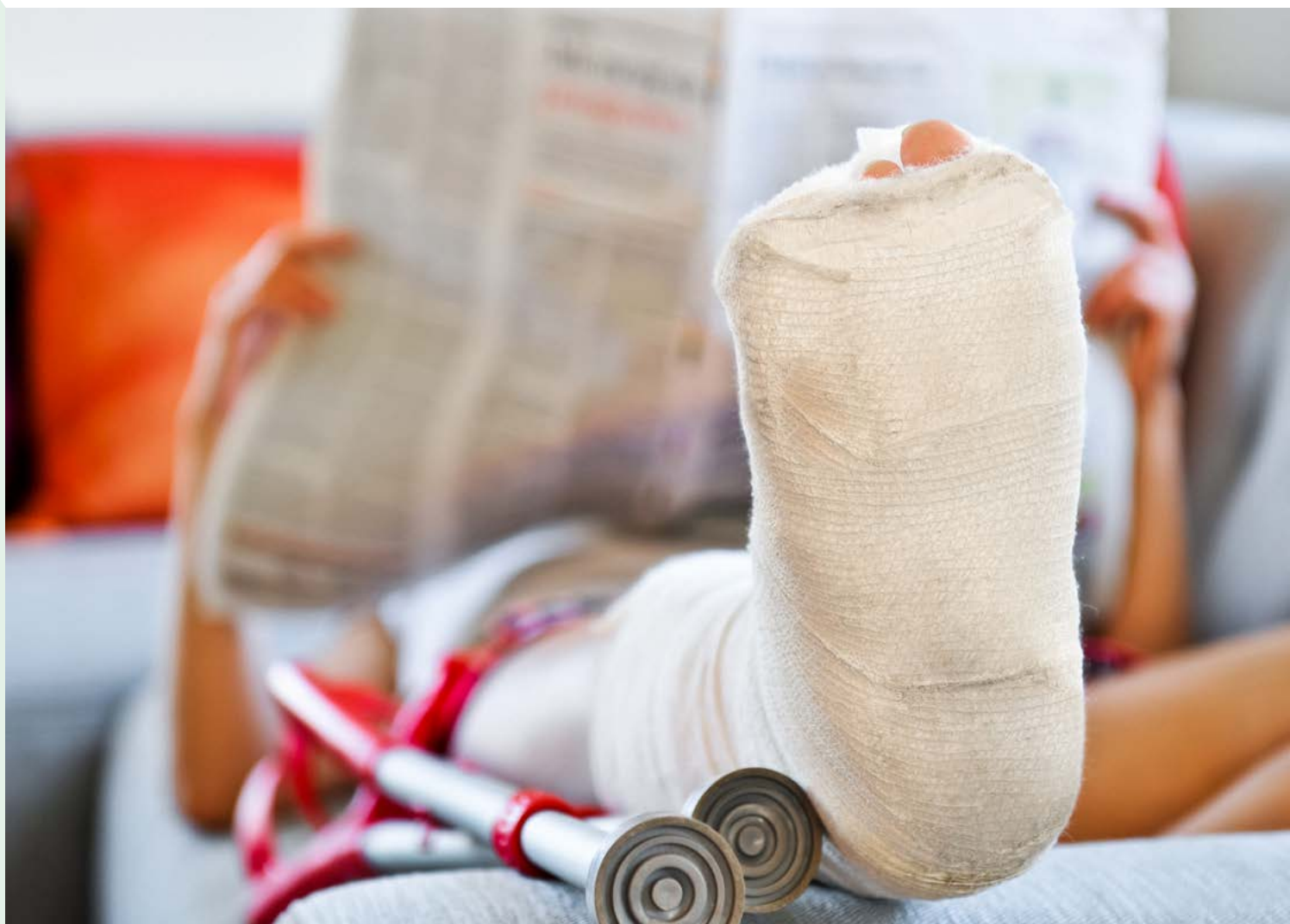


DATA AND TREND ANALYSIS

# Injury



*Motor vehicle crashes, gun violence, suicide, and unintentional drug overdoses are important public health concerns. In addition to their immediate health impact, the effects of injuries and violence extend well beyond the injured person or victim of violence, affecting family members, friends, coworkers, employers, and communities.*

## DESCRIPTION

Injuries, unintentional and intentional, are a major contributor to mortality rates. Unintentional injuries are the fourth leading cause of death behind cancer, heart disease and stroke in Minnesota. Injuries take the lives of more than 1,800 Minnesotans each year and send nearly 300,000 more to the hospital. This results in enormous human suffering to the victim as well as families and communities. In addition, the economic toll adds up to billions of dollars each year.<sup>1</sup> Many people accept injuries as “accidents,” but most injury deaths are preventable.

## HOW ARE WE DOING

Between 2006 and 2016, the rate of hospital-treated injury deaths in Ramsey County (intentional and unintentional), rose from 14.2 to 28.4 per 100,000 residents. Compared to other counties in the seven-county metro area, Ramsey County ranked second highest with 28.4 for every 100,000 people, behind Hennepin county with 28.7. Both counties were above the Minnesota rate of 24.8 injury deaths per 100,000 population. In residents ages zero to 19, there was a fatal unintentional injury rate of 5.9 for every 100,000 people between 2014 and 2016. In adults age 20 and over, this rate was much higher at 68.4 in 2016.<sup>2</sup> In 2016, Ramsey County lost 129 residents due to unintentional injury fatalities. This was 11 percent of the state total and 22.5 percent of the seven-county metro total in the same year. The most common causes were falls, poisonings and motor vehicle-related crashes.<sup>3</sup>

## BENCHMARK INDICATOR

Healthy People 2020: Reduce fatal injuries. Minnesota Injury Data Access System State injury mortality rate in 2016: 24.8 per 100,000 standard population.

Healthy People 2020: Reduce unintentional injury deaths. Minnesota Injury Data Access System State mortality rate in 2016: 17.4 per 100,000 standard population.

## DISPARITIES

Nationally in 2015, the injury death rate for males was two times that for females.<sup>4</sup> The age group most likely to see fatal injuries are those age 85 and over. In 2016 in Ramsey County, there were 41 total unintentional injury deaths in this age group. This was a rate of 367.7 for every 100,000 residents in this age group.<sup>3</sup>

## RISK FACTORS

Unsafe physical environments in the home and community (e.g., unlocked guns, poisonous products, fall hazards). Lack of cohesive social environment within families, neighborhoods, communities. Non-supportive societal-level factors (e.g., lack of laws requiring motorcycle helmet use).

## WHAT RAMSEY COUNTY GOVERNMENT IS DOING

Saint Paul - Ramsey County Public Health provides data monitoring and reporting for this topic in order to better understand the overall health and current conditions in the community. The information may help inform community partners, policy makers or county program leadership.

## Information to note

- Males in Ramsey County die from injuries more often than females.
- Ramsey County deaths from injuries is at its highest rate (2016) in 10 years and has the second highest rate in the metro area.

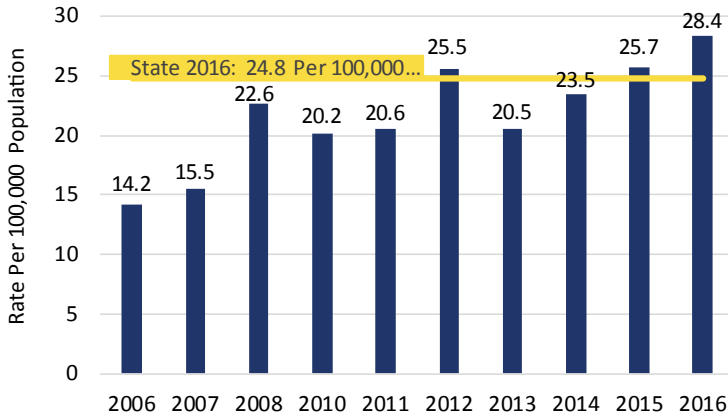
<sup>1</sup> Preventing Unintentional Injury in Minnesota: A Working Plan for 2020. Minnesota Department of Health. <https://www.minnesotasafetycouncil.org/2020Plan/UnintentionalInjuryOnline.pdf> Accessed October 24, 2017.

<sup>2</sup> Minnesota Vital Statistics Interactive Queries. Minnesota Department of Health Website. <https://mhsq.web.health.state.mn.us/frontPage.jsp>. Accessed May 15, 2018.

<sup>3</sup> Minnesota Injury Data Access System. Minnesota Department of Health Web site. <http://www.health.state.mn.us/injury/midas/injury/index.cfm>. Accessed September 28, 2017.

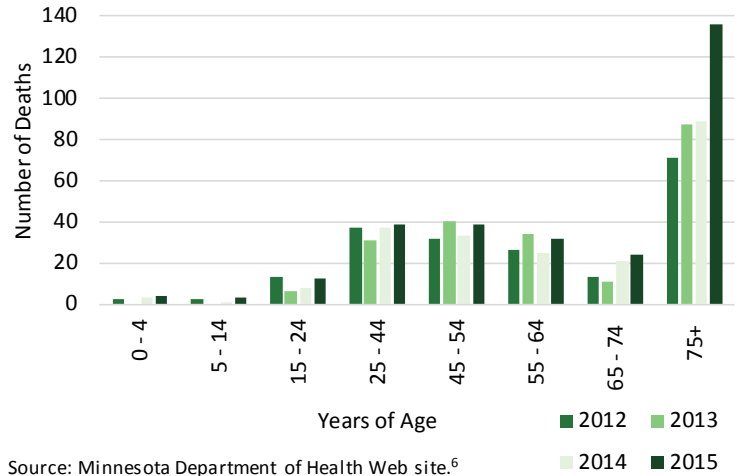
<sup>4</sup> Injury and Violence. Healthy People 2020 Web site. <https://www.healthypeople.gov/2020/leading-health-indicators/2020-lhi-topics/injury-and-violence/data#homicides>. Accessed August 18, 2017.

