

## INJURY AND VIOLENCE

In California, injury, including both unintentional and intentional, is the number one killer and disabler of persons aged 1 to 44 (CDPH, 2010). Each year in California, injuries cause:

- Over 17,000 deaths
- Over 75,000 Californians to be permanently disabled
- Over 240,000 Californians to be hospitalized
- Over 2 million Californians to require treatment in emergency departments (EDs)
- An unknown number of injury-related treatment in physician offices and clinics

This chapter will review the prevalence, trends and the underlying causes of unintentional and intentional injury in San Diego County and provide insight into which residents are most impacted in terms of gender, age category, race/ethnicity and geographic region.

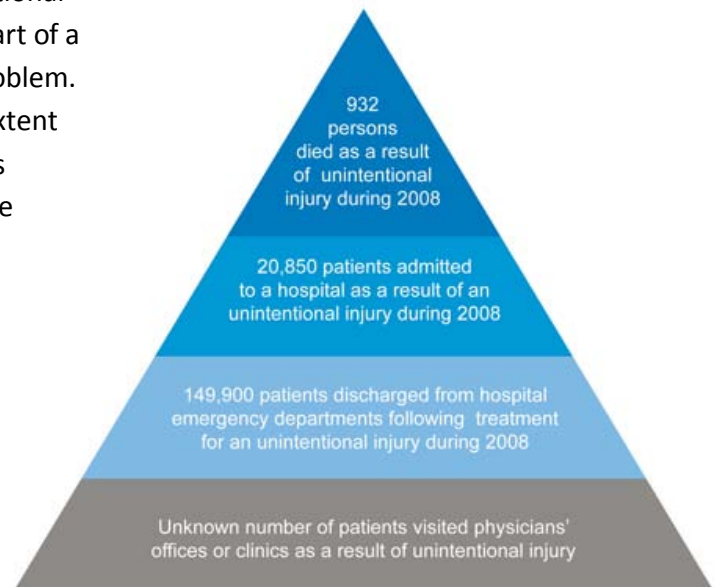
The term “unintentional injury” is referred to “accidents” because the latter implies events are inevitable and unavoidable whereas a high proportion of these incidents are regarded as being preventable (ISD, 2009).

### Unintentional Injury

Unintentional injuries can occur at home, at work, while participating in sports and recreation, on the streets, and at school. The information in this section focuses on those injuries that are severe enough to result in a visit to a hospital ED, hospitalization or death. Causes of unintentional injuries include motor vehicle accidents, falls, firearms, fire/burns, drowning, poisoning (including drugs and alcohol, gas, cleaners and caustic substances) and injuries at work.

The number of deaths associated with unintentional injury is significant, yet presents only a small part of a much larger and more serious public health problem. Hospitalization data is more indicative of the extent of the injury problem than death data alone. As shown in the pyramid below, during 2008, while there were over 930 deaths, more than 20,800 San Diegans were hospitalized and nearly 150,000 were treated annually in EDs for unintentional injuries. The number of unintentional injuries treated in physicians’ offices and clinics is unknown

### Unintentional Injury Pyramid 2008 San Diego County



## Unintentional Injury Deaths

Unintentional injuries are one of the leading causes of death for San Diego County residents of all ages, regardless of gender, race or region. During 2008, unintentional injury was the leading cause of death for persons ages 1 to 4 years and 15 to 34 years, and the sixth leading cause of death overall. Over 930 San Diegans died in 2008 as a result of unintentional injuries. Between 2000 and 2008, 6,725 San Diegans died as a result of unintentional injuries, and the rate of death has increased by 9.8%.

The following paragraphs and charts show those most impacted by the results of unintentional injuries as reflected by rates of deaths, hospitalizations and ED discharges.

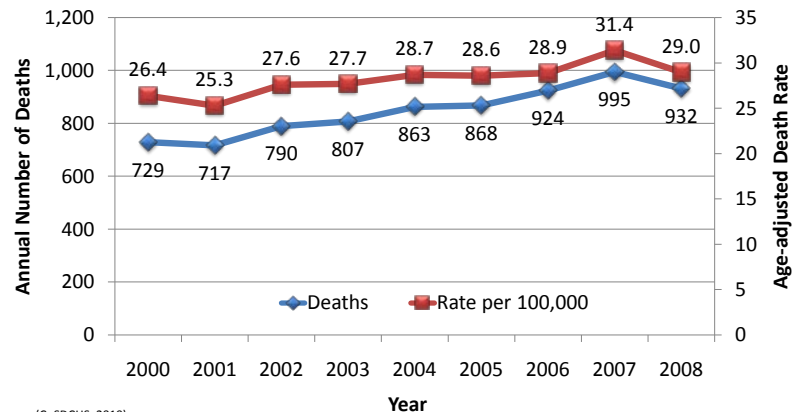
### Deaths

**Age Category** – Between 2006 and 2008, there were 2,843 unintentional deaths in San Diego County, with higher death rates per 100,000 population among those in the 75 to 84 and the 85-plus age categories, 72.1 and 222.6, respectively.

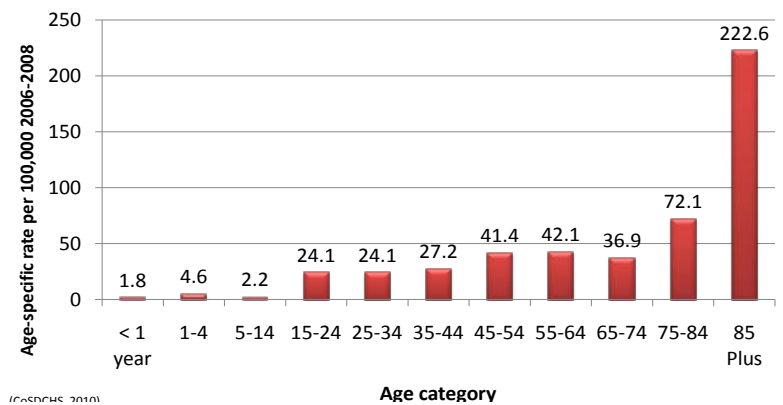
During this three-year period, unintentional injury deaths among those between the ages of 15 and 64 accounted for over two-thirds (68.7%) of the deaths for this cause of death.

**Gender** – During 2008, males accounted for almost two-thirds (65.1%) of the unintentional injury deaths in San Diego County. The death rate per 100,000 population among males was more than twice the death rate among females, 39.2 and 18.9, respectively.

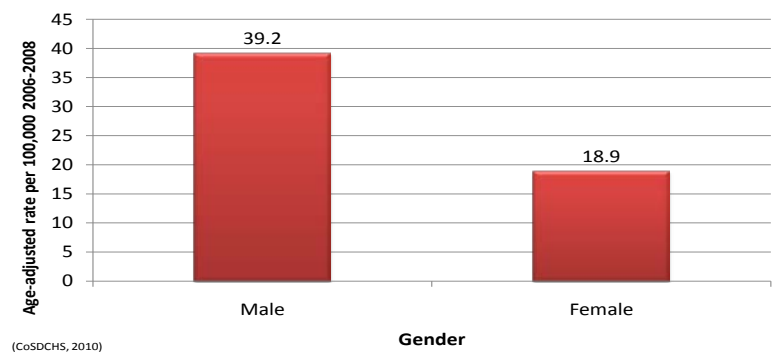
Unintentional Injury Deaths  
San Diego County, 2000-2008



Unintentional Injury Deaths  
San Diego County, 2006-2008

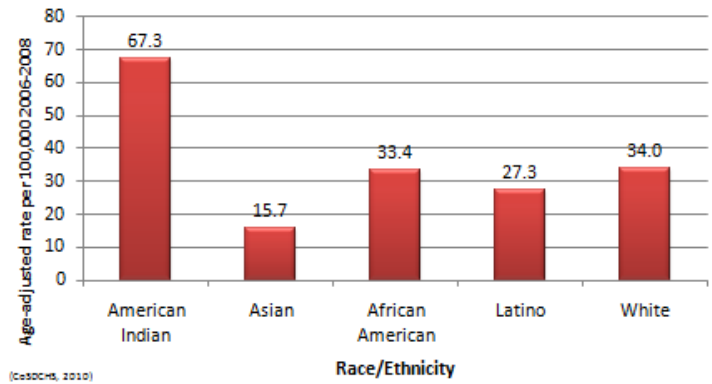


Unintentional Injury Deaths  
San Diego County, 2008



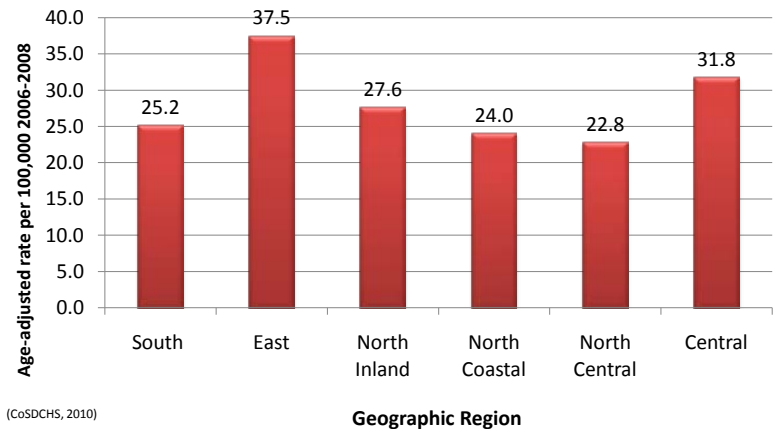
**Race and Ethnicity** – Between 2006 and 2008, age-adjusted death rates per 100,000 were highest among American Indians (67.3), whites (34.0) and African Americans (33.4). The death rate was lowest among Asians (15.7).

**Unintentional Injury Deaths**  
San Diego County, 2006-2008



**Geographic Region** – During 2008, the East and Central Regions experienced the highest unintentional injury death rates, 37.5 and 31.8, respectively. In both of these regions, unintentional injury death rates were higher than the overall County rate of 29.0.

