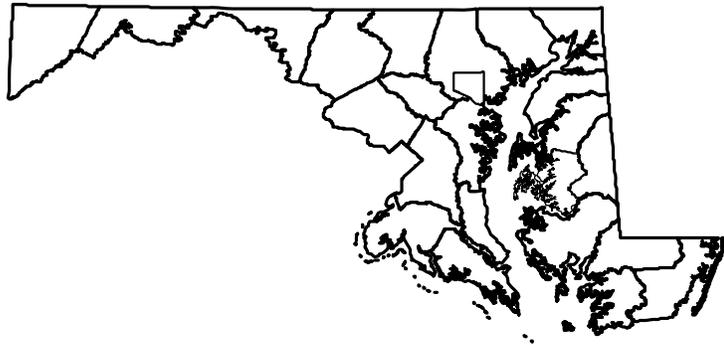


Injuries in Maryland

2007 Statistics on Injury-related
Emergency Department Visits,
Hospitalizations and Deaths



Maryland Department of Health & Mental Hygiene

Family Health Administration

Center for Health Promotion and Education

**Injuries in Maryland: 2007 Statistics on Injury-related Emergency
Department Visits, Hospitalizations, and Deaths Report, September 2009**

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FOREWORD

The *Injuries in Maryland – 2007 Statistics on Injury-related Emergency Department Visits, Hospitalizations and Deaths* report continues the series of reports produced each year in an effort to provide injury professionals a better direction for designing programs to reduce injuries to Maryland residents.

The Center for Health Promotion and Education would like to acknowledge the Health Services Cost Review Commission (HSCRC) for providing the hospital discharge and ambulatory care databases, and the Maryland Vital Statistics Administration for the mortality database upon which the analyses were based.

Additionally, we would like to thank Jeanette Jenkins, Director of the Office of Health Policy and Planning, for her team's dedication in compiling and analyzing the data presented in the report.

Finally, we would like to thank Dr. Russell Moy, Director, and Ms. Joan Salim, Deputy Director, of the Family Health Administration for their continued support in injury prevention activities throughout Maryland.

Sincerely,

Joan Stine, MHS, MS, CHES

Director, Center for Health Promotion and Education
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TABLE OF CONTENTS

Executive Summary	6
Introduction	7
Data Issues and Methodology	7
Burden of Injury in Maryland	8
Leading Causes of Injury in Maryland	11
Injury by Gender	19
Injury by Race	22
Injury Over Time	26
Maryland	29
Appendix A: ICD-9 codes	36
Appendix B: ICD-10 codes	39
Appendix C: Maryland Population Estimates	47

EXECUTIVE SUMMARY

The “*Injuries in Maryland – 2007 Statistics on Injury-related Emergency Department Visits, Hospitalizations and Deaths*” report provides detailed statistics on all injuries to Maryland residents which required Emergency Department (ED) visits, hospitalization at Maryland hospitals, or caused the death of Maryland residents during 2007. Information is presented for Maryland as a whole.

- ◆ In 2007, there were 490,590 injury-related hospital ED visits, 54,366 injury-related hospital discharges, and 3,718 injury-related deaths of Maryland residents.
- ◆ There were 9,492 injury-related ED visits and 968 injury-related hospital discharges at Maryland hospitals per 100,000 Maryland residents in 2007.
- ◆ Maryland’s injury-related death rate was 66 per 100,000 in 2007.
- ◆ Men were more likely than women to suffer a fatal injury.
- ◆ Overall, the leading causes of injury-related ED visits were: (1) falls, (2) being struck by/against an object or person, and (3) motor vehicle traffic incidents. The leading causes of injury-related hospitalization were: (1) falls, (2) poisoning, and (3) motor vehicle traffic incidents. The leading causes of injury-related death were: (1) poisoning, (2) firearms, and (3) motor vehicle traffic incidents.
- ◆ Marylanders spent over 237,000 days in the hospital as a result of injuries, which resulted in over \$705 million in hospitalization charges.
- ◆ The burden of injury to Maryland amounted to over 100,000 years of potential life lost (YPLL) during 2007. Thirty-six percent of this total was due to unintentional injuries, 24% due to homicides, and 14% due to suicides.

INTRODUCTION

Injury, both intentional and unintentional, is a leading cause of morbidity and mortality in Maryland. As the distribution and determinants of injury are known to vary according to the mechanism and manner of injury, this report provides detailed statistics describing the occurrence of injuries in Maryland during 2007 in order to inform injury-prevention efforts.

DATA ISSUES AND METHODOLOGY

Data regarding injury-related emergency department visits and hospitalizations were derived from the Maryland Health Services Cost Review Commission (HSCRC) Ambulatory Care and Hospital Discharge Databases, respectively. Injury-related death data were extracted from the Maryland Vital Statistics Mortality Database.

HSCRC Databases

According to Maryland State law, the 47 non-federal acute care general hospitals are required to submit uniform abstract (UB-04) data on all hospital ED visits and hospital discharges to the HSCRC. These data comprise demographic, clinic, diagnostic and procedure information which are used by the HSCRC to set hospital rates under Maryland's charge-per-case payment system.

Information on injury-related ED visits and hospitalizations are based on the external cause of injury codes (E-codes) from the ninth revision of the International Classification of Diseases, Clinical Modification (ICD-9-CM). The E-codes describe the mechanism or cause of injury as well as the manner or intent of the injury (see Appendix A).

The cases included in this report were identified by searching records for the first-listed E-code, starting with the designated E-code field, and proceeding through the diagnosis fields in numeric order (i.e., primary diagnosis, first secondary diagnosis, etc.) Each record is counted only once. If multiple injuries are present, only the first-listed E-code is counted.

Injuries caused by misadventures during surgical and medical care or abnormal reactions to drugs, medicinal or biological substances were excluded from this report.

The HSCRC data presented in this report refer to encounters with the healthcare system, not to individuals nor to incidents. Recurring visits, either for the same injury, or for subsequent injuries, are counted separately.

Note that these data do not include contact with institutions outside of Maryland, and may not represent a good estimate of incidence in jurisdictions adjacent to other states or to the District of Columbia.

Vital Statistics Database

Data on fatal injuries were derived from the death certificates collected by the Maryland Vital Statistics Administration.

Since 1999, the tenth revision of the International Classification of Diseases has been used to code the causes of death reported on death certificates. ICD-10 includes expanded detail for many conditions and transfers conditions between classifications.

The injury-related deaths reported in this publication refer to individuals whose cause of death codes include at least one external cause of injury code (codes beginning with V, W, X, or Y, see Appendix B). Codes indicating adverse effects of medical care were excluded.

BURDEN OF INJURY IN MARYLAND

In 2007, 28% of all Maryland ED visits and 8% of all hospitalizations were injury-related. These encounters incurred a total of \$180 million in ED charges and \$705 million in hospitalization charges. Marylanders spent over 237,000 days in the hospital as a result of injuries.

The number of injury-related hospital discharges has increased from an average of 147 discharges per day in 2006 to 149 per day in 2007. The number of injury-related deaths has also increased from an average of 9.9 deaths per day in 2006 to 10.2 deaths per day in 2007. The average number of ED visits per day was 1,344 discharges in 2007.

Due to changes that occurred in 2007 concerning outpatient data collection, ED visits from 2007 should not be compared to past years at this time. Revisions may occur in 2007 ED data in future years.

Unintentional injury was the fifth leading cause of death for Maryland residents, and one of the top three leading causes of death for residents under age 65. When combined with homicide and suicide, the total number of deaths surpassed that for any other cause except diseases of the heart and malignant neoplasms.¹

Table 1 illustrates the burden levied by injuries to Marylanders as represented by ED charges, hospitalization charges, and hospital length of stay by cause of injury.

There is considerable variation in cost by type of injury. Firearm-related injuries had the highest average charge per ED visit (\$850), but represented only 0.20% of the total for all injuries. Conversely, although fall-related injuries were not the most costly

per event, they accounted for the greatest portion (28%) of injury-related ED charges for the state, amounting to over \$50 million in 2007.

Likewise, firearms were one of the causes of the most costly injury hospitalizations (average \$28,534), and fall-related injury comprised the greatest proportion of hospital charges, summing to over \$273 million in 2007 (see Table 1).

Suffocation-related hospitalizations had the longest average length of stay (over seven days). Again, fall-related injuries imposed the greatest burden as measured by hospital overall length of stay: Marylanders spent 99,502 days in the hospital in 2007 due to falls.

Years of potential life lost (YPLL) are calculated for individuals before age 75 to quantify the impact of diseases and conditions on life lost in childhood, adolescence, and early to middle adulthood. In total, over 100,000 years of potential life lost were attributable to injuries during 2007. As Table 2 shows, 36% of this total was due to unintentional injuries, 24% due to homicides, and 14% due to suicides.

Together, poisonings, firearms, and motor vehicle-related deaths accounted for almost 75% of the total YPLL. Although fall-related injuries were the fourth leading cause of injury-related deaths, they were only the fifth leading contributor to YPLL and far behind the leading causes. Since fall-related injuries are typically life threatening for the elderly, falls had the lowest average YPLL per fall death (10.3). Firearm-related deaths, by contrast, are more common among much younger individuals, and therefore, had the highest average of potential life lost at 40 years per firearm-related death.

¹ Vital Statistics, 2007 'Maryland Vital Statistics: Annual Report 2007' Vital Statistics Administration, Maryland Department of Health and Mental Hygiene.

Table 1: ED visit charges, hospitalization charges and hospital length of stay for selected causes of injury, Maryland, 2007.

Cause of Injury	ED Visits				Hospitalizations							
	Charges in dollars				Charges in dollars				Length of stay in days			
	N	Mean	Median	Sum	N	Mean	Median	Sum	N	Mean	Median	Sum
All	490,590	368	277	180,748,890	54,366	12,970	7,062	705,117,263	54,366	4.36	3	237,050
Cut/pierce	38,896	313	245	12,192,575	2,234	9,041	5,522	20,197,066	2,234	3.25	2	7,266
Drowning	166	548	361	90,921	42	12,927	4,518	542,930	42	2.62	1	110
Fall	124,845	406	322	50,705,402	21,578	12,684	8,525	273,704,288	21,578	4.61	3	99,502
Fire/burn	6,324	273	210	1,727,297	663	22,799	7,044	15,115,463	663	6.91	3	4,584
Firearm	991	850	634	842,842	918	28,534	10,402	26,194,573	918	5.63	2	5,167
Machinery	1,759	397	303	698,239	164	14,689	6,308	2,409,008	164	2.91	2	477
Motor vehicle	72,588	418	289	30,309,350	6,421	18,607	6,120	119,474,028	6,421	3.70	2	23,764
Natural environment	17,501	299	202	5,238,625	1,469	8,461	4,855	12,429,637	1,469	3.71	2	5,450
Other/unspecified	76,146	340	253	25,852,255	8,873	14,105	8,524	125,156,150	8,873	5.71	3	50,639
Overexertion	51,756	305	262	15,781,553	774	9,146	6,138	7,078,737	774	3.10	2	2,401
Pedal cyclist, other	4,452	405	314	1,801,172	283	9,754	5,533	2,760,301	283	2.65	2	750
Pedestrian, other	317	424	331	134,394	67	38,683	10,575	25,917,030	67	5.87	3	393
Poisoning	9,336	612	507	5,717,848	7,482	7,549	4,857	56,483,853	7,482	3.24	2	24,259
Struck by/against	81,305	340	266	27,648,270	2,293	9,629	5,301	22,079,665	2,293	2.89	2	6,624
Suffocation	451	541	377	244,049	506	21,444	11,193	10,850,580	506	7.57	4	3,831
Transport, other	3,757	470	353	1,764,098	599	13,438	6,304	8,049,256	599	3.06	2	1,833

Table 2: Years of potential life lost (YPLL) before age 75 for selected causes of death by manner of injury, Maryland, 2007

Cause of Injury	Total*			Unintentional			Homicide			Suicide		
	N	SUM	MEAN	N	SUM	MEAN	N	SUM	MEAN	N	SUM	MEAN
All	3,718	107,874.0	29.0	1,763	39,315.0	22.3	577	25,882.5	44.9	509	15,634.5	30.7
Cut/pierce	77	2,835.5	36.8	0	0	0	65	2,499.5	38.5	12	336.0	28.0
Drowning	69	2,438.0	35.3	49	1,842.0	37.6	0	0	0	6	167.5	27.9
Fall	546	5,636.5	10.3	535	2,201.0	4.1	0	0	0	9	294.0	32.7
Fire/burn	93	2,870.5	30.9	87	2,763.0	31.8	0	0	0	2	25.5	12.8
Firearm	671	26,832.5	40.0	4	122.0	30.5	421	19,782.5	47.0	231	6,235.5	27.0
Hot Object	3	31.0	10.3	3	31.0	10.3	0	0	0	0	0	0
Machinery	3	41.0	13.7	3	41.0	13.7	0	0	0	0	0	0
Motor Vehicle	665	24,112.0	36.3	665	24,112.0	36.3	0	0	0	0	0	0
Natural Environment	59	696.5	11.8	59	696.5	11.8	0	0	0	0	0	0
Overexertion	1	35.5	35.5	1	35.5	35.5	0	0	0	0	0	0
Pedal Cyclist, Other	2	31.0	15.5	2	31.0	15.5	0	0	0	0	0	0
Pedestrian, Other	19	670.0	35.3	19	670.0	35.3	0	0	0	0	0	0
Poisoning	866	28,260.0	32.6	50	1,416.0	28.3	1	67.5	67.5	73	2,068.0	28.3
Struck by/against	33	960.0	29.1	11	285.0	25.9	22	675.0	30.7	0	0	0
Suffocation	344	8,587.0	25.0	166	1,738.5	10.5	14	749.0	53.5	162	5,996.5	37.0
Transport, Other	32	1,065.5	33.3	31	1,040.0	33.5	0	0	0	1	25.5	25.5

*Total includes deaths from legal intervention and undetermined manner.

LEADING CAUSES OF INJURY IN MARYLAND

The leading causes of injury vary by outcome of the injury, demographic characteristics of the injured person, and jurisdiction. Listed below are the five leading causes of injury by outcome, and the number of events in Maryland in 2007.

ED visit:

1. Fall	124,845
2. Struck by or against an object or person	81,305
3. Motor vehicle traffic	72,588
4. Overexertion	51,756
5. Cut/Pierce	38,896

Hospitalization:

1. Fall	21,578
2. Poisoning	7,482
3. Motor vehicle traffic	6,421
4. Struck by or against an object or person	2,293
5. Cut/Pierce	2,234

Death:

1. Poisoning	866
2. Firearm	671
3. Motor vehicle traffic	665
4. Fall	546
5. Suffocation	344

The majority of injuries were unintentional, but the proportions of injuries attributed to each manner varied by the cause and outcome of the injury. More severe injuries were more likely to be intentional: about 93% of injuries resulting in ED visits, 83% of injuries resulting in hospitalization, and 49% of injury-related deaths were unintentional. While the number of assault-related ED visits was more than seven times the number of visits for self-inflicted injuries, the ratio was nearly 1:1 for hospitalizations and deaths (see tables MD-3, MD-6 and MD-9).

The following sections describe the differences in incidence among various demographic groups in Maryland.

Injury by age

Different types of injury are more common among different age groups. Figures 1-3 illustrate the age distribution of ED visits and hospitalizations for unintentional, assault-related, and self-inflicted injuries in 2007. Figures 4-5 show the age distribution of unintentional fatal injuries, homicide and suicide.

Figures 6-15 illustrate the age distribution for the top five types of injury leading to ED visits and hospitalization, and the top five causes of fatal injury. Tables 3 through 5 on the following pages list the top 10 causes of injury and the number of cases per cause by age and outcome.

