



# **North Dakota Injury Prevention Plan 2010**



North Dakota Department of Health  
Division of Injury Prevention and Control





July 2011

To Our Partners in Injury Prevention and Control:

Injuries are a major public health concern in both North Dakota and the United States. In fact, unintentional injury is the leading cause of death for people ages 1 through 44 and the third-leading cause of death for people ages 45 through 54 in North Dakota. Needless death, disability, pain, and suffering caused by preventable injuries can be reduced immediately, and eventually eliminated.

This document reports the leading causes of injuries and deaths from injuries in North Dakota and is designed to help health professionals and injury prevention specialists develop initiatives to reduce and prevent them. It also offers specific prevention strategies for targeting affected populations who are at the greatest risk. Most injuries are predictable and preventable.

This plan reflects the best thinking of many people in our state. They have shared their insight on ways to prevent the severe burden of injury and violence on individuals and our society. The message is positive. We can prevent injury and violence, if we work together. There is a role for everyone in this plan.

In order to achieve Healthy People 2020 goals and objectives, the North Dakota Department of Health, Division of Injury Prevention and Control, will continue to identify and implement prevention strategies with its many partners across the state.

I encourage you to join us in working to reduce injuries and violence, and improve the health of all of our citizens in North Dakota.

Sincerely,

A handwritten signature in black ink, appearing to read "Terry L. Dwelle".

Terry L. Dwelle, MD, MPHTM, FAAP, CPH  
State Health Officer

TLD/DR:lrr



# **North Dakota Injury Prevention Plan 2010**

Governor Jack Dalrymple

State Health Officer Terry Dwelle, M.D., M.P.H.T.M.



**NORTH DAKOTA**  
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# North Dakota Injury Prevention and Control State Plan

## Introduction

The purpose of this plan is to provide an overview of injury in North Dakota. The problem areas were selected based on data from the North Dakota Department of Health Division of Vital Record's leading cause of injury deaths from the years 2004 through 2008, as well as the domestic and sexual violence data from outside sources. The information is intended to help programs that guide prevention efforts across the state to approach the problem with a unified message and similar strategies.

The World Health Organization defines injury in this manner: "Injuries are caused by acute exposure to physical agents such as mechanical energy, heat, electricity, chemicals and ionizing radiation interacting with the body in amounts or at rates that exceed the threshold of human tolerance. In some cases (for example drowning and frostbite), injuries result from the sudden lack of essential agents such as oxygen or heat."

Injuries including unintentional injuries, homicide and suicide are the leading cause of death for people ages 1 to 44. The consequences of injuries can be extensive and wide ranging. Injuries have physical, emotional and financial consequences that can impact the lives of individuals, their families and society. Some injuries can result in temporary or long-term disability. During the time 2004 through 2008, motor vehicle crashes were the leading cause of injury death while suicide and falls were second and third respectively.

Deaths are the only way of measuring the true problem statewide in North Dakota without a Hospital/Emergency Department Discharge Data System, which is available in many other states across the United States. We know that deaths are merely the tip of the iceberg with about 100 injuries occurring per death that present to emergency departments.

Injuries and violence affect us all, regardless of sex, race or economic status, but research shows that three quarters of all deaths in young people are the result of injuries and violence. The cost of injury and violence can be measured on both personal and societal levels. When considering factors such as lost productivity, the loss of the ability to work due to disability and quality of life, we observe the disproportionate impact of injury and violence on our nation's youth.

The partners and collaborators mentioned in the plan are groups of people from a variety of prevention programs that are all working towards the same goal. Many of the partners are members of the North Dakota Injury Prevention Coalition whose mission statement is: "The North Dakota Injury Prevention Coalition is a multi-disciplinary partnership to reduce unintentional and intentional injuries and deaths." With this plan implemented across the state and with the partners and the citizens of N.D., we can move closer to fewer deaths and injuries.



## **A. Motor Vehicle Crashes**

### **Problem:**

Motor vehicle crashes are the leading cause of injury death in North Dakota.

North Dakota consistently has been ranked as one of the safest states in the nation and strives to maintain this distinction through effective traffic safety programs. The number of motor vehicle fatalities each year in North Dakota has dropped from a high of 227 in 1971 to 104 in 2008. The fatality rate has reflected a decrease from 5.73 deaths per 100 million vehicle miles of travel (VMT) in 1971 to 1.37 deaths per 100 million VMT in 2008.

Historically (dating back to 1979), North Dakota's motor vehicle fatality rate consistently had been lower than the national fatality rate. But 20 years later, in 1999, the state's fatality rate crept beyond the national rate and again in 2005, 2007 and 2008.

Impaired driving and lack of seat belt use continue to be a problem in the state. In 2008:

- 51 percent of motor vehicle fatalities involved alcohol.
- 75 percent of individuals killed in motor vehicle crashes (autos and sport utility vehicles [SUVs]) were not wearing seat belts.

While seat belt use in North Dakota climbed to an all-time high of 82.2 percent in 2007, subsequent annual seat belt use rates indicate the state has reached a plateau in seat belt use. In addition, alcohol continues to be a factor in about half of all motor vehicle fatalities each year.

These statistics necessitate an increase in the level of seat belt and impaired driving programming to further advance the public's awareness and level of education related to these issues.

North Dakota also has experienced a rapid increase in population and traffic in the western portion of the state due to the upsurge in oil activity. Some N.D. roads have seen an increase in traffic of up to 300 percent. Law enforcement officers, western N.D. companies and travelers have voiced their concerns related to the increasing traffic safety issue and the need for programming and enforcement to address it.

### **Goals:**

Reduce the number of fatalities caused by motor vehicle crashes by 10 percent by 2015 by supporting the goals, objectives and initiatives of the North Dakota Injury Prevention & Control State Plan.

### **Prevention Strategies:**

- Support public information and education campaigns such as seat belt mobilization campaigns, social marketing, defensive driving and other efforts to increase the use of seat belts by North Dakotans.

- Support special efforts to decrease motor vehicle fatality rates in high-risk populations, including American Indians and young drivers, both of which are over-represented in motor vehicle fatality rates.
- Promote educational programs specific to western N.D. traffic safety problems, such as commercial truck driver and railroad safety training.
- Support efforts to reduce the rate of alcohol-related fatalities through enactment and enforcement of laws and administrative rules to reduce impaired driving.
- Support public education and awareness programs to reduce impaired driving; including teen court, victim impact panels, alcohol beverage server training, saturation patrols, sobriety checkpoints and education campaigns that address drinking and driving.
- Support efforts to change social norms about underage drinking and general alcohol consumption by North Dakotans.
- Encourage employers to implement and enforce seat belt policies, non-alcohol use policies, distracted driving policies and to include motor vehicle safety as part of worksite wellness initiatives.
- Support enactment of a primary/standard enforcement seat belt law in North Dakota.
- Enhance North Dakota's current child passenger safety law.
- Promote public awareness and enforcement of North Dakota's child passenger safety law and North Dakota's current seat belt law.
- Promote correct use of child restraints through car seat distribution programs, car safety seat checkups and public information campaigns. Conduct workshops to increase and maintain the network of trained advocates and certified child passenger safety technicians.
- Provide child passenger safety educational materials to law enforcement and health-care professionals and educate them in regard to child passenger safety best practices.
- Observe the N.D. Crash Summary on "attention distracted" to determine if inattention continues to be the leading factor in most crashes.

## Priority Focus Areas and Strategies

### Crash Definitions:

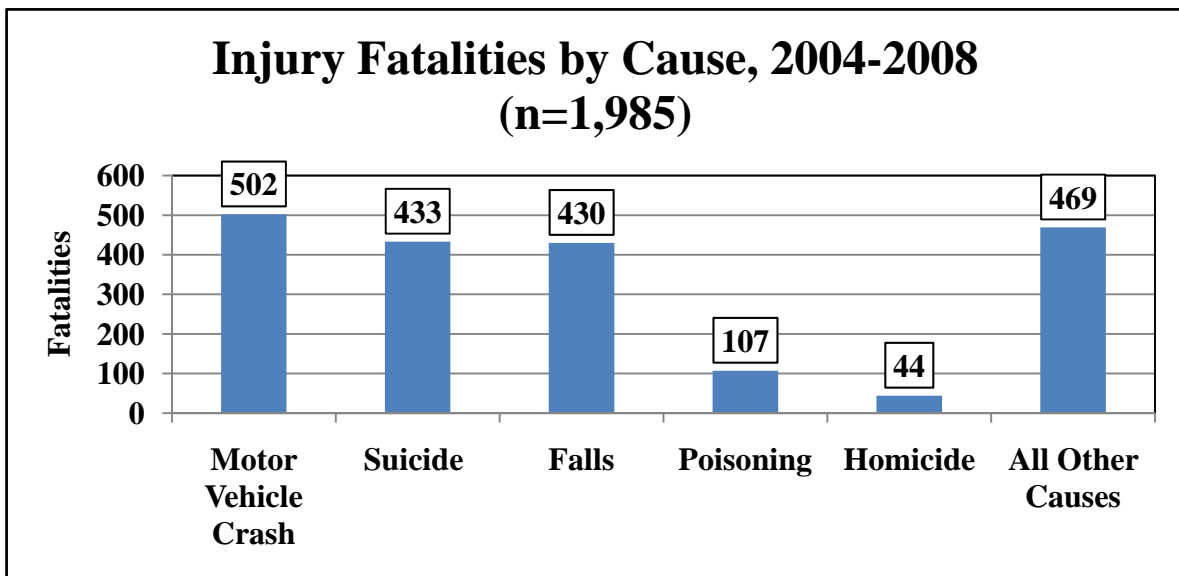
*Crashes* – sudden damage or destruction on impact to a motor vehicle on public roadways.

*Fatal Crashes* – a motor vehicle crash on public roadways that result in the death of one or more persons. The death must occur within 30 days of the crash.

*Fatalities* – A person who died as a result of injuries received in a motor vehicle crash on public roadways. The death must occur within 30 days of the crash.

### Supporting Evidence:

Motor vehicle crashes are the leading cause of injury death in North Dakota. Motor vehicle crashes (MVCs) accounted for one-quarter of all injury-related fatalities in North Dakota from 2004 to 2008. It should be noted that the North Dakota Department of Health, Division of Vital Records, only registers fatalities of North Dakota residents, and therefore lists a total of 502 motor vehicle fatalities for that population. North Dakota Department of Transportation (NDDOT) records motor vehicle fatalities for all persons fatally injured in motor vehicle crashes within the state of North Dakota. NDDOT (2009) recorded a total of 549 fatalities from 2004 to 2008, an average of 110 people per year. In 2008 alone, there were 104 fatalities and 4,247 injuries resulting from 16,387 reported crashes in North Dakota.

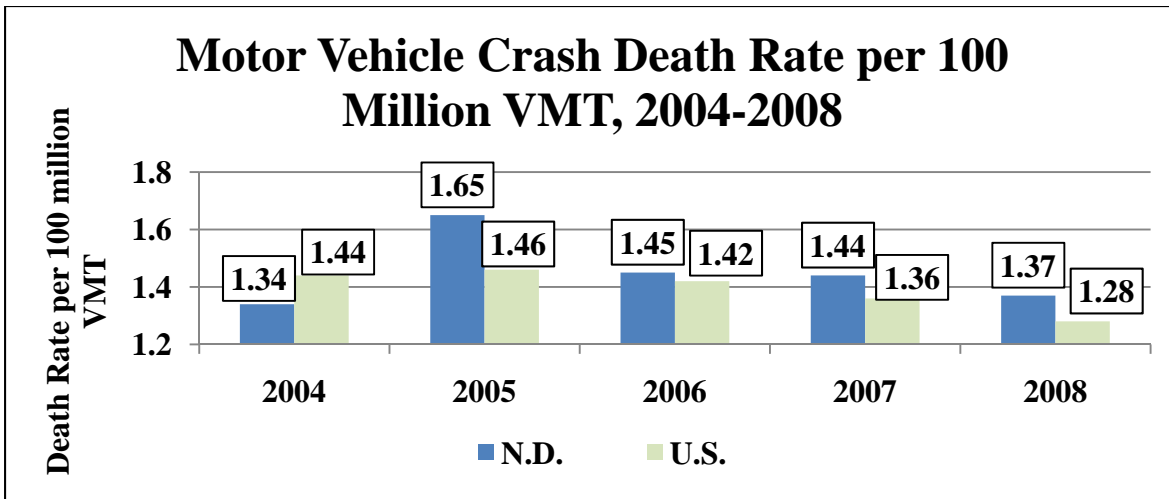


Source: North Dakota Department of Health, Division of Vital Records

Based on the 2008 numbers, this equates to (NDDOT 2009):

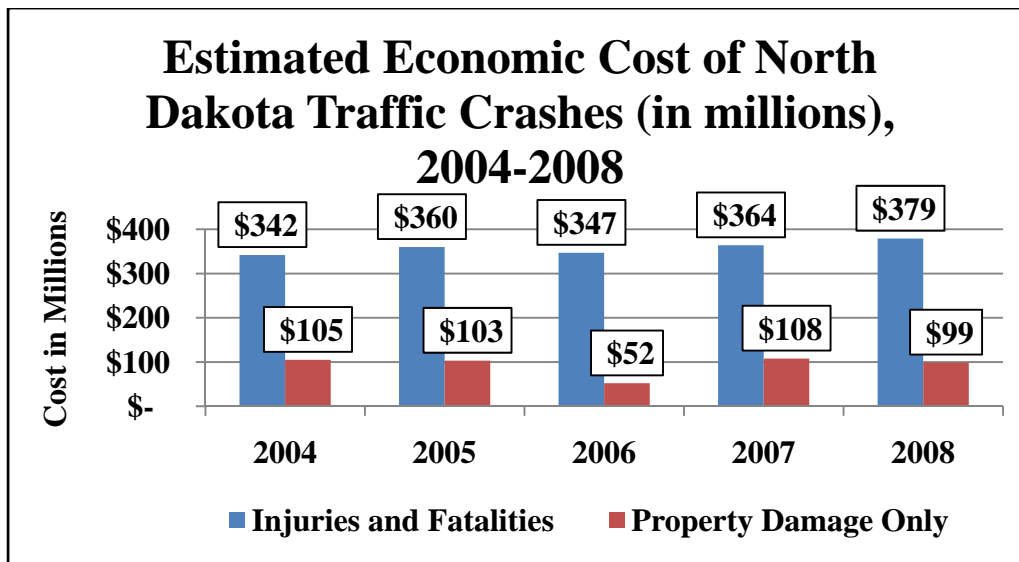
- One reportable traffic crash every 32 minutes.
- One person injured in a motor vehicle crash every 2.06 hours.
- One person killed in a motor vehicle crash every 3.5 days.

North Dakota's MVC death rate was 1.34 per 100 million vehicle miles traveled in 2004, spiking to 1.65 in 2005, followed by a sharp decrease to 1.45 in 2006 and a small decline to 1.44 in 2007 and 1.37 in 2008 (NDDOT 2009). In comparison, the national MVC death rate dropped from 1.44 per 100 million vehicle miles traveled in 2004 to 1.26 in 2008 (NHTSA 2011).



Source: North Dakota Department of Transportation (2009); NHTSA (2011)

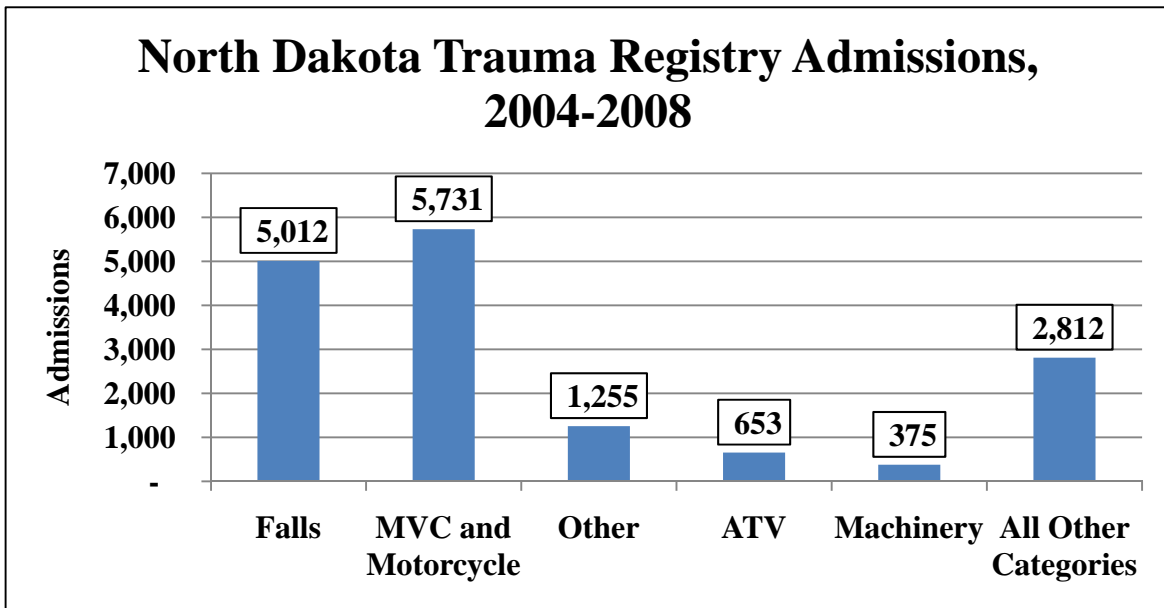
It is estimated that North Dakota crashes resulting in either fatality or injury cost \$379,135,200, including but not limited to lost wages, fringe benefits, medical expenses including emergency service costs, administrative expenses that include cost of public and private insurance, police and legal costs, motor vehicle damage, damage to property and employer cost for injuries to workers (NDDOT 2009). In addition, costs associated with “property damage” crashes added another \$99,210,000 to the estimated loss amounts in 2008. The estimated loss for each North Dakota resident is \$752 each year for all types of crashes.



