

# Unintentional Injury

## What is Unintentional Injury?

Unintentional injuries are injuries that are not caused on purpose and are free from harmful intent. Some would call unintentional injuries “accidents” but they are not because they are predictable and preventable.<sup>1</sup> Most unintentional injuries are caused by falls, poisonings/overdoses, motor vehicle crashes, struck by/against events, fires/burns, cuts/piercing, drowning/submersion, and overexertion.

In 2010, there were over 120,000 deaths due to unintentional injuries in the United States.<sup>2</sup> In the same year, an estimated 1.7 million were hospitalized and over 26 million were treated and released from an emergency department due to unintentional injury.<sup>2</sup>

## Risk Factors for Unintentional Injury

### Demographic Risk Factors

- *Age*
  - Those aged 65 years and older have the highest unintentional injury death and hospitalization rates compared to any other age group.<sup>2</sup>
  - The leading causes of unintentional injury vary by age.
    - Children and older adults are more at risk for falls than other age groups, whereas motor vehicle crashes are more likely to occur among those aged 16 to 19 years.<sup>3</sup>
- *Race/Ethnicity*
  - American Indians/Alaska Natives are more likely to die from unintentional injury compared to any other racial or ethnic group.<sup>2</sup>
- *Gender*
  - Males are twice as likely to die from unintentional injury compared to females.<sup>2</sup>
  - Males are more likely to be hospitalized for unintentional injury compared to females.<sup>2</sup>
- *Socioeconomic Status*
  - A study found that playgrounds in low-income areas had more maintenance-related hazards (i.e., rusty play equipment, damaged fall surfaces) than playgrounds in high-income areas.<sup>4</sup>
  - The poorest Americans are at an increased risk of fire-related injuries and deaths.<sup>5</sup>

### Social and Behavioral Risk Factors

- *Alcohol and Drug Abuse*
  - Alcohol use can lead to impaired brain function resulting in poor judgment, reduced reaction time, and loss of balance and motor skills, increasing the risk of unintentional injury.<sup>6</sup>

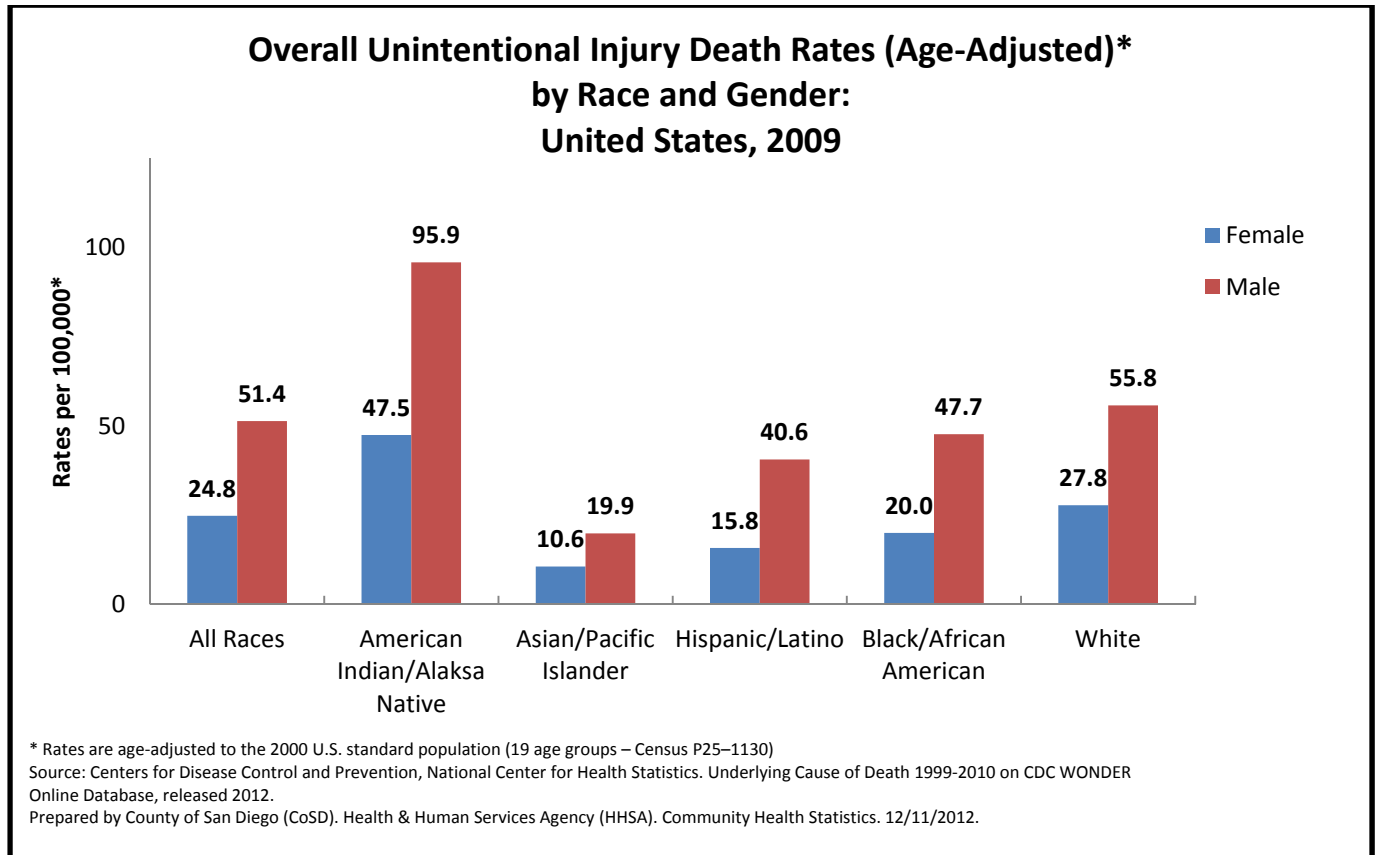
- 1 in every 3 traffic-related deaths involves a drunk driver.<sup>7</sup>
- In 2010, alcohol-impaired drivers were involved in over 10,000 traffic-related deaths.<sup>8</sup>
- Drugs (e.g., marijuana and cocaine) are involved in approximately 18% of motor vehicle driver deaths. These drugs are often used in combination with alcohol.<sup>9</sup>
- Alcohol use is involved in up to 70% of deaths associated with water recreation, nearly a quarter of ED visits for drowning, and about one in five reported boating deaths.<sup>10</sup>
- *Lack of Physical Activity*
  - Lack of physical activity can lead to weak legs and decreased balance, which can increase the risk of falls for older adults.<sup>11</sup>
  - Weakened muscles from lack of physical activity can increase the risk of various mechanisms of unintentional injury (i.e., overexertion, falls).