Figure 1 – ED visit and hospitalization rates due to **unintentional** injury by age, Maryland 2007

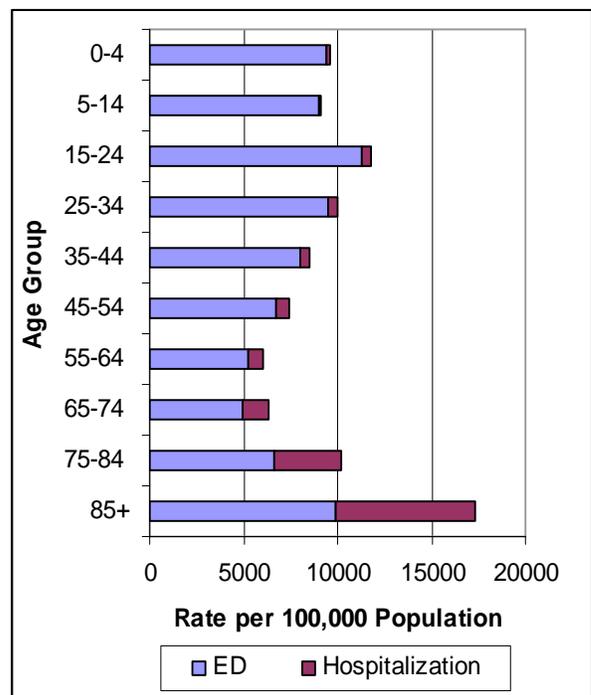


Figure 2 –ED visit and hospitalization rates due to **assault** by age, Maryland 2007

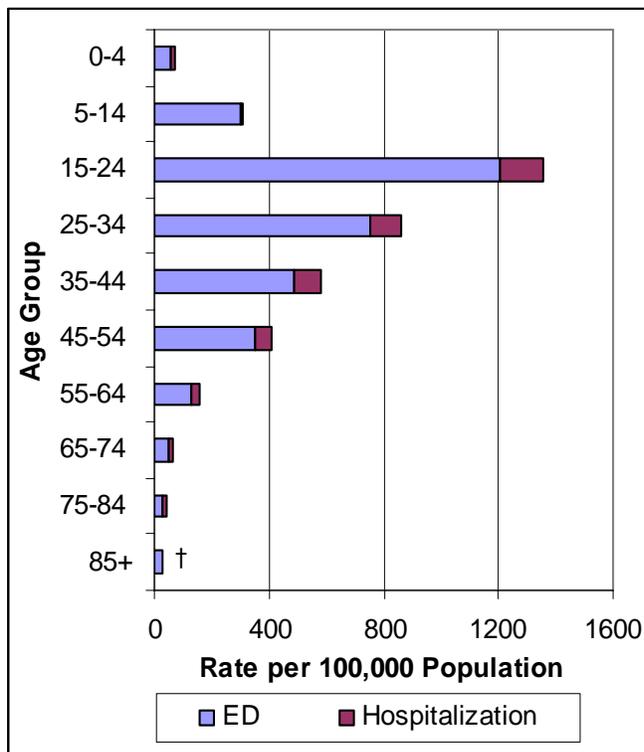


Figure 4 – Death rates due to **unintentional** injury by age, Maryland 2007

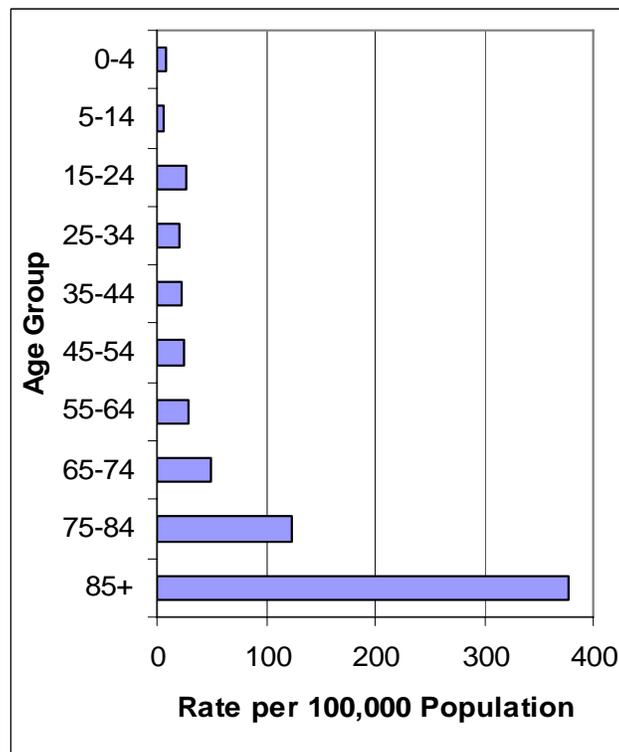


Figure 3 –ED visit and hospitalization rates due to **self-inflicted** injury by age, Maryland 2007

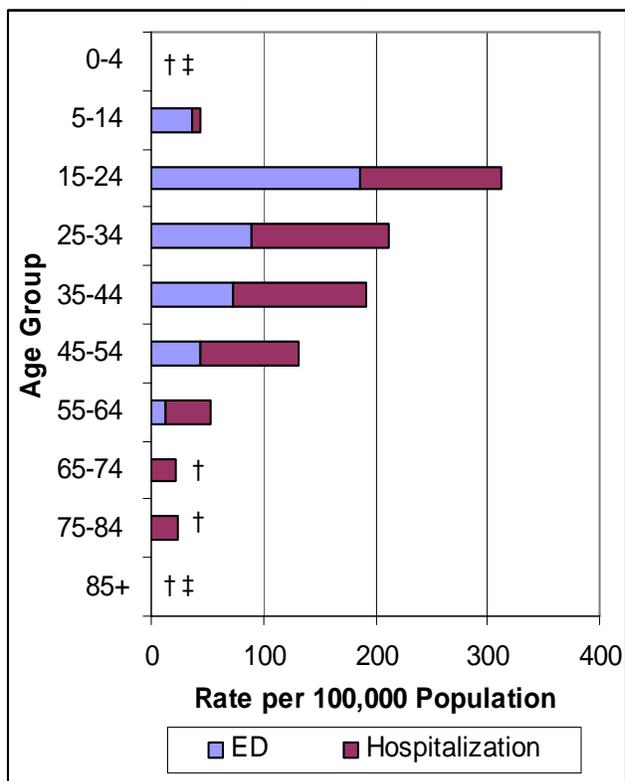
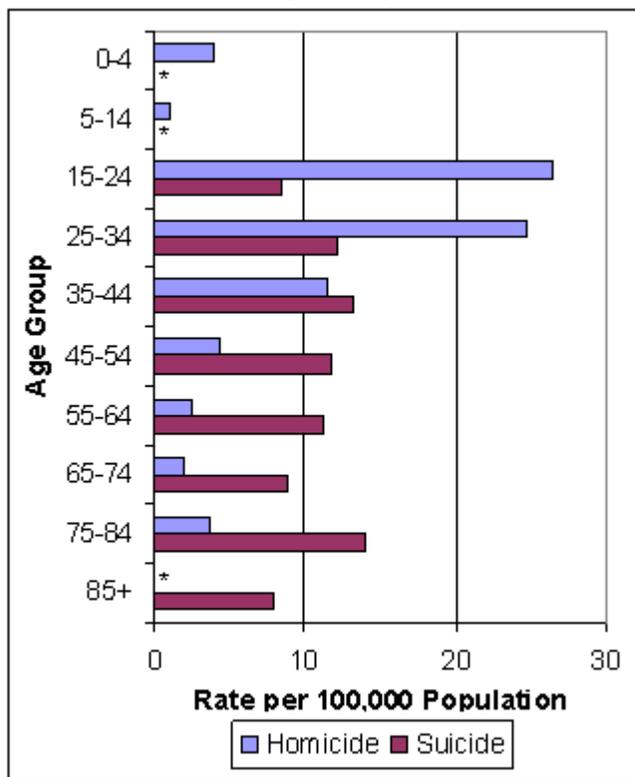


Figure 5 – Death rates due to **homicide and suicide** by age, Maryland 2007



† The number of ED visits was too small to use in the calculation of a reliable rate (less than 20 visits).

‡ The number of hospitalization visits was too small to use in the calculation of a reliable rate (less than 20 visits).

* The number of deaths was too small to use in the calculation of reliable rates (less than 5 visits).

Figure 6 – ED visit and hospitalization rates due to **falls** by age, Maryland 2007

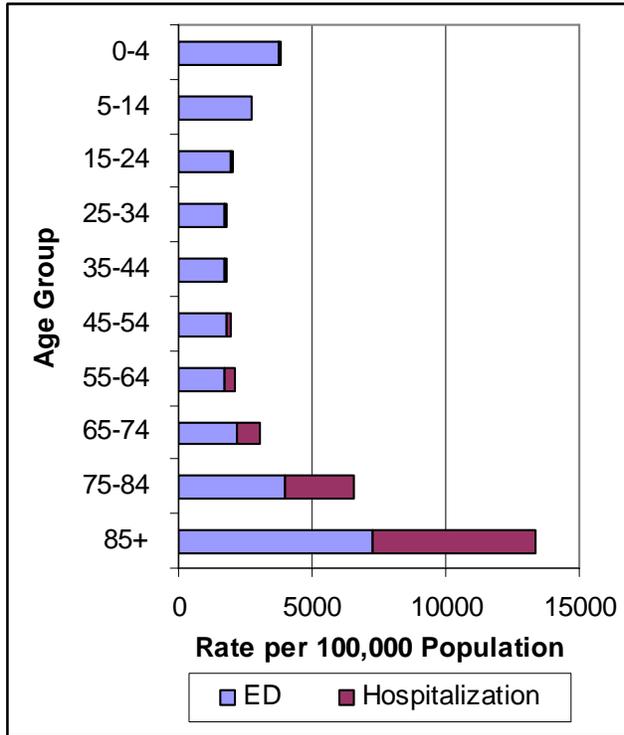


Figure 8 –ED visit and hospitalization rates due to **motor vehicle traffic incidents** by age, Maryland 2007

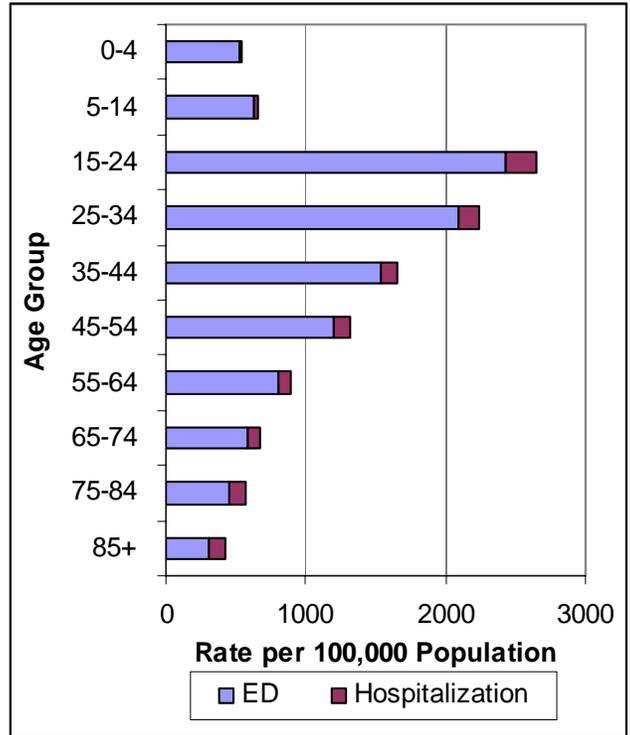


Figure 7 –ED visit and hospitalization rates due to **struck by/against** injury by age,

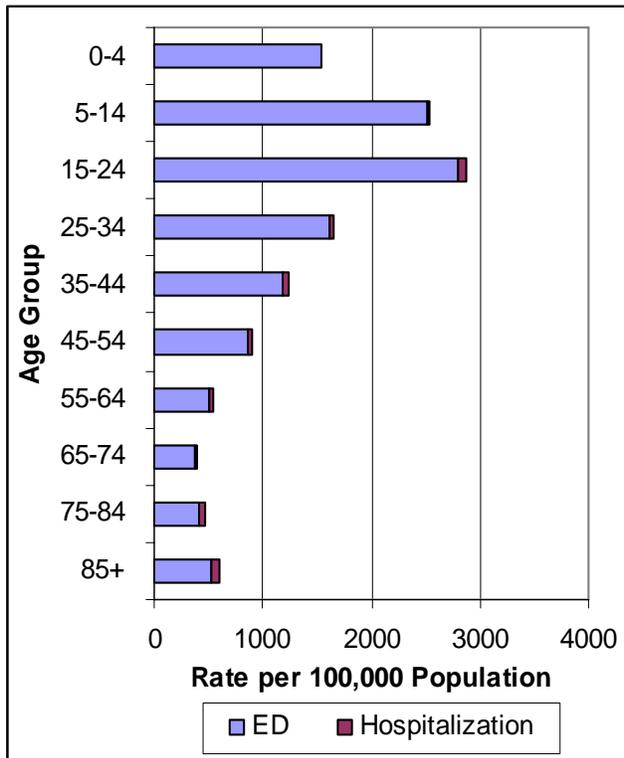
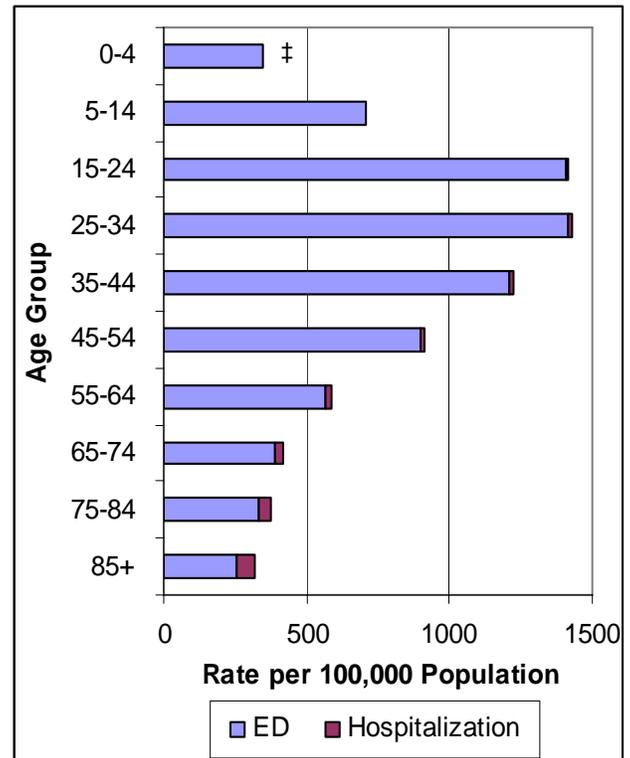


Figure 9 –ED visit and hospitalization rates due to **overexertion** by age, Maryland 2007



‡ The number of hospitalization visits was too small to use in the calculation of a reliable rate (less than 20 visits).

Figure 10 –ED visit and hospitalization rates due to **cut/pierce** injury by age, Maryland 2007

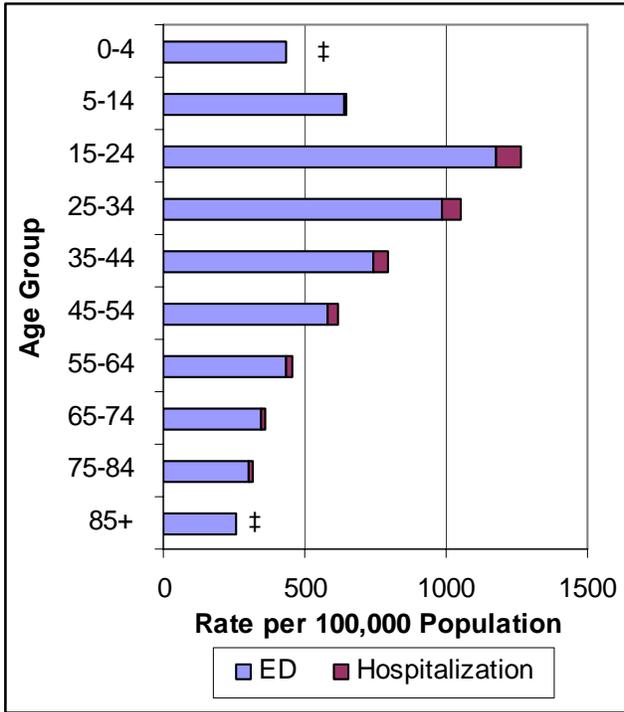


Figure 12 – Death rates due to **poisoning** by age, Maryland 2007

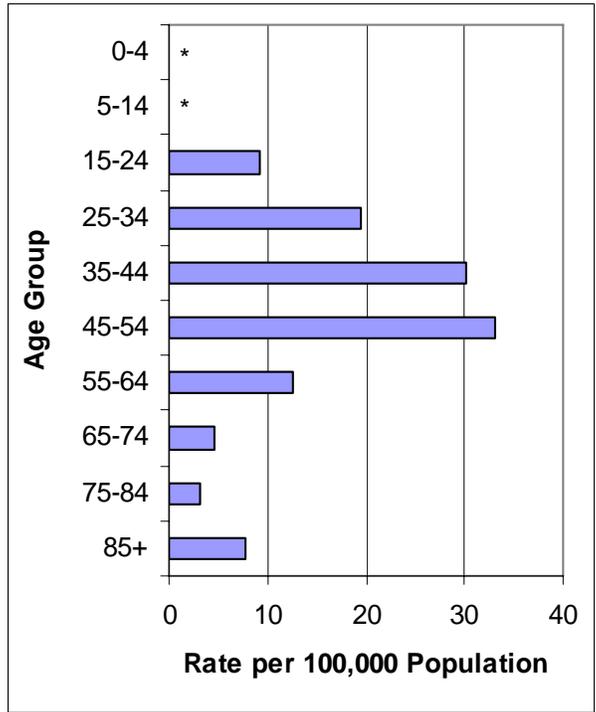


Figure 11 –ED visit and hospitalization rates due to **poisoning** by age, Maryland 2007

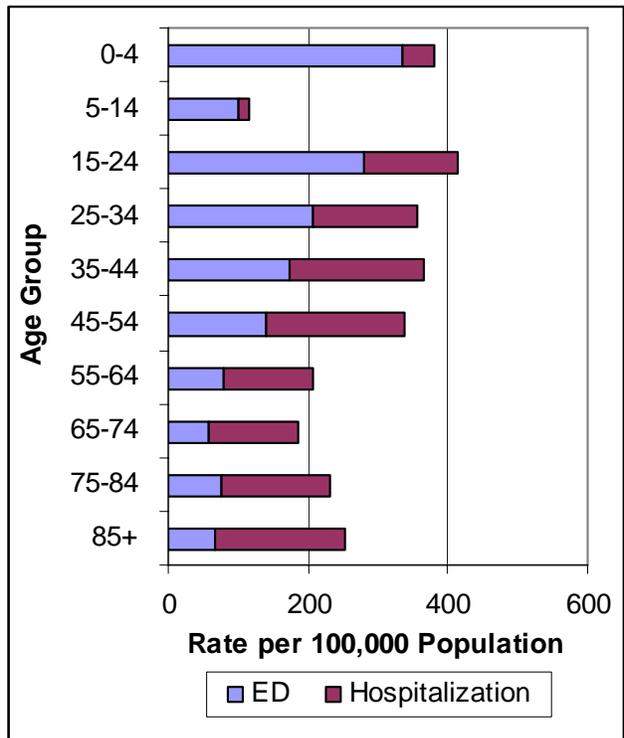
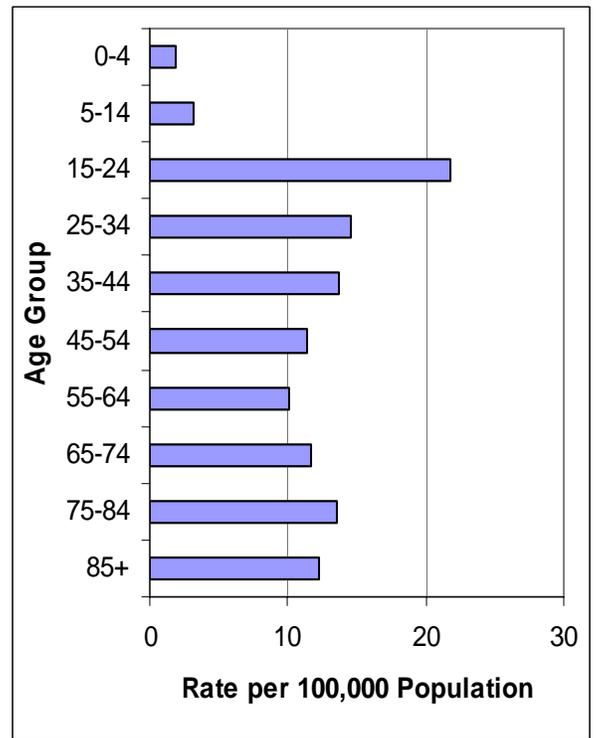


Figure 13 – Death rates due to **motor vehicle traffic incidents** by age, Maryland 2007



‡ The number of hospitalization visits was too small to use in the calculation of a reliable rate (less than 20 visits).
 * The number of deaths was too small to use in the calculation of reliable rates (less than 5 deaths).

