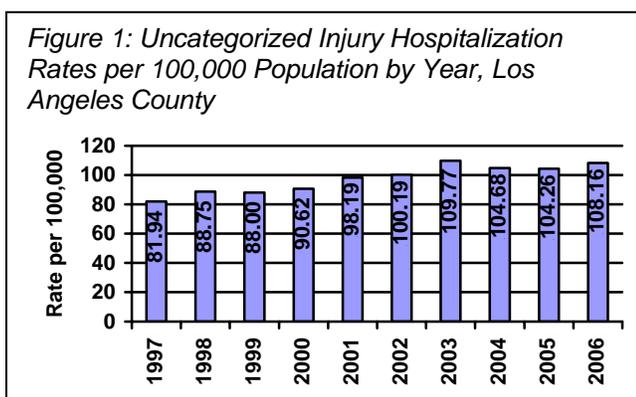


Appendix I: Uncategorized Injuries¹

Uncategorized injuries include all injuries that were not included in one of the standard injury mechanism categories. The Center for Disease Control's *Recommended Framework for Presenting Injury Mortality Data* subdivides the uncategorized injuries further (see footnote); however, in this section these injuries are presented as a single group. In California, between 2000 and 2005, there were 190,453 hospitalizations due to uncategorized injuries (statewide data for 2006 is not yet available). Overall, 29.5% of these injuries occurred to Los Angeles residents.

Trends

Between 2000 and 2006, there were 66,283 uncategorized injury hospitalizations in Los Angeles County. Throughout the ten year period from 1997 to 2006, annual hospitalization rates increased by 32% (Figure 1), while the total number of hospitalizations reported each year increased by 47%.



Intent

The vast majority of uncategorized injuries were unintentional (81%), and most of the rest were assaults (14%). Suicide attempts and injuries of undetermined intent each accounted for about 2% of hospitalizations, while legal intervention injuries made up less than 1% of all uncategorized injuries.

¹ The uncategorized injuries discussed in this section include three groups of injuries from the CDC's *Recommended Framework for Presenting Injury Mortality Data* (Available online at: <http://www.cdc.gov/mmwr/preview/mmwrhtml/00049162.htm>)

4th Leading Cause of Injury Hospitalization — Unspecified Injuries: Injuries for which no mechanism is reported.

6th Leading Cause of Injury Hospitalization — Other Specified and Classifiable Injuries: Injuries that are not included in one of the other injury categories. This category includes injuries from a foreign body in an orifice, being caught in or between objects, explosions, electric current, and others. This category also includes hospitalizations for the late effects of other specific types of unintentional injuries. These late effects injuries were included in this category to separate them from the acute affects of injuries.

8th Leading Cause of Injury Hospitalization — Other Specified and Not Elsewhere Classifiable Injuries: Injuries caused by specific factors for which no E-code exists. It includes assault by other specified means and other late effects of injuries which were not included in the other classified category.

Table 1: Causes of Uncategorized Injury Hospitalizations, Los Angeles County, 2000-2006