Source: North Dakota Department of Transportation (2009)

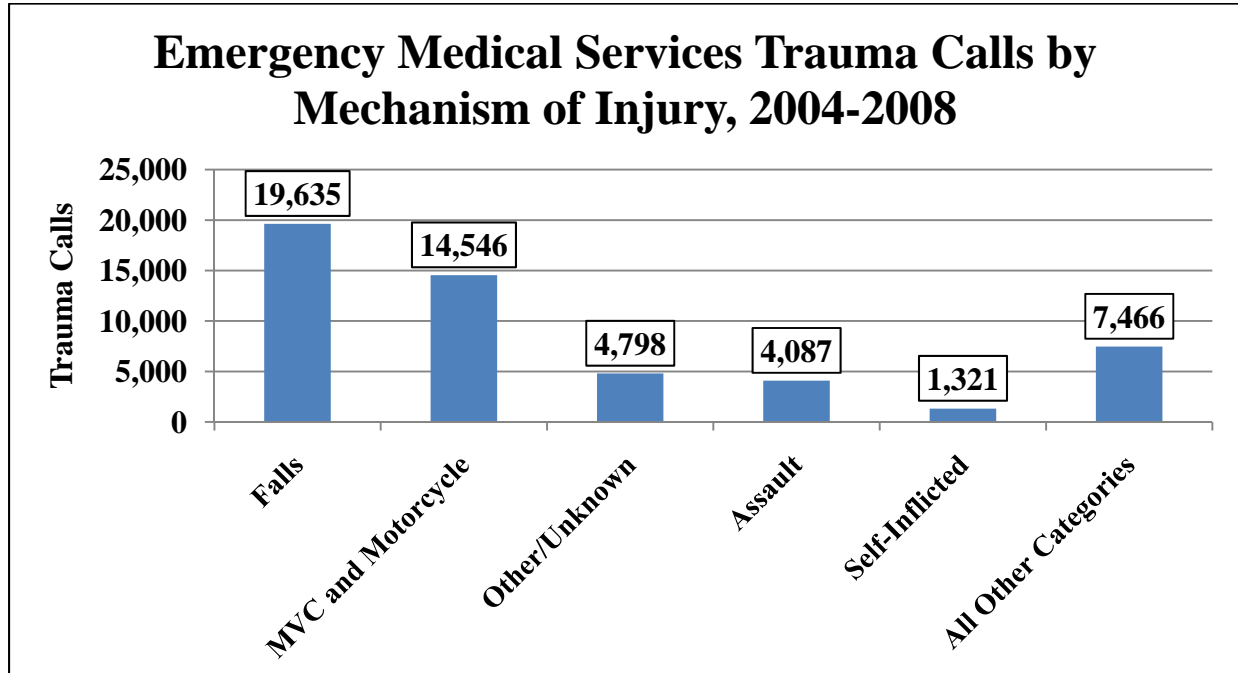
Of the 15,838 cases collected through the State Trauma Registry from January 2004 through December 2008, motor vehicle and motorcycle crashes were the leading cause of all trauma cases reported, with more than 36 percent of the trauma cases being attributed to motor vehicle and motorcycle crashes. Motor vehicle and motorcycle crashes also accounted for 39 percent of the 346 deaths recorded.





Source: North Dakota Trauma Registry

The EMS ambulance runs data also indicates that MVC injury is significant for North Dakota with more than 28 percent of trauma runs being attributed to motor vehicle and motorcycle crashes. It should be noted that there are limitations on incomplete and variable population ascertainment over this period, although data submission has improved over the last three years.

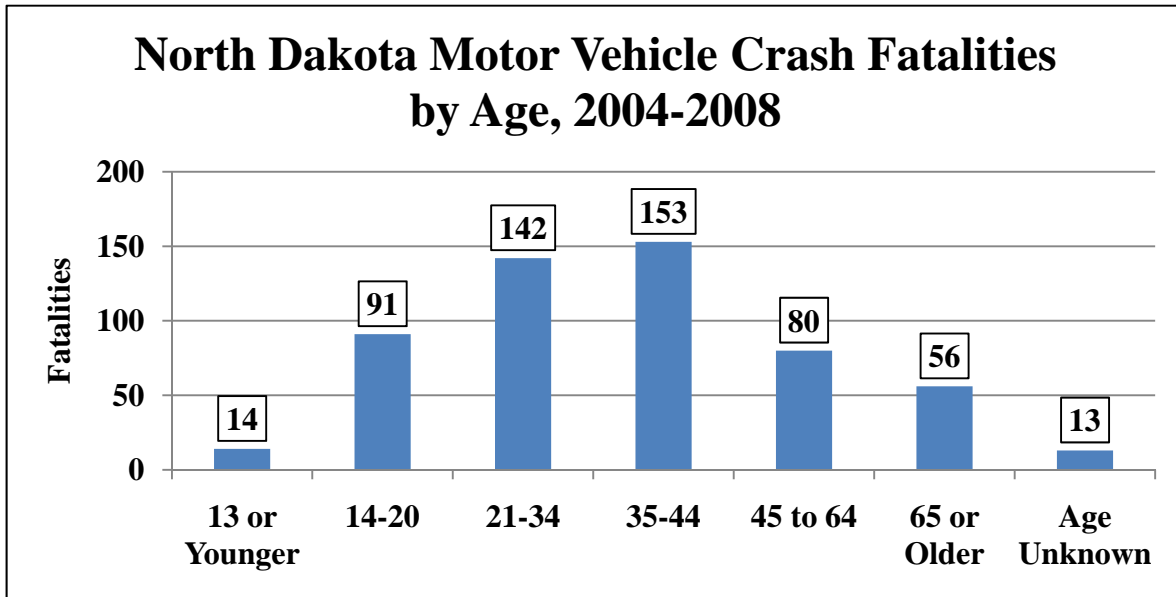


Source: North Dakota Department of Health, Division of Emergency Medical Services and Trauma

**Contributing Factors/Risks:**

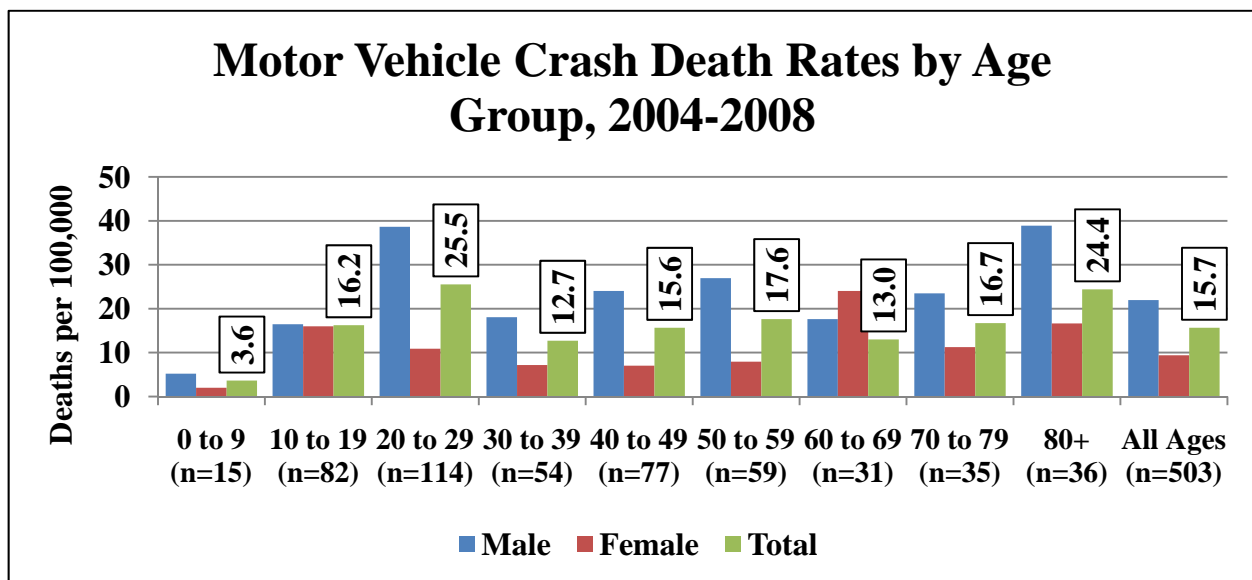
*1. Gender and Age*

Of the 549 fatalities resulting from motor vehicle crashes during 2004 through 2008, the majority of fatalities were people ages 21 through 44, with nearly 54 percent of the victims being in this age group (NDDOT 2009).



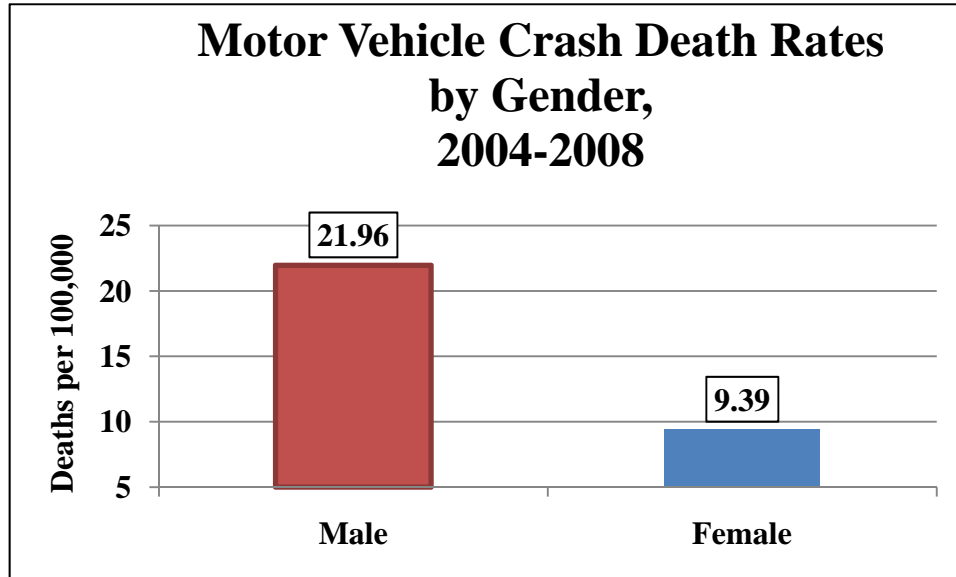
Source: North Dakota Department of Transportation (2009)

Overall, North Dakota’s MVC death rate is 15.7 per 100,000 population. The highest MVC death rate was for the 20 to 29 age group with a rate of 25.5 per 100,000 population, followed by the 80 and older age group at 24.4, and the 50-59 age group with a rate of 17.6.

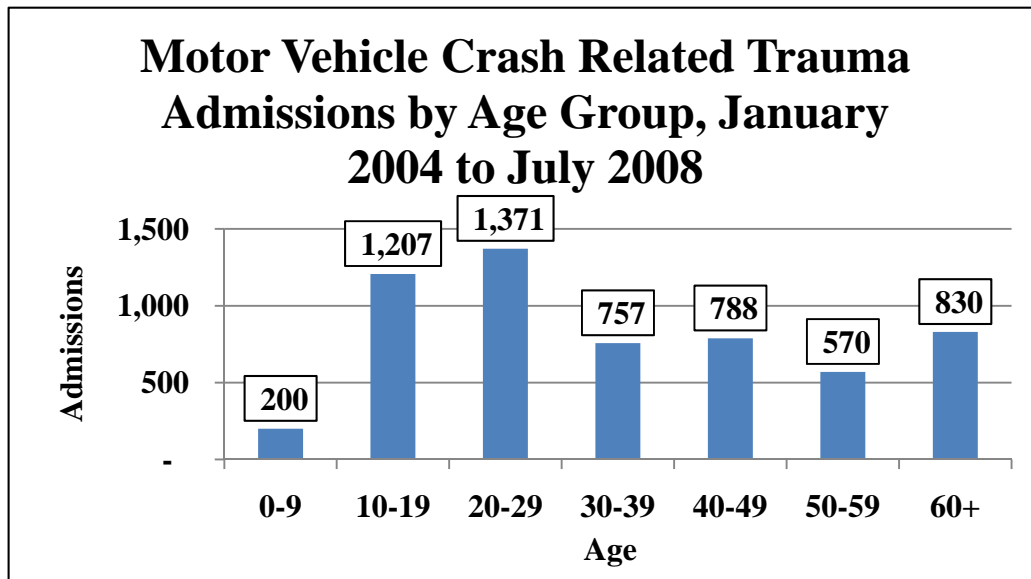


Source: North Dakota Department of Health, Division of Vital Records

Of the motor vehicle crash-related fatalities during 2004 through 2008, males accounted for 70 percent (352) of those fatalities while females accounted for 30 percent (151). Males had higher death rates in all but one of the different age groups. Overall, males also had a significantly higher MVC death rate per 100,000 population than females: 22.0 versus 9.4.



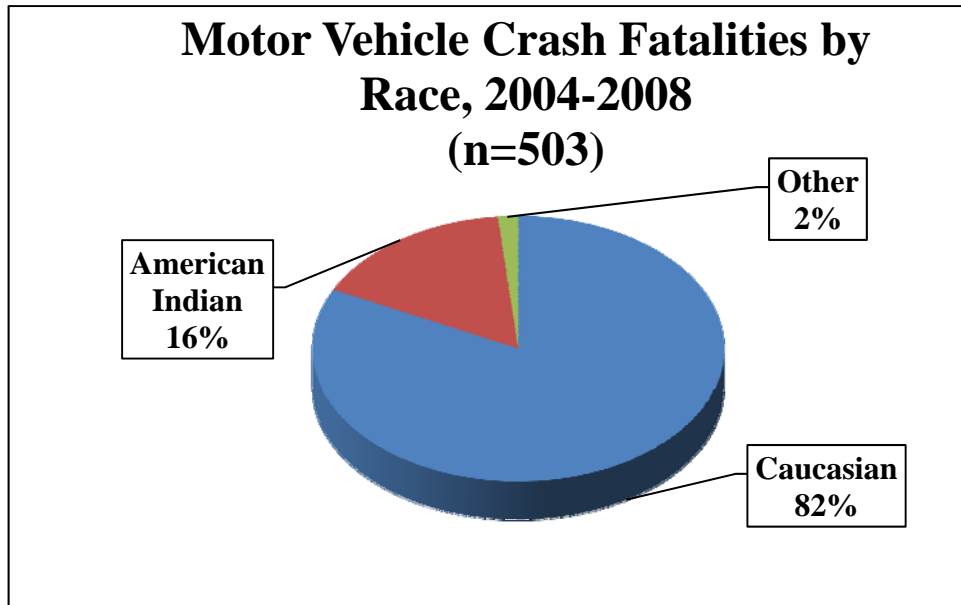
Source: North Dakota Department of Health, Division of Vital Records



Source: North Dakota Trauma Registry

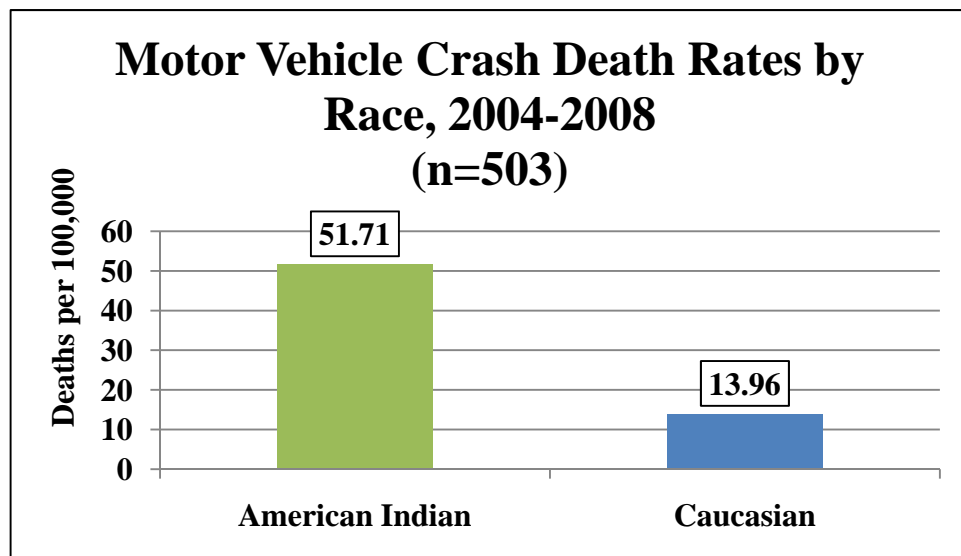
## 2. Race

MVC fatalities disproportionately affect American Indians in North Dakota. Despite accounting for only 4.9 percent of the population, American Indians accounted for 16 percent of the MVC fatalities from 2004 to 2008.



Source: North Dakota Department of Health, Division of Vital Records

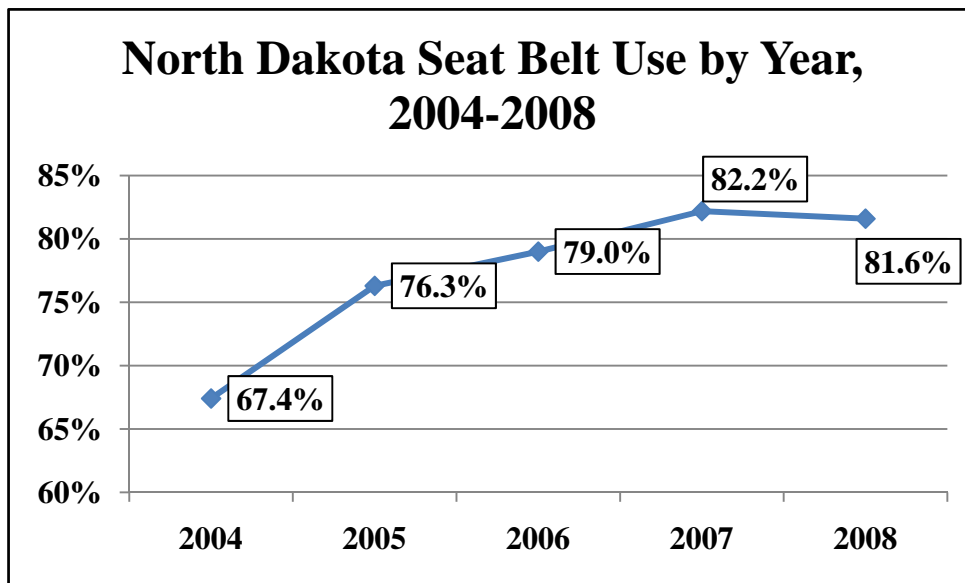
The MVC death rate per 100,000 population for Americans Indians in North Dakota is more than 3.5 times the rate for Caucasians: 51.71 for American Indians versus 13.96 for Caucasians.



Source: North Dakota Department of Health, Division of Vital Records

### 3. Low Restraint Use

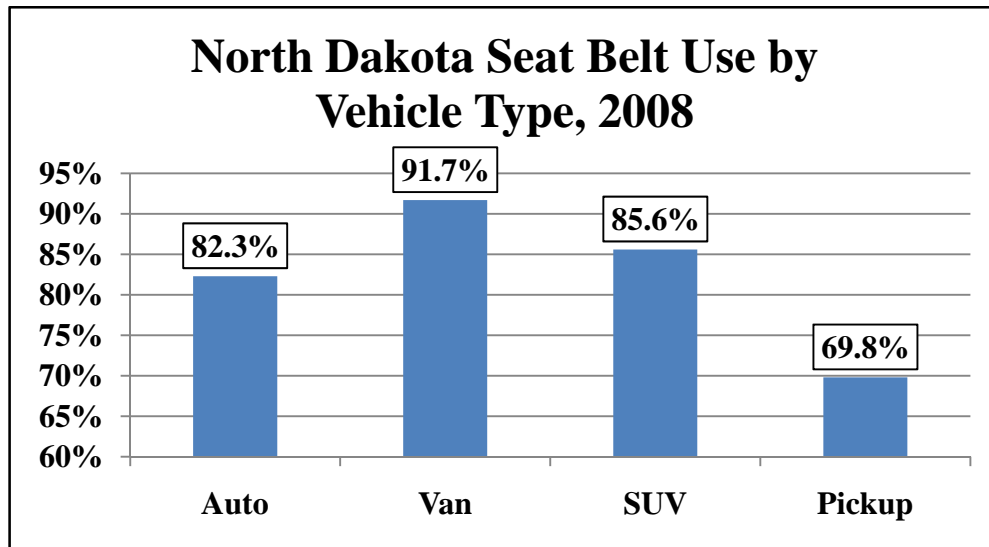
North Dakota saw an increase in restraint use annually from 2004 to 2007, increasing from 67.4 percent in 2004 to 82.2 percent in 2007. In 2008, restraint use decreased slightly to 81.6 percent. North Dakota's seat belt use remains lower than other states in the U.S. Of the MVC fatalities in 2008 in North Dakota, restraints were used by only 16.3 percent of the people. An estimated 33 lives were saved by seat belts in North Dakota in 2008 and by increasing the usage to 100 percent this could potentially save an additional 18 lives per year (NDDOT 2008).