Figure 14 – Death rates due to **firearms** by age, Maryland 2007

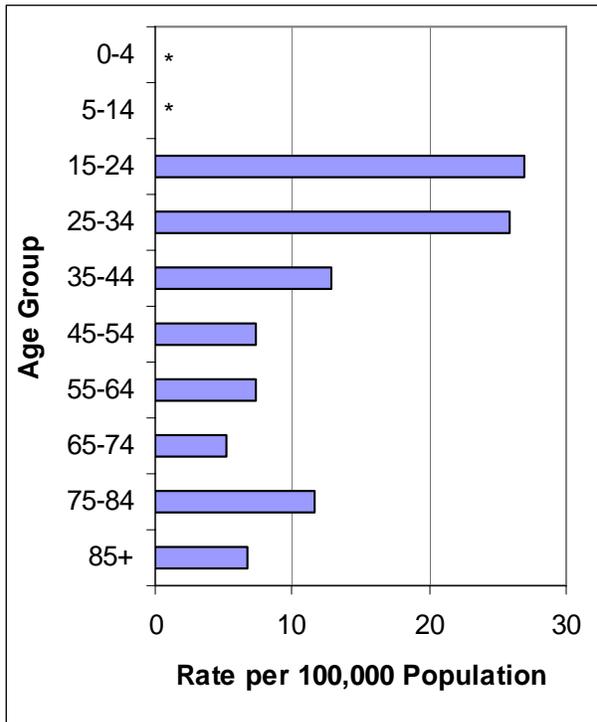


Figure 16 – Death rates due to **suffocation** by age, Maryland 2007

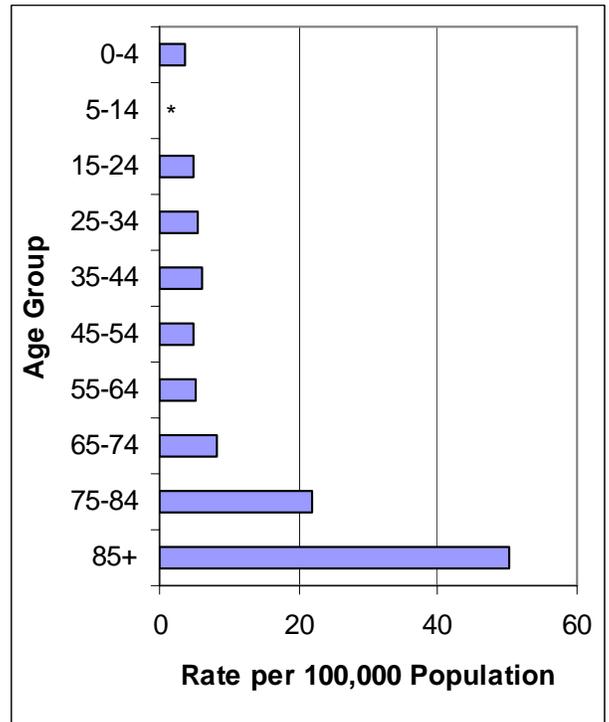
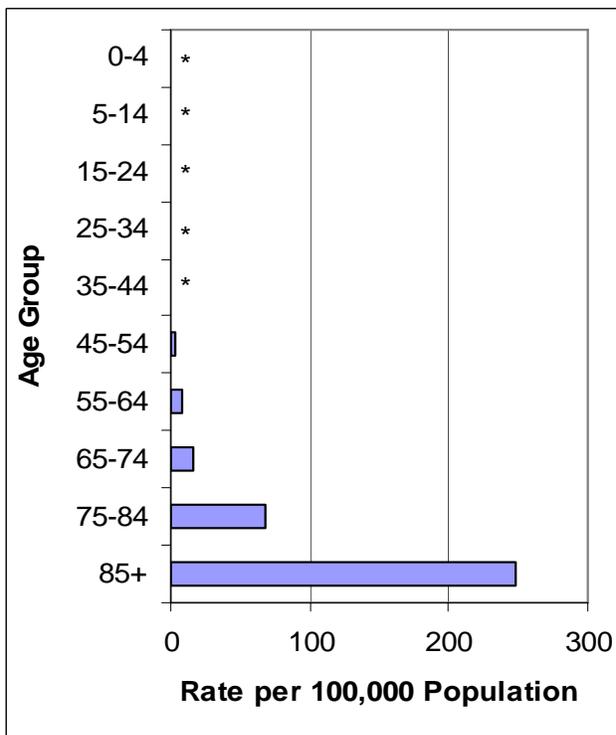


Figure 15 – Death rates due to **falls** by age, Maryland 2007



* The number of deaths was too small to use in the calculation of reliable rates (less than 5 visits).

Table 3: Top 10 causes of injury-related ED visits by age, Maryland, 2007

Rank	0-4 yrs	5-14 yrs	15-24 yrs	25-34 yrs	35-44 yrs	45-54 yrs	55-64 yrs	65-74 yrs	75-84 yrs	85+ yrs	All Ages
1	Fall (N=14,182)	Fall (N=19,900)	Struck by/against (N=21,998)	MV traffic (N=15,050)	Fall (N= 14,302)	Fall (N= 15,238)	Fall (N= 10,879)	Fall (N=7,622)	Fall (N= 8,921)	Fall (N=6,487)	Fall (N=124,845)
2	Struck by/against (N=5,794)	Struck by/against (N=18,512)	MV traffic (N=19,144)	Fall (N= 12,162)	MV traffic (N=13,054)	MV traffic (N=10,369)	MV traffic (N= 5,025)	MV traffic (N=2,029)	MV traffic (N=992)	Struck by/against (N=466)	Struck by/against (N=81,305)
3	Natural environment (N=2,044)	Overexertion (N=5,177)	Fall (N=15,152)	Struck by/against (N= 11,650)	Overexertion (N=10,289)	Overexertion (N=7,762)	Overexertion (N=3,549)	Overexertion (N=1,375)	Struck by/against (N=922)	MV traffic (N=269)	MV traffic (N=72,588)
4	MV traffic (N=1,979)	Cut/pierce (N=4,713)	Overexertion (N=11,093)	Overexertion (N=10,289)	Struck by/against (N=10,018)	Struck by/against (N=7,452)	Struck by/against (N=3,195)	Struck by/against (N=1,298)	Overexertion (N=738)	Cut/pierce (N=232)	Overexertion (N=51,756)
5	Cut/pierce (N=1,623)	MV traffic (N=4,677)	Cut/pierce (N=9,279)	Cut/pierce (N=7,084)	Cut/pierce (N=6,313)	Cut/pierce (N=5,048)	Cut/pierce (N=2,725)	Cut/pierce (N=1,212)	Cut/pierce (N=667)	Overexertion (N=225)	Cut/pierce (N=38,896)
6	Overexertion (N=1,316)	Natural environment (N=2,869)	Natural environment (N=2,748)	Natural environment (N=2,289)	Natural environment (N=2,368)	Natural environment (N=2,347)	Natural environment (N=1,425)	Natural environment (N=759)	Natural environment (N=507)	Natural environment (N=145)	Natural environment (N=17,501)
7	Poisoning (N=1,264)	Pedal cyclist (N=2,151)	Poisoning (N=2,207)	Poisoning (N=1,487)	Poisoning (N=1,483)	Poisoning (N=1,221)	Poisoning (N=490)	Poisoning (N=208)	Poisoning (N=172)	Poisoning (N=61)	Poisoning (N=9,336)
8	Fire/burn (N=964)	Poisoning (N=743)	Fire/burn (N=1,281)	Fire/burn (N=1,013)	Fire/burn (N=995)	Fire/burn (N=773)	Fire/burn (N=368)	Fire/burn (N=171)	Fire/burn (N=83)	Fire/burn (N=33)	Fire/burn (N=6,324)
9	Pedal cyclist (N=278)	Transport, other (N=734)	Transport, other (N=1,131)	Transport, other (N=619)	Transport, other (N=531)	Transport, other (N=377)	Machinery (N=184)	Machinery (N=82)	Machinery (N=34)	Transport, other (N=17)	Pedal cyclist (N=4,452)
10	Suffocation (N=134)	Fire/burn (N=643)	Pedal cyclist (N=777)	Machinery (N=337)	Machinery (N=378)	Pedal cyclist (N=324)	Transport, other (N=184)	Transport, other (N=61)	Transport, other (N=33)	Suffocation (N=17)	Transport, other (N=3,757)

Table 4: Top 10 causes of injury-related hospitalization by age, Maryland, 2007

Rank	0-4 yrs	5-14 yrs	15-24 yrs	25-34 yrs	35-44 yrs	45-54 yrs	55-64 yrs	65-74 yrs	75-84 yrs	85+ yrs	All Ages
1	Fall (N=245)	Fall (N=374)	MV traffic (N=1,751)	MV traffic (N=1,107)	Poisoning (N=1,614)	Fall (N=1,942)	Fall (N=2,446)	Fall (N=2,938)	Fall (N=5,663)	Fall (N=5,415)	Fall (N=21,578)
2	Poisoning (N=170)	MV traffic (N=192)	Poisoning (N=1,044)	Poisoning (N=1,092)	Fall (N=1,234)	Poisoning (N=1,703)	Poisoning (N=806)	Poisoning (N=440)	Poisoning (N=345)	Poisoning (N=164)	Poisoning (N=7,482)
3	Fire/burn (N=84)	Struck by/against (N=146)	Cut/pierce (N=679)	Fall (N=673)	MV traffic (N=1,024)	MV traffic (N=989)	MV traffic (N=576)	MV traffic (N=333)	MV traffic (N=282)	MV traffic (N=115)	MV traffic (N=6,421)
4	Natural environment (N=82)	Poisoning (N=104)	Fall (N=648)	Cut/pierce (N=496)	Cut/pierce (N=452)	Struck by/against (N=346)	Natural environment (N=208)	Natural environment (N=148)	Natural environment (N=123)	Natural environment (N=80)	Struck by/against (N=2,293)
5	MV traffic (N=52)	Natural environment (N=73)	Struck by/against (N=572)	Struck by/against (N=334)	Struck by/against (N=422)	Cut/pierce (N=311)	Struck by/against (N=177)	Overexertion (N=96)	Suffocation (N=106)	Struck by/against (N=71)	Cut/pierce (N=2,234)
6	Suffocation (N=28)	Transport, other (N=53)	Firearm (N=436)	Firearm (N=275)	Natural environment (N=238)	Natural environment (N=303)	Cut/pierce (N=135)	Struck by/against (N=95)	Struck by/against (N=103)	Suffocation (N=67)	Natural environment (N=1,469)
7	Struck by/against (N=27)	Pedal cyclist (N=50)	Transport, other (N=130)	Natural environment (N=110)	Firearm (N=117)	Overexertion (N=146)	Overexertion (N=113)	Suffocation (N=89)	Overexertion (N=95)	Overexertion (N=61)	Firearm (N=918)
8	Drowning (N=13)	Cut/pierce (N=47)	Natural environment (N=104)	Transport, other (N=76)	Overexertion (N=103)	Fire/burn (N=136)	Transport, other (N=80)	Fire/burn (N=51)	Cut/pierce (N=41)	Fire/burn (N=22)	Overexertion (N=774)
9	Cut/pierce (N=10)	Fire/burn (N=32)	Fire/burn (N=77)	Overexertion (N=74)	Fire/burn (N=98)	Transport, other (N=95)	Fire/burn (N=60)	Cut/pierce (N=48)	Fire/burn (N=33)	Cut/pierce (N=15)	Fire/burn (N=663)
10		Overexertion (N=22)	Overexertion (N=60)	Fire/burn (N=70)	Transport, other (N=84)	Pedal Cyclist, Other (N=55)	Suffocation (N=52)	Transport, other (N=39)	Transport, other (N=28)	Transport, other (N=10)	Transport, other (N=599)

Table 5: Top 10 causes* of fatal injury by age, Maryland, 2007

Rank	0-4 yrs	5-14 yrs	15-24 yrs	25-34 yrs	35-44 yrs	45-54 yrs	55-64 yrs	65-74 yrs	75-84 yrs	85+ yrs	All Ages
1	Suffocation (N=14)	Motor vehicle (N=23)	Firearm (N=212)	Firearm (N=187)	Poisoning (N=255)	Poisoning (N=286)	Poisoning (N=79)	Fall (N=57)	Fall (N=153)	Fall (N=222)	Poisoning (N=866)
2	Fire/flame (N=10)	Fire/flame (N=9)	Motor vehicle (N=171)	Poisoning (N=141)	Motor vehicle (N=116)	Motor vehicle (N=98)	Motor vehicle (N=63)	Motor vehicle (N=41)	Suffocation (N=49)	Suffocation (N=45)	Firearm (N=671)
3	Motor vehicle (N=7)	Drowning (N=6)	Poisoning (N=73)	Motor vehicle (N=105)	Firearm (N=109)	Firearm (N=63)	Fall (N=50)	Suffocation (N=29)	Motor vehicle (N=30)	Motor vehicle (N=11)	Motor vehicle (N=665)
4	Drowning (N=4)	Firearm (N=4)	Suffocation (N=38)	Suffocation (N=40)	Suffocation (N=51)	Suffocation (N=43)	Firearm (N=46)	Firearm (N=18)	Firearm (N=26)	Fire/flame (N=9)	Fall (N=543)
5	Struck by/ against (N=3)	Transport, other (N=2)	Cut/pierce (N=11)	Cut/pierce (N=23)	Cut/pierce (N=21)	Fall (N=31)	Suffocation (N=33)	Poisoning (N=16)	Natural environment (N=13)	Natural environment (N=7)	Suffocation (N=344)
6	Fall (N=2)	Suffocation (N=2)	Drowning (N=9)	Fire/flame (N=8)	Fall (N=15)	Natural environment (N=17)	Drowning (N=10)	Natural environment (N=15)	Fire/flame (N=9)	Poisoning (N=7)	Fire/flame (N=93)
7			Pedestrian, other (N=7)	Fall (N=7)	Drowning (N=14)	Drowning (N=16)	Cut/pierce (N=9)	Fire/flame (N=12)	Poisoning (N=7)	Firearm (N=6)	Cut/pierce (N=77)
8			Fall (N=6)	Transport, other (N=6)	Fire/ flame (N=11)	Fire/flame (N=14)	Natural environment (N=5)	Cut/pierce (N=4)	Struck by/ against (N=3)	Struck by/ against (N=2)	Drowning (N=69)
9			Fire/flame (N=6)	Drowning (N=4)	Struck by/ against (N=7)	Transport, other (N=9)	Fire/flame (N=5)	Drowning (N=4)		Transport, other (N=2)	Natural environment (N=59)
10			Struck by/ against (N=3)	Struck by/ against (N=2)	Transport, other (N=3)	Cut/pierce (N=8)	Struck by/ against (N=4)	Struck by/ against (N=2)			Struck by/ against (N=33)

*Causes of death with a count of less than two are not included.

Injury by gender

Men suffered more injuries than women overall, and most types of injury were more common in men than in women. Tables 6-8 below show the rates of ED visits, hospitalization, and death due to injury by gender and manner of injury. Only nonfatal self-inflicted injury was more common among women than men.

Nearly all mechanisms of injury affected men more frequently than women: only rates of ED visits for falls and motor vehicle accidents and hospital discharges for falls and poisonings were higher among women. Death rates were higher among men than women for all mechanisms of injury. Tables 6-8 compare the rates of ED visits, hospital discharge, and death for men and women by cause of injury. Due to differences in incidence among different types of injury, the graphs depicting ED visit and hospital discharge rates have been subdivided to enhance readability.

