

NORTH DAKOTA

UNINTENTIONAL INJURY PREVENTION

DATA REPORT

AND

RECOMMENDED STRATEGIES

2022-2027



NORTH
Dakota Be Legendary.

Health & Human Services



Table of Contents

ACKNOWLEDGEMENTS 4

INTRODUCTION..... 6

..... 7

FALLS 8

 Goal Statement:..... 8

 Statement of Problem: 8

 Age and Gender 10

 Falls Among Adults 14

 Risk Factors for Adults..... 14

 Public spaces designed poorly for people with disabilities..... 15

 Recommended Strategies for Adults..... 15

 Falls Among Children 16

 Risk Factors for Children..... 16

 Recommended Strategies for Children..... 18

 For More Information on Fall Prevention..... 19

 References 19

MOTOR VEHICLE CRASHES 20

 Goal Statement:..... 20

 Statement of Problem: 20

 Crash Definitions: 20

 Motor vehicle crashes by year..... 21

 Supporting Evidence:..... 23

 Risk Factors: 23

 Age and Gender 23

 Race..... 24

 Low Seat Belt Restraint Use..... 25

 Alcohol Use 27

 Speed..... 28

Lane Departure	29
Distracted Driving	30
Pedestrian Safety.....	30
Bicycle Safety	32
Recommended Prevention Strategies.....	33
Occupant Protection	33
Child Passenger Safety (CPS)	33
Alcohol Impairment.....	34
Speed.....	34
Lane Departure	34
Distracted Driving	34
Pedestrians	34
Bicycles.....	34
For More Information.....	35
References	35
UNINTENTIONAL POISONINGS.....	36
Goal Statement	36
Statement of Problem	36
Age	37
Race.....	38
Poisoning Exposures	39
Ages Affected	40
Most Serious Poisonings	41
Seriousness of Poison Exposures	42
Risk Factors.....	43
Prevention Strategies.....	44
General Population.....	45
Children	46
Seniors.....	47

Rural Communities	47
American Indian and Underserved Population	47
UNINTENTIONAL SUFFOCATION	49
Goal Statement	49
Statement of Problem	49
Recommended Strategies.....	51
Unintentional Suffocation Sleep Related Infant Suffocation Death Attributed to Soft Bedding, Overlay, and Wedging.....	52
Unintentional Suffocation Definitions:.....	52
Deaths Related to Unsafe Sleep	52
Risk Factors.....	53
Recommended Strategies to Reduce the Risk of Sleep Related Deaths	53
For More Information	55
References	56

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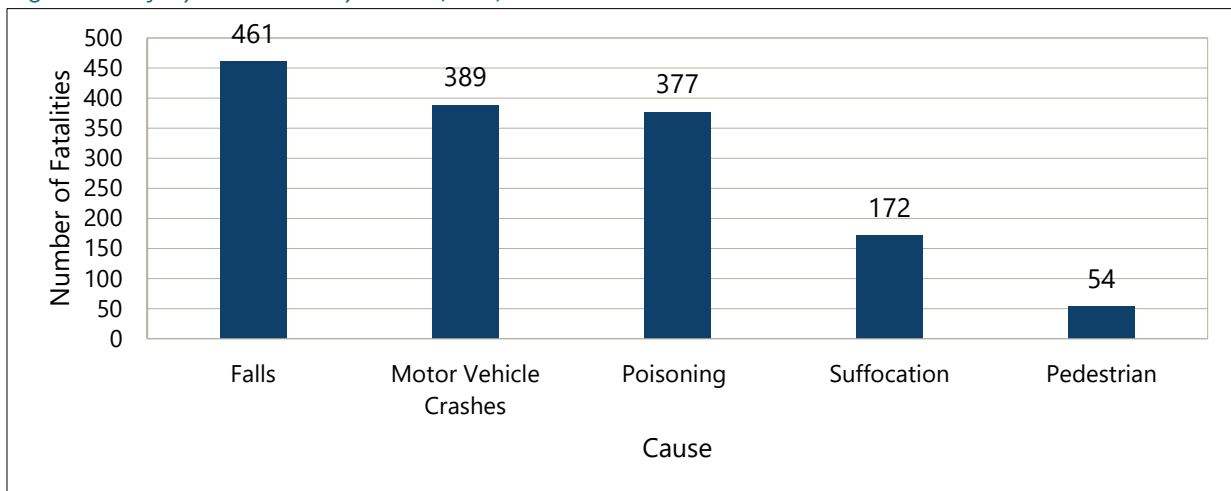
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INTRODUCTION

The purpose of the North Dakota Unintentional Injury Prevention data report and strategies is to provide an overview of unintentional injury in North Dakota. The data, goals, risk factors and recommended strategies provided in the report are intended to help programs guide prevention efforts across the state to approach the problem with a unified message and similar strategies.

The problem areas were selected based on data from the North Dakota Department of Health and Human Services (NDHHS), Vital Record Unit's leading causes of unintentional injury deaths from the years 2016 through 2020 (Figure 1).

Figure 1. Injury Fatalities by Cause, ND, 2016-2020



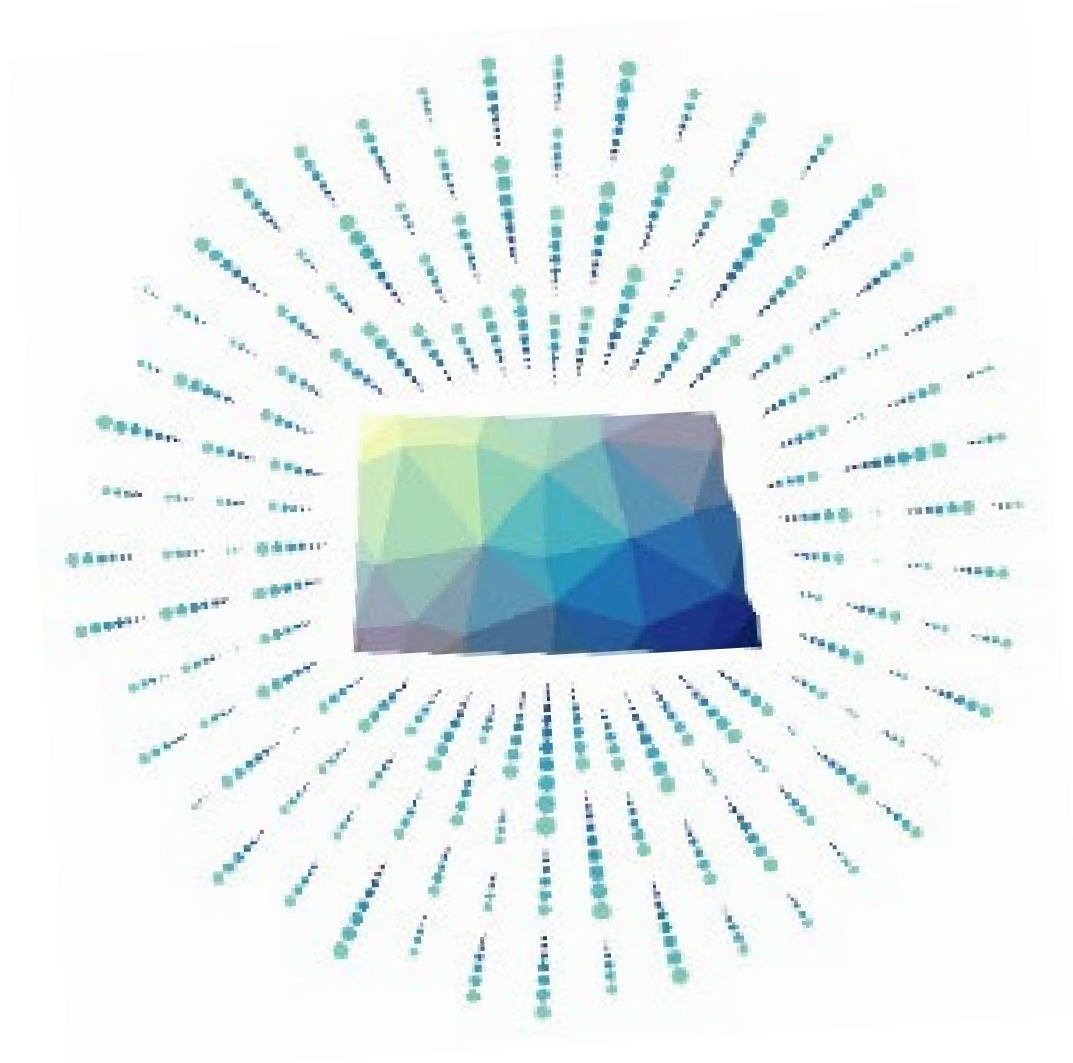
Source: NDHHS – Vital Records Unit

The World Health Organization (WHO) states: "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 (such as drowning and frostbite), injuries result from the sudden lack of essential agents such as oxygen or heat."

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. Between 2016 and 2020, falls were the leading cause of unintentional injury death, followed by motor vehicle crashes, and unintentional poisoning. Data in all other accident categories includes fatalities resulting from ATVs, special agriculture vehicles, air/space vehicles, etc.

Although NDHHS doesn't have a statewide hospital discharge database, 16 ND hospitals voluntarily provide discharge data to the Minnesota Hospital Association. The NDHHS receives ND hospital discharge data annually from the Minnesota Hospital Association. According to the WHO, for every death, it is estimated there are dozens of hospitalizations, hundreds of emergency department visits, and thousands of doctor's appointments. Unintentional injuries affect us all, regardless of sex, race, or economic status. The cost of unintentional injury can be measured on both personal and societal levels.

The partners and collaborators mentioned in the report are from a variety of prevention programs that are all working towards the same goal. Many of the partners are members of the ND Injury Prevention Coalition whose mission, as a multidisciplinary partnership, is to reduce unintentional injuries and deaths. With the implementation of this report, ND can move closer to fewer deaths and injuries in the state.



FALLS

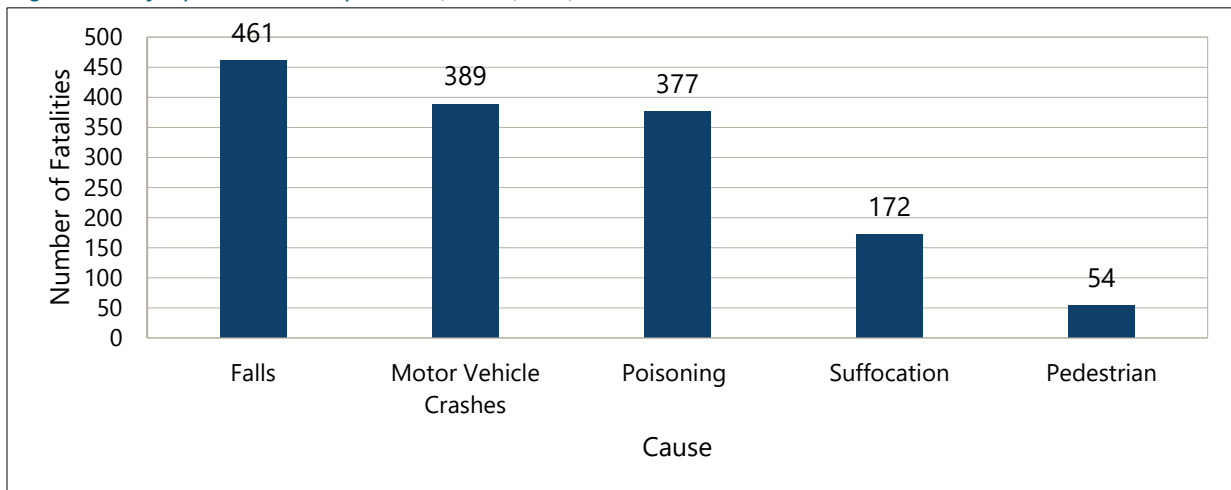
GOAL STATEMENT:

Reduce the annual number of fall fatalities by 23 deaths by 2027, which is a reduction of slightly more than 5%.

STATEMENT OF PROBLEM:

Falls were the leading cause of injury death in ND from 2016 through 2020. A total of 461 ND residents died due to falls from 2016 through 2020, an average of 92 deaths per year (Figure 2).

Figure 2. Injury Fatalities by Cause, Falls, ND, 2016-2020



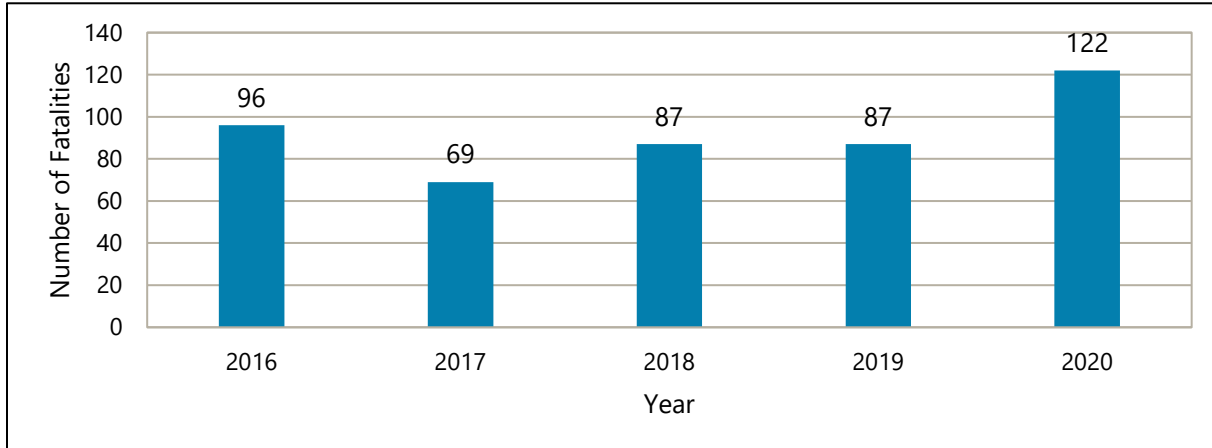
Source: NDHHS – Vital Records Unit

Fall death rates among adults aged 65 and older increased by about 30% from 2009 to 2018¹. In the U.S. in 2016, a total of 29,668 individuals aged 65 and older died as a result of a fall.² Unintentional falls accounted for 30% of all traumatic brain injury-related deaths in 2018 and 2019 in the U.S.³ In 2019, fall-related incidents were the leading cause of deaths in individuals over the age of 65.⁴



In ND, fall-related deaths have been steadily increasing each year since 2017. In 2017, there were 69 fall-related fatalities. By 2020, there were 122 fall-related fatalities, which is over a 76% increase from 2017 (Figure 3).

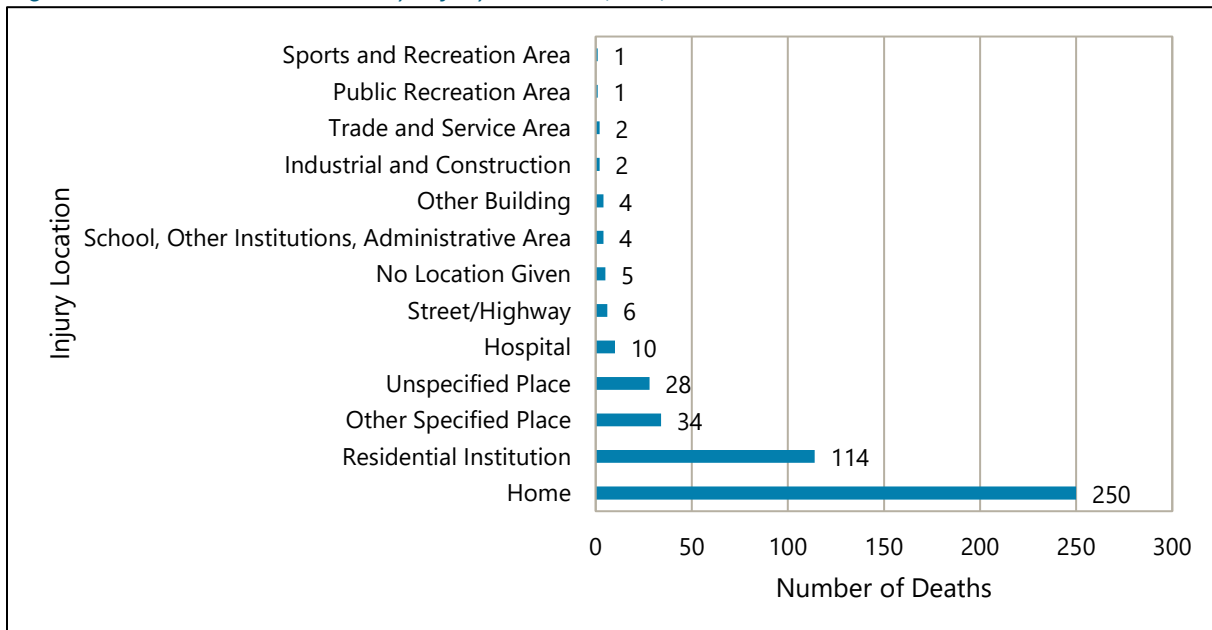
Figure 3. Fall Fatalities by Year, ND, 2016-2020



Source: NDHHS – Vital Records Unit

Fall-related deaths occur primarily at home. Among fall-related deaths in ND from 2016 through 2020, 54% took place at home and 25% occurred at a residential institution (Figure 4).