## **National Statistics and Disparities**

### **Statistics**

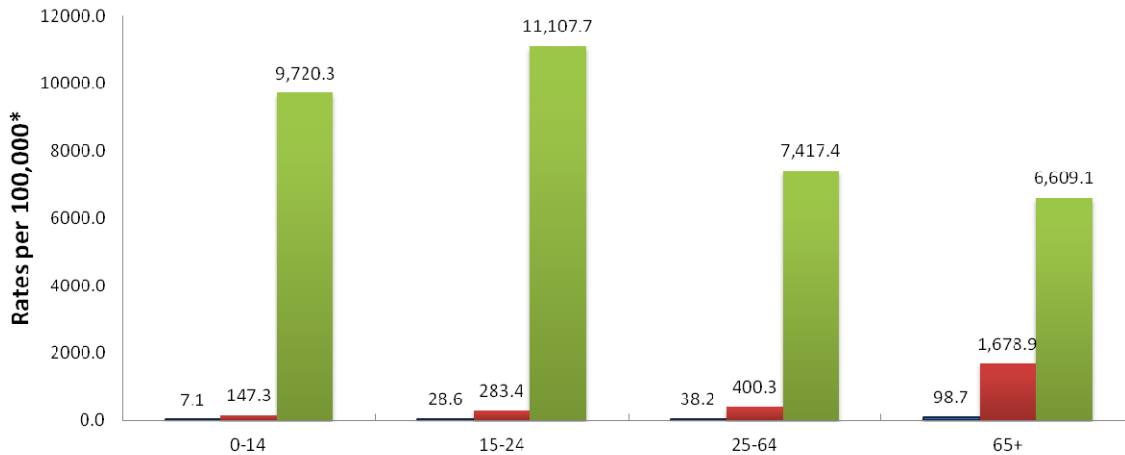
- Nationally, unintentional injury is the leading cause of death for people aged 1-44 years.<sup>12</sup>
- Unintentional injury is the 5th leading cause of death for all age groups, resulting in approximately 120,000 deaths in 2010.<sup>12</sup>
- Unintentional injuries resulted in an estimated 1.7 million hospitalizations and 26 million emergency department discharges in the U.S. in 2010.<sup>13</sup>

## Disparities



- American Indians/Alaska Natives had the highest age-adjusted death rate for unintentional injury, whereas Asians/Pacific Islanders had the lowest in 2009.
- Males had a higher rate of death for unintentional injury compared to females in 2009.