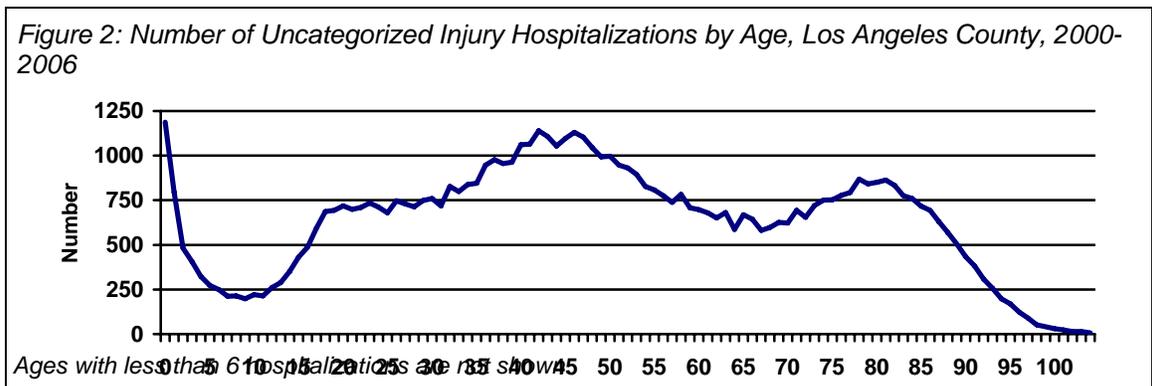
Cause of Injury	Number	Cause of Injury	Number
Transport Injuries	397	Suicide by Unspecified Firearm, Air Gun or Explosive	32
Powered vehicles used solely on commercial/industrial premises	14	Suicide by Jumping or Lying in Front of a Moving Object	98
Cable cars not running on rails	17	Suicide by Other Specified Means	835
Other vehicles, not elsewhere classified	366	Suicide by Unspecified Means	395
Foreign Body	6,064	Late Effects of Suicide	303
Foreign body entering eye/adnexa	171	Rape	153
Foreign body entering other oriface	5,893	Assault by Explosives	228
Caught In/Between Objects	1,065	By other specified explosives	18
Explosion of Pressure Vessel	88	By unspecified explosives	210
Explosion of gas cylinder	28	Child/Adult Battering/Maltreatment	882
Explosion of other/unspecified vessel	60	By father or stepfather	195
Air Gun (BB Gun)	133	By other specified person	62
Paintball Gun	43	By mother or stepmother	72
Explosive Materials	289	By spouse or partner (includes ex-)	200
Fireworks	79	By child	62
Blasting materials	10	By sibling	20
Explosive gases (ex: gasoline fumes)	114	By other relative	59
Other/Unspecified explosive material	86	By non-related caregiver	37
Electric Current	396	By unspecified person	175
Domestic appliances	82	Assault – Criminal Neglect	9
Generating plants/power lines	28	Assault – Air Gun	78
Industrial wiring/appliances/machines	78	Assault – Human Bite	605
Other (farms, outdoors, school, etc.)	91	Assault – Other Specified Means	1,086
Unspecified	117	Assault – Unspecified Means	3,037
Radiation	333	Late Effects of Assault	3,216
Visible & UV (includes sunlight)	138	Legal Intervention	41
Radioactive isotopes	17	Late Effects of Legal Intervention	158
Radiofrequency radiation, infra-red heaters and lamps, X-rays & other EM ionizing radiation.	8	Undet Intent – Jumping in Front of a Moving Object	7
Other specified radiation	97	Undetermined Intent – Air Gun	9
Unspecified radiation	73	Undet Intent – Other Specified	179
Human Bite	364	Undet Intent – Unspecified	359
External Constriction	11	Late Effects of Undet. Intent	1,013
Unspecified Fracture	5,115	Operations of War	11
Other Accidents	6,142	Late Effects of War Operations	85
Unspecified Accidents	18,177	Terrorism & Late Effects of Terrorism	6
Late Effects of Accidents	15,381		
Late Effects of MV Collisions	6,124		
Late Effects of Other Transport	286		
Late Effects of Poisoning	67		
Late Effects of Falls	3,644		
Late Effects of Fire/Burn	203		
Late Effects of Natural/Environment	133		
Late Effects of Other Accidents	2,535		
Late Effects of Unspecified Accidents	2,389		

Cause of Injury

Uncategorized injuries encompassed an extremely wide range of injury causes (Table 1). Over half (53%) of these hospitalizations were for a non-specific type of injury, while another 30% were for injuries that did not occur immediately prior to the hospitalization (late effects). This varied based on the intent of injury. Other or unspecified injuries accounted for 34% of injuries of undetermined intent, 44% of assaults, 55% of unintentional injuries, and 74% of suicide attempts. Late effects hospitalizations accounted for 18% of suicide attempts, 28% of unintentional injuries, 35% of assaults, and 65% of injuries of undetermined intent. Additionally, 83% of legal intervention and operations of war injury hospitalizations were for late effects, not acute injuries.

Among unintentional injuries for which a specific cause was known, the largest group was injuries from a foreign body entering an orifice (except choking, which is included in the separate choking/suffocation category). Other specific types of injuries on the list include certain kinds of transport injuries, being caught in or between objects, explosions, electrocution, radiation, and human bites. For suicide attempts, specific types of injuries included jumping/lying in front of a moving object and for injuries caused by unspecified guns or explosives. Specific types of assault injuries included in this category were rape, child or adult battering & mistreatment, criminal neglect, air gun injuries, and human bites. Injuries of undetermined intent had specific categories for air gun, electrocution, and jumping/lying in front of moving object, in addition to other, unspecified, and late effects injuries. The number of legal intervention injuries was too small to break down by type. Finally, there were several injuries resulting from operations of war and terrorism. Victims of these injuries may have been injured elsewhere and then were hospitalized in Los Angeles County.

