxonomy was needed to address the internationally-required transition from the previous medical coding system (International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) to the much more expansive and restructured ICD-10-CM system that is now being used in individuals' medical records.[2,3]

This study also provides data to address concerns that the types of injuries monitored in current surveillance efforts may be outdated. For example, recruit training activities and demographic changes that have occurred since the establishment of training-related injury reports (TRIR) a decade ago may have impacted the etiology of recruit injuries.[4] The frequencies of the different injuries types and body regions amongst both male and female recruits that result from this evaluation will provide the basis for monitoring specific injuries in future recruit populations. It is noted that these results are based on the Army recruit population and, therefore, may not be directly applicable to overall Army or other military "trainees" in specialized Army training programs (e.g., Airborne or Ranger School).

3.2 Background

3.2.1 The APHC Taxonomy of Injuries

The APHC injury taxonomy[1] defines injury categories based on the type of causal external energy and assigns applicable ICD-10-CM diagnostic codes to each category. The total of all codes and categories defines "all injuries." All ICD-10-CM codes identified by the taxonomy are also aligned with a specified body region and injury type (i.e., fracture, sprain, strain).

The first application of the injury taxonomy identified 1,125,659 initial injury medical encounters among the Active Army Component population in CY 2016.[1] This initial analysis aggregated the encounters of all Active Duty Soldiers, including Reserve and National Guard. Within this dataset are personnel referred to as "recruits" who are being indoctrinated into the Army through its required basic training program. These include men and women in BCT or OSUT (unit-associated BCT in conjunction with Advanced Individual Training (AIT) at the same location).

3.2.2 Army Recruit Injury Monitoring

Recruits have long been identified as a military group "at risk" for a myriad of physical injuries due to the repetition and intensity of physical-demanding activities required of them.[4-14] Within the recruit population, musculoskeletal (MSK) injuries, especially cumulative microtraumatic (overuse) injuries, have been described as "the single most significant medical impediment to military readiness."[7] Some common injuries (e.g., knee or lower-back pain) hinder Army training and readiness by the sheer volume of medical encounters they require.[4, 6, 7, 8, 12] Others (e.g., pelvic, hip, and lower-extremity stress fractures) occur less frequently but are much more costly and sometimes result in the medical discharge of recruits.[5, 7, 8, 12] As the loss of any recruit to an injury incurred during training is a substantial loss to Army investment, the magnitude of the injury problem in this population cannot be ignored.[4, 5, 7, 10]

As a high-risk group, the Army routinely monitors injuries among basic trainees.[4,6] Instead of monitoring all injuries, training-related injury monitoring has focused only on a selected subset of injuries considered especially problematic among recruits. The specific subset of ICD injury codes used was determined by Army subject matter experts and the findings of a 2003 Army study.[4,13] The purpose of that study was to compare modifications of the then-established Army recruit physical assessment and training program to a new standardized physical readiness training ("PRT") program. The study included an examination of six different ICD-9-CM injury indices used by different Army efforts at the time. The comparison of the frequency of codes described in that study provided the basis for Army subject matter experts to later formulate a standard group of ICD diagnostic codes for routine TRIR injury monitoring.[4] The original TRIR codes were a subset of the Army's Installation Injury Report (IIR) ICD-9-CM codes. The IIR represented the comprehensive list of injuries used in routine Army-wide and Army installation injury surveillance and monitoring.[1, 15] The group of ICD TRIR codes previously used included lower extremity MSK injuries (some cumulative microtraumatic as well as some acute) and some lower back injuries.

3.2.3 Army Recruit Injury Monitoring

When the ICD-10-CM codes were implemented in October 2015, a "cross-walk" approach was used to translate the ICD-9-CM injury codes used in both routine Army and installation analyses (IIR codes), as well as the TRIR, into ICD-10-CM codes. The cross-walk was performed as an interim measure pending the results of a detailed analysis of the more complex ICD-10-CM code system. Now that the injury taxonomy has been completed, [1] it can be used to re-evaluate the medical codes that have been used in Army injury surveillance and epidemiological monitoring (i.e., the IIR as well as TRIR codes).

Lower extremity injuries are still expected to be the most common recruit training-related injuries. However, given the reduced running-centric Army recruit PRT changes that have occurred since the IIR and TRIR lists were originally established,[5, 6, 13,16] this evaluation will provide current quantitative evidence as to the most frequent recruit training-related injury types and body regions.

4 METHOD

4.1 Population

The population was selected using a roster of recruits who had conducted training at any time during the CY 2016 as identified from the Army Training Requirements and Resources System (ATRRS). The roster included individuals' start- and end-training dates and designation as BCT (typically 10 weeks duration) or OSUT programs (duration variable, e.g., 14–19 weeks, based on military occupational specialty (MOS) (ATRRS Course catalog https://www.atrrs.army.mil/atrrscc/search.aspx).

4.2 Injury Case Definition

For this analysis, a "CY 2016 recruit incident injury" is defined as an initial encounter consistent with ICD-10-CM codes in the Taxonomy of Injuries [1] that is documented in recruit medical records during the time they participated in BCT/OSUT training activities. A 30-day incident rule was used as a "gap" rule (i.e., at least 30 days after an individual's first medical encounter with a specified injury code before that code can again be counted as an incident injury). This 30-day rule was chosen instead of the 60-day gap rule applied to the overall Army Active Component due to the limited exposure duration (70 to 117 days) of the training population. To most accurately embrace the 30-day rule, medical encounters were pulled from the Defense Medical Surveillance System (DMSS) starting from December 2015 for those individuals in training at that time. This meant that incident injuries reported for this study (which started with a January date) reflected the 30-day rule as applied to injuries seen in the prior month.

The Armed Forces Health Surveillance Branch (AFHSB) of the Defense Health Agency linked the recruits' training dates to their medical encounter data applying the APHC taxonomy of injury ICD-10-CM codes,[1] using first billable diagnosis code for each visit, out to six digits when available (minimum of fourth digit). Though this approach does not address the potential multiple medical codes (and thus injuries) that may be documented for a single medical encounter, the use of the first code is intended to represent the primary reason for the visit.

During the course of their training in BCT or OSUT, individuals can still have more than one incident injury, which is determined by the unique medical code and 30-day rule.

4.3 Analyses

Frequencies of incident injuries were calculated for all recruits and for both genders. Descriptive results were organized for the total recruit population and separately for men and women for—

- Frequencies for each injury code, along with body region and injury type.
- Frequencies for body region and injury type.
- Incident injury frequencies by Taxonomy exposure category and subcategory, body region, and injury type [(1).]

5 RESULTS

5.1 CY 2016 Recruit Population and Injury rates

The CY 2016 roster included 102,149 recruits (Table 1). Twenty percent of recruits were female, with a substantially higher proportion of women in BCT (25.4 %) as opposed to OSUT (only 6.7%).

The DMSS data yielded a total of 65,025 CY 2016 recruit incident injuries, equating to an average 0.64 incident injuries per recruit (Table 2). Injury incidence was twice as high for women (1.07 injuries/female recruit) than as for men (0.53 injuries/male recruit).

Table 1. **Army CY 2016 Recruits**

Recruit gender	BCT		OSUT		TOTALS	
	# Recruits	% Gender	# Recruits	% Gender	# Recruits	% Gender
Men	54,257	74.6	27,443	93.3	81,700	80.0
Women	18,469	25.4	1,980	6.7	20,449	20.0
TOTALs	72,726		29,423		**102,149**	

Notes:
Army BCT and OSUT recruits, participating in training during CY 2016, per ATTRS

Table 2. Army CY 2016 Recruits, All Injuries by Energy Transfer Category/Subcategory

Exposure Type: Energy Category	Energy Sub-Category	Body System	# Injuries	%All injuries	# Recruits injured	Men		Women	
						# Injuries	# Injured	# Injuries	# Injured
MECHANICAL	**ACUTE TRAUMA** *single high intensity force*	**All ACUTE**	**10,567**	**16.3**	**8,435**	**6,795**	**5,524**	**3,772**	**2,911**
		Non-MSK	4,007	6.2	3,577	2,825	2,541	1,182	1,036
		MSK	6,560	10.1	5,273	3,970	3,206	2,590	2,067
	CUMULATIVE MICROTRAUMA *repetitive low intensity force*	**All CUMULATIVE**	**52,105**	**80.1**	**29,294**	**34,840**	**20,250**	**17,265**	**9,044**
		Non-MSK	3,432	5.3	3,014	1,954	1,755	1,478	1,259
		MSK	48,673	74.9	27,478	32,886	19,105	15,787	8,373
	All MSK *(acute + cumulative)*		*55,233*	*84.9*	*29,497*	36,856	20,449	18,377	9,048
	NeuroMSK *("All MSK" + select neuro)*		*55,270*	*85.0*	*29,503*	36,876	20,451	18,394	9,052
	ALL MECHANICAL		**62,672**	**96.4**	**33,005**	**41,635**	**22,990**	**21,037**	**10,015**
ENVIRON-MENTAL	Thermal/Radiant		1,542	2.4	1,308	1,006	835	536	473
	Pressure		0	0.0	0	0	0	0	0
	Cold		32	0.0	32	19	19	13	13
	Electrical		0	0.0	0	0	0	0	0
	ALL ENVIRONMENTAL		**1,574**	**2.4**	**1,339**	**1,025**	**854**	**549**	**485**
POISONS	Drugs		51	0.1	37	27	20	24	17
	Chemicals		41	0.1	30	27	20	14	10
	Toxins		62	0.1	59	55	52	7	7
	ALL POISONS		**154**	**0.2**	**124**	**109**	**90**	**45**	**34**
NON-ENVIRON-MENTAL	Nuclear/Radiation		0	0.0	0	0	0	0	0
	Thermal (burns)		97	0.1	87	71	64	26	23
	Electrical		0	0.0	0	0	0	0	0
	ALL NON-ENVIRONMENTAL		**97**	**0.1**	**87**	**71**	**64**	**26**	**23**
OTHER	Operative/Medical Accidents		0	0.0	0	0	0	0	0
	Operative/Medical Complications		33	0.1	33	22	22	11	11
	Unspecified/Multiple Injuries		176	0.3	174	110	110	66	64
	Lack of essential element(s)		71	0.1	69	43	42	28	27
	Abuse /Intentional		48	0.1	47	27	26	21	21
	Other foreign body/food		25	0.0	13	23	11	2	2
	Other Reaction to external cause		175	0.3	158	123	113	52	45
	ALL OTHER		**528**	**0.8**	**490**	**348**	**320**	**180**	**170**
		TOTAL INJURIES	**65,025**	**100%**	**35,045**	**43,188**	**24,318**	**21,837**	**10,727**

Notes:
Army BCT and OSUT recruits in CY 2016 (N= 102,149**);** initial encounters (up to sixth digit, 30 day incident rule)
Source: Defense Medical Surveillance System (DMSS), 02-January-2018; prepared by AFHSB

5.2 Types of Injuries and Body Regions

Table 2 presents the number of CY 2016 recruit incident injuries organized by the APHC injury taxonomy exposure categories and subcategories. Exposure categories represent the type of energy transfer that caused the injury, and subcategories further describe the energy source or intensity (e.g., single, high-intensity forces that cause acute traumatic injuries and the lower intensity repetitive forces that cause cumulative microtraumatic injuries). The vast majority (96.4%) is a result of a mechanical energy transfer. Overall most (75%) incident injuries are cumulative microtraumatic MSK injuries.

Table 3 summarizes the CY 2016 recruit mechanical energy transfer incident injuries by general body region. Most incident injuries (75%) occur to a lower extremity. Table 4 further differentiates the most commonly injured body regions (i.e., secondary body regions) from mechanical energy transfers. The knee is the leading injured body part (19.5% all injuries), followed by the hip (14%), and then the ankle (12.1%) and foot/toe (11.8%). These are primarily cumulative microtraumatic injuries with the knee (18.2%), hip (12.6%), foot (10.8%) and ankle (8.7%) accounting for the highest proportions of these injuries. The ankle has the highest percentage of acute trauma injuries (3.7%), followed by the lower leg (2.1%) and hands/fingers (1.7%). Aside from the lower extremities, some notable cumulative microtraumatic injuries involved the lower back (4.25%) and shoulder (3.5%).

Table 5 presents the mechanical injuries organized by type of injury, including primary examples of injury diagnoses included in that injury-type category.