Table 6: Injury-related **ED visit** rates per 100,000 population by manner and gender, Maryland, 2007

Manner	Males	Females
Assault	580.8	338.3
Self-inflicted	56.1	67.8
Unintentional	8,759.0	7,577.8
Legal intervention	40.2	6.8
Undetermined	45.9	37.2
Total	9,482.2	8,027.9

Table 7: Injury-related **hospitalization** rates per 100,000 population by manner and gender, Maryland, 2007

Manner	Males	Females
Assault	110.5	22.2
Self-inflicted	66.0	79.6
Unintentional	830.3	783.8
Legal intervention	2.0	0.4
Undetermined	27.8	16.6
Total	1,036.7	902.6

Table 8: Injury-related **death** rates per 100,000 population by manner of injury and gender, Maryland, 2007

Manner	Males	Females
Homicide	18.1	3.0
Suicide	14.6	3.8
Unintentional	41.7	23.3
Legal intervention	0.7	0.0
Undetermined	20.9	8.1
Total	96.0	38.2

Figure 17a: Injury-related **ED visit** rates by cause and gender, Maryland, 2007

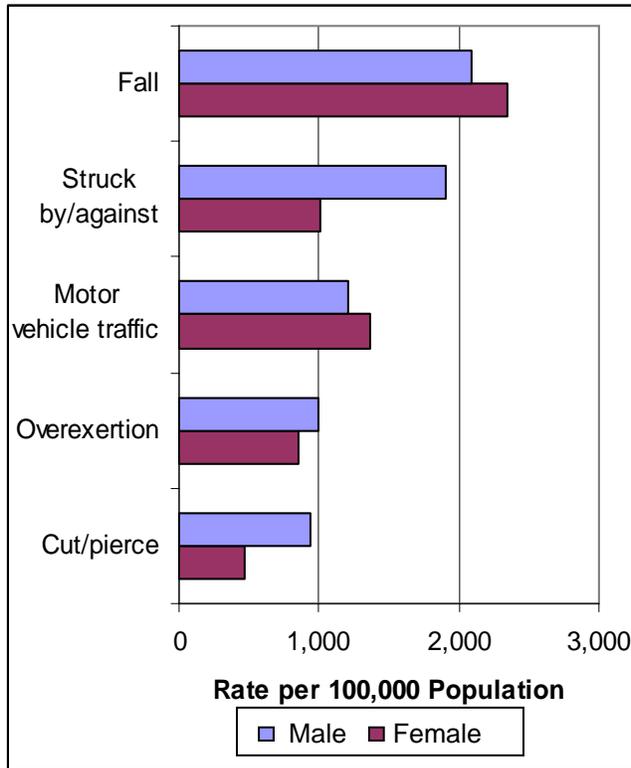


Figure 17c: Injury-related **ED visit** rates by cause and gender, Maryland, 2007 (cont'd)

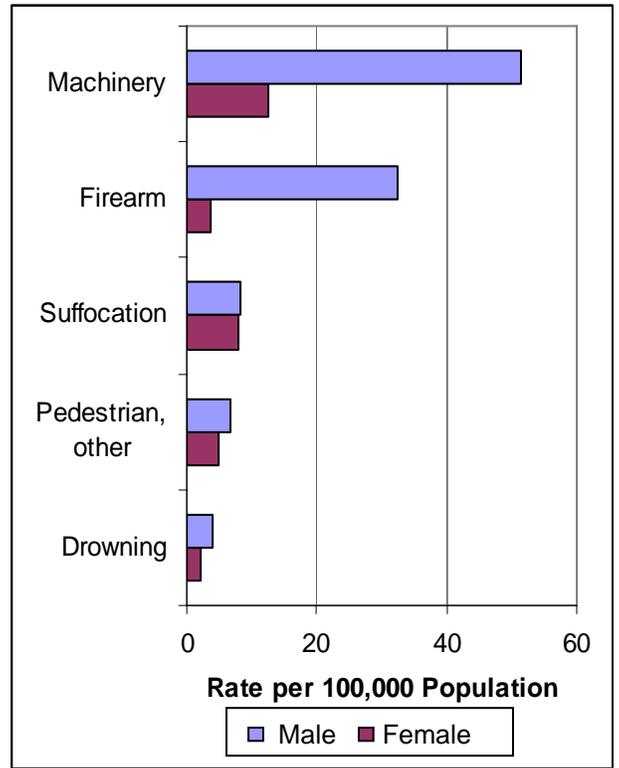


Figure 17b: Injury-related **ED visit** rates by cause and gender, Maryland, 2007 (cont'd)

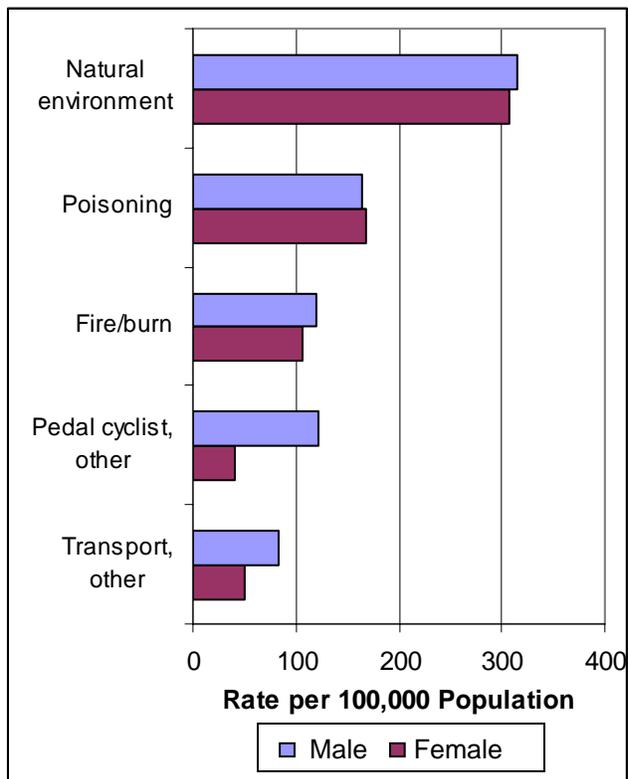


Figure 18a: Injury-related **hospitalization** rates by cause and gender, Maryland, 2007

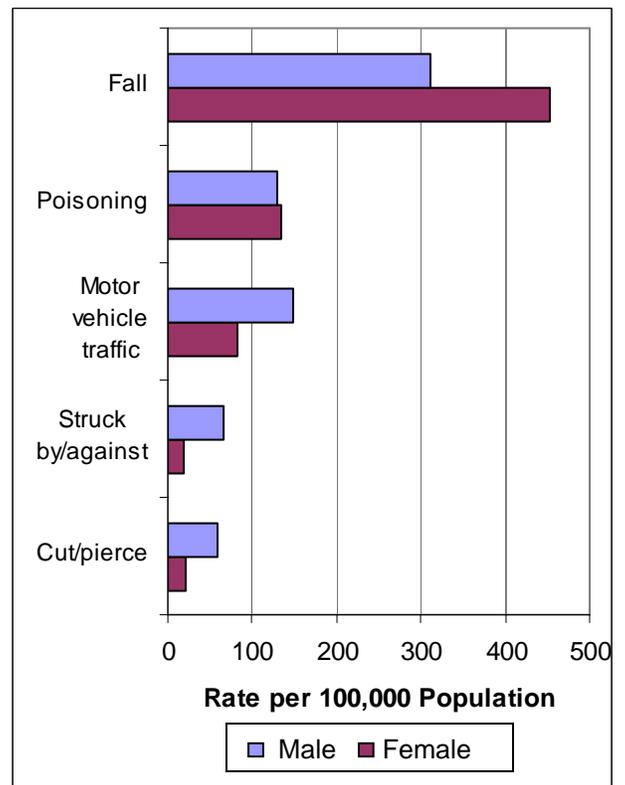


Figure 18b: Injury-related **hospitalization** rates by cause and gender, Maryland, 2007 (cont'd)

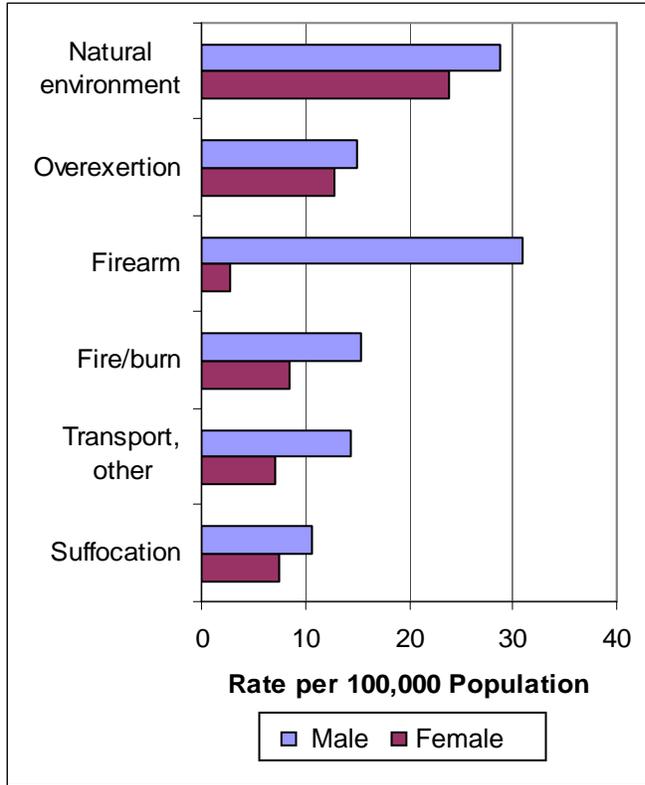


Figure 19: Injury-related **death** rates by cause and gender, Maryland, 2007

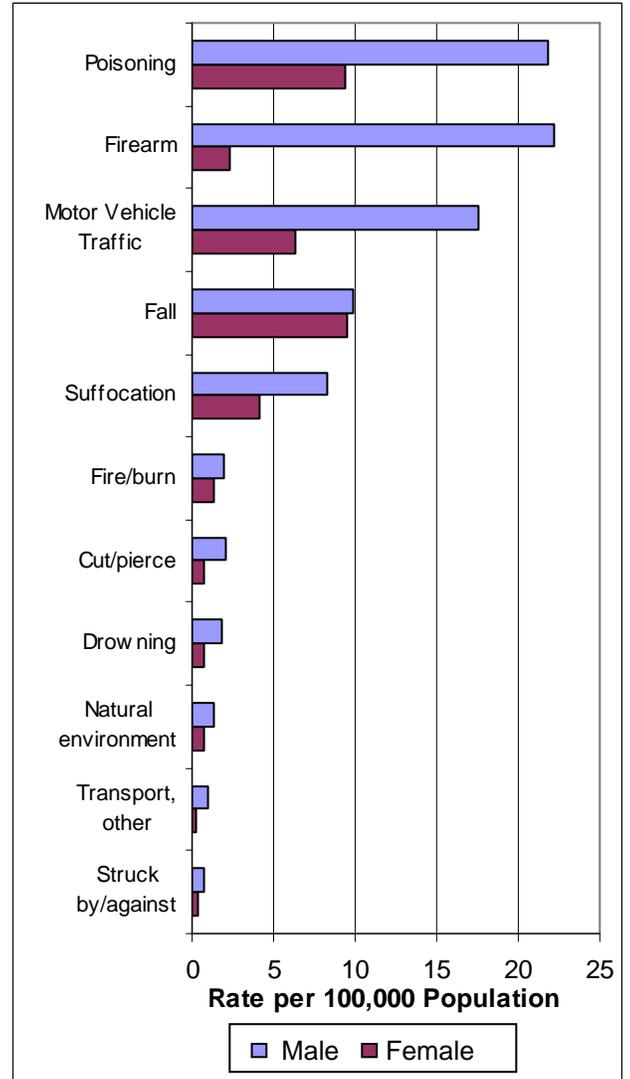
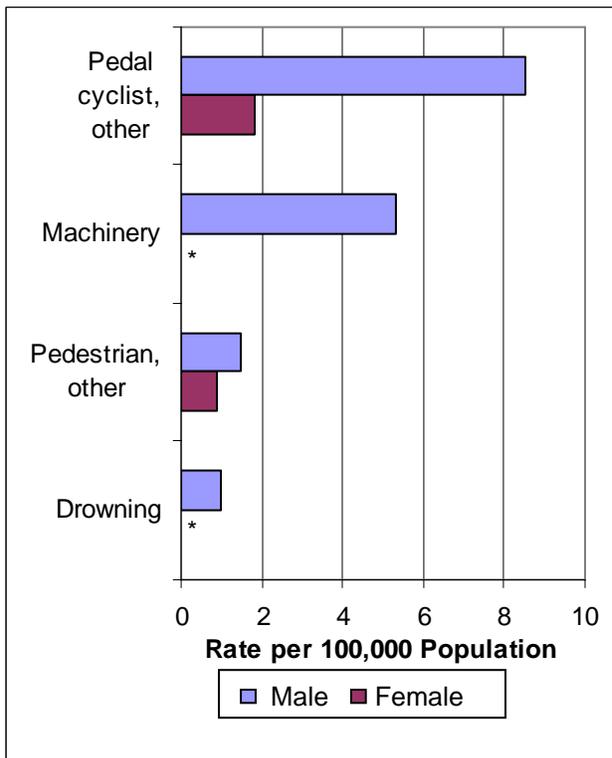


Figure 18c: Injury-related hospitalization rates by cause and gender, Maryland, 2007 (cont'd)



‡ The number of hospitalization visits was too small to use in the calculation of a reliable rate (less than 20 visits).

* The number of deaths was too small to use in the calculation of reliable rates (less than 5 visits).

Injury by race

Rates of injury also varied among racial groups. Overall, rates of injury-related ED visits and fatal injury were higher among African-American residents, while rates of injury-related hospitalization were similar among white and African-American residents. Low event frequencies limit our analysis of rates among other racial groups, but rates of injury-related hospitalization and ED visits were lowest among Asian/Pacific Islander residents, while rates among American Indian residents were higher than for Asian residents but lower than for white or African-American residents. Tables 9-11 show the rates of injury-related ED visits, hospitalizations, and deaths by race and manner

Figures 20-22 below illustrate the differences in injury rate by race, type of injury, and outcome. Due to differences in incidence among different types of injury, the ED and hospital discharge figures have been subdivided to enhance readability.

Table 9: Injury-related **ED visit** rates per 100,000 population by manner of injury and race, Maryland 2007

Manner	White	African American	Asian/Pacific Islander	American Indian/ Eskimo/ Aleut
Assault	279.7	811.2	76.7	158.5
Self-inflicted	68.0	51.3	8.3	*
Unintentional	7343.5	9549.4	2045.9	4207.0
Legal intervention	11.5	47.2	*	*
Undetermined	34.4	57.1	*	*
Total	7737.0	10516.2	2140.6	4438.0

* The number of incidents was too small to use in the calculation of reliable rates (less than 20 visits).

Table 10: Injury-related **hospitalization** rates by manner of injury and race, Maryland 2007

Manner	White	African American	Asian/Pacific Islander	American Indian/ Eskimo/ Aleut
Assault	28.6	137.6	7.3	*
Self-inflicted	76.9	62.6	17.7	*
Unintentional	872.7	668.1	153.6	394.0
Legal intervention	0.8	2.3	*	*
Undetermined	16.4	35.7	*	*
Total	995.4	906.4	181.3	443.8

* The number of incidents was too small to use in the calculation of reliable rates (less than 20 visits).

Table 11: Injury-related **death** rates by manner of injury and race, Maryland 2007

Manner	White	African American
Homicide	3.1	27.0
Suicide	11.2	4.9
Unintentional	35.6	28.1
Legal Intervention	*	*
Undetermined	14.9	15.3
Total	65.0	76.0