Deaths Due to Injury among Hospital Treated Patients, All Manners of Intent, Ramsey County



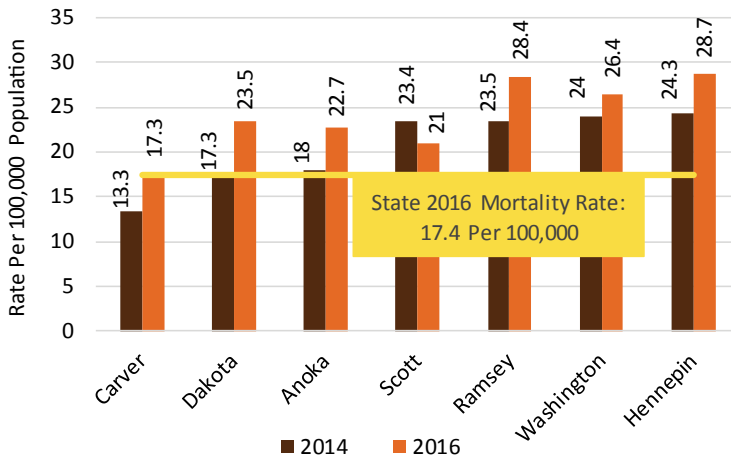
Source: Minnesota Department of Health Web site.<sup>5</sup>

Unintentional Injury Deaths, Ramsey County



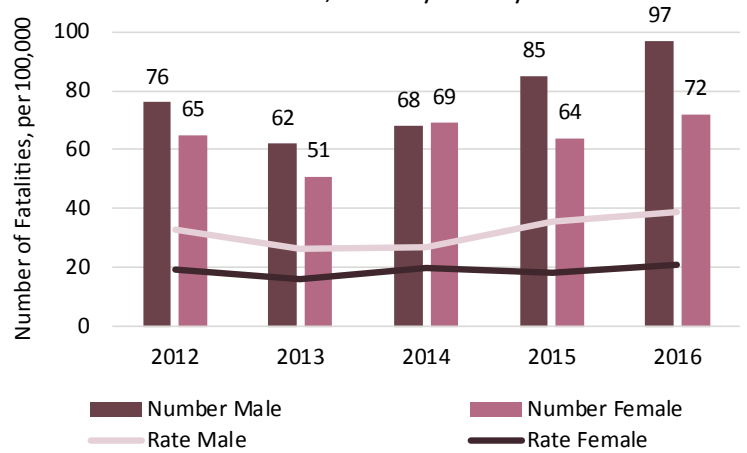
Source: Minnesota Department of Health Web site.<sup>6</sup>

Hospital Treated Unintentional Injury Death Rates



Source: Minnesota Department of Health Web site.<sup>7</sup>

Hospital-Treated Injury Death Rates and Numbers, Ramsey County



Source: Minnesota Department of Health Web site.<sup>7</sup>

<sup>5</sup> Minnesota Injury Data Access System. Minnesota Department of Health Web site. <http://www.health.state.mn.us/injury/midas/injury/index.cfm>. Accessed September 28, 2017.

<sup>6</sup> MN Public Health Data Access. Minnesota Department of Health Web Site. <https://apps.health.state.mn.us/mndata/webmap/lungcancer.html>. Accessed October 3, 2017.

<sup>7</sup> Minnesota Injury Data Access System. Minnesota Department of Health Web site. <http://www.health.state.mn.us/injury/midas/injury/index.cfm>. Accessed September 28, 2017.

## DESCRIPTION

Globally, falls are a major public health problem. An estimated 424,000 fatal falls occur each year in the U.S. making it the second leading cause of unintentional injury death. In Minnesota between 2005 and 2015, there were an average 10,500 hospitalizations for fall-related injuries each year. While all people who fall have a risk of injury, the age, gender and health of the individual can all impact the type and severity of injury.<sup>1</sup>

## HOW ARE WE DOING

In Minnesota, there were 115,942 hospitalizations for fall-related injuries in 2015. Ramsey County residents made 10,532 of these visits (9 percent). This was a five-year high for the county. Thirty-two percent of visits were made by adults aged 65 and older. Another 19 percent occurred with children who were nine and younger. There were 71 falls that were fatal or caused fatal injuries. Of these, 86 percent were adults aged 65 and older. Along with this, the rate of death due to falls in those age 65 and older in 2016 was 144.8 for every 100,000 population.<sup>2</sup> This does not meet the Healthy People goal.

## BENCHMARK INDICATOR

Healthy People 2020: Prevent an increase in fall-related deaths among adults aged 65 years and older.

U.S. Target: 47 per 100,000 population.

## DISPARITIES

Older people have the highest risk of death or serious injury arising from a fall and the risk increases with age. In 2015 in Ramsey County, residents aged 60 and older made up 37.5 percent of all fall-related hospitalizations and ED visits.<sup>2</sup> Older women and younger children are especially prone to falls and increased injury severity.<sup>1</sup>

## RISK FACTORS

- Occupations at elevated heights or other hazardous working conditions
- Alcohol or substance use
- Unsafe environments, particularly for those with poor balance and limited vision
- Side effects of medication, physical inactivity and loss of balance, particularly among older people
- Underlying medical conditions, such as neurological, cardiac or other disabling conditions.<sup>1</sup>

## WHAT RAMSEY COUNTY GOVERNMENT IS DOING

Saint Paul - Ramsey County Public Health provides data monitoring and reporting for this topic in order to better understand the overall health and current conditions in the community. The information may help inform community partners, policy makers or county program leadership.

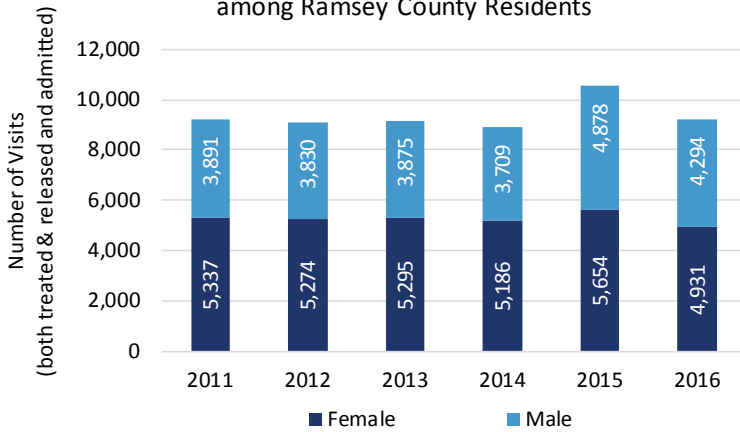
## Information to note

- Over 70 falls caused fatal injuries in Ramsey County in 2015. Of these, 86% were adults aged 65 and older.
- Older people have the highest risk of death or serious injury arising from a fall and the risk increases with age.
- Ramsey County is not meeting the Healthy People 2020 target (47 per 100,000 population) for unintentional fall-related deaths among adults aged 65 years and older (89.8 per 100,000 population).

<sup>1</sup> Falls. World Health Organization. <http://www.who.int/mediacentre/factsheets/fs344/en/>. Accessed July 24, 2017.

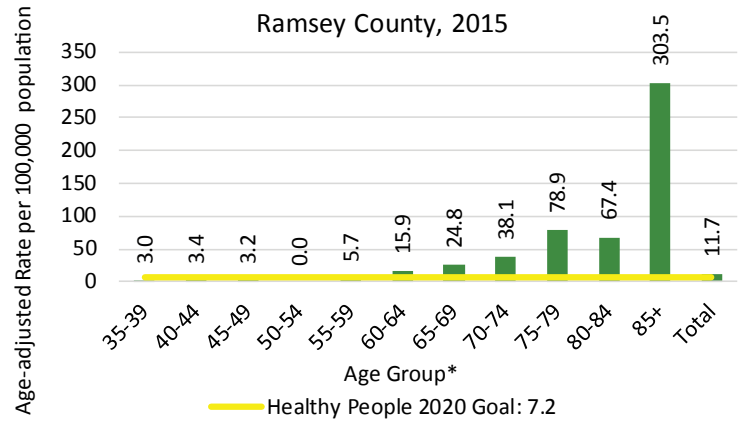
<sup>2</sup> MIDAS. Minnesota Department of Health. <http://www.health.state.mn.us/injury/midas/injury/index.cfm>. Accessed July 24, 2017.

### Fall-related Emergency Department Visits among Ramsey County Residents



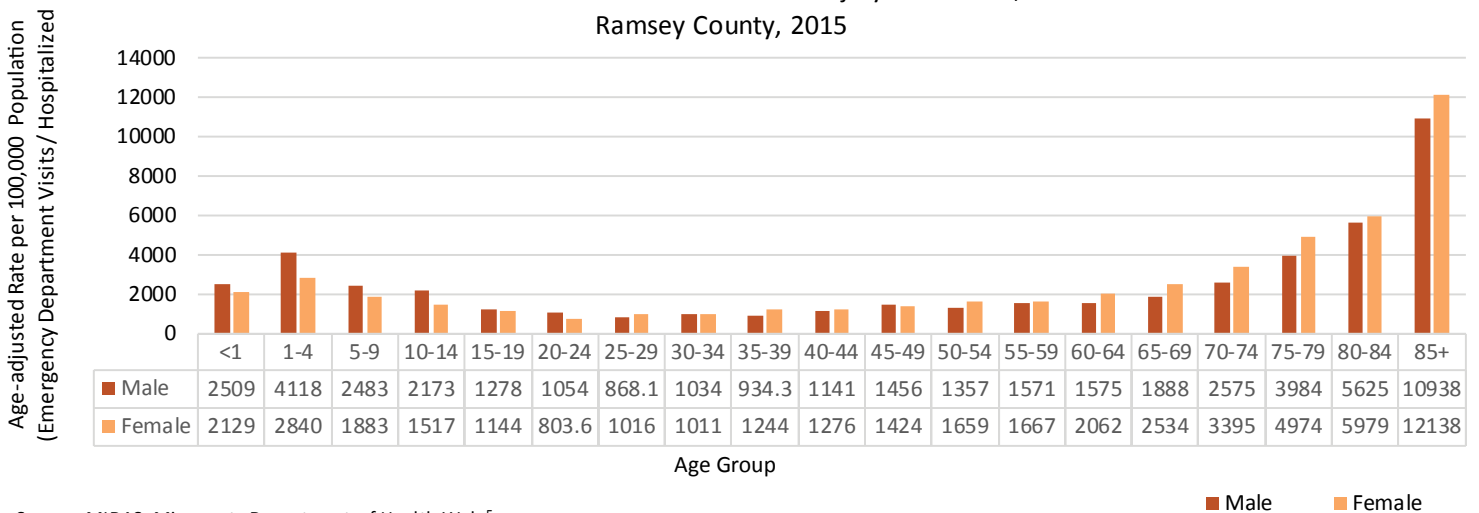
Source: MIDAS. Minnesota Department of Health.<sup>3</sup>

### Rate of Unintentional Fall-related Fatalities, Ramsey County, 2015



\*there were no fatalities for agegroups under 35-39  
Source: MIDAS. Minnesota Department of Health Web Site.<sup>4</sup>

### Rate of Unintentional Fall-related Injury and Death, Ramsey County, 2015



Source: MIDAS. Minnesota Department of Health Web.<sup>5</sup>

<sup>3</sup> MIDAS (2016) Minnesota Department of Health. Access 7/24/2017 from: <http://www.health.state.mn.us/injury/midas/injury/index.cfm>

<sup>4</sup> MIDAS. Minnesota Department of Health Web Site. <http://www.health.state.mn.us/injury/midas/injury/index.cfm>. Accessed July 24, 2017.