Figure 4. Fall-Related Deaths by Injury Location, ND, 2016-2020

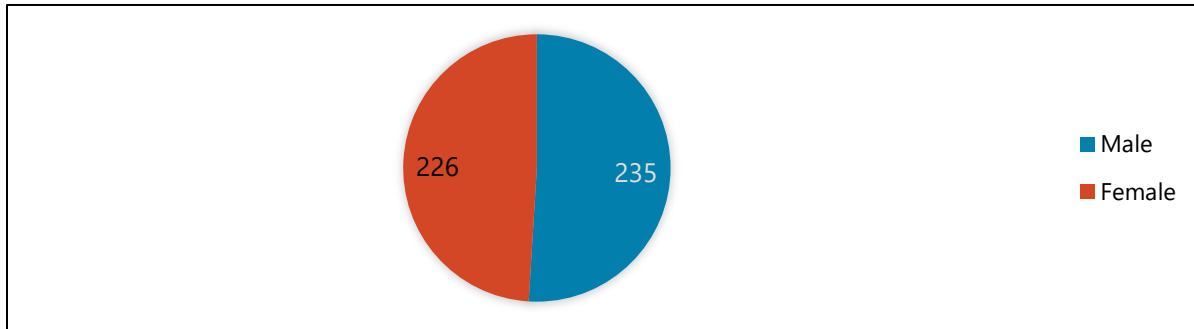


Source: NDHHS – Vital Records Unit

AGE AND GENDER

Nationwide, men are more likely to die from a fall than women, with a fall age adjusted death rate about 50% higher than women.⁴ In ND from 2016 to 2020, fall-related deaths occurred slightly more among men with 235 deaths, than among women with 226 deaths (Figure 5).

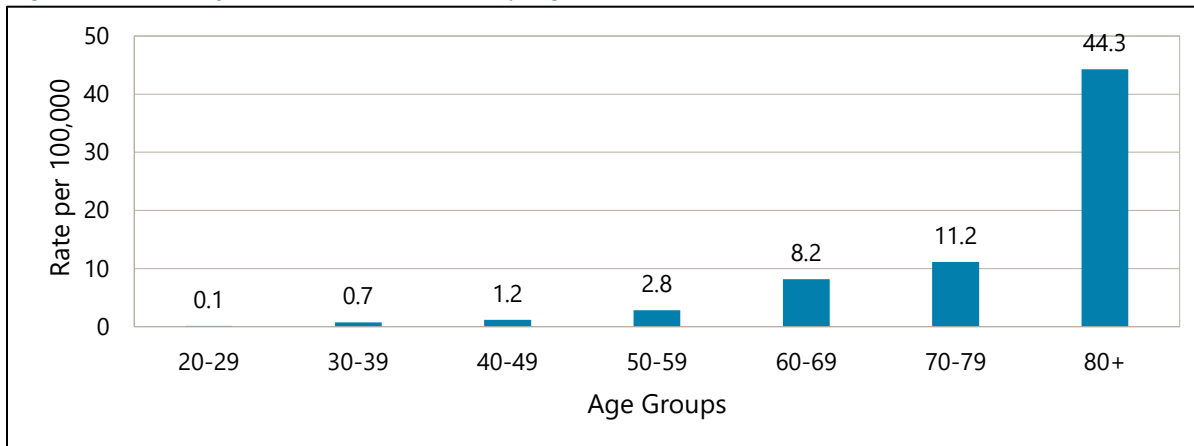
Figure 5. Number of Fall-Related Deaths by Gender, ND, 2016-2020



Source: NDHHS –Vital Records Unit

Falls are the leading cause of both fatal and nonfatal injuries among older adults. Twenty to thirty percent of people who fall suffer moderate to severe injuries that may make it difficult to get around or live independently, increasing the risk of early death.² The fall-related death rate in ND increases significantly as people age. From 2016 through 2020, ND’s fall-related death rate was highest among those 80 and older (Figure 6).

Figure 6. Rates of Fall-Related Deaths by Age, ND, 2016-2020

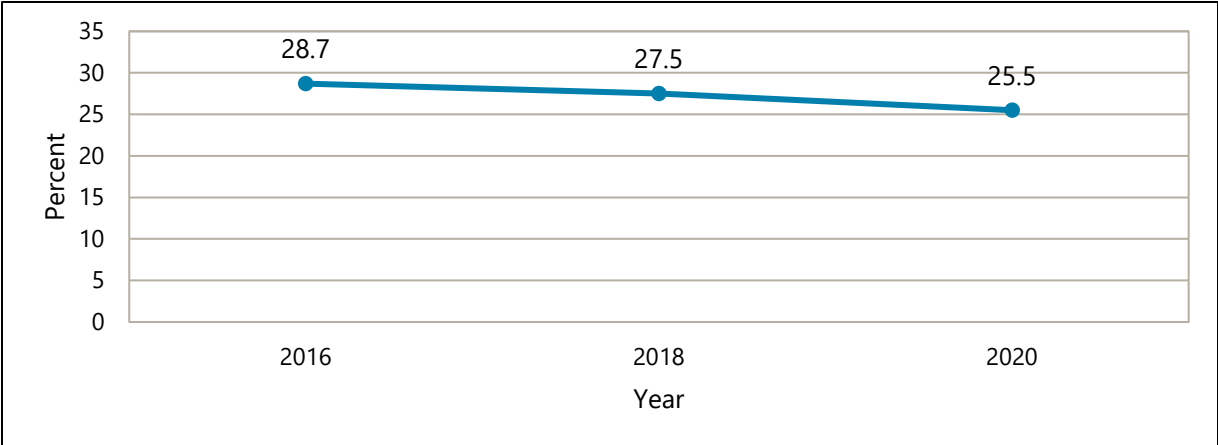


Source: NDHHS – Vital Records Unit



According to ND Behavioral Risk Factor Surveillance System (BRFSS) data, in 2020, 26% of ND adults aged 60 and older reported at least one fall in the past 12 months. Between 2016 and 2020, there was an 11% decrease (Figure 7).

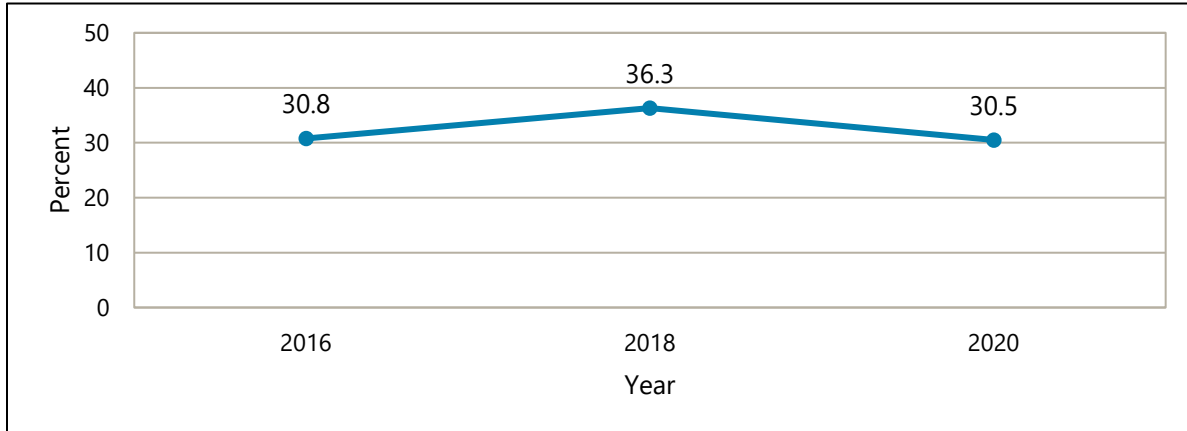
Figure 7. Proportion of ND Adults Aged 60+ Reporting at Least One Fall in Past 12 Months



Source: ND Behavior Risk Factor Surveillance System (BRFSS)

In 2020, 31% of ND adults aged 60 and older who reported at least one fall during the past 12 months also reported a fall-related injury during that same time (Figure 8).

Figure 8. ND Adults Aged 60+ Reporting at Least One Fall in Past 12 Months, Also Reporting at Least One Fall-Related Injury in the Past 12 Months

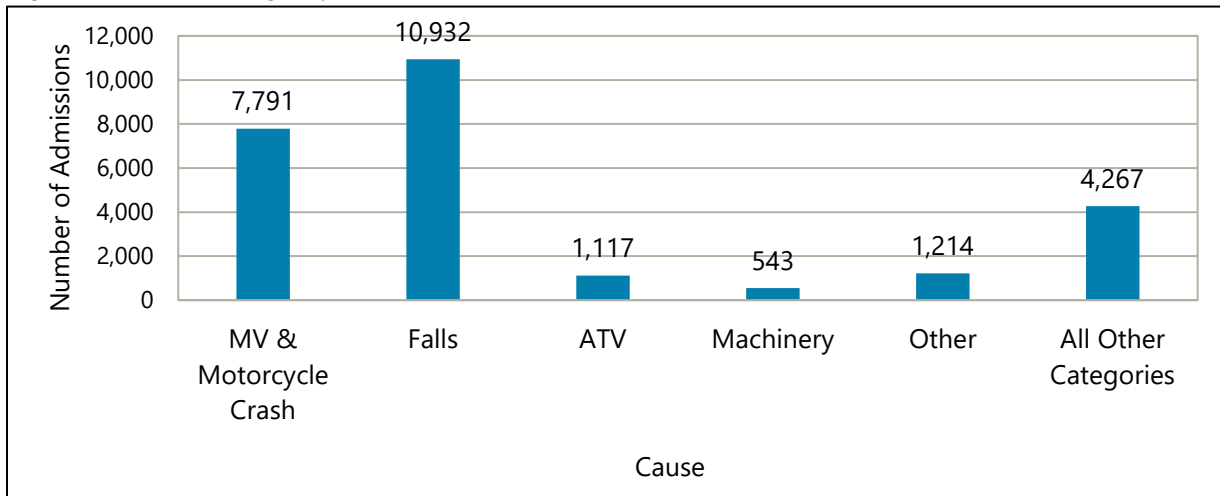


Source: ND Behavior Risk Factor Surveillance System (BRFSS)

Of the 25,864 cases collected through the ND State Trauma Registry from January 2015 through December 2018, falls and motor vehicle (MV)/motorcycle crashes were the leading cause of all trauma cases reported (Figure 9).

Most of the trauma cases were attributed to falls at 42% and MV/motorcycle crashes at 30%. Of the 685 deaths recorded, falls accounted for 44% of the deaths and motor vehicle/motorcycle crashes accounted for 26% of the deaths.³

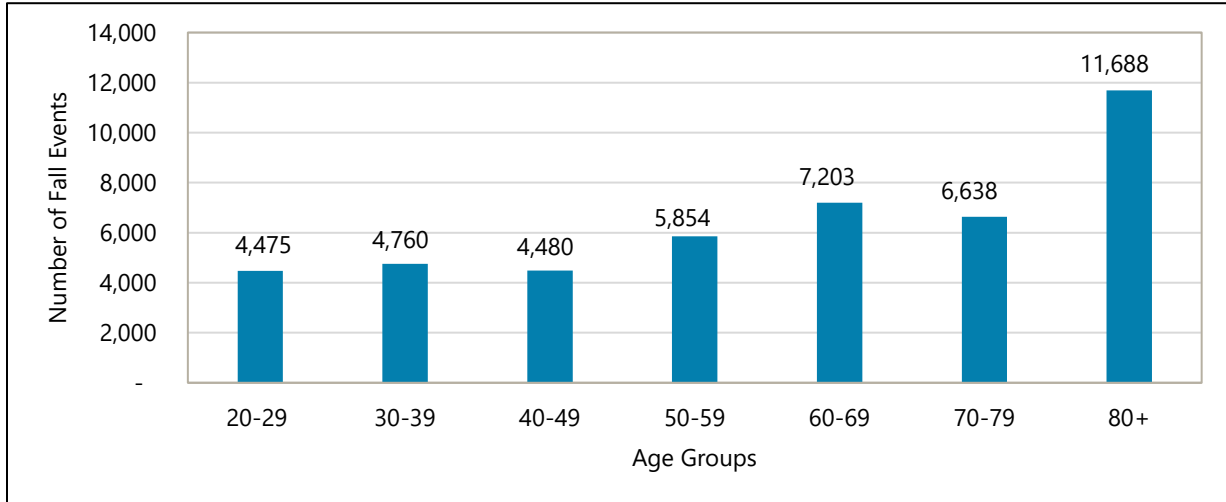
Figure 9. Trauma Registry Admissions, ND, 2015-2018



Source: NDHHS Trauma Registry, Health Response & Licensure

According to data collected from emergency department, urgent care and walk-in-clinic visit information across ND, the number of fall-related events increased as the population aged. From 2016 through 2020, ND's fall-related events were highest among those 80 and older with 11,688 events (Figure 10).

Figure 10. Number of Fall-Related Events Among Adults by Age Group, ND, 2016-2020



Source: NDHHS Disease Control's ND Electronic Surveillance System for the Early Notification of Community-Based Epidemics (ESSENCE)



FALLS AMONG ADULTS

Risk Factors for Adults

Fall risk factors increase with age. A fall risk factor may be a biological characteristic, a behavior, or an environmental factor. A person has a greater chance of falling with more risk factors present.