Age



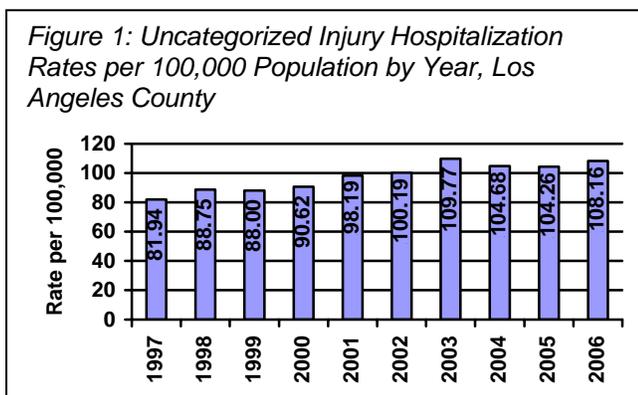
Overall, the average age of a patient hospitalized with an uncategorized injury was 48.9 years. The distribution of hospitalizations by age (Figure 2), shows three separate peaks in uncategorized injury hospitalizations by age; the first among infants, the second among people in their 40s and the third among people

Appendix I: Uncategorized Injuries¹

Uncategorized injuries include all injuries that were not included in one of the standard injury mechanism categories. The Center for Disease Control's *Recommended Framework for Presenting Injury Mortality Data* subdivides the uncategorized injuries further (see footnote); however, in this section these injuries are presented as a single group. In California, between 2000 and 2005, there were 190,453 hospitalizations due to uncategorized injuries (statewide data for 2006 is not yet available). Overall, 29.5% of these injuries occurred to Los Angeles residents.

Trends

Between 2000 and 2006, there were 66,283 uncategorized injury hospitalizations in Los Angeles County. Throughout the ten year period from 1997 to 2006, annual hospitalization rates increased by 32% (Figure 1), while the total number of hospitalizations reported each year increased by 47%.



Intent

The vast majority of uncategorized injuries were unintentional (81%), and most of the rest were assaults (14%). Suicide attempts and injuries of undetermined intent each accounted for about 2% of hospitalizations, while legal intervention injuries made up less than 1% of all uncategorized injuries.

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8th Leading Cause of Injury Hospitalization — Other Specified and Not Elsewhere Classifiable Injuries: Injuries caused by specific factors for which no E-code exists. It includes assault by other specified means and other late effects of injuries which were not included in the other classified category.

Gender

Overall, males accounted for 60% of uncategorized injury hospitalizations. The gender distribution varied dramatically by the intent and cause of the injury (Table 3). Only 57% of victims of unintentional injuries were male, while over 94% of patients with legal intervention injuries and injuries from operations of war were male. Females outnumbered males only for three specific types of injuries: rapes (13% male), child or adult battering & maltreatment (29% male), and unspecified fractures (41% male). The types of injuries for which the greatest percentage of patients were male included air gun assaults (92% male), assaults by explosives (89% male), and unintentional injuries from air guns or paintball guns (89% male).

While there were fewer female patients overall, females (55.1 years) were, on average, much older than male patients (44.8 years) with uncategorized injuries.

Race/Ethnicity

Racial/ethnic group was unknown for 2.3% of all uncategorized injury hospitalizations; all statistics in this section only include those records for which race/ethnicity was reported. Whites and Blacks were significantly overrepresented among uncategorized injury hospitalizations relative to their proportion in the entire county population, while Latinos and Asians/Others were underrepresented (Figure 4). Countywide, rates were lowest for Asians/Others (53.7 per 100,000), followed by Latinos (86.7 per 100,000), Whites (113.0 per 100,000), and Blacks (166.5 per 100,000).

Table 3: Gender Distribution of Uncategorized Injuries, by Cause, Los Angeles County, 2000-2006