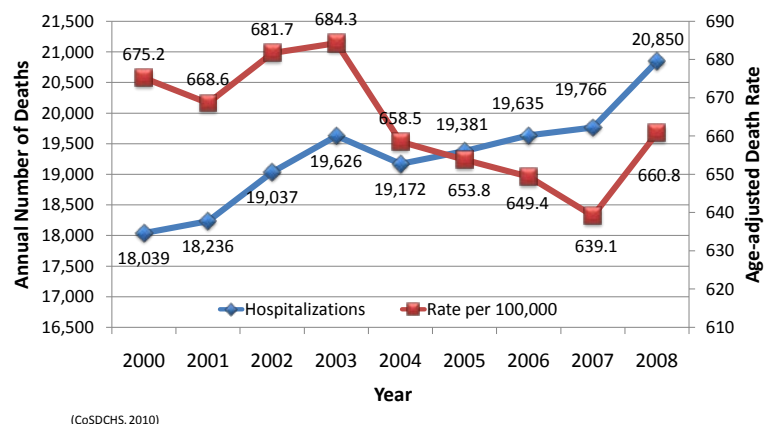
**Unintentional Injury Deaths**  
San Diego County, 2008



**Unintentional Injury Hospitalizations**

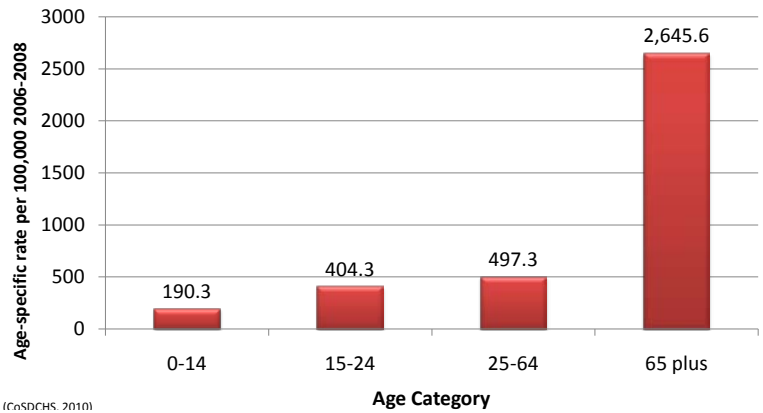
During 2008, there were 20,850 San Diego residents hospitalized as a result of an unintentional injury, and the age-adjusted rate was 660.8 per 100,000 population. Between 2000 and 2008, there was a 15.6% increase in the number of persons hospitalized. However, the rate of hospitalization declined by 2.1%. Between 2000 and 2008, 173,742 San Diegans were hospitalized due to unintentional injury.

**Unintentional Injury Hospitalizations**  
San Diego County, 2000-2008



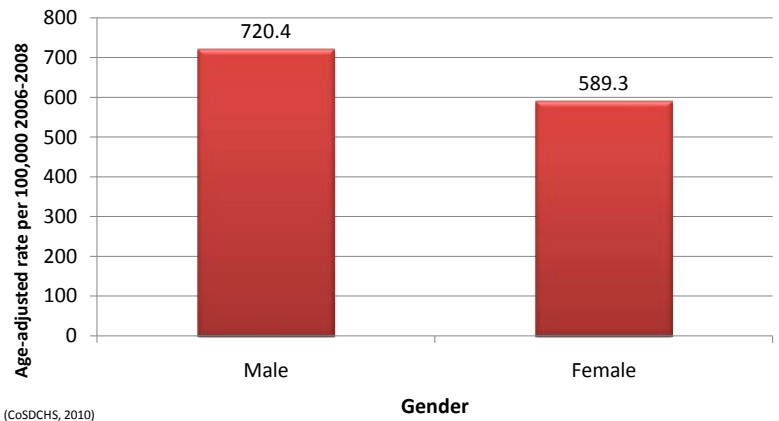
**Age Category** – During 2008, persons 65 and older accounted for 45.1% of unintentional injury hospitalizations in San Diego County. The hospitalization rate per 100,000 population among those in this age category was more than five times the rate of those in younger age categories.

### Unintentional Injury Hospitalizations San Diego County, 2008



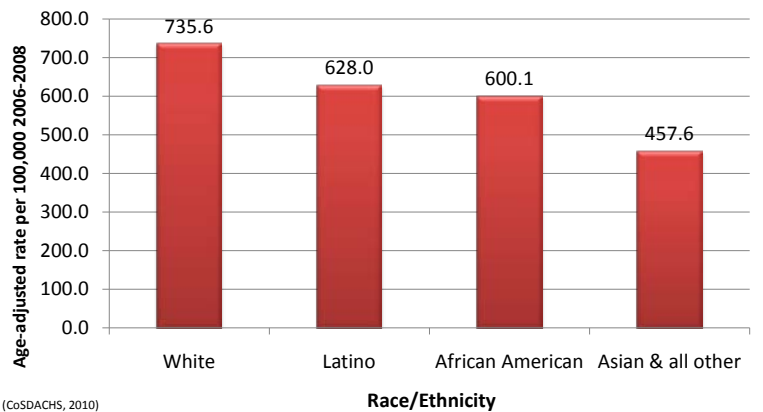
**Gender** – During 2008, males accounted for slightly more than half (51.5%) of unintentional injury hospitalizations in San Diego County. The age-adjusted hospitalization rate among males was 720.4 per 100,000, compared to 589.3 per 100,000 among females.

### Unintentional Injury Hospitalizations San Diego County, 2008



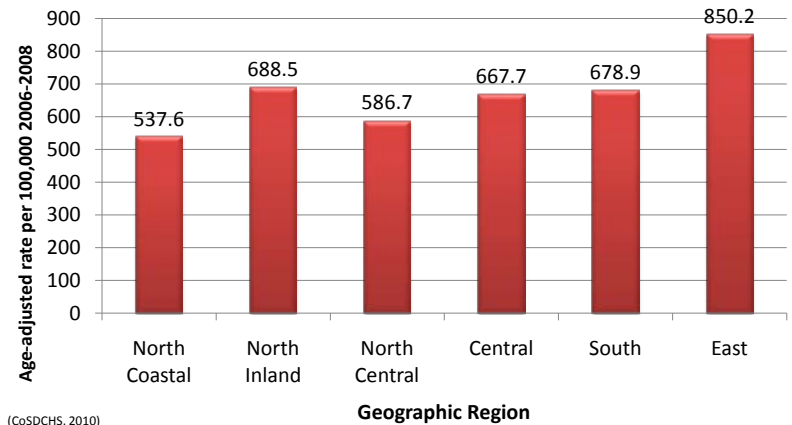
**Race and Ethnicity** – During 2008, more than 14,100 white San Diego residents were hospitalized as a result of unintentional injury, accounting for 67.7% of all hospitalizations related to unintentional injury. The rate for white residents was 735.6 per 100,000 compared to the overall County rate of 660.8.

### Unintentional Injury Hospitalizations San Diego County, 2008



**Geographic Region** – During 2008, residents of the East Region experienced the highest rate of hospitalization resulting from unintentional injury, 850.2 per 100,000. During this period, three other regions — North Inland, South and Central — had unintentional injury hospitalization rates higher than the overall County rate. The North Coastal Region had the lowest rate with 537.6 per 100,000.

### Unintentional Injury Hospitalizations San Diego County, 2008



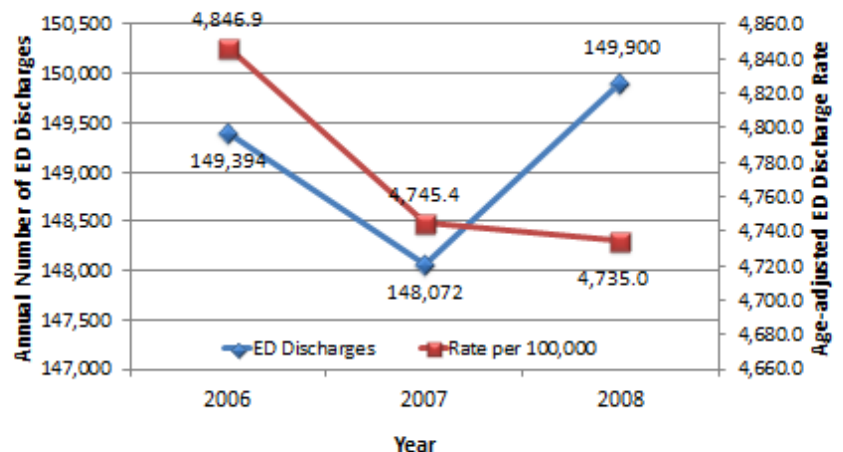
(CoSDCHS, 2010)

### Unintentional Injury Emergency Department Discharges

The ED discharge information contained in this section describes all patients treated and discharged from participating EDs in San Diego County. This data does not include those patients treated and subsequently admitted to the hospital from the ED. Information related to patients admitted to the hospital from the ED is reflected in the hospital discharge database. During 2007, 17% of all patients who presented to a San Diego County ED were admitted to that hospital.

During 2008, there were 149,900 San Diego County ED discharges following treatment for unintentional injuries, accounting for almost one in four (24.2%) of all ED discharges during this period. The rate of ED discharges related to unintentional injury was 4,735 per 100,000 and represented the lowest rate during the past three years.