Biological risk factors:

- Muscle weakness or balance problems
- Medication side effects and/or interactions
- Blood thinners
- Chronic health conditions such as arthritis, stroke or Parkinson's disease
- Vision changes or vision loss
- Loss of sensation in feet

Behavioral risk factors:

- Inactivity
- Risky behaviors such as standing on a chair in place of a step stool
- Alcohol or drug use
- Refusal to use assistive equipment such as a cane, walker or wheelchair
- Lack of access to assistive equipment

Environmental risk factors:

- Clutter and tripping hazards
- Poor lighting
- Lack of stair railings
- Lack of grab bars inside and outside the tub or shower
- Slippery tubs or showers without mats
- Improper footwear
- Lack of grab bars around toilet
- Ice or slippery conditions
- Rugs
- Living spaces that are not Americans with Disabilities Act (ADA) accessible



Public spaces designed poorly for people with disabilities

Recommended Strategies for Adults

- Increase the availability, accessibility, and affordability of fall prevention programs in the state, such as the following:
 - Stepping On, an evidence-based program designed specifically for people who are at risk of falling, have a fear of falling or have fallen one or more times. [Stepping On | NDSU Agriculture and Extension](#)
 - Tai Ji Quan: Moving for Better Balance, an evidence-based fall prevention program designed to improve strength, balance, mobility, and daily function, reducing participants' risk of falling. [Tai Ji Quan: Moving for Better Balance | NDSU Agriculture and Extension](#)
 - Fit & Strong! is an exercise/behavior change program developed by researchers at the University of Illinois for older adults or those with lower extremity osteoarthritis. [Fit & Strong! | NDSU Agriculture and Extension](#)
- Engage health professionals and community members in fall prevention activities by promoting ND's fall prevention programs and holding training annually for new leaders
- Enhance awareness among the public, older adults, caregivers and providers that falls can be prevented and promote the adoption of four key prevention behaviors:
 1. Begin a regular exercise program
 2. Have a health care provider review medicine
 3. Have vision checked
 4. Make one's home safer
- Disseminate messages for older adults
- Disseminate messages for care givers, pharmacists, and physicians.
- Develop a packet of fall prevention educational materials to be distributed through partners
- Create awareness about programs and services that offer assistive technology and products
- Create awareness about the increased risk of injury following a fall if taking blood thinners

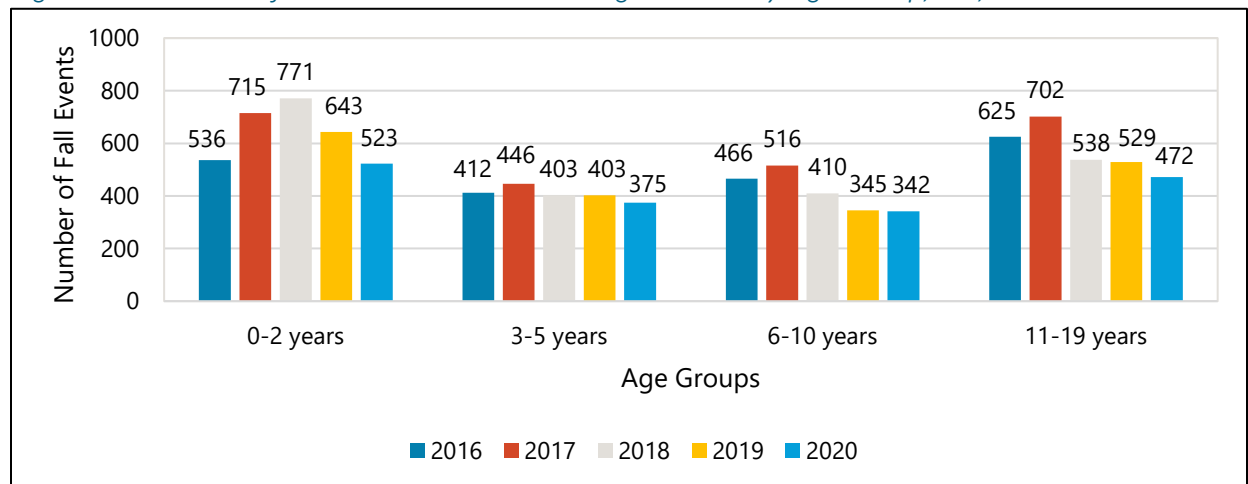


FALLS AMONG CHILDREN

Unintentional falls are the leading cause of non-fatal injuries for children in the U.S. In 2013, almost 2 million children visited the emergency department for a fall-related injury.⁵ These injuries resulted from activities such as climbing on furniture, playing near unsecured windows, falling down the stairs, sports activities, and playing on playgrounds.⁵ Most serious falls occur in the home. Each year in the U.S., more than 2,200 children, or six children a day, die from an injury that occurred in the home.⁵ Falls are the leading cause of traumatic brain injuries. Rates are highest among children under the age of 4.⁶

According to data collected from emergency department, urgent care, and walk-in-clinic visit information across ND, from 2016 through 2020, fall-related events were highest among children under the age of 2, with a total of 3,188 events. However, the number of fall-related events has steadily declined in all age groups from 2016-2020 (Figure 11).

Figure 11. Number of Fall-Related Events Among Children by Age Group, ND, 2016-2020



Source: NDHHS Disease Control's ND ESSENCE

Risk Factors for Children

Biological risk factors:

- Children's natural curiosity and desire to explore
- Head is large in proportion to children's bodies, making them more prone to fall forward
- Poor decision-making abilities

Behavioral risk factors:

- Children using playground equipment in ways other than how it was intended
- Lack of safety equipment in the home (i.e., baby gates, window locks)
- Not wearing helmets when appropriate
- Distracted walking and biking



Environmental risk factors:

- Children playing on playground equipment not designated for their age level
- Lack of proper adult supervision
- Playground surfaces that are not certified to meet all applicable American Society for Testing and Materials (ASTM) standards: [ASTM International - Standards Worldwide](#)
- Playgrounds that are not designed or constructed based on the physical characteristics of children
- Falls from changing tables, highchairs, boosters, or infant equipment (because of misuse or lack of using safety straps)
- Placing infant equipment (car seats, bouncers, chairs, etc.) on elevated surfaces
- Using shallow sleeping surfaces such as bassinets or bassinet inserts, as well as not lowering the mattress of a crib for infants who are able to sit up, push up, or pull up to stand, etc.
- Lack of resources to provide necessary sporting equipment such as helmets or pads when needed



Recommended Strategies for Children

- Communicate effective strategies to promote injury prevention to target audiences through curated messaging and sharing of information
 - Campaign to raise parents' awareness about the leading causes of child injury and how to prevent it
- Provide education and training to increase knowledge, attitudes, and behavior change to preventing injuries
 - Develop a child-care-based curriculum to reduce falls among children in those settings, especially falls from heights such as cribs and playground equipment
 - Develop a school-based curriculum to reduce falls among children
 - Increase concussion education and prevention education in schools and community-based sporting clubs
- Utilize health systems and health care to deliver quality care and clinical and community preventive services
 - Work with health care providers to find efficient and effective means of routinely incorporating age-appropriate fall prevention recommendations into well child visits
- Educate and instruct the public on how to:
 - Install safety gates on stairs and guards on windows to prevent falls by young children⁷
 - Provide a soft-landing surface below playground equipment⁷
 - Use proper safety equipment, such as knee pads, elbow pads, wrist guards, and helmets while playing sports⁷
 - Supervise children near fall hazards⁷
 - Always use safety straps and properly adjust straps to fit the child
 - Always read and follow the manufacturer's instructions/guidelines for infant equipment
 - Keep the crib mattress in the lowest position
 - Wear proper shoes for active playing or climbing – rubber soled, closed toe shoes secured with laces or straps
 - Provide more playgrounds appropriate for infants, toddlers, and preschool children
 - Teach children how to use playground equipment properly
 - Actively supervise when caring for children

- Promote the Consumer Product Safety Commission (CPSC) awareness about safe window coverings. [Childproofing Your Home- 12 Safety Devices to Protect Your Children | CPSC.gov](#)
- Remove fall hazards whenever possible⁷



For More Information on Fall Prevention

- ND Health and Human Services - [Injury Prevention Program](#)
- [CDC Older Adult Fall Prevention page](#)
- [Safe Kids Worldwide](#)

References

¹Centers for Disease Control and Prevention (2020). Deaths from Older Adult Falls. <https://www.cdc.gov/falls/facts.html>

²Centers for Disease Control and Prevention (2019). Surveillance Report of Traumatic Brain Injury-related Emergency Department Visits, Hospitalizations, and Deaths-United States. https://www.cdc.gov/traumaticbraininjury/get_the_facts.html

³Centers for Disease Control and Prevention (2019). Results: Traumatic Brain Injury-related Deaths by Age Group, Sex, and Mechanism of Injury. [SURVEILLANCE REPORT \(cdc.gov\)](#).

⁴National Center for Injury Prevention and Control. Web-Based Injury Statistics Query & Reporting System. [WISQARS \(Web-based Injury Statistics Query and Reporting System\)|Injury Center|CDC](#). Centers for Disease Control and Prevention. 2022

⁵Safe Kids Worldwide (2015). Protecting Kids in Your Home. [Home Safety Tips \(PDF\) | \[Safe Kids Worldwide\]](#)

⁶A National Action Plan for Child Injury Prevention: Reducing Fall-Related Injuries in Children. <https://stacks.cdc.gov/view/cdc/12060> Centers for Disease Control and Prevention. 2013

⁷Falls. [Falls Prevention | Children's Safety Network \(childrenssafetynetwork.org\)](#)

MOTOR VEHICLE CRASHES

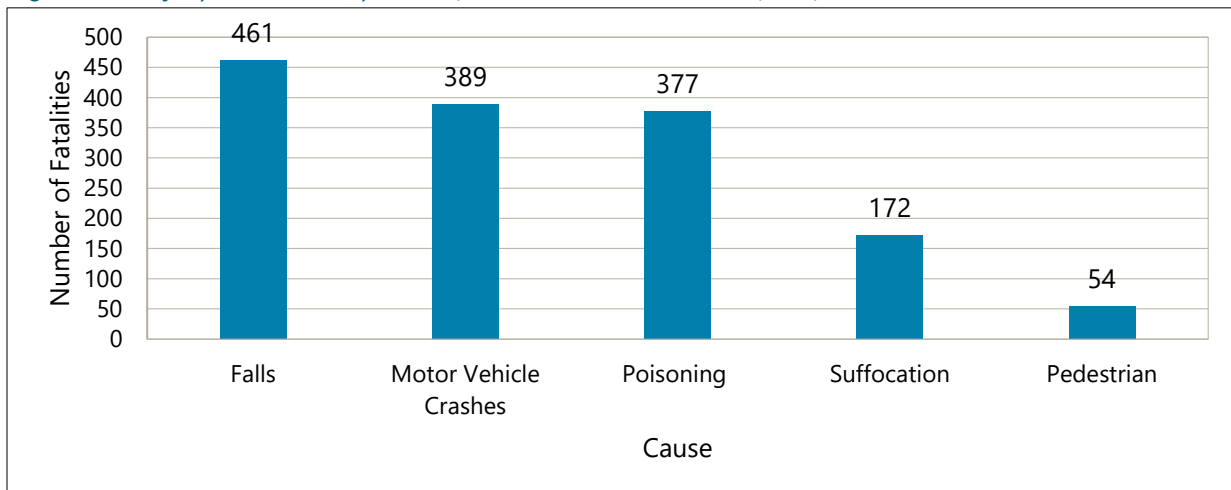
GOAL STATEMENT:

Reduce the annual motor vehicle crash fatalities to less than 75 per year by 2027.

STATEMENT OF PROBLEM:

Motor vehicle crashes (MVC) are the second leading cause of injury death in ND.¹ MVCs accounted for nearly one-quarter of all injury-related fatalities in ND from 2016 to 2020. It should be noted that the NDHHS Vital Records Unit only registers fatalities of ND residents, and therefore lists a total of 389 motor vehicle fatalities (Figure 12).

Figure 12. Injury Fatalities by Cause, Motor Vehicle Crashes, ND, 2016-2020



Source: NDHHS – Vital Records Unit

CRASH DEFINITIONS:

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

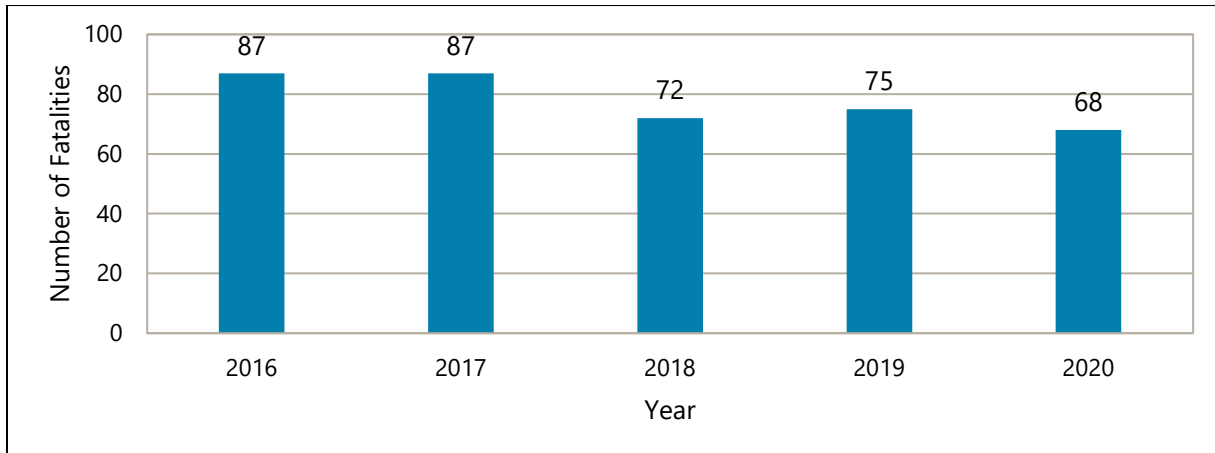
Fatal Crash – a motor vehicle crash on public roadways that results in the death of one or more persons; the death must occur within 30 days of the crash.



MOTOR VEHICLE CRASHES BY YEAR

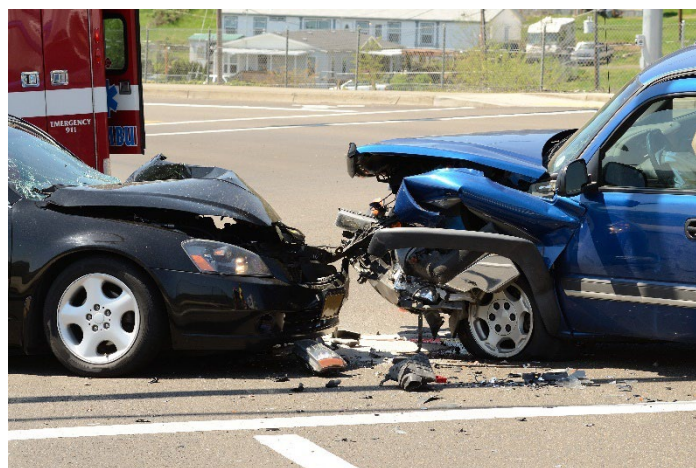
ND consistently strives to maintain effective traffic safety programs to eliminate fatalities and serious injuries caused by motor vehicle crashes. The number of motor vehicle fatalities in ND has been steadily declining since 2016 (Figure 13).

Figure 13. Motor Vehicle Crashes by Year, ND, 2016-2020



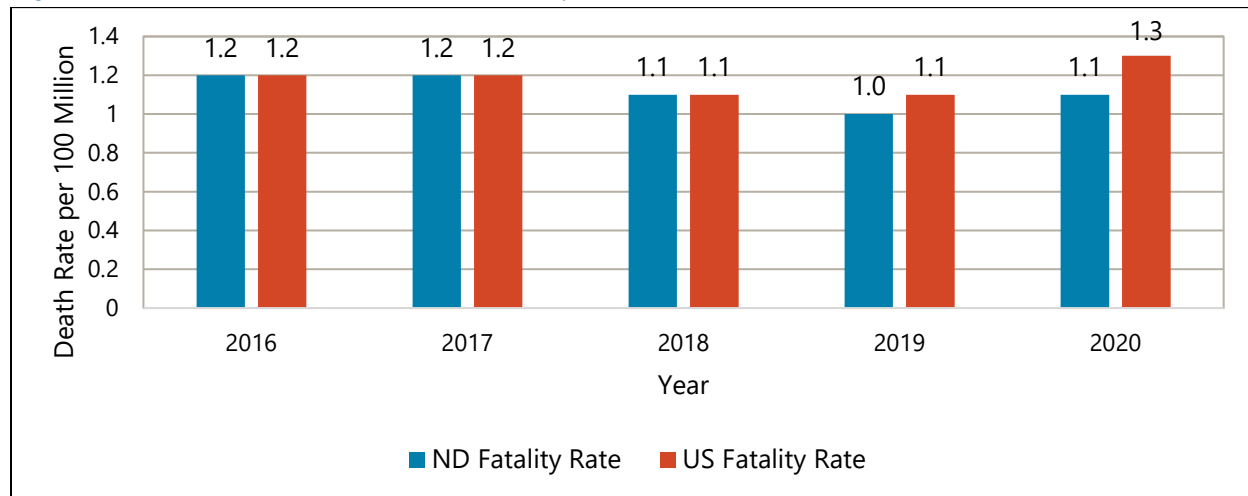
Source: NDHHS – Vital Records Unit

The ND Department of Transportation (NDDOT) reports motor vehicle fatalities for all persons fatally injured in motor vehicle crashes within the state of ND, including out-of-state travelers on ND roads. The NDDOT (2020) recorded a total of 534 fatalities from 2016 to 2020 - an average of 107 people per year. In 2020 alone, there were 100 fatalities and 3,426 injuries resulting from 8,820 reported crashes in ND.²



The fatality rate has decreased from 1.16 deaths per 100 million vehicle miles traveled (VMT) in 2016 to 1.14 deaths per 100 million VMT in 2020. In comparison, the national MVC death rate increased from 1.19 per 100 million VMT in 2016 to a rate of 1.34 in 2020.² In 2020, ND's motor vehicle fatality rate was lower than the national fatality rate (Figure 14).

Figure 14. Motor Vehicle Crash Death Rate per 100 million, 2016-2020



Source: NDDOT (2020); National Highway Traffic Safety Administration (NHTSA) (2020)

Lane departure, impaired driving, and lack of seat belt use continue to be a problem in the state.