Cause of Injury	% Male	% Female
<i>All Unintentional Injuries</i>	57%	43%
Transport Injuries	64%	36%
Foreign Body Injuries	57%	43%
Caught In/Between Objects	69%	31%
Explosion of Pressure Vessel	82%	18%
Air Gun & Paintball Gun	89%	11%
Explosive Materials	83%	17%
Electric Current	84%	16%
Radiation	53%	47%
Human Bite	66%	34%
Unspecified Fracture	41%	59%
Other Accidents	58%	42%
Unspecified Accidents	53%	47%
Late Effects of Accidents	64%	36%
<i>All Suicide Attempts</i>	63%	37%
Unspecified Firearm/Explosive	75%	25%
Jump in Front of Moving Object	70%	30%
Other Suicide Attempts	64%	36%
Unspecified Suicide Attempts	56%	44%
Late Effects Suicide Attempts	65%	35%
<i>All Assault Injuries</i>	76%	24%
Rape	13%	87%
Explosives	89%	11%
Battering & Mistreatment	29%	71%
Air Gun	92%	8%
Human Bite	78%	22%
Other Assault	67%	33%
Unspecified Assault	82%	18%
Late Effects Assault	88%	12%
<i>Legal Intervention & Late Effects</i>	94%	6%
<i>All Undetermined Intent</i>	71%	29%
Other Undetermined Intent	65%	35%
Unspecified Undetermined Intent	61%	39%
Late Effects Undetermined Intent	76%	24%
<i>Ops War, Terrorism & Late Effects</i>	90%	10%

The racial/ethnic distribution varied considerably based on the intent and specific cause of the injury (Table 4). Whites accounted for just 21% of assault hospitalizations, but for nearly half of all hospitalizations for unintentional injuries and suicide attempts. Blacks accounted for 13% of unintentional injuries but for 30% of assaults and 31% of legal intervention injuries. Latinos accounted for 30% of suicide attempts, but 43% of assault injury hospitalizations. There is even greater racial/ethnic disparity when looking at the specific causes of the injuries. The proportion of Whites among hospitalized patients ranged from 15% of human bite assaults to 65% of hospitalizations for radiation. Blacks accounted for just 5% of hospitalizations due to explosive materials, but for 26% of rape hospitalizations. The proportion of Latinos ranged from 18% of radiation injuries to 67% of air gun and paintball gun injuries.

Asians/Others accounted for less than 10% of all intents and causes of injury except for hospitalizations due to radiation (11% Asian/Other).

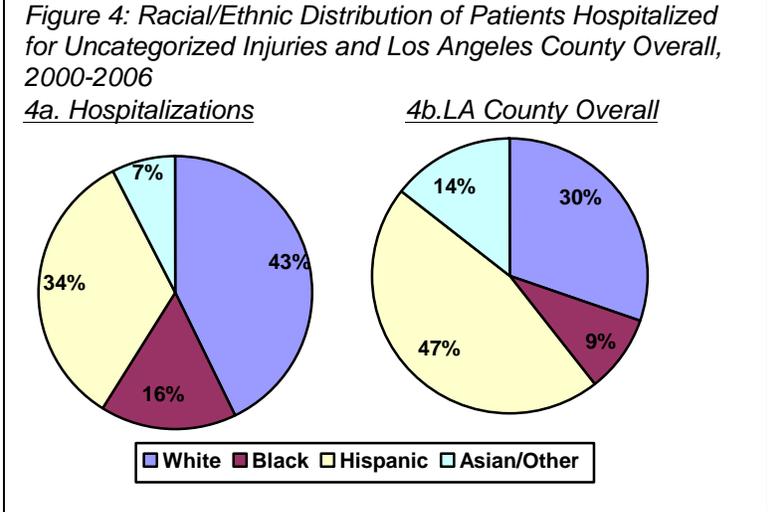


Table 4: Racial/Ethnic Distribution of Non-Specific Mechanism Injuries by Mechanism, Intent & Selected Causes, Los Angeles County, 2000-2006

	White	Black	As/Oth	Latino
Intent				
Unintentional	47%	13%	8%	32%
Suicide Attempt	48%	15%	7%	30%
Assault	21%	30%	5%	43%
Legal Inter.	25%	31%	4%	40%
Undet. Intent	34%	24%	6%	37%
Cause				
Transport Injuries	40%	12%	7%	41%
Foreign Body	42%	12%	9%	38%
Caught In/Between	31%	11%	6%	52%
Expl. Pressure Ves	31%	11%	7%	51%
Air/Paintball Gun	18%	11%	4%	67%
Explosive Material	43%	5%	5%	46%
Electric Current	40%	7%	4%	49%
Radiation	65%	6%	11%	18%
Human Bite	34%	21%	7%	37%
Jump in Front of Moving Object (Sui)	34%	23%	7%	36%
Rape (Assault)	23%	26%	5%	47%
Explosive (Assault)	10%	33%	3%	54%
Battering (Assault)	27%	23%	6%	43%
Human Bite (Asslt.)	15%	35%	4%	46%

Note: Only causes in which there were 6+ patients from each racial/ethnic group are shown. All causes are unintentional injuries unless otherwise stated. Non-specific causes (Other, Unspecified, Late Effects) are not shown.