### Unintentional Injury ED Discharges San Diego County, 2006-2008



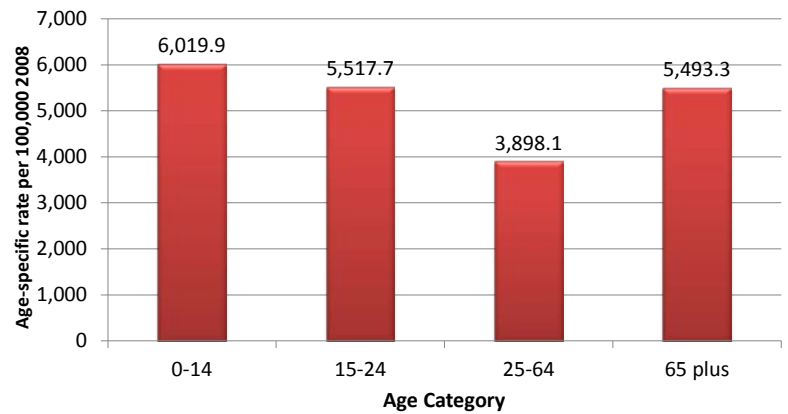
(CoSDCHS, 2010)



**Age Category** – During 2008, in San Diego County, persons between the ages of 25 and 64 accounted for 43.1% of ED discharges following treatment for unintentional injury. However, the ED discharge rate per 100,000 population was highest among those in the 0 to 14 and 15 to 24 age categories, 6,019.9 and 5,517.7, respectively. The ED discharge rate among those 65 and over was also higher than the county-wide rate, 5,493.3 and 4,735.0, respectively.

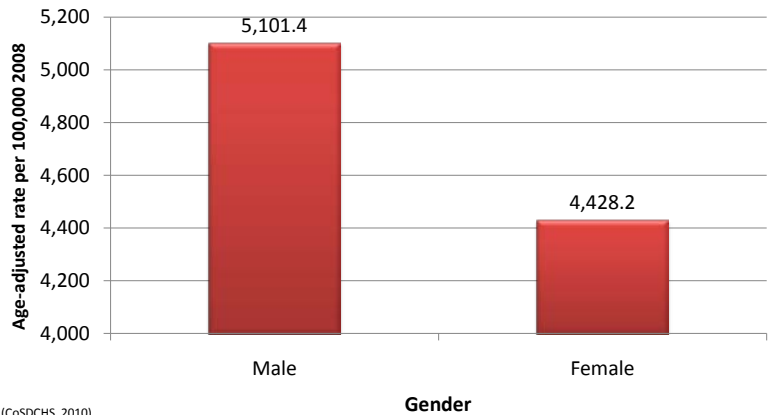
**Gender** – During 2008, males accounted for slightly more than half (53.4%) of the unintentional injury ED discharges in San Diego County. The age-adjusted hospitalization rate per 100,000 population among males was 5,101.4 compared to 4,366.2 among females.

### Unintentional Injury ED Discharges San Diego County, 2008



(CoSDCHS, 2010)

### Unintentional Injury ED Discharges San Diego County, 2008

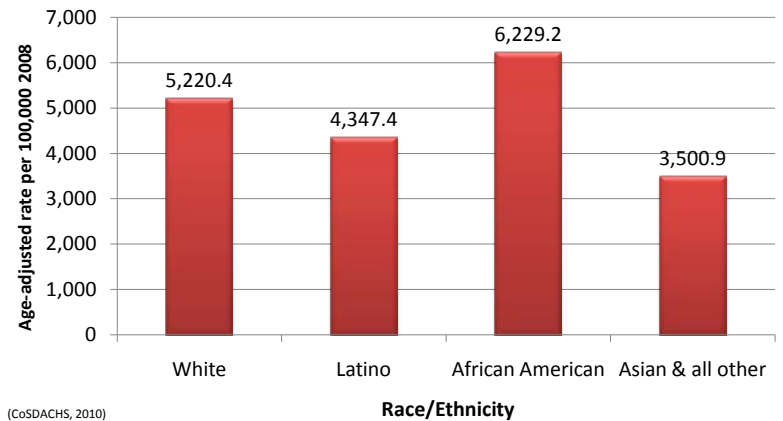


(CoSDCHS, 2010)



**Race and Ethnicity** – During 2008, more than 81,300 white San Diego residents were discharged from the ED following treatment for an unintentional injury, accounting for 54.3% of all ED discharges for treatment related to unintentional injury. The rate per 100,000 for white residents was 5,220.4 compared to the overall County rate of 4,735.0. The highest unintentional injury ED discharge rate however, was among African-Americans with a rate of 6,229.2.

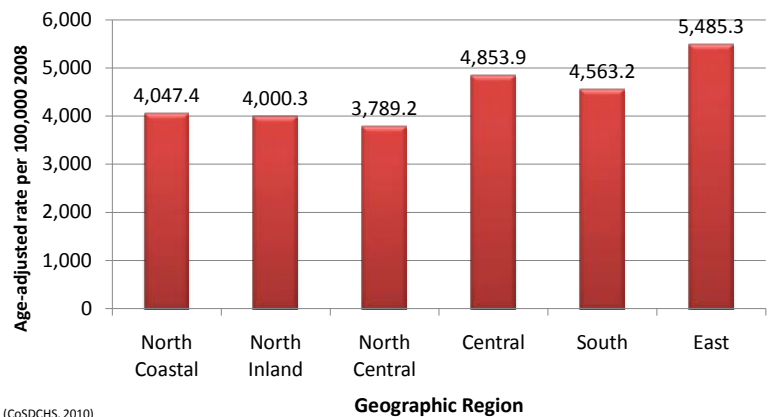
**Unintentional Injury ED Discharges**  
San Diego County, 2008



(CoSDACHS, 2010)

**Geographic Region** – During 2008, residents of the East Region experienced the highest ED discharge rate following treatment for unintentional injury, 5,485.3 per 100,000. In addition, the Central Region had an unintentional injury ED discharge rate higher than the overall County rate, 4,853.9 versus 4,735.0 per 100,000, respectively.

**Unintentional Injury ED Discharges**  
San Diego County, 2008



(CoSDCHS, 2010)



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## Underlying Cause of Death

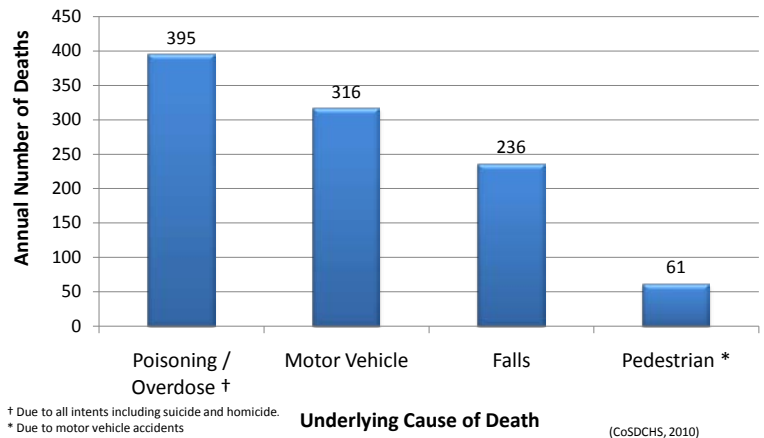
There are several major underlying causes of unintentional injury death, hospitalization and ED discharges, including falls, motor vehicle related injury, overdose/poisoning and pedestrian injury. This section will review each of these underlying causes and will include the following:

- Trends related to the annual number of deaths, hospitalizations and ED discharges
- Trends related to the rate of deaths, hospitalizations and ED discharges per 100,000 population
- Most current year data for deaths, hospitalizations and ED discharges, to identify who is impacted most in terms of gender, race and ethnicity, age category, and geographic region

The charts on this page provide an overview of each of these underlying causes as reflected in rates of death, hospitalization and ED discharges.

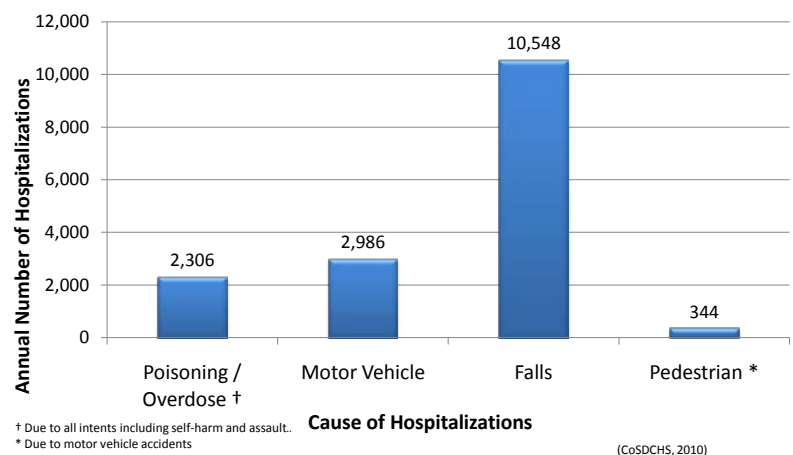
## Unintentional Injury Deaths

San Diego County, 2007



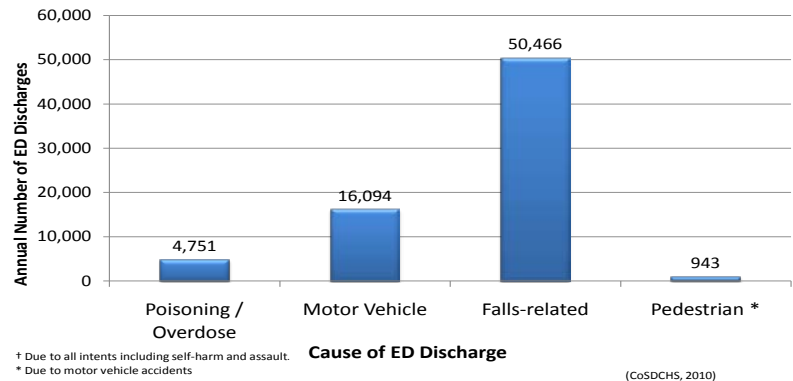
## Unintentional Injury Hospitalizations

San Diego County, 2008



## Unintentional Injury ED Discharges

San Diego County, 2008



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## Poisoning/Overdose

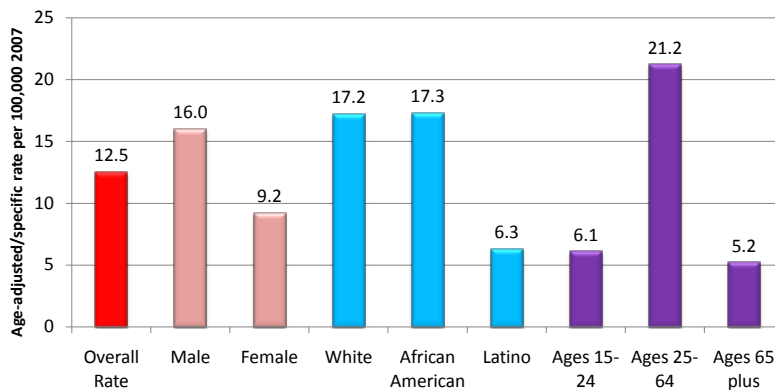
Persons included in the overdose and poisoning statistics have incurred the damaging physiological effects of ingestion, inhalation or other exposure to a broad range of chemicals, including pesticides, heavy metals, gases/vapors, drugs and a variety of common household substances, such as bleach and ammonia. Included are accidental overdoses of drugs, a wrong drug given or taken in error, and a drug taken inadvertently. Note that data reported here includes overdose and poisoning due to all intents, such as suicide and self-inflicted drug overdose, not just unintentional causes.

