

# Elevating Injury and Violence Prevention

*A Strategic Plan for North Carolina*

# 2015-2020



North Carolina  
Injury & Violence   
 PREVENTION Branch



Public Health  
HEALTH AND HUMAN SERVICES



North Carolina  
Injury & Violence  
PREVENTION Branch

# Elevating Injury and Violence Prevention: *A Strategic Plan for North Carolina, 2015-2020*

North Carolina Department of Health and Human Services  
Division of Public Health, Injury and Violence Prevention Branch

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# Letter from the State Health Director

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It is with great appreciation that I introduce the Statewide Strategic Plan for Injury and Violence Prevention in North Carolina, 2015 to 2020. Since the Injury and Violence Prevention Branch (IVPB) in the NC Division of Public Health released the first statewide plan in 2009, North Carolina has made great strides toward elevating injury and violence prevention as priority public health issues. For 80% of the North Carolina population (ages 1 to 59), injury and violence are the leading cause of death, and include prescription drug overdose, suicide, older adult falls, and motor vehicle crashes, among others.

The Injury and Violence Prevention State Advisory Council is a driving force behind the collective progress and efforts; it provides a place for diverse organizations to come together and learn about the latest research, programs, and policies for preventing injuries and violence. Such strong collaborations are the cornerstone of prevention and a method that we strongly encourage to ensure all efforts are coordinated and achieve their maximum impact.

We have advocated for and been involved with prescription drug overdose prevention for many years. Given the rising mortality rate of drug overdoses, it is critical now more than ever to increase our efforts in prevention. We credit the injury prevention community in our state for their immense efforts to slow and hopefully reverse this upward trend through widespread distribution of naloxone and simplifying the use of the controlled substances reporting system, among other community-based interventions and policy initiatives. While such innovative activities have positioned North Carolina as a nationally recognized leader in preventing overdoses, there is still more to do to combat this epidemic.

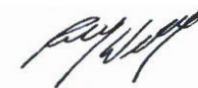
Like prevention of prescription drug overdose, similarly impressive efforts have been prioritized by injury prevention stakeholders to address other critical areas in the state and to save lives every day. Graduated drivers licensing laws keep our young drivers safe and have steadily reduced deaths since their enactment, older adults engaged in balance improvement programs have caused a reduction in falls, and programs to coordinate advocates and encourage bystander intervention on college campuses are preventing sexual assault before it happens.

We applaud the injury prevention field's, and the NC IVPB's, commitment to evidence-based practices and the use of data to continually identify, develop, implement, monitor, and evaluate program progress.

The public's health is vital to everything we do in North Carolina, and preventing injuries and violence is a significant factor in improving the quality of life for each North Carolinian. We are confident that in the next five years we will see great improvements in collaborations, programs, and policies that will lead to the ultimate goal of saving lives from injury and violence. We encourage everyone to use this Plan as a roadmap for further collaboration to strengthen the state's infrastructure for injury and violence prevention and implement effective interventions. It is our sincere hope that you will examine the Plan and identify the parts to which you and your organizations or communities can contribute. We all have a role to play, and we can make a difference if we work together.

Thanks for joining us in this important work.

Sincerely,



Randall Williams, M.D.  
NC Deputy Secretary for Health Services and State Health Director

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# Acknowledgements

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The NC Injury and Violence Prevention Branch would like to acknowledge the partnership, contributions, and support of the following organizations and entities:

- Brain Injury Association of NC
- Carolinas Poison Center
- Community Care of NC
- Duke University Hospital Trauma Center
- NC Governor’s Highway Safety Program
- Governor’s Institute on Substance Abuse
- Local Health Departments
- NC Board of Pharmacy
- NC Child Fatality Task Force
- NC Coalition Against Domestic Violence
- NC Coalition Against Sexual Assault
- NC Department of Health and Human Services
  - Division of Aging and Adult Services
  - Division of Health Services Regulation, Office of Emergency Medical Services
  - Division of Mental Health, Developmental Disabilities, and Substance Abuse Services
    - o Community Policy Management Section
    - o Controlled Substances Reporting System
    - o Traumatic Brain Injury Program
  - Division of Public Health
    - o Chronic Disease and Injury Section
    - o Women’s and Children’s Health Section
- NC Department of Insurance, Office of State Fire Marshal
- NC Essentials for Childhood
- NC Falls Prevention Coalition
- NC Harm Reduction Coalition
- NC Medical Board
- NC Medical Society
- NC Office on Disability and Health
- NC Sexual Violence Prevention Team
- NC Violent Death Reporting System
- Project Lazarus, Inc.
- Safe Kids North Carolina
- State Bureau of Investigation
- Trauma Regional Advisory Committees
- University of North Carolina at Asheville, NC Center for Health and Wellness
- University of North Carolina at Chapel Hill
  - Center for Health Promotion and Disease Prevention
  - Gillings School of Global Public Health, Department of Health Behavior
  - Highway Safety Research Center
  - Injury Prevention Research Center