<sup>5</sup> MIDAS. Minnesota Department of Health Web.

## DESCRIPTION

Firearm injuries and fatalities are a large cause for concern in the U.S., in fact, Americans are 25 times more likely to be murdered with a gun than people in other developed countries.<sup>1</sup> About 500 Minnesotans are hospitalized or receive emergency care as a result of firearm injuries each year.<sup>2</sup> Over the last decade, an average of 368 Minnesotans per year died from firearms, and 77 percent of those were suicides.<sup>3</sup> Both fatal and nonfatal gun injuries cost Minnesota \$764 million per year in medical costs, criminal justice expenses, employer costs and lost income. This cost increases to an estimated \$2.2 billion per year with the addition of reduced quality of life caused by pain and suffering. The cost of gun violence in Minnesota is equal to 11 percent of the state's yearly general fund spending.<sup>4</sup>

## HOW WE ARE DOING

In 2016, there were 143 firearm-related injuries treated in a hospital or emergency department among Ramsey County residents-142 nonfatal injuries and one fatality. Ramsey County is not meeting the Healthy People 2020 target for nonfatal firearm-related injuries. In 2016, Ramsey County's rate was 22.4 per 100,000 population. Ramsey County's firearm-related fatality rate of 0.2 for every 100,000 people does meet the Healthy People 2020 target of 9.3.<sup>2</sup>

## BENCHMARK INDICATOR

Healthy People 2020:

- 1) Reduce firearm-related deaths.  
U.S. Target: 9.3 deaths per 100,000 population
- 2) Reduce nonfatal firearm-related injuries.  
U.S. Target: 18.6 injuries per 100,000 population

## DISPARITIES

In 2016, Ramsey County males were far more likely than females to be injured by firearms.<sup>2</sup> In 2015 in the U.S., blacks had a firearm-related fatality rate of 20.7, the highest among all race/ethnicities.<sup>5</sup> In Minnesota, black/African-Americans are much more likely than whites to be killed by firearms, but whites are more likely than black/African-Americans to use guns to kill themselves. Minnesota data show that black/African-Americans are 12 times more likely than whites to die from gun homicides; however, the gun-suicide rate for whites is three times higher than the rate for black/African-Americans.<sup>6</sup>

## RISK FACTORS

Firearm-related death rates are seven times higher in the states with the highest rates of household gun ownership compared to states with the lowest rates.<sup>7</sup> Improper firearm handling and storage can lead to unintentional injuries and death. In adolescents, a national study found risk factors that may indicate future gun injuries including living with less than

(continued on back)

## Information to note

- Ramsey County is not meeting the Healthy People 2020 target for nonfatal firearm-related injuries.
- In Minnesota, black residents are much more likely than whites to be killed by firearms, but whites are more likely than blacks to use guns to kill themselves.

## Community voice

*"Guns and violence."*  
- White/ Native American/  
Nigerian Female, age 35-44

Respondents mentioned shootings, guns, and gun violence as influencing their health.

<sup>1</sup> Everytown for Gun Safety. Learn What It Takes to Keep America Safe. <https://everytown.org/learn/>. Accessed March 28, 2018.

<sup>2</sup> Minnesota Department of Health. Minnesota Injury Data Access System (MIDAS). <http://www.health.state.mn.us/injury/midas/violence/index.cfm>. Accessed February 2, 2018.

<sup>3</sup> Gun Violence and Background Checks in Minnesota. <https://everytownresearch.org/gun-violence-and-background-checks-in-minnesota/>. Accessed May 2018.

<sup>4</sup> Minnesota Coalition for Common Sense. The economic cost of gun violence in Minnesota: A business case for action. 2016. <http://americansforresponsiblesolutions.org/files/2016/12/The-Economic-Cost-of-Gun-Violence.pdf>. Accessed February 2, 2018.

<sup>5</sup> Disparities Overview by IVP-30 firearm related deaths. Healthy People 2020. <https://www.healthypeople.gov/2020/data/disparities/summary/Chart/4768/3>. Accessed February 9, 2018.

<sup>6</sup> Centers for Disease Control and Prevention, National Center for Health Statistics. Underlying Cause of Death 1999-2010 on CDC WONDER Online Database, released 2012. Data are from the Multiple Cause of Death Files, 1999-2010, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program.

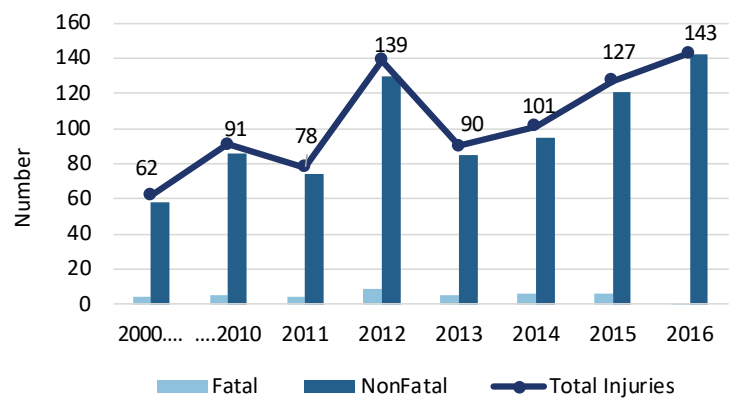
<sup>7</sup> Harvard School of Public Health. Harvard Injury Control Research Center. Homicide – Suicide – Accidents – Children and Women. 2009. <http://www.hsph.harvard.edu/research/hicrc/firearms-research/guns-and-death>. Accessed May 2018.

two parents, skipping class during school and previous arrest.<sup>8</sup> States that require background checks for gun sales report a lower rate of suicide, domestic violence, homicide and police killed with handguns.<sup>1</sup> In Minnesota, no background check is required to purchase through a private sale or transfer, which makes it easy for those who are prohibited from possessing a gun under federal and state law to obtain a firearm.

## WHAT RAMSEY COUNTY IS DOING

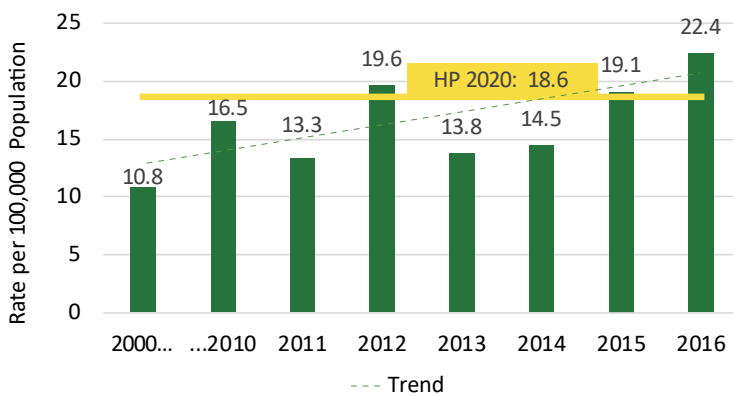
Two places in Minnesota state law prohibit the collection of data regarding guns, which prevents essential public health research from taking place.<sup>9</sup> Ramsey County supports state funding initiatives to conduct surveillance for all forms of violent injury and research regarding the role of firearms in violence, and the effectiveness of different types of firearm laws. The Ramsey County Attorney's Office has joined with Saint Paul – Ramsey County Public Health, the Ramsey County Sheriff's Office and multiple community partners to make sure guns in homes are safely locked and stored away from children. This prevention effort is designed to encourage all gun owners to lock and secure their firearms by making it easy for residents to pick up free gun locks from community-based locations. Distribution sites include select recreation centers, libraries and community centers.

Hospital and Emergency Department-Treated Injuries\* from Firearms, Ramsey County



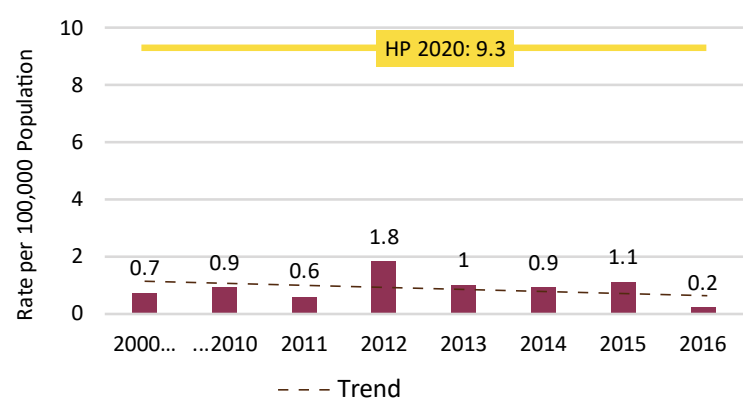
\* includes paintball and airgun injuries  
Source: Minnesota Department of Health. MIDAS.<sup>10</sup>

Rate of Non-Fatal Firearm-Related Injuries Treated in a Hospital or Emergency Department, Ramsey County



Source: Minnesota Department of Health MIDAS.<sup>10</sup>

Rate of Fatal Firearm-Related Injuries Treated in a Hospital or Emergency Department, Ramsey County



Source: Minnesota Department of Health. MIDAS.<sup>10</sup>

<sup>8</sup> Paris CA, Edgerton EA, Sifuentes M, et al. Risk factors associated with non-fatal adolescent firearm injuries. *BMJ Journals*. 2002;8:147–150. <http://injuryprevention.bmj.com/content/8/2/147>. Accessed February 9, 2018.