**Deaths** – Between 2000 and 2007, in San Diego County, 2,441 persons died as a result of poisoning and overdose, averaging 305 persons per year. During this eight-year period, the annual number of deaths related to poisoning and overdose increased by 44.7%. The age-adjusted death rate increased from 9.7 in 2000 to 12.5 per 100,000 in 2007, a change of 28.9%.

Those most impacted by overdose and poisoning deaths during 2007, as measured by the age-adjusted (age-specific for age categories) rates per 100,000, include males, whites and African Americans, and persons ages 25-64. Additionally, age-adjusted death rates in the Central and East regions were higher than the overall County rate, 16.9 and 15.9 per 100,000, respectively.

**Hospitalizations** – Between 2000 and 2008, in San Diego County, 19,765 persons were hospitalized as a result of poisoning and overdose, averaging

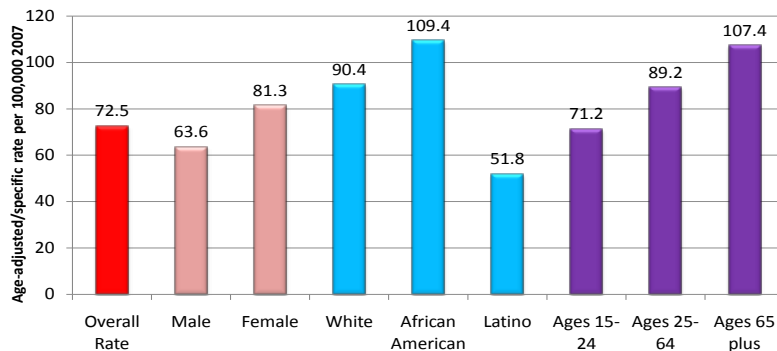
### Overdose & Poisoning\* Deaths San Diego County, 2007



\*Due to all intents including suicide and homicide.

(CoSDCHS, 2010)

### Overdose & Poisoning\* Hospitalizations San Diego County, 2008



\*Due to all intents including self-harm and assault.

(CoSDCHS, 2010)



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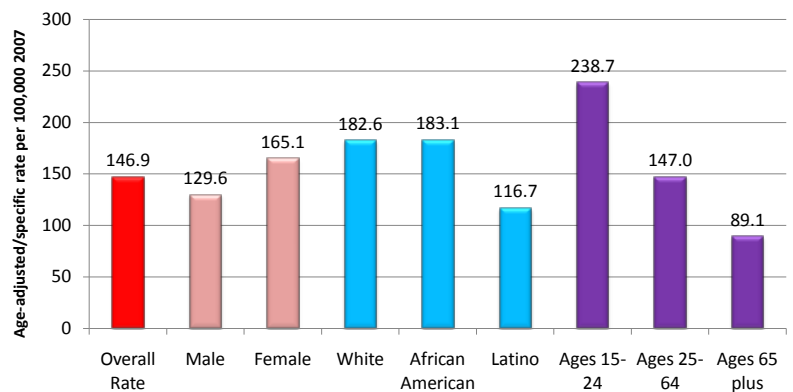
2,196 persons per year. During this nine-year period, the annual number of hospitalizations related to poisoning and overdose remained relatively stable, increasing by less than 1%. The age-adjusted hospitalization rate decreased from 81.5 per 100,000 in 2000 to 72.5 per 100,000 on 2008, a change of 11.7%.

Those most impacted by hospitalizations for overdose and poisoning during 2008, as measured by the age-adjusted (age-specific for age categories) rate per 100,000, include females, whites and African Americans, and persons ages 25 and older. Additionally, age-adjusted hospitalization rates in the Central, East and South regions were higher than the overall County rate, 103.2, 86.6 and 75.2 per 100,000, respectively.

**Emergency Department Discharges** – Between 2006 and 2008, in San Diego County, 13,411 persons were discharged from hospital EDs following treatment for poisoning and overdose, averaging 4,470 persons per year. During this three-year period, the annual number of ED discharges following treatment for poisoning and overdose increased by 11.4%. The age-adjusted ED discharge rate increased from 135.7 per 100,000 in 2006 to 146.9 per 100,000 in 2008, a change of 8.3%.

ED discharge rates show that those most impacted by overdose and poisoning during 2008, as measured by the age-adjusted (age-specific for age categories) rate per 100,000, include females, whites and African Americans, and persons ages 15-24. Additionally, age-adjusted ED discharge rates in the Central and East regions were higher than the overall County rate, 154.2 and 208.5 per 100,000, respectively.

**Overdose & Poisoning\* ED Discharges**  
San Diego County, 2008



\*Due to all intents including self-harm and assault.

(CoSDCHS, 2010)

## Motor Vehicle Injury

“Motor vehicle injuries” refers to accidents (collision or non-collision) occurring on a public roads. In addition to collisions between vehicles, these accidents include collisions between vehicles and animals, vehicles and pedestrians, or vehicles and fixed obstacles. Single vehicle accidents, in which one vehicle alone (and no other road user) was involved, are included. All fatality and injury totals include pedestrians, motorcyclists and bicyclists.

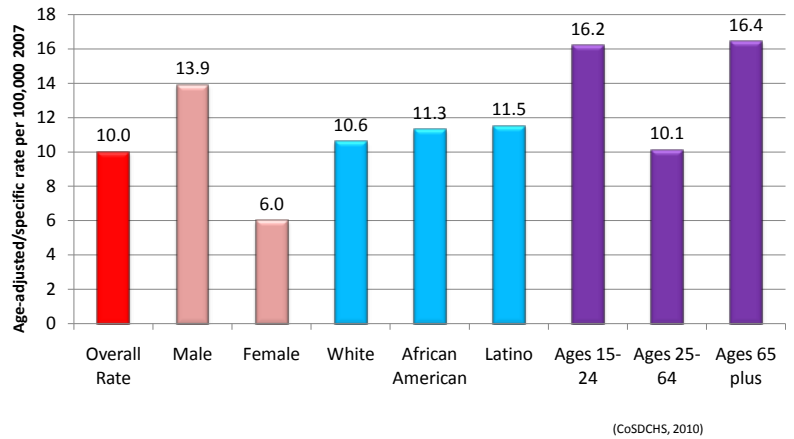


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**Deaths** – Between 2000 and 2007, among San Diego County residents, there were 2,355 deaths resulting from motor vehicle accidents, averaging 291 deaths per year. During this eight-year period, the annual number of deaths related to motor vehicle accidents increased by 53.4%. The age-adjusted death rate increased from 7.2 per 100,000 in 2000 to 10.0 per 100,000 in 2007, a change of 38.9%.

Those most impacted by motor vehicle accident deaths during 2007, as measured by the age-adjusted (age-specific for age categories) rates per 100,000, include males, Latinos, African Americans and whites; and persons age 15-24 and those age 65 and older. Additionally, age-adjusted death rates in the North Central, East and North Inland regions were higher than the overall County rate, 12.0, 10.7 and 11.8 per 100,000, respectively.

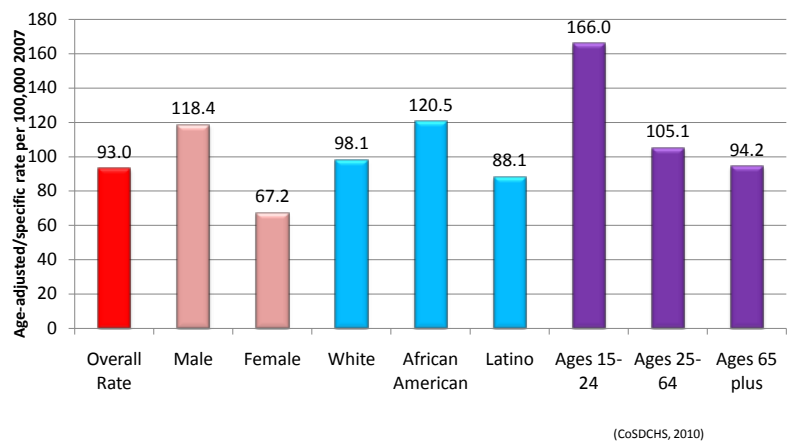
**Deaths due to Motor Vehicles**  
San Diego County, 2007



**Hospitalizations** – Between 2000 and 2008, in San Diego County, 29,326 persons were hospitalized as a result of motor vehicle accidents, averaging 3,258 persons per year. During this nine-year period, the annual number of hospitalizations related to motor vehicle accidents has declined by 10%. The age-adjusted hospitalization rate decreased from 116.5 per 100,000 in 2000 to 93.0 per 100,000 on 2008, a change of 20.2%.

Those most impacted by hospitalizations due to motor vehicle accidents during 2008, as measured by the age-adjusted (age-specific for age categories) rate per 100,000, include males, whites and African Americans, and persons ages 15 to 24. Additionally, age-adjusted hospitalization rates in the Central, South and East regions were higher than the overall County rate, 118.9, 114.4 and 109.6 per 100,000, respectively.