Latino patients were the youngest of any racial/ethnic group, with an average age of 39.4 years. Asian/Other (53.5 years) and White (57.0 years) patients were the oldest, while Black patients (45.6 years) fell in between these extremes. The gender distribution of patients was more even among Whites (55% male) and Asians/Others (57% male) than among Blacks (64% male) or Latinos (66% male).

Geography

The greatest number of uncategorized injury hospitalizations were from the San Fernando SPA; however this SPA had one of the lowest rates of hospitalization (Table 5). Rates of hospitalization were highest in the South SPA, while both the number of hospitalizations and the rate of hospitalizations was lowest in the West SPA.

Table 5: Number of Uncategorized Injury Hospitalizations and Average Annual Age Adjusted Hospitalization Rate by SPA, Los Angeles County, 2000-2006

SPA	Number	Rate
SPA 1: Antelope Valley	2,517	121.4
SPA 2: San Fernando	12,494	90.4
SPA 3: San Gabriel	11,280	93.3
SPA 4: Metro	8,755	110.4
SPA 5: West	3,955	84.4
SPA 6: South	8,960	150.8
SPA 7: East	8,627	102.9
SPA 8: South Bay	10,235	98.7
LA County Total	66,823	102.3

Note: Rates are per 100,000 population. The small number of patients with unknown SPA were added to the most populous SPA (SPA 2).

Unintentional injuries accounted for more than three quarters of the hospitalizations in seven of the SPAs; however, in the South SPA, only 67% of hospitalizations were for unintentional injuries. Over one quarter of the injuries in the South SPA were caused by assaults, while in three SPAs (San Fernando, San Gabriel, and West), less than 10% of all uncategorized injury hospitalizations were caused by assaults. Undetermined intent injuries ranged from 1.4% of hospitalizations in San Fernando to 3.2% from South SPA. Suicide attempts ranged from 2.0% of hospitalizations in South to 3.1% in Metro. Legal intervention (including operations of war) injuries ranged from 0.2% of injuries in Antelope Valley to 0.6% in Metro and South SPAs.

Certain causes of injuries were disproportionately represented in particular SPAs compared to that SPA's share of all uncategorized injuries. For example, the South SPA accounted for 13% of all uncategorized injury hospitalizations, but for more than 30% of human bite assaults. The San Fernando SPA had the opposite situation; the SPA accounted for 19% of all hospitalizations, but only for 10% of human bite assault hospitalizations. Metro SPA accounted for 13% of all hospitalizations, but for 26% of hospitalizations due to rape. San Gabriel accounted for 17% of all hospitalizations, but for less than 9% of rape-related hospitalizations. Finally, Antelope Valley accounted for just 4% of all hospitalizations but for almost 9% of hospitalizations for injuries from explosive materials.

There were also differences in the demographics of uncategorized injury hospitalizations between SPAs. In seven of the SPAs, hospitalization rates were highest among Blacks, while in the South SPA, the highest hospitalization rate was found among Whites. Asians/Others had the lowest hospitalization rate in each SPA except the South SPA, where Latinos had the lowest rate. The lowest hospitalization rate for Whites overall was found in the West SPA and the highest (by a large margin) was in the South SPA. For Blacks, the lowest rate was found in the San Fernando SPA and the highest was in the Metro SPA. For Latinos, the lowest rate was found in the West and the highest rate was found in the South. Finally, among Asians/Others, the lowest rate was in the San Gabriel and the highest was in the South SPA. Rates among males were higher than females in each SPA, but the disparity was greatest in the South SPA, where the rate among males (206.9 per 100,000) was more than twice the rate among females (101.2 per 100,000). The gender gap was smallest in the West (male rate 43% higher than female rate) and the San Gabriel (male rate 44% higher than female rate) SPAs.