Table 3. Army CY 2016 Recruit Incident Injuries from Mechanical Energy Transfer Categorized by General Body Region

General Body Region	Acute Traumatic Injuries %	Cumulative Microtraumatic Injuries %	All Injuries %
HEAD & NECK	1.9	0.0	**2.2**
SPINE & BACK	0.4	6.9	**7.3**
TORSO	0.9	0.1	**1.0**
UPPER EXTREMITY	3.6	6.3	**9.9**
LOWER EXTREMITY	9.4	65.3	**74.8**
OTHER	--	--	**4.8**

Notes:
Army BCT and OSUT recruits in CY 2016 (N= 102,149**);** initial encounters (up to sixth digit, 30 day incident rule)
Source: Defense Medical Surveillance System (DMSS), 02-January-2018; prepared by AFHSB

Table 4. Army CY 2016 Recruit Incident Injuries from Mechanical Energy Transfer, Categorized by General and Specific Body Regions

General Body Region	Specific Body Region	Acute Trauma Injuries		Cumulative Microtraumatic Injuries		All Injuries	
		% all injury	Rank	% all injury	Rank	% all injury	Rank
HEAD & NECK	Traumatic Brain Injury(TBI)	0.2		0.0		0.2	
	Other head	0.9		0.0		0.9	
	Face	0.3		0.0		0.3	
	Eye	0.3		0.0		0.3	
	Ear	0.1		0.0		0.3	
	Neck	0.1		0.0		0.1	
	Head/Neck, Other	0.0		0.0		0.0	
SPINE & BACK	Back, Upper	0.0		0.5		0.6	
	Back, Middle	0.0		0.5		0.5	
	Back, Lower	0.4		**4.2**		**4.5**	
	Back, Other	0.0		1.7		1.7	
TORSO	Chest	0.5		0.0		0.6	
	Abdomen	0.1		0.0		0.1	
	Pelvis	0.3		0.6		0.9	
	Trunk, Other	0.0		0.0		0.0	
UPPER EXTREMITY	**Shoulder**	0.9		**3.5**		**4.4**	
	Arm, Upper	0.2		0.1		0.3	
	Elbow	0.3		0.6		0.9	
	Arm, Lower	0.3		0.1		0.4	
	Wrist	0.3		0.9		1.1	
	Hand, Finger	1.7	3rd	0.9		2.5	
	Arm, Other	0.0		0.3		0.4	
LOWER EXTREMITY	**Hip**	0.8		**12.6**	2nd	**14.0**	2nd
	Leg, Upper	0.7		2.9		3.6	
	Knee	1.3	4th	**18.2**	1st	**19.5**	1st
	Leg, Lower	2.1	2nd	**7.7**	5th	**9.8**	5th
	Ankle	3.4	1st	**8.7**	4th	**12.1**	3rd
	Foot, Toe	1.0	5th	**10.8**	3rd	**11.8**	4th
	Leg, Other	0.0		3.9		3.9	
OTHER	System-wide	0.0		0.0		0.0	
	Multiple	0.0		0.3		0.3	
	Unspecified	0.0		0.9		0.9	

Notes:
Army BCT and OSUT recruits in CY 2016 (N= 102,149); initial encounters (up to sixth digit, 30 day incident rule)
Source: Defense Medical Surveillance System (DMSS), 02-January-2018; prepared by AFHSB

Table 5. Army CY 2016 Recruit Incident Injuries from Mechanical Energy Transfer, Categorized by Injury Type

	Primarily MSK system						Primarily non-MSK or multisystem				
	Fracture	**Dislocation**	**Sprain/ Joint Damage**	**Strain/ Tear**	**MSK Tissue Damage, Other**	**Amputation & Crush**	**Internal Organ & Blood Vessel**	**Open Wound**	**Nerve**	**Contusion/ Superficial**	**Tissue Damage, Other**
Total #	3,058	184	2,948	2,055	46,912	43	169	681	176	5,708	523
% of all injuries (n=65,025)	**4.7%**	0.3%	**4.5%**	**3.2%**	**72.1%**	0.1%	0.3%	1.0%	0.3%	**8.8%**	0.8%
% Cumulative Microtraumatic Injuries (aka "overuse")	**67%**	0	1%	0.3	**99%**	0	0	0	**80%**	**55%**	**0.5%**
Primary injury examples	Stress fractures-leg, hip, pelvis	Shoulder	Sprained ankle	Strained muscle/ tendon	• Pain in knee, hip, leg, foot, ankle low back • Dorsalgia • Iliotibial band syndrome • Patellar tendinitis • Chondro-malacia • Patellar tendinitis • Plantar fascial fibromatosis • Cervicalgia	Fingers	TBI	Head & neck; hands	• Brachial plexus disorders • Carpal tunnel syndrome • Sciatica	Foot blisters	• Tinnitus & Hearing loss • Teeth • Other/ unspecified

Notes: Army BCT and OSUT recruits in CY 2016 (N= 102,149); initial encounters (up to sixth digit, 30 day incident rule)
Source: Defense Medical Surveillance System (DMSS), 02-January-2018; prepared by AFHSB

5.3 Most Common Recruit Injury Diagnoses

Data showing frequencies of all individual ICD-CM-10 incident injury codes for each gender are presented in Appendix B. Because some codes differentiate right or left side for same injury and because different providers will diagnose similar injuries with different codes, Tables 6-8 present a synthesis of the data provided in Appendix B. These are discussed further below.

5.3.1 Overall Injuries

The leading injury diagnoses codes documented by providers among recruits who sought an initial medical evaluation for an injury in CY 2016 are summarized in Table 6. Combined, these top ten diagnoses make up over 40% of the 65,025 recruit incident injuries, and 68% of those among female recruits. All are mechanical injuries. Especially of note, the majority (which include blisters) are cumulative microtraumatic injuries. Only ankle sprains are acute traumatic injuries. With the exception of foot blisters, all are MSK injuries. Most diagnoses are characterized by the symptom of pain, an undefined form of MSK tissue damage, in a specific body region.

Table 6. Top Ten Army CY 2016 Recruit Incident Injury Diagnoses Codes

Injury Diagnosis		% of injuries among		
ICD-10-CM Code	Description	All recruits	Men	Women
M25.56 (.1,.2, .9)	Pain in knee (right, left, unspecified)	10.1	8.6	16.1
M25.55 (.1,.2, .9)	Pain in hip (right, left, unspecified)	7.6	5.3	16.7
M25.57 (.1,.2, .9)	Pain in ankle and joints of foot (right, left, unspecified)	5.3	4.7	8.0
M79.66 (.1, .2, .3)	Pain in lower leg (right, left, unspecified)	3.2	2.9	4.4
M79.67 (.1, .2, .3)	Pain in foot (right, left, unspecified)	3.1	2.9	3.9
M54.5	Low back pain	2.6	2.4	3.4
S90.82*	Blister on foot (right, left, unspecified)	2.7	1.8	6.1
M79.60 (.4 , 5, 6)	Pain in leg (right, left, unspecified)	2.5	2.2	3.4
M25.51 (.1,.2, .9)	Pain in shoulder (right, left, unspecified)	2.2	2.2	2.0
S934*	Ankle ligament sprains (acute)	1.8	1.2	4.3
		41.1	34.2	68.3

Notes:
Army BCT and OSUT recruits in CY 2016 (N= 102,149); initial encounters (up to sixth digit, 30 day incident rule)
Source: Defense Medical Surveillance System (DMSS), 02-January-2018; prepared by AFHSB
All incident injuries = 65,025
*Indicates additional extension code for initial encounters

5.3.2 Stress Fractures

Though this recruit population's injuries only included 47% fractures, 67% of the fractures were *stress fractures* (Table 5). Unlike acute trauma fractures, stress fractures result from excessive repetitive stress to a specific body part (i.e., cumulative microtraumatic injuries caused by overuse). Table 7 summarizes the specific stress fracture diagnoses based on specific body part and by gender. Most stress fractures are to specific lower extremity body regions, over half occurring in leg bones (tibia, fibula, and femur). However, in women especially, the majority of the stress fractures occur to the pelvis.

Table 7. Army CY 2016 Recruit Stress Fracture Injury Diagnoses

ICD-10-CM Code	Specific Body part	All Recruits		Men		Women	
		# stress fractures	% all stress fractures*	# stress fractures	% all stress fractures (men)*	# stress fractures	% all stress fractures (women)*
M84.361-4,9	Lower Leg (Tibia, unspecified tibia-fibula)	592	**29**	373	**35**	219	**23**
M84.351-3	Upper Leg (Femur)	469	**23**	261	**24**	208	**21**
M84.350	Pelvis	398	**19**	105	**10**	293	**30**
M84.359A	Hip	292	**14**	171	**16**	121	**12**
M84.374-9	Foot, toe	202	**10**	126	**12**	76	**8**
M84.37(1-3)	Ankle	26	**1**	7	**1**	19	**2**
M4848XA	Lower Back	2	**0**	1	**0**	1	**0**
M84322A	Upper Arm	2	**0**	1	**0**	1	**0**
M8430/8 XA	Unspecified	66	**3**	31	**3**	35	**4**
Total		2,049	**100**	1076	**100**	973	**100**

Notes:
Army BCT and OSUT recruits in CY 2016 (N= 102,149); initial encounters (up to sixth digit, 30 day incident rule)
Source: Defense Medical Surveillance System (DMSS), 02-January-2018; prepared by AFHSB
All incident injuries = 65,025
*percent of all injury that are stress fractures = 3.2%

5.3.3 Injuries from Non-Mechanical Energy Transfer: Environmental, Heat- and Sun-Related Diagnoses

Table 8 summarizes the heat- and sun-related diagnoses in the CY 2016 recruit population.

Table 8. Army CY 2016 Recruit Heat-and Sun-related Injury Diagnoses

ICD-10-CM Code	Description	All Recruits		Men		Women	
		#	% *	#	% *	#	% *
T676XXA	Heat fatigue, transient	434	**28**	198	**20**	236	**44**
L740	Miliaria rubra	343	**22**	245	**24**	98	**18**
T675XXA	Heat exhaustion, unspecified	266	**17**	190	**19**	76	**14**
T679XXA	Effect of heat and light, unspecified	148	**10**	121	**12**	27	**5**
T671XXA	Heat syncope	85	**6**	46	**5**	39	**7**
L550	Sunburn of first degree	61	**4**	47	**5**	14	**3**
T678XXA	Other effects of heat and light	49	**3**	37	**4**	12	**2**
T673XXA	Heat exhaustion, anhydrotic,	33	**2**	17	**2**	16	**3**
L743	Miliaria, unspecified	29	**2**	26	**3**	3	**1**
T670XXA	Heatstroke and sunstroke	27	**2**	26	**3**	1	**0**
L551	Sunburn of second degree	24	**2**	22	**2**	2	**0**
T672XXA	Heat cramp	15	**1**	9	**1**	6	**1**
L559	Sunburn, unspecified	14	**1**	11	**1**	3	**1**
E871	Hypo-osmolality and hyponatremia	6	**0**	6	**1**	0	**0**
T677XXA	Heat edema	6	**0**	3	**0**	3	**1**
T674XXA	Heat exhaustion due to salt depletion	2	**0**	2	**0**	0	**0**
	TOTAL	**1542**	**1.5**	**1006**	**1.2**	**536**	**2.6**

Notes:
Army BCT and OSUT recruits in CY 2016 (N= 102,149); initial encounters (up to sixth digit, 30 day incident rule)
Source: Defense Medical Surveillance System (DMSS), 02-January-2018; prepared by AFHSB
All incident injuries = 65,025
*percent of all injury that heat/sun related injuries = 2.4%

6 DISCUSSION

6.1 Injury Rates

This study's findings are in line with prior studies that describe the high incidence of injury and especially of cumulative microtraumatic injuries among BCT or OSUT recruits. [4-14] This study shows one third (34%) of recruits experienced one or more injuries, with an average of two (1.9) injuries during their training program (Table 9). The findings also support prior studies [8, 11] that reported higher incidence among female recruits than among male recruits.

Table 9. Army CY 2016 Recruit Incident Injury Rates

Total Recruit Population (N=102,149)	# Injuries	# Recruits Injured	% Recruits Injured	Men (n=81,700			Women (n=20,449)		
				# Injuries	# Injured	% Injured	# Injuries	# Injured	% Injured
TOTAL INJURIES	**65,025**	35,045	34	43,188	24,318	30	21,837	10,727	52
Average #Injury/Recruit	0.64			0.53			1.07		
Injuries/Injured Recruit	1.9			1.8			2.04		

Notes:
Army BCT and OSUT recruits in CY 2016 (N= 102,149); initial encounters (up to sixth digit, 30 day incident rule)
Source: Defense Medical Surveillance System (DMSS), 02-January-2018; prepared by AFHSB
All incident injuries = 65,025

6.2 Injuries by Exposure Category (Energy Type)

6.2.1 Mechanical Injuries

Most recruit incident injuries (96.4% of the CY 2016 recruit incident injuries, Table 2) resulted from the transfer of external mechanical (kinetic) energy to body tissues. Most of these injuries are cumulative microtraumatic (overuse) injuries (80%, Table 2) that are the result of low intensity but repetitive forces on a body part or body region. Most overuse injuries are to the MSK tissues (74.9%, Table 2). These statistics are comparable to those of the overall Army CY 2016 incident injuries (97% mechanical energy, 69% cumulative microtraumatic MSK injuries). A common mechanical non-MSK injury type among recruits are foot blisters, which are superficial/contusion injuries (8.8%, Table 5).

6.2.1 Non-Mechanical Injuries (Environmental)

Within the CY 2016 recruit population 2.4% of all injuries (n=65,025) were caused by heat/sun-related thermal/radiant energy, as compared to only 0.39% heat/sun-related thermal/radiant energy injuries (n= 1,125,629) in the overall Army population for the same timeframe.[1] This suggests that the majority of the Army's heat-related injuries may be occurring among recruits.

6.3 Body Regions of Interest

6.3.1 Lower Extremities

Consistent with prior evidence,[4, 7, 14] this investigation found that the lower extremities (knee, followed by hip, ankle, and foot/toe) are the most frequently (74.8%) injured body region. Most of the lower extremity injuries are cumulative microtraumatic MSK injuries. These overuse injuries are primarily associated with the repeated forces exerted during extensive running, walking, and marching activities.[6,17-19] One non-MSK injury frequently diagnosed in this population is foot blisters, a common and well-known problem in physical training and foot marching activities.[20,21]

6.3.2 Lower Back

The lower back has been a body region of concern to military as well as civilian populations, especially as it is often the primary area of long-term chronic MSK conditions identified in these populations.[18-20] The combination of the new types, repetitive nature, and intensity levels of physically-demanding activities required of Army recruits (e.g., foot marching while donning/doffing and carrying heavy rucks, running long distances, lifting/carrying) is plausibly associated with initial new onset injuries to the lower back. These initial incident injuries may lead to future injuries or long-term conditions. For these reasons, several low back diagnosis codes were previously included in TRIR monitoring. This investigation shows that low back incident injuries were much fewer than those involving lower extremities (4.5% lower back compared to 74.8% lower extremities). However, the IPD subject matter experts consider the stresses on the lower back are a direct continuum of the mechanical (i.e., kinetic) energy that is transferred to the lower body during weight-bearing activities such as running and foot marching.[17-18] The primary diagnosis used by medical providers for this body region is described by a non-discrete "pain" code. As with other non-discrete pain codes, this diagnosis is an early indicator of tissue damage, and as such these encounters can provide the earliest opportunity for intervention.