In 2020²,

- 56% of motor vehicle fatal crashes involved lane departure
- 39% of motor vehicle fatalities involved alcohol
- 60% of individuals killed in motor vehicle crashes (pickups, autos, and sport utility vehicles [SUVs]) were not wearing seat belts

While seat belt use in ND was 82.8% in 2016, it declined to a low of 79.3% in 2017 and slowly increased to 83.7% in 2020. 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 almost 40% 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.

SUPPORTING EVIDENCE:

Based on 2020 ND numbers, this equates to:

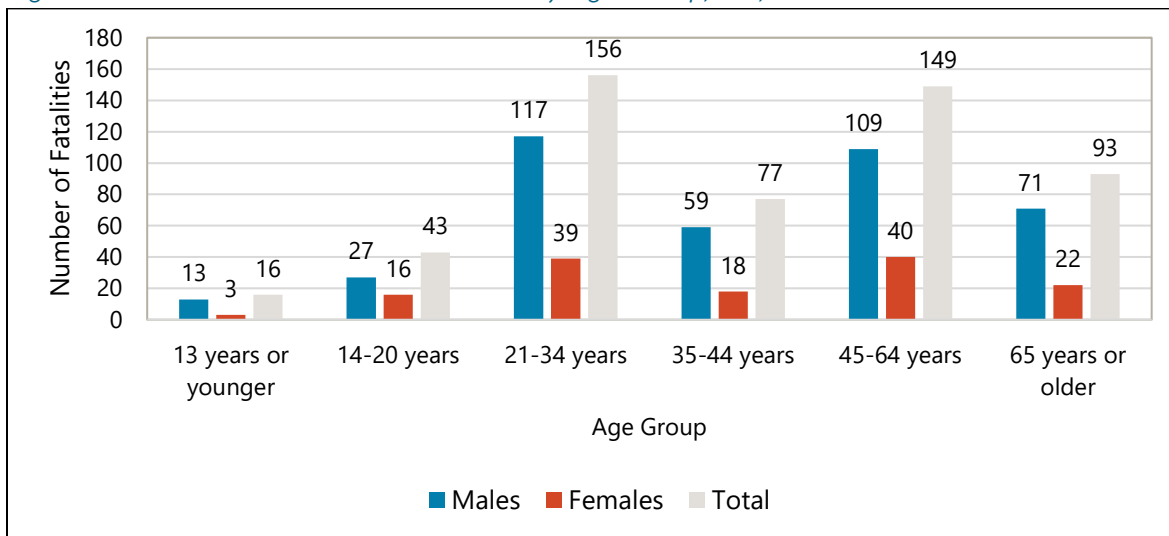
- One reportable traffic crash every 60 minutes
- One person is injured in a motor vehicle crash every 2.5 hours
- One person is killed in a motor vehicle crash every 4 days

RISK FACTORS:

Age and Gender

Of the 534 fatalities resulting from motor vehicle crashes that occurred in ND during 2016 through 2020, most fatalities were people ages 21-34 and 45-65, with over 57% of the victims being in these two age groups .² (Figure 15).

Figure 15. Motor Vehicle Crash Fatalities by Age Group, ND, 2016-2020



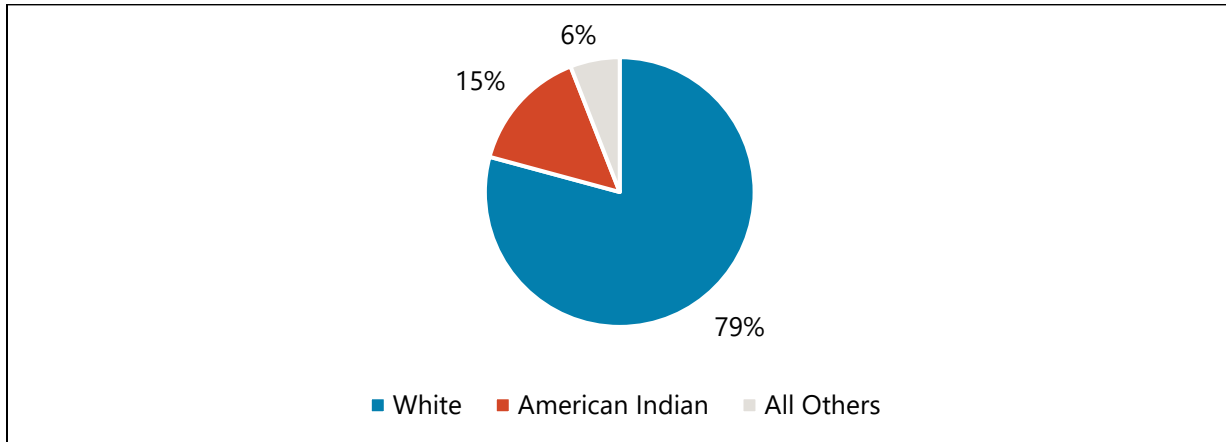
Source: NDDOT



Race

MVC fatalities reported by the NDHHS Vital Records Unit (n=389) disproportionately affect American Indians in ND. Despite accounting for only 6% of the population, American Indians accounted for 15% of the MVC fatalities from 2016 to 2020 (Figure 16). Note, data is from NDHHS Vital Records Unit only registers fatalities of ND residents.

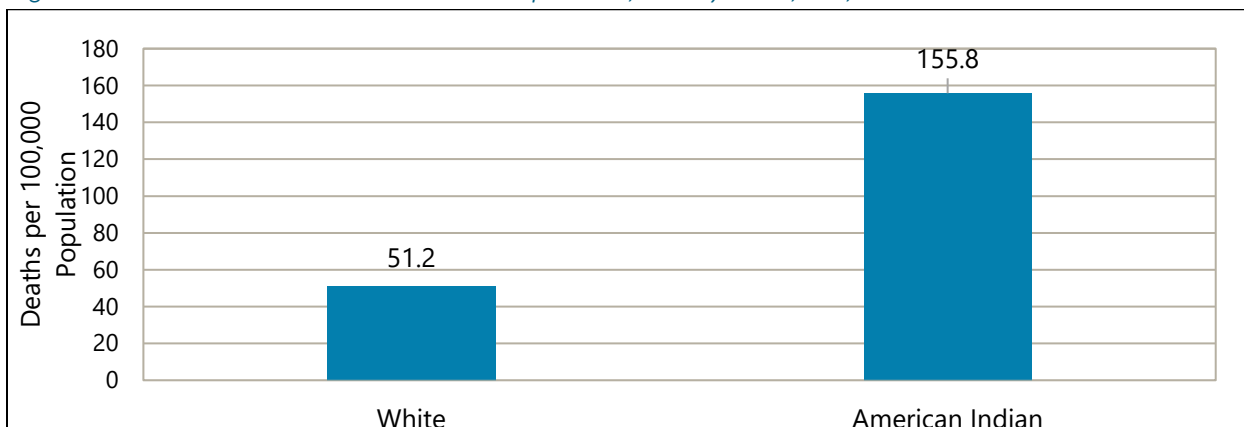
Figure 16. Motor Vehicle Crash Fatalities by Race, ND, 2016-2020



Source: NDHHS – Vital Records Unit

The MVC death rate per 100,000 population for American Indians in ND is three times the rate for Whites, 155.8 deaths for American Indians versus 51 deaths² for Whites (Figure 17).

Figure 17. Motor Vehicle Crash Fatalities per 100,000 by Race, ND, 2016-2020

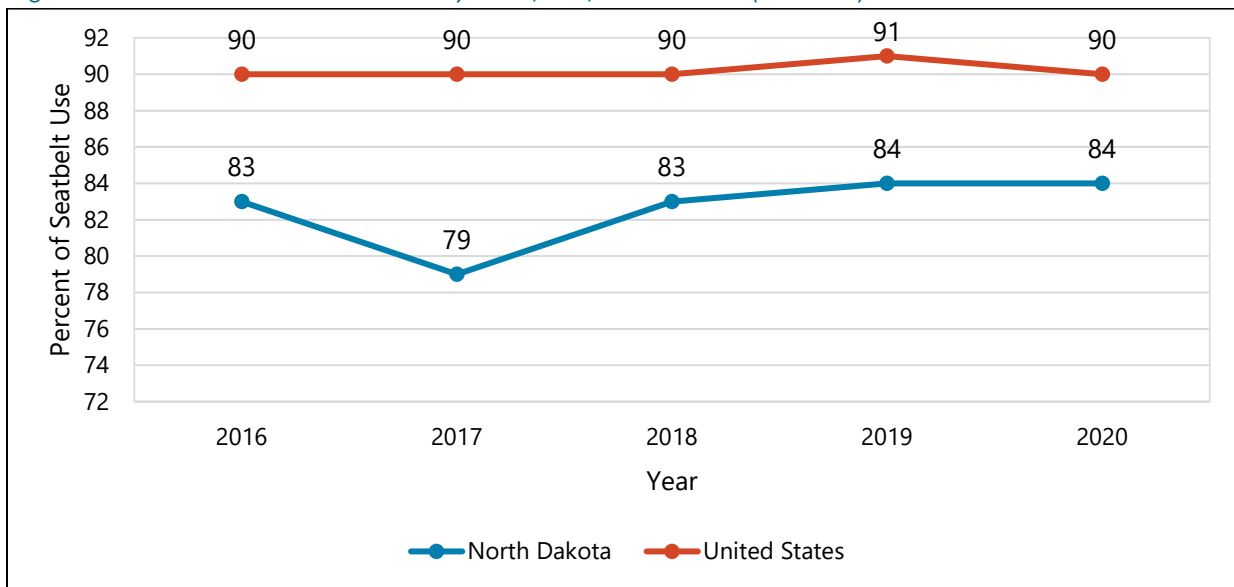


Source: NDHHS – Vital Records Unit

Low Seat Belt Restraint Use

ND's seat belt restraint use has seen a steady increase in recent years, except for a slight dip in 2017 potentially due to the required revised survey design implemented with the 2017 re-selection of observation sites (Figure 18). In 2020, ND's seat belt use of 83.7% remained significantly lower than the U.S. average of 90.3%.

Figure 18. Seat Belt Restraint Use by Year, ND, 2016-2020 (Percent)

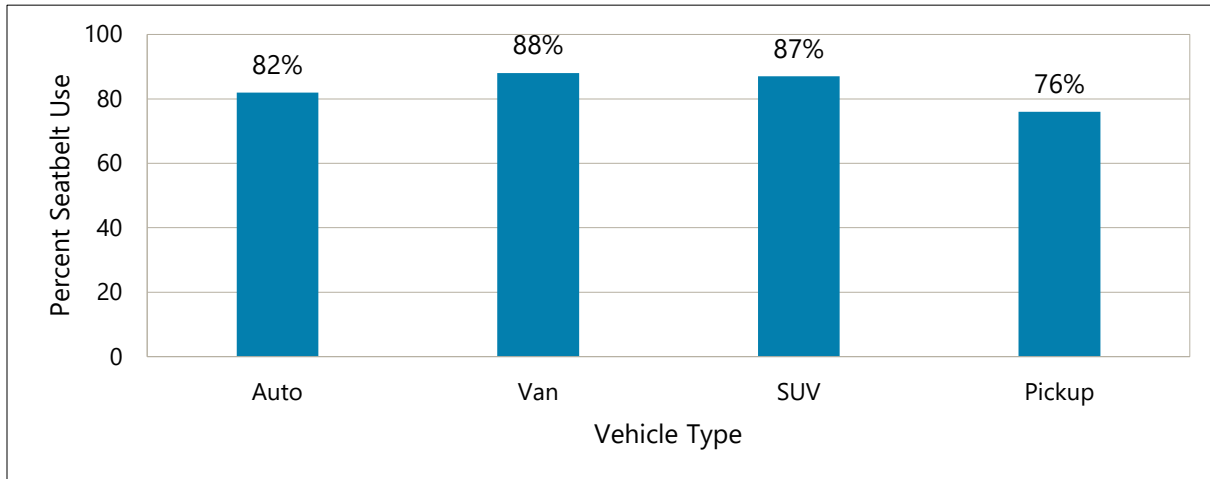


Source: NDDOT

Observation surveys conducted by the NDDOT indicate that van and sports utility vehicles (SUV) occupants continue to demonstrate the highest seat belt restraint usage rates at 88% and 87%, respectively, followed by auto and pickup occupants at 82% and 76%, respectively. Pickup occupants continue to have noticeably lower rates than occupants in other vehicle types (Figure 19). Other factors related to seat belt restraint use include age, gender, and geographic density, as well as speed.



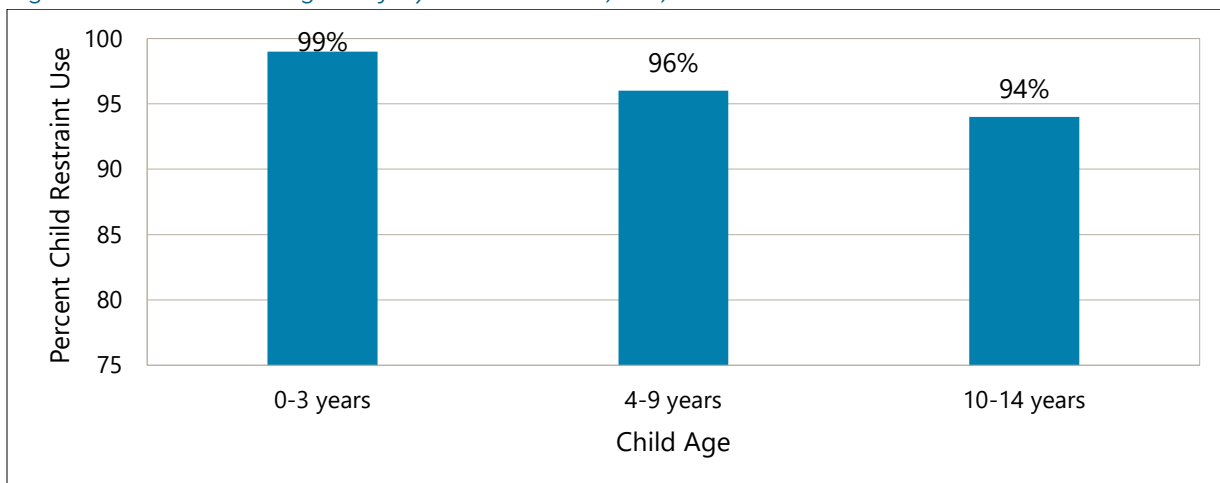
Figure 19. Seat Belt Restraint Use by Vehicle Type, ND, 2020



Source: NDDOT

The state’s primary enforcement child passenger safety law requires children younger than 8 years old to be secured in a child restraint, and children ages 8 through 17 to be secured in a seat belt or child restraint. Observation surveys conducted by the North Dakota State University Upper Great Plains Transportation Institute (NDSU UGPTI) in 2020 showed that 99% of children ages 0 through 3 years were secured in a car seat, 96% of children ages 4 through 9 years were secured in a seat belt or child restraint, and 94% of children ages 10 through 14 years were secured in a seat belt. Overall, restraint use for children aged 14 and younger was 97% (Figure 20).