<sup>9</sup> MN Statute 144.05 and 625.714. <https://www.revisor.mn.gov/statutes>. Accessed May 2018.

<sup>10</sup> Hospital Treated Injuries. MIDAS- Minnesota Department of Health Web site. <http://www.health.state.mn.us/injury/midas/injury/index.cfm>. Accessed February 2, 2018.

# Injury - Household Poisonings

## DESCRIPTION

A poison is anything that can harm someone if it is 1) used in the wrong way, 2) used by the wrong person, or 3) used in the wrong amount. Poisons come in various forms (solids, liquids, sprays and vapors); some may be harmful if they come into direct contact with the eyes or skin while others may be toxic if breathed or swallowed. Examples of household poisons include: alcohols (including alcoholic beverages as well as mouthwash, facial cleaners and hair tonics), pesticides and insect repellents, paint and paint strippers, laundry and cleaning products, pharmaceutical substances (prescription and over-the-counter medications), batteries, fertilizers, adhesives and glues, chemicals and deodorizers.<sup>1</sup>

## HOW WE ARE DOING

Of the approximately 4,200 calls to Minnesota Poison Control from Ramsey County residents every year, about 60 percent are related to pharmaceutical exposures. Approximately 20 percent are related to other household chemicals, with the top three categories of concern being cleaning products, alcohols and pesticides.<sup>2</sup>

While chemical poisoning follows a seasonal pattern (i.e., they increase in the summer and fall, probably due in part to the increased use of pesticides for pest management),<sup>1</sup> the annual rates of hospitalizations and emergency department visits for nonfatal unintentional poisonings in Ramsey County has stayed fairly consistent from 2006-2014, with rates appearing higher for 2015 and 2016.

Children age 4 and under have a higher rate of unintentional nonfatal poisonings than other age groups; fatalities due to unintentional poisonings are less common, and more likely to be seen in young adults and those over 65.<sup>3</sup> The Ramsey County rate of non-fatal unintentional poisonings was 166.8 per 100,000, and the rate of fatal unintentional poisonings was 1.4 in 2016.<sup>4</sup> Both of these rates meet/exceed the Healthy People target.<sup>5</sup>

Ramsey County's household hazardous waste collection program receives an average of 700 tons of potentially poisonous materials from homes annually. More than half of these materials are recycled, nearly 40 percent are reused or otherwise recovered, and less than 0.5 percent are ultimately landfilled.<sup>2</sup> Since 2012, Ramsey County's medicine collection program has removed more than 22 tons of unwanted, unused or expired medicines. Both programs help reduce in-home exposures to poisons.

## BENCHMARK INDICATOR

Healthy People 2020<sup>5</sup>:

- 1) Prevent an increase in nonfatal poisonings  
U.S. Target: 304.8 per 100,000 population
- 2) Prevent an increase in poisoning deaths among all persons  
U.S. Target: 13.2 deaths per 100,000 population

## RISK FACTORS

Young children are especially vulnerable to chemical poisoning, because childhood is a time of rapid growth and development, children have increased exposures compared to adults, and because children often put things they can see and reach into their mouths.

## WHAT RAMSEY COUNTY GOVERNMENT IS DOING

The following household items are accepted for free at Ramsey County hazardous

## Information to note

- 20% of the calls that Minnesota Poison Control receives each year from Ramsey County residents are related to household chemical exposures; 60% are related to pharmaceutical exposures.
- Children age 4 and under have a higher rate of poisonings than other age groups.
- Ramsey County collects 700 tons of potentially poisonous materials from homes annually, with more than 90% of it being reused, recycled or otherwise recovered.

<sup>1</sup> Poison Info. Health Resources & Services Administration Web site. <https://poisonhelp.hrsa.gov/poison-info/index.html>. Accessed September 18, 2017.

<sup>2</sup> Saint Paul – Ramsey County Public Health Department Environmental Health Division.

<sup>3</sup> Pesticide poisoning. Minnesota Department of Health Web site. [https://apps.health.state.mn.us/mndata/pest\\_ed#byregion](https://apps.health.state.mn.us/mndata/pest_ed#byregion). Accessed September 18, 2017.

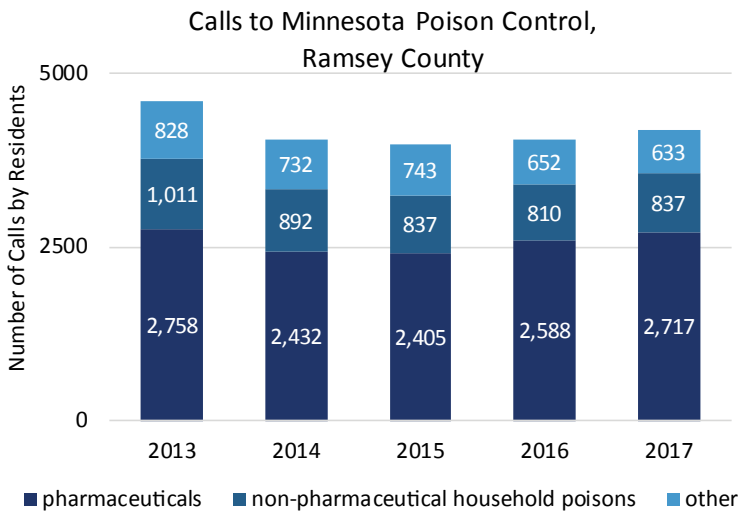
<sup>4</sup> Source: Minnesota Department of Health, MIDAS. Accessed February 24, 2018.

<sup>5</sup> Healthy People 2020. <https://www.healthypeople.gov/2020/topics-objectives/topic/injury-and-violence-prevention/objectives>. Accessed March 14, 2018.

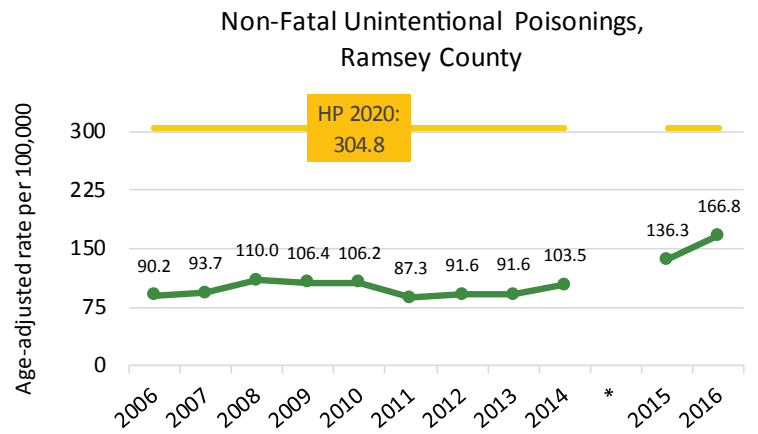


# Injury - Household Poisonings

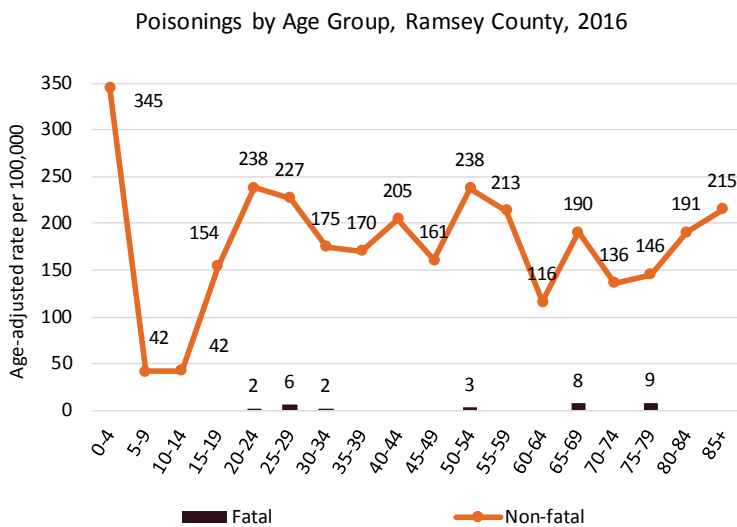
waste collection sites: automotive products, cleaning products, acids and other corrosive products (such as drain opener, oven cleaner, bathroom cleaner, rust remover, etc.), cords and string lights, paint, thinners, solvents, adhesives, sealants, wood stains, lead paint chips, aerosol cans, weed killer, pesticides, fever thermometers, thermostats, fluorescent lights, rechargeable and button batteries, pool chemicals, propane tanks and gas cylinders. In 2016 and 2017, the county's household hazardous waste sites logged over 28,000 visits per year. Through its medicine collection program, Ramsey County accepts (at no charge to the resident): prescription medications, over-the-counter pharmaceuticals, vitamins, supplements and pet medicines. From 2012-2017, nearly 25,000 residents have participated in the program.



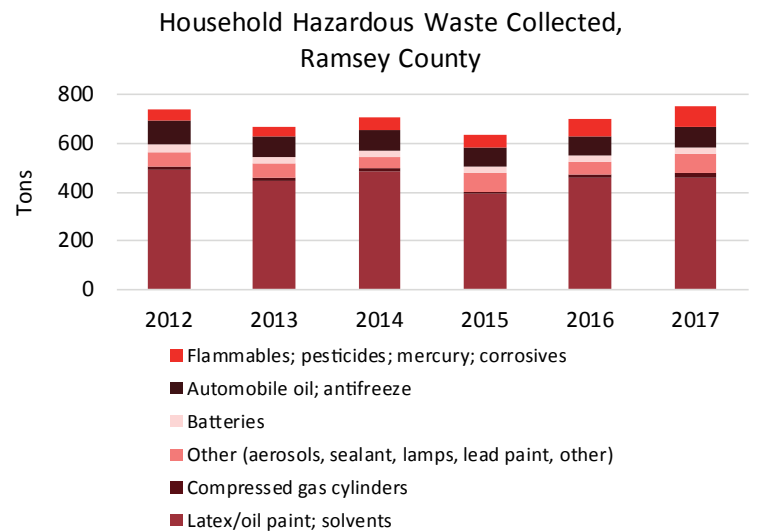
Source: Minnesota Poison Control System.<sup>6</sup>



\* The gap indicates a change in International Classification of Disease coding from ICD9 to ICD10. Rates from 2014 and earlier should not be compared to rates for 2015 and later.  
Source: Minnesota Department of Health.<sup>7</sup>



Source: Minnesota Department of Health.<sup>7</sup>



Source: Saint Paul – Ramsey County Public Health Environmental Health Division

<sup>6</sup> Minnesota Poison Control System

<sup>7</sup> Minnesota Department of Health, MIDAS. Accessed February 24, 2018.