6.3.3 Shoulder

Though not previously included in the TRIR, 4.4% of the incident injuries identified in this evaluation occurred specifically to the shoulder. Though essentially equivalent to the number of lower back injuries, the activities causing shoulder injuries would be different from the activities that cause lower extremity injuries (e.g., running, marching). Not previously the focus of training-related injury monitoring, these findings suggest that repetitive stress on the upper body from lifting or carrying weights results in a relatively notable number of injuries to the recruits' shoulder muscles, tendons, and joints. Activities such as the repeated donning and doffing and carrying of ruck sacks [18, 19] and weight training [22, 23] may be contributing to these injuries.

6.3.4 Most Frequent Specific Injury Diagnoses

The top 10 leading individual diagnoses among recruits made up over 40% of the 65,025 CY 2016 recruit incident injuries, and 68% of those diagnosed among female recruits. The injuries included—

- *MSK tissue damage onset as pain*. Among the 10 injury types, 8 were initial onset microtraumatic (overuse) injuries diagnosed by the symptom of pain for some form of MSK tissue damage in a specific body region. These resulted in 36.6% of the overall injuries (31.2% male recruits, 57.9% female recruits). Though codes reflecting non-discrete pain are the most common ones being used by the recruits' medical providers for incident injuries, these generic codes are too vague to adequately support specific prevention tactics. It would be beneficial if medical providers used more specific diagnostic codes for these injuries in order to better understand the pathophysiology and ultimately develop approaches to prevent them.

- *Foot blisters,* which are categorized as non-MSK cumulative microtraumatic injuries, resulted in 2.7% of the overall injuries (1.8% male recruits, 6.1% female recruits).

- *Ankle ligament sprains* were the only acute MSK injury, and resulted in 1.8% of the overall injuries (1.2% male recruits, 4.3% female recruits).

6.3.5 Stress Fractures

Consistent with prior studies, stress fractures have been highlighted as a unique and especially costly problem among Army recruits, in particular among female recruits.[8, 11, 24] Instead of occurring instantaneously (acute trauma), stress fractures are caused by excessive repetitive stress to bone tissue. Given the insidious onset of stress fractures, early non-descriptive diagnoses such as pain may be early indicators. The diagnoses of stress fractures themselves suggests more significant overtraining of individuals has occurred. This investigation supports the concern regarding stress fractures by demonstrating that of all fractures experienced by recruits, 67% were stress fractures.

Weight-bearing activities such as running have long been associated with these injuries.[8, 11, 24] Because energy is transferred from the ground up through the body's lower extremities, bones in the lower extremities receive the greatest exposure (energy transfer). This investigation supports this concept by demonstrating that the lower leg (tibia, and to lesser extent fibula) and upper leg (femur) are the most frequent sites of stress fractures in the overall recruit population. Among female recruits, however, stress fractures most frequently occurred in the pelvis. Both men and women experienced hip as well as pelvic stress fractures. This makes physiological sense given that the kinetic energy transfer associated with weight-bearing activities can extend up into the sacral region of the lower back (Figure 1). As MSK structures are most affected by the cumulative forces of this energy transfer, bones of the lower extremities as well as those in the "pelvic girdle" (i.e., ilium, pubic rami, sacrum, coccyx) are subject to stress fractures.

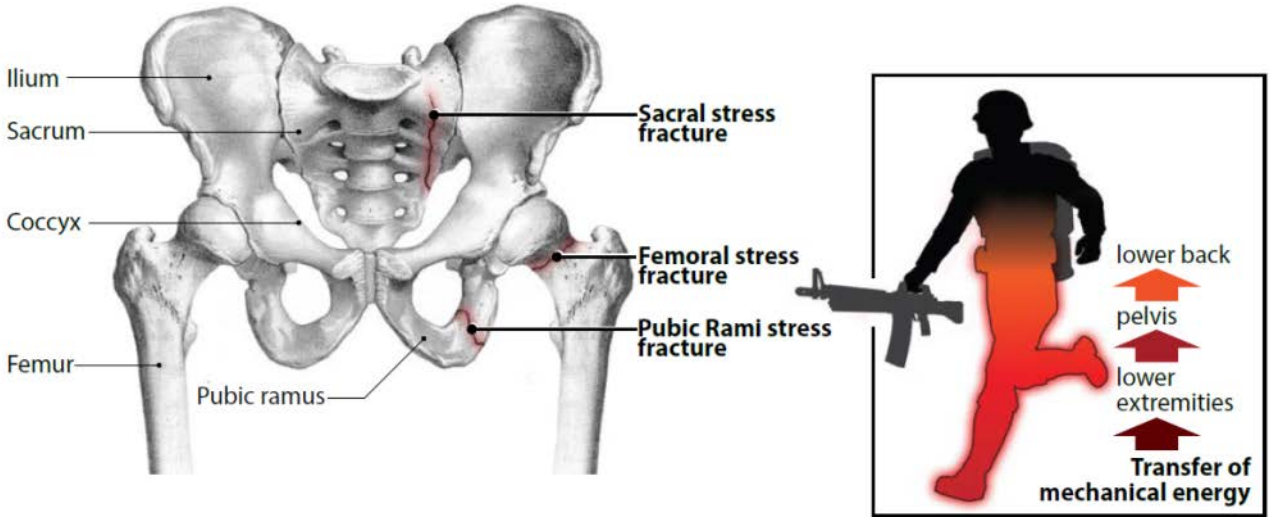

Figure 1.
Mechanical energy transfer to MSK tissues during weight-bearing activities (e.g., running)

7 CONCLUSIONS AND RECOMMENDATIONS

7.1 Conclusions

In order to support actionable injury prevention strategies among Army recruits, the routine monitoring of recruit injury trends should be continued. To address the expanded and restructured ICD-10-CM system, injury codes used in past training-related injury monitoring efforts needs to be updated. The diagnostic codes used to monitor injuries should be—

- Consistent with the terminology and taxonomic framework established by the APHC Taxonomy of Injuries; [(1)]
- Reasonably caused by specific Army recruit training-related activities;
- Focused on injuries that are of particular magnitude and/or impact and interest to the Army medical community and the U.S. Army Training and Doctrine Command (TRADOC), and
- Associated with specific injury prevention actions that can be taken to reduce those injuries.

7.2 Course of Action Options

An update to the recruit training injury codes of interest should still focus on mechanical injuries because: (1) these far outnumber the non-mechanical (environmental) injuries and (2) the primary non-mechanical injuries noted (e.g., heat-related injuries) are already tracked and monitored under separate programs such as reportable medical event documentation.[(25)] The following courses of action (COA) regarding the specific limited set of ICD-10-CM codes to be used for routine recruit injury monitoring were considered:

- *Top ten diagnosis codes only, as an indicator of overall recruit injury trends (COA1).* This approach is a simplistic selection based solely on leading frequencies. The codes include a combination of MSK injuries caused by overuse and acute trauma and non-MSK injuries (i.e., foot blisters). Though these 'most frequent' diagnoses could be used as early indicators of injury trends, the resulting data will be too limited to establish potential causes and/or to support specific interventions or prevention tactics.
- *Lower extremity codes only (COA2)*. This approach would capture the majority (75%) of identified injuries. The resulting data could be used as an indicator of primary injury trends. Because these injuries have been specifically associated weight-bearing activities (e.g., running, marching), prevention tactics and interventions can be directed to this body region and the associated causal activities. Lower extremity codes could be further limited to just MSK injuries and or cumulative microtraumatic MSK injury codes.

- *Lower extremity codes, plus lower back codes, and pelvic stress fracture codes (COA3)*. This approach includes the body region associated with the majority of injuries (lower extremities), as well as additional injuries considered to be caused by primary type of repetitive weight-bearing activities (running and distance marching). As discussed in sections 6.3.5. and 6.3.6, the energy transfer to the lower extremities that results in these injuries represents a kinetic energy chain that will often extend up to the lower back. As with COA2, the data would directly support focus on prevention and interventions associated with body weight-bearing activities. Though this COA will include more codes, the additional codes are not expected to substantially impact overall trends, but would be more inclusive of the primary injuries of concern to this population.

  In addition, COA3 could be limited to just MSK injury codes or just MSK cumulative microtraumatic codes. Limiting injury codes to those identified as MSK injuries means exclusion of non–MSK injuries (e.g., blisters) and ensures that routine training-related injury reports highlight the injuries that have the most significant medical impact to recruits' successful completion of recruit training. The majority of the MSK lower extremity and lower back injuries are cumulative microtraumatic injuries. These include less common but severe injuries such as pelvic stress fractures. Also of note, a small number of acute traumatic MSK lower extremity and back injuries are often part of the continuum of tissue damage that leads to cumulative microtraumatic injury.

- *All injury codes (COA4).* This is the most comprehensive approach. However, because so many injury types are caused by different types of energy transfer and activities reported data would need to be distinguished into different injury categories and/or body regions described by the injury taxonomy to be of practical use. This would require more length and result in complicated recruit injury reporting products that are likely to be overwhelming to commanders and unit leaders. In addition, it is noted that some injuries (such as heat injuries) are already tracked and reported to leaders through other mechanisms. Though including all injuries may be unnecessary, there may be value in tracking additional subsets of injuries. For example, this investigation demonstrated that shoulder injuries occurred as frequently as lower back injuries. Shoulder injuries would not be caused by the same energy transfer associated with weight-bearing activities such as running. If desired, a separate shoulder injury indices may be warranted.

7.3 Recommendation

Future Army recruit injury monitoring should focus on the acute and cumulative microtraumatic MSK injuries represented by COA3 (i.e., MSK lower extremity codes, plus MSK lower back codes and pelvic stress fracture codes). The resulting data will provide commanders and units with practical information to help them observe routine trends and reduce the types of injuries that have the largest impact on recruits.

As these injuries are the result of weight-bearing activities such as distance running and foot marching, leaders should use increasing or higher than expected rates of these injuries as indicators of excessive running and/or marching activities (distances and/or frequencies). Recognizing disparate impacts to men and women is also critical because gender may be a risk

factor for specific injuries and body regions (e.g., female recruit pelvic stress fractures). Specific injury reduction tactics and interventions units may need to consider include:

- Slowly acclimate recruits, especially those with low fitness level and/or high body mass index (BMI) to increase distances and frequencies of body weight-bearing activities (e.g., running, marching).
- Assign recruits to ability groups for running and marching.
- Reduce frequency and distances of running activities >1 mile.
- Reduce frequency and distances of distance road marches (e.g., to one a week maximum, not on days consecutive with distance running).
- Using PRT guidance, ensure training activities are balanced with strength building, agility, speed, and balance activities.
- Ensure proper equipment is used (e.g., running shoes in decent condition (not old or worn), synthetic socks, and blister prevention material).[21]
- Ensure proper use of equipment (e.g., proper donning, diffing, and wearing of rucks carried in road marches).[19]

Commanders may also wish to also have similar data to help them identify trends and units with problems with other injuries not associated with distance running/foot marching (e.g., shoulder injuries which may be caused by weight-lifting or donning/doffing of ruck sacks). This data can be provided if requested.

8 POINT OF CONTACT

The APHC Injury Prevention Division is the point of contact for this project and can be reached via email at usarmy.apg.medcom-aphc.mbx.injuryprevention@mail.mil; or by phone at 410-436-4655 (commercial) or 584-4655 (DSN).