Figure 20. Child Passenger Safety Restraint Use, ND, 2020



Source: NDSU UGPTI

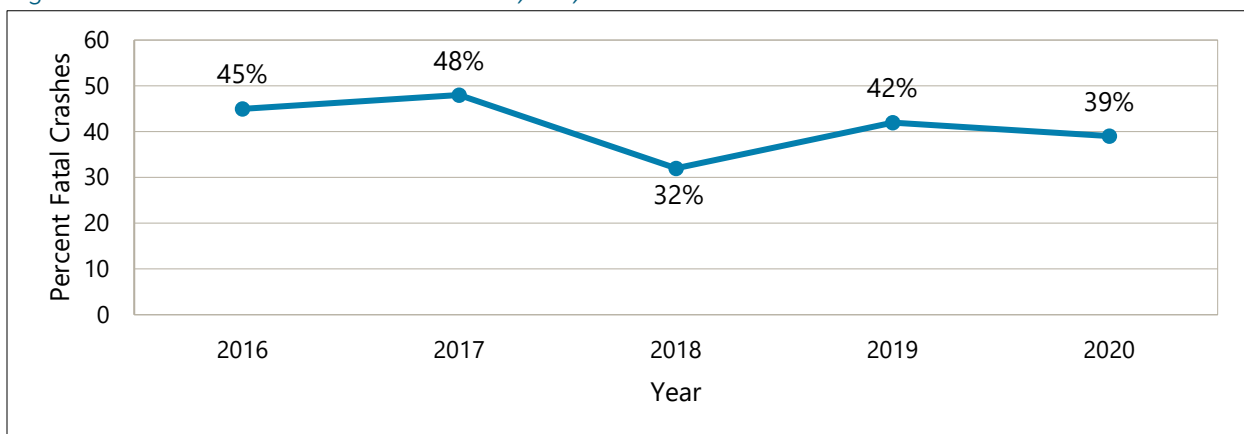
According to the National Highway Traffic Safety Administration (2015), national studies reflect a 49% misuse rate of child passenger safety restraints. The ND child restraint misuse rate is higher than the national rate at approximately 70%.^{4,5}



Alcohol Use

In recent years, the percentage of alcohol-related fatal crashes in ND fluctuated from a high of 48% in 2017 to a low of 32% in 2018 (Figure 21). Approximately 14% of adult arrests in 2020 were for Driving Under the Influence (DUI). In 2020, the average blood alcohol content (BAC) among DUI offenders in ND is .161 – well over the legal limit of .08. In 2020, one alcohol-related crash occurred every 14 hours and one alcohol-related vehicle fatality occurred nearly every 9.6 days.²

Figure 21. Alcohol Related Fatal Crashes, ND, 2016-2020



Source: NDDOT



The ND Youth Risk Behavior Survey (YRBS) results indicate that alcohol use by the state's youth has decreased from 17.7% in 2015 to 14.2% in 2019. In 2019, 14% of ND ninth through 12th graders stated in the past 30 days they had ridden in a vehicle with someone who had been drinking (ND Department of Public Instruction).⁵

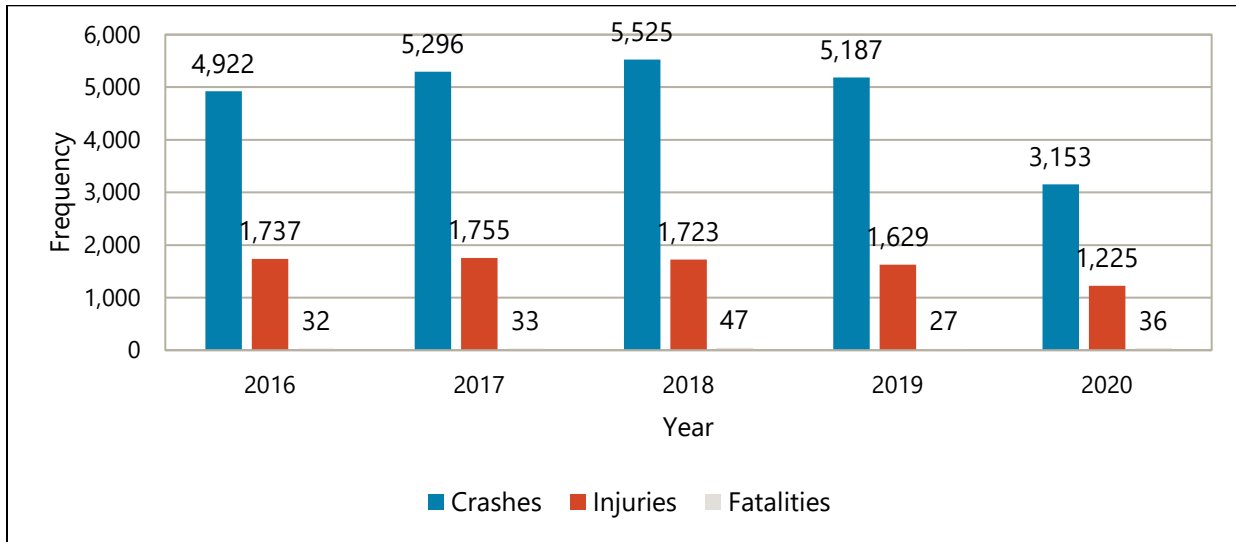
Speed

Speed and/or aggressive driving was a factor in 34% of fatal crashes in ND in 2020. One speed/aggressive driving involved crash occurred nearly every three hours and one speed/aggressive driving involved fatality occurred about every 10 days in 2020.

Of the 36 drivers involved in fatal crashes in ND in 2020 with speed and/or aggressive driving identified as a contributing factor, 64% were ages 18-44 and 75% were male. Between 2016-2020, 175 people died in speed/aggressive driving-involved crashes in ND² (Figure 22).



Figure 22. Motor Vehicle Crashes, Fatalities, and Injuries Involving Speed/Aggressive Driving, ND, 2016-2020



Source: NDDOT

Lane Departure

Lane departure is the most common type of crash resulting in injuries in rural areas. In 2016-2020, 74% of single-vehicle fatal lane departure crashes involved overturning/rolling over and 15% involved collisions with fixed objects such as trees, utility/light poles, traffic signs, and mailboxes.

Lane departure can be caused by many things including distraction, drowsiness, and impaired driving. From 2016-2020, officer suspected alcohol involvement was a contributing factor in 43% of fatal lane departure crashes in ND² (Table 1).

Table 1

Number of ND Motor Vehicle Crashes, Fatalities, and Injuries Involving Lane Departure, 2016-2020			
Year	Crashes	Injuries	Fatalities
2016	5,604	1,770	62
2017	5,725	1,497	69
2018	5,656	1,555	60
2019	5,198	1,460	63
2020	3,510	1,278	56

Source: NDDOT 2016-2020

Distracted Driving

According to the National Highway Traffic Safety Administration (NHTSA)^{4,3}, 142 people were killed in a motor vehicle crash involving distracted drivers in 2019 in the U.S.

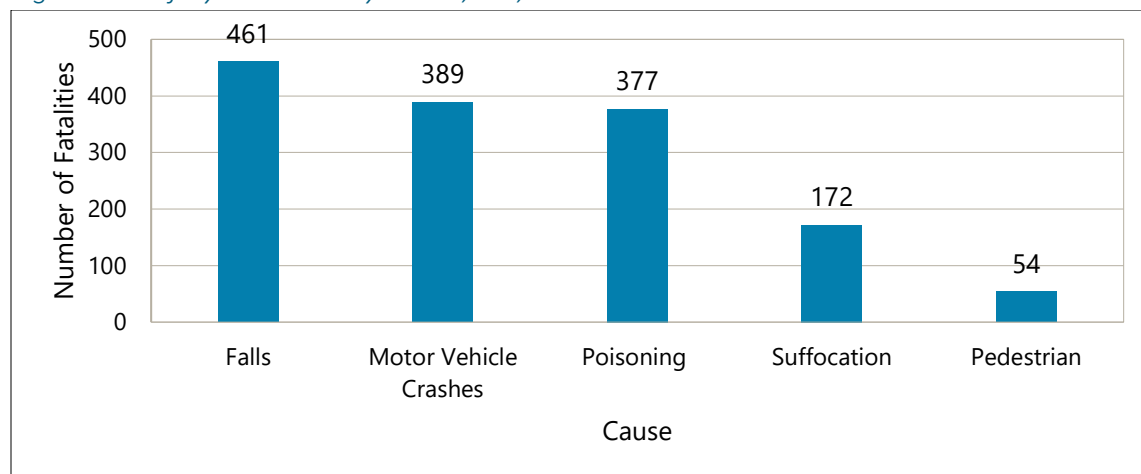
Distracted driving is vastly under reported as a factor in a crash due to driver hesitancy to report, lack of witness verification, and other factors. As a result, ND crash data related to distraction is limited. However, in 2020, 1,066 distracted driving violations were posted to the ND Driver's License system.²



PEDESTRIAN SAFETY

A pedestrian is defined as a person walking along a road or in a developed area. Nationally, there were a total of 6,721 pedestrian fatalities on public roadways involving a motor vehicle in 2020, which is an increase of almost 5% from 2019. From 2016 through 2020, there were 54 pedestrian fatalities in ND (Figure 23).

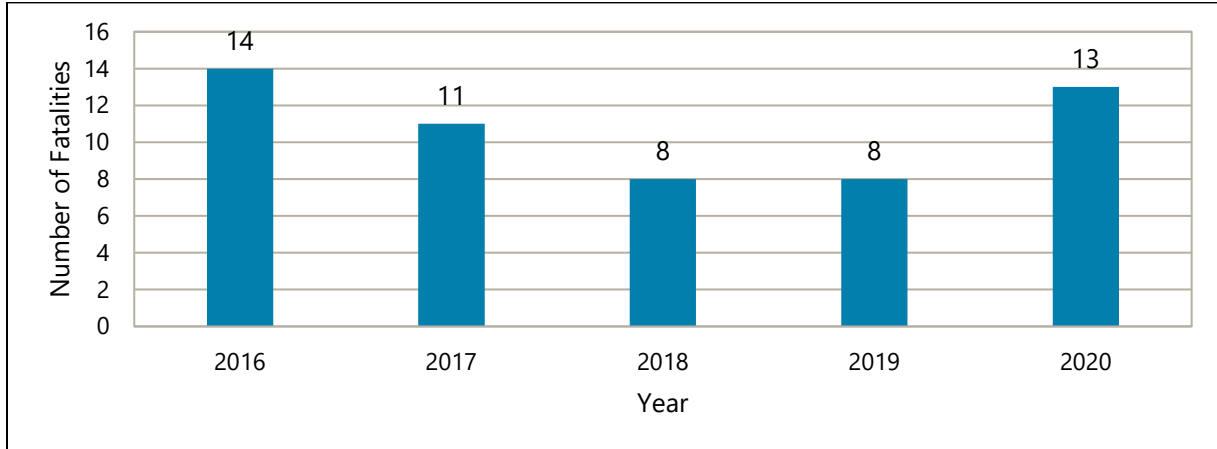
Figure 23. Injury Fatalities by Cause, ND, 2016-2020



Source: NDHHS – Vital Records Unit

In 2020, 13 ND residents died in pedestrian-related accidents (Figure 24).

Figure 24. Pedestrian Fatalities by Year, ND, 2016-2020



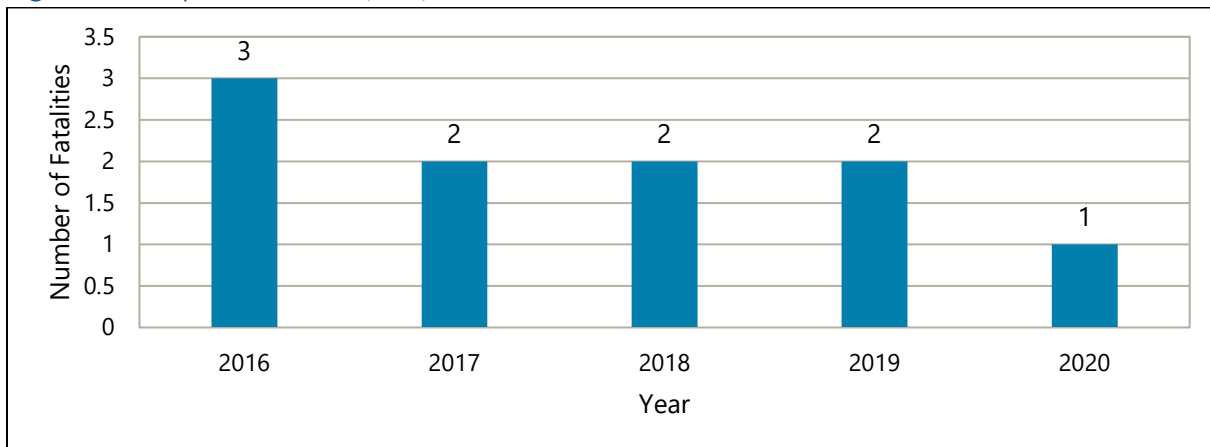
Source: NDHHS – Vital Records Unit



Bicycle Safety

People are increasing bicycling to commute to work, for exercise, or just for fun. By law, bicycles on the roadway are vehicles with the same rights and responsibilities as motorized vehicles. Nationally, there were 806 bicyclists killed in traffic crashes in 2020. Each year in ND from 2016 through 2020, bicyclists' fatalities are decreasing (Figure 25).²

Figure 25. Bicyclist Fatalities, ND, 2016-2020



Source: NDDOT



RECOMMENDED PREVENTION STRATEGIES

Occupant Protection

- Support enactment of primary seat belt legislation that includes all passengers in all seating positions
- Conduct outreach to ND's law enforcement to enforce occupant protection laws within the state with emphasis in the rural areas
- Support public information and education campaigns to include:
 - Seat belt mobilization campaigns
 - Social media marketing
 - Defensive driving
 - Other efforts to increase the use of seat belts by ND residents
- Encourage employers to implement and enforce seat belt policies and include motor vehicle safety as part of worksite wellness initiatives

Child Passenger Safety (CPS)

- Promote CPS best practices through statewide car seat distribution programs, car seat safety checkups, and CPS campaigns
- Conduct CPS certification trainings to increase and maintain the network of certified CPS technicians, instructors, and proxies
- Recruit at least 10 law enforcement personnel to attend the annual ND CPS certification trainings
- Promote the online CPS resource maps on the NDHHS website: [North Dakota Child Passenger Safety | Health and Human Services North Dakota](#)



Alcohol Impairment

- Support our partner's efforts to decrease the rate of alcohol-related fatalities through enactment and enforcement of laws and administrative rules to reduce impaired driving
- Support public information and education campaigns for impaired driving:
 - Alcohol beverage server training
 - Saturation patrols
 - Sobriety checkpoints
 - Education campaigns that address drinking and driving
- Change social norms about general alcohol consumption by ND residents
- Encourage employers to implement and enforce non-alcohol use policies and include motor vehicle safety as part of worksite wellness initiatives

Speed

- Support the enactment of enhanced penalties for speed fines
- Support public information and education campaigns on speed and aggressive driving

Lane Departure

- Support public information and education campaigns on safety corridors and median barriers

Distracted Driving

- Support public information and education campaigns on distracted driving

Pedestrians

- Support public information and education campaigns on pedestrian safety

Bicycles

- Support public information and education campaigns on bicycle safety

For more strategies, see the ND Vision Zero Plan at:

<https://visionzero.nd.gov/safety-plans/>

For More Information

- [ND Department of Transportation](#)
- [Vision Zero](#)
- ND Health and Human Services - [Child Passenger Safety](#)
- [ND Highway Patrol](#)
- [AAA -The Auto Club Group](#)
- [National Highway Traffic Safety Administration](#)
- [Safe Kids Worldwide](#)
- [Home - ND Safety Council \(ndsc.org\)](#)
- [Upper Great Plains Transportation Institute \(UGPTI\) - Home](#)
- Centers for Disease Control and Prevention - [Transportation Safety | Transportation Safety | Injury Center | CDC](#)

References

¹Injury Fatalities by Cause, ND: [Vital Records | Health and Human Services North Dakota](#)

²Overview of Motor Vehicle Crashes in 2020: [Overview of Motor Vehicle Crashes in 2020 \(dot.gov\)](#)

³ND Trauma: [NDDOT - Safety](#)

⁴National Highway Traffic Safety Administration: <https://www.nhtsa.gov/>

⁵Youth Risk Behavior Survey: <https://www.nd.gov/dpi/districtschools/safety-health/youth-risk-behavior-survey>



UNINTENTIONAL POISONINGS

GOAL STATEMENT

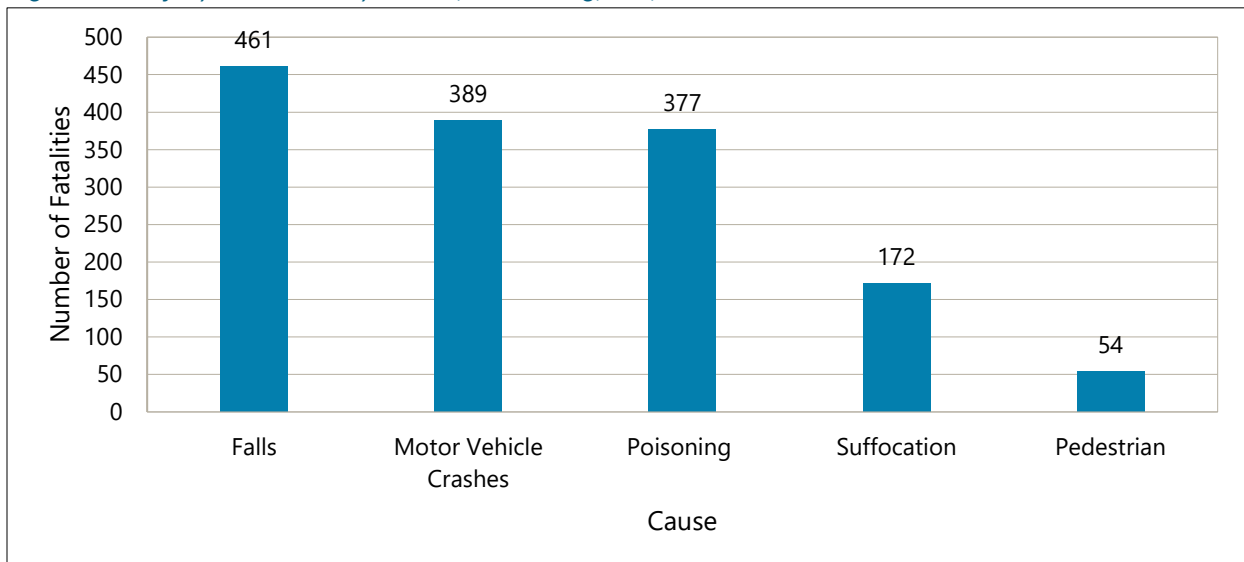
Reduce fatal poisonings from 5.73 per 100,000 (age-adjusted rates) to 4.5 per 100,000 by 2027.