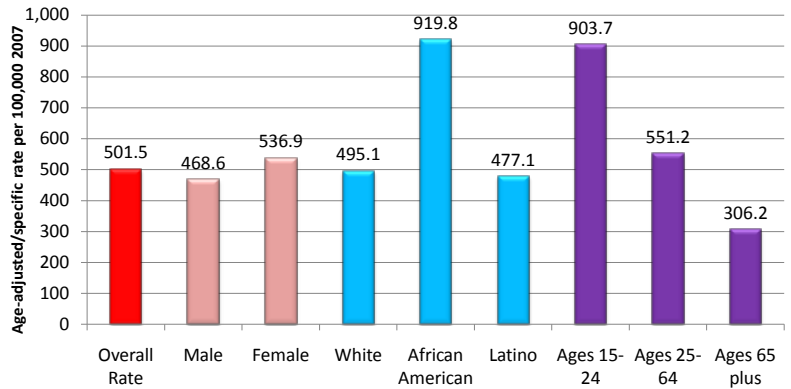
**Hospitalizations due to Motor Vehicles**  
San Diego County, 2008



**Emergency Department Discharges** – Between 2006 and 2008, in San Diego County, 50,894 persons were discharged from hospital EDs following treatment for injuries resulting from motor vehicle accidents, averaging 5,655 persons per year. During this three-year period, the annual number of ED discharges following treatment for injuries due to motor vehicle accidents increased by 7.9%. The age-adjusted ED discharge rate has decreased from 557.6 in 2006 to 501.5 per 100,000 on 2008, a change of 10.1%.

ED discharge rates for 2008 show that those most impacted by injuries from motor vehicle accidents, as measured by the age-adjusted (age-specific for age categories) rate per 100,000, include females, African Americans and persons ages 15-24. Additionally, age-adjusted ED discharge rates in the Central and East regions were higher than the overall County rate, 545.7 and 584.4 per 100,000, respectively.

**ED Discharges due to Motor Vehicles**  
San Diego County, 2008



(CoSDCHS, 2010)



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## Fall-Related Injury

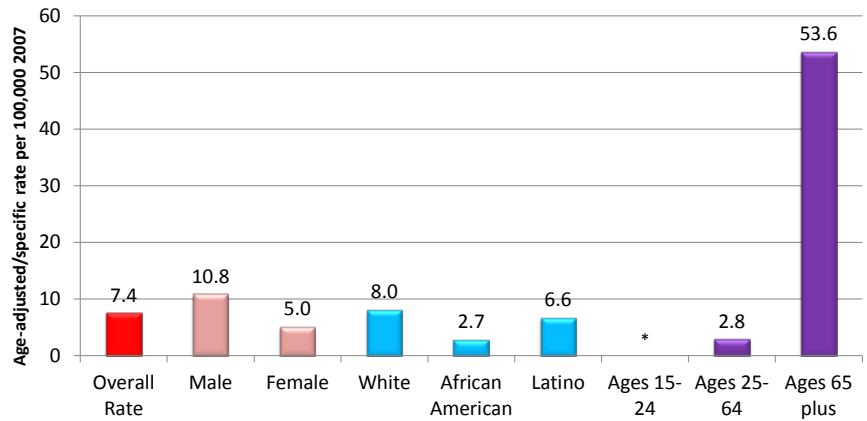
Falls, which are unintentional, are one of the leading causes of death, hospitalizations and visits to a hospital ED, especially among those ages 65 and older.

**Deaths** – Between 2000 and 2007, there were 1,242 fall-related deaths among San Diego County residents, averaging 155 deaths per year. During this eight-year period, the annual number of fall-related deaths increased by 84.4%. The age-adjusted death rate increased from 5.1 in 2000 to 7.4 per 100,000 on 2007, a change of 45.1%.

Those most impacted by fall-related deaths during 2007, as measured by the age-adjusted (age-specific for age categories) rates per 100,000, include males, whites and persons ages 65 and older. Additionally, age-adjusted death rates in all regions except the Central and South regions were higher than the overall County rate.

**Hospitalizations** – Between 2000 and 2008, 82,665 persons in San Diego County were hospitalized as a result of a fall-related injury, averaging 9,185 persons per year. During this nine-year period, the annual number of hospitalizations related to a fall-related injury increased by 23.3%. The age-adjusted hospitalization rate changed less than 1% from 334.0 in 2000 to 335.2 per 100,000 on 2008.

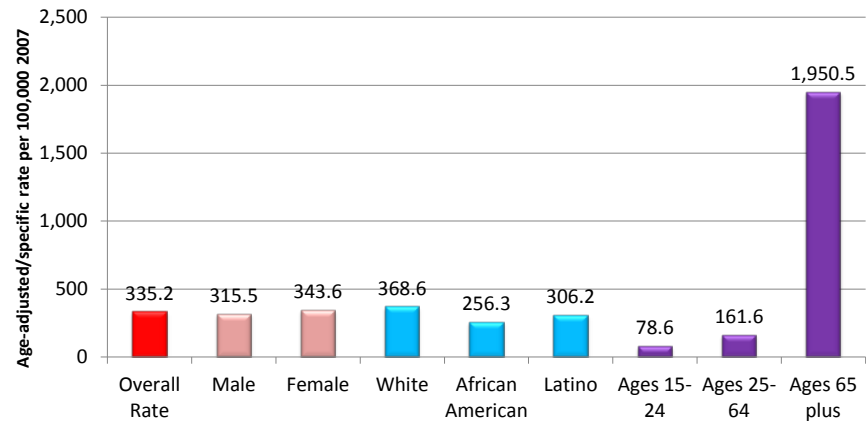
### Fall-Related Deaths San Diego County, 2007



\*Rate not calculated for fewer than 5 events.

(CoSDCHS, 2010)

### Fall-Related Hospitalizations San Diego County, 2008



(CoSDCHS, 2010)



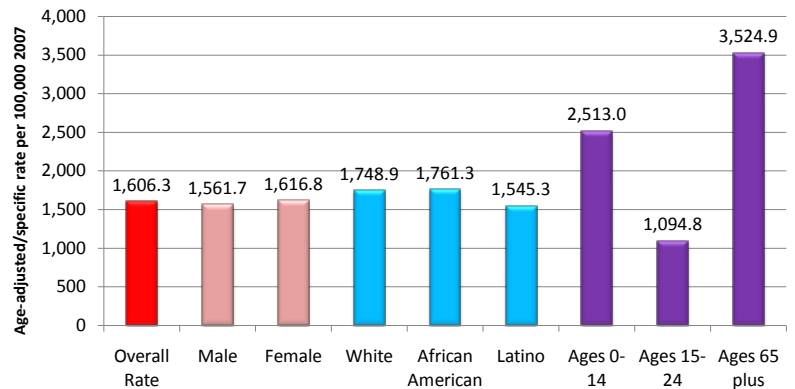
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Those most impacted by fall-related hospitalizations during 2008, as measured by the age-adjusted (age-specific for age categories) rate per 100,000, include males, whites and persons ages 65 and older. Additionally, age-adjusted hospitalization rates in the East and North Inland regions were higher than the overall County rate, 424.1 and 340.8 per 100,000, respectively.

**Emergency Department Discharges** – Between 2006 and 2008, 144,564 persons in San Diego County were discharged from hospital EDs following treatment for a fall-related injury, averaging 48,188 persons per year. During this three-year period, the annual number of ED discharges following treatment for fall-related injuries increased by 8.3%. The age-adjusted ED discharge rate increased from 1,532.3 in 2006 to 1,606.3 per 100,000 on 2008, a change of 4.8%.

During 2008, ED discharge rates show that those most impacted by fall-related injury, as measured by the age-adjusted (age-specific for age categories) rate per 100,000, include females, whites and African Americans, and persons under age 15 and those 65 and older. Additionally, age-adjusted ED discharge rates in the East Region were higher than the overall County rate, 1,825.9 per 100,000.

**Fall-Related ED Discharges**  
San Diego County, 2008



(CoSDCHS, 2010)



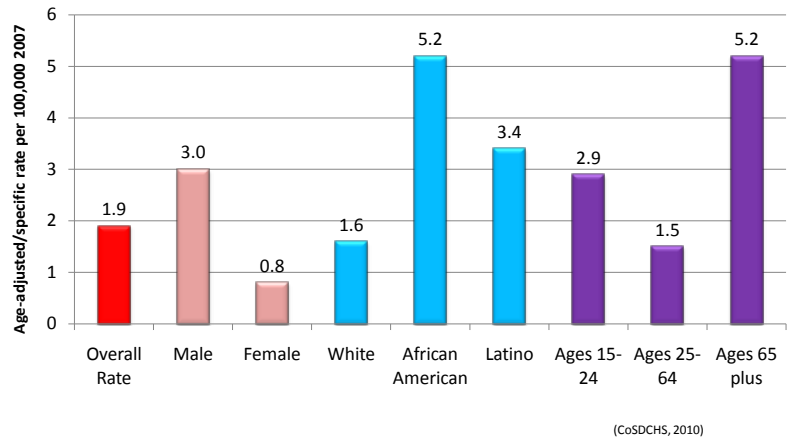
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## Pedestrian Injury

**Deaths** – Between 2000 and 2007, there were 480 pedestrian deaths due to motor vehicles among San Diego County residents, averaging 60 deaths per year. During this eight-year period, the annual number of pedestrian deaths increased by 19.6%. The age-adjusted death rate increased from 1.8 in 2000 to 1.9 per 100,000 on 2007, a change of 5.6%.

Those most impacted by pedestrian deaths due to motor vehicles during 2007, as measured by the age-adjusted (age-specific for age categories) rates per 100,000, include males, African Americans, Latinos, persons between the ages of 15 and 24 and those ages 65 and older. Additionally, age-adjusted death rates in the North Coastal and Central regions were higher than the overall County rate, 2.5 and 2.8, respectively.