### Overall Unintentional Injury Death, Hospitalization, and ED Discharge Rates\* : United States, 2009



\* Rates are age-adjusted to the 2000 U.S. standard population (19 age groups – Census P25–1130)  
 Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Underlying Cause of Death 1999–2010 on CDC WONDER Online Database, released 2012.  
 Prepared by County of San Diego (CoSD). Health & Human Services Agency (HHS). Community Health Statistics. 12/11/2012.

- Those aged 65 years and older are more likely to die and be hospitalized due to unintentional injury than any other age group.
- Those aged 15-24 years were more likely to be treated and discharged from the emergency department due to unintentional injury compared to other age groups.

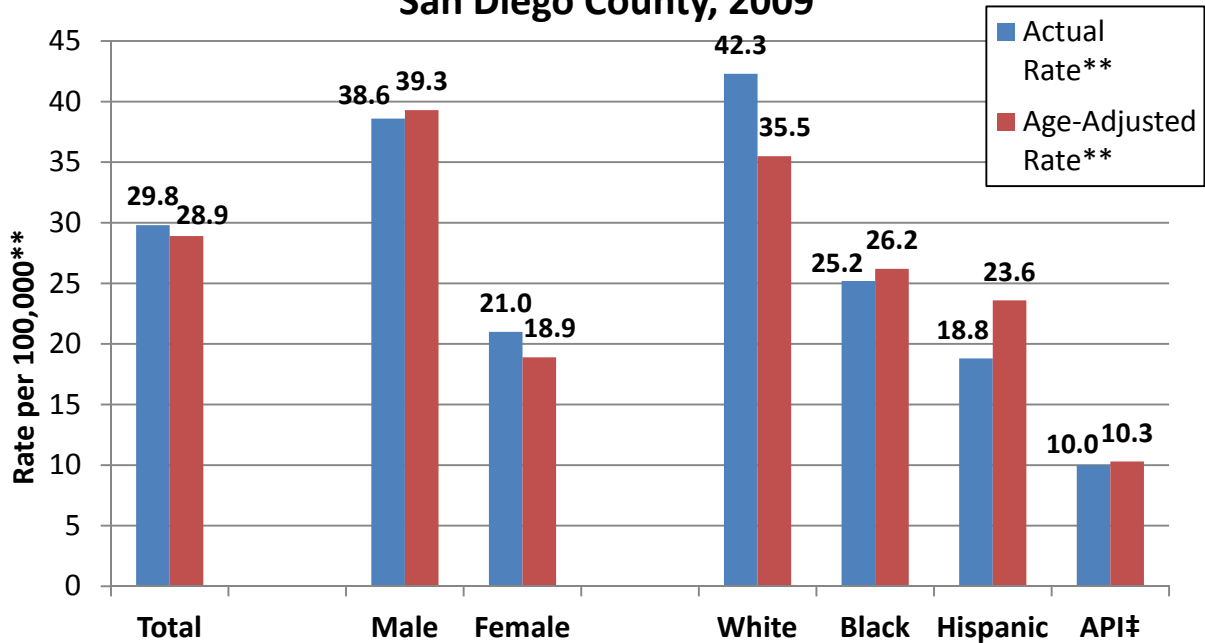
#### Cost

- In 2009, unintentional injury cost the United States an estimated \$341.0 billion: \$63.9 billion in direct medical costs, and \$277.1 billion for lost productivity (indirect cost).<sup>14</sup>

#### Local Statistics and Disparities

- In 2009, there were 949 deaths, 21,149 hospitalizations, and 149,437 ED discharges due to unintentional injury in San Diego County.
- Falls were the most common cause of unintentional injury in the county in 2009, followed by motor vehicle-related injuries.

## Unintentional Injury Deaths\*: Actual and Age-Adjusted Rates\*\* San Diego County, 2009



\*All unintentional injury death refers to (underlying cause of death) ICD-10 codes V01-X59, Y85-Y86.

\*\* County actual rates are per 100,000 individuals. County age-adjusted rates per 100,000 2000 US standard population.