STATEMENT OF PROBLEM

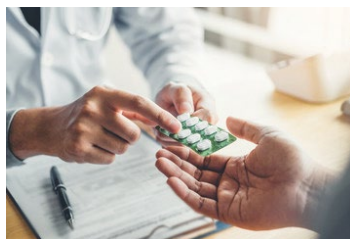
According to the CDC, there were 389,651 poisoning deaths from 2016 to 2020 (23.86 per 100,000 population) nationally¹. Poisonings increase the burden in emergency departments (ED) and hospitals; about one-quarter (25%) of drug poisoning ED visits resulted in hospital admission.¹

There were 377 deaths due to poisoning in ND from 2016 to 2020 (Figure 26). The rate of unintentional poisoning deaths among ND residents was 56.1 per 100,000 population. Within the period of 2016-2020, unintentional poisoning ranked third among the leading causes of injury deaths in ND.

Figure 26. Injury Fatalities by Cause, Poisoning, ND, 2016-2020

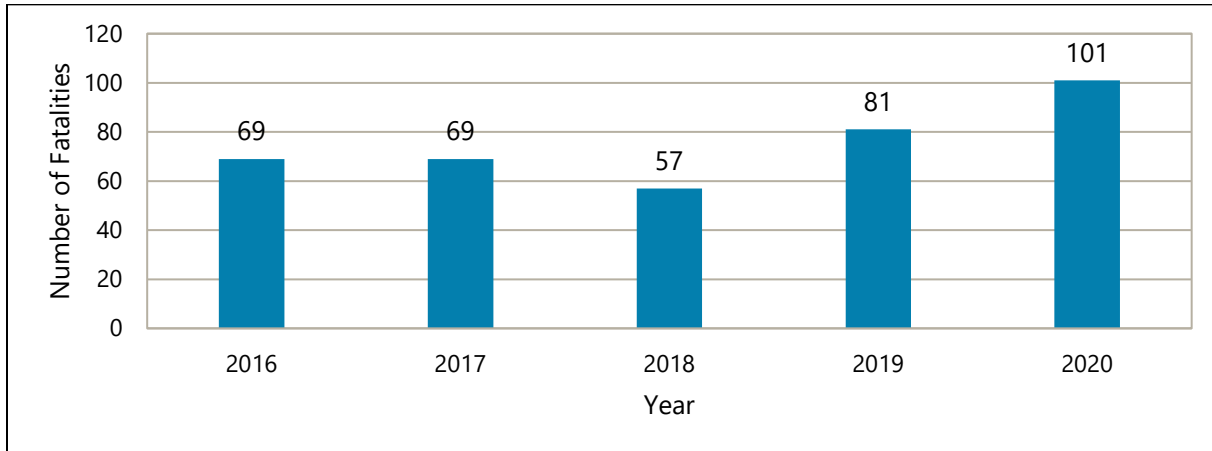


Source: NDHHS – Vital Records Unit



The number of poisoning deaths in ND has increased each year from 2016 through 2020 (Figure 27), resulting in an increase of over 46%.

Figure 27. Poisoning Fatalities by Year, ND, 2016-2020

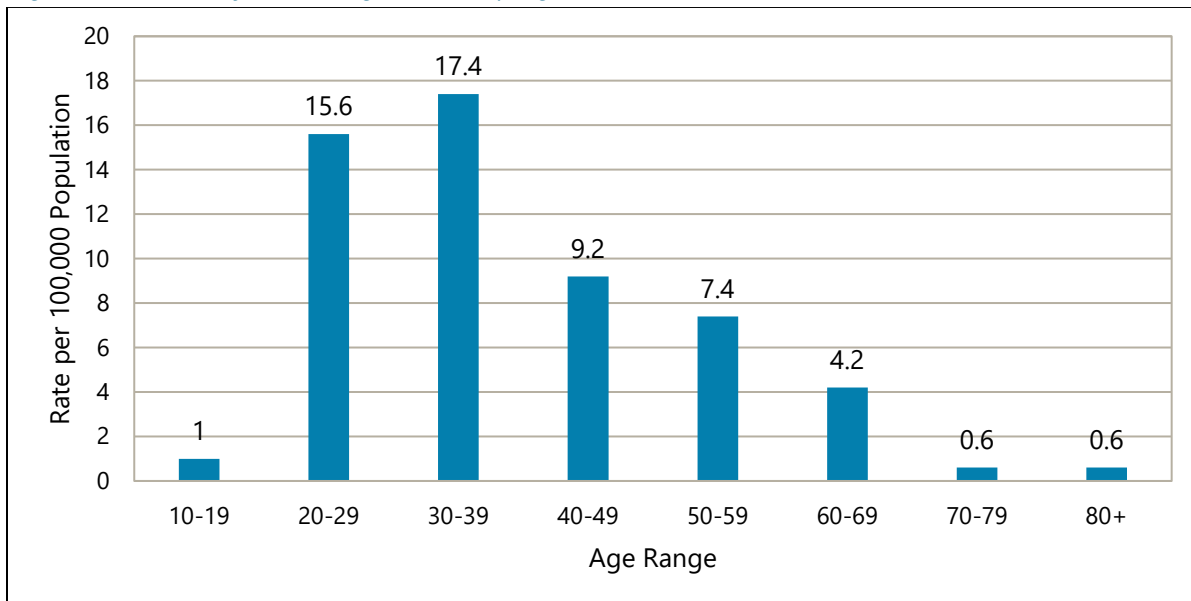


Source: NDHHS – Vital Records Unit

Age

Nationwide, the highest death rates for unintentional poisonings were among residents ages 35-44 with a rate of 42.0 deaths per 100,000 population from 2016 to 2020.³ In ND, residents ages 20-29 and 30-39 have the highest rates of deaths due to poisonings from 2016 to 2020 (Figure 28).

Figure 28. Rates of Poisoning Deaths by Age, ND, 2016-2020



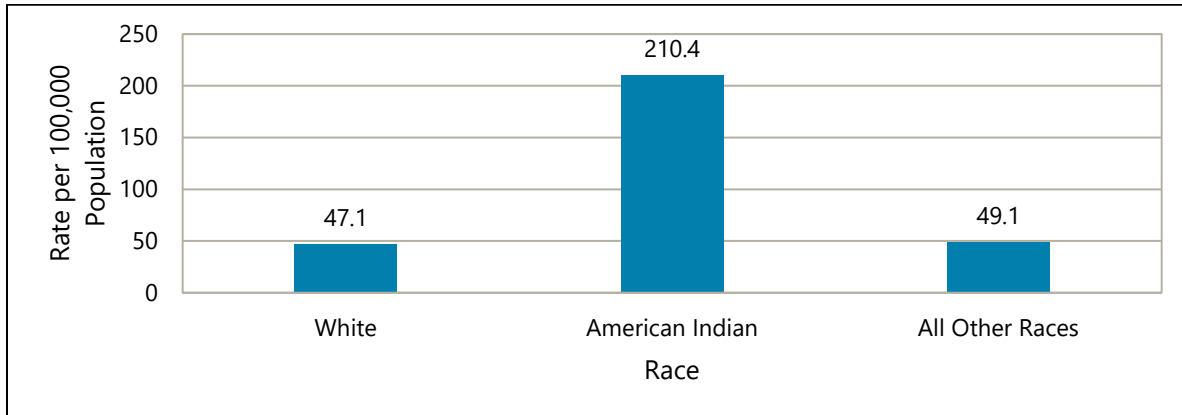
Source: NDHHS – Vital Records Unit

Race

Nationwide, among the highest death rates for unintentional poisonings were American Indian or Alaska Natives with 21.49 deaths per 100,000 population from 2016 to 2020, preceded by Whites with 22.67 and Blacks with 21.46 deaths per 100,000 population.¹

In ND, American Indians have the highest rate of deaths due to poisonings with 210.4 deaths per 100,000 from 2016 to 2020 (Figure 29).

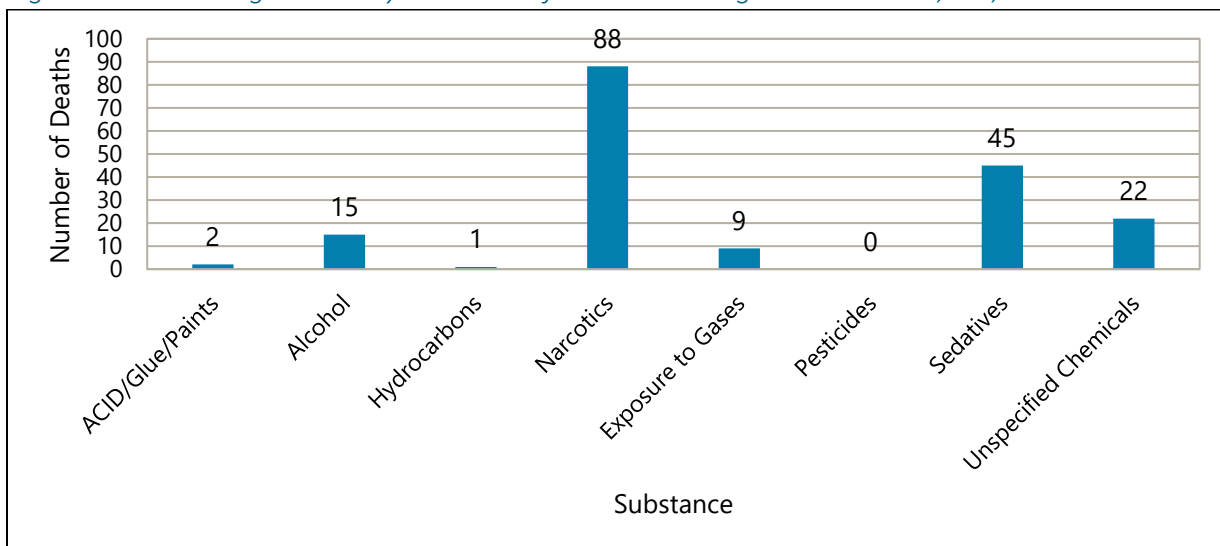
Figure 29. Rates of Poisoning Deaths by Race, ND, 2016-2020



Source: NDHHS – Vital Records Unit

Narcotics were the most common substance resulting in a poisoning death in ND from 2016 to 2020 in residents ages 30-50 (Figure 30).

Figure 30. Poisoning Deaths by Substance for Residents Ages 30-50 Years, ND, 2016-2020

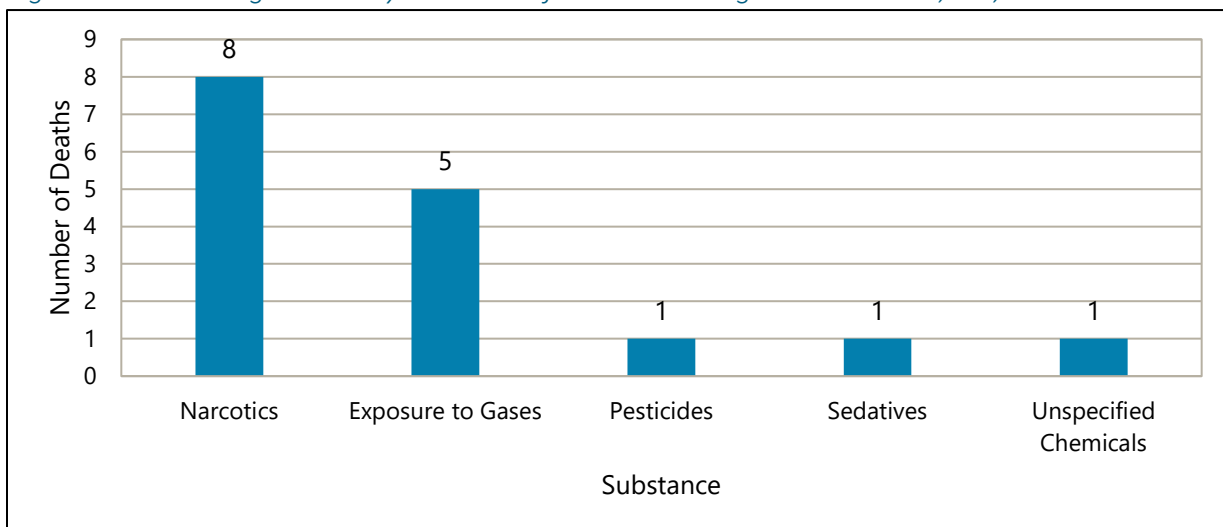


Source: NDHHS – Vital Records Unit



Among residents over the age of 65, narcotics were the leading substance resulting in death in ND from 2016 to 2020 (Figure 31).

Figure 31. Poisoning Deaths by Substance for Residents Age 65 and Older, ND, 2016-2020



Source: NDHHS – Vital Records Unit

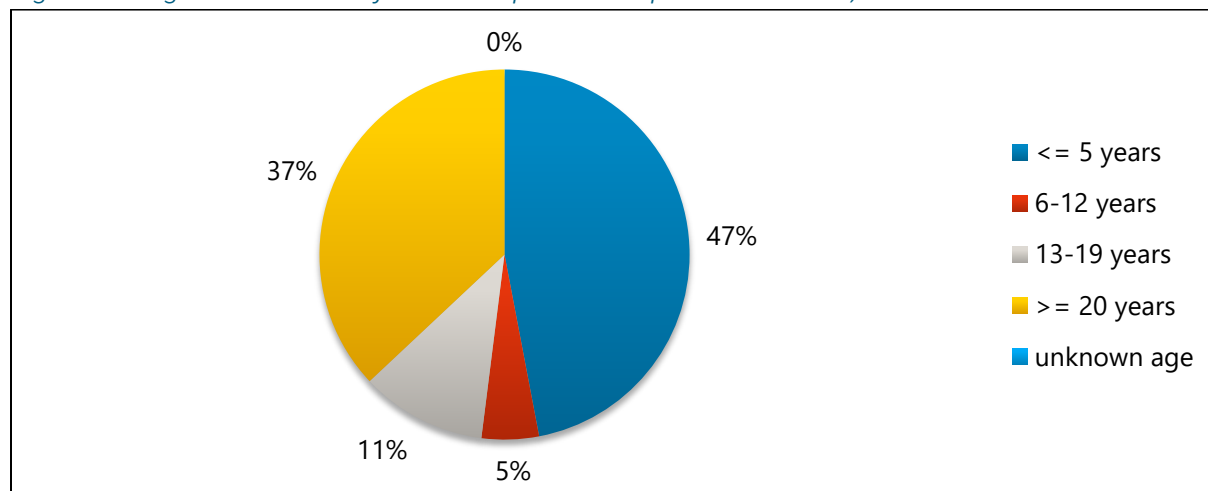
Poisoning Exposures

The U.S. has 55 poison control systems that track poisonings and their sources. All poisoning exposure calls that are made to these centers are collected and stored in a database called the National Poison Data System.⁴ In 2020, these centers provided telephone guidance for over 2.1 million human poison exposures, which is about one poison exposure being reported to a poison control center every 15 seconds.⁵ The Minnesota Poison Control System (MPCS) in Minneapolis is the regional poison control center for ND residents⁶. From 2016-2020, a total of 27,313 calls from ND residents were made to the MPCS, or about 6,828 calls a year.