## DESCRIPTION

Road traffic injuries and death cause considerable economic losses to individuals, their families, and to communities. These losses arise from the cost of treatment as well as lost productivity for those killed or disabled by their injuries, and for family members who need to take time off work or school to care for the injured.<sup>1</sup> In 2015 on an average day in Minnesota, there were 205 motor vehicle crashes, 82 injuries and one death.<sup>2</sup> The average daily cost to the state was \$4,858,135; a total of \$1,773,219,300 for the year. In 2015, speeding caused the loss of 78 lives, distracted driving caused 74, drunk driving led to 95 and the failure to use a seatbelt caused 91 fatalities on Minnesota roads. Traffic crashes cause deaths and injuries to all ages, but they are the leading cause of death for people 1 to 34 years.<sup>2</sup>

## HOW WE ARE DOING

Over the past decade in Ramsey County, motor vehicle crashes have numbered between 10,822 to 11,654 annually. Between 2011-2015, there were 54,324 motor vehicle crashes (14.6 percent of all MN crashes); which resulted in 75 deaths, 22 of which involved alcohol. Among these fatalities, 12 involved a motorcycle, one of which was alcohol-related. Among the 75 deaths, about half (34) were vehicle occupant fatalities.<sup>3</sup> Between 2006 and 2016, there was average of 16 motor vehicle deaths in Ramsey County. In 2015, 21.6 percent of all Ramsey County crashes, and 28 percent of all motor vehicle deaths were alcohol-related. Over a five-year period, 3.5 percent of all alcohol-related motor vehicle deaths in Minnesota occurred in Ramsey County.<sup>4</sup> In 2016, the age-adjusted Ramsey County rate for non-fatal motor vehicle crash-related injuries was 439.6 per 100,000 population<sup>5</sup> and the rate of motor vehicle crash related deaths was 6.8 per 100,000 population<sup>6</sup>.

## BENCHMARK INDICATOR

Healthy People 2020<sup>7</sup>: Reduce non-fatal motor-vehicle crash-related injuries.

U.S. Target: 694.3 per 100,000 population.

Health People 2020: Reduce motor-vehicle crash-related deaths.

U.S. Target: 12.4 per 100,000 population.

## DISPARITIES

There are disparities related to gender, race and age. The lowest motor vehicle crash death rate was among youth under 18 years compared to the highest rate among adults 18-44 years.<sup>3</sup> Drivers 18-24 years had the highest rate of nonfatal crashes in 2015.<sup>2</sup> Drivers 15-19 were most likely to have a multiple-vehicle accident caused by driver inattention and distraction. The most common age group to cause a crash due to illegal and unsafe speeds were those ages 20-34.<sup>4</sup> Racial /ethnic disparities are also evident. The lowest rate of motor vehicle crash deaths in 2016 was among Asians, the highest rate was among American Indians. Females have a crash death rate of 6.7 per 100,000 compared to a rate of 16.9 for men. In Minnesota, males had a higher mortality rate due to alcohol-impaired driving than females (3.2 per 100,000 population versus 1.2 for females).<sup>8</sup>

## Information to note

- Over the past decade in Ramsey County, motor vehicle crashes have numbered between 10,822 to 11,654 annually.
- There are significant disparities related to race, gender and age for motor vehicle crash deaths.

<sup>1</sup> Road Traffic Injuries Fact Sheet. World Health Organization. <http://www.who.int/news-room/fact-sheets/detail/road-traffic-injuries>. Published February 19, 2018. Accessed July 2018.

<sup>2</sup> Minnesota motor vehicle crash facts 2015. Minnesota Department of Public Safety. <https://dps.mn.gov/divisions/ots/reports-statistics/Documents/2015-crash-facts.pdf>. Accessed July 2018.

<sup>3</sup> 2011-2015 Minnesota crash statistics by county. Minnesota Department of Public Safety. <https://dps.mn.gov/divisions/ots/reports-statistics/Documents/stats-by-county-2011-2015.pdf>. Published June 2016. Accessed July 2018.

<sup>4</sup> 2013-2015 Minnesota traffic fatalities and severe Injuries by county and seat-belt use. Minnesota Department of Public Safety. <https://dps.mn.gov/divisions/ots/reports-statistics/Documents/seat-belts-fact-sheet-2013-2015.pdf>. Published June 2016. Accessed July 2018.

<sup>5</sup> Minnesota Injury Data Access System. Minnesota Department of Health. <http://www.health.state.mn.us/injury/midas/injury/index.cfm>. Accessed October 2018.

<sup>6</sup> CDC Wonder. Centers for Disease Control. <https://wonder.cdc.gov/>. Accessed October 2018.

<sup>7</sup> Injury and Violence Prevention. Healthy People 2020. <https://www.healthypeople.gov/2020/topics-objectives/topic/injury-and-violence-prevention/objectives>. Accessed July 2018.

<sup>8</sup> Sobering Facts: Drunk Driving in Minnesota. Centers for Disease Control and Prevention. [https://www.cdc.gov/motorvehiclesafety/pdf/impaired\\_driving/Drunk\\_Driving\\_in\\_MN.pdf](https://www.cdc.gov/motorvehiclesafety/pdf/impaired_driving/Drunk_Driving_in_MN.pdf). Updated December 2014. Accessed July 2018.

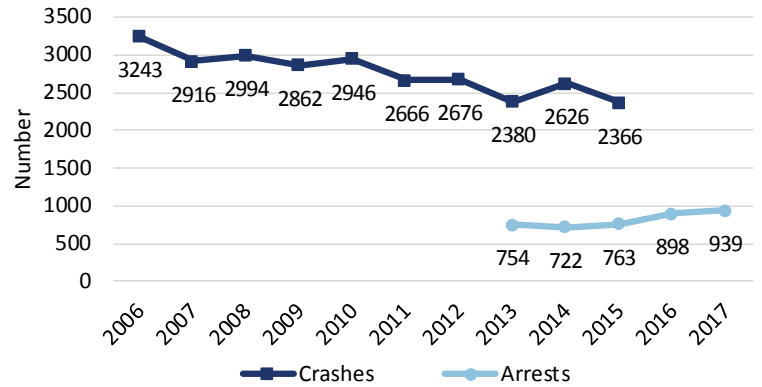
## RISK FACTORS

The World Health Organization (WHO) identifies five primary risk factors for motor vehicle crashes: speed, driving under the influence of alcohol, and inadequate use of helmets, seat belts, and child restraints. Another factor that significantly increases the risk of a crash is distracted driving, which may include: using electronic devices while driving for activities such as calling, texting, watching video, and searching the internet.<sup>9</sup> Binge drinkers (men who consume more than five or more drinks, or women who drink four or more drinks in two hours) make up a majority of drunk-drivers, and have a higher chance of getting behind the wheel when over the legal limit.<sup>10</sup>

## WHAT RAMSEY COUNTY GOVERNMENT IS DOING

Saint Paul - Ramsey County Public Health provides data monitoring and reporting for this topic in order to better understand the overall health and current conditions in the community. The information may help inform community partners, policy makers or county program leadership.

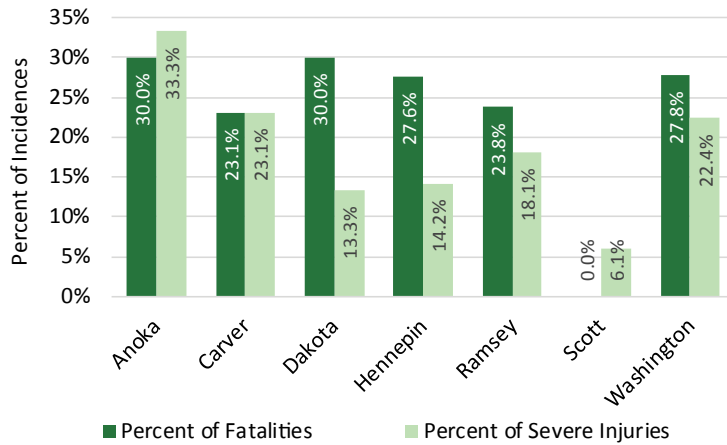
DWI Incidents Over Time\*, Ramsey County



\* Most recent detailed county-level data is available through 2015.

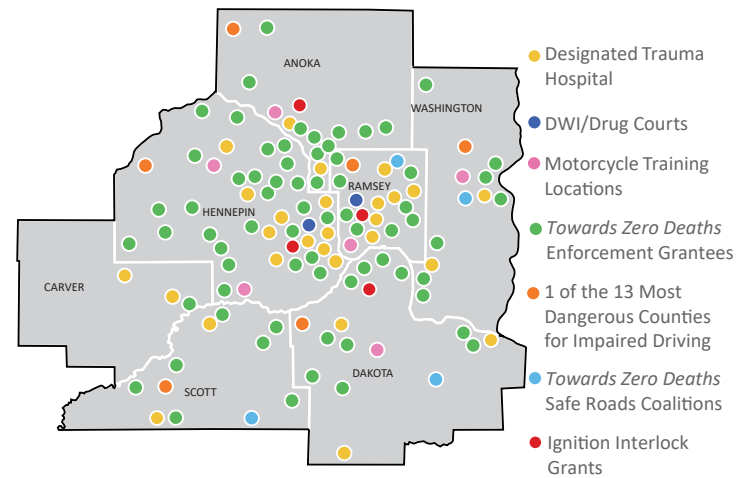
Source: Minnesota Department of Public Safety Crash Facts and Uniform Crime Reports.<sup>11</sup>

Motor Vehicle Deaths and Severe Injuries Due to Failure to Use Seatbelt, 2013-2015



Source: MN Department of Public Safety.<sup>12</sup>

Traffic Safety Initiatives, 7-County Metro, as of March, 2018



Source: Towards Zero Deaths Minnesota.<sup>13</sup>

<sup>9</sup> Road Traffic Injuries Fact Sheet. World Health Organization. <http://www.who.int/news-room/fact-sheets/detail/road-traffic-injuries>. Published February 19, 2018. Accessed July 2018.