§ Rates not calculated for fewer than 5 events.

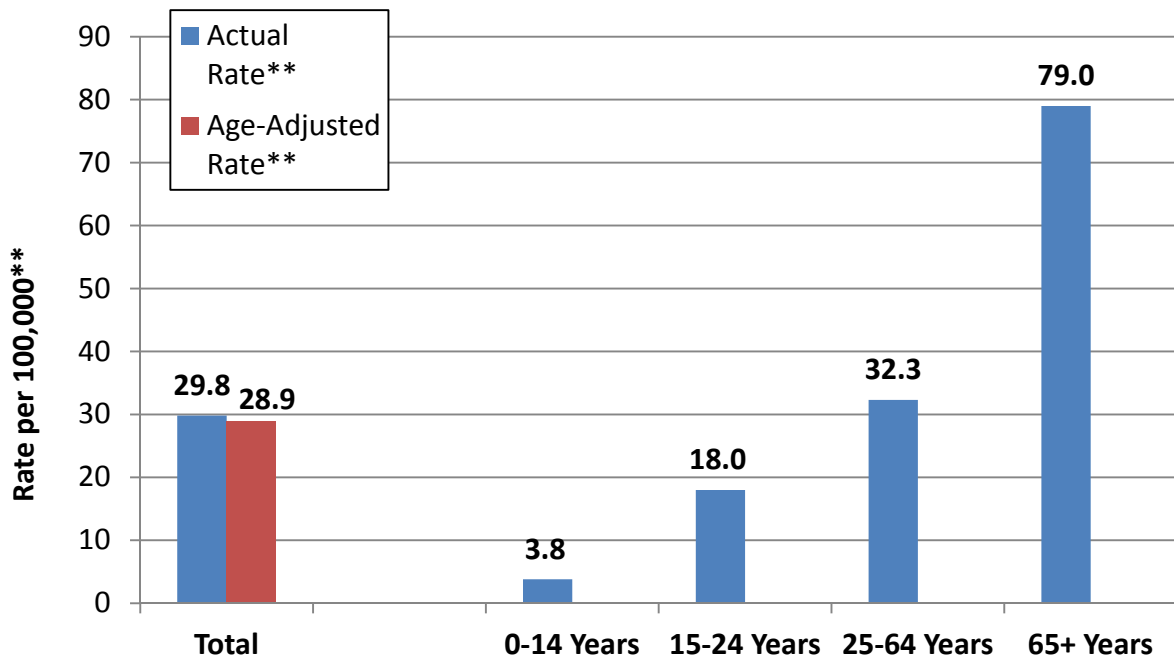
‡ API includes Asian and Pacific Islander.

Source: Death Statistical Master Files (CADPH), County of San Diego, Health & Human Services Agency, Epidemiology & Immunization Services Branch; SANDAG, Current Population Estimates, 10/2010.

Prepared by County of San Diego (CoSD), Health & Human Services Agency (HHS), Community Health Statistics, 12/19/2012.

- The actual unintentional injury death rate among residents of San Diego County was 29.8 per 100,000 in 2009.<sup>19</sup>
- Men had a higher death rate than women (38.6 per 100,000 versus 21.0 per 100,000).<sup>19</sup>
- Whites had the highest unintentional injury death rate (42.3 per 100,000), more than four times as high as Asians/Pacific Islanders (10.0 per 100,000).<sup>15</sup>

## Unintentional Injury Death\* Rates\*\* by Age Group, San Diego County, 2009



\*All unintentional injury death refers to (underlying cause of death) ICD-10 codes V01-X59, Y85-Y86.

\*\* County actual rates are per 100,000 individuals. County age-adjusted rates per 100,000 2000 US standard population.