APPENDIX A

References

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APPENDIX B

Frequency of ICD-10-CM Injury Codes Identified in CY 2016 Army Recruits*

***N= 65,025, includes injuries identified more than 5 occurrences**

PHIP No. 12-01-0116, Taxonomy- Analysis of Army Recruit Injuries, January 2018

ICD10 thru 7th DIGIT (from column I in APHC Taxonomy Codes Excel)	ICD 10 DEFINITION (column J in APHC Taxonomy Codes Excel)	Body Region.1 (column L in APHC Taxonomy Codes Excel)	Body Region.2 (column M in APHC Taxonomy Codes Excel)	Injury type (column N in APHC Taxonomy Codes Excel)	Total #	Male #	Female #
M25561	Pain in right knee	LOWER EXTREM	Knee	MSK TISSUE DAMAGE, OTHER	4911	3082	1829
M25551	Pain in right hip	LOWER EXTREM	Hip	MSK TISSUE DAMAGE, OTHER	3918	2100	1818
M25562	Pain in left knee	LOWER EXTREM	Knee	MSK TISSUE DAMAGE, OTHER	3485	2271	1214
M25552	Pain in left hip	LOWER EXTREM	Hip	MSK TISSUE DAMAGE, OTHER	2758	1468	1290
M545	Low back pain	SPINE & BACK	Back, Lower	MSK TISSUE DAMAGE, OTHER	2632	1927	705
M25571	Pain in right ankle and joints of right foot	LOWER EXTREM	Ankle	MSK TISSUE DAMAGE, OTHER	2441	1570	871
M25572	Pain in left ankle and joints of left foot	LOWER EXTREM	Ankle	MSK TISSUE DAMAGE, OTHER	2095	1370	725
M25569	Pain in unspecified knee	LOWER EXTREM	Knee	MSK TISSUE DAMAGE, OTHER	1886	1640	246
M79661	Pain in right lower leg	LOWER EXTREM	Leg, Lower	MSK TISSUE DAMAGE, OTHER	1734	1143	591
S90821A	Blister (nonthermal), right foot, initial encour	LOWER EXTREM	Foot, toe	CONTUSION/SUPERFICIAL	1590	827	763
M79671	Pain in right foot	LOWER EXTREM	Foot, toe	MSK TISSUE DAMAGE, OTHER	1297	853	444
M79604	Pain in right leg	LOWER EXTREM	Leg, Other	MSK TISSUE DAMAGE, OTHER	1244	817	427
M25559	Pain in unspecified hip	LOWER EXTREM	Hip	MSK TISSUE DAMAGE, OTHER	1060	751	309
M25511	Pain in right shoulder	UPPER EXTREM	Shoulder	MSK TISSUE DAMAGE, OTHER	972	757	215
M549	Dorsalgia, unspecified	SPINE & BACK	Back, Other	MSK TISSUE DAMAGE, OTHER	972	750	222
M79673	Pain in unspecified foot	LOWER EXTREM	Foot, toe	MSK TISSUE DAMAGE, OTHER	965	909	56
M25579	Pain in unspecified ankle and joints of unspec	LOWER EXTREM	Ankle	MSK TISSUE DAMAGE, OTHER	911	866	45
M25512	Pain in left shoulder	UPPER EXTREM	Shoulder	MSK TISSUE DAMAGE, OTHER	897	711	186
M79672	Pain in left foot	LOWER EXTREM	Foot, toe	MSK TISSUE DAMAGE, OTHER	864	575	289
M79662	Pain in left lower leg	LOWER EXTREM	Leg, Lower	MSK TISSUE DAMAGE, OTHER	832	568	264
M79605	Pain in left leg	LOWER EXTREM	Leg, Other	MSK TISSUE DAMAGE, OTHER	785	558	227
M79669	Pain in unspecified lower leg	LOWER EXTREM	Leg, Lower	MSK TISSUE DAMAGE, OTHER	667	624	43
S90822A	Blister (nonthermal), left foot, initial encount	LOWER EXTREM	Foot, toe	CONTUSION/SUPERFICIAL	632	374	258
M79651	Pain in right thigh	LOWER EXTREM	Leg, Upper	MSK TISSUE DAMAGE, OTHER	591	364	227
S90829A	Blister (nonthermal), unspecified foot, initial	LOWER EXTREM	Foot, toe	CONTUSION/SUPERFICIAL	536	305	231
M79606	Pain in leg, unspecified	LOWER EXTREM	Leg, Other	MSK TISSUE DAMAGE, OTHER	503	453	50
S93401A	Sprain of unspecified ligament of right ankle,	LOWER EXTREM	Ankle	SPRAIN/JOINT DAMAGE	475	256	219
M79652	Pain in left thigh	LOWER EXTREM	Leg, Upper	MSK TISSUE DAMAGE, OTHER	473	288	185
S93402A	Sprain of unspecified ligament of left ankle, i	LOWER EXTREM	Ankle	SPRAIN/JOINT DAMAGE	462	239	223
T676XXA	Heat fatigue, transient, initial encounter	OTHER	Systemwide	OTHER - Heat/Sun	434	198	236
M7631	Iliotibial band syndrome, right leg	LOWER EXTREM	Leg, Lower	MSK TISSUE DAMAGE, OTHER	403	289	114
M84350A	Stress fracture, pelvis, initial encounter for fra	TORSO	Pelvis	FRACTURE	398	105	293
S86911A	Strain of unspecified muscle(s) and tendon(s)	LOWER EXTREM	Leg, Lower	STRAIN/TEAR	370	200	170
M25519	Pain in unspecified shoulder	UPPER EXTREM	Shoulder	MSK TISSUE DAMAGE, OTHER	350	338	12
L740	Miliaria rubra	OTHER	Unspecified	OTHER - Heat/Sun	343	245	98
M222X1	Patellofemoral disorders, right knee	LOWER EXTREM	Knee	MSK TISSUE DAMAGE, OTHER	343	179	164
M722	Plantar fascial fibromatosis	LOWER EXTREM	Foot, toe	MSK TISSUE DAMAGE, OTHER	341	182	159
M542	Cervicalgia	SPINE & BACK	Back, Upper	MSK TISSUE DAMAGE, OTHER	340	254	86
M84361A	Stress fracture, right tibia, initial encounter fo	LOWER EXTREM	Leg, Lower	FRACTURE	325	201	124
M546	Pain in thoracic spine	SPINE & BACK	Back, Middle	MSK TISSUE DAMAGE, OTHER	324	260	64
M79659	Pain in unspecified thigh	LOWER EXTREM	Leg, Upper	MSK TISSUE DAMAGE, OTHER	321	288	33
M7632	Iliotibial band syndrome, left leg	LOWER EXTREM	Leg, Lower	MSK TISSUE DAMAGE, OTHER	320	229	91
S93492A	Sprain of other ligament of left ankle, initial e	LOWER EXTREM	Ankle	SPRAIN/JOINT DAMAGE	309	152	157
M25531	Pain in right wrist	UPPER EXTREM	Wrist	MSK TISSUE DAMAGE, OTHER	297	213	84
M7651	Patellar tendinitis, right knee	LOWER EXTREM	Knee	MSK TISSUE DAMAGE, OTHER	296	158	138
M84359A	Stress fracture, hip, unspecified, initial encou	LOWER EXTREM	Hip	FRACTURE	292	171	121
S93491A	Sprain of other ligament of right ankle, initial	LOWER EXTREM	Ankle	SPRAIN/JOINT DAMAGE	292	142	150
M84351A	Stress fracture, right femur, initial encounter	LOWER EXTREM	Leg, Upper	FRACTURE	274	142	132
T675XXA	Heat exhaustion, unspecified, initial encount	OTHER	Systemwide	OTHER - Heat/Sun	266	190	76
S86919A	Strain of unspecified muscle(s) and tendon(s)	LOWER EXTREM	Leg, Lower	STRAIN/TEAR	215	119	96

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M2241	Chondromalacia patellae, right knee	LOWER EXTREM	Knee	MSK TISSUE DAMAGE, OTHER	208	127	81
M25532	Pain in left wrist	UPPER EXTREM	Wrist	MSK TISSUE DAMAGE, OTHER	200	154	46
M84362A	Stress fracture, left tibia, initial encounter for	LOWER EXTREM	Leg, Lower	FRACTURE	190	124	66
M79641	Pain in right hand	UPPER EXTREM	Hand, finger	MSK TISSUE DAMAGE, OTHER	185	144	41
M7652	Patellar tendinitis, left knee	LOWER EXTREM	Knee	MSK TISSUE DAMAGE, OTHER	168	102	66
M222X2	Patellofemoral disorders, left knee	LOWER EXTREM	Knee	MSK TISSUE DAMAGE, OTHER	167	91	76
M7089	Other soft tissue disorders related to use, ove	OTHER	Multiple	MSK TISSUE DAMAGE, OTHER	165	60	105
M7661	Achilles tendinitis, right leg	LOWER EXTREM	Leg, Lower	MSK TISSUE DAMAGE, OTHER	159	104	55
M79674	Pain in right toe(s)	LOWER EXTREM	Foot, toe	MSK TISSUE DAMAGE, OTHER	157	133	24
M84352A	Stress fracture, left femur, initial encounter fo	LOWER EXTREM	Leg, Upper	FRACTURE	149	86	63
T679XXA	Effect of heat and light, unspecified, initial en	OTHER	Systemwide	OTHER - Heat/Sun	148	121	27
S39012A	Strain of muscle, fascia and tendon of lower b	SPINE & BACK	Back, Lower	STRAIN/TEAR	144	99	45
M79644	Pain in right finger(s)	UPPER EXTREM	Hand, finger	MSK TISSUE DAMAGE, OTHER	143	105	38
M2242	Chondromalacia patellae, left knee	LOWER EXTREM	Knee	MSK TISSUE DAMAGE, OTHER	142	91	51
M791	Myalgia	OTHER	Unspecified	MSK TISSUE DAMAGE, OTHER	139	90	49
M7662	Achilles tendinitis, left leg	LOWER EXTREM	Leg, Lower	MSK TISSUE DAMAGE, OTHER	136	92	44
S90811A	Abrasion, right foot, initial encounter	LOWER EXTREM	Foot, toe	CONTUSION/SUPERFICIAL	126	69	57
M25521	Pain in right elbow	UPPER EXTREM	Elbow	MSK TISSUE DAMAGE, OTHER	122	110	12
M5489	Other dorsalgia	SPINE & BACK	Back, Other	MSK TISSUE DAMAGE, OTHER	122	73	49
M25522	Pain in left elbow	UPPER EXTREM	Elbow	MSK TISSUE DAMAGE, OTHER	118	97	21
S76011A	Strain of muscle, fascia and tendon of right hi	LOWER EXTREM	Hip	STRAIN/TEAR	118	46	72
S8001XA	Contusion of right knee, initial encounter	LOWER EXTREM	Knee	CONTUSION/SUPERFICIAL	116	52	64
M79675	Pain in left toe(s)	LOWER EXTREM	Foot, toe	MSK TISSUE DAMAGE, OTHER	111	81	30
M7088	Other soft tissue disorders related to use, ove	OTHER	Unspecified	MSK TISSUE DAMAGE, OTHER	110	45	65
S8002XA	Contusion of left knee, initial encounter	LOWER EXTREM	Knee	CONTUSION/SUPERFICIAL	109	63	46
S93431A	Sprain of tibiofibular ligament of right ankle, i	LOWER EXTREM	Ankle	SPRAIN/JOINT DAMAGE	105	65	40
T7840XA	Allergy, unspecified, initial encounter	OTHER	Systemwide	OTHER - Trauma	103	75	28
S93432A	Sprain of tibiofibular ligament of left ankle, in	LOWER EXTREM	Ankle	SPRAIN/JOINT DAMAGE	102	65	37
S86912A	Strain of unspecified muscle(s) and tendon(s)	LOWER EXTREM	Leg, Lower	STRAIN/TEAR	99	58	41
M6282	Rhabdomyolysis	OTHER	Unspecified	MSK TISSUE DAMAGE, OTHER	95	68	27
M84374A	Stress fracture, right foot, initial encounter fo	LOWER EXTREM	Foot, toe	FRACTURE	95	57	38
S76012A	Strain of muscle, fascia and tendon of left hip	LOWER EXTREM	Hip	STRAIN/TEAR	95	44	51
S060X0A	Concussion without loss of consciousness, ini	HEAD & NECK	TBI	Internal Organ & Blood Vessel	90	67	23
T671XXA	Heat syncope, initial encounter	OTHER	Systemwide	OTHER - Heat/Sun	85	46	39
M84375A	Stress fracture, left foot, initial encounter for	LOWER EXTREM	Foot, toe	FRACTURE	83	52	31
M79601	Pain in right arm	UPPER EXTREM	Arm, Other	MSK TISSUE DAMAGE, OTHER	82	64	18
S0990XA	Unspecified injury of head, initial encounter	HEAD & NECK	Other head	TISSUE DAMAGE, OTHER	82	47	35
S0181XA	Laceration without foreign body of other part	HEAD & NECK	Other head	OPEN WOUND	79	73	6
S0101XA	Laceration without foreign body of scalp, initi	HEAD & NECK	Other head	OPEN WOUND	77	70	7
M25539	Pain in unspecified wrist	UPPER EXTREM	Wrist	MSK TISSUE DAMAGE, OTHER	76	72	4
S30810A	Abrasion of lower back and pelvis, initial encc	TORSO	Pelvis	CONTUSION/SUPERFICIAL	76	58	18
M79609	Pain in unspecified limb	OTHER	Unspecified	MSK TISSUE DAMAGE, OTHER	71	64	7
M79602	Pain in left arm	UPPER EXTREM	Arm, Other	MSK TISSUE DAMAGE, OTHER	69	51	18
M79642	Pain in left hand	UPPER EXTREM	Hand, finger	MSK TISSUE DAMAGE, OTHER	67	56	11
S90424A	Blister (nonthermal), right lesser toe(s), initia	LOWER EXTREM	Foot, toe	CONTUSION/SUPERFICIAL	66	40	26
S60221A	Contusion of right hand, initial encounter	UPPER EXTREM	Hand, finger	CONTUSION/SUPERFICIAL	64	42	22
M79645	Pain in left finger(s)	UPPER EXTREM	Hand, finger	MSK TISSUE DAMAGE, OTHER	63	47	16
T07	Unspecified multiple injuries	OTHER	Unspecified	OTHER - Unspecified	63	38	25
T148	Other injury of unspecified body region	OTHER	Unspecified	OTHER - Unspecified	62	34	28
L550	Sunburn of first degree	OTHER	Unspecified	OTHER - Heat/Sun	61	47	14
S93411A	Sprain of calcaneofibular ligament of right ank	LOWER EXTREM	Ankle	SPRAIN/JOINT DAMAGE	61	33	28