Figure 20a: Injury-related **ED visit** rates by race, Maryland, 2007

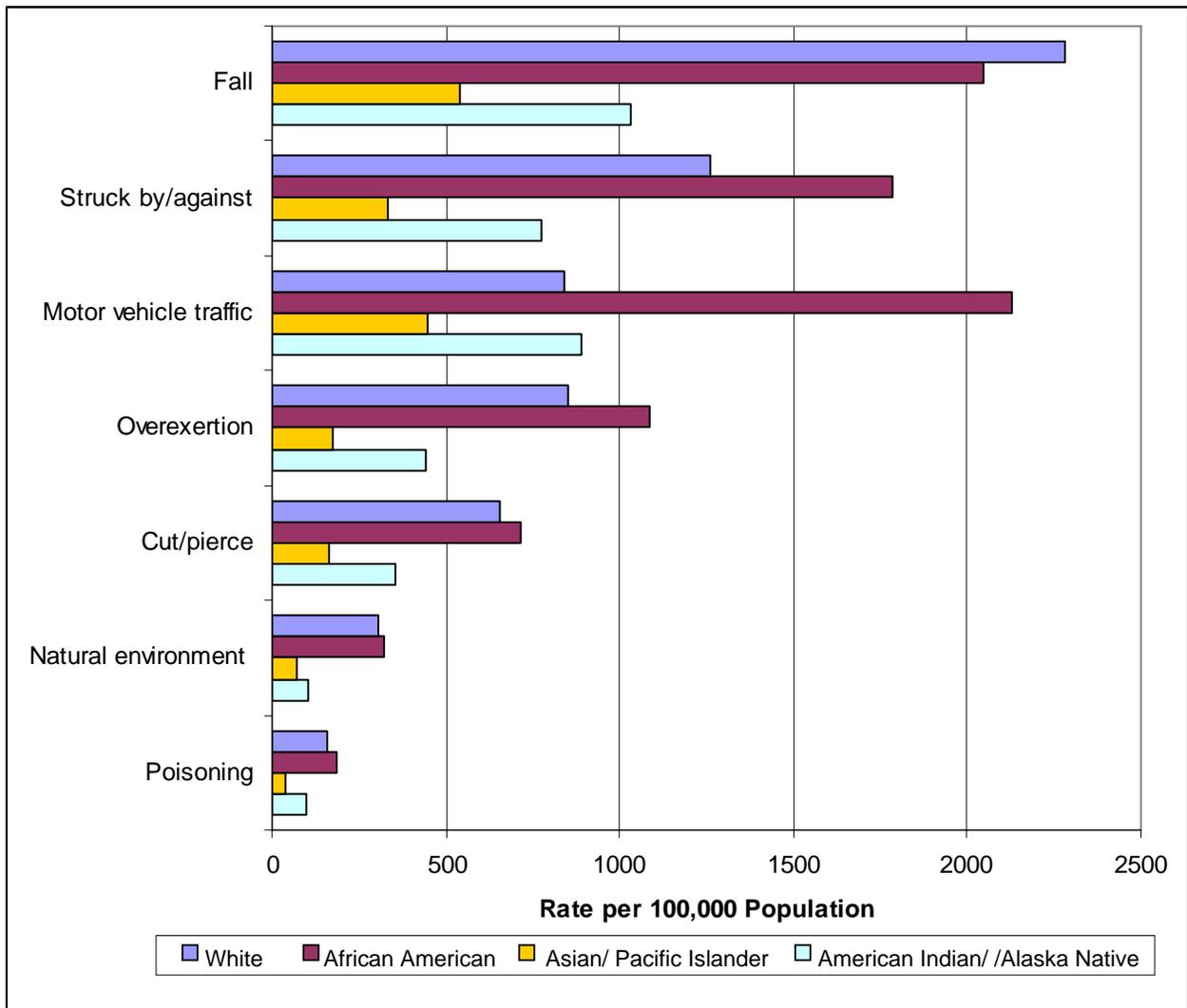
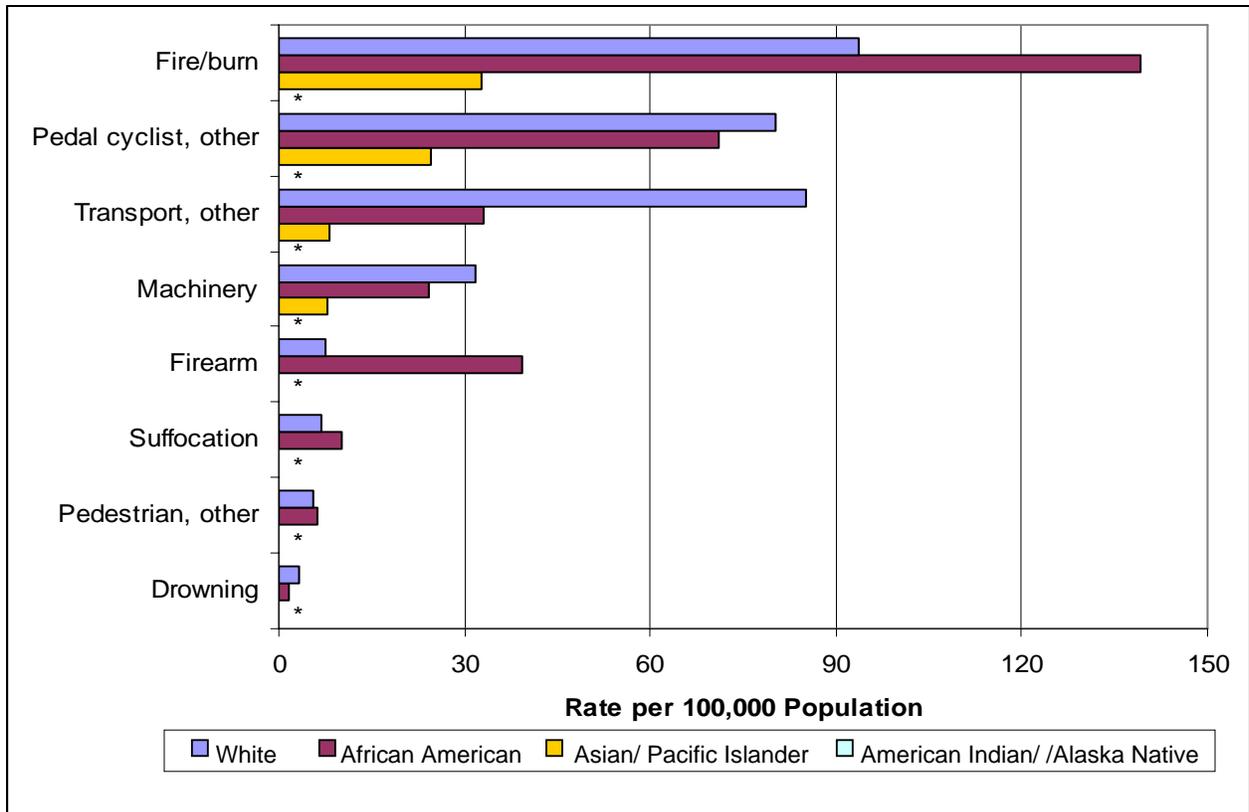
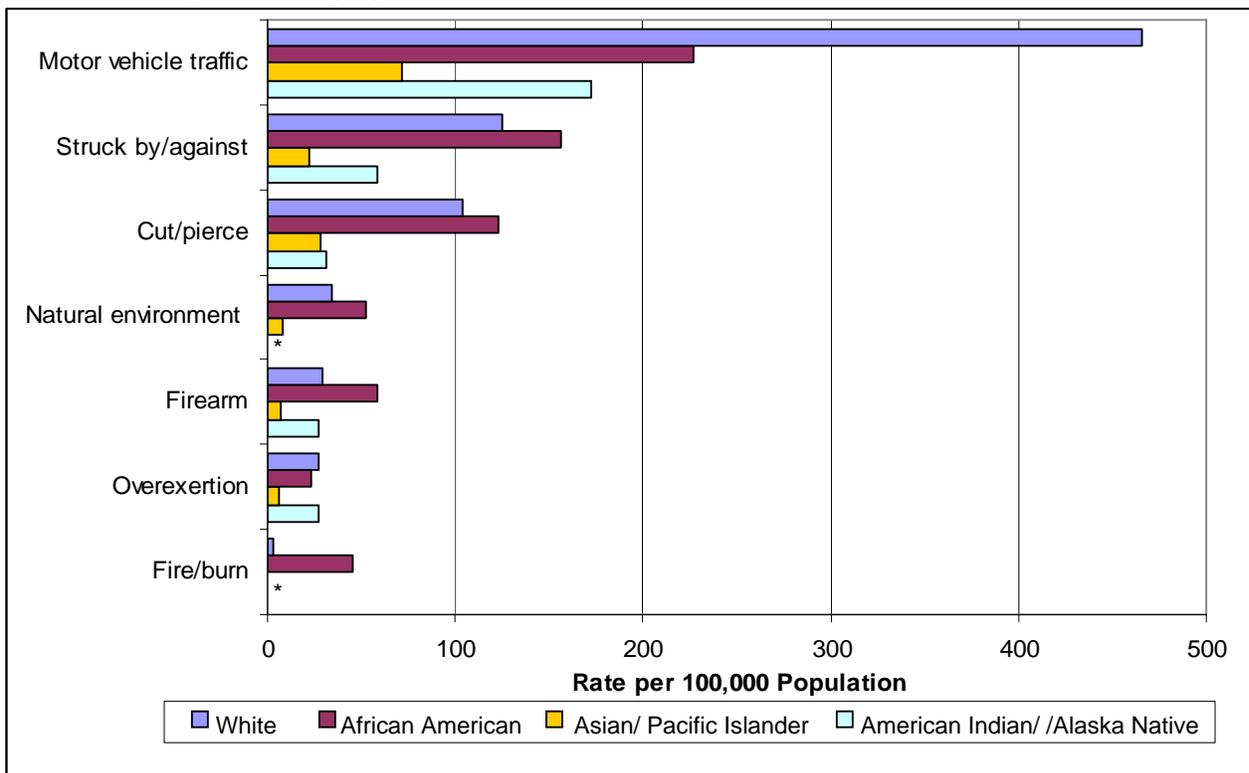


Figure 20b: Injury-related **ED visit** rates by race, Maryland, 2007 (cont'd)



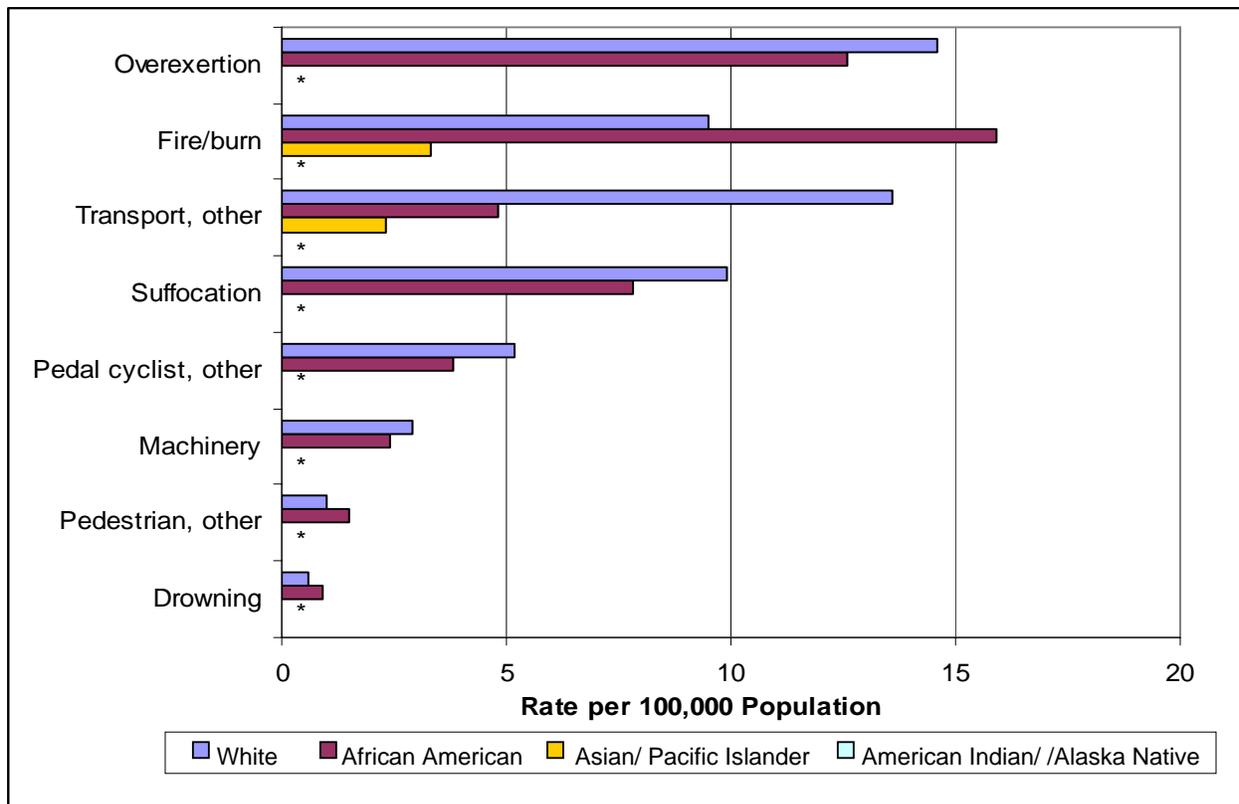
* Frequencies for this group were too small to use in the calculation of reliable rates.

Figure 21a: Injury-related **hospitalization** rates by race, Maryland, 2007



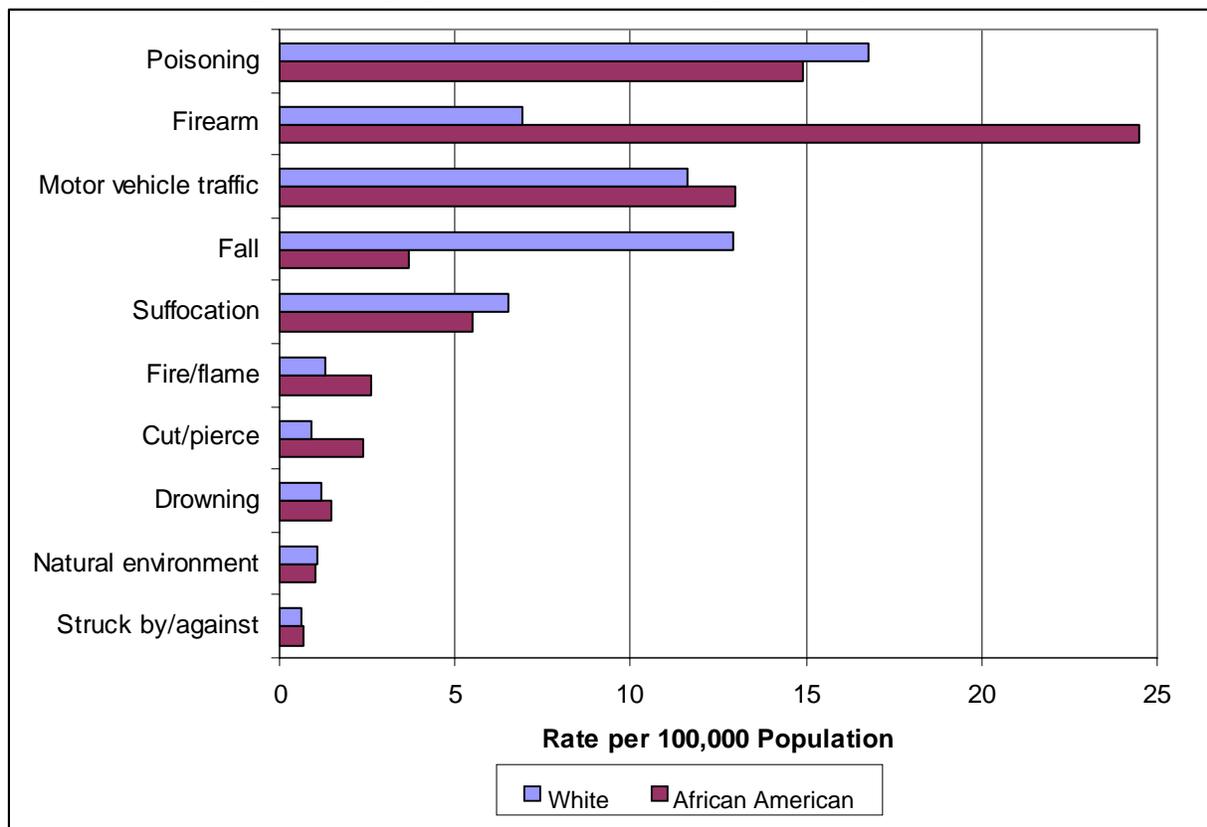
* Frequencies for this group were too small to use in the calculation of reliable rates (less than 20 visits).

Figure 21b: Injury-related **hospitalization** rates by race, Maryland, 2007 (cont'd)



* Frequencies for this group were too small to use in the calculation of reliable rates (less than 20 visits).

Figure 22: Injury-related **death** rates by race, Maryland, 2007



Injuries over Time

From 2003 to 2007, the number of injury-related hospitalizations and deaths has increased, the age-adjusted rate of injury-related hospitalizations has increased and the age-adjusted rate of injury-related deaths has remained fairly stable. When looking at the age-adjusted rate of injury-related hospitalizations and deaths by manner and by injury, the same general trend appears. There are a few exceptions, such as motor vehicle hospitalizations and deaths, which both appear to be going down, and firearm hospitalizations and deaths, which have been stable in the past five years.

Table 12: Number of injury-related hospitalizations and deaths by year and manner of injury, Maryland, 2003-2007

Manner of Injury	Hospitalizations					Deaths				
	2003	2004	2005	2006	2007	2003	2004	2005	2006	2007
Unintentional	39,187	40,208	42,772	44,495	45,309	1,732	1,693	1,736	1,768	1,812
Assault	2,889	3,194	3,599	3,969	3,649	557	538	581	570	577
Self- inflicted	3,047	3,296	3,716	3,896	4,103	483	493	467	486	509
Legal intervention	40	49	64	78	67	11	11	12	18	18
Undetermined	852	866	1,109	1,204	1,238	727	634	629	758	803
Total	46,015	47,613	51,260	53,642	54,366	3,510	3,369	3,425	3,600	3,719

Table 13: Age-adjusted rates (per 100,000 population) of injury-related hospitalizations and deaths by year and manner of injury, Maryland, 2003-2007

Manner of Injury	Hospitalizations					Deaths				
	2003	2004	2005	2006	2007	2003	2004	2005	2006	2007
Unintentional	729.2	736.2	770.3	799.4	805.9	32.3	31.0	31.2	31.8	32.2
Assault	52.6	57.8	64.7	70.5	65.0	10.2	9.8	10.5	10.2	10.4
Self- inflicted	55.0	59.1	66.5	68.8	72.8	8.7	8.7	8.4	8.4	8.9
Legal Intervention	0.7	0.9	1.1	1.4	1.2	0.2	0.2	0.2	0.3	0.3
Undetermined	15.4	15.4	19.7	20.9	21.4	12.8	11.2	11.0	13.1	13.9
Total	853.0	869.4	922.3	960.9	966.3	64.2	61.0	61.3	63.8	65.7

Rates for hospitalization counts less than 20 have not been calculated, rates for death counts less than 5 have not been calculated.

Table 14: Number of Injury-Related Hospitalizations and Deaths by Year and Cause of Injury, Maryland, 2003-2007

Cause of Injury	Hospitalizations					Deaths				
	2003	2004	2005	2006	2007	2003	2004	2005	2006	2007
Cut/pierce	2,007	2,104	2,296	2,382	2,234	81	69	83	81	77
Drowning	41	30	39	43	42	80	71	77	84	69
Fall	19,058	18,604	19,501	20,205	21,578	436	430	459	503	546
Fire/burn	576	609	641	666	663	59	84	67	56	93
Firearm	885	930	933	996	918	643	653	654	677	671
Machinery	208	210	225	187	164	6	12	10	7	3
Motor Vehicle	6,432	6,628	6,641	6,766	6,421	679	658	624	712	665
Natural Environment	1,094	1,234	1,461	1,456	1,469	42	44	95	76	59
Overexertion	759	719	727	755	774	0	0	0	0	1
Pedal Cyclist, Other	222	300	275	251	283	2	1	3	2	2
Pedestrian, Other	41	43	42	45	67	21	29	31	18	19
Poisoning	5,345	5,677	6,468	7,174	7,482	858	717	709	802	866
Struck by/against	2,001	2,141	2,292	2,445	2,293	29	32	18	19	33
Suffocation	433	381	431	474	506	305	316	328	300	344
Transport, Other	482	579	617	525	599	52	48	42	41	32

Table 15: Age-Adjusted Rates (per 100,000 population) of Injury-Related Hospitalizations and Deaths by Year and Cause of Injury, Maryland, 2003-2007

Cause of Injury	Hospitalizations					Deaths				
	2003	2004	2005	2006	2007	2003	2004	2005	2006	2007
Cut/pierce	36.4	38.1	41.3	42.5	39.8	1.5	1.3	1.5	1.4	1.4
Drowning	0.8	0.5	0.7	0.8	0.8	1.5	1.3	1.4	1.5	1.2
Fall	362.0	346.4	355.2	369.1	387.8	8.4	8.1	8.3	9.3	9.8
Fire/burn	10.5	10.9	11.4	11.8	11.7	1.1	1.5	1.2	1.0	1.7
Firearm	16.3	17.0	17.0	17.9	16.6	11.8	11.9	11.8	12.0	12.0
Machinery	3.7	3.7	4.0	3.3	2.9	0.1	0.2	0.2	0.1	#
Motor Vehicle	117.2	119.4	118.6	119.6	113.5	12.4	11.9	11.2	12.6	11.8
Natural Environment	19.8	22.1	25.9	25.5	25.7	0.8	0.8	1.7	1.3	1.0
Overexertion	14.0	12.9	12.9	13.4	13.6	0	0	0	0	#
Pedal Cyclist, Other	4.0	5.4	4.9	4.4	5.0	#	#	#	#	#
Pedestrian, Other	0.7	0.8	0.8	0.8	1.2	0.4	0.5	0.6	0.3	0.3
Poisoning	96.3	101.5	114.8	125.7	131.0	15.2	12.6	12.5	13.8	15.0
Struck by/against	36.6	38.7	41.1	43.5	40.8	0.5	0.6	0.3	0.3	0.6
Suffocation	8.1	7.0	7.8	8.6	9.1	5.7	5.8	5.9	5.4	6.1
Transport, Other	8.8	10.5	11.0	9.3	10.5	1.0	0.9	0.8	0.7	0.5

Rates for hospitalization counts less than 20 have not been calculated, rates for death counts less than 5 have not been calculated.