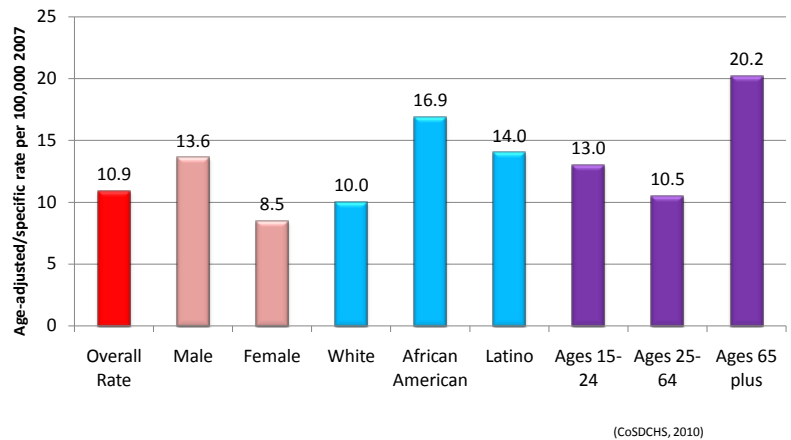
**Pedestrian Deaths due to Motor Vehicles**  
San Diego County, 2007



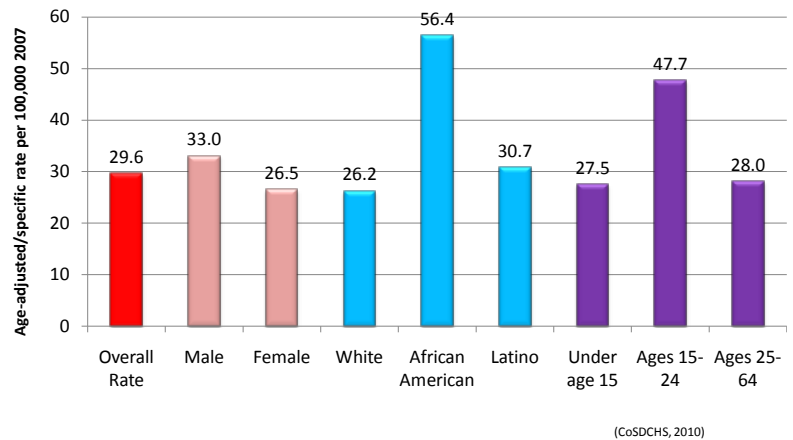
**Hospitalizations** – Between 2000 and 2008, 3,374 persons in San Diego County were hospitalized due to pedestrian injury, averaging 375 persons per year. During this nine-year period, the annual number of hospitalizations related to a pedestrian injury decreased by 23.3%. The age-adjusted hospitalization rate decreased by 20.4%, from 13.7 in 2000 to 10.9 per 100,000 in 2008.

Hospitalization rates show that those most impacted by pedestrian injury during 2008, as measured by the age-adjusted (age-specific for age categories) rate per 100,000, include males, African Americans, Latinos, persons between the ages of 15 and 24 and those ages 65 and older. Additionally, age-adjusted hospitalization rates in the Central, East and South regions were higher than the overall County rate, 22.4, 12.8 and 11.4 per 100,000, respectively.

**Pedestrian Injury Hospitalizations**  
San Diego County, 2008



## Pedestrian Injury ED Discharges San Diego County, 2008



**Emergency Department Discharges –**  
Between 2006 and 2008, 2,860 persons in San Diego County were discharged from hospital EDs following treatment for a pedestrian injury, averaging 955 persons per year. During this three-year period, the annual number of ED discharges following treatment for pedestrian injuries increased by 5.0%. The age-adjusted ED discharge rate increased from 29.1 in 2006 to 29.6 per 100,000 in 2008, a change of 1.7%.

2008 ED discharge rates show that those most impacted by pedestrian injury, as measured by the age-adjusted (age-specific for age categories) rate per 100,000, include males, African Americans, Latinos and persons ages 15 or 24. Additionally, age-adjusted ED discharge rates in the Central and East regions were higher than the overall County rate, 45.9 and 31.9 per 100,000, respectively.

### Intentional Injury

The term "intentional" refers to injuries resulting from purposeful human action, whether directed at oneself or others. Intentional injuries include:

- Assault injury: the use of physical force with the intent to inflict harm or death upon another — known as violence
- Self-inflicted injury: is not only suicide attempts but also self-inflicted injury without intent to attempt suicide — known as self-harm or suicide

### Violence

Violence includes a wide array of activities, most of which are reportable crimes. Yet, according to the Crime Victimization Survey, less than half, 49%, of all violent crimes were reported to the police in 2009. Violent crimes against females were more likely to be reported than violent crimes against males, 53% and 45%, respectively (NVCS, 2010).



The following section provides an overview of the different types of violent acts currently reported to law enforcement and reported in SANDAG’s Criminal Justice Clearinghouse.

During 2009, there were 12,776 violent crimes reported to law enforcement in the San Diego region. These included:

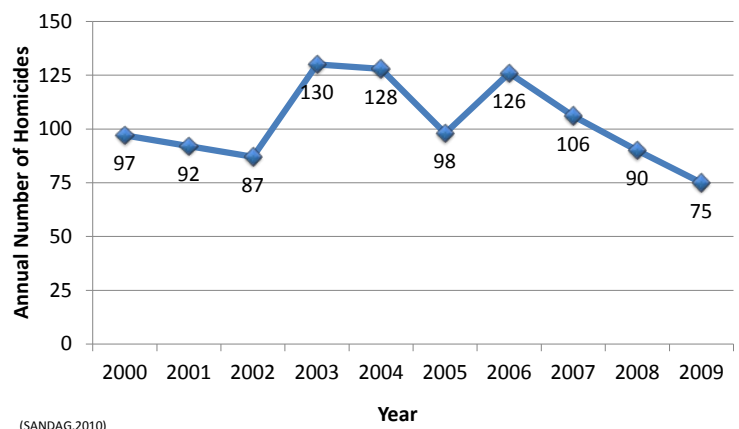
	2009	Percentage of total	Percentage change 2005 - 2009
Homicide	75	0.6%	-23.5%
Rape	746	5.8%	-8%
Robbery	4,033	31.6%	-2%
Aggravated assault	7,922	62.0%	-12%
Total violent crime	12,776	100.0%	-8%

## Homicide

According to the Centers for Disease Control and Prevention’s (CDC’s) National Violent Death Reporting System (NVDRS, 2008):

- Approximately one-third of homicides in 2005 were precipitated by another crime, including robbery, assault, drug trading, burglary, motor-vehicle theft or rape/sexual assault.
- In nearly 20% of homicide cases in 2005, intimate-partner violence (IPV) was identified as a contributing factor. When IPV was a factor, over 78% of suspects were male, while 65% of victims were female.
- Incidents resulting in multiple deaths were most often homicides that were followed by suicide of the suspect (49.9%) or multiple homicides (41.6%).

**Homicide**  
San Diego County, 2000-2009



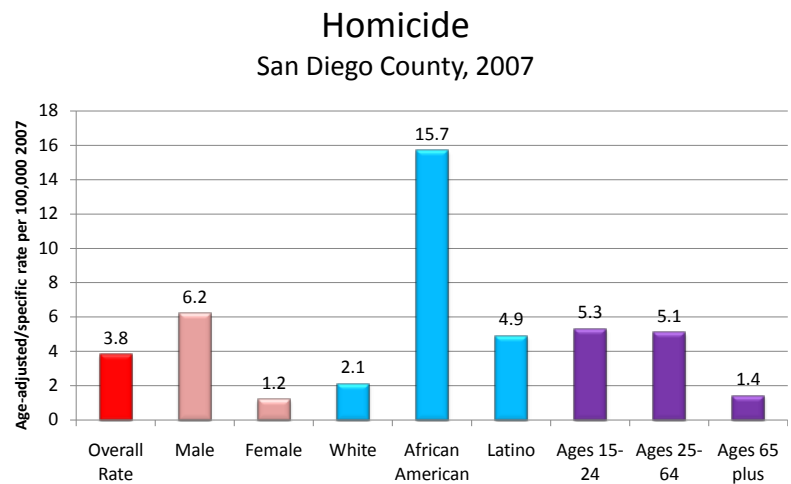
(SANDAG, 2010)

- In 63.2% of cases, victims who were killed by law enforcement officers and were tested for alcohol were over the legal limit of 0.08 mg/DL.

According to information provided by SANDAG, a total of 75 homicides occurred in the San Diego region in 2009, the lowest number in the past 25 years. During this period, the number of homicides fluctuated from 278 in 1991 to a low of 75 in 2009 (SANDAG, 2010).

In addition to the homicide and assault data provided by SANDAG’s Criminal Justice Clearinghouse, the County of San Diego HHS’s Community Health Statistics department provides a wealth of data related to homicide and assault. This data includes the annual incidence and rate, plus demographic profiles of victims of both homicide and assault serious enough to require medical treatment in the ED or hospitalization.

Those most impacted by homicide during 2007, as measured by the age-adjusted (age-specific for age categories) rates per 100,000 include males, African Americans, Latinos, and persons between the ages of 15 and 54. Additionally, age-adjusted death rates in the Central, South and East regions were higher than the overall County rate, 7.5, 4.8 and 4.4, respectively.



(CoSDCHS, 2010)

## Assault

Defining assault becomes complex when reviewing both public health and crime statistics. While the intent of this section is to review the prevalence of violence in San Diego County using available data sources, including County Public Health and SANDAG crime data, it is important to acknowledge the differences in these reporting systems. Part of this process includes understanding how assault is classified.

SANDAG uses the FBI’s Uniform Crime Reporting (UCR) Program definition of aggravated assault — “An unlawful attack by one person upon another for the purpose of inflicting severe or aggravated bodily injury.” The UCR Program further specifies that this type of assault is usually accompanied by the use of a weapon or by other means likely to produce death or great bodily harm. Attempted aggravated assault that involves the display of — or threat to use — a gun, knife or other weapon is included in this crime category because serious personal injury would likely result if the assault were completed (URC, 2010).