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S93412A	Sprain of calcaneofibular ligament of left ankl	LOWER EXTREM	Ankle	SPRAIN/JOINT DAMAGE	60	36	24
M25529	Pain in unspecified elbow	UPPER EXTREM	Elbow	MSK TISSUE DAMAGE, OTHER	59	59	0
S46811A	Strain of other muscles, fascia and tendons at	UPPER EXTREM	Shoulder	STRAIN/TEAR	59	38	21
S90521A	Blister (nonthermal), right ankle, initial encou	LOWER EXTREM	Ankle	CONTUSION/SUPERFICIAL	59	26	33
S60561A	Insect bite (nonvenomous) of right hand, initi	UPPER EXTREM	Hand, finger	CONTUSION/SUPERFICIAL	58	44	14
S80211A	Abrasion, right knee, initial encounter	LOWER EXTREM	Knee	CONTUSION/SUPERFICIAL	56	43	13
S39011A	Strain of muscle, fascia and tendon of abdom	TORSO	Abdomen	STRAIN/TEAR	54	32	22
S0083XA	Contusion of other part of head, initial encou	HEAD & NECK	Other head	Contusion/Superficial	53	35	18
S46812A	Strain of other muscles, fascia and tendons at	UPPER EXTREM	Shoulder	STRAIN/TEAR	53	38	15
S46912A	Strain of unspecified muscle, fascia and tendc	UPPER EXTREM	Shoulder	STRAIN/TEAR	53	33	20
M7742	Metatarsalgia, left foot	LOWER EXTREM	Foot, toe	MSK TISSUE DAMAGE, OTHER	52	21	31
M79643	Pain in unspecified hand	UPPER EXTREM	Hand, finger	MSK TISSUE DAMAGE, OTHER	52	48	4
M7061	Trochanteric bursitis, right hip	LOWER EXTREM	Hip	MSK TISSUE DAMAGE, OTHER	51	21	30
S29012A	Strain of muscle and tendon of back wall of th	TORSO	Chest	STRAIN/TEAR	51	35	16
T1490	Injury, unspecified	OTHER	Unspecified	OTHER - Unspecified	51	38	13
M7741	Metatarsalgia, right foot	LOWER EXTREM	Foot, toe	MSK TISSUE DAMAGE, OTHER	50	21	29
S83412A	Sprain of medial collateral ligament of left kn	LOWER EXTREM	Knee	SPRAIN/JOINT DAMAGE	50	26	24
T732XXA	Exhaustion due to exposure, initial encounter	OTHER	Systemwide	OTHER - Exhaustion	50	30	20
S70311A	Abrasion, right thigh, initial encounter	LOWER EXTREM	Leg, Upper	CONTUSION/SUPERFICIAL	49	36	13
S8992XA	Unspecified injury of left lower leg, initial en	LOWER EXTREM	Leg, Lower	TISSUE DAMAGE, OTHER	49	30	19
T678XXA	Other effects of heat and light, initial encount	OTHER	Systemwide	OTHER - Heat/Sun	49	37	12
M7630	Iliotibial band syndrome, unspecified leg	LOWER EXTREM	Leg, Lower	MSK TISSUE DAMAGE, OTHER	48	42	6
S0093XA	Contusion of unspecified part of head, initial	HEAD & NECK	Other head	Contusion/Superficial	47	29	18
M84353A	Stress fracture, unspecified femur, initial enc	LOWER EXTREM	Leg, Upper	FRACTURE	46	33	13
S161XXA	Strain of muscle, fascia and tendon at neck le	HEAD & NECK	Neck	STRAIN/TEAR	46	25	21
S90819A	Abrasion, unspecified foot, initial encounter	LOWER EXTREM	Foot, toe	CONTUSION/SUPERFICIAL	46	21	25
S90812A	Abrasion, left foot, initial encounter	LOWER EXTREM	Foot, toe	CONTUSION/SUPERFICIAL	45	19	26
S060X1A	Concussion with loss of consciousness of 30 m	HEAD & NECK	TBI	Internal Organ & Blood Vessel	44	26	18
S76311A	Strain of muscle, fascia and tendon of the pos	LOWER EXTREM	Leg, Upper	STRAIN/TEAR	44	32	12
M84369A	Stress fracture, unspecified tibia and fibula, ir	LOWER EXTREM	Leg, Lower	FRACTURE	43	29	14
S8991XA	Unspecified injury of right lower leg, initial er	LOWER EXTREM	Leg, Lower	TISSUE DAMAGE, OTHER	43	29	14
S93409A	Sprain of unspecified ligament of unspecified	LOWER EXTREM	Ankle	SPRAIN/JOINT DAMAGE	42	32	10
M799	Soft tissue disorder, unspecified	OTHER	Unspecified	MSK TISSUE DAMAGE, OTHER	41	23	18
S0180XA	Unspecified open wound of other part of hea	HEAD & NECK	Other head	OPEN WOUND	41	34	7
S46911A	Strain of unspecified muscle, fascia and tendc	UPPER EXTREM	Shoulder	STRAIN/TEAR	41	28	13
S60562A	Insect bite (nonvenomous) of left hand, initia	UPPER EXTREM	Hand, finger	CONTUSION/SUPERFICIAL	41	35	6
S90425A	Blister (nonthermal), left lesser toe(s), initial	LOWER EXTREM	Foot, toe	CONTUSION/SUPERFICIAL	41	20	21
M2240	Chondromalacia patellae, unspecified knee	LOWER EXTREM	Knee	MSK TISSUE DAMAGE, OTHER	40	24	16
M7041	Prepatellar bursitis, right knee	LOWER EXTREM	Knee	MSK TISSUE DAMAGE, OTHER	40	35	5
S73191A	Other sprain of right hip, initial encounter	LOWER EXTREM	Hip	SPRAIN/JOINT DAMAGE	40	28	12
S83411A	Sprain of medial collateral ligament of right k	LOWER EXTREM	Knee	SPRAIN/JOINT DAMAGE	40	24	16
M8430XA	Stress fracture, unspecified site, initial encou	OTHER	Unspecified	FRACTURE	39	18	21
S2341XA	Sprain of ribs, initial encounter	TORSO	Chest	SPRAIN/JOINT DAMAGE	39	23	16
S8391XA	Sprain of unspecified site of right knee, initial	LOWER EXTREM	Knee	SPRAIN/JOINT DAMAGE	39	22	17
S99912A	Unspecified injury of left ankle, initial encour	LOWER EXTREM	Ankle	MSK TISSUE DAMAGE, OTHER	39	24	15
S01511A	Laceration without foreign body of lip, initial	HEAD & NECK	Face	OPEN WOUND	38	35	3
S3992XA	Unspecified injury of lower back, initial encou	SPINE & BACK	Back, Lower	TISSUE DAMAGE, OTHER	38	25	13
S60511A	Abrasion of right hand, initial encounter	UPPER EXTREM	Hand, finger	CONTUSION/SUPERFICIAL	38	28	10
S73101A	Unspecified sprain of right hip, initial encount	LOWER EXTREM	Hip	SPRAIN/JOINT DAMAGE	38	22	16
M79676	Pain in unspecified toe(s)	LOWER EXTREM	Foot, toe	MSK TISSUE DAMAGE, OTHER	37	36	1
S76312A	Strain of muscle, fascia and tendon of the pos	LOWER EXTREM	Leg, Upper	STRAIN/TEAR	37	20	17

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S76812A	Strain of other specified muscles, fascia and t	LOWER EXTREM	Leg, Upper	STRAIN/TEAR	36	19	17
S80812A	Abrasion, left lower leg, initial encounter	LOWER EXTREM	Leg, Lower	CONTUSION/SUPERFICIAL	36	24	12
S300XXA	Contusion of lower back and pelvis, initial en	TORSO	Pelvis	CONTUSION/SUPERFICIAL	35	13	22
S86111A	Strain of other muscle(s) and tendon(s) of pos	LOWER EXTREM	Leg, Lower	STRAIN/TEAR	35	23	12
H903	Sensorineural hearing loss, bilateral	HEAD & NECK	Ear	TISSUE DAMAGE, OTHER	34	29	5
S8392XA	Sprain of unspecified site of left knee, initial	LOWER EXTREM	Knee	SPRAIN/JOINT DAMAGE	34	25	9
S93422A	Sprain of deltoid ligament of left ankle, initial	LOWER EXTREM	Ankle	SPRAIN/JOINT DAMAGE	34	20	14
S99911A	Unspecified injury of right ankle, initial encou	LOWER EXTREM	Ankle	MSK TISSUE DAMAGE, OTHER	34	22	12
S46011A	Strain of muscle(s) and tendon(s) of the rotat	UPPER EXTREM	Shoulder	STRAIN/TEAR	33	21	12
S70319A	Abrasion, unspecified thigh, initial encounter	LOWER EXTREM	Leg, Upper	CONTUSION/SUPERFICIAL	33	25	8
S76811A	Strain of other specified muscles, fascia and t	LOWER EXTREM	Leg, Upper	STRAIN/TEAR	33	20	13
S93421A	Sprain of deltoid ligament of right ankle, initi	LOWER EXTREM	Ankle	SPRAIN/JOINT DAMAGE	33	19	14
T673XXA	Heat exhaustion, anhydrotic, initial encounte	OTHER	Systemwide	OTHER - Heat/Sun	33	17	16
S0003XA	Contusion of scalp, initial encounter	HEAD & NECK	Other head	CONTUSION/SUPERFICIAL	32	28	4
S62306A	Unspecified fracture of fifth metacarpal bone	UPPER EXTREM	Hand, finger	FRACTURE	32	29	3
S79911A	Unspecified injury of right hip, initial encount	LOWER EXTREM	Hip	TISSUE DAMAGE, OTHER	32	13	19
S8012XA	Contusion of left lower leg, initial encounter	LOWER EXTREM	Leg, Lower	CONTUSION/SUPERFICIAL	32	20	12
G540	Brachial plexus disorders	TORSO	Chest	NERVE	31	22	9
S0501XA	Injury of conjunctiva and corneal abrasion wit	HEAD & NECK	Eye	CONTUSION/SUPERFICIAL	31	23	8
M25461	Effusion, right knee	LOWER EXTREM	Knee	MSK TISSUE DAMAGE, OTHER	30	22	8
M76822	Posterior tibial tendinitis, left leg	LOWER EXTREM	Leg, Lower	MSK TISSUE DAMAGE, OTHER	30	21	9
S60521A	Blister (nonthermal) of right hand, initial enc	UPPER EXTREM	Hand, finger	CONTUSION/SUPERFICIAL	30	22	8
S90522A	Blister (nonthermal), left ankle, initial encour	LOWER EXTREM	Ankle	CONTUSION/SUPERFICIAL	30	13	17
T1491	Suicide attempt	OTHER	Unspecified	OTHER - Unspecified	30	20	10
H9312	Tinnitus, left ear	HEAD & NECK	Ear	TISSUE DAMAGE, OTHER	29	24	5
L743	Miliaria, unspecified	OTHER	Unspecified	OTHER - Heat/Sun	29	26	3
M25462	Effusion, left knee	LOWER EXTREM	Knee	MSK TISSUE DAMAGE, OTHER	29	18	11
S43004A	Unspecified dislocation of right shoulder joint	UPPER EXTREM	Shoulder	DISLOCATION	29	28	1
M79632	Pain in left forearm	UPPER EXTREM	Arm, Lower	MSK TISSUE DAMAGE, OTHER	28	18	10
S79912A	Unspecified injury of left hip, initial encounte	LOWER EXTREM	Hip	TISSUE DAMAGE, OTHER	28	10	18
S86891A	Other injury of other muscle(s) and tendon(s)	LOWER EXTREM	Leg, Lower	MSK TISSUE DAMAGE, OTHER	28	15	13
S90421A	Blister (nonthermal), right great toe, initial er	LOWER EXTREM	Foot, toe	CONTUSION/SUPERFICIAL	28	19	9
H905	Unspecified sensorineural hearing loss	HEAD & NECK	Ear	TISSUE DAMAGE, OTHER	27	24	3
M7051	Other bursitis of knee, right knee	LOWER EXTREM	Knee	MSK TISSUE DAMAGE, OTHER	27	17	10
M8438XA	Stress fracture, other site, initial encounter fo	OTHER	Unspecified	FRACTURE	27	13	14
S20211A	Contusion of right front wall of thorax, initial	TORSO	Chest	CONTUSION/SUPERFICIAL	27	23	4
S20212A	Contusion of left front wall of thorax, initial e	TORSO	Chest	CONTUSION/SUPERFICIAL	27	23	4
S80212A	Abrasion, left knee, initial encounter	LOWER EXTREM	Knee	CONTUSION/SUPERFICIAL	27	20	7
T670XXA	Heatstroke and sunstroke, initial encounter	OTHER	Systemwide	OTHER - Heat/Sun	27	26	1
M7071	Other bursitis of hip, right hip	LOWER EXTREM	Hip	MSK TISSUE DAMAGE, OTHER	26	8	18
M76821	Posterior tibial tendinitis, right leg	LOWER EXTREM	Leg, Lower	MSK TISSUE DAMAGE, OTHER	26	16	10
M79603	Pain in arm, unspecified	UPPER EXTREM	Arm, Other	MSK TISSUE DAMAGE, OTHER	26	22	4
S72001A	Fracture of unspecified part of neck of right fe	LOWER EXTREM	Hip	FRACTURE	26	15	11
S80811A	Abrasion, right lower leg, initial encounter	LOWER EXTREM	Leg, Lower	CONTUSION/SUPERFICIAL	26	22	4
H9311	Tinnitus, right ear	HEAD & NECK	Ear	TISSUE DAMAGE, OTHER	25	20	5
S50311A	Abrasion of right elbow, initial encounter	UPPER EXTREM	Elbow	CONTUSION/SUPERFICIAL	25	19	6
S73192A	Other sprain of left hip, initial encounter	LOWER EXTREM	Hip	SPRAIN/JOINT DAMAGE	25	18	7
G5601	Carpal tunnel syndrome, right upper limb	UPPER EXTREM	Arm, Other	NERVE	24	13	11
L551	Sunburn of second degree	OTHER	Unspecified	OTHER - Heat/Sun	24	22	2
M7541	Impingement syndrome of right shoulder	UPPER EXTREM	Shoulder	MSK TISSUE DAMAGE, OTHER	24	16	8
M7660	Achilles tendinitis, unspecified leg	LOWER EXTREM	Leg, Lower	MSK TISSUE DAMAGE, OTHER	24	15	9