<sup>10</sup> Fact Sheets- Binge Drinking. Centers for Disease Control and Prevention. <https://www.cdc.gov/alcohol/fact-sheets/binge-drinking.htm>. Updated May 10, 2018. Accessed July 2018.

<sup>11</sup> Minnesota Department of Public Safety. <https://dps.mn.gov/divisions/ots/reports-statistics/Documents/crash-facts-summary-2016.pdf>. Accessed July 2018.

<sup>12</sup> 2013-2015 Minnesota Traffic Fatalities and Severe Injuries by County and Seat-Belt Use. MN Department of Public Safety Website. <https://dps.mn.gov/divisions/ots/reports-tactics/Documents/seat-belts-fact-sheet-2013-2015.pdf>. Accessed February 6, 2018.

<sup>13</sup> Towards Zero Deaths Minnesota. [www.MinnesotaTZD.org/initiatives](http://www.MinnesotaTZD.org/initiatives). Accessed July 2018.

## DESCRIPTION

An injury that occurs when someone purposely hurts him or herself is a self-harm or self-inflicted injury; a behavior that indicates a lack of coping skills.<sup>1</sup> Several illnesses are associated with it, including depression, eating disorders, anxiety or posttraumatic distress disorder. Self-harm occurs most often during the teenage and young adult years, though it can also happen later in life.<sup>2</sup> When a person is not sure how to deal with emotions, or learned as a child to hide emotions, self-harm may feel like a release. A person who self-harms usually does not mean to kill himself or herself, but they are at higher risk of attempting suicide if they do not get help. Some people may engage in self-harm a few times and then stop. Others engage in it more often and have trouble stopping. A recent national analysis of Medicaid data found that adults treated for deliberate self-harm were 37.2 times more likely to die by suicide within 12 months than other adults.<sup>3</sup> In adolescents, nonfatal self-harm is a common reason for hospital presentation and also occurs frequently in the community without coming to clinical attention.<sup>2</sup>

## HOW WE ARE DOING

In both 2013 and 2016, 17 percent of Ramsey County students reported purposely hurting themselves in the past year; most were 14-year-old females who self-identified as Asian.<sup>4</sup> In Ramsey County, self-inflicted injuries such as cutting, burning and overdose, are the second leading cause of emergency department (ED) visits and hospitalizations due to injury for children. Each year, over 100 Ramsey County children 10 to 14 and over 200 children 15 to 19 visit an ED or are hospitalized for self-inflicted injuries. Ramsey County's self-inflicted injury ED visit rate in 2015 (181/100,000 population) does not meet the Healthy People 2020 objective. Comparing 2014 hospital visits to 2015 visits does show slight movement in the right direction for several age groups.<sup>5</sup>

## BENCHMARK INDICATOR

Healthy People 2020 Goal: Reduce the number of hospital emergency department visits for nonfatal intentional self-harm injuries.  
U.S. Target: 112.4 per 100,000 population.<sup>6</sup>

## DISPARITIES

A greater proportion of hospital visits for self-inflicted injury occur among females, teens and young adults. Female students in Ramsey County were about 2.5 times more likely to report self-harm than male students. Students of color were 1.3 times more likely than white students to report intentionally injuring themselves.<sup>4</sup>

## RISK FACTORS

Those most at risk for self-harm are people who have experienced trauma, neglect or abuse and may be impacted by many social, personal, economic, biological and environmental factors.<sup>1</sup>

## WHAT RAMSEY COUNTY GOVERNMENT IS DOING

Early diagnosis and treatment can decrease the disease burden of mental health disorders

## Information to note

- A person who self-harms usually does not mean to kill himself or herself, but they are at higher risk of attempting suicide if they do not get help.
- Hospital visits for non-fatal self-inflicted injuries among Ramsey County residents increased 49% between 2010 - 2015.
- Ramsey County youth ages 10-14 have the highest rate of self-inflicted injury in the 7-county metro area.

<sup>1</sup>Self-Harm. National Alliance on Mental Illness. <https://www.nami.org/learn-more/mental-health-conditions/related-conditions/self-harm/>. Accessed May 7, 2018.

<sup>2</sup>Sulyman N, Kim M, Rampa S, et al. Self-inflicted injuries among children in United States-Estimates from a nationwide emergency department sample. PLoS ONE. 2013. <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0069874>. Published July 18, 2013. Accessed August 8, 2017.

<sup>3</sup>Olfson M, Wall M, Wang S, et al. Suicide following deliberate self-harm. The American Journal of Psychiatry. 2017;174(8):765-774. <https://ajp.psychiatryonline.org/doi/10.1176/appi.ajp.2017.16111288>. Published March 21, 2017. Accessed May 9, 2018

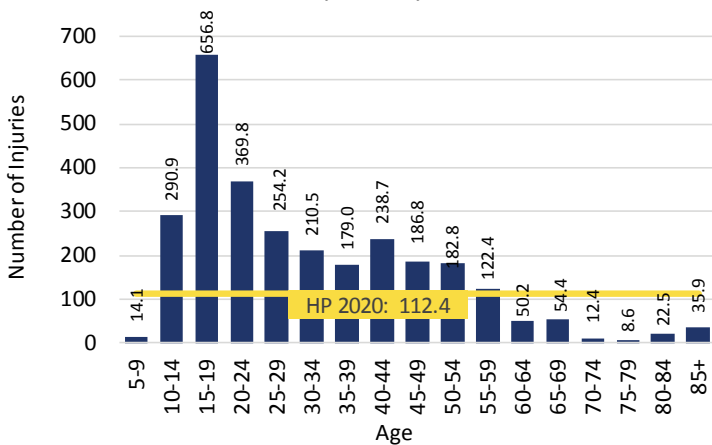
<sup>4</sup>Minnesota Student Survey. Saint Paul – Ramsey County Public Health data set.

<sup>5</sup>Minnesota Department of Health. MIDAS. <http://www.health.state.mn.us/injury/midas/injury/index.cfm>. Accessed May 7, 2018.

<sup>6</sup>Reduce nonfatal intentional self-harm injuries. Healthy People.gov. [https://www.healthypeople.gov/node/4787/data\\_details](https://www.healthypeople.gov/node/4787/data_details). Accessed May 7, 2018.

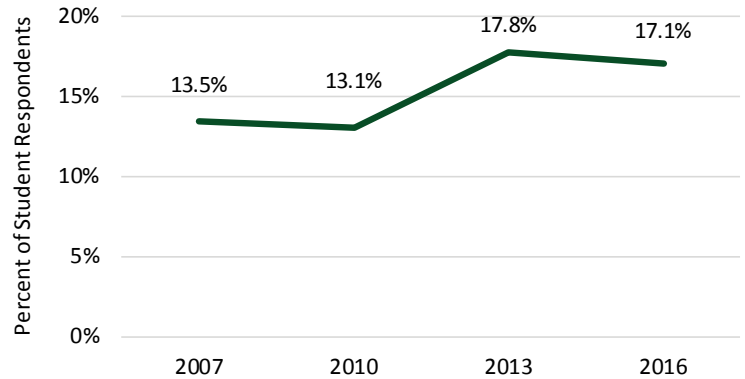
that contribute to self-inflicted injury as well as associated chronic diseases. Assessing and addressing mental health remains important to ensure that all Ramsey County residents lead longer, healthier lives. In 2018, 13 of the largest statewide health systems providing coverage for 80 percent of MN patients, came together to address major health issues in an effort called the Minnesota Health Collaborative. Together they will tackle major health topics, starting with mental health. The work will focus on how to better initiate care for those who present in acute crisis in EDs and can face long delays in accessing inpatient or community-based care. Also beginning in 2018, individuals and service providers in Ramsey County, calling from a cell phone, are able to call one number and have their call seamlessly forwarded to the county's mental health crisis team. The crisis team, made up of mental health professionals, can travel to an individual's location and assess the situation, provide stabilization and intervention services, crisis prevention planning, referral to other professionals and follow-up services. The crisis team is available by phone 24 hours a day, seven days a week. Ramsey County also provides urgent care for adult mental health offering walk-in appointments.

Rate of Self-Inflicted Injury\* by Age Group, Ramsey County, 2016



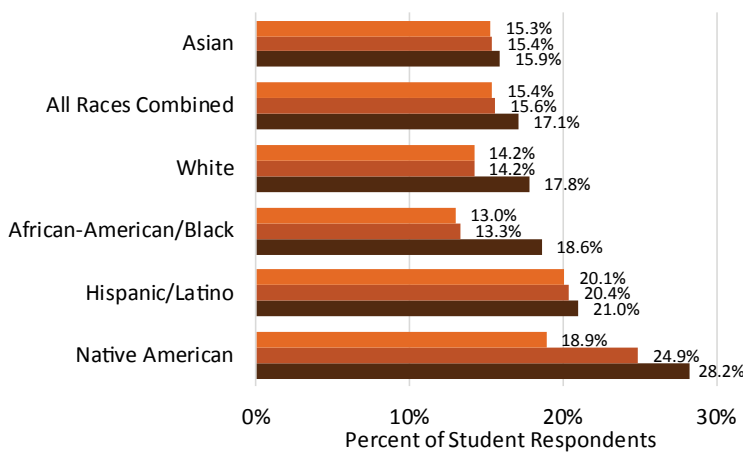
\*non-fatal treated in hospital or emergency department  
Source: Minnesota Department of Health.<sup>7</sup>

9th Grade Students Reporting They Purposefully Injured Themselves Without Wanting to Die in Past Year, Ramsey County



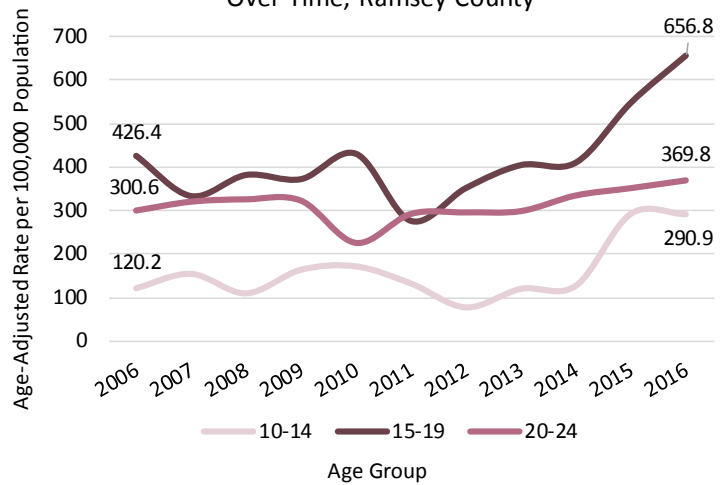
Source: Saint Paul - Ramsey County Public Health Minnesota Student Survey.