Table 6: Average Annual Age Adjusted Uncategorized Injury Hospitalization Rate by Race/Ethnicity and SPA, Los Angeles County, 2000-2006

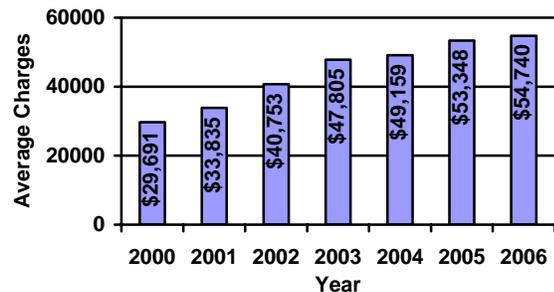
SPA	Rate			
	Black	Latino	As/Oth	White
SPA 1: Antelope Valley	172.56	92.36	65.95	126.66
SPA 2: San Fernando	120.00	72.55	58.89	98.81
SPA 3: San Gabriel	151.82	84.97	46.52	126.42
SPA 4: Metro	210.69	97.37	54.25	135.81
SPA 5: West	157.90	71.55	56.46	82.93
SPA 6: South	198.36	105.20	177.46	470.88
SPA 7: East	183.34	91.38	54.45	143.23
SPA 8: South Bay	135.26	88.02	54.29	105.73
Los Angeles County Total	166.45	86.68	53.70	113.03

Note: Rates are per 100,000 population.

Medical Charges

During the seven years covered by this report, the average charges incurred to treat an uncategorized injury were \$44,919. The average annual charge increased dramatically each year (Figure 5); by 2006, the average charge per patient was 84% higher than in 2000.

Figure 5: Average Medical Charges for Uncategorized Injury Hospitalizations by Year, Los Angeles County, 2000-2006



Charges were higher for males (\$48,219 per visit) than females (\$39,844 per visit). Medical charges were much lower for Whites (\$41,314) and Latinos (\$43,512) than for Asians/Others (\$51,006) and Blacks (\$52,267). Average charges were even higher for patients with unknown race/ethnicity (\$60,736). When looking at average charges by age group, infants were the most costly to treat (\$57,176 per visit among <1 year olds), while hospital visits among young

Table 7: Average Charge per Visit for Non-Specific Mechanism Injuries, by Cause, Los Angeles County, 2000-2006

Cause of Injury	Avg Charge	Cause of Injury	Avg Charge
<i>All Unintentional Injuries</i>	\$43,852	<i>All Assault Injuries</i>	\$52,422
Transport Injuries	\$40,130	Rape	\$24,547
Foreign Body Injuries	\$37,233	Explosives	\$59,500
Caught In/Between Objects	\$25,605	Battering & Mistreatment	\$39,921
Explosion of Pressure Vessel	\$65,296	Criminal Neglect	\$24,352
Air Gun	\$17,133	Air Gun	\$52,832
Paintball Gun	\$28,673	Human Bite	\$25,287
Explosive Materials	\$112,299	Other Assault	\$32,191
Electric Current	\$65,936	Unspecified Assault	\$38,918
Radiation	\$28,674	Late Effects Assault	\$81,443
Human Bite	\$38,718	<i>Legal Intervention & Late Effects</i>	\$31,179
Unspecified Fracture	\$42,212	<i>All Undetermined Intent</i>	\$45,117
Other Accidents	\$39,709	Air Gun	\$15,366
Unspecified Accidents	\$38,727	Jump in Front of Moving Object	\$19,657
Late Effects of Accidents	\$46,106	Electrocution	\$11,186
<i>All Suicide Attempts</i>	\$39,424	Other Undetermined Intent	\$33,500
Unspecified Firearm/Explosive	\$79,409	Unspecified Undetermined Intent	\$41,779
Jump in Front of Moving Object	\$61,930	Late Effects Undetermined Intent	\$48,903
Other Suicide Attempts	\$36,335	<i>Operations of War & Late Effects</i>	\$38,756
Unspecified Suicide Attempts	\$22,820		
Late Effects Suicide Attempts	\$58,084		

children were the least expensive (\$22,652 per visit among 1-4 year olds). Overall, the average charge per visit was between \$20,000 and \$30,000 for 1-14 year olds and more than \$40,000 per visit for patients 15 and older.

There were striking differences in medical charges for injuries of different intents and causes (Table 7). Legal intervention injuries (\$31,179 per visit) were the least costly to treat, while assault injuries (\$52,422) were the most expensive. When looking at specific causes of injury, the highest average charge per visit was for unintentional injuries from explosive materials (\$112,299 per visit). The least costly type of injury to treat were electrocution injuries of undetermined intent; curiously unintentional injuries from electric current were, on average, much more expensive.