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S0502XA	Injury of conjunctiva and corneal abrasion wit	HEAD & NECK	Eye	CONTUSION/SUPERFICIAL	24	20	4
S8011XA	Contusion of right lower leg, initial encounter	LOWER EXTREM	Leg, Lower	CONTUSION/SUPERFICIAL	24	10	14
M7042	Prepatellar bursitis, left knee	LOWER EXTREM	Knee	MSK TISSUE DAMAGE, OTHER	23	22	1
S01112A	Laceration without foreign body of left eyelid	HEAD & NECK	Eye	OPEN WOUND	23	22	1
S4351XA	Sprain of right acromioclavicular joint, initial e	UPPER EXTREM	Shoulder	SPRAIN/JOINT DAMAGE	23	14	9
S9032XA	Contusion of left foot, initial encounter	LOWER EXTREM	Foot, toe	CONTUSION/SUPERFICIAL	23	11	12
T63441A	Toxic effect of venom of bees, accidental (uni	OTHER	Unspecified	TISSUE DAMAGE, OTHER	23	21	2
M7099	Unspecified soft tissue disorder related to use	OTHER	Multiple	MSK TISSUE DAMAGE, OTHER	22	16	6
S4991XA	Unspecified injury of right shoulder and uppe	UPPER EXTREM	Shoulder	TISSUE DAMAGE, OTHER	22	15	7
S63501A	Unspecified sprain of right wrist, initial encou	UPPER EXTREM	Wrist	SPRAIN/JOINT DAMAGE	22	14	8
S80861A	Insect bite (nonvenomous), right lower leg, in	LOWER EXTREM	Leg, Lower	CONTUSION/SUPERFICIAL	22	13	9
S86112A	Strain of other muscle(s) and tendon(s) of pos	LOWER EXTREM	Leg, Lower	STRAIN/TEAR	22	14	8
M7542	Impingement syndrome of left shoulder	UPPER EXTREM	Shoulder	MSK TISSUE DAMAGE, OTHER	21	16	5
M84363A	Stress fracture, right fibula, initial encounter f	LOWER EXTREM	Leg, Lower	FRACTURE	21	8	13
S0081XA	Abrasion of other part of head, initial encount	HEAD & NECK	Other head	CONTUSION/SUPERFICIAL	21	18	3
S022XXA	Fracture of nasal bones, initial encounter for c	HEAD & NECK	Face	FRACTURE	21	19	2
S299XXA	Unspecified injury of thorax, initial encounter	TORSO	Chest	TISSUE DAMAGE, OTHER	21	15	6
S46012A	Strain of muscle(s) and tendon(s) of the rotat	UPPER EXTREM	Shoulder	STRAIN/TEAR	21	15	6
S5002XA	Contusion of left elbow, initial encounter	UPPER EXTREM	Elbow	CONTUSION/SUPERFICIAL	21	14	7
S50861A	Insect bite (nonvenomous) of right forearm, i	UPPER EXTREM	Arm, Lower	CONTUSION/SUPERFICIAL	21	16	5
S60222A	Contusion of left hand, initial encounter	UPPER EXTREM	Hand, finger	CONTUSION/SUPERFICIAL	21	13	8
S73102A	Unspecified sprain of left hip, initial encounte	LOWER EXTREM	Hip	SPRAIN/JOINT DAMAGE	21	12	9
T733XXA	Exhaustion due to excessive exertion, initial e	OTHER	Systemwide	OTHER - Exhaustion	21	13	8
T781XXA	Other adverse food reactions, not elsewhere	OTHER	Systemwide	OTHER - Trauma	21	15	6
M7062	Trochanteric bursitis, left hip	LOWER EXTREM	Hip	MSK TISSUE DAMAGE, OTHER	20	11	9
M7671	Peroneal tendinitis, right leg	LOWER EXTREM	Ankle	MSK TISSUE DAMAGE, OTHER	20	10	10
S0993XA	Unspecified injury of face, initial encounter	HEAD & NECK	Other head	TISSUE DAMAGE, OTHER	20	17	3
S29019A	Strain of muscle and tendon of unspecified w	TORSO	Chest	STRAIN/TEAR	20	14	6
S83511A	Sprain of anterior cruciate ligament of right kn	LOWER EXTREM	Knee	SPRAIN/JOINT DAMAGE	20	14	6
S838X1A	Sprain of other specified parts of right knee, i	LOWER EXTREM	Knee	SPRAIN/JOINT DAMAGE	20	12	8
S86012A	Strain of left Achilles tendon, initial encounte	LOWER EXTREM	Leg, Lower	STRAIN/TEAR	20	13	7
S9031XA	Contusion of right foot, initial encounter	LOWER EXTREM	Foot, toe	CONTUSION/SUPERFICIAL	20	14	6
M25471	Effusion, right ankle	LOWER EXTREM	Ankle	MSK TISSUE DAMAGE, OTHER	19	9	10
M79631	Pain in right forearm	UPPER EXTREM	Arm, Lower	MSK TISSUE DAMAGE, OTHER	19	15	4
S0911XA	Strain of muscle and tendon of head, initial en	HEAD & NECK	Other head	STRAIN/TEAR	19	8	11
S43005A	Unspecified dislocation of left shoulder joint,	UPPER EXTREM	Shoulder	DISLOCATION	19	16	3
S4352XA	Sprain of left acromioclavicular joint, initial en	UPPER EXTREM	Shoulder	SPRAIN/JOINT DAMAGE	19	10	9
S50862A	Insect bite (nonvenomous) of left forearm, in	UPPER EXTREM	Arm, Lower	CONTUSION/SUPERFICIAL	19	14	5
S61411A	Laceration without foreign body of right hand	UPPER EXTREM	Hand, finger	OPEN WOUND	19	18	1
S63502A	Unspecified sprain of left wrist, initial encoun	UPPER EXTREM	Wrist	SPRAIN/JOINT DAMAGE	19	12	7
S70312A	Abrasion, left thigh, initial encounter	LOWER EXTREM	Leg, Upper	CONTUSION/SUPERFICIAL	19	16	3
S76112A	Strain of left quadriceps muscle, fascia and te	LOWER EXTREM	Leg, Upper	STRAIN/TEAR	19	9	10
S76912A	Strain of unspecified muscles, fascia and tend	LOWER EXTREM	Leg, Upper	STRAIN/TEAR	19	14	5
S8264XA	Nondisplaced fracture of lateral malleolus of	LOWER EXTREM	Ankle	FRACTURE	19	10	9
S83421A	Sprain of lateral collateral ligament of right kn	LOWER EXTREM	Knee	SPRAIN/JOINT DAMAGE	19	11	8
S86892A	Other injury of other muscle(s) and tendon(s)	LOWER EXTREM	Leg, Lower	MSK TISSUE DAMAGE, OTHER	19	9	10
H9042	Sensorineural hearing loss, unilateral, left ear, with	HEAD & NECK	Ear	TISSUE DAMAGE, OTHER	18	16	2
M7650	Patellar tendinitis, unspecified knee	LOWER EXTREM	Knee	MSK TISSUE DAMAGE, OTHER	18	16	2
M79621	Pain in right upper arm	UPPER EXTREM	Arm, Upper	MSK TISSUE DAMAGE, OTHER	18	11	7
M79622	Pain in left upper arm	UPPER EXTREM	Arm, Upper	MSK TISSUE DAMAGE, OTHER	18	14	4
S43401A	Unspecified sprain of right shoulder joint, init	UPPER EXTREM	Shoulder	SPRAIN/JOINT DAMAGE	18	11	7
S62336A	Displaced fracture of neck of fifth metacarpal	UPPER EXTREM	Hand, finger	FRACTURE	18	17	1
S90422A	Blister (nonthermal), left great toe, initial enc	LOWER EXTREM	Foot, toe	CONTUSION/SUPERFICIAL	18	14	4
S90529A	Blister (nonthermal), unspecified ankle, initia	LOWER EXTREM	Ankle	CONTUSION/SUPERFICIAL	18	10	8

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T783XXA	Angioneurotic edema, initial encounter	OTHER	Systemwide	OTHER - Trauma	18	12	6
M7072	Other bursitis of hip, left hip	LOWER EXTREM	Hip	MSK TISSUE DAMAGE, OTHER	17	3	14
M84371A	Stress fracture, right ankle, initial encounter f	LOWER EXTREM	Ankle	FRACTURE	17	3	14
S2231XA	Fracture of one rib, right side, initial encounte	TORSO	Chest	FRACTURE	17	12	5
S29011A	Strain of muscle and tendon of front wall of th	TORSO	Chest	STRAIN/TEAR	17	10	7
S43402A	Unspecified sprain of left shoulder joint, initi	UPPER EXTREM	Shoulder	SPRAIN/JOINT DAMAGE	17	10	7
S50312A	Abrasion of left elbow, initial encounter	UPPER EXTREM	Elbow	CONTUSION/SUPERFICIAL	17	15	2
S60512A	Abrasion of left hand, initial encounter	UPPER EXTREM	Hand, finger	CONTUSION/SUPERFICIAL	17	14	3
S8261XA	Displaced fracture of lateral malleolus of right	LOWER EXTREM	Ankle	FRACTURE	17	14	3
M7021	Olecranon bursitis, right elbow	UPPER EXTREM	Elbow	MSK TISSUE DAMAGE, OTHER	16	16	0
M7672	Peroneal tendinitis, left leg	LOWER EXTREM	Ankle	MSK TISSUE DAMAGE, OTHER	16	9	7
S025XXA	Fracture of tooth (traumatic), initial encounte	HEAD & NECK	Face	TISSUE DAMAGE, OTHER	16	12	4
S5001XA	Contusion of right elbow, initial encounter	UPPER EXTREM	Elbow	CONTUSION/SUPERFICIAL	16	16	0
S60949A	Unspecified superficial injury of unspecified f	UPPER EXTREM	Hand, finger	CONTUSION/SUPERFICIAL	16	15	1
S61211A	Laceration without foreign body of left index	UPPER EXTREM	Hand, finger	OPEN WOUND	16	12	4
S6991XA	Unspecified injury of right wrist, hand and fin	UPPER EXTREM	Arm, Lower	TISSUE DAMAGE, OTHER	16	12	4
S70362A	Insect bite (nonvenomous), left thigh, initial e	LOWER EXTREM	Leg, Upper	CONTUSION/SUPERFICIAL	16	11	5
S76111A	Strain of right quadriceps muscle, fascia and t	LOWER EXTREM	Leg, Upper	STRAIN/TEAR	16	11	5
S93602A	Unspecified sprain of left foot, initial encount	LOWER EXTREM	Foot, toe	SPRAIN/JOINT DAMAGE	16	12	4
H9313	Tinnitus, bilateral	HEAD & NECK	Ear	TISSUE DAMAGE, OTHER	15	12	3
M5126	Other intervertebral disc displacement, lumb	SPINE & BACK	Back, Lower	MSK TISSUE DAMAGE, OTHER	15	12	3
S01111A	Laceration without foreign body of right eyeli	HEAD & NECK	Eye	OPEN WOUND	15	13	2
S134XXA	Sprain of ligaments of cervical spine, initial en	SPINE & BACK	Back, Upper	SPRAIN/JOINT DAMAGE	15	12	3
S46919A	Strain of unspecified muscle, fascia and tendc	UPPER EXTREM	Shoulder	STRAIN/TEAR	15	12	3
S61210A	Laceration without foreign body of right index	UPPER EXTREM	Hand, finger	OPEN WOUND	15	12	3
S61412A	Laceration without foreign body of left hand,	UPPER EXTREM	Hand, finger	OPEN WOUND	15	14	1
S83422A	Sprain of lateral collateral ligament of left kne	LOWER EXTREM	Knee	SPRAIN/JOINT DAMAGE	15	9	6
S838X2A	Sprain of other specified parts of left knee, in	LOWER EXTREM	Knee	SPRAIN/JOINT DAMAGE	15	7	8
S86311A	Strain of muscle(s) and tendon(s) of peroneal	LOWER EXTREM	Leg, Lower	STRAIN/TEAR	15	8	7
T39312A	Poisoning by propionic acid derivatives, inten	OTHER	Unspecified	TISSUE DAMAGE, OTHER	15	8	7
T672XXA	Heat cramp, initial encounter	OTHER	Systemwide	OTHER - Heat/Sun	15	9	6
H833X9	Noise effects on inner ear, unspecified ear	HEAD & NECK	Ear	TISSUE DAMAGE, OTHER	14	13	1
L559	Sunburn, unspecified	OTHER	Unspecified	OTHER - Heat/Sun	14	11	3
M7052	Other bursitis of knee, left knee	LOWER EXTREM	Knee	MSK TISSUE DAMAGE, OTHER	14	10	4
M70861	Other soft tissue disorders related to use, ove	LOWER EXTREM	Leg, Lower	MSK TISSUE DAMAGE, OTHER	14	4	10
S0001XA	Abrasion of scalp, initial encounter	HEAD & NECK	Other head	CONTUSION/SUPERFICIAL	14	13	1
S0033XA	Contusion of nose, initial encounter	HEAD & NECK	Face	CONTUSION/SUPERFICIAL	14	10	4
S39013A	Strain of muscle, fascia and tendon of pelvis, i	TORSO	Pelvis	STRAIN/TEAR	14	8	6
S40011A	Contusion of right shoulder, initial encounter	UPPER EXTREM	Shoulder	CONTUSION/SUPERFICIAL	14	9	5
S40861A	Insect bite (nonvenomous) of right upper arm	UPPER EXTREM	Arm, Upper	CONTUSION/SUPERFICIAL	14	9	5
S43014A	Anterior dislocation of right humerus, initial e	UPPER EXTREM	Arm, Upper	DISLOCATION	14	12	2
S86312A	Strain of muscle(s) and tendon(s) of peroneal	LOWER EXTREM	Leg, Lower	STRAIN/TEAR	14	8	6
T7849XA	Other allergy, initial encounter	OTHER	Systemwide	OTHER - Trauma	14	7	7
M238X1	Other internal derangements of right knee	LOWER EXTREM	Knee	SPRAIN/JOINT DAMAGE	13	11	2
M25472	Effusion, left ankle	LOWER EXTREM	Ankle	MSK TISSUE DAMAGE, OTHER	13	8	5
M84364A	Stress fracture, left fibula, initial encounter fo	LOWER EXTREM	Leg, Lower	FRACTURE	13	11	2
S2232XA	Fracture of one rib, left side, initial encounter	TORSO	Chest	FRACTURE	13	9	4