Figure MD-1: Rate of injury-related ED visits per 100,000 population, Maryland, 2006

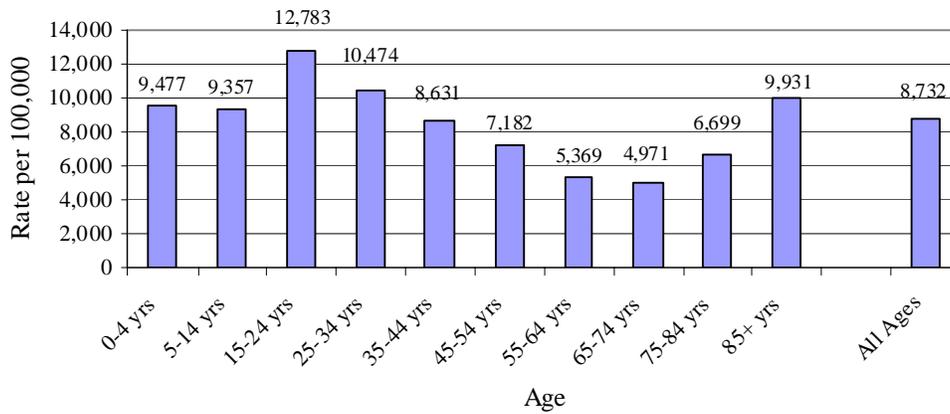


Figure MD-2: Rate of injury-related hospitalization per 100,000 population, Maryland, 2006

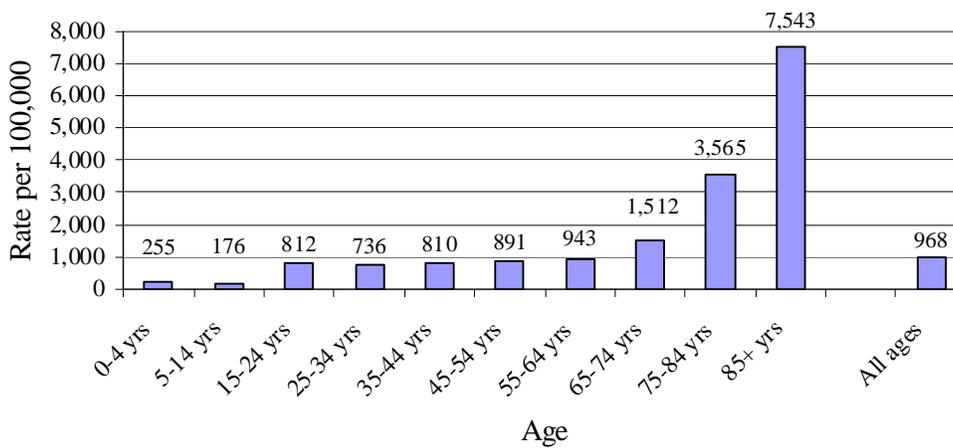


Figure MD-3: Injury-related death rate per 100,000 population, Maryland, 2006

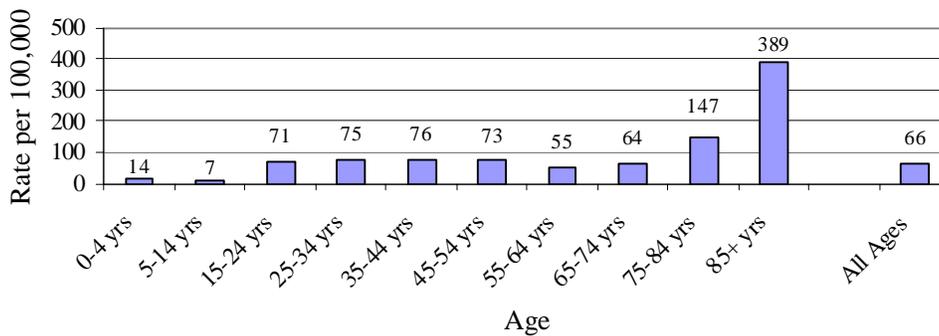


Table MD-1: Number of injury-related **ED visits** by cause of injury and age, Maryland, 2007

Cause of Injury	Total	Age (years)									
		0-04	05-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
All	490,590	35,703	68,769	100,602	75,565	73,194	62,109	33,478	17,410	14,887	8,873
Cut/pierce	38,896	1,623	4,713	9,279	7,084	6,313	5,048	2,725	1,212	667	232
Drowning	166	25	33	34	20	17	24	7	#	#	#
Fall	124,845	14,182	19,900	15,152	12,162	14,302	15,238	10,879	7,622	8,921	6,487
Fire/burn	6,324	964	643	1,281	1,013	995	773	368	171	83	33
Firearm	991	#	102	481	227	100	49	22	#	#	#
Machinery	1,759	21	37	352	337	378	323	184	82	34	11
Motor vehicle traffic	72,588	1,979	4,677	19,144	15,050	13,054	10,369	5,025	2,029	992	269
Natural environment	17,501	2,044	2,869	2,748	2,289	2,368	2,347	1,425	759	507	145
Other/unspecified	76,146	5,980	8,342	14,801	12,972	12,915	10,733	5,223	2,514	1,761	905
Overexertion	51,756	1,316	5,177	11,093	10,232	10,289	7,762	3,549	1,375	738	225
Pedal cyclist, other	4,452	278	2,151	777	330	353	324	169	46	24	0
Pedestrian, other	317	26	87	63	43	35	34	11	12	#	#
Poisoning	9,336	1,264	743	2,207	1,487	1,483	1,221	490	208	172	61
Struck by/against	81,305	5,794	18,512	21,998	11,650	10,018	7,452	3,195	1,298	922	466
Suffocation	451	134	49	61	50	43	35	22	14	26	17
Transport, other	3,757	70	734	1,131	619	531	377	184	61	33	17

To preserve patient confidentiality, cell sizes less than 6 are not displayed.

Table MD-2: Number of injury-related **ED visits** by cause of injury, gender and race, Maryland, 2007

Cause of Injury	Total*	Gender		Race				
		Male	Female	White	African American	Asian/Pacific Islander	American Indian/Eskimo/Aleut	Other
All	490,590	257,781	232,788	279,178	177,499	6,423	980	24,249
Cut/pierce	38,896	25,357	13,538	23,549	12,045	488	78	2,531
Drowning	166	105	61	119	28	#	0	14
Fall	124,845	56,650	68,190	82,406	34,579	1,624	228	5,419
Fire/burn	6,324	3,259	3,064	3,384	2,348	98	11	449
Firearm	991	886	105	270	661	6	#	47
Machinery	1,759	1,400	359	1,145	406	24	#	171
Motor vehicle traffic	72,588	32,868	39,716	30,368	35,959	1,344	197	4,413
Natural environment	17,501	8,572	8,927	11,002	5,465	217	23	693
Other/unspecified	76,146	39,378	36,764	38,676	32,375	871	124	3,763
Overexertion	51,756	26,953	24,803	30,653	18,346	520	98	1,973
Pedal cyclist, other	4,452	3,283	1,168	2,896	1,198	74	13	238
Pedestrian, other	317	179	138	197	104	#	#	12
Poisoning	9,336	4,458	4,877	5,646	3,103	115	22	404
Struck by/against	81,305	51,932	29,371	45,550	30,153	1,006	171	4,009
Suffocation	451	222	229	250	168	#	#	25
Transport, other	3,757	2,279	1,478	3,067	561	25	#	88

*Total includes individuals of unknown gender and race.

To preserve patient confidentiality, cell sizes less than 6 are not displayed.

Table MD-3: Number of injury-related **ED visits** by manner, cause of injury, age, gender and race, Maryland, 2007

Cause of Injury	Total*	Manner				
		Unintentional	Assault	Self-inflicted	Other	Undetermined
All	490,590	457,880	25,599	3,491	1,292	2,328
Cut/pierce	38,896	36,000	1,862	954	20	60
Drowning	166	164	0	#	0	#
Fall	124,845	124,707	25	14	0	99
Fire/burn	6,324	6,236	45	18	0	25
Firearm	991	508	394	10	25	54
Machinery	1,759	1,759	0	0	0	0
Motor vehicle traffic	72,588	72,553	23	#	0	8
Natural environment	17,501	17,493	0	0	0	8
Other/unspecified	76,146	65,739	9,278	321	220	588
Overexertion	51,756	51,756	0	0	0	0
Pedal cyclist, other	4,452	4,452	0	0	0	0
Pedestrian, other	317	317	0	0	0	0
Poisoning	9,336	5,699	41	2,089	31	1,476
Struck by/against	81,305	66,427	13,882	0	996	0
Suffocation	451	313	49	80	0	9
Transport, other	3,757	3,757	0	0	0	0
Age (years)						
0-4	35,703	35,351	223	#	#	123
5-14	68,769	66,075	2,223	268	23	180
15-24	100,602	88,638	9,466	1,462	463	573
25-34	75,565	68,687	5,424	647	345	462
35-44	73,194	67,705	4,166	626	282	415
45-54	62,109	58,236	3,010	373	134	356
55-64	33,478	32,415	824	78	30	131
65-74	17,410	17,167	175	17	10	41
75-84	14,887	14,781	63	10	#	31
85+	8,873	8,825	25	#	#	16
Gender						
Male	257,781	238,122	15,790	1,526	1,094	1,249
Female	232,788	219,738	9,808	1,965	198	1,079
Race						
White	279,178	264,978	10,092	2,452	414	1,242
African American	177,499	161,181	13,692	866	796	964
Asian/Pacific Islander	6,423	6,139	230	25	6	23
American Indian/ Alaska Native	980	929	35	8	#	#
Other	24,249	22,519	1,442	132	71	85

*Total includes individuals of unknown age, gender, and race.

To preserve patient confidentiality, cell sizes less than 6 are not displayed.

Table MD-4: Number of injury-related **hospitalizations** by cause of injury and age, Maryland, 2007

Cause of Injury	Total	Age (years)									
		0-04	05-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
All	54,366	962	1,297	6,390	5,308	6,868	7,703	5,880	5,296	7,922	6,740
Cut/pierce	2,234	10	47	679	496	452	311	135	48	41	15
Drowning	42	13	#	6	#	7	#	#	#	0	0
Fall	21,578	245	374	648	673	1,234	1,942	2,446	2,938	5,663	5,415
Fire/burn	663	84	32	77	70	98	136	60	51	33	22
Firearm	918	#	16	436	275	117	36	16	6	#	9
Machinery	164	#	0	22	36	27	40	17	11	6	#
Motor vehicle traffic	6,421	52	192	1,751	1,107	1,024	989	576	333	282	115
Natural environment	1,469	82	73	104	110	238	303	208	148	123	80
Other/unspecified	8,873	236	173	766	885	1,366	1,543	1,142	981	1,075	706
Overexertion	774	#	22	60	74	103	146	113	96	95	61
Pedal cyclist, other	283	#	50	43	29	33	55	42	15	13	0
Pedestrian, other	67	0	#	8	11	16	10	9	#	#	#
Poisoning	7,482	170	104	1,044	1,092	1,614	1,703	806	440	345	164
Struck by/against	2,293	27	146	572	334	422	346	177	95	103	71
Suffocation	506	28	7	44	36	33	44	52	89	106	67
Transport, other	599	#	53	130	76	84	95	80	39	28	10

To preserve patient confidentiality, cell sizes less than 6 are not displayed.

Table MD-5: Number of injury-related **hospitalizations** by cause of injury, gender and race, Maryland, 2007

Cause of Injury	Total*	Gender		Race				
		Male	Female	White	African American	Asian/Pacific Islander	American Indian/Eskimo/Aleut	Other
All	54,366	28,183	26,174	35,916	15,298	544	98	2,378
Cut/pierce	2,234	1,626	608	1,042	984	20	6	179
Drowning	42	28	14	22	15	0	0	#
Fall	21,578	8,472	13,106	16,789	3,826	214	38	667
Fire/burn	663	417	246	343	269	10	#	39
Firearm	918	839	77	119	758	#	0	36
Machinery	164	145	19	104	40	#	0	17
Motor vehicle traffic	6,421	4,049	2,367	3,732	2,080	85	7	502
Natural environment	1,469	780	689	990	385	18	6	65
Other/unspecified	8,873	5,139	3,734	5,448	2,915	85	20	370
Overexertion	774	404	370	528	212	#	#	29
Pedal cyclist, other	283	232	51	189	64	#	#	23
Pedestrian, other	67	41	26	35	26	#	0	#
Poisoning	7,482	3,552	3,929	4,495	2,633	67	13	262
Struck by/against	2,293	1,776	517	1,232	878	23	#	148
Suffocation	506	291	215	359	132	#	0	12
Transport, other	599	392	206	489	81	7	#	19

*Total includes individuals of unknown gender and race.

To preserve patient confidentiality, cell sizes less than 6 are not displayed.

Table MD-6: Number of injury-related **hospitalizations** by manner, cause of injury, age, gender and race, Maryland, 2007

Cause of Injury	Total*	Manner				
		Unintentional	Assault	Self-inflicted	Other	Undetermined
All	54,366	45,309	3,649	4,103	67	1,238
Cut/pierce	2,234	660	862	691	#	20
Drowning	42	37	0	#	0	#
Fall	21,578	21,510	8	35	0	25
Fire/burn	663	628	9	17	0	9
Firearm	918	221	588	35	12	62
Machinery	164	164	0	0	0	0
Motor vehicle traffic	6,421	6,401	10	9	0	#
Natural environment	1,469	1,455	0	#	0	11
Other/unspecified	8,873	7,435	1,056	138	30	214
Overexertion	774	774	0	0	0	0
Pedal cyclist, other	283	283	0	0	0	0
Pedestrian, other	67	67	0	0	0	0
Poisoning	7,482	3,501	6	3,084	#	890
Struck by/against	2,293	1,164	1,106	0	23	0
Suffocation	506	410	#	87	0	#
Transport, other	599	599	0	0	0	0
Age (years)						
0-4	962	904	43	#	0	14
5-14	1,297	1,181	56	55	0	#
15-24	6,390	4,011	1,234	990	15	140
25-34	5,308	3,417	812	888	8	183
35-44	6,868	4,832	743	1,003	15	275
45-54	7,703	6,093	498	767	11	334
55-64	5,880	5,296	169	251	9	155
65-74	5,296	5,100	45	79	#	71
75-84	7,922	7,795	30	51	#	41
85+	6,740	6,680	19	18	#	20
Gender						
Male	28,183	22,573	3,003	1,795	55	757
Female	26,174	22,728	645	2,308	12	481
Race						
White	35,916	31,489	1,031	2,775	28	593
African American	15,298	11,277	2,323	1,057	38	603
Asian/Pacific Islander	544	461	22	53	0	8
American Indian/ Alaska Native	98	87	#	6	0	#
Other	2,378	1,875	265	206	#	31

*Total includes individuals of unknown gender and race

To preserve patient confidentiality, cell sizes less than 6 are not displayed.

Table MD-7 Number of injury-related **deaths** by cause of injury and age, Maryland, 2007

Cause of Injury	Total*	Age (years)									
		0-04	05-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
All	3,718	52	50	557	540	643	634	341	223	326	348
Cut/pierce	77	0	1	11	23	21	8	9	4	0	0
Drowning	69	4	6	9	4	14	16	10	4	1	1
Fall	546	2	0	6	7	15	31	50	57	153	222
Fire/flame	93	10	9	6	8	11	14	5	12	9	9
Firearm	671	0	4	212	187	109	63	46	18	26	6
Hot object	3	0	0	0	0	0	0	2	0	1	0
Machinery	3	0	0	0	0	0	1	1	0	1	0
Motor vehicle traffic	665	7	23	171	105	116	98	63	41	30	11
Natural environment	59	1	0	0	0	1	17	5	15	13	7
Other/unspecified	235	8	2	18	16	37	36	29	23	30	35
Overexertion	1	0	0	0	0	1	0	0	0	0	0
Pedal cyclist, other	2	0	0	0	0	0	1	0	1	0	0
Pedestrian, other	19	1	0	7	1	2	3	1	1	2	1
Poisoning	866	1	1	73	141	255	286	79	16	7	7
Struck by/against	33	3	0	3	2	7	7	4	2	3	2
Suffocation	344	14	2	38	40	51	43	33	29	49	45
Transport, other	32	1	2	3	6	3	10	4	0	1	2

* Total includes individuals of unknown age.

Table MD-8: Number of injury-related **deaths** by cause of injury, gender and race, Maryland, 2007

Cause of Injury	Total*	Gender		Race		
		Male	Female	White	African American	Other
All	3,718	2,609	1,109	2,345	1,282	90
Cut/pierce	77	56	21	33	41	3
Drowning	69	49	20	42	25	2
Fall	546	270	276	466	63	17
Fire/flame	93	54	39	48	44	1
Firearm	671	603	68	248	414	9
Hot object	3	2	1	2	1	0
Machinery	3	3	0	3	0	0
Motor vehicle traffic	665	479	186	420	219	26
Natural environment	59	38	21	41	17	1
Other/unspecified	235	171	64	138	93	3
Overexertion	1	1	0	0	1	0
Pedal cyclist, other	2	2	0	1	1	0
Pedestrian, other	19	15	4	15	2	2
Poisoning	866	594	272	606	252	8
Struck by/against	33	20	13	21	12	0
Suffocation	344	226	118	234	92	18
Transport, other	32	26	6	27	5	0

* Total includes individuals of unknown gender and race.