Comparison to Mortality Data

Between 2000 and 2005, there were 38 hospitalizations for each death from an uncategorized injury (Table 8). The vast majority of hospitalizations were unintentional, while suicide attempts, assaults, and injuries of undetermined intent made up a greater percentage of fatalities than hospitalizations. The racial/ ethnic distribution was similar for deaths and hospitalizations, though Blacks accounted for a larger percentage of deaths while Whites accounted for a larger percentage of hospitalizations. Males accounted for a larger percentage of

deaths than of hospitalizations, and the average age of a fatally injured victim was slightly greater than that of a hospitalized victim.

Table 8: Demographics of Fatal and Non-Fatal Hospitalizations from Uncategorized Injuries, Los Angeles County 2000-2005

	Deaths	Hosps
Total Number	1,480	56,370
Intent (%)		
Unintentional	43.9%	80.7%
Suicide Attempt	9.8%	2.5%
Assault	37.4%	14.1%
Legal Intervention*	<1%	<1%
Undetermined Intent	8.6%	2.4%
Race/Ethnicity (%)		
Black	20.1%	15.8%
Latino	35.1%	33.0%
White	34.7%	41.9%
Asian/Other	8.1%	7.0%
Unknown	2.0%	2.3%
Gender (%)		
Male	70.7%	60.6%
Female	29.3%	39.4%
Average Age (Years)	51.3	48.6

* Includes operations of war.

Discussion of Uncategorized Injuries

Uncategorized injuries fall into four broad groups:

1. Injuries for which no specific mechanism is known.
2. Injuries for which a specific mechanism is known, but the E-coding system is not specific enough to assign a code to that type of injury.
3. Injuries for which a specific mechanism is known and an appropriate E-code can be assigned, but the code does not fit into one of the other groupings in the Centers for Disease Control and Prevention's *Recommended Framework for Presenting Injury Mortality Data*.¹
4. Late effects of specific types of injuries resulting from various mechanisms, for example motor vehicle crashes, poisonings, or falls. Hospitalizations for late effects of injury means the actual injury event occurred some time before the hospitalization. Research has found variation in the definition of late effects injuries among hospitals. Some hospitals code visits to rehabilitation units as late effects, while others code visits that occur after a given period of time after the injury event as late effects.² The CDC places these injuries in this category to separate them from the more common acute injury hospitalizations, for which the injury occurred immediately before the hospitalization. Since information about most of these types of injuries is provided elsewhere in this report, they will not be discussed again here.

The remainder of this section will highlight several specific types of uncategorized injuries that resulted in large numbers of hospitalizations.

Foreign Body Injuries

This category includes all hospitalizations caused by the entry of a foreign body into or through a natural body opening (e.g., eye, ear or nose) that does not cause suffocation. This would include, for example, injuries from a child swallowing a coin or getting sand in the eyes, but not injuries from choking on food or other objects. The E-coding system allows for the separation of foreign objects in the eye from injuries caused by foreign bodies entering other orifices. In Los Angeles County, for each hospitalization caused by a foreign body in the eye, there were 34 hospital visits for foreign bodies in other orifices.

Other research has examined the most common types of foreign body injuries. Among children, one study found that about 80% of visits for foreign bodies in other orifices resulted from the child swallowing the object.³ The most common objects swallowed were coins.

Human Bites

Nearly two-thirds of hospitalizations for human bite injuries in Los Angeles County resulted from assaults, the remainder were inflicted unintentionally. While other types of animal bites, such as dog bites, may cause more extensive injury, human bites carry infection risks that can be very serious. Generally, human bites are minor and can be tended to by the bite recipient. Occasionally, however, human bites, particularly bites to the hand, may cause serious infection and may also transmit diseases such as Hepatitis B or C, and the herpes virus.^{4 5} While there have been some reports of HIV transmission via human bites, each of the cases involved severe trauma and the presence of blood. The CDC reports that biting is not a common way to transmit HIV and the great majority of bite injuries do not result in HIV infection.⁶

Explosive Materials

This category includes unintentional injuries from materials such as fireworks, and explosions from gas leaks, as well as intentional injuries from bombs.