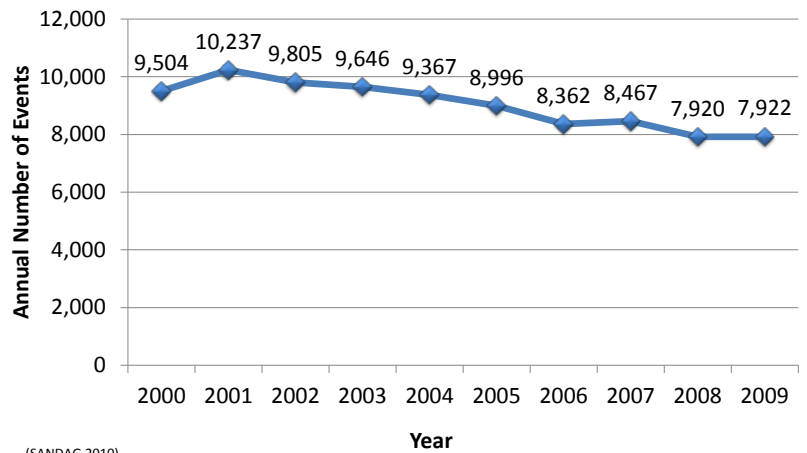
For public health purposes only, the term “assault” is used and is defined using ICD-9 Ecodes E960-E969, which describe how the assault occurred, i.e., fighting, rape, poisoning, strangulation, etc.

Used together, both of these data sets help create a fuller understanding of the problem of violence and the outcomes of these events.

### Aggravated Assaults

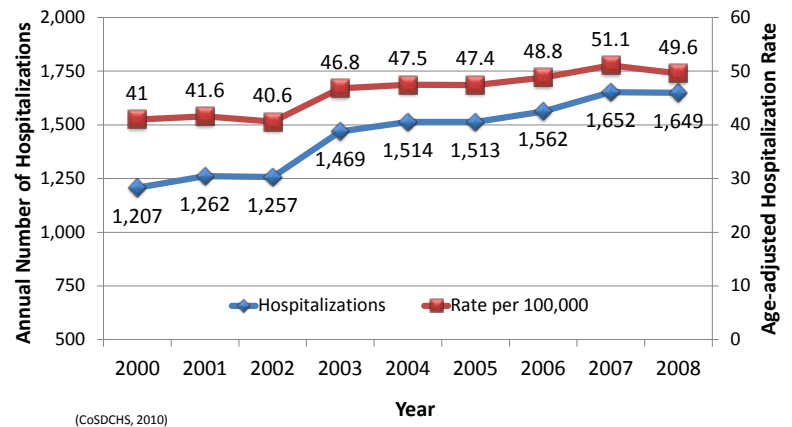
According to information provided by SANDAG, there were 7,922 aggravated assaults in the San Diego region during 2009, similar to 2008. Since 2001 there has been a 22.6% decline in assaults (SANDAG, 2010).

**Aggravated Assault**  
San Diego County, 2000-2009



**Hospitalizations** – Between 2000 and 2008, 13,055 persons in San Diego County were hospitalized as a result of an assault injury, averaging 1,451 persons per year. During this nine-year period, the annual number of hospitalizations related to an assault injury increased by 36.6%. The age-adjusted hospitalization rate increased by 21.0%.

**Assault Hospitalizations**  
San Diego County, 2000-2008



Those most impacted by assault injuries requiring hospitalization during 2008, as measured by the age-adjusted (age-specific for age categories) rate per 100,000, include males, African Americans, Latinos, and persons between the ages of 15 and 64. Additionally, age-adjusted hospitalization rates in the Central, East and South regions were higher than the overall County rate, 109.9, 58.4 and 75.8 per 100,000, respectively.

**Emergency Department Discharges –**

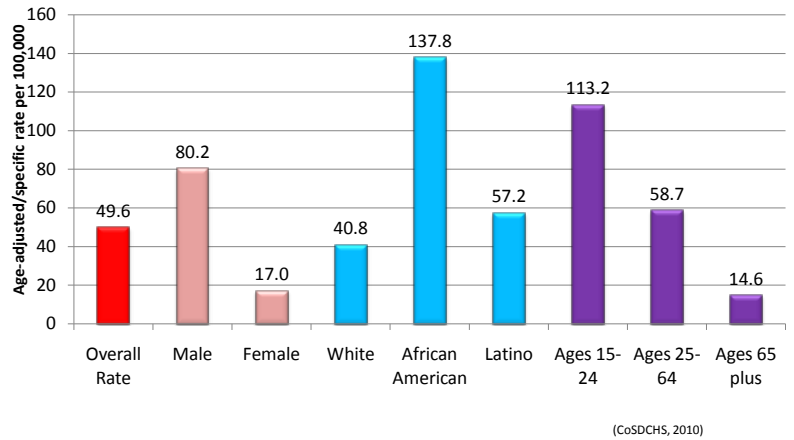
Between 2006 and 2008, 23,860 persons in San Diego County were discharged from

hospital EDs following treatment for an assault injury, averaging 7,953 persons per year. During this three-year period, the annual number of ED discharges following treatment for assault injuries increased by 2.1% and the age-adjusted ED discharge rate changed less than 1%, from 245.8 to 245.5.

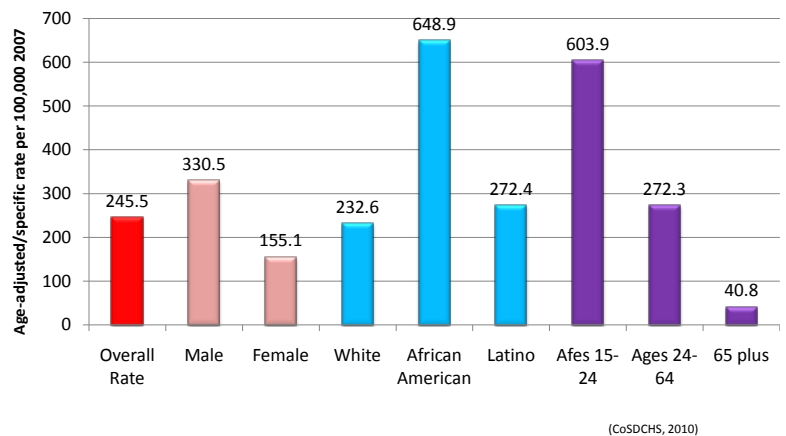
ED discharge rates show that those most impacted by assault injury during 2008, as measured by the age-adjusted (age-specific for age categories) rate per 100,000, include males, African Americans, Latinos, and persons between the ages of 15 and 24.

Additionally, age-adjusted ED rates in the Central, East and South regions were higher than the overall County rate, 406.9, 286.3 and 278.2 per 100,000, respectively.

**Assault Hospitalizations  
San Diego County, 2008**



**Assault Injury ED Discharges  
San Diego County, 2008**



## Suicide and Self-Inflicted Injury

Suicide occurs when a person ends his or her life, and it is a major, preventable public health problem. In 2008, suicide was the eighth-leading cause of death in San Diego County, accounting for 359 deaths, with an overall age adjusted rate of 11.3 suicide deaths per 100,000 people (SDEpi, 2010). Suicide deaths are only part of the problem: more people survive suicide attempts than actually die. Those who attempt suicide are often seriously injured and require medical and psychiatric care. The following section reviews the prevalence of suicide in San Diego County, along with self-inflicted injury hospitalizations and ED discharges following treatment for self-inflicted injuries. Included in this section are trends and profiles of those most impacted.

Self-inflicted injury is the deliberate harm of one's own body to cause injury. The self-inflicted injury data shown in this report does not indicate if the intent was suicidal. Common types of self-inflicted injury include cutting, scratching, hitting, biting and burning.

While the data reported here represents those who have committed or attempted to commit suicide, it has been estimated that there may be from eight to 25 attempted suicides per every one suicide death (Moscicki, 2001).

### Risk Factors for Suicide

According to the National Institute of Mental Health (NIMH) there are at least eight generally accepted risk factors for suicide. These include:

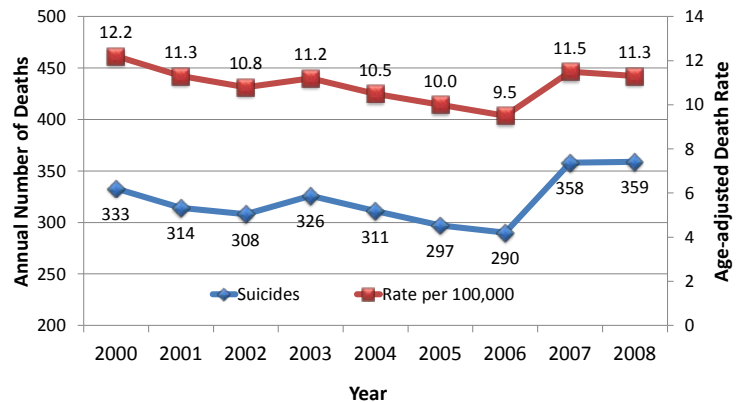
- Depression and other mental disorders, or a substance-abuse disorder (often in combination with other mental disorders). More than 90 percent of people who die by suicide have these risk factors.
- Prior suicide attempt.
- Family history of mental disorder or substance abuse.
- Family history of suicide.
- Family violence, including physical or sexual abuse.
- Firearms in the home, the method used in more than half of suicides.
- Incarceration.
- Exposure to the suicidal behavior of others, such as family members, peers, or media figures.



## Suicide

During 2008, 359 San Diego residents died as a result of suicide, and the age-adjusted rate was 11.3 per 100,000 population. Between 2000 and 2008, there was a 3.3% increase in the number of suicides; however, the rate of suicides declined by 7.4%. Between 2000 and 2008, 2,896 San Diegans died as a result of suicide.