Source: North Dakota Department of Transportation (2008)

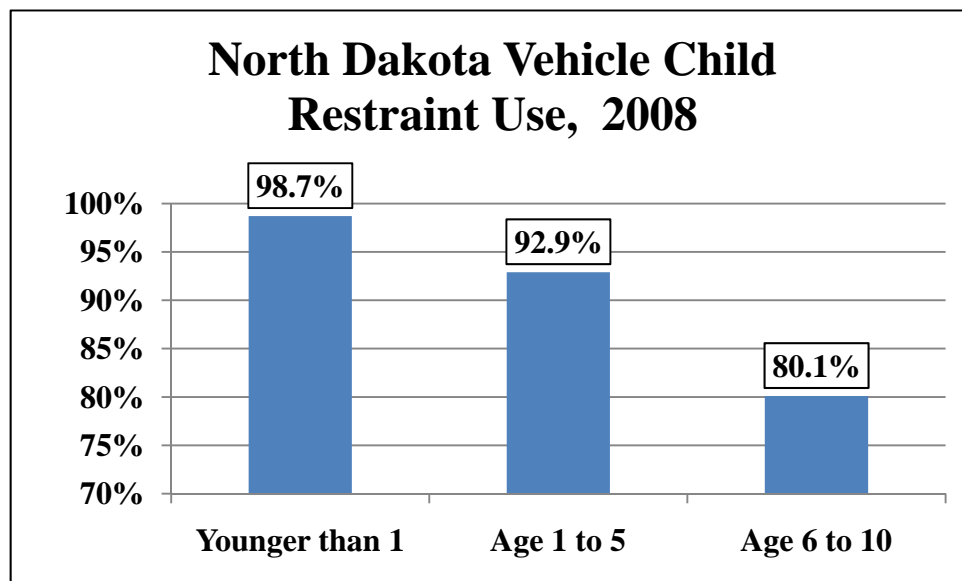
A step toward the goal of 100 percent usage would be to upgrade North Dakota's seat belt law from secondary to standard/primary enforcement. Under the current secondary enforcement law, motorists may be cited for non-seat belt use only if they are stopped for another motor vehicle violation. Studies have shown that states upgrading from a secondary to a primary seat belt law saw a median increase in seat belt use of 16 percentage points (NCHRP 2007; Solomon 2001; Eby 2001; Salzberg 2004; Illinois DOT 2004, Ulmer 1997; Preusser 1997). It is likely that if North Dakota were to pass a standard/primary seat belt law, the state could see a large increase in seat belt use which would have positive consequences. By enacting a standard/primary enforcement law, North Dakota could potentially save 8 lives, prevent 60 people from receiving serious injuries, and receive a total cost savings of approximately \$16.2 million each year (NHTSA 2009).

One factor that may contribute to the use/non-use of restraints is the type of vehicle. Surveys conducted by the North Dakota Department of Transportation indicate that pickup drivers are less likely to use restraints (NDDOT 2008). Data reflects that pickups/vans/SUVs are involved in a significant proportion of MVCs (NDDOT 2009). Other factors related to seat belt use include age, gender and geographic density, as well as speed, which is most likely correlated to the previous factors mentioned.



*Source: North Dakota Department of Transportation (2008)*

The state's primary enforcement child passenger safety law requires children younger than 7 to ride in a child restraint and children ages 7 through 17 to be secured in a seat belt or child restraint. Observation surveys conducted by the Department of Health's Injury Prevention Program in 2008 showed that 98.7 percent of infants were riding in a car seat, 92.9 percent of toddlers ages 1 through 5 were buckled in a car seat or seat belt, and 80.1 percent of children ages 6 to 10 were in a seat belt or child restraint.

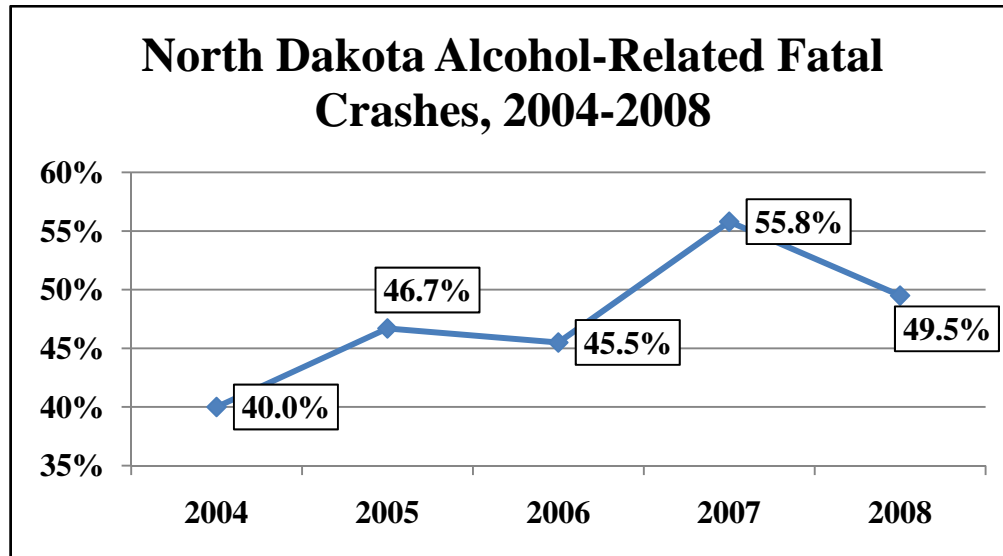


*Source: North Dakota Department of Health, Child Passenger Safety*

According to the National Highway Traffic Safety Administration (2005), national studies reflect a 73 percent misuse rate of child safety seats. The North Dakota child safety seat misuse rate is higher than the national rate at approximately 84 percent (NDDoH 2008).

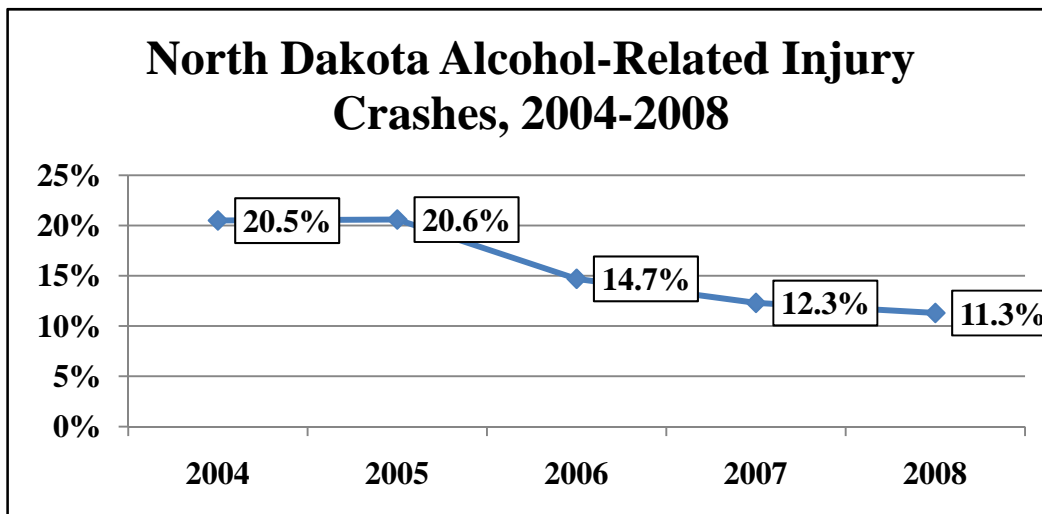
#### 4. Alcohol Use

In recent years, the percentage of alcohol-related fatal crashes in North Dakota fluctuated from a low of 40 percent in 2004 to a high of 56 percent in 2007.



Source: North Dakota Department of Transportation (2009)

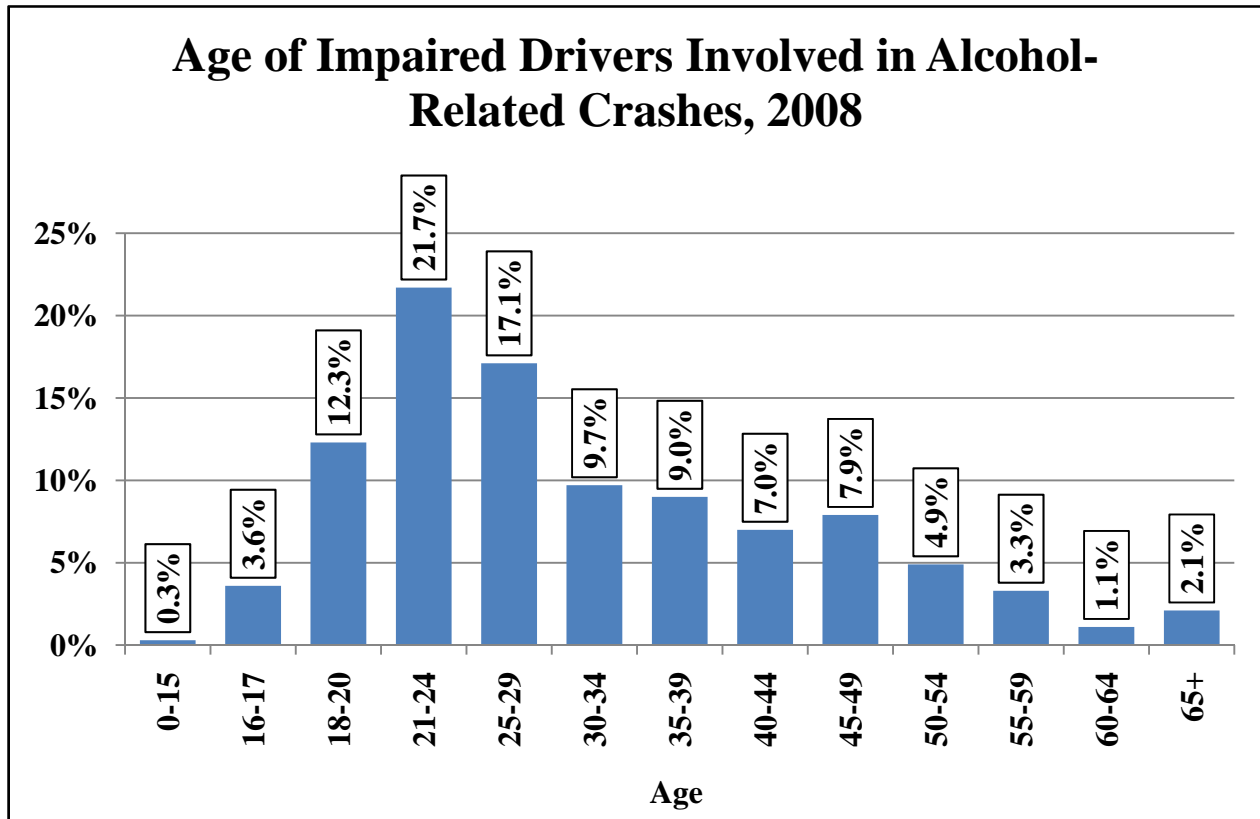
Alcohol-related injuries as resulting from motor vehicle crashes have been declining in recent years, from 20.6 percent in 2005 to 11.3 percent in 2008.



Source: North Dakota Department of Transportation (2009)

There is limited alcohol data between the years of 2004-2005. The North Dakota Department of Transportation redesigned the Crash Facts in 2006 to the Crash Summary with detailed crash data.

In 2008, North Dakota drivers between the ages of 18 and 29 contributed to 51.1 percent of crashes involving alcohol, with drivers between the ages of 21 and 24 accounting for a higher percent of drivers involved in fatal alcohol-related crashes than other age groups.



Source: North Dakota Department of Transportation (2009)

The Youth Risk Behavior Survey (YRBS) results reflect that alcohol use by the state’s youth continues to be a problem. In 2007, 31.5 percent of North Dakota 9<sup>th</sup> through 12<sup>th</sup> graders stated “in the past 30 days” they had ridden in a vehicle with someone who had been drinking (NDDPI 2007), as compared to 29.1 percent of the students nationwide (USDHHS 2007).

#### 5. Geographic Density (Rural Versus Urban)

##### Roadway Type Definitions:

*Local roads* – roads that feed higher order systems providing direct access with little or no traffic.

*Principal arterial*– major street or highway, many with multi-lane or freeway design.

*Minor arterial* – a street or highway that links cities and larger towns in rural areas.

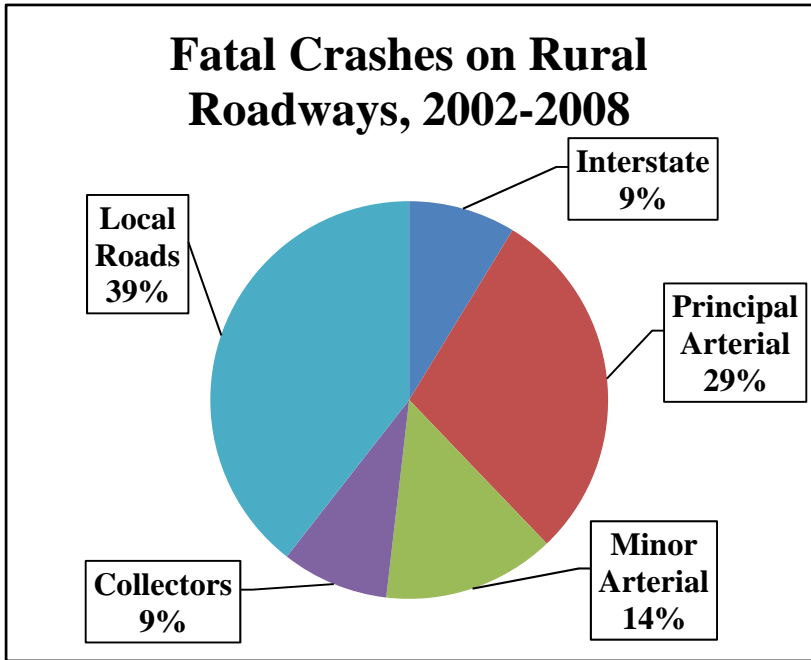
*Interstates* – as limited-access, divided facilities of at least four lanes, designated by the FHWA as part of the Interstate System.

*Collectors (rural areas)* – routes serving intra-county rather than statewide travel.

*Collectors (urban areas)* – streets providing access to neighborhoods and direct access to arterial.



### Fatal Crashes on Rural Roadways, 2002-2008

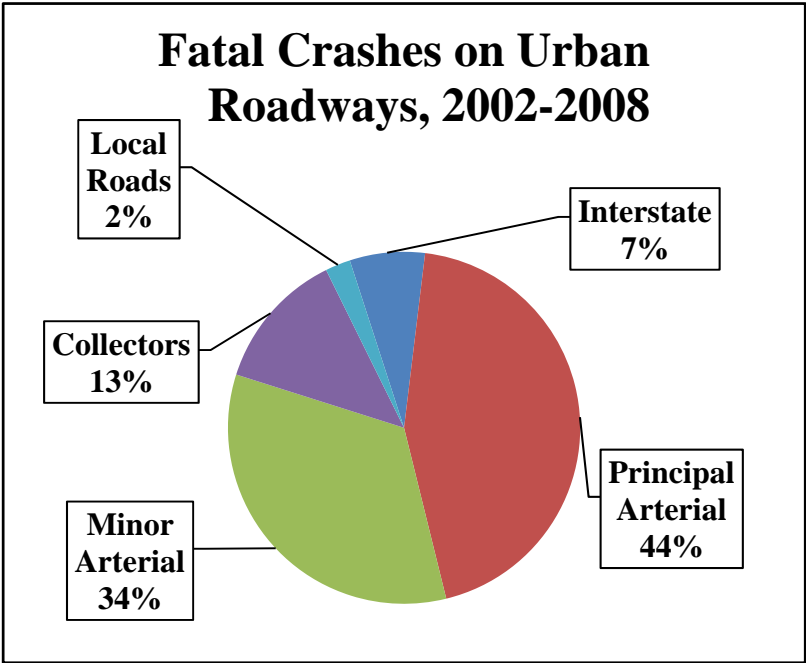


Thirty-nine percent of fatal crashes on rural roadways occurred on local roads followed by principal arterial with 29 percent of the fatal crashes. The fewest number of fatal crashes occurred on interstates and collectors with 9 percent of the rural road fatal crashes respectively.

Source: North Dakota Department of Transportation (2009)

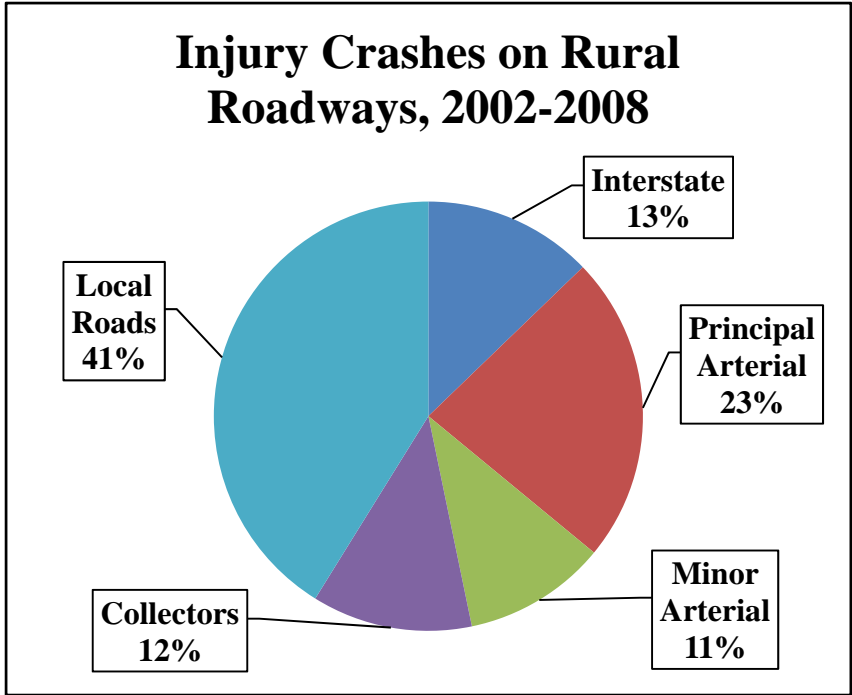
The greatest number of urban fatal crashes occurred on principal arterials at 44 percent, followed by minor arterial roadways with 34 percent of the urban road fatal crashes. The fewest number of urban roadway crashes occurred on local roads with 2 percent of the urban road fatal crashes.