In 2004, around 9,600 emergency department visits in the United States were to treat fireworks-related injuries; about half of the victims were children younger than 15 years old.⁷ Around three-quarters of these injuries occurred within a 30 day period surrounding the 4th of July holiday.⁸ Every type of legally available firework has been reported to cause severe injury or death.⁹ Sparklers, which are frequently assumed to be a safe type of firework, burn at more than 1000° F and can cause serious burns.⁸ Between 1990 and 2003, sparklers and other novelty devices (for example, snakes), were responsible for 20% of fireworks-related emergency department visits among children and teenagers.¹⁰ Many authorities strongly recommend attending public fireworks displays rather than using fireworks at home;⁹ however, the Consumer Product Safety Commission has a list of safety tips for people who are planning on using fireworks themselves (see box).¹¹

Fireworks Safety Tips

- Never allow children to play with fireworks.
- Read & follow all warnings & instructions.
- Be sure other people are out of range before lighting fireworks.
- Only light fireworks on a smooth, flat surface away from the house, dry leaves, and flammable materials.
- Never try to relight fireworks that have not fully functioned.
- Keep a bucket of water nearby in case of malfunction or fire.

Unspecified Injuries

Accurate data about the types of injuries experienced within a community are essential for providing appropriate prevention services, and hospital discharge data are an excellent source of information about severe non-fatal injuries. However, if large numbers of injury hospitalizations are coded as unspecified injuries, the true extent of the problem of certain specific kinds of injuries will be underestimated.

In our data, 6.5% of all injury hospitalizations were coded as an unspecified injury. Many of these may not be truly unspecified injuries. A study in Rhode Island found that 70% of injuries with a vague or unspecified code could, upon review of hospital charts, actually be assigned a specific cause-of-injury code.¹² Most of the records that could be assigned to a specific type of injury were coded as falls or motor vehicle injuries.

Unspecified injuries are not just a problem in hospital discharge data. A national review of mortality data found that 9% of assault and 7% of unintentional injury fatalities were coded with an unspecified cause-of-injury.¹³ The study did not try to determine if enough information existed to code these fatalities to a specific cause of injury, but did find that these numbers compared favorably to statistics from other nations; the U.S. had the lowest percentage (of 4 countries) of unspecified unintentional deaths and the second lowest percentage of unspecified assault deaths.

¹ Centers for Disease Control and Prevention. Recommended Framework for Presenting Injury Mortality Data. MMWR. 1997;46(RR14):1-30

² LeMier M, Cummings P, West TA. Accuracy of external cause of injury codes reported in Washington State hospital discharge records. *Inj Prev.* 2001;7:334-338

³ Altmann AE, Ozanne-Smith J. Non-fatal asphyxiation and foreign body ingestion in children 0-14 years. *Injury Prevention.* 1997;3(3):176-182.

⁴ Griego RD, Rosen T, Orengo IF, Wolf JE. Dog, cat, and human bites: A review. *Journal of American Academy of Dermatology.* 1995;33(6):1019-1029.

⁵ Centers for Disease Control and Prevention. Guidelines for Prevention of Transmission of Human Immunodeficiency Virus and Hepatitis B Virus to Health-Care and Public-Safety Workers A Response to P.L. 100-607 The Health Omnibus Programs Extension Act of 1988. MMWR 1989;38(S-6):3-37. Available at: <http://www.cdc.gov/mmwr/preview/mmwrhtml/00001450.htm>

⁶ Centers for Disease Control and Prevention. HIV and Its Transmission. Available at: <http://www.cdc.gov/hiv/resources/factsheets/PDF/transmission.pdf>

⁷ Consumer Products Safety Commission. Fireworks. CPSC Document #012. Available at: <http://www.cpsc.gov/cpscpub/pubs/012.html>

⁸ Centers for Disease Control and Prevention. Notice to Readers: Injuries from Fireworks in the United States. MMWR. 2000;49(24):545-546. Available at: <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm4924a7.htm>

⁹ American Academy of Pediatrics, Committee on Injury and Poison Prevention. Fireworks-Related Injuries in Children. *Pediatrics.* 2001;108(1):190-191.

¹⁰ Witsaman RJ, Comstock RD, Smith GA. Pediatric Fireworks-Related Injuries in the United States: 1990-2003. *Pediatrics.* 2006;118(1):296-303.

¹¹ Consumer Products Safety Commission. Fireworks Safety Tips. Available at: <http://www.cpsc.gov/cpscpub/pubs/july4/safetip.html>

¹² Langlois JA, Buechner JS, O'Connor EA, Nacar EQ, Smith GS. Improving the E Coding of Hospitalizations for Injury: Do Hospital Records Contain Adequate Documentation? *Am J Public Health* 1995;85:1261-1265.

¹³ Lu TH, Walker S, Anderson RN, et al. Proportion of injury deaths with unspecified external cause codes: a comparison of Australia, Sweden, Taiwan and the US. *Injury Prevention*. 2007;13:276-281.