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S32591A	Other specified fracture of right pubis, initial	TORSO	Pelvis	FRACTURE	13	6	7
S5011XA	Contusion of right forearm, initial encounter	UPPER EXTREM	Elbow	CONTUSION/SUPERFICIAL	13	5	8
S50362A	Insect bite (nonvenomous) of left elbow, initi	UPPER EXTREM	Elbow	CONTUSION/SUPERFICIAL	13	9	4
S60021A	Contusion of right index finger without dama	UPPER EXTREM	Hand, finger	CONTUSION/SUPERFICIAL	13	7	6
S60522A	Blister (nonthermal) of left hand, initial enco	UPPER EXTREM	Hand, finger	CONTUSION/SUPERFICIAL	13	8	5
S60862A	Insect bite (nonvenomous) of left wrist, initia	UPPER EXTREM	Wrist	CONTUSION/SUPERFICIAL	13	11	2
S6992XA	Unspecified injury of left wrist, hand and fing	UPPER EXTREM	Arm, Lower	TISSUE DAMAGE, OTHER	13	6	7
S76211A	Strain of adductor muscle, fascia and tendon	LOWER EXTREM	Leg, Upper	STRAIN/TEAR	13	7	6
S76911A	Strain of unspecified muscles, fascia and tend	LOWER EXTREM	Leg, Upper	STRAIN/TEAR	13	9	4
S80219A	Abrasion, unspecified knee, initial encounter	LOWER EXTREM	Knee	CONTUSION/SUPERFICIAL	13	10	3
S80862A	Insect bite (nonvenomous), left lower leg, ini	LOWER EXTREM	Leg, Lower	CONTUSION/SUPERFICIAL	13	9	4
S81012A	Laceration without foreign body, left knee, in	LOWER EXTREM	Knee	OPEN WOUND	13	11	2
S83512A	Sprain of anterior cruciate ligament of left kn	LOWER EXTREM	Knee	SPRAIN/JOINT DAMAGE	13	8	5
T691XXA	Chilblains, initial encounter	LOWER EXTREM	Foot, toe	OTHER - Cold	13	6	7
M222X9	Patellofemoral disorders, unspecified knee	LOWER EXTREM	Knee	MSK TISSUE DAMAGE, OTHER	12	8	4
M2550	Pain in unspecified joint	OTHER	Unspecified	MSK TISSUE DAMAGE, OTHER	12	5	7
M5412	Radiculopathy, cervical region	SPINE & BACK	Back, Upper	NERVE	12	9	3
M7022	Olecranon bursitis, left elbow	UPPER EXTREM	Elbow	MSK TISSUE DAMAGE, OTHER	12	12	0
S32592A	Other specified fracture of left pubis, initial e	TORSO	Pelvis	FRACTURE	12	4	8
S72002A	Fracture of unspecified part of neck of left fer	LOWER EXTREM	Hip	FRACTURE	12	7	5
S8265XA	Nondisplaced fracture of lateral malleolus of	LOWER EXTREM	Ankle	FRACTURE	12	7	5
S86011A	Strain of right Achilles tendon, initial encount	LOWER EXTREM	Leg, Lower	STRAIN/TEAR	12	10	2
S90426A	Blister (nonthermal), unspecified lesser toe(s	LOWER EXTREM	Foot, toe	CONTUSION/SUPERFICIAL	12	8	4
S93692A	Other sprain of left foot, initial encounter	LOWER EXTREM	Foot, toe	SPRAIN/JOINT DAMAGE	12	5	7
T7621XA	Adult sexual abuse, suspected, initial encoun	OTHER	Unspecified	OTHER - Trauma	12	3	9
M5416	Radiculopathy, lumbar region	SPINE & BACK	Back, Lower	NERVE	11	8	3
M7040	Prepatellar bursitis, unspecified knee	LOWER EXTREM	Knee	MSK TISSUE DAMAGE, OTHER	11	11	0
S0000XA	Unspecified superficial injury of scalp, initial	HEAD & NECK	Other head	CONTUSION/SUPERFICIAL	11	7	4
S0086XA	Insect bite (nonvenomous) of other part of he	HEAD & NECK	Other head	CONTUSION/SUPERFICIAL	11	10	1
S098XXA	Other specified injuries of head, initial encou	HEAD & NECK	Other head	TISSUE DAMAGE, OTHER	11	6	5
S335XXA	Sprain of ligaments of lumbar spine, initial en	SPINE & BACK	Back, Lower	SPRAIN/JOINT DAMAGE	11	6	5
S62308A	Unspecified fracture of other metacarpal bon	UPPER EXTREM	Hand, finger	FRACTURE	11	11	0
S62396A	Other fracture of fifth metacarpal bone, right	UPPER EXTREM	Hand, finger	FRACTURE	11	11	0
S7002XA	Contusion of left hip, initial encounter	LOWER EXTREM	Hip	CONTUSION/SUPERFICIAL	11	4	7
S7012XA	Contusion of left thigh, initial encounter	LOWER EXTREM	Leg, Upper	CONTUSION/SUPERFICIAL	11	9	2
S70361A	Insect bite (nonvenomous), right thigh, initial	LOWER EXTREM	Leg, Upper	CONTUSION/SUPERFICIAL	11	6	5
S82891A	Other fracture of right lower leg, initial encou	LOWER EXTREM	Leg, Lower	FRACTURE	11	8	3
S86811A	Strain of other muscle(s) and tendon(s) at low	LOWER EXTREM	Leg, Lower	STRAIN/TEAR	11	7	4
S86812A	Strain of other muscle(s) and tendon(s) at low	LOWER EXTREM	Leg, Lower	STRAIN/TEAR	11	6	5
S90112A	Contusion of left great toe without damage to	LOWER EXTREM	Foot, toe	CONTUSION/SUPERFICIAL	11	10	1
S90931A	Unspecified superficial injury of right great to	LOWER EXTREM	Foot, toe	CONTUSION/SUPERFICIAL	11	5	6
S90932A	Unspecified superficial injury of left great toe	LOWER EXTREM	Foot, toe	CONTUSION/SUPERFICIAL	11	7	4
S99921A	Unspecified injury of right foot, initial encour	LOWER EXTREM	Foot, toe	MSK TISSUE DAMAGE, OTHER	11	6	5
S99922A	Unspecified injury of left foot, initial encount	LOWER EXTREM	Foot, toe	MSK TISSUE DAMAGE, OTHER	11	7	4
M5417	Radiculopathy, lumbosacral region	SPINE & BACK	Back, Lower	NERVE	10	9	1
M5431	Sciatica, right side	SPINE & BACK	Back, Lower	NERVE	10	1	9
M5432	Sciatica, left side	SPINE & BACK	Back, Lower	NERVE	10	4	6
M70879	Other soft tissue disorders related to use, ove	LOWER EXTREM	Ankle	MSK TISSUE DAMAGE, OTHER	10	9	1
M70961	Unspecified soft tissue disorder related to use	LOWER EXTREM	Leg, Lower	MSK TISSUE DAMAGE, OTHER	10	4	6
S00411A	Abrasion of right ear, initial encounter	HEAD & NECK	Ear	CONTUSION/SUPERFICIAL	10	9	1
S0096XA	Insect bite (nonvenomous) of unspecified par	HEAD & NECK	Other head	CONTUSION/SUPERFICIAL	10	8	2
S199XXA	Unspecified injury of neck, initial encounter	HEAD & NECK	Neck	TISSUE DAMAGE, OTHER	10	5	5
S30812A	Abrasion of penis, initial encounter	TORSO	Pelvis	CONTUSION/SUPERFICIAL	10	10	0
S4992XA	Unspecified injury of left shoulder and upper	UPPER EXTREM	Shoulder	TISSUE DAMAGE, OTHER	10	5	5
S50812A	Abrasion of left forearm, initial encounter	UPPER EXTREM	Arm, Lower	CONTUSION/SUPERFICIAL	10	9	1