### Fatal Crashes on Urban Roadways, 2002-2008



Source: North Dakota Department of Transportation (2009)

## Injury Crashes on Rural Roadways, 2002-2008

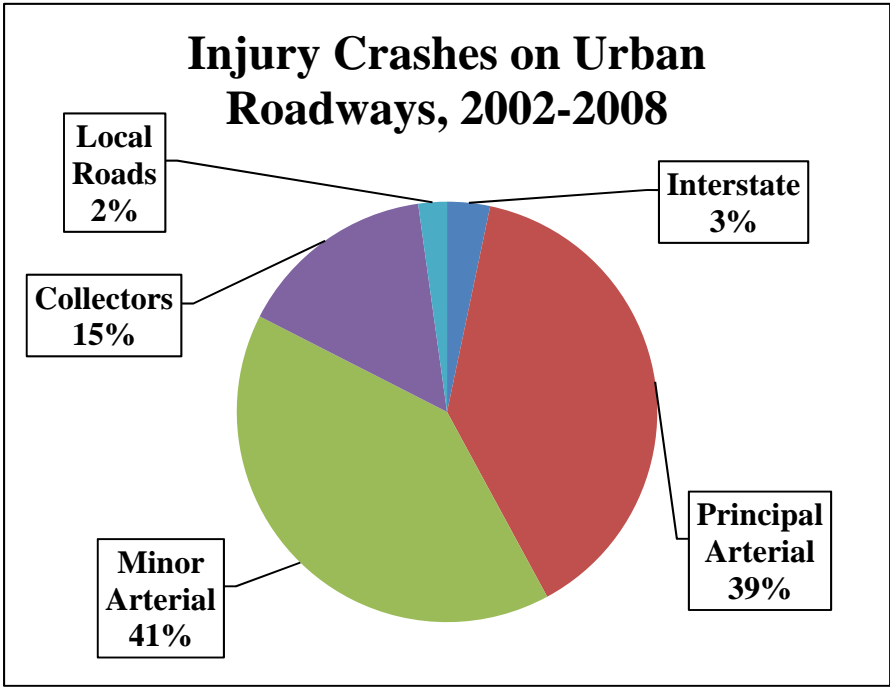


Most rural injury crashes occur on local roads with 41 percent of crashes occurring on this road type, followed by principal arterial with 23 percent of injury crashes. Injury crashes are least likely to occur on minor arterials.

Source: North Dakota Department of Transportation (2009)

The greatest number of injury crashes in urban areas occur on minor arterials, followed by principal arterial roads with 39 percent of injury crashes occurring on this road type. Injury crashes on urban roadways are least likely to occur on local roads or the interstate.

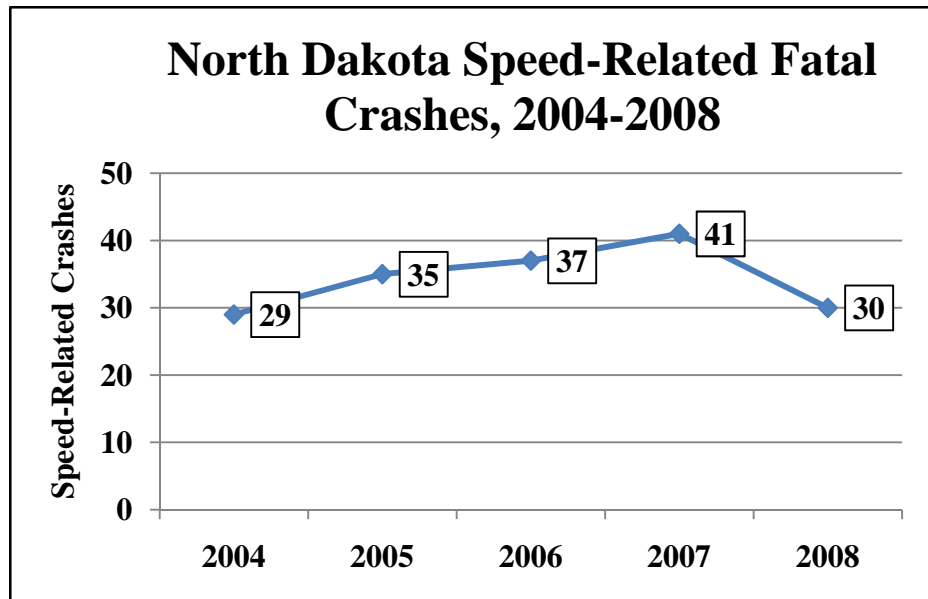
## Injury Crashes on Urban Roadways, 2002-2008



Source: North Dakota Department of Transportation (2009)

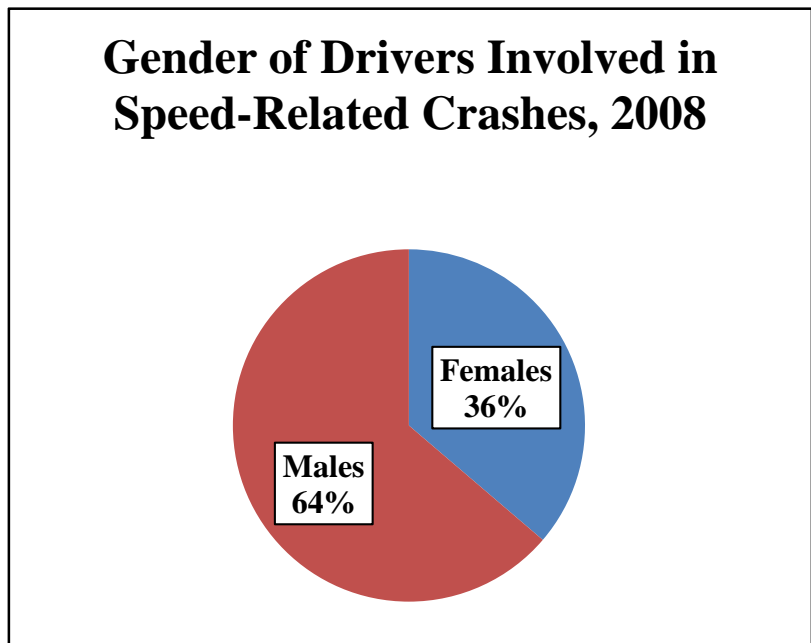
### 6. Speed

Fatal speed-related crashes increased from 29 in 2004 to 41 in 2007. In 2008, the number of fatal speed-related crashes decreased by 26.8 percent – from 41 to 30 – the largest decline in ten years



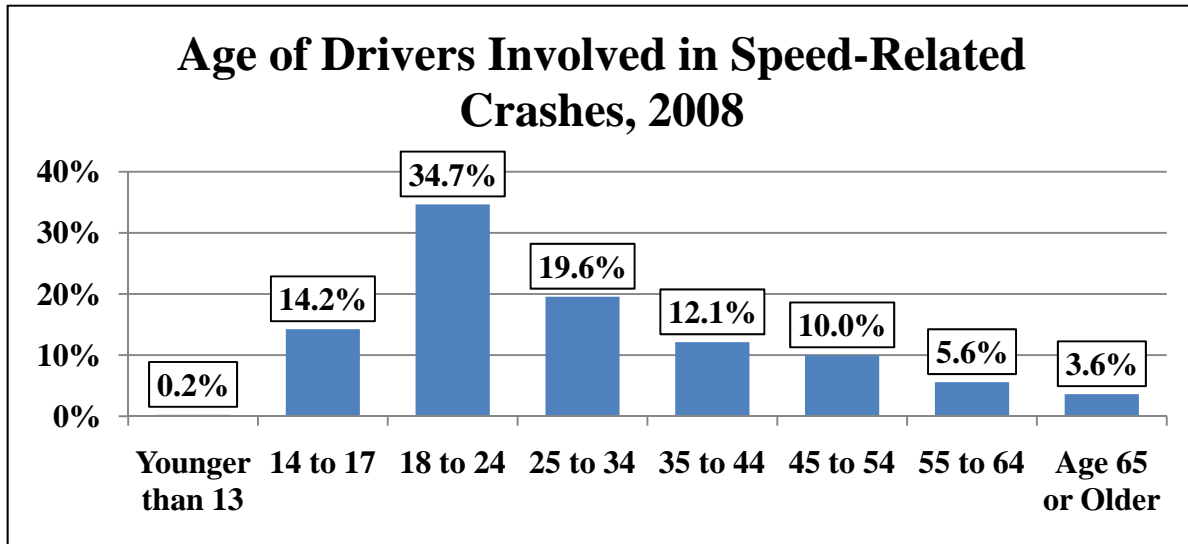
Source: North Dakota Department of Transportation (2009)

Male drivers overwhelmingly are involved in speed-related crashes more often than female drivers, with 64 percent of the drivers involved in speed-related crashes in North Dakota in 2008 being male.



Source: North Dakota Department of Transportation (2009)

Age also is very strongly correlated with speed-related crashes. Approximately two-thirds of drivers involved in speed-related crashes in North Dakota in 2008 were age 34 or younger.



Source: North Dakota Department of Transportation (2009)

#### 7. Attention Distracted

Driver inattention has been shown to be an increasing factor in motor vehicle crashes and near-crashes (NHTSA 2010a) and has become a topic of great interest in recent years (Klauer et al. 2006; NHTSA 2010b). Nationally in 2008, 16 percent of fatal crashes involved some form of driver inattention (NHTSA 2010a). In North Dakota, of the 97 fatal crashes in 2008, 10 of them involved attention distraction (NDDOT 2009).

#### Collaborators and Partners:

- North Dakota Department of Transportation
- North Dakota Department of Human Services
- North Dakota Department of Public Instruction
- North Dakota Department of Health
- Law Enforcement
- North Dakota Universities
- University of North Dakota Center for Rural Health
- Healthy North Dakota
- Insurance Companies
- Public Health
- North Dakota Safety Council
- Health-care Organizations
- Trauma Organizations
- Safe Kids North Dakota, Safe Kids Grand Forks, and Safe Kids Fargo/Moorhead
- Local EMS

- Local Schools
- North Dakota State University Extension Service
- 4-H
- Future Farmers of America
- North Dakota Driver and Safety Educators
- Native American Tribes and State Legislative Leaders
- Safe Communities
- Community Traffic Safety Programs
- Students Against Destructive Decisions
- Mothers Against Drunk Driving
- Family, Career and Community Leaders of America
- Emergency Medical Services

**For More Information:**

Visit the North Dakota Department of Transportation Traffic Safety website for data, prevention information and links to other resources.

[www.dot.nd.gov/divisions/safety/trafficsafety.htm](http://www.dot.nd.gov/divisions/safety/trafficsafety.htm)

North Dakota Department of Transportation – Crash Summary

[www.dot.nd.gov/divisions/safety/docs/crash-summary.pdf](http://www.dot.nd.gov/divisions/safety/docs/crash-summary.pdf)

North Dakota Department of Transportation

[www.dot.nd.gov/](http://www.dot.nd.gov/)

North Dakota Department of Health - Child Passenger Safety

[www.ndhealth.gov/injuryprevention/childpassenger/](http://www.ndhealth.gov/injuryprevention/childpassenger/)

National Highway Traffic Safety Administration

[www.nhtsa.dot.gov/](http://www.nhtsa.dot.gov/)

Upper Great Plains Transportation Institute

[www.ugpti.org/](http://www.ugpti.org/)

Safe Kids USA - Countdown2:Drive program (pre-driver)

[www.safekids.org/](http://www.safekids.org/)

North Dakota Safety Council - Defensive Driving, Professional Truck Driver and Alive at 25

[www.ndsc.org/](http://www.ndsc.org/)

U.S. Centers for Disease Control and Prevention

[www.cdc.gov/](http://www.cdc.gov/)

North Dakota Operation Lifesaver (Railroad Safety)

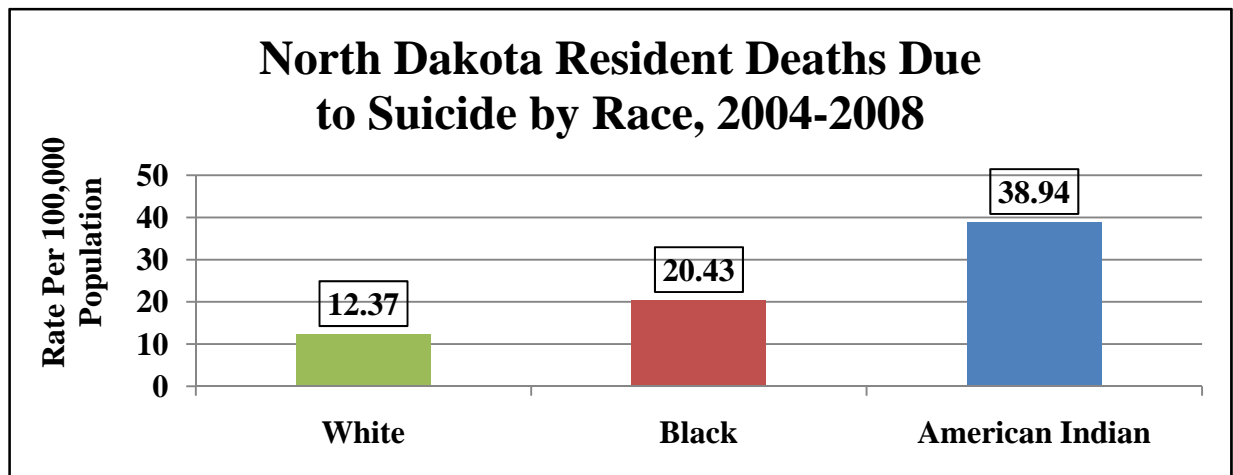
[www.ndsc.org/operationlifesaver](http://www.ndsc.org/operationlifesaver) or [www.oli.org](http://www.oli.org)

## B. Suicide

### **Problem:**

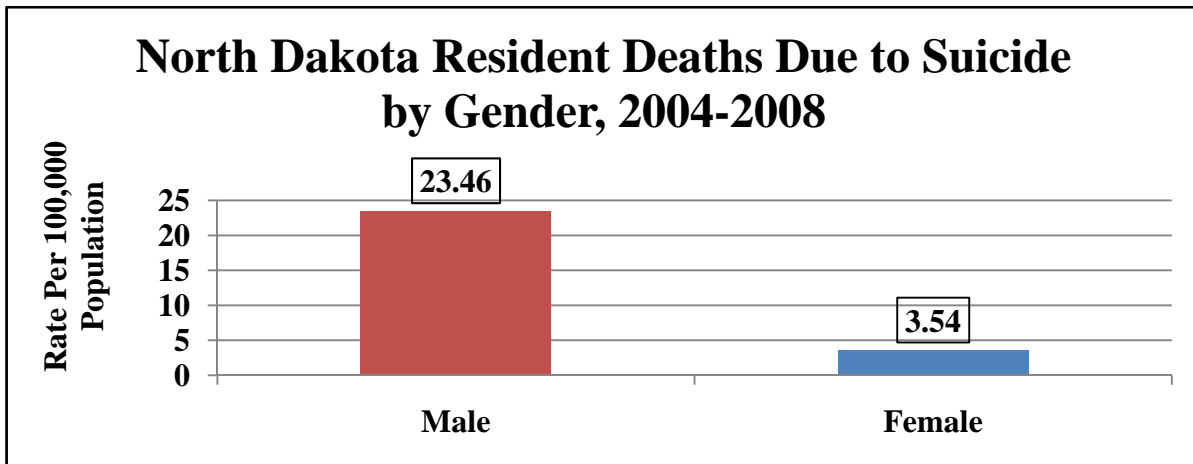
With over 34,000 deaths in 2007, suicide was the 11<sup>th</sup> leading cause of death in the United States – the suicide death rate was 11.26 per 100,000 population or approximately 94 suicides per day (CDC, 2010). In comparison, the 2008 suicide death rate in North Dakota was 13.3 per 100,000 population, equaling one death due to suicide approximately every four days. For each year 2005 through 2007, the suicide rate maintained over 14 deaths per 100,000 population.

Between 2004 and 2008, there were 433 suicide deaths in the state. The majority (85%) were white and 14 percent were American Indian. However, suicide rates were higher among the American Indian race (38.94 per 100,000 population) for this five-year period.



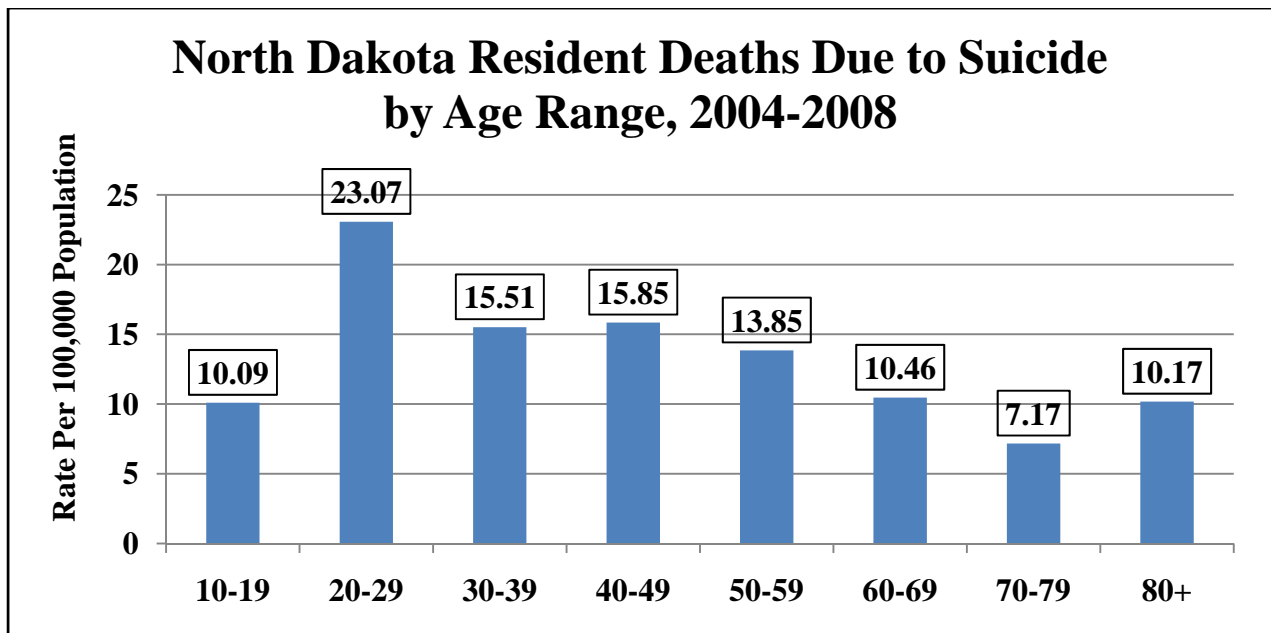
*Source: North Dakota Department of Health, Division of Vital Records*

From 2004 through 2008, a majority of the suicides (71%) were male. Males (23.46 per 100,000) had a much higher rate of suicide deaths for this time period than females (3.54 per 100,000).