Students\* Who Purposefully Hurt or Injured Themselves in Past Year, 2016



\* 8th, 9th, 11th graders  
Source: Saint Paul - Ramsey County Public Health Minnesota Student Survey.

Rate of Self-Inflicted Injury\* Among Youth Over Time, Ramsey County



\*non-fatal treated in hospital or emergency department  
Source: Minnesota Department of Health.<sup>7</sup>

<sup>7</sup> Minnesota Department of Health. MIDAS. <http://www.health.state.mn.us/injury/midas/injury/index.cfm>. Accessed May 7, 2018

## DESCRIPTION

Unintentional, or accidental injuries can lead to enormous amounts of death, disability, and cost and can cause immense human suffering for individuals, their families and communities. However, most unintentional injuries are predictable and preventable. In Minnesota, the top five causes of injuries that result in death are: falls, traffic crashes, poisonings, suffocation and drownings. The top five causes of hospital or emergency department visits for nonfatal unintentional injuries are: falls, traffic crashes, poisonings, being struck by or against something, and overexertion.<sup>1</sup>

## HOW WE ARE DOING

Ramsey County death rates from unintentional injuries have been steadily rising since 1997 with the largest increase occurring most recently during 2012-2016. Ramsey County ranked second among the metro counties for unintentional injury deaths during that 5-year period and no longer meets the Healthy People 2020 target. Ramsey County also ranked second highest in total number of hospital-treated, nonfatal unintentional injury visits (28,197), second to Hennepin County; most visits were made by residents ages 75 and over (11.4 percent of all visits), followed by children ages one to four years (2,669 visits in 2016). Ramsey County had the second highest nonfatal unintentional injury visit rate among the metro counties at 5,202 per 100,000.<sup>2</sup> Among Ramsey County age groups, the highest nonfatal unintentional injury rate is among those age 85 and over (14,948 per 100,000 residents.) Two other age groups with high rates were those ages 80 to 84 (8,790 per 100,000) and young children ages one to four years (8,722 per 100,000.) Generally, the rate of hospital-treated nonfatal unintentional injuries in Ramsey County decreased between 2010 and 2014. However, in 2015 there was a sharp increase, which then declined slightly in 2016. The top cause of hospital-treated nonfatal unintentional injury in Ramsey County has been falls, with the highest rates among those 85 years or older.<sup>2</sup> Youth under age 19 had the largest rate increases for nonfatal injuries from falls during 2012-2016, with infants under age one increasing 320 percent.

## BENCHMARK INDICATOR

Healthy People 2020<sup>3 4</sup>:

1) Reduce unintentional injury deaths.

U.S. Target: 36.4 per 100,000 population.

2) Reduce number of hospital emergency department visits for nonfatal unintentional injuries.

U.S. Target: 8,310.1 per 100,000 population.

3) Reduce the rate of emergency department visits due to falls among adults 65 years and older.

U.S. Target: 4711.6 per 100,000 population.

## DISPARITIES

Males have higher rates of hospital-treated, nonfatal unintentional injury visits than females in Ramsey County. In 2016, males had 14,606 (5,594 per 100,000) visits where females only had 13,591 (4,738 per 100,000) visits.<sup>2</sup> The age group with the largest occurrence of fatal injuries were those ages 65 and over. Ramsey County residents in this age group made-up 70 percent of all fatal injuries in 2016.<sup>2</sup>

(continued on back)

## Information to note

- Most unintentional injuries are predictable and preventable.
- During the past 5 years in Ramsey County, the largest rate increases for hospital-treated injuries caused by falls occurred in youth age groups, with babies under age 1 increasing 320% and children ages 1-14 increasing over 100%.

<sup>1</sup> Preventing Unintentional Injury in Minnesota. Minnesota Department of Health. <https://www.minnesotasafetycouncil.org/2020Plan/UnintentionalInjuryOnline.pdf>. Published September 2012. Accessed August 2018.

<sup>2</sup> Hospital Treated Injuries. MIDAS- Minnesota Department of Health. <http://www.health.state.mn.us/injury/midas/index.cfm>. Accessed August 2018.

<sup>3</sup> Injury and Violence Prevention. Healthy People 2020. <https://www.healthypeople.gov/2020/topics-objectives/topic/injury-and-violence-prevention/objectives>. Accessed August 2018.

<sup>4</sup> Older Adults. Healthy People 2020. <https://www.healthypeople.gov/2020/topics-objectives/topic/older-adults/objectives>. Accessed August 2018.

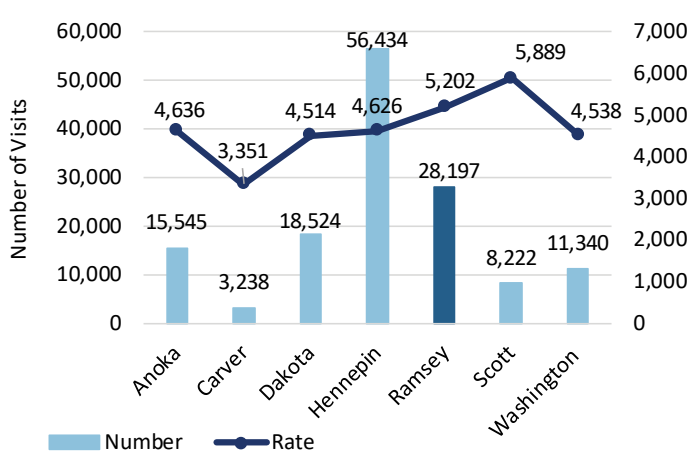
## RISK FACTORS

Unintentional injuries among the rural elderly were closely related to chronic disease, mental health and residence environment.<sup>5</sup>

## WHAT RAMSEY COUNTY GOVERNMENT IS DOING

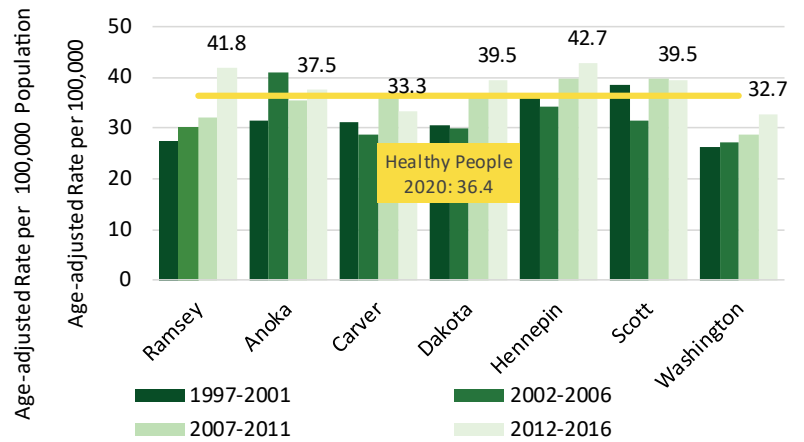
Saint Paul - Ramsey County Public Health provides data monitoring and reporting for this topic in order to better understand the overall health and current conditions in the community. The information may help inform community partners, policy makers or county program leadership.

Rate and Number of Hospital-Treated Non-Fatal Unintentional Injury Visits, Metro Counties, 2016



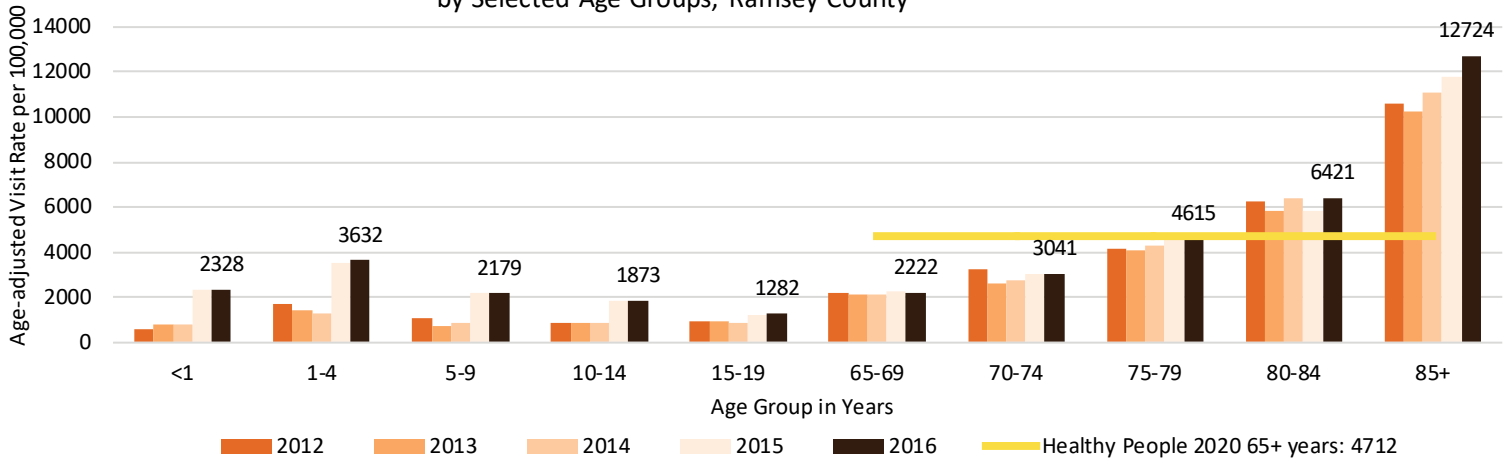
Source: Hospital Treated Injuries. MIDAS-Minnesota Department of Health.<sup>6</sup>

Unintentional Injury Death Rate Over Time, 7-County Metro



Source: Minnesota Department of Health.<sup>7</sup>

Percent Change Over 5 Years in Hospital-Treated Unintentional Injuries from Falls by Selected Age Groups, Ramsey County



Source: Hospital Treated Injuries. MIDAS. Minnesota Department of Health.<sup>8</sup>

<sup>5</sup> Zang H, Wei F, Han M, Chen J, Peng S, Du Y. Risk factors for unintentional injuries among the rural elderly: a county-based cross-sectional survey. Scientific Reports. 2017. <https://www.nature.com/articles/s41598-017-12991-3>. Published October 2, 2017. Accessed August 2018.