Table MD-9 Number of injury-related **deaths** by manner, cause of injury, age, gender and race, Maryland, 2007

Cause of Injury	Total*	Manner				
		Unintentional	Suicide	Homicide	Undetermined	Legal
All	3,718	1,811	509	577	803	18
Cut/pierce	77	0	12	65	0	0
Drowning	69	49	6	0	14	0
Fall	546	535	9	0	2	0
Fire/flame	93	87	2	0	4	0
Firearm	671	4	231	421	1	14
Hot object	3	3	0	0	0	0
Machinery	3	3	0	0	0	0
Motor vehicle traffic	665	665	0	0	0	0
Natural environment	59	59	0	0	0	0
Other/unspecified	235	126	13	54	38	4
Overexertion	1	1	0	0	0	0
Pedal cyclist, other	2	2	0	0	0	0
Pedestrian, other	19	19	0	0	0	0
Poisoning	866	50	73	1	742	0
Struck by/against	33	11	0	22	0	0
Suffocation	344	166	162	14	2	0
Transport, other	32	31	1	0	0	0
Age (years)						
0-4	52	34	0	15	3	0
5-14	50	40	2	7	1	0
15-24	557	208	66	209	68	6
25-34	540	144	88	178	125	5
35-44	643	192	112	97	241	1
45-54	634	221	102	38	271	2
55-64	341	182	70	16	73	0
65-74	224	174	31	7	11	1
75-84	326	276	31	8	8	3
85+	348	337	7	2	2	0
Gender						
Male	2,610	1,135	398	491	568	18
Female	1,109	677	111	86	235	0
Race						
White	2,346	1,286	405	111	537	7
African American	1,282	474	83	456	259	10
Other	90	51	21	10	7	1

*Total includes individuals of unknown gender and race

APPENDIX A

Table A1: International Classifications of Diseases - 9 (ICD-9)

Injury Category	E-Code	Definition
Adverse effects	E870-E876	Misadventures to patients during surgical and medical care
	E878-E879	Surgical and medical procedures as the cause of abnormal reaction of patient or later complication, without mention of misadventure at time of procedure
	E930-E949	Drugs, medicinal and biological substances causing adverse effects in therapeutic use.
Cut/pierce	E920	Accidents caused by cutting and piercing instruments or objects
	E956	Suicide and self-inflicted injury by cutting and piercing instrument
	E966	Assault by cutting and piercing instrument
	E986	Injury by cutting and piercing instruments, undetermined whether accidentally or purposely inflicted
	E974	Injury due to legal intervention by cutting and piercing instrument
Drowning/submersion	E830	Accident to watercraft causing submersion
	E832	Other accidental submersion or drowning in water transport accident
	E910	Accidental drowning and submersion
	E954	Suicide and self-inflicted injury by submersion
	E964	Assault by submersion
	E984	Submersion (drowning), undetermined whether accidentally or purposely inflicted
	Fall	E880-E886
E888		Other and unspecified fall
E957		Suicide and self-inflicted injury from jumping from a high place
E968.1		Assault by pushing from a high place
E987		Falling from high place, undetermined whether accidentally or purposely inflicted
Fire/burn	E890-E899	Accidents caused by fire and flame
	E924	Accident caused by hot substance or object, caustic or corrosive material and steam
	E958 (.1,.2,.7)	Suicide and self-inflicted injury by burns, fire; scald; caustic substance, except poisoning
	E961	Assault by corrosive or caustic substance, except poisoning
	E968 (.0,.3)	Assault by fire; hot liquid
	E988 (.1, .2, .7)	Injury by burns, fire; scald; caustic substance, except poisoning; undetermined whether accidentally or purposely inflicted.
Firearm	E922 (.0-.3, .8,.9)	Accidents caused by firearm missiles
	E955 (.0-.4)	Suicide and self-inflicted injury by firearms
	E965 (.0-.4)	Assault by firearms
	E970	Injury due to legal intervention by firearms
	E985	Injury by firearms, undetermined whether accidentally or purposely inflicted
	Machinery	E919
Motor vehicle	E810-E819	Motor vehicle traffic accident
	E958.5	Suicide and self-inflicted injury by crashing of motor vehicle
	E968.5	Assault by transport vehicle (e.g. purposely struck by, pushed in front of, thrown from, dragged)
	E988.5	Injury by crashing of motor vehicle, undetermined whether accidentally or purposely inflicted

Table A1: Key to groupings on injury codes (continued)

Injury Category	E-Code	Definition
Pedal cyclist, other	E800-E807 (.3)	Railway accident – pedal cyclist
	E820-E825 (.6)	Motor vehicle non-traffic accident – pedal cyclist
	E826 (.1, .9)	Pedal cyclist accident
	E827.1	Animal-drawn vehicle accident – pedal cyclist
	E828.1	Accident involving animal being ridden – pedal cyclist
	E829.1	Other road vehicle accident – pedal cyclist.
Pedestrian, other	E800-E807 (.2)	Railway accident – pedestrian
	E820-E825 (.7)	Motor vehicle non-traffic accident – pedestrian
	E826.0	Pedal cyclist accident – pedestrian
	E827.0	Animal-drawn vehicle accident – pedestrian
	E828.0	Accident involving animal being ridden – pedestrian
	E829.0	Other road vehicle accident – pedestrian
Transport, other	E800-E807 (.0, .1, .8, .9)	Railway accident
	E820-E825 (.0-.5, .8, .9)	Motor vehicle non-traffic accident
	E826 (.2-.8)	Pedal cyclist accident
	E827 (.2-.9)	Animal-drawn vehicle accident
	E828 (.2-.9)	Accident involving animal being ridden
	E829 (.2-.9)	Other road vehicle accident
	E831	Accident to watercraft causing injury other than drowning
	E833-E845	Watercraft, air and space transport accidents
	E958.6	Suicide and self-inflicted injury by crashing of aircraft
	E988.6	Injury by crashing of aircraft, undetermined whether accidentally or purposely inflicted
Natural environment	E900	Excessive heat
	E901	Excessive cold
	E902	High and low air pressure and changes in air pressure
	E903	Travel and motion
	E904	Hunger, thirst, exposure and neglect
	E905	Venomous animals and plants as the cause of poisoning and toxic reactions
	E906	Other injury caused by animals
	E907	Lightning
	E908	Cataclysmic storms and floods resulting from storms
	E909	Cataclysmic earth surface movements and eruptions
	E928 (.0-.2)	Other and unspecified environmental and accidental causes
	E958.3	Suicide and self-inflicted injury by extremes of cold
	E988.3	Injury by extremes of cold, undetermined whether accidentally or purposely inflicted
Poisoning	E850-E858	Accidental poisoning by drugs, medicinal substances and biologicals
	E860-E869	Accidental poisoning by other solid and liquid substances, gases and vapors
	E950	Suicide and self-inflicted poisoning by solid or liquid substances
	E951	Suicide and self-inflicted poisoning by gases in domestic use
	E952	Suicide and self-inflicted poisoning by other gases and vapors
	E962	Assault by poisoning
	E972	Injury due to legal intervention by gas
	E980	Poisoning by solid or liquid substances, undetermined
	E981	Poisoning by gases in domestic use, undetermined
	E982	Poisoning by other gases, undetermined.
Overexertion	E927	Overexertion and strenuous movement
Struck by/ against	E916	Struck accidentally by falling object
	E917	Striking against or struck accidentally by objects or persons
	E960.0	Unarmed fight, brawl
	E968.2	Assault by striking by blunt or thrown object
	E973	Injury due to legal intervention by blunt object
	E975	Injury due to legal intervention by other specified means (blow, manhandling)

Table A1: Key to groupings on injury codes (continued)

Injury Category	E-Code	Definition
Suffocation	E911	Inhalation and ingestion of food causing obstruction of respiratory tract or suffocation
	E912	Inhalation and ingestion of other object causing obstruction of respiratory tract or suffocation
	E913	Accidental mechanical suffocation
	E953	Suicide and self-inflicted injury by hanging, strangulation, and suffocation
	E963	Assault by hanging and strangulation
	E983	Hanging, strangulation, or suffocation, undetermined whether accidentally or purposely inflicted.
Other/ unspecified	E846-E848	Vehicle accidents not elsewhere classifiable
	E887	Fracture, cause unspecified
	E914	Foreign body accidentally entering eye and adnexa
	E915	Foreign body accidentally entering other orifice
	E918	Caught accidentally in or between objects
	E921	Accident caused by explosion of pressure vessel
	E922.4	Accident caused by air gun
	E923	Accident caused by explosive material
	E925	Accident caused by electric current
	E926	Exposure to radiation
	E928 (.3 -.9)	Other and unspecified environmental and accidental causes
	E929	Late effects of accidental injury
	E955 (.5, .6, .9)	Suicide and self-inflicted injury by explosives, air gun, or unspecified firearm
	E958 (.0, .4)	Suicide and self-inflicted injury by jumping or lying before a moving object or electrocution
	E958 (.8-.9)	Suicide and self-inflicted injury by other or unspecified means
	E959	Late effects of self-inflicted injury
	E960.1	Rape
	E965 (.5 - .9)	Assault by antipersonnel bomb, gasoline bomb, letter bomb, or other explosive
	E967	Child and adult battering and other maltreatment
	E968 (.4, .6, .7)	Assault by criminal neglect; air gun; human bite
	E968 (.8-.9)	Assault by other or unspecified means
	E969	Late effects of injury purposely inflicted by other person
	E971	Injury due to legal intervention by explosives
	E976	Injury due to legal intervention by unspecified means
	E977	Late effects of injury due to legal intervention
	E978	Legal execution
	E979	Terrorism
	E985 (.5, .6)	Injury by explosives or air guns, undetermined whether accidentally or purposely inflicted
	E988 (.0, .4)	Injury by jumping or lying before moving objects or electrocution, undetermined whether accidentally or purposely inflicted
	E988 (.8-.9)	Injury by other or unspecified means, undetermined whether accidentally or purpose inflicted
	E989	Late effects of injury, undetermined whether accidentally or purposely inflicted
	E990-E999	Injury resulting from operations of war

APPENDIX B

Table B1: Key to groupings on injury codes (ICD-10)

Injury Category	ICD 10 category	Definition
Cut/pierce	W25	Contact with sharp glass
	W26	Contact with knife, sword or dagger
	W27	Contact with non-powered hand tool
	W28	Contact with powered lawnmower
	W29	Contact with other powered hand tools and household machinery
	W45	Foreign body or object entering through skin
	X78	Intentional self-harm by sharp object
	X99	Assault by sharp object
	Y28	Contact with sharp object, undetermined intent
	Y35.4	Legal intervention involving sharp objects
Drowning	W65	Drowning and submersion while in bath-tub
	W66	Drowning and submersion following fall into bath-tub
	W67	Drowning and submersion while in swimming pool
	W68	Drowning and submersion following fall into swimming pool
	W69	Drowning and submersion while in natural water
	W70	Drowning and submersion following fall into natural water
	W73	Other specified drowning and submersion (includes: quenching tank, reservoir)
	W74	Unspecified drowning and submersion (includes: drowning NOS, fall into water NOS)
	X71	Intentional self-harm by drowning and submersion
	X92	Assault by drowning and submersion
	Y21	Drowning and submersion, undetermined intent
Fall	W00	Fall on same level involving ice and snow
	W01	Fall on same level from slipping, tripping and stumbling
	W02	Fall involving ice-skates, skis, roller skates or skateboards
	W03	Other fall on same level due to collision with or pushing by, another person
	W04	Fall while being carried or supported by other persons (includes: accidentally dropped while being carried)
	W05	Fall involving wheelchair
	W06	Fall involving bed
	W07	Fall involving chair
	W08	Fall involving other furniture
	W09	Fall involving playground equipment
	W10	Fall on and from stairs and steps (includes: fall (on)(from) escalators, incline, involving ice or snow on stairs and steps, ramp)
	W11	Fall on and from ladder
	W12	Fall on and from scaffolding
	W13	Fall from, out of or through building or structure
	W14	Fall from tree
	W15	Fall from cliff
	W16	Driving or jumping into water causing injury other than drowning or submersion
	W17	Other fall from one level to another
	W18	Other fall on same level
	W19	Unspecified fall
	X80	Intentional self-harm by jumping from a high place (includes: intentional fall from one level to another)
	Y01	Assault by pushing from high place
	Y30	Falling, jumping or pushed from a high place, undetermined intent (includes: victim falling from one level to another, undetermined intent)

Table B1: Key to groupings on injury codes (ICD-10) (continued)

Fire/hot object or substance	X00	Exposure to uncontrolled fire in building or structure
	X01	Exposure to uncontrolled fire, not in building or structure (includes: forest fire)
	X02	Exposure to controlled fire in building or structure (includes: fire in fireplace, stove)
	X03	Exposure to controlled fire, not in building or structure (includes: cap-fire)
	X04	Exposure to ignition of highly flammable material
	X05	Exposure to ignition or melting of nightwear
	X06	Exposure to ignition or melting of other clothing and apparel
	X08	Exposure to other specified smoke, fire and flames
	X09	Exposure to unspecified smoke, fire and flames (includes: burning NOS, incineration NOS)
	X10	Contact with hot drinks, food, fats and cooking oils
	X11	Contact with hot tap-water
	X12	Contact with other hot fluids
	X13	Contact with steam and hot vapors
	X14	Contact with hot air and gases
	X15	Contact with hot household appliances
	X16	Contact with hot heating appliances, radiators and pipes
	X17	Contact with hot engines, machinery and tools
	X18	Contact with other hot metals
	X19	Contact with other and unspecified heat and hot substances
	X76	Intentional self-harm by smoke, fire and flames
	X77	Intentional self-harm by sharp object
	X97	Assault by smoke, fire and flames
	X98	Assault by steam, hot vapors and hot objects
	Y26	Exposure to smoke, fire and flames, undetermined intent
	Y27	Contact with steam, hot vapors and hot objects, undetermined
	Y36.3	War operations involving fires, conflagrations and hot substances
	Firearm	W32
W33		Rifle, shotgun and larger firearm discharge
W34		Discharge from other unspecified firearms
X72		Intentional self-harm by handgun discharge
X73		Intentional self-harm by rifle, shotgun and larger firearm discharge
X74		Intentional self-harm by other and unspecified firearm discharge
X93		Assault by handgun discharge
X94		Assault by rifle, shotgun and larger firearm discharge
X95		Assault by other and unspecified firearm discharge
Y22		Handgun discharge, undetermined intent
Y23		Rifle, shotgun and larger firearm discharge, undetermined intent
Y24	Other and unspecified firearm discharge, undetermined intent	
Y35.0	Legal intervention involving firearm discharge	
Machinery	W24	Contact with lifting and transmission devices, not else where classified
	W30	Contact with agricultural machinery
	W31	Contact with other unspecified machinery
Motor vehicle traffic: occupant	V30	Occupant of three-wheeled motor vehicle injured in collision with pedestrian or animal
	V31	Occupant of three-wheeled motor vehicle injured in collision with pedal cycle
	V32	Occupant of three-wheeled motor vehicle injured in collision with two- or three-wheeled motor vehicle
	V33	Occupant of three-wheeled motor vehicle injured in collision with car, pick-up truck or van
	V34	Occupant of three-wheeled motor vehicle injured in collision with heavy transport vehicle or bus
	V35	Occupant of three-wheeled motor vehicle injured in collision with railway train or railway vehicle
	V36	Occupant of three-wheeled motor vehicle injured in collision with another non-motor vehicle
	V37	Occupant of three-wheeled motor vehicle injured in collision with fixed or stationary object

Table B1: Key to groupings on injury codes (ICD-10) (continued)

V38	Occupant of three-wheeled motor vehicle injured in non-collision transport accident.
V39	Occupant of three-wheeled motor vehicle injured in collision with other and unspecified transport accident.
V40	Car occupant injured in collision with pedestrian or animal
V41	Car occupant injured in collision with pedal cycle
V42	Car occupant injured in collision with two- or three-wheeled motor vehicle
V43	Car occupant injured in collision with car, pick-up truck or van
V44	Car occupant injured in collision with heavy transport vehicle or bus
V45	Car occupant injured in collision with railway train or railway vehicle
V46	Car occupant injured in collision with other non-motor vehicle
V47	Car occupant injured in collision with fixed or stationary object
V48	Car occupant injured in non-collision transport accident
V49	Car occupant injured in collision with other and unspecified transport accidents
V50	Occupant of pick-up truck or van injured in collision with pedestrian or animal
V51	Occupant of pick-up truck or van injured in collision with pedal cycle
V52	Occupant of pick-up truck or van injured in collision with two- or three-wheeled motor vehicle
V53	Occupant of pick-up truck or van injured in collision with car, pick-up truck or van
V54	Occupant of pick-up truck or van injured in collision with heavy transport vehicle or bus
V55	Occupant of pick-up truck or van injured in collision with railway train or railway vehicle
V56	Occupant of pick-up truck or van injured in collision with other non-motor vehicle
V57	Occupant of pick-up truck or van injured in collision with fixed or stationary object
V58	Occupant of pick-up truck or van injured in non-collision transport accident.
V59	Occupant of pick-up truck or van injured in collision with other and unspecified transport accidents
V60	Occupant of heavy transport vehicle injured in collision with pedestrian or animal
V61	Occupant of heavy transport vehicle injured in collision with pedal cycle
V62	Occupant of heavy transport vehicle injured in collision with two- or three-wheeled motor vehicle
V63	Occupant of heavy transport vehicle injured in collision with car, pick-up truck or van
V64	Occupant of heavy transport vehicle injured in collision with heavy transport vehicle or bus
V65	Occupant of heavy transport vehicle injured in collision with railway train or railway vehicle
V66	Occupant of heavy transport vehicle injured in collision with other non-motor vehicle,
V67	Occupant of heavy transport vehicle injured in collision with fixed or stationary object
V68	Occupant of heavy transport vehicle injured in non-collision transport accident.
V69	Occupant of heavy transport vehicle injured in collision with other unspecified transport accidents
V70	Bus occupant injured in collision with pedestrian or animal
V71	Bus occupant injured in collision with pedal cycle
V72	Bus occupant injured in collision with two- or three-wheeled motor vehicle
V73	Bus occupant injured in collision with car, pick-up truck or van
V74	Bus occupant injured in collision with heavy transport vehicle or bus
V75	Bus occupant injured in collision with railway train or railway vehicle
V76	Bus occupant injured in collision with other non-motor vehicle
V77	Bus occupant injured in collision with fixed or stationary object
V78	Bus occupant injured in non-collision transport accident
V79	Bus occupant injured in collision with other and unspecified transport accidents
V81	Occupant of railway train or railway vehicle injured in transport accident
V82	Occupant of streetcar injured in transport accident
V83	Occupant of special vehicle mainly used on industrial premises injured in transport accident
V84	Occupant of special vehicle mainly used in agriculture injured in transport accidents.
V85	Occupant of special construction vehicle injured in transport accident
V86	Occupant of special all-terrain or other motor vehicle designed primarily for off-road use, injured in transport accident