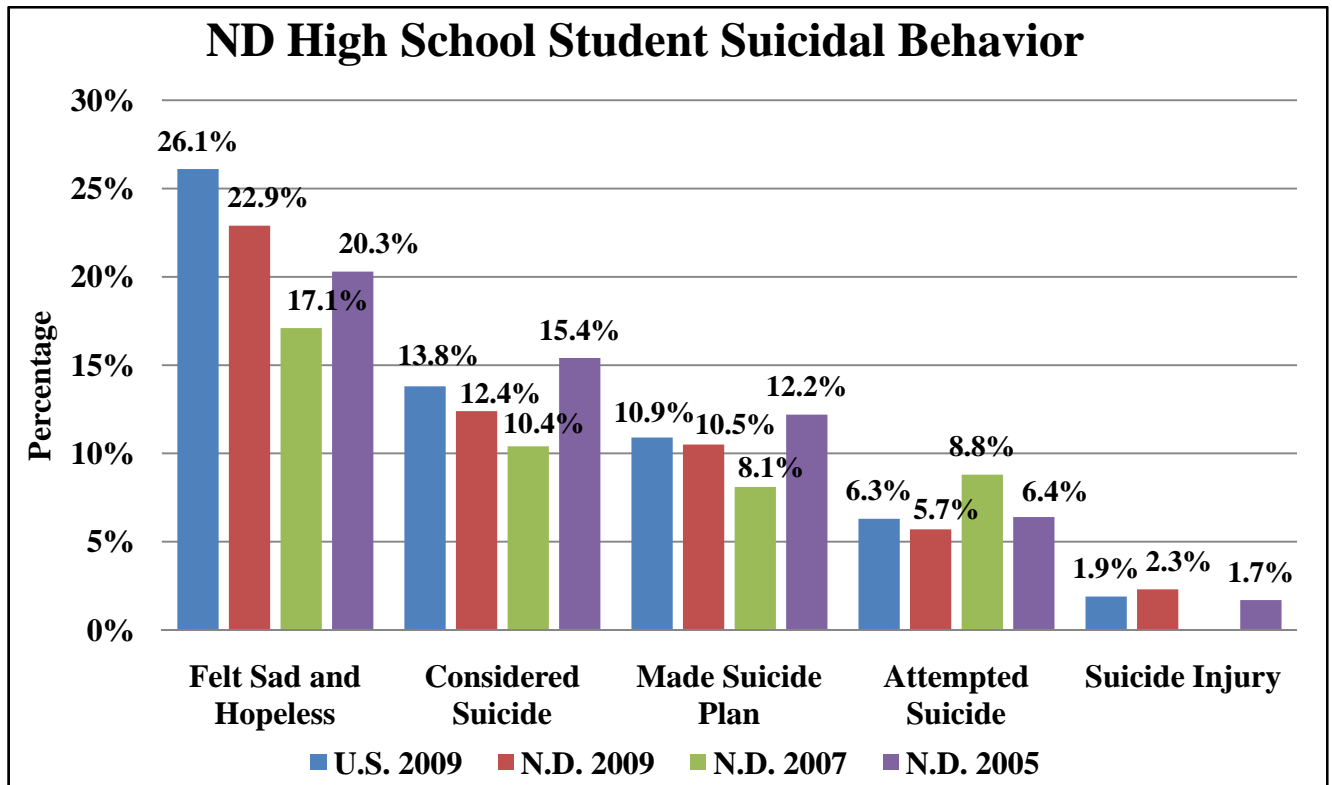
*Source: North Dakota Department of Health, Division of Vital Records*

Adults ages 20 through 29 had the highest percentage of suicide deaths (24%) and the highest rate per 100,000 population (23.07). Adults ages 40 through 49 had the second highest percentage of total deaths (18%) and rate (15.85 per 100,000).



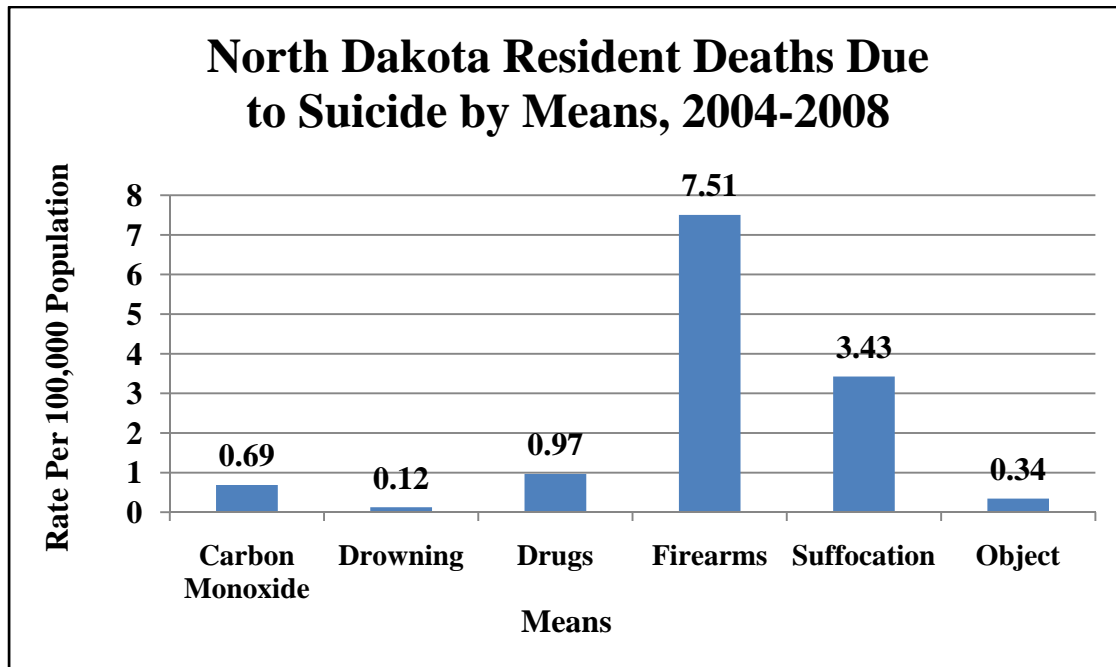
*Source: North Dakota Department of Health, Division of Vital Records*

According to the 2009 Youth Risk Behavior Survey (YRBS), 13.8% of U.S. high school students reported that they had seriously considered attempting suicide within 12 months preceding the survey; 12.4 percent of N.D. students reported to have considered suicide during this time period. Nationally, 6.3 percent of students reported that they had actually attempted suicide one or more times during the same period; 5.7 percent of N.D. students reported to have attempted suicide. In 2003, 11.3 percent of N.D. students reported to have made a suicide plan and in 2001, 13.9 percent made a plan to commit suicide.



Source: U.S. and North Dakota Youth Risk Behavior Surveillance System

Death by firearms has the highest rate in terms of suicide means (7.51 per 100,000); suffocation had the second highest rate (3.43 per 100,000).



Source: North Dakota Department of Health, Division of Vital Records



## **Goals:**

To empower communities to create and sustain suicide prevention programs and strengthen resiliency by reducing the suicide rate to 12.5 persons in North Dakota per 100,000 population in 2015.

## **Prevention Strategies:**

Suicide is a serious public health problem with extensive short- and long-term health consequences. Several barriers exist to addressing suicide prevention in N.D. These include access to mental health services, lack of sufficient funding to sustain suicide prevention programs, and the need to provide training for parents, educators, friends and co-workers to recognize at-risk behaviors and respond and refer appropriately.

- Develop and administer a statewide assessment survey to schools, churches, health-care providers, social services and other appropriate agencies to determine the current level of suicide prevention activities being completed.
- Collaborate with the N.D. Suicide Prevention Coalition and the N.D. Indian Affairs Commission to develop and implement a state plan to utilize state and/or federal funding to enhance or develop suicide prevention programs that include public awareness, training, data collection and a referral system for at-risk youth.
- Continue a statewide public awareness suicide prevention campaign.
- Develop a statewide data system to collect the number of attempts and completions from the six largest hospitals in N.D.

The North Dakota Department of Health has been involved in addressing suicide prevention since 1999, with the formation of the North Dakota Adolescent Suicide Prevention Task Force. Although there was limited funding, the many partners on the task force worked together to increase public awareness and offer trainings on suicide prevention. Many of these partnerships continued when the task force transformed into the North Dakota Suicide Prevention Coalition to support suicide prevention and early intervention activities. There are many state and local agencies and organizations, as well as suicide survivors, who are included in the coalition. Below is a listing of some of the agencies the North Dakota Department of Health will partner with on the suicide prevention strategies.

## **Collaborators and Partners:**

- North Dakota Department of Health
- North Dakota Suicide Prevention Coalition
- North Dakota Department of Veterans Affairs
- North Dakota Indian Affairs Commission
- Indian Health Service
- North Dakota Game and Fish Department

**For More Information:**

Visit the North Dakota Department of Health (NDDoH) Injury Prevention and Control website for prevention information, publications and links to other resources.

[www.ndhealth.gov/injury/](http://www.ndhealth.gov/injury/)

American Foundation for Suicide Prevention

[www.afsp.org/index.cfm?fuseaction=home.viewPage&page\\_id=1](http://www.afsp.org/index.cfm?fuseaction=home.viewPage&page_id=1)

American Association of Suicidology

[www.suicidology.org/web/guest/home](http://www.suicidology.org/web/guest/home)

National Suicide Prevention Lifeline

[www.suicidepreventionlifeline.org/](http://www.suicidepreventionlifeline.org/)

Suicide Prevention Action Network USA

[www.suicidepreventionlifeline.org/](http://www.suicidepreventionlifeline.org/)

Suicide Prevention Resource Center

[www.sprc.org/](http://www.sprc.org/)

## C. Falls

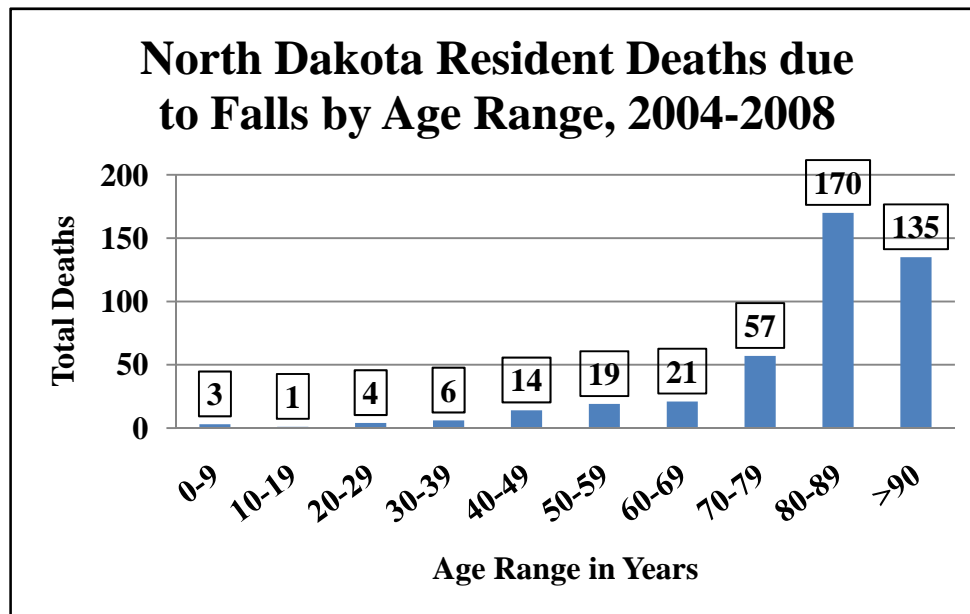
### **Problem for Adults:**

Falls are a common cause of injury for adults and children alike in our state. Falls involving elderly are from different causes than those for children, thus they will be addressed separately in this section.

Each year in the United States, one in every three adults age 65 and older falls and sustains moderate to severe injuries, such as hip fractures and head traumas. Falls are the most common cause of traumatic brain injuries (National Center for Health Statistics, (NCHS). Falls may even increase the risk of early death. According to the U.S. Centers for Disease Control and Prevention (CDC), in 2007, over 18,000 older adults died from unintentional fall injuries. The chances of falling and of being seriously injured in a fall increase with age. According to the NCHS, the death rates from falls among older men and women have risen sharply over the past decade.

Fall-related medical expenses cost Americans more than \$20 billion each year, according to estimates from the CDC. Projections show these expenses will climb to more than \$32 billion over the next 20 years. Our already strapped Medicare and Medicaid systems will be hard-pressed to meet these new costs

In North Dakota, falls remain the third leading cause of injury-related fatalities behind motor vehicle crashes and suicides. A total of 430 North Dakota residents died due to falls from 2004 through 2008, an average of 86 people per year. Eighty seven percent of those residents that died were older than 65.



*Source: North Dakota Department of Health, Division of Vital Records*

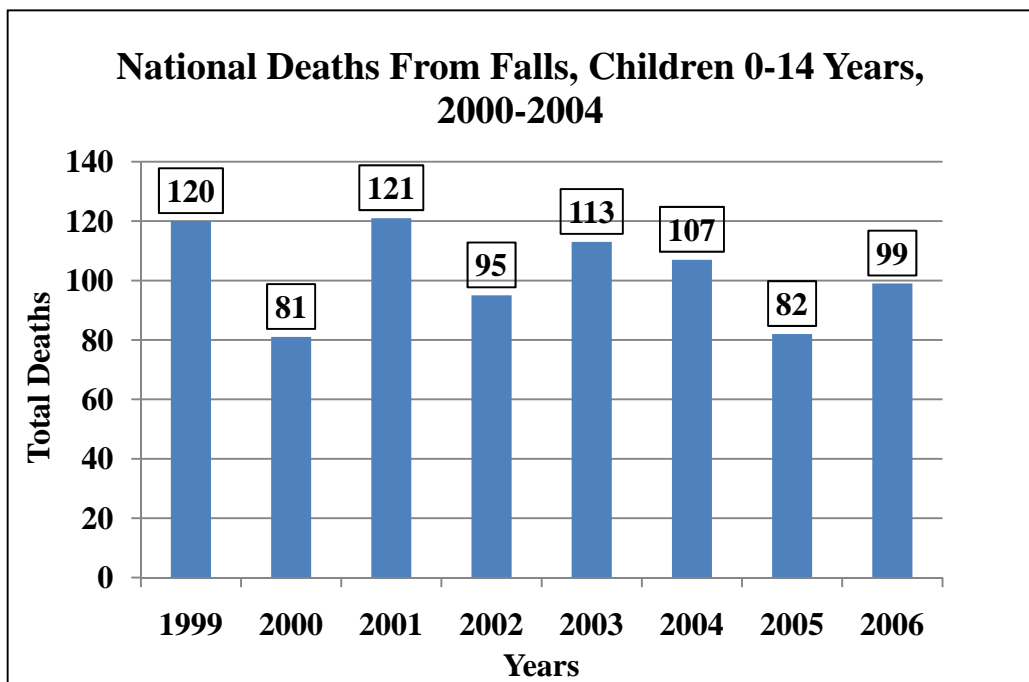
Approximately:

- Three people are taken to a trauma facility for a fall-related event every day.
- Two people are killed by a fall-related event every week.

### **Problem for Children:**

Children: Falls also are the leading cause of non-fatal injuries for children ages birth to 19 years. Each day, approximately 8,000 children (2.8 million each year) are treated in U.S. emergency rooms for fall-related injuries (CDC). Here are some key facts as it relates to childhood injuries and deaths associated with falls. This data is national data provided by Safe Kids USA.

- On average, each year 103 children die from fall-related injuries.



Source: Safe Kids USA

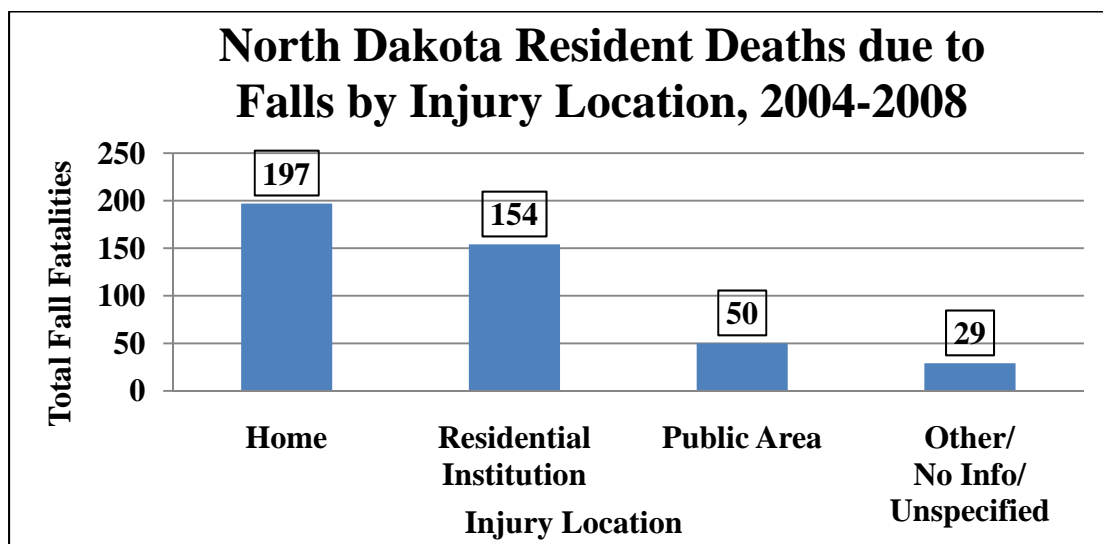
- Each year, more than 2.3 million fall-related injuries in children are reported.
- Falls are the leading cause of unintentional injury for all children ages 14 years and younger.

Fall injuries affecting children happen as a result of playground falls as well as falls from furniture and windows. While all of these types are seen in emergency rooms, falls from playgrounds constitute the major risk area for children as found in a study involving a North Dakota trauma center facility.

### **Contributing Factors and Risks for Adults:**

- *Gender and Age*  
Women older than 60 are the most frequently represented population for fall-related injuries and fatalities. Age complicates recovery, contributes to the development of secondary health problems, and increases the likelihood of falling and the severity of the injury.
- *Health Status*  
Reduced strength, inactivity, lack of adequate nutrition, frailty and other conditions associated with age increase the risk for falls and complicates recovery.
- *Management of Prescription Medication*  
Mismanagement of medication increases the risk for falls.
- *Alcohol*  
Misuse of alcohol, particularly in conjunction with medication, increases the risk for falls.
- *Living Environment*  
Cluttered rooms, unsafe stairs, unsafe floor coverings, lack of handrails, poor lighting and other home hazards result in increased risk for falls.
- *Outdoor Environment*  
Steps, slippery surfaces, cluttered yards and other hazards result in increased risk for falls.

North Dakota has an aging population. Year 2000 census data indicates 18.5 percent of the state's population is age 60 and older, and 2.3 percent of the population is age 85 and older. Surveys indicate adults (ages 45 and above) overwhelmingly want to stay in their homes as long as possible and prefer to receive any needed care in their home. In both the fall fatalities and traumas, home was the number one injury location. However, these are the most severe outcomes.



Source: North Dakota Department of Health, Division of Vital Records

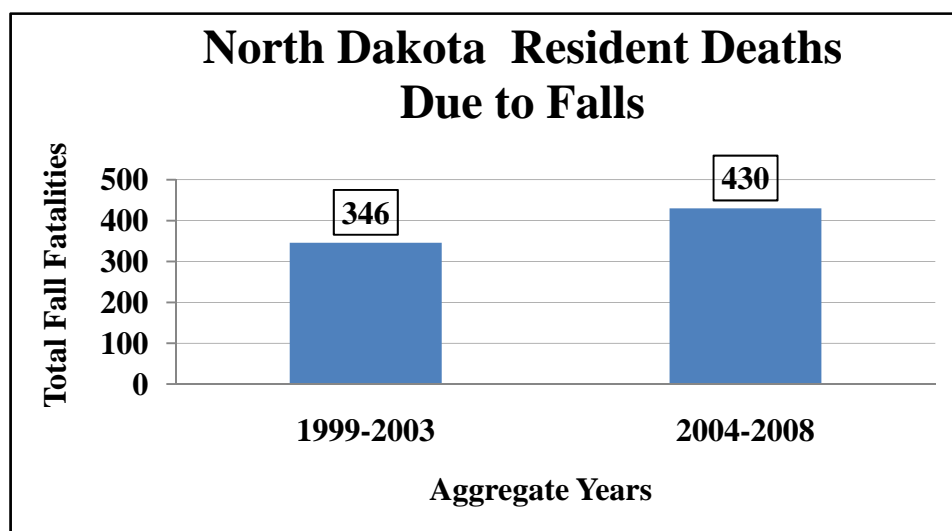
## **Contributing Factors and Risks for Children:**

The following are some of the causes of falls from playground equipment that result in injury:

- *Surfacing*  
The main contributor to injuries sustained due to a fall from playgrounds is the surfacing below the equipment. There needs to be a minimum of 9 to 12 inches of adequate surfacing to protect from injury.
- *Age Appropriateness*  
Children playing on playground equipment not designated for their age level. (Playgrounds usually are designated for younger than 5 and ages 5 to 12. They are constructed differently based on the physical characteristics of the children in each age group.)
- *Intended Use*  
Children using playground equipment in ways other than how it was intended.
- *Supervision*  
Lack of proper adult supervision.
- *Other Factors*  
Children's natural curiosity and desire to explore.  
Furniture being placed too close to windows and balconies.