Ages Affected

Young children comprise a disproportionate percentage of poisoning cases.⁵ From 2016 to 2020, 47% of exposure calls to the poison control center from ND residents (n=12,884) were regarding children five years of age and younger (Figure 32).

Figure 32. Age Distribution of Poison Exposures Reported to MPCS, 2016-2020



Source: MPCS

Most Common Substances Involved in Poison Exposures

Nationwide in 2020, cosmetics and personal care products were the most common substances involved in poisoning exposures in children 5 years of age and younger.⁵ In ND, the most common substance reported in poisoning exposures from 2016-2020 in children 5 years of age and younger (n=12,884) was ibuprofen, followed by melatonin (Table 2).

Table 2. Common Substances Involved in Poison Exposures, Ages <=5, 2016-2020

Substance	Number of Calls	Percent of all exposure calls to the MPCS regarding ND residents <=5 years
Ibuprofen	580	4.27
Melatonin	533	3.92
Acetaminophen Alone, Pediatric	314	2.31
Diaper Care/Rash Products	310	2.28
Cream/Lotions/Makeup	200	1.47

Source: MPCS

Among residents ages twenty years and older, the most common substance involved in poison exposures were pain medications. The most common substance involved in poisoning exposures in adults twenty years of age and older was ethanol (alcohol beverage), followed by benzodiazepines (Table 3)

Table 3. Common Substances Involved in Poison Exposures, Ages >=20, 2016-2020

Substance	Number of Calls	Percent of all exposure calls to the MPCS regarding ND residents >=20 years
Ethanol (Alcoholic Beverages)	1,057	14.44
Benzodiazepines	747	4.89
Atypical Antipsychotics	521	3.41
Acetaminophen Alone, Adult	413	2.71
Gabapentin	284	1.86

Source: MPCS

Most Serious Poisonings

Nationwide in 2020, substance categories with the largest number of deaths across all ages included sedatives and sleeping medications; stimulants and street drugs; opioids; and alcohol.⁵ In ND, from 2016-2020, ethanol (alcoholic beverages) had the largest number of deaths or major effects across all ages (n=27,088), followed by benzodiazepines and atypical antipsychotics (Table 4).

Table 4. Largest Number of Deaths/Major Effects by Substance, 2016-2020

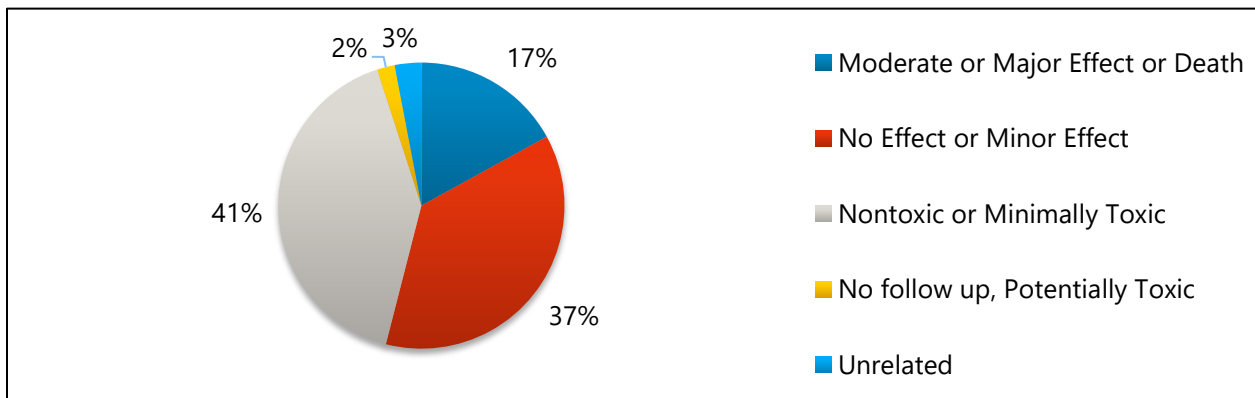
Substance	Number of Calls	Percent of all exposure calls to the MPCS from ND residents
Ethanol (Alcoholic Beverages)	113	0.42
Benzodiazepines	71	0.26
Atypical Antipsychotics	66	0.24
Acetaminophen Alone, Adult	59	0.22
Bupropion	45	0.17

Source: MPCS

Seriousness of Poison Exposures

Nationwide in 2020, about 83% of poison exposures reported to US poison control centers were non-toxic, minimally toxic, or had at most a minor effect. Moderate effect, major effect, or death occurred in approximately 10% of poison exposures reported to US poison centers.⁵ In ND from 2016-2020, nearly 78% of poison exposures reported to the MPCS (n=27,088) were non-toxic, minimally toxic or had a minor effect. Moderate effect, major effect, or death occurred in about 17% of poison exposures among North Dakotans (Figure 33).

Figure 33. Outcome of Poison Exposure Reported to MPCS, 2016-2020

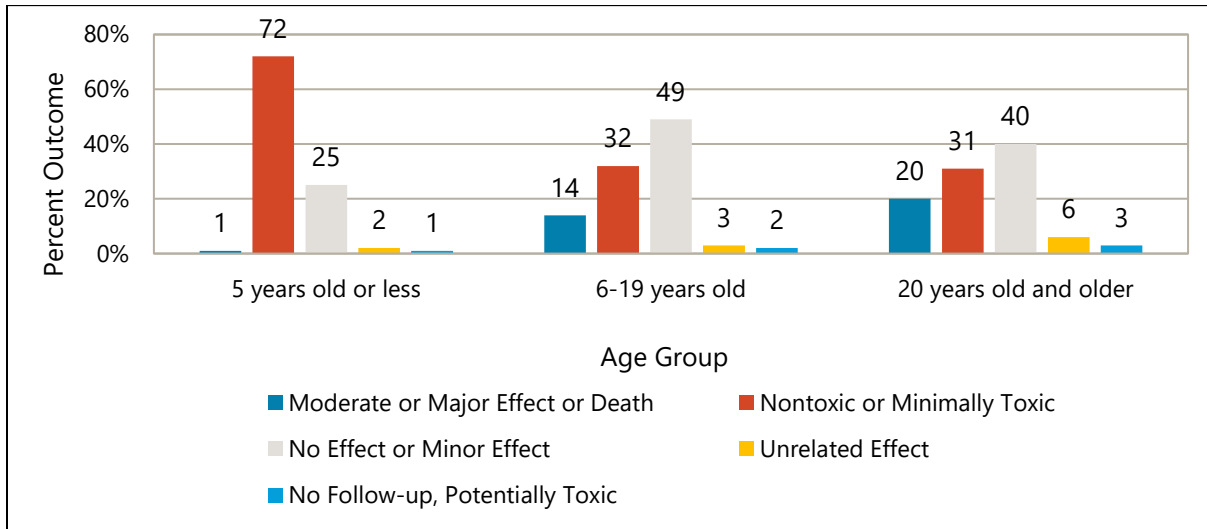


Source: MPCS



Nationwide in 2019, exposures in teens and adults were more serious, with 21% of teens and 19% of adults having a moderate, major, or fatal effect compared to 1% of children 5 years of age and younger.⁵ In ND, from 2016-2020, 14% of teens and 20% of adults had a moderate, major, or fatal effect compared to 1% of children 5 years of age and younger (Figure 34).

Figure 34. Outcomes of Poison Exposures Reported to MPCS by Age Group, 2016-2020



Source: MPCS

Risk Factors

- Misusing or abusing prescription or over the counter medications
- Taking larger or more frequent doses of medications
- Not following directions on the label when giving or taking medicines and not reading all warning labels
- Using food containers such as cups, bottles or jars to store chemical products such as cleaning solutions or beauty products
- Mixing household products together that can result in toxic gases
- Lack of education of the general population (parents and caregivers of children) regarding medications, specifically over the counter (OTC) medications
- Not reading directions on labels of chemicals
- Lack of assistance with managing medication – not able to read instructions/vision issues, cognitive issues, language barriers (not able to read English)
- Lack of child safety devices or not using them
- Storing medications in non-childproof containers such as plastic bags or pill boxes

- Placing medications in sight and with easy access to help remind adults to take them (e.g., on a nightstand, windowsill, or on countertops)
- Culture of drinking glamorized for youth, on campus, tailgating, or parties.
- E-cigarettes not stored properly



Prevention Strategies

- Distribute data to agencies and organizations involved in poison prevention strategies (i.e., child care, hospitals, clinics, Safe Kids coalitions) to assist them in determining priorities
- Develop a partnership with [ND Workforce Safety & Insurance \(WSI\)](#) and [ND Occupational Safety and Health Administration \(OSHA\)](#) to explore methods of gathering data relating to unintentional overdoses and poisoning exposures in the workplace
- Support existing and new community prevention efforts that are based on local needs and utilize evidence-based strategies
- Work with colleges and schools regarding alcohol use/abuse
- Maintain a high-quality poison center with round-the-clock free information services 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 professionals and insurance providers about the need to screen at-risk children:
 - Suggest providers utilize Bright Futures Guidelines, a resource that provides health care professionals with updated background and recommendations for pediatric health promotion, health supervision and anticipatory guidance for 31 age-based visits:
<https://www.aap.org/en/practice-management/bright-futures>

General Population

- Create and distribute various poison prevention flyers and tip sheets to public health, pharmacies, hospitals, and clinics
- Create and maintain online resources available to providers, pharmacists, and the public, (i.e., [ND Safety Council](#), [Safe Kids Worldwide](#), and [NDHHS](#))
- Educate the public on proper disposal of drugs including the [Attorney General's Drug Take Back Program](#) at local law enforcement centers and local participating pharmacies using handouts, television, and radio PSA's and web sites
- Assist with the process of conducting community-wide drug/medication take back events that are one-time (i.e., health fair, drive-up, and drop-off)
- Support poison prevention education to address emerging poison dangers (i.e., [ND Safety Council Annual Conference](#), [Dakota Conference on Rural and Public Health](#))
- Promote the [ND Safety Council Prescription Drug Employer toolkit](#)
- Explore the need to provide education on Naloxone availability and use (Naloxone is a medicine that reverses the effects of opioids, sometimes called narcotics)
- Promote statewide campaigns seeking to raise awareness of unintentional poisonings
- Disseminate information to pharmacies to encourage participation in the [Medsafe program](#) for pharmacy-based medication take backs

- Educate physicians and pharmacists regarding poison prevention strategies and resources
- Provide educational outreach to prescribers on ways to minimize poison/medication exposures
- Conduct "[Reasonable Suspicion Training](#)" for employers in ND to include information on how to create drug/alcohol policies that deter drug abuse/misuse in the workplace
- Educate on the dangers of carbon monoxide (CO) poisoning, common sources of CO in homes, and the use of CO detectors/alarms
- Collect and analyze data on CO poisonings to create educational campaigns and strategies targeted at the specific cause/location/source of CO deaths

Children

- Create and distribute presentations on prevention to parents and caregivers (i.e., [Head Start](#), College of Nursing, [Child Care Aware](#), [Prevent Child Abuse ND](#))
- Promote the [NDHHS online poison prevention training program](#)⁶
- Promote the "[Young Minds Inspired](#)" for middle school students (recommended for ages 11 and up)
- Promote the use of the Safe Kids "[A Parent's Guide to Child Safety](#)", (i.e., [WIC](#), physician offices, [local Public Health](#), [Head Start](#))
- Provide community education on the dangers of electronic cigarettes, including nicotine overdose/poisoning prevention
- Obtain and distribute CO monitors and education regarding CO poisoning at health fairs and community events
- Distribute poison stickers and information to children (either in the classroom or at preschools) for them to place on common household poisons in their own homes
- Distribute cabinet locks to families with young children along with education on poison prevention at health fairs and community events
- Keep purses, bags, etc. out of the reach of children
- Store medication and chemicals in original containers, out of the sight and reach of children, such as in a high location versus a low location in case the child safety device doesn't work or breaks



Seniors

- Distribute information to senior groups on the adverse effects of medication and potential interactions
- Partner with pharmacists' associations to educate seniors on safe use of medications
- Distribute poison prevention brochure to public health, pharmacies, hospitals, and clinics
- Explore partnerships to promote poison prevention messaging to agencies (i.e., [NDHHS Aging Division](#), [American Legion](#), [ND AARP](#), and [ND Nursing Home Association](#))
- Store medication and chemicals in original containers
- Prepare (safety proofing) home if grandchildren/young children visit
- When visiting people with young children, always keep luggage/purses out of the reach of children
- Take medication at a table or over a countertop to prevent medication from falling to the floor if dropped. If medication falls onto floor and you're unable to find it, ask someone to help you

Rural Communities

- Promote and encourage continuing education training through the [online poison prevention training program](#)⁶ for public health nurses, child care providers, social workers, EMS personnel, rural hospital staff, [Indian Health Services](#), and tribal health services
- Raise awareness about Naloxone availability, use and benefits with rural communities, including first responders

American Indian and Underserved Population

- Promote the drug/medication take back program/sites via pharmacy cards to tribal pharmacies and with radio PSAs targeted toward tribal populations
- Reach out to Underserved community leaders to determine what is most appropriate to meet their educational needs for poison prevention education



For More Information

- ND Health and Human Services, Behavioral Health Unit
<https://prevention.nd.gov/>
- ND Health and Human Services, Family Health, and Wellness Unit
[Injury Prevention | Health and Human Services North Dakota](#)
- [ND Poison Center](#)
- [ND Safety Council](#)
- [Safe Kids Worldwide](#)
- [Safe Kids Fargo/Moorhead](#)
- [Safe Kids Grand Forks](#)
- [American Association of Poison Control Centers](#)
- [National Safety Council](#)
- [National Children's Center for Rural and Agricultural Health and Safety](#)
- [Marshfield Clinic Research Institute - National Children's Center for Rural and Agricultural Health and Safety \(marshfieldresearch.org\)](#)
- [Scholastic OTC Program](#) through the [Young Minds Inspired](#)

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² Centers for Disease Control and Prevention (2020). Cost of Injuries and Violence in the United States. https://www.cdc.gov/injury/wisqars/overview/cost_of_injury.html

³ Centers for Disease Control and Prevention (2022). CDC WONDER: Underlying Cause of Death, 1999-2020 Results. <http://wonder.cdc.gov/ucd-icd10.html>

⁴ American Association of Poison Control Centers (2019). National Poison Data System. <http://www.aapcc.org/>

⁵ National Capital Poison Center (2019). Poison Statistics: National Data 2018. <http://www.poison.org/poison-statistics-national>

⁶ North Dakota Poison Center (2022). About the Poison Center. [North Dakota Poison Center \(ndpoison.org\)](#)

UNINTENTIONAL SUFFOCATION

GOAL STATEMENT

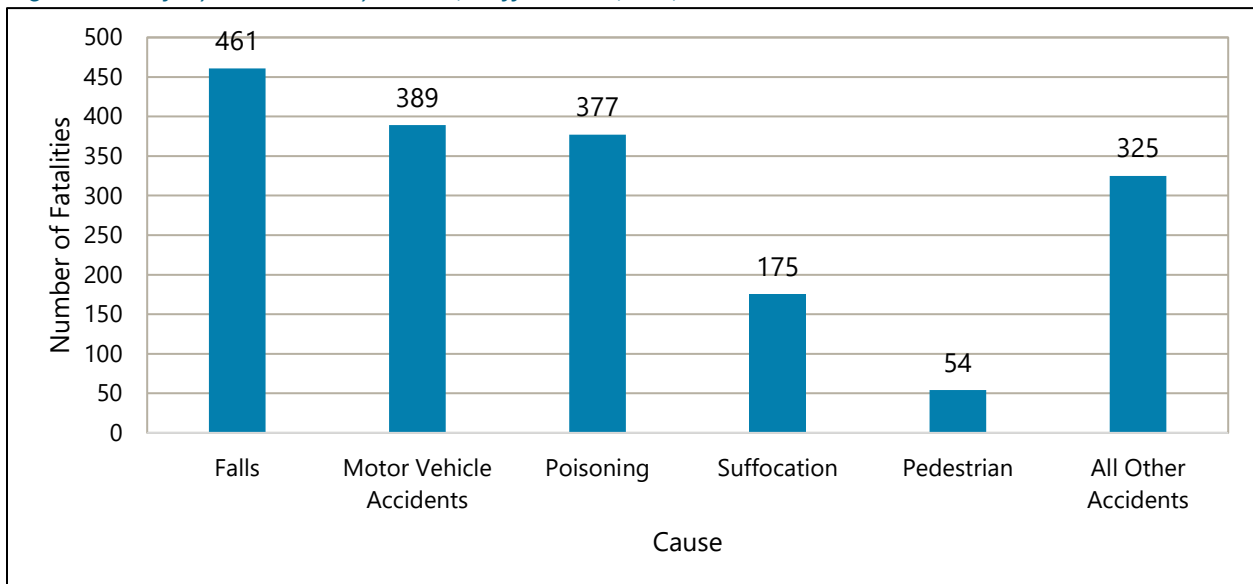
Reduce the number of fatalities caused by suffocation by 9 deaths by 2027, which is slightly less than 5%.