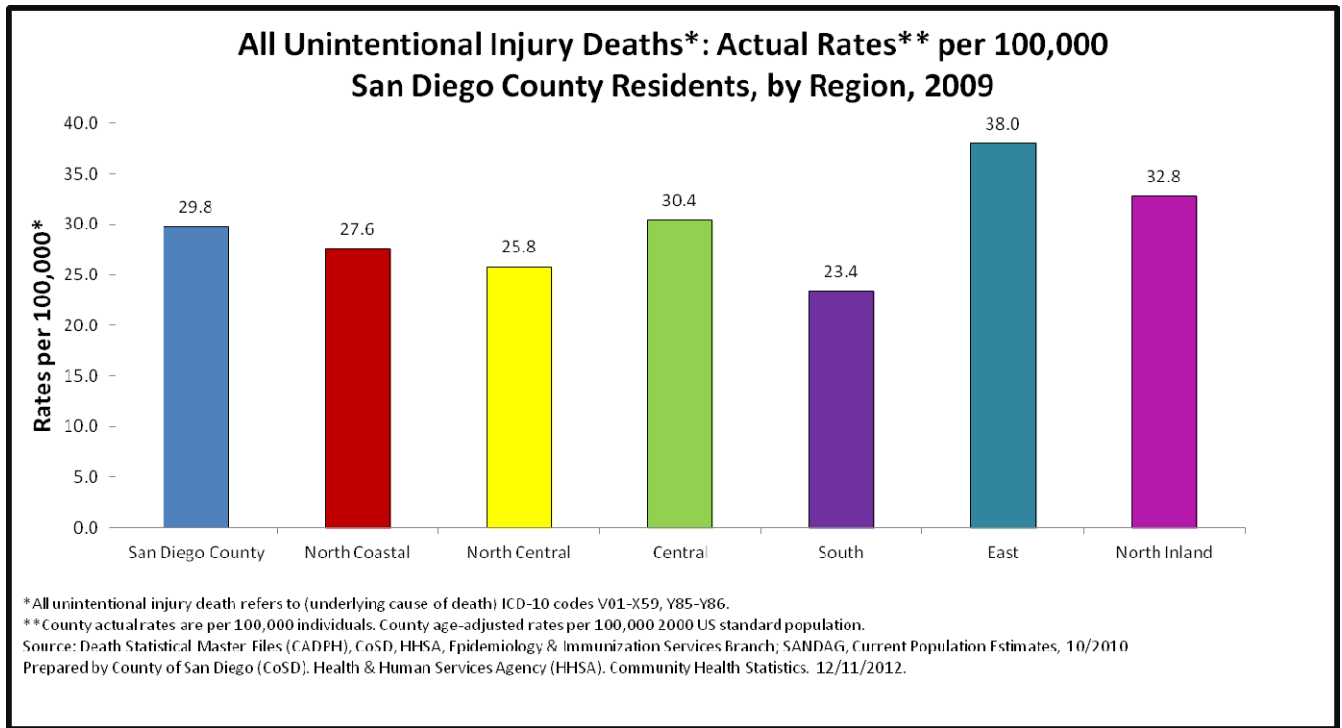
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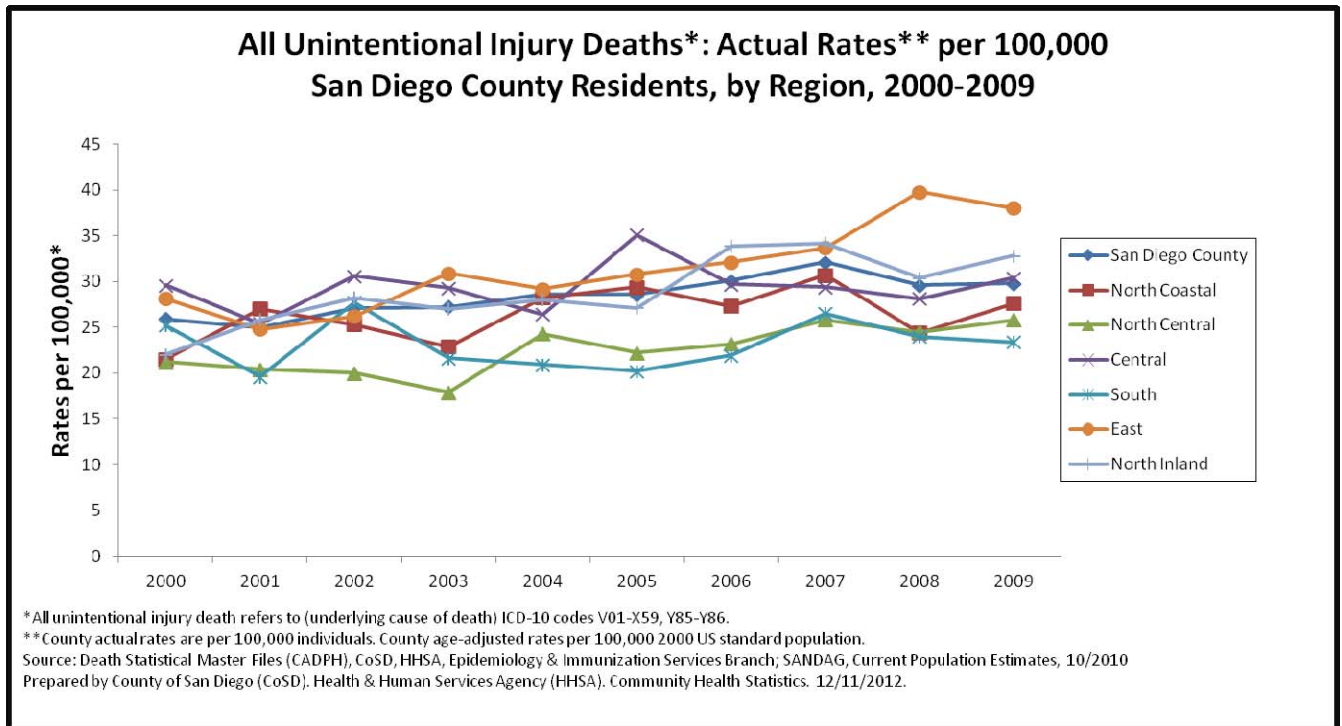
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- The unintentional injury death rate among residents aged 65 years and older was 79.0 per 100,000, approximately 2.5 times the death rate for all of San Diego County.<sup>15</sup>