## **Goals:**

Reduce the number of fatalities caused by falls by 10 percent by 2015. Falls are a public health problem – a problem that is largely preventable. North Dakota saw a substantial increase in the number of deaths related to residential falls from 2003 to 2008. As a result, a more comprehensive approach to fall prevention planning is indicated.



Source: North Dakota Department of Health, Division of Vital Records

Many people who fall suffer moderate to severe injuries such as lacerations, hip fractures or head traumas. These injuries can make it difficult to live independently and may increase the risk of early death. The majority of fractures among older adults are caused by falls. The most common are fractures of the spine, hip, forearm, leg, ankle, pelvis, upper arm and hand (CDC). Many who fall, but are not injured, develop a fear of falling. This fear may cause reduced participation in activities, leading to reduced mobility and loss of physical fitness, which in turn may increase the risk of falling. Public and health-care education and awareness are vital in addressing these issues and achieving this goal.

### **Prevention Strategies for Adults:**

Falls often result from multiple factors. These factors include general loss of strength or balance, medications that make people dizzy or impair reaction time, alcohol use, impaired vision, or hazards in and outside the home. Strategies to reduce the number of falls will include education for identifying risk factors and fall prevention. These strategies include:

- Increase public awareness about fall prevention.
- Improve fall prevention awareness where people live.
- Improve fall prevention awareness for agriculture-related work (farm).
- Improve fall prevention awareness in health-care settings.

*Public Education:* The general public can help with reducing falls if they are provided with appropriate information from credible sources. The North Dakota Department of Health is a valuable resource for providing information to the public through specific program promotion.

The Injury Prevention Program will:

- Campaign to reduce fall hazards in the home, with an emphasis on elderly population.
- Campaign to reduce fall hazards outside of the home (yard, shops, workplace) with emphasis on elderly population.
- Campaign to reduce fall hazards related to farm workers (see farm plan).
- Campaign to reduce falls in the health-care setting.

*Elderly Adults:* Elderly adults can take several steps to protect their independence and reduce their chances of falling by:

- Exercising regularly to focus on increasing leg strength and improving balance. Walking, Tai Chi and Yoga programs are beneficial.
- Contacting their health-care provider (physician, pharmacist, etc.) to review their medicines, both prescription and over-the counter, to reduce side effects and interactions that may cause dizziness or drowsiness and to ensure that medication is taken at the appropriate time.
- Having their eyes examined by an eye doctor at least once a year and updating their eyeglasses to maximize their vision.
- Making their homes safer by reducing tripping hazards, adding grab bars and railings, and improving the lighting in their homes

- Discussing with their health-care provider symptoms of dizziness or other health-care issues that affect their mobility.
- Seeking fall prevention information from public health or other health-care providers.

*Health-care Practitioners:* Health-care practitioners can play a role in reducing fall risk by educating patients who are discharged and returning home or are being transferred to a long-term care or rehabilitation facility, by including information on fall prevention. Hospitals and long-term care facility workers need to be educated about fall risk factors **and** prevention strategies. Long-term care and other health-care practitioners need to understand that many falls are preventable and are **not** a normal part of aging. Health-care practitioners should be encouraged to examine intrinsic/extrinsic risk factors, such as:

- Gait and balance impairment.
- Peripheral neuropathy (nerve problems).
- Vestibular dysfunction (balance problems).
- Muscle weakness.
- Vision impairment.
- Medical illness.
- Advanced age.
- Impaired ADLs (activities of daily living).
- Alcohol use or alcohol/medication interactions.
- Orthostasis (“head rush” or dizzy spell).
- Dementia (mild thinking problems).
- Medications, including psychotropic drugs (which affect the mind, emotions or behavior).
- Environmental hazards.
- Poor footwear.
- Restraints.



## **Prevention Strategies for Children:**

### *Playground:*

- Educate schools, park districts and child-care facilities about playground safety inspection lists that help in maintaining a safe play environment. Currently, there are no safety regulations that govern playgrounds in North Dakota. Therefore, places that have them are responsible for ongoing maintenance and assurance that they meet criteria set out for safe use and maintenance (The National Program for Playground Safety).
- Conduct statewide campaign to reduce falls on playgrounds, in child-care facilities and in homes with children.
- Provide resources to parents to better protect their children at home or at public playgrounds.
- Create a resource list of certified playground inspectors in the state of North Dakota who can provide assistance and services for playground inspection.

### *Other Falls:*

- Increase public awareness of prevention strategies including, promotion of home safety devices such as stair gates and guard rails, supervision of young children, placement of furniture, use of window locks, etc.
- Promote the availability of the North Dakota Department of Health publication entitled: “Home Safety Checklist: Are children safe in your house?”
- Educate employees of home visitation programs on how to assess and modify home environments to prevent falls.
- Make renters aware of safety standards regulating balcony railings and that many are “grandfathered in” and do not comply with the standards that regulate “new construction.”

## **Collaborators and Partners:**

This plan outlines issues and actions that require a comprehensive approach to a complex public health problem. The plan calls for actions to educate the general public and health-care providers and to build collaborative capacity for fall prevention. Fall risk factors and fall prevention strategies should be communicated across the health-care professional system, including those providing care at home, in outpatient clinics, hospitals, rehabilitation centers, eye care facilities, foot care offices, specialty care clinics, emergency departments and long-term care facilities. Fall risk factors and prevention strategies should be communicated to the general public, parents, schools and child-care facilities. In North Dakota, partnering agencies play a vital role in sharing risk factor and prevention strategies and information. Some of these agencies include:

- North Dakota State University Extension Service
- Insurance Companies
- North Dakota Department of Health
- North Dakota Farm Bureau
- Hospitals/Clinics
- North Dakota Association of American Retired Persons
- Local Public Health Agencies

- North Dakota Department of Human Services Aging Services
- North Dakota Interagency Program for Assistive Technology
- North Dakota Long Term Care Association
- Fitness Centers
- North Dakota Association of Pharmacists
- North Dakota Medical Association
- North Dakota Safety Council
- Local Media
- Senior Centers
- Safe Kids North Dakota, Safe Kids Grand Forks, and Safe Kids Fargo/Moorhead
- Home Visitation Programs (i.e. Healthy Families, Public Health, Early Childhood Tracking)
- North Dakota Parks and Recreation
- Local Schools, Churches and Child-care Centers

**For More Information:**

Visit the North Dakota Department of Health (NDDoH) Injury Prevention and Control website for prevention information, publications and links to other resources.

[www.ndhealth.gov/injury/](http://www.ndhealth.gov/injury/)

U.S. Centers for Disease Control and Prevention

[www.cdc.gov](http://www.cdc.gov)

Safe Kids USA

[www.safekids.org/](http://www.safekids.org/)

Playground Supervision

[www.playgroundsupervision.org](http://www.playgroundsupervision.org)

## **D. Unintentional Poisoning**

### **Problem:**

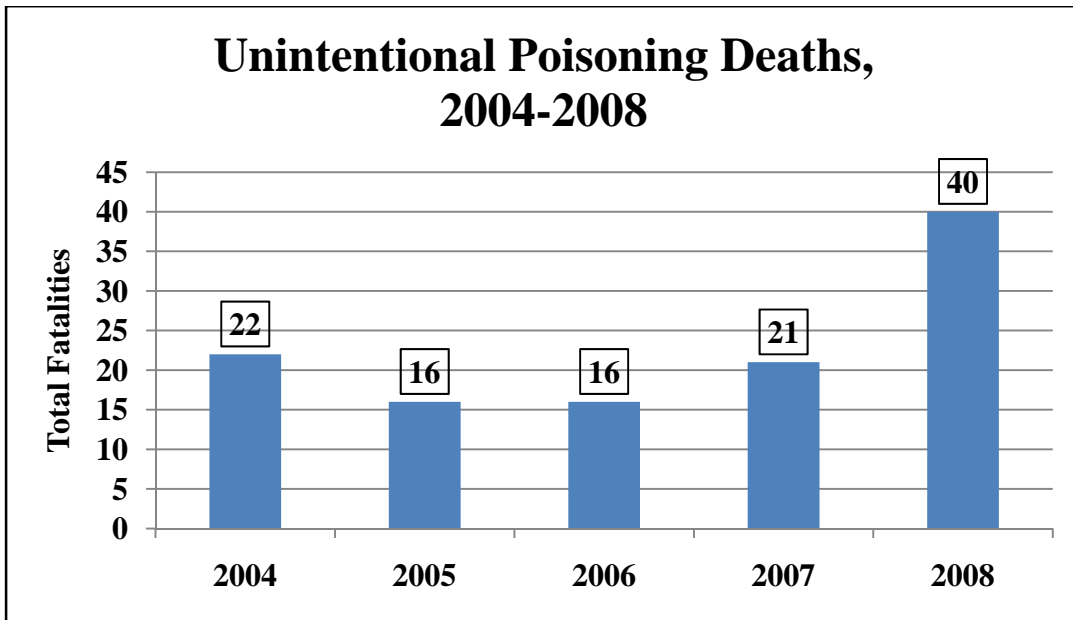
Unintentional poisonings were the fourth leading cause of injury death for all North Dakotans between the years of 2004 to 2008. According to the CDC, each day in the U.S. about 82 people die as a result of unintentional poisoning and another 1,941 are treated in emergency departments. The use and abuse of prescription drugs is on the rise nationally and North Dakota is trending in the same direction. Sixty-one percent of poison exposure calls to the Regional Poison Control Center deal with children ages 5 and younger.

Sixty-one (61) percent of poison-exposure calls by North Dakota residents deal with children ages 5 and younger. The most common poison exposures for children are household products such as cosmetics and personal care products, cleaning substances, pain relievers, foreign bodies and plants. Calls to the Regional Poison Center for children ages birth to 17 years primarily were for ingesting analgesics, antipyretics and antirheumatics, as well as other drugs and medications.

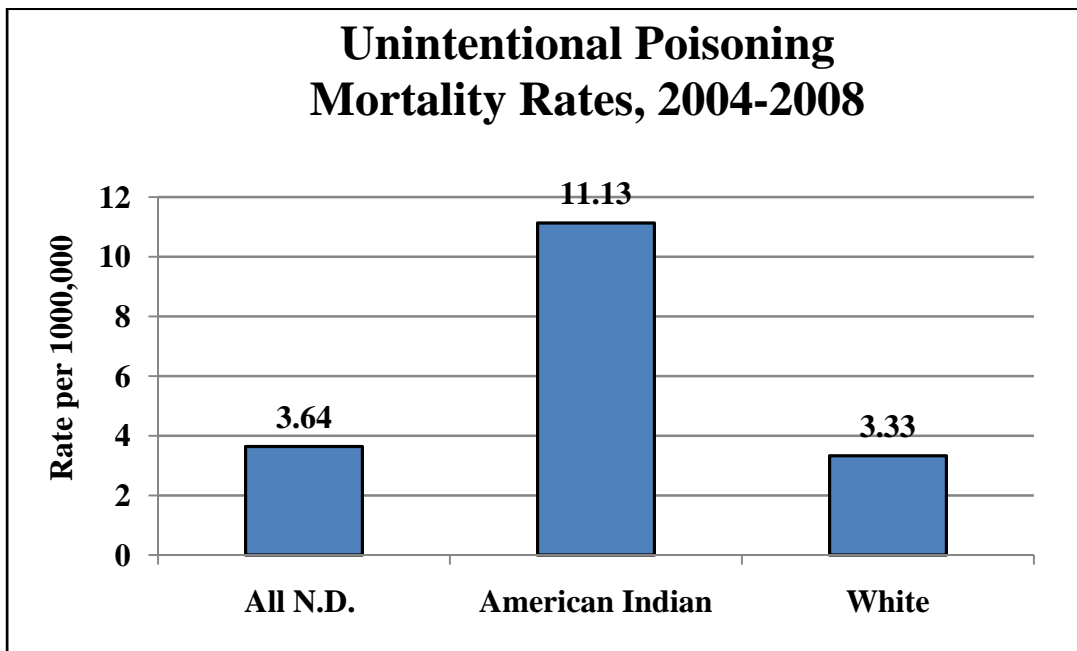
For North Dakota adults, the most common poison exposures are pain relievers, sedatives, cleaning substances, antidepressants and bites/stings. The number one leading age group for all unintentional poisoning deaths is 40 to 49. The age adjusted rate of deaths for all North Dakota residents is 3.64. There is a large disparity between the age-adjusted rate for American Indians at 11.13 and other races at 3.3 per 100,000.

Use or abuse of narcotics is the leading cause of unintentional poisoning death for adults in their 30s and 40s, followed by carbon monoxide poisoning. Seniors age 65 and older were unintentionally poisoned by hormones and synthetic substitutes, other drugs and medicinal substitutes such as herbal remedies and agents primarily affecting the cardiovascular system.

Rural people have an increased risk of injury due to the distance and access to medical centers; therefore, use of the Poison Control Center helpline is more critical to obtaining appropriate interventions.



Source: North Dakota Department of Health, Division of Vital Records



Source: North Dakota Department of Health, Division of Vital Records

**Goals:**

Reduce fatal poisonings from 3.64 per 100,000 (age-adjusted rates) to 2.5 per 100,000 by 2015.

**Prevention Strategies:**

- Collect and analyze poisoning data. Distribute to agencies and organizations involved in poison prevention strategies, i.e., childcare, hospitals, clinics, Safe Kids coalitions

- Support existing and new community-prevention efforts that are based on local data and needs and that utilize proven or promising programs
- Enlist/maintain a high-quality poison information center with round-the-clock free service for the public and health-care professionals. Document calls using an established database. Analyze caller data to look for emerging trends, location, ages, symptoms and outcomes.
- Promote the national Poison Control Center logo and telephone number (1.800.222.1222), which connects callers with the nearest poison control center.
  - Educate health-care plans and providers about the need to screen at-risk children.
- Educate populations at risk for poisoning, including the following:

#### **Children**

- Create and distribute presentations on prevention to parents and caregivers
- Promote Train-the-Trainer Toolkits with the North Dakota Safety Council
- Promote the use of the Department of Health Home Safety Checklist

#### **Seniors**

- Make presentations and distribute information to senior groups on adverse effects of medication and potential interactions
- Contact pharmacists' associations to educate seniors on safe use of medications
- Create and distribute a poison prevention brochure to public health, pharmacies, hospitals and clinics

#### **General**

- Create and distribute a poison prevention brochure to public health, pharmacies, hospitals and clinics
- Educate and promote the Attorney General's Drug Take Back Program
- Educate public on the proper disposal of drugs
- Increase awareness regarding poison prevention strategies using statewide media and other opportunities
- Educate physicians on local resources, such as pharmacists, regarding poison control

#### **Rural Communities**

- Promote and encourage continuing education training on poison prevention and poison center services for public health nurses, child-care providers, social workers, EMS personnel, rural hospital staff, Indian Health Services and tribal health services
- Promote poison prevention efforts with farm organizations with emphasis on special topics of concern in rural areas including pesticides and farm hazards

### **Collaborators:**

- North Dakota Department of Human Services, Children and Family Services and Aging Services
- North Dakota Department of Health
- North Dakota Office of the Attorney General
- North Dakota Emergency Medical Services Association
- North Dakota Healthcare Association
- North Dakota Chapter of the American Academy of Pediatrics
- Safe Kids North Dakota, Grand Forks and Fargo/Moorhead
- North Dakota Safety Council
- Safe Kids North Dakota, Safe Kids Grand Forks, and Safe Kids Fargo/Moorhead

### **For More Information:**

Visit the North Dakota Department of Health (NDDoH) Injury Prevention and Control website for prevention information, publications and links to other resources.

[www.ndhealth.gov/injury/](http://www.ndhealth.gov/injury/)

American Association of Poison Control Centers

[www.aapcc.org](http://www.aapcc.org)

U.S. Centers for Disease Control and Prevention

- General Poison Prevention Fact Sheet  
[www.cdc.gov/ncipc/factsheets/poisonprevention.htm](http://www.cdc.gov/ncipc/factsheets/poisonprevention.htm)
- National Center for Environmental Health (NCEH) *Fact Sheet: What Every Parent Should Know About Lead.*  
[www.cdc.gov/nceh/lead/faq/cdc97a.htm](http://www.cdc.gov/nceh/lead/faq/cdc97a.htm)

North Dakota Poison Control System

[www.ndpoison.org](http://www.ndpoison.org)

American Academy of Pediatrics

[www.aap.org](http://www.aap.org)

Safe Kids USA

[www.safekids.org](http://www.safekids.org)

Safe States Alliance

[www.safestates.org](http://www.safestates.org) (search “Poisoning”)

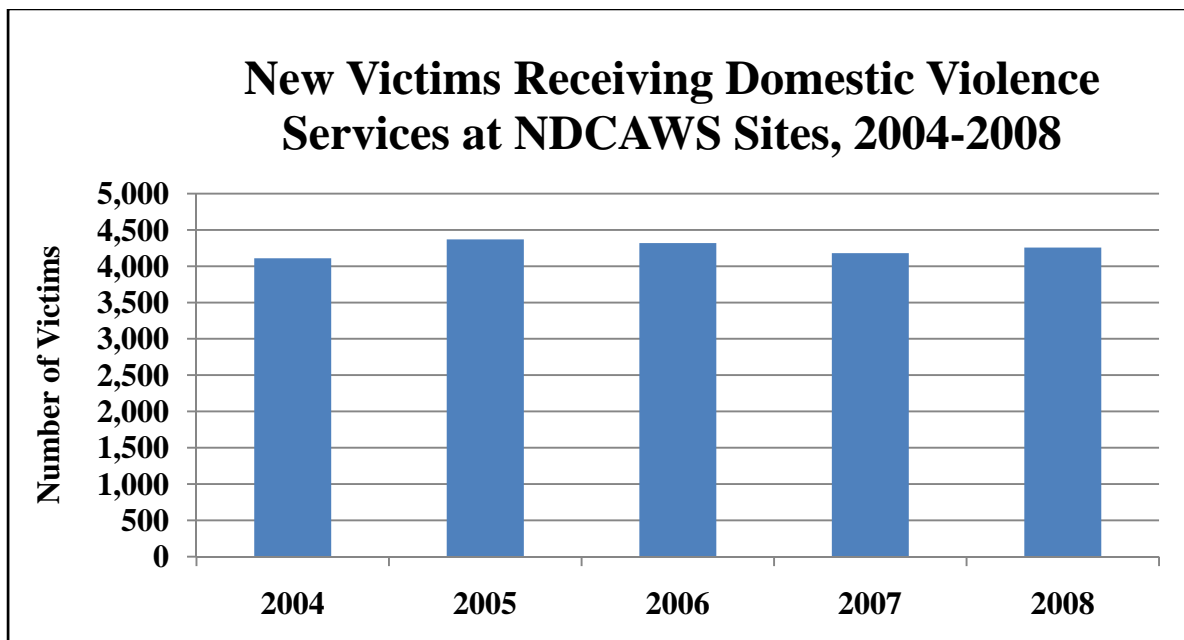
North Dakota Safety Council

[www.ndsc.org/](http://www.ndsc.org/)

## E. Domestic Violence/Sexual Assault

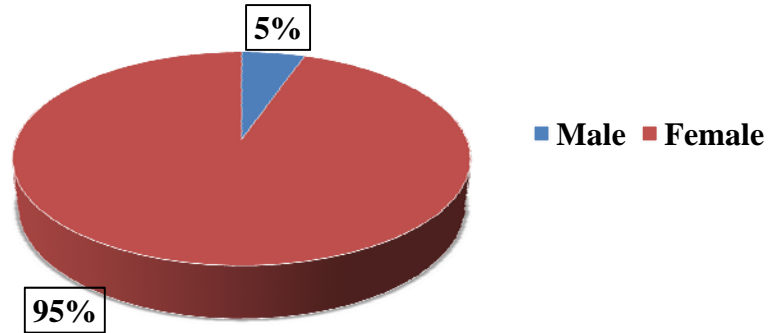
### Problem:

Intimate partner violence (IPV) and sexual violence (SV) are serious public health problems in North Dakota. Individuals who experience violence find their lives irrevocably changed. The repercussions last a lifetime and the impacts that it has on families and children are devastating. There are 21 dual domestic violence/rape crisis agencies in North Dakota who report their statistics to the North Dakota Council on Abused Women's Services/Coalition Against Sexual Assault in North Dakota (NDCAWS). In 2008, 4,563 incidents of domestic violence were reported to crisis centers in North Dakota. In the same year, 854 primary victims of sexual assault also were served at crisis centers across the state. That's over 5,000 victims a year in our state alone. We are all impacted by IPV and SV and there are several things we can do to address this problem. Intimate partner and sexual violence can be prevented through development of healthy relationships and coping skills. We can collaborate with health-care providers to increase screenings for IPV and SV and to obtain more accurate data. Additional funding is needed to address both prevention and intervention of IPV and SV.