Suffocation definition: inability to breathe by unintentional causes such as asphyxiation, aspiration, and strangulation.

STATEMENT OF PROBLEM

There were 175 ND resident deaths from unintentional suffocation from 2016-2020 (Figure 35).

Figure 35. Injury Fatalities by Cause, Suffocation, ND, 2016-2020

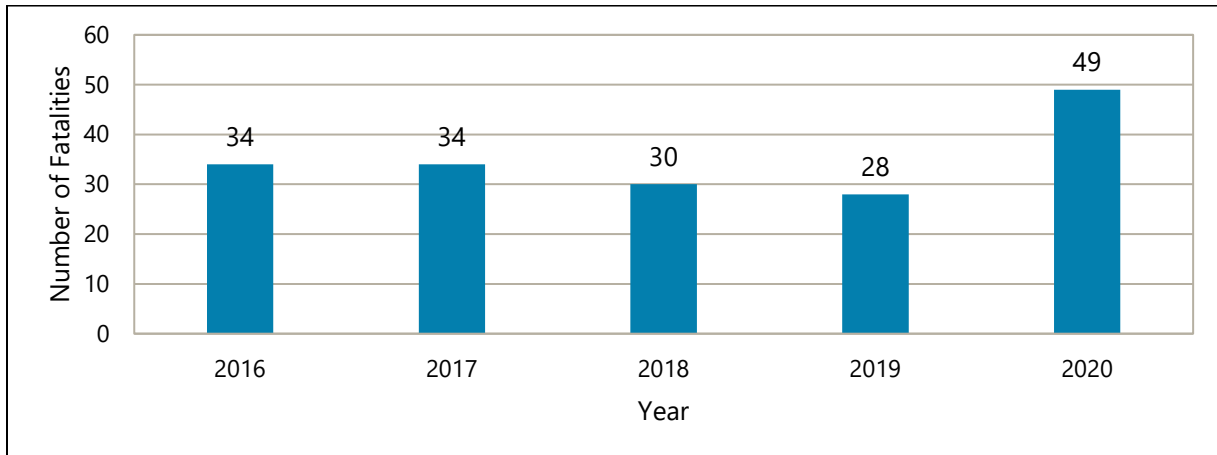


Source: NDHHS – Vital Records Unit



In ND, 2020 had the highest number of suffocation fatalities at 49 (Figure 36).

Figure 36. Suffocation Fatalities by Year, ND, 2016-2020

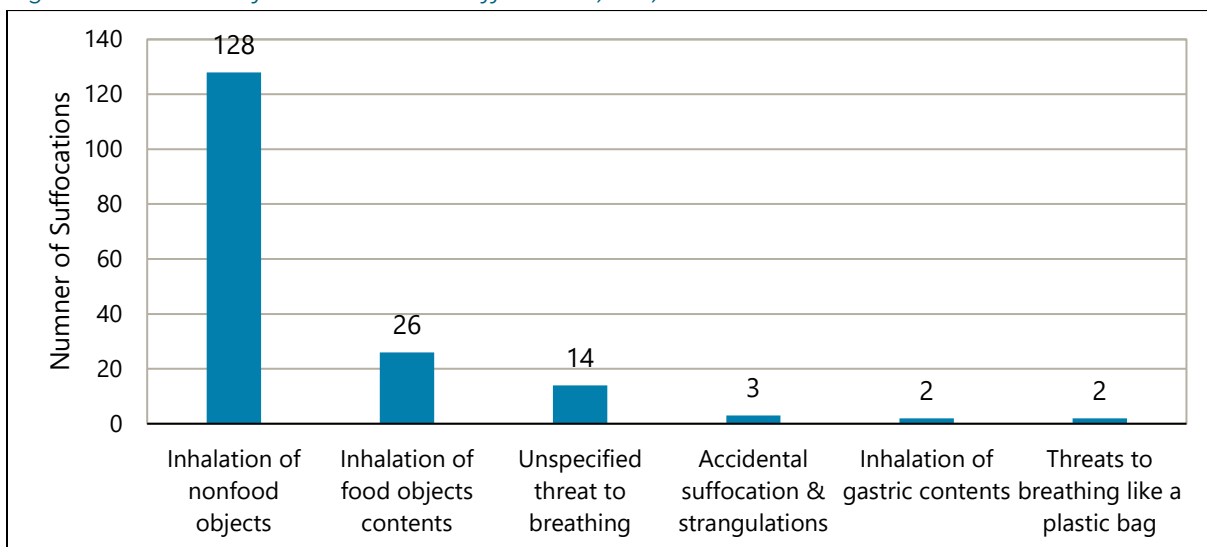


Source: NDHHS – Vital Records Unit

While suffocation is listed as the primary cause of death in these cases shown in the graph above, it is often the result of chronic disease, choking, substance abuse, and/or farming accidents.

Causes of unintentional suffocation in ND are reported to be from inhalation of non-food objects, inhalation of food object contents, and unspecified threats to breathing (Figure 37).

Figure 37. Causes of Unintentional Suffocation, ND, 2016-2020



Source: NDHHS – Vital Records Unit



Risk Factors

- Age
- Substance abuse
- Physical swallowing impairment
- Eating while running
- Talking or laughing while eating
- Food not properly cut into safely small pieces
- Encourage a swallowing study if physical impairments exist
- Quality of supervision at time of death
- Easy access by infants and toddlers to small objects, balloons, plastic bags, and toys with small parts¹
- Toy chests without safety latches²
- Unsafe working environment

Recommended Strategies

- Promote First Aid/CPR classes
- Encourage a swallowing study if physical impairments exist
- Encourage the public to focus on the task at hand while eating or drinking, avoid distractions or multitasking
- Encourage the public to use safe work practices per [OSHA](#) guidelines
- Promote the [NDHHS educational materials](#) related to opioids
- Promote [Parents LEAD](#)
- Promote naloxone training and distribution for opioid overdose
- Promote the evidence-based primary prevention program for substance use disorder called [Sources of Strength](#)
- Promote the [Consumer Product Safety Commission \(CPSC\)](#) awareness about safe window coverings

Unintentional Suffocation Sleep Related Infant Suffocation Death Attributed to Soft Bedding, Overlay, and Wedging

UNINTENTIONAL SUFFOCATION DEFINITIONS:

SUID - is a sudden and unexpected death, whether explained or unexplained including sudden infant death syndrome (SIDS), occurring during infancy.

Overlay – when another person rolls on top of or against the infant and impairs breathing.

Bed sharing – Parent(s) and infant sleeping together on any surface (bed, couch, or chair). Medical examiners prefer the term “surface sharing.”⁴

Co-sleeping – sleeping in close proximity and/or sleep surface/bed sharing.⁴

Wedging or entrapment - is a form of suffocation or mechanical asphyxia in which the nose and mouth or thorax is compressed or obstructed because of the infant being trapped or confined between inanimate objects, preventing respiration. A common wedging scenario is an infant stuck between a mattress and a wall (or a bedframe) in an adult bed. ⁴

Strangulation - is when an object becomes wrapped around an infant’s head and/or neck such as a tie from crib bumpers or a cord from window blinds.⁵

DEATHS RELATED TO UNSAFE SLEEP

Unintentional suffocation is the leading cause of injury death among infants less than 1 year old in the U.S., with 82% being attributable to accidental suffocation and strangulation in bed. Understanding the circumstances surrounding these deaths may inform prevention strategies.³

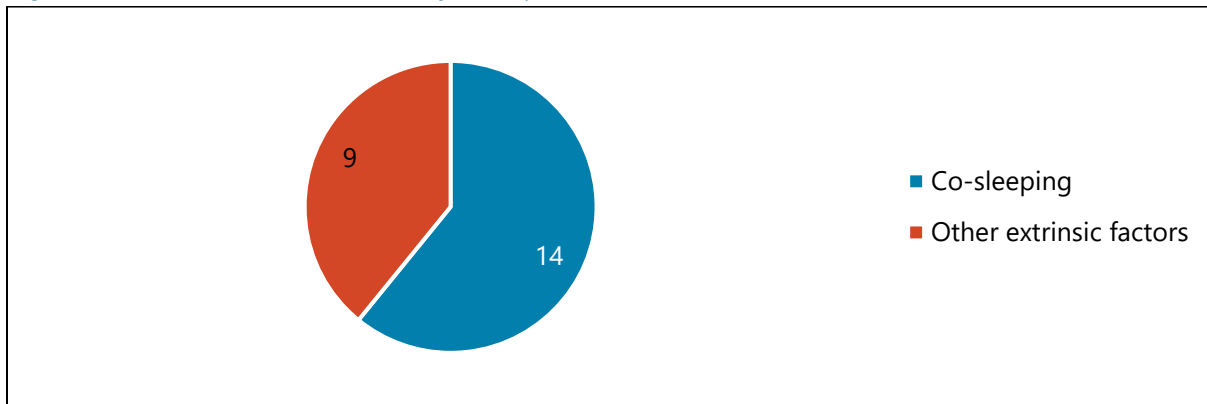
Circumstances that may be related to suffocation are accidental suffocation and strangulation in bed.² Accidental strangulation or suffocation in bed is an explained sudden and unexpected infant death in a sleep environment (bed, crib, couch, chair, etc.) in which the infant’s nose and mouth are obstructed or the neck or chest is compressed from soft or loose bedding, an overlay, or wedging causing asphyxia.⁴

In ND, from 2016-2020 47 deaths were documented under sudden unexplained infant death (SUID).

Twenty-four of these were unexplained infant death with no secondary cause of death listed on the death certificates.

However, the other 23 of these deaths were documented to be directly related to an unsafe sleeping environment such as co-sleeping with adults and/or sibling, or other extrinsic factors, such as sleeping in an adult bed in a prone (on their stomach) position, recliners, mother falling asleep while breastfeeding, soft bedding, pillows, and/or entrapment. (Figure 38).

Figure 38. Deaths Related to Unsafe Sleep, ND, 2016-2020



Source: NDHHS – Vital Records Unit

Risk Factors

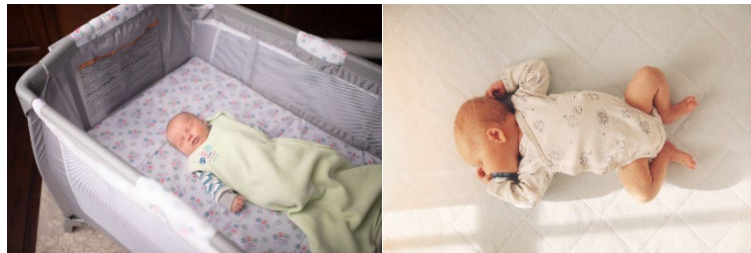
- Age
- Substance abuse by caregivers
- Co-sleeping
- Family's ability to provide safe sleep environment for child²
- Quality of supervision at time of death²

Recommended Strategies to Reduce the Risk of Sleep Related Deaths

- Continued collaboration with medical professionals, public health providers, child care providers, parenting education programs, child welfare, home visiting programs, and other entities to provide safe sleep information and tools for discussing safe sleep with parents and caregivers of infants
- The information should include the dangers of bed, couch, and recliner sharing, particularly when the caregiver may be impacted by exhaustion or sedating substances. In addition, the dangers to infants prenatally or environmentally

exposed to alcohol or controlled substances, particularly how it increases their vulnerability to sudden infant death, should be included

- Referring families for the distribution of safe sleep resources such as "[Cribs for Kids](#)," including proper use and education
- Provide education and a safe sleep environment for all infants who do not have a safe sleep environment
- Encourage the public to follow the American Academy of Pediatrics recommendations for safe sleep environments⁴ [Safe Sleep \(aap.org\)](#)
- Promote the placement of infants back to sleep for every sleep
- Promote that infant's sleep environment should be clear of everything but a fitted sheet
- Promote the use a firm, flat, and non-inclined sleep surfaces for infants to reduce the risk of suffocation or wedging/entrapment



- Promote that infants sleep in the parents' room, close to the parents' bed, but on a separate surface designed for infants, ideally for at least the first 6 months
- Weighted blankets, weighted sleepers, weighted swaddles, or other weighted objects should not be placed on or near the sleeping infant⁴
- Bumper pads or similar products that attach to crib slats or sides are not recommended because they have been implicated in deaths attributable to suffocation, entrapment/wedging, and strangulation⁴
- The infant sleep area should be kept free of hazards, such as dangling cords, electric wires, and window covering cords, because these may present a strangulation risk⁴
- Continue public education, including strategies for overcoming barriers to behavior change, for all who care for infants, including parents, child care providers, grandparents, foster parents, and babysitters⁴
- Continue to emphasize outreach to subgroups, including Black and American Indian/Alaska Native populations, which have higher incidence of sleep-related deaths or higher prevalence of risk factors⁴



- Increase implementation of standardized protocols for death scene investigations, according to [CDC protocol](#). Comprehensive autopsies should be performed, including full external and internal examination of all major organs and tissues, including the brain; complete radiographs; metabolic testing; and toxicology screening
- Training on how to conduct a comprehensive death scene investigation should be offered to medical examiners, coroners, death scene investigators, first responders, and law enforcement
- Promote [First Aid/AED/CPR classes](#) offered by [ND Safety Council](#)⁶
- Promote [CPR and First Aid classes](#) offered by the [American Heart Association](#)⁵

For More Information

- NDHHS, Family Health and Wellness Unit:
[A Parents Guide to Home Safety.pdf \(nd.gov\)](#)
- American Academy of Pediatrics (AAP) Safe Sleep Recommendations [Sleep-Related Infant Suffocation Deaths Attributable to Soft Bedding, Overlay, and Wedging | Pediatrics | American Academy of Pediatrics \(aap.org\)](#)
- Consumer Product Safety Commission (CPSC)
 - www.cpsc.gov/Safety-Education/Safety-Education-Centers/cribs
- Centers for Disease Control and Prevention (CDC)
www.cdc.gov/sids/aboutsuidandsids.htm
- Safe to Sleep (NIH) www.nichd.nih.gov/sts/Pages/default.aspx
- [Sleep Safety and Suffocation | Safe Kids Worldwide](#)
- [Child Care Aware of North Dakota](#)
 - How to set up a pack n play video: <https://youtu.be/VARYce1bbis>
 - Daily use guidelines for pack n plays video: <https://youtu.be/8YDuivnKg08>
 - Creating a safe sleep environment video: <https://youtu.be/ITmjWsdDPec>

References

¹ The National Center for Fatality Review and Prevention (2017). Suffocation, Choking and Strangulation. [Center Resources – The National Center for Fatality Review and Prevention \(ncfrp.org\)](https://www.ncfprp.org/center-resources)

² Centers for Disease Control and Prevention (2017). About Sudden Unexpected Infant Death and Sudden Infant Death Syndrome. <http://www.cdc.gov/sids/aboutsuidandsids.htm>

³ American Academy of Pediatrics (AAP) Safe Sleep Recommendations [Sleep-Related Infant Suffocation Deaths Attributable to Soft Bedding, Overlay, and Wedging | Pediatrics | American Academy of Pediatrics \(aap.org\)](https://www.aap.org/sleep-related-infant-suffocation-deaths)

⁴ American Academy of Pediatrics (AAP) Safe Sleep Recommendations [Sleep-Related Infant Deaths: Updated 2022 Recommendations for Reducing Infant Deaths in the Sleep Environment | Pediatrics | American Academy of Pediatrics \(aap.org\)](https://www.aap.org/sleep-related-infant-deaths)

⁵ American Heart Association (2017). CPR and First Aid Emergency Cardiovascular Care. [ACLS | American Heart Association CPR & First Aid](https://www.heart.org/health-topics/cpr-and-first-aid)

⁶ North Dakota Safety Council (2016). [CPR/AED/First Aid, Adult - ND Safety Council \(ndsc.org\)](https://www.ndsc.org/cpr-aed-first-aid-adult)

For questions, comments, or more information,
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