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S62326A	Displaced fracture of shaft of fifth metacarpal	UPPER EXTREM	Hand, finger	FRACTURE	10	10	0
S63641A	Sprain of metacarpophalangeal joint of right t	UPPER EXTREM	Hand, finger	SPRAIN/JOINT DAMAGE	10	7	3
S7001XA	Contusion of right hip, initial encounter	LOWER EXTREM	Hip	CONTUSION/SUPERFICIAL	10	5	5
S90934A	Unspecified superficial injury of right lesser t	LOWER EXTREM	Foot, toe	CONTUSION/SUPERFICIAL	10	4	6
T63421A	Toxic effect of venom of ants, accidental (uni	OTHER	Unspecified	TISSUE DAMAGE, OTHER	10	8	2
G5622	Lesion of ulnar nerve, left upper limb	UPPER EXTREM	Arm, Other	NERVE	9	7	2
M76829	Posterior tibial tendinitis, unspecified leg	LOWER EXTREM	Leg, Lower	MSK TISSUE DAMAGE, OTHER	9	5	4
M84376A	Stress fracture, unspecified foot, initial encou	LOWER EXTREM	Foot, toe	FRACTURE	9	6	3
S00511A	Abrasion of lip, initial encounter	HEAD & NECK	Face	CONTUSION/SUPERFICIAL	9	7	2
S00561A	Insect bite (nonvenomous) of lip, initial enco	HEAD & NECK	Face	CONTUSION/SUPERFICIAL	9	6	3
S0190XA	Unspecified open wound of unspecified part	HEAD & NECK	Other head	OPEN WOUND	9	8	1
S0191XA	Laceration without foreign body of unspecifie	HEAD & NECK	Other head	OPEN WOUND	9	9	0
S1096XA	Insect bite of unspecified part of neck, initial	HEAD & NECK	Neck	CONTUSION/SUPERFICIAL	9	7	2
S20219A	Contusion of unspecified front wall of thorax,	TORSO	Chest	CONTUSION/SUPERFICIAL	9	6	3
S5012XA	Contusion of left forearm, initial encounter	UPPER EXTREM	Elbow	CONTUSION/SUPERFICIAL	9	4	5
S53402A	Unspecified sprain of left elbow, initial encou	UPPER EXTREM	Elbow	SPRAIN/JOINT DAMAGE	9	5	4
S60519A	Abrasion of unspecified hand, initial encount	UPPER EXTREM	Hand, finger	CONTUSION/SUPERFICIAL	9	8	1
S60861A	Insect bite (nonvenomous) of right wrist, initi	UPPER EXTREM	Wrist	CONTUSION/SUPERFICIAL	9	8	1
S61011A	Laceration without foreign body of right thum	UPPER EXTREM	Hand, finger	OPEN WOUND	9	8	1
S61401A	Unspecified open wound of right hand, initial	UPPER EXTREM	Hand, finger	OPEN WOUND	9	8	1
S62346A	Nondisplaced fracture of base of fifth metaca	UPPER EXTREM	Hand, finger	FRACTURE	9	8	1
S6710XA	Crushing injury of unspecified finger(s), initia	UPPER EXTREM	Hand, finger	CRUSH	9	8	1
S82402A	Unspecified fracture of shaft of left fibula, ini	LOWER EXTREM	Leg, Lower	FRACTURE	9	6	3
S8262XA	Displaced fracture of lateral malleolus of left	LOWER EXTREM	Ankle	FRACTURE	9	5	4
S82892A	Other fracture of left lower leg, initial encour	LOWER EXTREM	Leg, Lower	FRACTURE	9	6	3
S86211A	Strain of muscle(s) and tendon(s) of anterior	LOWER EXTREM	Leg, Lower	STRAIN/TEAR	9	4	5
S90111A	Contusion of right great toe without damage t	LOWER EXTREM	Foot, toe	CONTUSION/SUPERFICIAL	9	6	3
S90416A	Abrasion, unspecified lesser toe(s), initial en	LOWER EXTREM	Foot, toe	CONTUSION/SUPERFICIAL	9	5	4
S92334A	Nondisplaced fracture of third metatarsal bon	LOWER EXTREM	Foot, toe	FRACTURE	9	6	3
T391X2A	Poisoning by 4-Aminophenol derivatives, inte	OTHER	Unspecified	TISSUE DAMAGE, OTHER	9	6	3
G44319	Acute post-traumatic headache, not intractab	HEAD & NECK	Other head	TISSUE DAMAGE, OTHER	8	3	5
M2391	Unspecified internal derangement of right kn	LOWER EXTREM	Knee	SPRAIN/JOINT DAMAGE	8	6	2
M5442	Lumbago with sciatica, left side	SPINE & BACK	Back, Lower	MSK TISSUE DAMAGE, OTHER	8	8	0
M654	Radial styloid tenosynovitis [de Quervain]	OTHER	Unspecified	MSK TISSUE DAMAGE, OTHER	8	2	6
M6751	Plica syndrome, right knee	LOWER EXTREM	Knee	SPRAIN/JOINT DAMAGE	8	5	3
M70969	Unspecified soft tissue disorder related to use	LOWER EXTREM	Leg, Lower	MSK TISSUE DAMAGE, OTHER	8	3	5
M84377A	Stress fracture, right toe(s), initial encounter	LOWER EXTREM	Foot, toe	FRACTURE	8	7	1
S0031XA	Abrasion of nose, initial encounter	HEAD & NECK	Face	CONTUSION/SUPERFICIAL	8	7	1
S0121XA	Laceration without foreign body of nose, initi	HEAD & NECK	Face	OPEN WOUND	8	7	1
S01411A	Laceration without foreign body of right chee	HEAD & NECK	Face	OPEN WOUND	8	8	0
S0992XA	Unspecified injury of nose, initial encounter	HEAD & NECK	Other head	TISSUE DAMAGE, OTHER	8	5	3
S1086XA	Insect bite of other specified part of neck, init	HEAD & NECK	Neck	CONTUSION/SUPERFICIAL	8	5	3
S1091XA	Abrasion of unspecified part of neck, initial e	HEAD & NECK	Neck	CONTUSION/SUPERFICIAL	8	8	0
S20229A	Contusion of unspecified back wall of thorax,	TORSO	Chest	CONTUSION/SUPERFICIAL	8	3	5
S20419A	Abrasion of unspecified back wall of thorax, i	TORSO	Chest	CONTUSION/SUPERFICIAL	8	6	2
S40021A	Contusion of right upper arm, initial encounte	UPPER EXTREM	Arm, Upper	CONTUSION/SUPERFICIAL	8	3	5
S43492A	Other sprain of left shoulder joint, initial enc	UPPER EXTREM	Shoulder	SPRAIN/JOINT DAMAGE	8	4	4
S4382XA	Sprain of other specified parts of left shoulde	UPPER EXTREM	Shoulder	SPRAIN/JOINT DAMAGE	8	5	3
S50361A	Insect bite (nonvenomous) of right elbow, ini	UPPER EXTREM	Elbow	CONTUSION/SUPERFICIAL	8	4	4
S53401A	Unspecified sprain of right elbow, initial enco	UPPER EXTREM	Elbow	SPRAIN/JOINT DAMAGE	8	6	2
S60022A	Contusion of left index finger without damag	UPPER EXTREM	Hand, finger	CONTUSION/SUPERFICIAL	8	6	2
S60042A	Contusion of left ring finger without damage t	UPPER EXTREM	Hand, finger	CONTUSION/SUPERFICIAL	8	6	2
S61012A	Laceration without foreign body of left thumb	UPPER EXTREM	Hand, finger	OPEN WOUND	8	8	0
S61212A	Laceration without foreign body of right midd	UPPER EXTREM	Hand, finger	OPEN WOUND	8	7	1
S638X2A	Sprain of other part of left wrist and hand, ini	UPPER EXTREM	Wrist	SPRAIN/JOINT DAMAGE	8	6	2
S6391XA	Sprain of unspecified part of right wrist and h	UPPER EXTREM	Wrist	SPRAIN/JOINT DAMAGE	8	3	5
S76212A	Strain of adductor muscle, fascia and tendon	LOWER EXTREM	Leg, Upper	STRAIN/TEAR	8	6	2
S80261A	Insect bite (nonvenomous), right knee, initial	LOWER EXTREM	Knee	CONTUSION/SUPERFICIAL	8	6	2
S80262A	Insect bite (nonvenomous), left knee, initial e	LOWER EXTREM	Knee	CONTUSION/SUPERFICIAL	8	4	4
S81011A	Laceration without foreign body, right knee, i	LOWER EXTREM	Knee	OPEN WOUND	8	5	3
S81812A	Laceration without foreign body, left lower le	LOWER EXTREM	Leg, Lower	OPEN WOUND	8	7	1
S82831A	Other fracture of upper and lower end of righ	LOWER EXTREM	Leg, Lower	FRACTURE	8	7	1

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G5602	Carpal tunnel syndrome, left upper limb	UPPER EXTREM	Arm, Other	NERVE	7	6	1
G5621	Lesion of ulnar nerve, right upper limb	UPPER EXTREM	Arm, Other	NERVE	7	3	4
M7521	Bicipital tendinitis, right shoulder	UPPER EXTREM	Shoulder	MSK TISSUE DAMAGE, OTHER	7	6	1
M7621	Iliac crest spur, right hip	LOWER EXTREM	Hip	MSK TISSUE DAMAGE, OTHER	7	4	3
M7702	Medial epicondylitis, left elbow	UPPER EXTREM	Elbow	MSK TISSUE DAMAGE, OTHER	7	5	2
S0012XA	Contusion of left eyelid and periocular area, i	HEAD & NECK	Eye	CONTUSION/SUPERFICIAL	7	6	1
S01501A	Unspecified open wound of lip, initial encour	HEAD & NECK	Face	OPEN WOUND	7	6	1
S0512XA	Contusion of eyeball and orbital tissues, left e	HEAD & NECK	Eye	CONTUSION/SUPERFICIAL	7	7	0
S143XXA	Injury of brachial plexus, initial encounter	TORSO	Chest	TISSUE DAMAGE, OTHER	7	5	2
S30860A	Insect bite (nonvenomous) of lower back and	TORSO	Pelvis	CONTUSION/SUPERFICIAL	7	6	1
S43491A	Other sprain of right shoulder joint, initial en	UPPER EXTREM	Shoulder	SPRAIN/JOINT DAMAGE	7	6	1
S46211A	Strain of muscle, fascia and tendon of other p	UPPER EXTREM	Arm, Upper	STRAIN/TEAR	7	4	3
S46212A	Strain of muscle, fascia and tendon of other p	UPPER EXTREM	Arm, Upper	STRAIN/TEAR	7	4	3
S50319A	Abrasion of unspecified elbow, initial encoun	UPPER EXTREM	Elbow	CONTUSION/SUPERFICIAL	7	7	0
S50811A	Abrasion of right forearm, initial encounter	UPPER EXTREM	Arm, Lower	CONTUSION/SUPERFICIAL	7	7	0
S61215A	Laceration without foreign body of left ring fi	UPPER EXTREM	Hand, finger	OPEN WOUND	7	6	1
S62002A	Unspecified fracture of navicular [scaphoid] b	UPPER EXTREM	Wrist	FRACTURE	7	7	0
S63601A	Unspecified sprain of right thumb, initial encc	UPPER EXTREM	Hand, finger	SPRAIN/JOINT DAMAGE	7	6	1
S638X1A	Sprain of other part of right wrist and hand, in	UPPER EXTREM	Wrist	SPRAIN/JOINT DAMAGE	7	5	2
S73109A	Unspecified sprain of unspecified hip, initial e	LOWER EXTREM	Hip	SPRAIN/JOINT DAMAGE	7	3	4
S81811A	Laceration without foreign body, right lower l	LOWER EXTREM	Leg, Lower	OPEN WOUND	7	7	0
S82101A	Unspecified fracture of upper end of right tibi	LOWER EXTREM	Leg, Lower	FRACTURE	7	5	2
S82899A	Other fracture of unspecified lower leg, initia	LOWER EXTREM	Leg, Lower	FRACTURE	7	3	4
S86212A	Strain of muscle(s) and tendon(s) of anterior t	LOWER EXTREM	Leg, Lower	STRAIN/TEAR	7	3	4
S90122A	Contusion of left lesser toe(s) without damag	LOWER EXTREM	Foot, toe	CONTUSION/SUPERFICIAL	7	3	4
S90212A	Contusion of left great toe with damage to na	LOWER EXTREM	Foot, toe	CONTUSION/SUPERFICIAL	7	6	1
S91302A	Unspecified open wound, left foot, initial enc	LOWER EXTREM	Foot, toe	OPEN WOUND	7	3	4
T63301A	Toxic effect of unspecified spider venom, acci	OTHER	Unspecified	TISSUE DAMAGE, OTHER	7	7	0
E871	Hypo-osmolality and hyponatremia	OTHER	Systemwide	OTHER - Heat/Sun	6	6	0
H9041	Sensorineural hearing loss, unilateral, right ea	HEAD & NECK	Ear	TISSUE DAMAGE, OTHER	6	6	0
H9319	Tinnitus, unspecified ear	HEAD & NECK	Ear	TISSUE DAMAGE, OTHER	6	6	0
M20011	Mallet finger of right finger(s)	UPPER EXTREM	Hand, finger	STRAIN/TEAR	6	5	1
M238X2	Other internal derangements of left knee	LOWER EXTREM	Knee	SPRAIN/JOINT DAMAGE	6	2	4
M25852	Other specified joint disorders, left hip	LOWER EXTREM	Hip	SPRAIN/JOINT DAMAGE	6	3	3
M5430	Sciatica, unspecified side	SPINE & BACK	Back, Lower	NERVE	6	2	4
M6752	Plica syndrome, left knee	LOWER EXTREM	Knee	SPRAIN/JOINT DAMAGE	6	4	2
M71572	Other bursitis, not elsewhere classified, left a	LOWER EXTREM	Ankle	MSK TISSUE DAMAGE, OTHER	6	3	3
M84378A	Stress fracture, left toe(s), initial encounter fo	LOWER EXTREM	Foot, toe	FRACTURE	6	3	3
S01512A	Laceration without foreign body of oral cavity	HEAD & NECK	Face	OPEN WOUND	6	5	1
S060X9A	Concussion with loss of consciousness of unsp	HEAD & NECK	TBI	Internal Organ & Blood Vessel	6	5	1
S1081XA	Abrasion of other specified part of neck, initia	HEAD & NECK	Neck	CONTUSION/SUPERFICIAL	6	4	2
S139XXA	Sprain of joints and ligaments of unspecified	SPINE & BACK	Back, Upper	SPRAIN/JOINT DAMAGE	6	4	2
S3022XA	Contusion of scrotum and testes, initial encou	TORSO	Pelvis	CONTUSION/SUPERFICIAL	6	6	0
S3991XA	Unspecified injury of abdomen, initial encour	TORSO	Abdomen	TISSUE DAMAGE, OTHER	6	3	3
S40212A	Abrasion of left shoulder, initial encounter	UPPER EXTREM	Shoulder	CONTUSION/SUPERFICIAL	6	3	3
S43015A	Anterior dislocation of left humerus, initial en	UPPER EXTREM	Arm, Upper	DISLOCATION	6	5	1
S46311A	Strain of muscle, fascia and tendon of triceps,	UPPER EXTREM	Arm, Upper	STRAIN/TEAR	6	5	1
S50869A	Insect bite (nonvenomous) of unspecified for	UPPER EXTREM	Arm, Lower	CONTUSION/SUPERFICIAL	6	5	1
S56811A	Strain of other muscles, fascia and tendons at	UPPER EXTREM	Arm, Lower	STRAIN/TEAR	6	4	2
S60011A	Contusion of right thumb without damage to	UPPER EXTREM	Hand, finger	CONTUSION/SUPERFICIAL	6	4	2
S60031A	Contusion of right middle finger without dam	UPPER EXTREM	Hand, finger	CONTUSION/SUPERFICIAL	6	4	2
S60041A	Contusion of right ring finger without damage	UPPER EXTREM	Hand, finger	CONTUSION/SUPERFICIAL	6	3	3
S60416A	Abrasion of right little finger, initial encounte	UPPER EXTREM	Hand, finger	CONTUSION/SUPERFICIAL	6	4	2
S60452A	Superficial foreign body of right middle finge	UPPER EXTREM	Hand, finger	CONTUSION/SUPERFICIAL	6	5	1
S61216A	Laceration without foreign body of right little	UPPER EXTREM	Hand, finger	OPEN WOUND	6	4	2
S62001A	Unspecified fracture of navicular [scaphoid] b	UPPER EXTREM	Wrist	FRACTURE	6	5	1
S62356A	Nondisplaced fracture of shaft of fifth metaca	UPPER EXTREM	Hand, finger	FRACTURE	6	4	2
S62664A	Nondisplaced fracture of distal phalanx of rigl	UPPER EXTREM	Hand, finger	FRACTURE	6	5	1
S63591A	Other specified sprain of right wrist, initial en	UPPER EXTREM	Wrist	SPRAIN/JOINT DAMAGE	6	3	3
S70211A	Abrasion, right hip, initial encounter	LOWER EXTREM	Hip	CONTUSION/SUPERFICIAL	6	5	1
S7291XA	Unspecified fracture of right femur, initial en	LOWER EXTREM	Leg, Upper	FRACTURE	6	3	3
S80869A	Insect bite (nonvenomous), unspecified lowe	LOWER EXTREM	Leg, Lower	CONTUSION/SUPERFICIAL	6	5	1