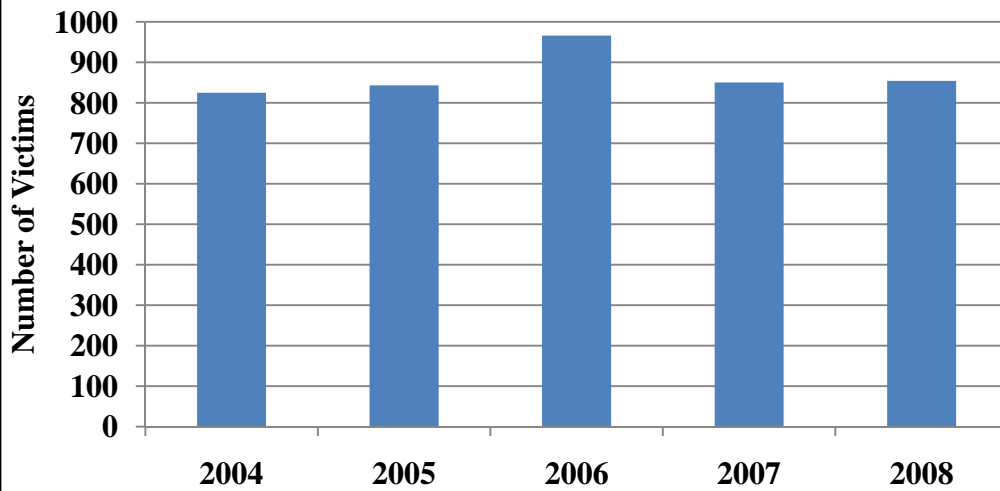
*Source: North Dakota Domestic Violence Statistics, North Dakota Council on Abused Women's Services*

### New Victims Receiving Sexual Assault Services at NDCAWS Sites by Gender, 2004-2008



Source: North Dakota Sexual Assault Statistics, North Dakota Council on Abused Women's Services

### New Victims Receiving Sexual Assault Services at NDCAWS Sites, 2004-2008



Source: North Dakota Sexual Assault Statistics, North Dakota Council on Abused Women's Services



## **What is Intimate Partner Violence (Domestic Violence)?**

North Dakota Century Code Chapter 14-07.1:

**Domestic Violence** includes physical harm, bodily injury, sexual activity compelled by physical force, assault, or the infliction of fear of imminent physical harm, bodily injury, sexual activity compelled by physical force, or assault, not committed in self-defense, on the complaining family or household members.

## **What is Sexual Violence?**

North Dakota Century Code Chapter 12.1-20:

**Sex Offenses- Sexual Act** means contact between human beings consisting of contact between the penis and vulva, penis and the anus, the mouth and the penis, the mouth and the vulva or any other portion of the human body and the penis, anus, or vulva; or the use of an object which comes in contact with the penis, vulva or anus.

## **Goals:**

Enhance primary-prevention initiatives and a victim-centered response to intimate partner and sexual violence by 2015 through community focused efforts.

## **Primary Prevention Strategies:**

- Increase in the number of schools adapting age-appropriate curricula policies and practices that promote healthy relationships.
- Promote healthy relationships, coping skills and community connectedness.
- Collaborate with the Intimate Partner Violence and Sexual Violence State Prevention Team to support community-based prevention programming.
- Seek increase of state general funds for primary prevention of Intimate Partner Violence and Sexual Violence.
- Collaborate with three large medical facilities to obtain and analyze intimate partner violence and sexual violence data.

## **Primary Prevention Evaluation:**

- Increase the number of schools that adopt age-appropriate curricula, policies and practices that promote healthy relationships.
  - A baseline survey will be done in 2011 of the 21 Domestic Violence/Rape Crisis programs on the types and frequency of presentations done on healthy relationships they provide in the schools. The survey will be repeated in 2015 to determine where the increase in policies and practices in the schools have occurred.

- The North Dakota Department of Health, North Dakota Council on Abused Women's Services (Coalition Against Sexual Assault in North Dakota and the North Dakota Department of Public Instruction will collaborate to assess the number and types of anti-bullying campaigns that are occurring with each North Dakota school district in 2011 and 2015.
- Increase the number of communities addressing primary prevention of intimate partner violence and sexual violence with consistent messages through collaborating community partnerships.
  - In 2011 and 2015, assess 21 Domestic Violence/Rape Crisis programs, local public health agencies and other appropriate community agencies (ex. Safe Communities) that have task forces, teams or other types of groups that address health relationships and their work.
- Document the number of times joint meetings or activities occur between the Intimate Partner Violence and Sexual Violence State Prevention team member and the local community-based prevention program.
- Increase in the number of community primary prevention of intimate partner violence and sexual violence activities.

**Intervention Strategies:**

- Increase capability of health-care providers to screen for intimate partner and sexual violence.
- Increase screening for experiences of violence for health-care providers.
- Seek increase of state general funds to support victims of intimate partner violence and their families.

**Intervention Evaluation:**

- Increase the number of men and women who are screened for experiences of violence by their care providers.
  - A pre- and post-test will be given to health-care providers attending the trainings to determine the difference in their abilities to screen before and after the trainings.
  - Health-care providers attending the trainings will be asked to estimate the number of victims they screened during the past year. A follow-up survey will be done one year later asking them how many victims were screened since they attended the training.
- Ensure that services to support victims of intimate partner violence and sexual violence are funded so they can meet the needs of victims and their families.

### **Collaborators and Partners:**

Intimate partner and sexual violence pose serious public health risks that affect individuals, families, communities and society. Both are crimes meant to control another individual whether it is by physical or emotional abuse, intimidation, or forcing a sexual act that is not wanted or consented. This plan encompasses primary-prevention strategies to teach youth about healthy relationships. To accomplish the strategies, a wide variety of partners who are leaders within their agencies, communities, schools, youth organizations and others influencing youth must work together. The work of assisting victims and survivors of intimate partner and sexual violence must still be addressed. This plan focuses on training health-care providers to screen their patients for intimate partner and sexual violence. Some of the agencies the Department of Health will partner with are listed below.

- North Dakota Council on Abused Women’s Services/Coalition Against Sexual Assault in North Dakota
- North Dakota Department of Health
- North Dakota Medical Association
- North Dakota Department of Public Instruction
- North Dakota School Counselor Association
- North Dakota Intimate Partner and Sexual Violence State Prevention Team
- Life After Fear

### **For More Information:**

Women’s Health Information Center  
[www.womenshealth.gov/](http://www.womenshealth.gov/)

Family Violence Prevention Fund  
[www.ndhealth.gov/injury/links.htm](http://www.ndhealth.gov/injury/links.htm)

National Sexual Violence Resource Center  
[www.nsvrc.org/](http://www.nsvrc.org/)

North Dakota Council on Abused Women’s Services  
[www.ndcaws.org/](http://www.ndcaws.org/)

Office on Violence Against Women  
[www.ovw.usdoj.gov/](http://www.ovw.usdoj.gov/)

U.S. Centers for Disease Control and Prevention – Violence Prevention  
[www.cdc.gov/ViolencePrevention/sexualviolence/index.html](http://www.cdc.gov/ViolencePrevention/sexualviolence/index.html)

National Resource Center on Domestic Violence on Violence Against Women  
[www.vawnet.org/](http://www.vawnet.org/)

North Dakota Intimate Partner and Sexual Violence Prevention Plan  
[www.ndcaws.org](http://www.ndcaws.org)

## **F. Other**

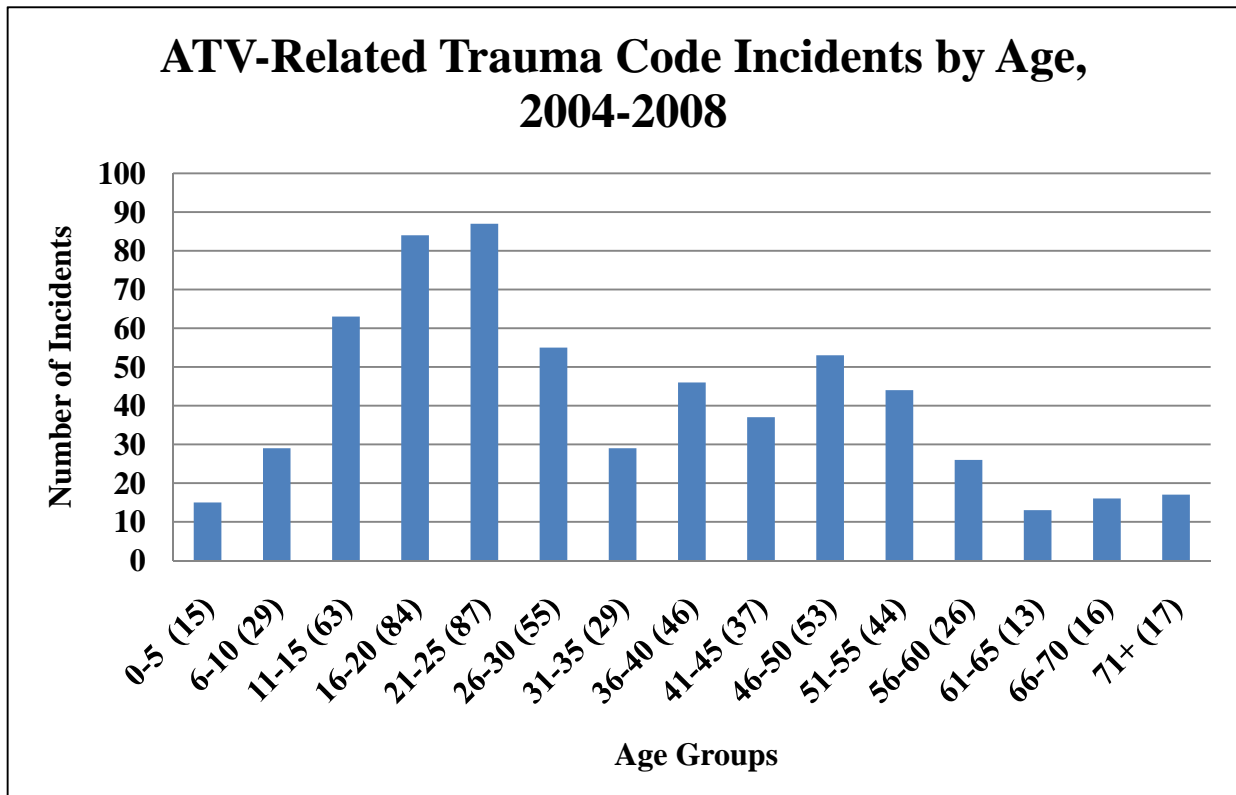
### **All Terrain Vehicles (ATV)**

#### **Problem:**

All terrain vehicle (ATV) use in North Dakota has been on the rise in the past years. In the past, use of ATVs was traditionally seen in rural areas where they were used for farming operations. Recently, ATVs have become more popular in the recreational arena and this has corresponded with an increasing incidence of injuries. Between the years of 2004 to 2008, seven people were killed in North Dakota while using an ATV. According to the Consumer Product Safety Commission (CPSC), more than 800 deaths and 135,000 injuries occur each year in the U.S. About one-third of ATV-related deaths and injuries are to children younger than 16. Like other activities involving high speeds and heavy machinery, riding an ATV can be dangerous and certain behaviors will increase the risk of injury or death.

While most people associate ATV deaths with head injuries, crushing injuries are just as likely. ATVs are large pieces of equipment that can weigh up to 800 pounds and reach speeds of over 60 miles per hour. Unlike a motor vehicle or some other types of recreational vehicles, ATVs have no safety mechanisms such as seat belts, air bags or roll-over bars. They typically are driven on off-road areas where the terrain is often uneven, thus resulting in tip-over crashes. The chance of this type of crash is often seen when ATVs are ridden with more people than they were intended for carrying making the weight distribution uneven. Young children are often unable to bring ATVs to an upright position should they begin to tip and especially are susceptible to injuries and deaths when crushed from the weight of these vehicles.

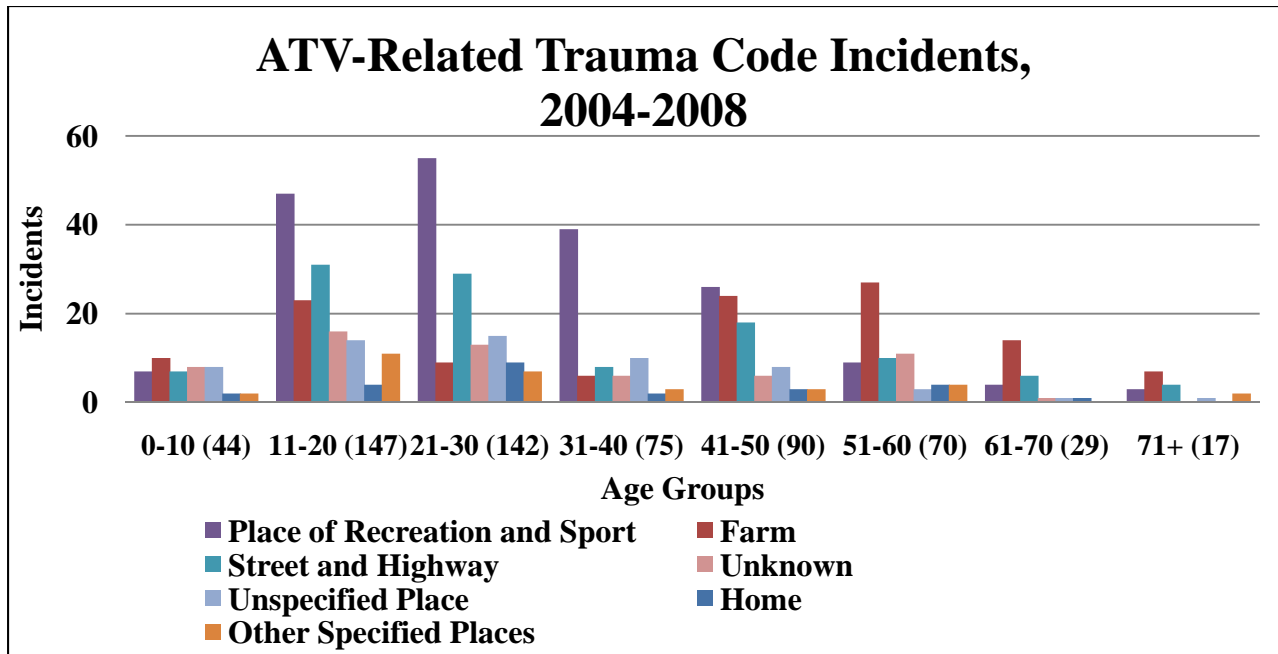
The North Dakota Trauma Registry is one way of tracking the most serious injuries in North Dakota. According to the North Dakota Trauma Registry, there were 614 events that were related to an ATV accident. To be designated as a trauma code, the injury must meet certain criteria that are assessed by the emergency departments of hospitals (see appendix for criteria). Of the total number of ATV-related incidents from the Trauma Registry during the five year period, 107 were for children younger than 16, while the most at-risk age group is 21 to 25 with 87 incidents.



*Source: North Dakota Department of Health, Division of Emergency Medical Services and Trauma, Trauma Registry*

The American Academy of Pediatrics and Safe Kids USA recognize that off-road vehicles are particularly dangerous for children younger than 16 who may have immature judgment and motor skills. Therefore, their recommendation is that ATVs not be driven by children younger than 16. CPSC recommends that children younger than 16 not drive or ride on an adult ATV. According to the CPSC, children younger than 16 are twice as likely to be injured on adult ATVs as compared to those riding youth ATVs. They also recommend that hands-on safety training courses and proper protective gear are essential to ATV safety. Safety gear should include not only a helmet, but a chest protector to aid in preventing crushing injuries as well.

The following graph depicts the ages of people involved in ATV injuries and the location of the incident according to the N.D. Trauma Registry. There were 191 incidents of children younger than 21 that were seriously injured due to an ATV-related accident. These injuries were recorded after medical professionals designated a trauma code. Most of the injuries occurred at a place of recreation or sport. While ATVs are considered an off-highway vehicle (they are not engineered for streets or highways), yet the second highest location for injuries occurred while driving on them.



*Source: North Dakota Department of Health, Division of Emergency Medical Services and Trauma, Trauma Registry*

Due to the rural population of our state and agriculture as one of the primary industries, there is use of ATVs on many roadways in N.D. The travel on county roads is permissible and may often occur due to farmland being located on both sides of a road. When accidents happen on these roads, it puts the accident victim at greater risk for more severe injuries. People in rural areas have an increased risk of death or serious injuries due to the distance and access to emergency medical services and/or a medical center; therefore, more diligence when operating an ATV is recommended.

**Goals:**

Reduce ATV-related deaths in North Dakota and also the number of Trauma Codes Incidents for children younger than 16 by 2015.

**Prevention Strategies:**

- Collaborate with North Dakota Parks and Recreation Safety Courses to ensure good prevention messages are given during trainings. Promote and encourage attendance at these courses.
- Work with the North Dakota Chapter of The American Academy of Pediatrics to provide information and materials about ATV safety and risks to their patients.
- Increase awareness of manufacturers’ recommendations matching operator age with ATV size

- Raise awareness of adults to the availability of appropriate-sized ATVs for children based upon their age, developmental stages, skill level and size.
- Work with appropriate partners including North Dakota State University Extension, insurance agencies, farm organizations and others to educate area youth on ATV risks.
- Provide educational materials to N.D. citizens about all ATV safety, including risks and equipment required to provide protection for ATV riders.
- Work with ATV dealers to provide purchasers with safety recommendations and equipment.
- Monitor ATV-related incident data and share with appropriate partners.