Table B1: Key to groupings on injury codes (ICD-10) (continued)

Motor vehicle traffic: motorcyclist	V20	Motorcycle rider injured in collision with pedestrian or animal
	V21	Motorcycle rider injured in collision with pedal cycle
	V22	Motorcycle rider injured in collision with two- or three-wheeled motor vehicle
	V23	Motorcycle rider injured in collision with car, pick-up truck or van
	V24	Motorcycle rider injured in collision with heavy transport vehicle or bus
	V25	Motorcycle rider injured in collision with railway train or railway vehicle
	V26	Motorcycle rider injured in collision with other non-motor vehicle
	V27	Motorcycle rider injured in non-collision transport accident
	V28	Motorcycle rider injured in collision with fixed or stationary object
Motor vehicle traffic: pedal cyclist	V10	Pedal cyclist injured in collision with pedestrian or animal
	V11	Pedal cyclist injured in collision with other pedal cycle
	V12	Pedal cyclist injured in collision with two- or three-wheeled motor vehicle
	V13	Pedal cyclist injured in collision with car, pick-up truck or van
	V14	Pedal cyclist injured in collision with heavy transport vehicle or bus
	V15	Pedal cyclist injured in collision with railway train or railway vehicle
	V16	Pedal cyclist injured in collision with other non-motor vehicle
	V17	Pedal cyclist injured in collision with fixed or stationary object
	V18	Pedal cyclist injured in non-collision transport accident
V19	Pedal cyclist injured in other and unspecified transport accidents	
Motor vehicle traffic: pedestrian	V01	Pedestrian injured in collision with pedal cycle
	V02	Pedestrian injured in collision with two- or three-wheeled motor vehicle
	V03	Pedestrian injured in collision with car, pick-up truck or van
	V04	Pedestrian injured in collision with heavy transport vehicle or bus
	V09	Pedestrian injured in other and unspecified transport accidents
Motor vehicle traffic: other	V80	Animal-rider or occupant of animal-drawn vehicle injured in transport accident
	V90	Accident to watercraft causing drowning and submersion
	V91	Accident to watercraft causing other injury
	V92	Water-transport-related drowning and submersion without accident to watercraft
	V93	Accident on board watercraft without accident to watercraft, not causing drowning and submersion
	V94	Other and unspecified water transport accidents
	V95	Accident to powered aircraft causing injury to occupant
	V96	Accident to non-powered aircraft causing injury to occupant
	V97	Other specified air transport accidents
	V98	Other specified transport accidents
V99	Unspecified transport accident	
Natural environment	W42	Exposure to noise
	W43	Exposure to vibration
	W53	Bitten by rat
	W54	Bitten or struck by dog
	W55	Bitten or struck by other mammals
	W56	Contact with marine animal
	W57	Bitten or stung by non-venomous insect and other non-venomous arthropods
	W58	Bitten or struck by crocodile or alligator
	W59	Bitten or crushed by other reptiles
	W60	Exposure to other and unspecified animate mechanical forces
	W64	Exposure to other and unspecified inanimate mechanical forces
	W92	Exposure to excessive heat of man-made origin
	W93	Exposure to excessive cold of man-made origin
	W94	Exposure to high and low air pressure and changes in air pressure
	W99	Exposure to other and unspecified man-made environmental factors
	X20	Contact with venomous snakes and lizards
	X21	Contact with venomous spiders
X22	Contact with scorpions	
X23	Contact with hornets, wasps and bees	
X24	Contact with centipedes and venomous millipedes (tropical)	
X25	Contact with other specified venomous arthropods	

Table B1: Key to groupings on injury codes (ICD-10) (continued)

	X26	Contact with venomous marine animals and plants
	X27	Contact with other specified venomous animals
	X28	Contact with other specified venomous plants
	X29	Contact with unspecified venomous animal or plant
	X30	Exposure to excessive natural heat
	X31	Exposure to excessive natural cold
	X32	Exposure to sunlight
	X33	Victim of lightning
	X34	Victim of earthquake
	X35	Victim of volcanic eruption
	X36	Victim of avalanche, landslide and other earth movements
	X37	Victim of cataclysmic storm
	X38	Victim of flood
	X39	Exposure to other and unspecified forces of nature
	X51	Travel and motion
	X52	Prolonged stay in weightless environment
	X53	Lack of food
	X54	Lack of water
	X57	Unspecified privation
Overexertion	X50	Overexertion and strenuous or repetitive movements
Poisoning	X40	Accidental poisoning by and exposure to nonopioid analgesics, antipyretics and antirheumatics
	X41	Accidental poisoning by and exposure to antiepileptic, sedative-hypnotic, antiparkinsonism and psychotropic drugs, not elsewhere classified
	X42	Accidental poisoning by and exposure to narcotics and psychodysleptics (hallucinogens) not elsewhere classified
	X43	Accidental poisoning by and exposure to other drugs acting on the autonomic nervous system
	X44	Accidental poisoning by and exposure to other and unspecified drugs, medicaments and biological substances
	X45	Accidental poisoning by and exposure to alcohol
	X46	Accidental poisonings by and exposure to organic solvents and halogenated hydrocarbons and their vapors
	X47	Accidental poisoning by and exposure to other gases and vapors
	X48	Accidental poisoning by and exposure to pesticides
	X49	Accidental poisoning by and exposure to other and unspecified chemicals and noxious substances
	X60	Intentional self-poisoning by and exposure to nonopioid analgesics, antipyretics and antirheumatics
	X61	Intentional self-poisoning by and exposure to antiepileptic, sedative-hypnotic, antiparkinsonism, and psychotropic drugs, not elsewhere classified
	X62	Intentional self-poisoning by and exposure to narcotics and psychodysleptics (hallucinogens), not elsewhere classified
	X63	Intentional self-poisoning by and exposure to other drugs acting on the autonomic nervous system
	X64	Intentional self-poisoning by and exposure to other and unspecified drugs, medicaments and biological substances
	X65	Intentional self-poisoning by and exposure to alcohol
	X66	Intentional self-poisoning by and exposure to organic solvents and halogenated hydrocarbons and their vapors
	X67	Intentional self-poisoning by and exposure to other gases and vapors
	X68	Intentional self-poisoning by and exposure to pesticides
	X69	Intentional self-poisoning by and exposure to other and unspecified chemicals and noxious substances.
	X85	Assault by drugs, medicaments and biological substances
	X86	Assault by corrosive substance
	X87	Assault by pesticides

Table B1: Key to groupings on injury codes (ICD-10) (continued)

	X88	Assault by gases and vapors
	X89	Assault by other specified chemicals and noxious substances
	X90	Assault by unspecified chemical or noxious substance
	Y10	Poisoning by and exposure to nonopioid analgesics, antipyretics and antirheumatics, undetermined intent.
	Y11	Poisoning by and exposure to antiepileptic, sedative-hypnotic, antiparkinsonism and psychotropic drugs, not elsewhere classified, undetermined intent.
	Y12	Poisoning by and exposure to narcotics and psychodysleptics (hallucinogens), not elsewhere classified, undetermined intent.
	Y13	Poisoning by and exposure to other drugs acting on the autonomic nervous system, undetermined intent
	Y14	Poisoning by and exposure to other and unspecified drugs, medicaments and biological substances, undetermined intent
	Y15	Poisoning by and exposure to alcohol, undetermined intent
	Y16	Poisoning by and exposure to organic solvents and halogenated hydrocarbons and their vapors, undetermined intent
	Y17	Poisoning by and exposure to other gasses and vapors, undetermined intent
	Y18	Poisoning by and exposure to pesticides, undetermined intent
	Y19	Poisoning by and exposure to other and unspecified chemicals and noxious substances, undetermined intent
	Y35.2	Legal intervention involving gas
Struck by/ against	W20	Struck by thrown, projected or falling object
	W21	Striking against or struck by sports equipment
	W22	Striking against or struck by other objects
	W50	Hit, struck, kicked, twisted, bitten or scratched by another person
	W51	Striking against or bumped into by another person
	W52	Crushed, pushed or stepped on by crowd or human stampede
	X79	Intentional self-harm by blunt object
	Y00	Assault by blunt object
	Y04	Assault by bodily force
	Y29	Contact with blunt object, undetermined intent
	Y35.3	Legal intervention involving blunt objects
Suffocation	W75	Accidental suffocation and strangulation in bed
	W76	Other accidental hanging and strangulation
	W77	Threat to breathing due to cave-in, falling earth and other substances
	W78	Inhalation of gastric contents
	W79	Inhalation and ingestion of food causing obstruction of respiratory tract
	W80	Inhalation and ingestion of other objects causing obstruction of respiratory tract
	W81	Confined to or trapped in a low-oxygen environment
	W83	Other specified threats to breathing
	W84	Unspecified threat to breathing
	X70	Intentional self-harm by hanging, strangulation and suffocation
	X91	Assault by hanging, strangulation and suffocation
	Y20	Hanging, strangulation and suffocation, undetermined intent
Other, specified and unspecified cause	W23	Caught, crushed, jammed or pinched in or between objects
	W35	Explosion and rupture of boiler
	W36	Explosion and rupture of gas cylinder
	W37	Explosion and rupture of pressurized tire, pipe or hose
	W38	Explosion and rupture of other specified pressurized devices
	W39	Discharge of fireworks
	W40	Explosion of other materials
	W41	Explosion to high-pressure jet
	W44	Foreign body entering into or through eye or natural orifice
	W49	Exposure to other and unspecified inanimate mechanical forces
	W85	Exposure to electric transmission lines
	W86	Exposure to other specified electric current
	W87	Exposure to unspecified electric current

Table B1: Key to groupings on injury codes (ICD-10) (continued)

	W88	Exposure to ionizing radiation
	W89	Exposure to man-made visible and ultraviolet light
	W90	Exposure to other nonionizing radiation
	W91	Exposure to unspecified type of radiation
	X58	Exposure to other specified factors
	X59	Exposure to unspecified factor
	X75	Intentional self-harm by explosive material
	X81	Intentional self-harm by jumping or lying before moving object
	X83	Intentional self-harm by other specified means
	X84	Intentional self-harm by unspecified means
	X96	Assault by explosive material
	Y02	Assault by pushing or placing victim before moving object
	Y05	Sexual assault by bodily force
	Y06	Neglect and abandonment
	Y07	Other maltreatment syndromes
	Y08	Assault by other specified means
	Y09	Assault by unspecified means
	Y25	Contact with explosive material, undetermined intent
	Y31	Falling, lying or running before or into moving object, undetermined intent
	Y33	Other specified events, undetermined intent
	Y34	Unspecified event, undetermined intent
	Y35.1	Legal intervention involving explosives
	Y35.2	Legal intervention involving gas
	Y35.6	Legal intervention involving other specified means
	Y35.7	Legal intervention, means unspecified
	Y36	Operations of war
	Y85	Sequelae of transport accidents
	Y86	Sequelae of other accidents
	Y87	Sequelae of intentional self-harm, assault and events of undetermined intent
	Y89	Sequelae of other external causes
Adverse effects	Y40	Systemic antibiotics
	Y41	Other systemic anti-infectives and antiparasitics
	Y42	Hormones and their synthetic substitutes and antagonists, not elsewhere classified
	Y43	Primarily systemic agents
	Y44	Agents primarily affecting blood constituents
	Y45	Analgesics, antipyretics and anti-inflammatory drugs
	Y46	Antiepileptics and antiparkinsonism drugs
	Y47	Sedatives, hypnotics and antianxiety drugs
	Y48	Anaesthetics and therapeutic gases
	Y49	Psychotropic drugs, not elsewhere classified
	Y50	Central nervous system stimulants, not elsewhere classified
	Y51	Drugs primarily affecting the autonomic nervous system
	Y52	Agents primarily affecting the cardiovascular system
	Y53	Agents primarily affecting the gastrointestinal system
	Y54	Agents primarily affecting water-balanced and mineral and uric acid metabolism
	Y55	Agents primarily acting on smooth and skeletal muscles and the respiratory system
	Y56	Topical agents primarily affecting skin and mucous membrane and ophthalmological, otorhinolaryngological and dental drugs
	Y57	Other and unspecified drugs and medicaments
	Y58	Bacterial vaccines
	Y59	Other and unspecified vaccines and biological substances
	Y60	Unintentional cut, puncture, perforation or hemorrhage during surgical and medical care
	Y61	Foreign object accidentally left in body during surgical and medical care
	Y62	Failure to sterile precautions during surgical and medical care
	Y63	Failure in dosage during surgical and medical care
	Y64	Contaminated medical or biological substances
	Y65	Other misadventures during surgical and medical care

Table B1: Key to groupings on injury codes (ICD-10) (continued)

Y66	Non-administration of surgical and medical care
Y69	Unspecified misadventure during surgical and medical care
Y70	Anaesthesiology devices associated with adverse incidents
Y71	Cardiovascular devices associated with adverse incidents
Y72	Otorhinolaryngological devices associated with adverse incidents
Y73	Gastroenterology and urology devices associated with adverse incidents
Y74	General hospital and personal-use devices associated with adverse incidents
Y75	Neurological devices associated with adverse incidents
Y76	Obstetric and gynecological devices associated with adverse incidents
Y77	Ophthalmic devices associated with adverse incidents
Y78	Radiological devices associated with adverse incidents
Y79	Orthopedic devices associated with adverse incidents
Y80	Physical medicine devices associated with adverse incidents
Y81	General- and plastic-surgery devices associated with adverse incidents
Y82	Other and unspecified medical devices associated with adverse incidents
Y83	Surgical operation and other surgical procedures as the cause of abnormal reaction of the patient or of later complication, without mention of misadventure at the time of the procedure
Y84	Other medical procedures as the cause of abnormal reaction of the patient, or of later complication, without mention of misadventure at the time of the procedure
Y88	Sequelae with surgical and medical care as external cause

APPENDIX C

Table C1: Maryland Population Estimates, July 2007

	< 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85+	Total
Allegany County	689	2,714	7,453	11,499	9,766	9,494	9,730	8,223	6,184	4,737	2,105	72,594
Anne Arundel County	6,800	27,271	67,659	68,963	64,128	81,025	80,137	59,654	32,215	18,195	6,107	512,154
Baltimore City	9,994	36,461	80,725	99,227	89,176	87,118	92,074	67,022	38,037	26,025	11,596	637,455
Baltimore County	9,873	38,358	96,329	110,770	96,678	113,959	120,442	89,283	53,575	41,903	17,824	788,994
Calvert County	1,068	4,249	12,505	12,364	11,504	13,716	14,558	9,573	4,959	2,696	1,031	88,223
Caroline County	490	1,868	4,178	4,353	4,876	4,484	4,967	3,490	2,131	1,446	627	32,910
Carroll County	2,002	7,992	23,178	23,868	20,183	24,992	27,979	19,285	10,565	6,543	2,633	169,220
Cecil County	1,353	5,166	13,550	12,693	15,398	15,500	14,727	10,261	5,990	3,756	1,301	99,695
Charles County	2,026	7,860	20,747	19,481	20,223	23,201	21,230	14,025	7,036	3,410	1,205	140,444
Dorchester County	400	1,489	3,605	3,941	3,990	4,209	4,664	3,913	2,798	2,006	831	31,846
Frederick County	3,118	12,668	32,146	30,354	29,412	35,958	35,491	23,028	12,171	7,428	2,931	224,705
Garrett County	297	1,262	3,648	3,822	3,898	3,950	4,300	3,530	2,562	1,663	695	29,627
Harford County	3,071	12,094	33,942	32,468	29,176	36,503	38,764	26,799	15,213	9,228	2,735	239,993
Howard County	3,419	14,037	39,525	36,391	31,660	45,171	46,236	32,102	14,929	7,474	2,725	273,669
Kent County	211	746	1,996	3,436	2,251	2,369	2,648	2,451	1,808	1,460	611	19,987
Montgomery County	13,470	52,398	120,787	117,617	105,217	144,344	152,940	110,850	58,431	37,675	17,084	930,813
Prince George's County	13,302	46,950	111,233	128,150	112,906	130,094	123,585	87,732	45,693	21,542	7,583	828,770
Queen Anne's County	522	2,219	6,088	5,860	5,568	7,026	7,458	5,738	3,433	1,990	669	46,571
Saint Mary's County	1,547	5,880	14,210	5,220	14,964	15,890	14,274	9,438	5,424	3,134	1,091	100,378
Somerset County	289	1,089	2,533	14,526	4,001	3,539	3,262	2,620	1,763	1,246	454	26,016
Talbot County	398	1,524	3,908	3,942	4,285	4,484	4,988	4,494	3,804	3,059	1,307	36,193
Washington County	1,892	7,445	18,071	17,785	22,943	22,080	20,469	14,525	9,776	7,026	3,101	145,113
Wicomico County	1,348	4,989	11,781	14,923	13,020	12,272	13,085	9,720	6,219	4,495	1,748	93,600
Worcester County	481	1,956	5,154	5,337	6,233	6,655	6,831	5,765	5,518	4,089	1,355	49,374
Maryland	78,060	298,685	734,951	786,990	721,456	848,033	864,839	623,521	350,234	222,226	89,349	5,618,344

Source: <http://vsa.maryland.gov/doc/07annual.pdf>

Accessed 7 July 2009

Discrimination Policy:

The services and facilities of the Maryland Department of Health and Mental Hygiene (DHMH) are operated on a non-discriminatory basis. This policy prohibits discrimination on the basis of race, color, sex or national origin and applies to the provisions of employment and granting of advantages, privileges, and accommodations. The Department, in compliance with the Americans With Disabilities Act, ensures that qualified individuals with disabilities are given an opportunity to participate in and benefit from DHMH services, programs, benefits, and employment opportunities.