<sup>6</sup> Hospital Treated Injuries. MIDAS. Minnesota Department of Health. <https://midas.web.health.state.mn.us/injury/index.cfm>. Accessed August 2018.

<sup>7</sup> Minnesota State, County, and Community Health Board Vital Statistics Trend Reports. Minnesota Department of Health. <http://www.health.state.mn.us/divs/chs/genstats/trends/index.html>. Accessed August 2018.

<sup>8</sup> Hospital Treated Injuries. MIDAS. Minnesota Department of Health. <https://midas.web.health.state.mn.us/injury/index.cfm>. Accessed August 2018.

## DESCRIPTION

Workplaces are a significant source of injury and exposure to hazardous substances, which can lead to disability, illness and death.<sup>1</sup> Despite improvements in occupational safety and health over the last several decades, workers continue to suffer work-related deaths, injuries and illnesses.<sup>2</sup> Nationally, more than 4.1 million workers suffer a serious job-related injury or illness every year. In addition to pain and suffering, inadequate workers' compensation benefits, and insufficient medical insurance can result in lost employment and wages, debt, a loss of home ownership and bankruptcy.<sup>3</sup> Since the passage of the Occupational Safety and Health Act (OSHA) in 1970, rates of workplace injury and illness have fallen dramatically.<sup>4</sup>

## HOW WE ARE DOING

In Minnesota, rates of workplace injury and illness dropped 31 percent between 2006 and 2016. The 2015 rate of 3.5 injuries per 100 was below the Healthy People 2020 goal of 3.8 injuries per 100 full-time workers but still above national average of 3.<sup>5</sup> Workers' compensation indemnity claims are paid injury and illness claims that require more than three days of work disability or payment of permanent disability benefits. Indemnity claims account for approximately 23 percent of all paid workers' compensation claims. The number of claims decreased in Ramsey County. The number of claims decreased in Ramsey County from 4,779 in 2005 to 3,349 in 2016.<sup>6</sup>

## BENCHMARK INDICATOR

Healthy People 2020<sup>1</sup>: Reduce non-fatal work-related injuries.

U.S. target: 3.8 injuries per 100 full-time workers.

## DISPARITIES

Racial and ethnic minorities, recent immigrants, younger and older workers, and workers with disabilities are at increased risk for work-related illness and injury.<sup>1</sup> Several factors contribute to this, including employment in high-hazard industries like transportation, construction and agriculture. Discrimination, low literacy, and lack of health insurance are also factors.<sup>7</sup> Temporary help agency workers have double the injury rate of permanent workers. Temporary workers are often immigrants and minorities who don't receive adequate safety training. In Minnesota in 2014, 2 percent of workers were temporary, but injuries among them accounted for 4 percent of indemnity claims.<sup>5</sup> In addition, men make up 91 percent of the work-related fatal injuries. Of these deaths, transportation incidences accounted for 51 percent.<sup>8</sup>

(continued on back)

## Information to note

- Racial and ethnic minorities, recent immigrants, younger and older workers, and workers with disabilities are at increased risk for work-related illness and injury.
- Men make up 91 percent of workplace fatalities.

<sup>1</sup> Occupational Safety and Health. Healthy People 2020. <http://www.healthypeople.gov/2020/topics-objectives/topic/occupational-safety-and-health/objectives>. Accessed August 2018.

<sup>2</sup> Occupational injuries and deaths among younger workers—United States, 1998–2007. Centers for Disease Control and Prevention. 2010. 59(15):449-55. <https://www.cdc.gov/mmwr/preview/mmwrhtml/mm5915a2.htm>. Published April 23, 2010. Accessed August 2018.

<sup>3</sup> Osha. Healthier workers. Safer workplaces. A stronger America. Injury and illness prevention programs, white paper. United States Department of Labor. <https://www.osha.gov/dsg/InjuryIllnessPreventionProgramsWhitePaper.html>. Published January 2012. Accessed August 2018.

<sup>4</sup> Timeline of OSHA's 40-year history. United States Department of Labor. <https://www.osha.gov/osha40/timeline.html>. Accessed August 2018.

<sup>5</sup> Survey shows Minnesota workplace injury rate sets another new all-time low. Minnesota Department of Labor and Industry. <http://www.dli.mn.gov/business/workplace-safety-and-health/mnosha-compliance-safety-lines-archive>. Published October 28, 2016. Accessed August 2018.

<sup>6</sup> Workplace Safety- Research and Statistics. Minnesota Department of Labor and Industry. <http://www.dli.mn.gov/>. Accessed August 2018.

<sup>7</sup> Occupational health disparities – inputs: occupational safety and health risks. Centers for Disease Control and Prevention. <https://www.cdc.gov/niosh/programs/ohd/risks.html>. Accessed August 2018.

<sup>8</sup> Fatal Work Injuries in Minnesota – 2016. Bureau of Labor Statistics. [https://www.bls.gov/regions/midwest/news-release/fatalworkinjuries\\_minnesota.htm](https://www.bls.gov/regions/midwest/news-release/fatalworkinjuries_minnesota.htm). Accessed August 2018.



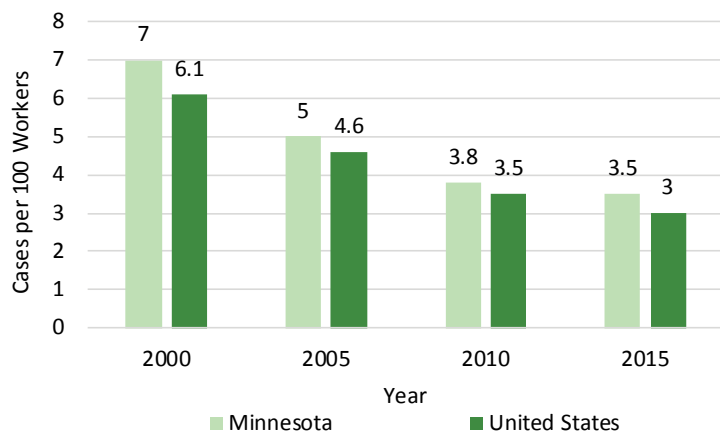
## RISK FACTORS

Changes in working conditions, like longer hours, compressed work weeks, shift work, reduced job security, and temporary work, as well as lack of training about new materials, processes and equipment can pose risks to worker health.<sup>9</sup> Some of the most dangerous situations are transporting or dealing with harmful substances, as most of the work-related fatal injuries that occur in Minnesota are due to transportation incidents, followed by exposure to harmful substances or environments.<sup>10</sup>

## WHAT RAMSEY COUNTY GOVERNMENT IS DOING

Saint Paul - Ramsey County Public Health provides data monitoring and reporting for this topic in order to better understand the overall health and current conditions in the community. The information may help inform community partners, policy makers or county program leadership.

Work-Related Injury and Illness in the Private Sector



Source: Minnesota Department of Labor and Industry.<sup>11</sup>

Fatal Occupational Injuries by Event or Exposure, Minnesota

Event or Exposure	2015 Number	2016 Number	Percent
Total	74	92	100
Violence and other injuries by persons or animals	7	10	11
Intentional injury by person	7	9	10
Homicides (Intentional injury by other person)	4	3	3
Suicides (Self-inflicted injury--intentional)	3	6	7
Transportation incidents	31	46	50
Pedestrian vehicular incident	4	4	4
Roadway incidents involving motorized land vehicle	19	29	32
Roadway collision with other vehicle	11	17	18
Roadway collision--moving in opposite directions, oncoming	2	8	9
Roadway collision--moving perpendicularly	6	4	4
Roadway collision with object other than vehicle	3	10	11
Vehicle struck object or animal on side of roadway	3	9	10
Nonroadway incident involving motorized land vehicles	5	7	8
Nonroadway noncollision incident	4	4	4
Jack-knifed or overturned, nonroadway	3	3	3
Falls, slips, trips	13	11	12
Falls on same level	3	3	3
Falls to lower level	10	8	9
Other fall to lower level	6	7	8
Other fall to lower level less than 6 feet	--	3	3
Exposure to harmful substances or environments	3	12	13
Exposure to other harmful substances	3	6	7
Nonmedical use of drugs or alcohol--unintentional overdose	--	4	4
Contact with objects and equipment	17	10	11
Struck by object or equipment	11	6	7
Struck by falling object or equipment--other than powered vehicle	5	5	5
Struck, caught, or crushed in collapsing structure, equipment, or material	1	3	3

Source: Fatal Work Injuries in Minnesota. Bureau of Labor and Statistics.<sup>12</sup>

<sup>9</sup> Occupational injuries and deaths among younger workers—United States, 1998–2007. Centers for Disease Control and Prevention. 2010. 59(15):449-55. <https://www.cdc.gov/mmwr/preview/mmwrhtml/mm5915a2.htm>. Published April 23, 2010. Accessed August 2018.

<sup>10</sup> Occupational health disparities – inputs: occupational safety and health risks. Centers for Disease Control and Prevention. <https://www.cdc.gov/niOSH/programs/ohd/risks.html>. Accessed August 2018.

<sup>11</sup> Workplace Safety- Research and Statistics. Minnesota Department of Labor and Industry Web site. <http://www.dli.mn.gov/>. Accessed August 2018.

<sup>12</sup> Fatal Work Injuries in Minnesota. Bureau of Labor and Statistics. [https://www.bls.gov/regions/midwest/news-release/fatalworkinjuries\\_minnesota.htm](https://www.bls.gov/regions/midwest/news-release/fatalworkinjuries_minnesota.htm). Accessed August 2018.