**Collaborators and Partners:**

- North Dakota Farm Bureau
- North Dakota Department of Transportation
- North Dakota Parks and Recreation
- North Dakota Department of Health
- Safe Kids North Dakota, Safe Kids Grand Forks, and Safe Kids Fargo/Moorhead
- North Dakota Chapter of American Academy of Pediatrics
- AAA of N.D.
- NDSU Extension Service
- North Dakota Rural Electric Cooperative
- Farmers Union
- State Farm
- Local ATV Dealerships

**For More Information:**

Visit the North Dakota Department of Health (NDDoH) Injury Prevention and Control website for prevention information, publications and links to other resources.

[www.ndhealth.gov/injury](http://www.ndhealth.gov/injury)

North Dakota Parks and Recreation Department

[www.parkrec.nd.gov/recreation/ohv/wheretoride.html](http://www.parkrec.nd.gov/recreation/ohv/wheretoride.html)

Consumer Product Safety Commission

[www.cpsc.gov/cpscpub/pubs/atvpubs.html](http://www.cpsc.gov/cpscpub/pubs/atvpubs.html)

[www.atvsafety.gov/](http://www.atvsafety.gov/)

Safe Kids USA

[www.safekids.org](http://www.safekids.org)

[www.safekids.org/assets/docs/for-safety-professionals/kids-and-all-terrain-vehicles.pdf#\\_utma=-&\\_utmb=-&\\_utmc=-&\\_utmz=-&\\_utmv=-&\\_utmh=38294271](http://www.safekids.org/assets/docs/for-safety-professionals/kids-and-all-terrain-vehicles.pdf#_utma=-&_utmb=-&_utmc=-&_utmz=-&_utmv=-&_utmh=38294271)

American Academy of Pediatrics  
[www.aap.org](http://www.aap.org)

Children's Safety Network  
[www.childrensafetynetwork.org](http://www.childrensafetynetwork.org)



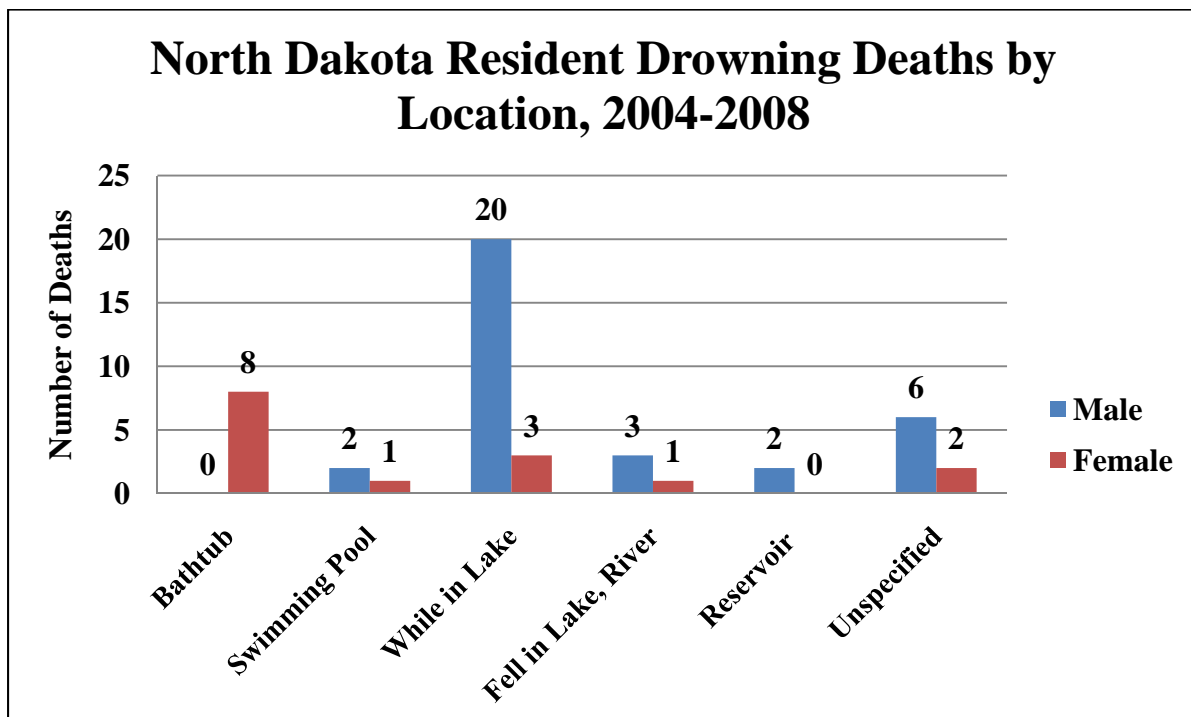
## Unintentional Drowning

### Problem:

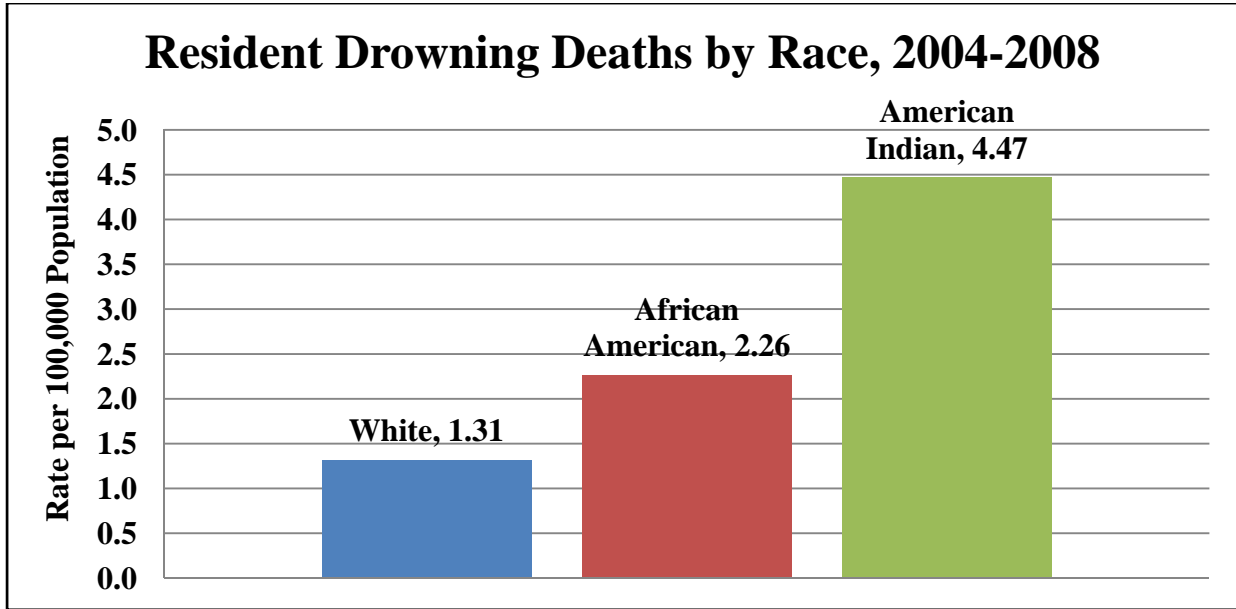
According to the Centers for Disease Control and Prevention (CDC), a person's age, place of recreation, and lack of personal flotation device (PFD) application are major risk factors for drowning (CDC, 2011). In North Dakota, drowning is the fifth leading cause of unintentional injury death.

From 2004 through 2008, the majority of drowning deaths occurred in natural waters such as lakes, rivers and reservoirs. According to the North Dakota Game and Fish Department, in each drowning death, the resident was not wearing a PFD (Boldt, 2011). Drowning in a bathtub had the second highest prevalence (16%) over this five-year span.

From 2004 through 2008, adults ages 25 through 29 had the highest rates of drowning deaths (3.6 per 100,000), followed by adults ages 40 through 44 (3.5 per 100,000). American Indians had a higher death rate (4.5 per 100,000) than Caucasians (1.3 per 100,000).

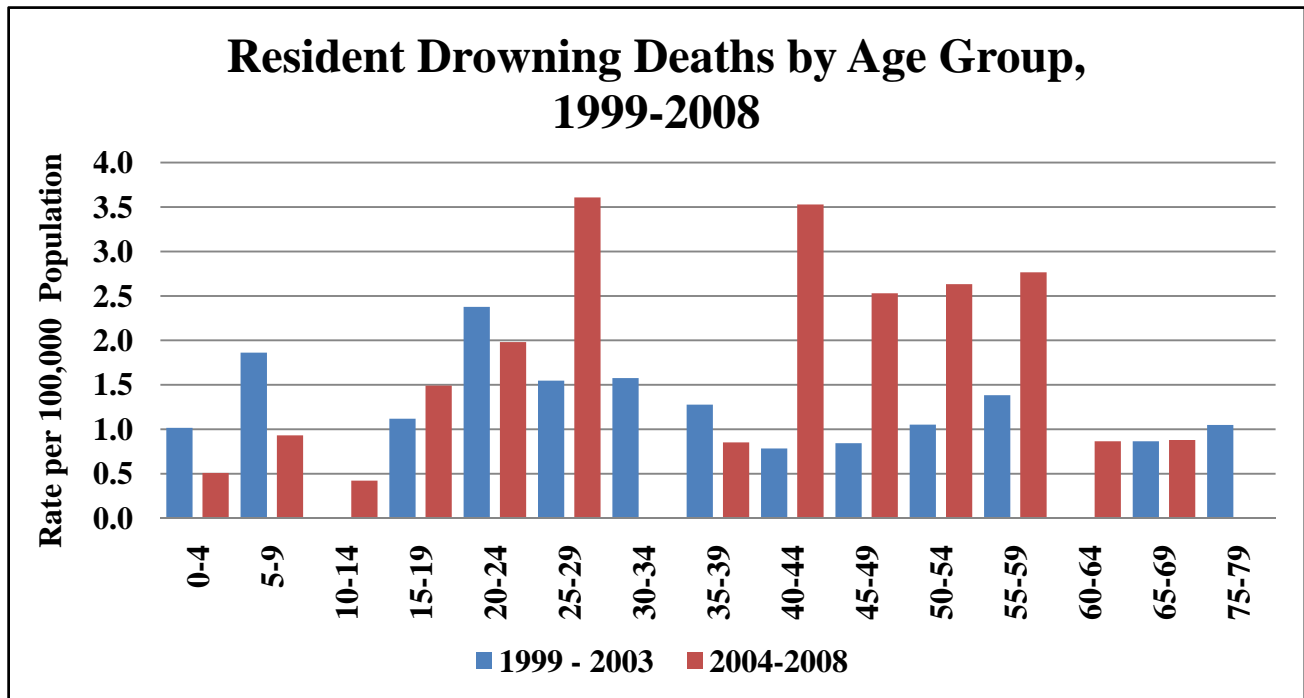


*Source: North Dakota Department of Health, Division of Vital Records*



Source: North Dakota Department of Health, Division of Vital Records

During the five-year period of 2004 through 2008, 48 North Dakota residents died from drowning (.15 per 100,000), an increase from 34 deaths during the 1999 through 2003 period (.10 per 100,000). Males comprised the majority of drowning deaths over the entire ten-year time period. However, female death rates increased dramatically from 1999 through 2003 (0.19 per 100,000) to 2004 through 2008 (0.93 per 100,000).



Source: North Dakota Department of Health, Division of Vital Records

## **Goals:**

Reduce the rate of unintentional drowning deaths of North Dakota residents from 0.15 per 100,000 to 0.10 per 100,000 population by 2015.

## **Prevention Strategies:**

- Provide instruction and materials to promote safe-boating practices.
- Promote public awareness of boating safety, navigational rules and federal regulations of boating safety involving a recreational vessel.
- Teach boating basics to all youth who operate a personal watercraft or boat.
- Maintain an enforcement division of adequately trained boating safety personnel.
- Provide more safe-boating facilities in heavily used boating areas.
- Increase the number of established life jacket loaner sites.
- Support the “Kids Don’t Float” program and expand it across the state.
- Continue to communicate with local public health departments and others who work with pool inspections about the U.S. Consumer Product Safety Commission’s pool and spa safety information and website training opportunities.
- Continue to offer bathtub safety information in the North Dakota Department of Health’s Home Safety Checklist publication.

## **Collaborators and Partners:**

- North Dakota Game and Fish Department
- U.S. Army Corps of Engineers
- North Dakota Department of Health
- Safe Kids North Dakota, Safe Kids Grand Forks, and Safe Kids Fargo/Moorhead
- North Dakota Sheriff’s Departments
- North Dakota Parks & Recreation

## **For More Information:**

U.S. Centers for Disease Control and Prevention:

[www.cdc.gov/SafeChild/Drowning/](http://www.cdc.gov/SafeChild/Drowning/)

[www.cdc.gov/HomeandRecreationalSafety/Water-Safety/waterinjuries-factsheet.html](http://www.cdc.gov/HomeandRecreationalSafety/Water-Safety/waterinjuries-factsheet.html)

North Dakota Game and Fish Department:

<http://gf.nd.gov/education/>

Safe Kids Worldwide (childhood) - Search for Drowning Prevention:  
[www.safekids.org/](http://www.safekids.org/)

The U.S. Consumer Product Safety Commission:  
[www.poolsafely.gov/](http://www.poolsafely.gov/)

## Farm Injuries

### Problem:

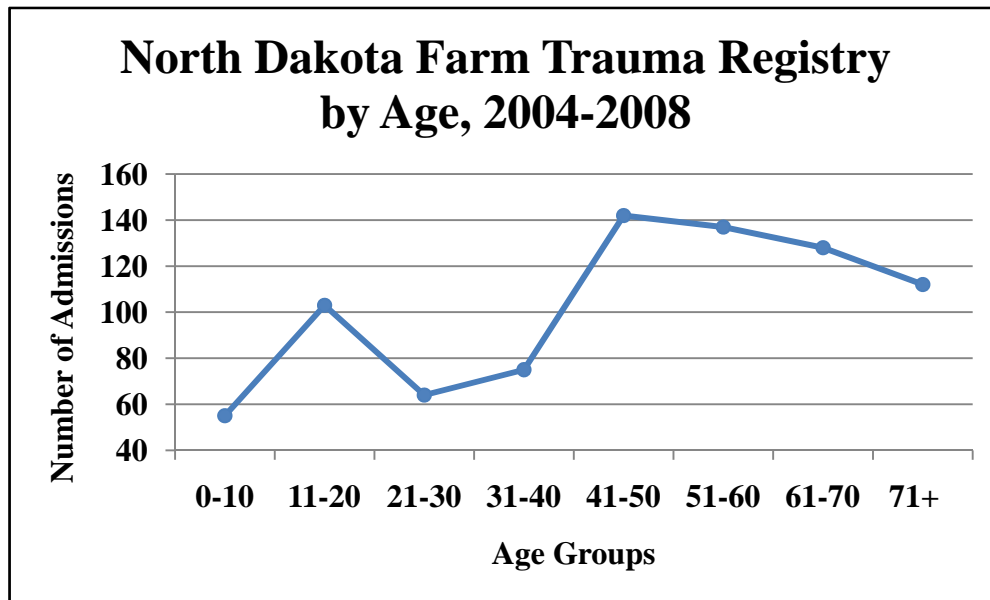
Farming consistently ranks as one of the country's most dangerous occupations. During 2004 through 2008, there were 816 documented trauma injuries and 80 deaths due to injury on farms across North Dakota. Falls accounted for the largest percentage of trauma injury at 19 percent, followed by farm machinery and ATV injuries, both around 15 percent. Suicide was the leading cause of death due to injury on N.D. farms with 16 deaths, followed by agricultural vehicles, falls and farm machinery deaths.

### Goals:

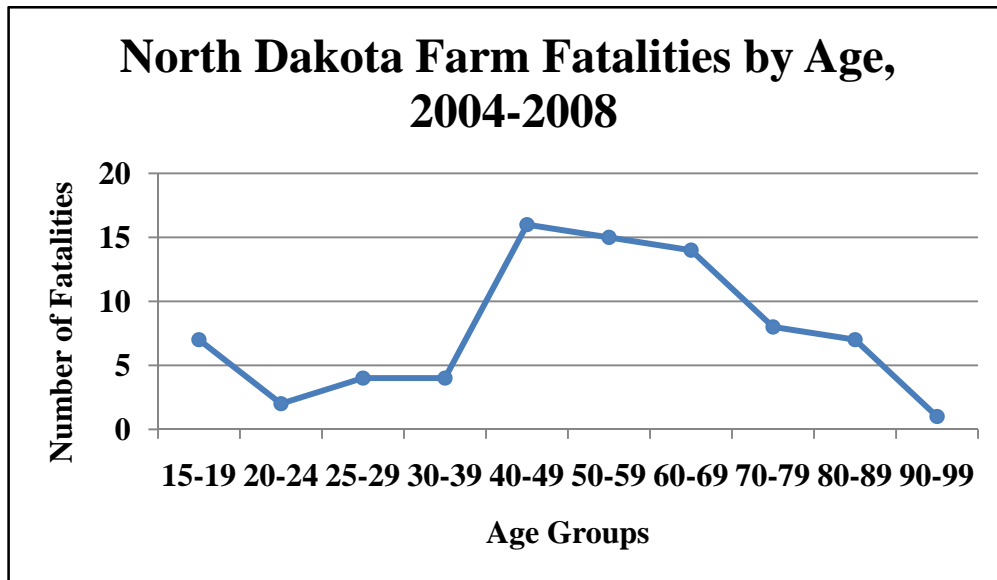
Reduce both trauma injuries and injury deaths on North Dakota farms by 10 percent by 2015.

### Contributing Factors and Risks:

Age plays a factor in both death and trauma injuries on farms across North Dakota. Approximately 64 percent of the trauma injuries documented occurred within age groups older than 40 years. Individuals older than age 40 also accounted for over 76 percent of the injury deaths.



*Source: North Dakota Trauma Registry*



*Source: North Dakota Department of Health, Division of Vital Records*

**Prevention Strategies:**

- Collect all data relating to trauma and death injuries have occurring on farms in North Dakota and analyze for correlations.
- Distribute injury data to all organizations that have safety programs involved with farming and ranching across North Dakota.
- Educate those at risk for injury on farms and ranches across the state through various venues such as safety programs and safety classes held across the state.
- Support in-school safety programs for children that talk about farm safety, as well as programs for adults that inform on various topics such as depression, ATV safety, falls and safety around farm equipment.

**Collaborators and Partners:**

- North Dakota Farm Bureau
- North Dakota Department of Health
- North Dakota Safety Council
- Progressive Agriculture Foundation
- Farm Safety for Just Kids
- Bayer Crop Science
- Safe Kids North Dakota, Safe Kids Grand Forks, and Safe Kids Fargo/Moorhead

**For More Information:**

Progressive Agriculture Foundation  
[www.progressiveag.org](http://www.progressiveag.org)

Great Plains Center for Agricultural Health  
[www.public-health.uiowa.edu/gpcah](http://www.public-health.uiowa.edu/gpcah)

Farm Safety for Just Kids  
[www.fs4jk.org](http://www.fs4jk.org)

North Dakota Farm Bureau  
[www.ndfb.org](http://www.ndfb.org)

International Society for Ag Safety and Health  
[www.nifsagsafety.org](http://www.nifsagsafety.org)

North Dakota State University-Extension Service  
[www.ag.ndsu.edu/extension/](http://www.ag.ndsu.edu/extension/)

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