- In 2009, the East Region of San Diego County had the highest rate of overall unintentional injury death.
- In 2009, the South Region had the lowest rate of overall unintentional injury death and was lower than the countywide unintentional injury death rate.



- From 2000-2009, the East Region of San Diego County had one of the highest unintentional injury death rates.

## Unintentional Injury and Its Complications: Prevention for Individuals

Implemented prevention strategies can help reduce the number of unintentional injuries. Selected below are prevention methods for some of the leading causes of unintentional injuries.

- **Falls**
  - For children: supervising children when at play, installing stair gates, securing furniture to the wall, ensuring that children wear protective gear (i.e. helmets, wrist guards, knee/elbow pads) when playing active sports.
  - For older adults: exercising regularly, wearing appropriate footwear (flat shoes with non-slip, thin soles), making the home safer by installing grab bars and non-skid mats in bathrooms, improving lighting, keeping frequently used items within easy reach, and removing loose rugs, electrical cords, and clutter in walkways.
- **Overdoses/Poisonings**
  - Locking medications, cleaning products, pesticides, and other household chemicals in their original containers and keep them out of reach.
  - Never taking medicine in front of children or refer to it as candy.
  - Reading labels on medications to insure proper dosage and avoid drug interactions.
  - Seeking help for substance abuse problems.



- Motor Vehicle-Related Injuries
  - Avoiding drinking and driving.
  - Enforcing seat belt laws and the use of booster seats for children under 4'9" in height.
  - Avoiding distractions while driving, such as talking or texting on cell phones, eating, or playing with the radio.
  - Obeying speed and traffic laws.
  - Enforcing graduated driver's license laws for new drivers.
- Struck By/Against Injuries
  - Wearing appropriate sports-related protective gear when engaged in sports-related activities.
  - Providing children safe places to play.
  - Remaining alert and aware of the surrounding environment.
- Overexertion<sup>16</sup>
  - Exercising regularly to strengthen muscles.
  - Taking breaks when engaging in strenuous activities.
  - Taking a firm stance, lifting with your knees and keeping objects close to your body.
  - Avoiding bending, reaching, and twisting when lifting.
  - Getting help to move heavy or large objects.
- Cut/pierce injuries<sup>17</sup>
  - Keeping your eyes on your work, and never look away while cutting.
  - Using caution and wearing appropriate personal protective equipment when handling broken glass and china.
  - Using the right tool for the right job.

## **Prevention Tools for Public Health Professionals: Unintentional Injury Critical Pathway**

At this time, there is not a Critical Pathway to Disease for Unintentional Injury. Please check back again.

## Data Sources

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- <sup>11</sup> Centers for Disease Control and Prevention. CDC Features: Fall Risks for Older Adults. <http://www.cdc.gov/features/fallrisks/>. Accessed December 12, 2012.
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- <sup>13</sup> Centers for Disease Control and Prevention. National Center for Injury Prevention and Control. WISQARS Nonfatal Injury Reports. <http://webappa.cdc.gov/sasweb/ncipc/nfirates2001.html>. Accessed December 12, 2012.
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