### Suicide Deaths San Diego County, 2000-2008

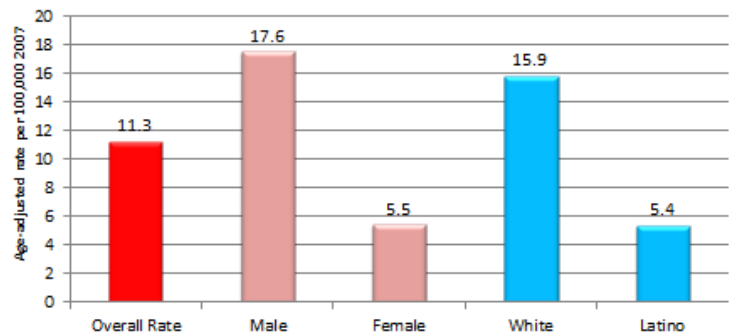


(CoSDCHS & SDEpi, 2010)

Review of non-natural causes of death in San Diego County between 1998 and 2007 found that suicide was the second leading cause of non-natural death for all ages. During this period:

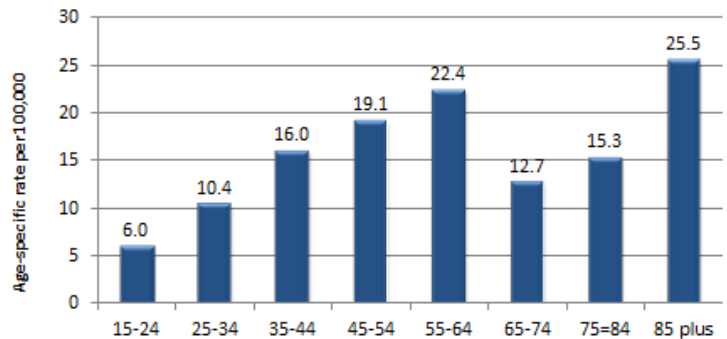
- Among those ages 55 to 74, suicide was the leading cause of non-natural death
- Among those ages 10 to 14, 20 to 54 and 75 and older, suicide was the second leading cause of non-natural death

### Suicides San Diego County, 2008



Those most impacted by suicide during 2008, as measured by the age-adjusted (age-specific for age categories) rate per 100,000, include males, whites, persons between the ages of 35 and 64, and those ages 85-plus. Additionally, age-adjusted suicide rates in the East, North Coastal and Central regions were higher than the overall County rate, 13.8, 12.4 and 11.7 per 100,000, respectively.

### Suicides by Age Category San Diego County, 2008



(SDEpi, 2010)



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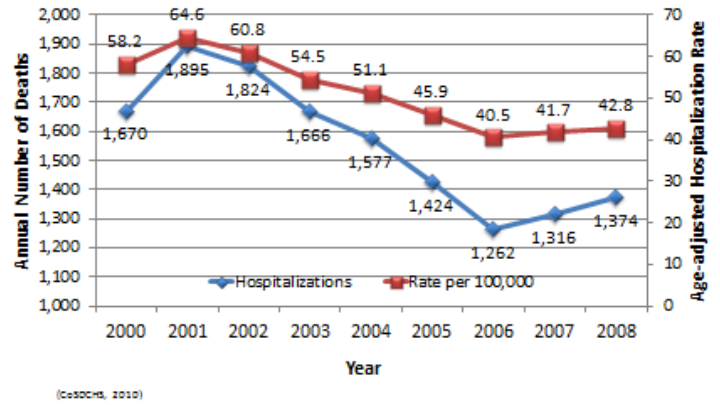
## Self-Inflicted Injury

Self-inflicted injury, as reflected by hospitalizations and ED discharges, are four to seven times more common than completed suicides. The following provides trends, and profiles those most impacted by self-inflicted injury.

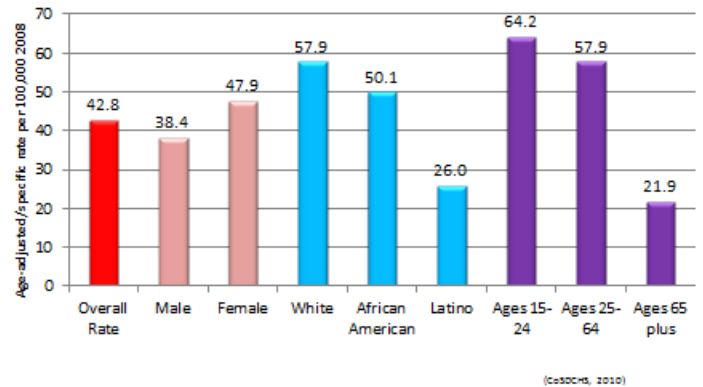
**Hospitalizations** – Between 2000 and 2008, 14,008 persons in San Diego County were hospitalized as a result of self-inflicted injuries, averaging 1,556 persons per year. During this nine-year period, the annual number of hospitalizations related to a self-inflicted injury decreased by 17.7%. The age-adjusted hospitalization rate decreased by 26.5%.

Those most often hospitalized as a result of self-inflicted injury during 2008, as measured by the age-adjusted (age-specific for age categories) rate per 100,000, include females, whites and African Americans, and persons ages 15 or 64. Additionally, hospitalization rates in the Central, South and East regions were higher than the overall County rate, 63.4, 52.4 and 49.1 per 100,000, respectively.

Self-Inflicted Injury Hospitalizations  
San Diego County, 2000-2008



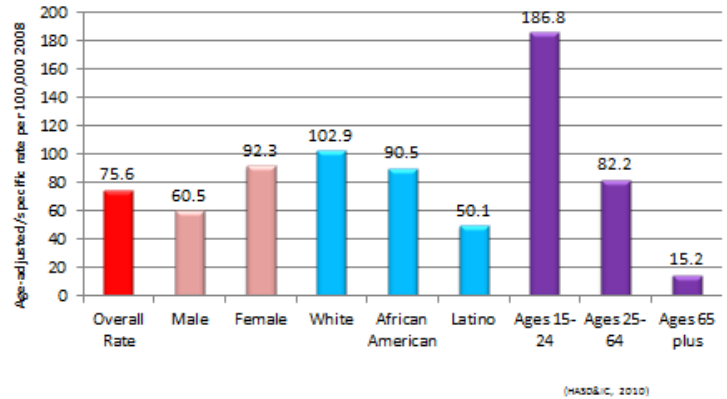
Hospitalizations due to Self-Inflicted Injury  
San Diego County, 2008



**Emergency Department Discharges** – Between 2006 and 2008, 6,525 persons in San Diego County were discharged from hospital EDs following treatment for self-inflicted injuries, averaging 2,175 persons per year. During this three-year period, the annual number of ED discharges following treatment for self-inflicted injuries increased by 27.4%. Between 2006 and 2008, the age-adjusted ED discharge rate increased by 24.6%, from 60.7 to 75.6.

Those most impacted by self-inflicted injury based on ED utilization during 2008, as measured by the rate per 100,000, include females, whites and African Americans, and persons ages 15 or 24. Additionally, ED discharge rate of 135.8 per 100,000 in the East Region was the highest of the six County regions.

**Emergency Department Discharges due to Self-Inflicted Injury San Diego County, 2008**



**Economic Costs**

The economic costs of injury and violence are massive, including not only the costs related to medical expenses but also wage and productivity losses, administrative expenses and motor vehicle damage. The following are a sample of cost estimates from a variety of sources. Each is briefly described and referenced, if additional information is desired.

**National Safety Council** – The National Safety Council (NSC) makes estimates of the average costs of fatal and nonfatal unintentional injuries as a means to measure the impact on the economy and to illustrate the importance of injury prevention. The costs are a measure of the dollars spent and income not received due to accidents, injuries and fatalities.

<b>Average Economic Cost per Death, Injury or Crash, 2008</b>	
Death	<b>\$1,300,000</b>
Nonfatal Disabling Injury	<b>\$63,500</b>
Property Damage Crash (including non-disabling injuries)	<b>\$8,300</b>

Additional information related to this study is available on the NSC website at: [http://www.nsc.org/news\\_resources/injury\\_and\\_death\\_statistics/Pages/EstimatingtheCostsofUnintentionalInjuries.aspx](http://www.nsc.org/news_resources/injury_and_death_statistics/Pages/EstimatingtheCostsofUnintentionalInjuries.aspx)

**Centers for Disease Control and Prevention** – The CDC, through a variety of funded research projects, provides economic cost estimates related to injury and violence. One recent study found that, nationwide, the total costs associated with nonfatal injuries and deaths due to violence in 2000 totaled more than \$70 billion. Most of this cost (\$64.4 billion or 92%) was due to lost productivity. However, an estimated \$5.6 billion was spent on medical care for the more than 2.5 million injuries due to interpersonal and self-directed violence. This 2007 study, entitled *Medical Costs and Productivity Losses Due to Interpersonal and Self-Directed Violence in the United States*, provides a comprehensive look at the cost of violence in the U.S. Some of the key findings from this study include:

- Most of the costs of violence stem from males and young adults. Sixty-eight percent of the costs from assaults and 63% of the costs from self-inflicted injuries were associated with males aged 15 to 44.
- Americans suffer 2.2 million medically treated injuries due to interpersonal violence annually, at a cost of \$37 billion (\$33 billion in productivity losses, \$4 billion in medical treatment).
- The cost of self-inflicted injuries (suicide and attempted suicide) is \$33 billion annually (\$32 billion in productivity losses, \$1 billion in medical costs).
- People aged 15 to 44 years comprise 44% of the population, but account for nearly 75% of injuries and 83% of costs due to interpersonal violence.
- The nearly 17,000 annual homicides result in \$22.1 billion in costs. The average cost per homicide was \$1.3 million in lost productivity and \$4,906 in medical costs.
- The average cost per case for a nonfatal assault was \$57,209 in lost productivity and \$23,353 in medical costs.
- The average cost per case of suicide is \$1 million in lost productivity and \$2,596 in medical costs. The average cost for a nonfatal self-inflicted injury was \$9,726 in lost productivity and \$7,234 in medical costs.

Additional information related to this study is available on the American Journal of Preventive Medicine Web site at: <http://www.ajpm-online.net/article/S0749-3797%2807%2900086-4/pdf>.

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