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# Plan Overview

## BACKGROUND

### INTRODUCTION

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Injury and violence are significant and largely preventable public health problems. The purpose of Elevating Injury and Violence Prevention: A Strategic Plan for North Carolina (2015-2020) is to enhance injury prevention efforts in our state over the next five years. This plan also updates Building for Strength: North Carolina's Strategic Plan for Preventing Injuries and Violence 2009-2014 and its 2012 Addendum.

Designed as a guide for any agency, organization, or individual working on injury and violence prevention in NC, this plan can be used to determine priorities, make funding decisions, and identify ways to coordinate with others in North Carolina working to accomplish a similar mission.

### BUILDING ON SUCCESS

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North Carolina's first comprehensive statewide plan, Building for Strength, written in 2008, was based on a compilation of surveys, surveillance data, evidence-based prevention strategies, and reviews of expert panel recommendations that were focused on injury and violence prevention. This input from stakeholders was used to carve the plan's objectives, strategies, and benchmarks in injury and violence prevention for 2009 to 2014.

In August 2009, the Injury and Violence Prevention State Advisory Council (IVP-SAC) was formed to facilitate the collaborations of stakeholders to comprehensively reduce the burdens of injury and violence. IVP-SAC's membership, led by the IVPB, includes stakeholders from a multitude of injury prevention areas: drug overdose, older adult falls, motor vehicle crashes, traumatic brain injury, emergency services, child maltreatment, child safety, intimate partner violence, and suicide.

Based on progress achieved from 2009 to 2012, an addendum to Building for Strength was released in 2012 with revised objectives and action plans.

IVPB has consulted with stakeholders since September 2015 to assess goals, strategies, and indicators of progress to create a new state injury and violence strategic prevention plan for 2015 to 2020. Elevating Injury and Violence Prevention thus reflects progress made and lessons learned since Building for Strength and its addendum.



## THE WAY FORWARD

### VISION

A North Carolina free of injury and violence, where residents can live to their full potential.

### MISSION

Establish a collaborative, strategic approach to define and address the major statewide issues of injury and violence in North Carolina.

### GOAL

Reduce deaths due to injuries and violence in North Carolina.

## EMPHASIS AREAS

The long-term goal of this strategic plan will be achieved through the implementation of strategies and actions in the following five emphasis areas:

1. Data and Surveillance
  - a. Surveillance Quality Improvement
  - b. Violent Death Reporting System
  - c. Translation and Dissemination
2. Messaging, Policy, and Environmental Change
3. Building the Injury and Violence Prevention Community
4. Workforce Development, Practical Learning, and Implementation Training
5. Prevention Focus Topics
  - a. Falls
  - b. Unintentional Poisoning
  - c. Sexual and Intimate Partner Violence
  - d. Suicide
  - e. Transportation Crashes
  - f. Traumatic Brain Injury
  - g. Child Maltreatment

## PLAN IMPLEMENTATION

### LEADERSHIP

IVPB staff is grateful for the input and efforts of the many entities and organizations that contributed to the development of this plan and who work tirelessly to reduce injuries and violence in North Carolina. These organizations are listed in the Acknowledgements section of the plan.

### MEASURING PERFORMANCE

Each emphasis area has a specific goal to reduce the burden of injury and violence in North Carolina. To measure advancement toward the goal, indicators of progress are listed under each emphasis area. Stakeholders for each emphasis area will also create an annual or biennial action plan to outline specific strategies and activities, as changes in priorities, funding restraints, and other factors may fluctuate.

### COORDINATION

Many of the strategies in this plan are outlined in related statewide plans. The IVPB supports the initiatives of those plans, including:

- [2015 NC Suicide Prevention Plan](#)
- [NC Strategic Highway Safety Plan 2014](#)
- NC Traffic Records Coordinating Committee Strategic Plan
- NC Occupant Protection Strategic Plan 2014
- [WalkBike NC: Statewide Pedestrian and Bicycle Plan](#)
- [NC Aging Services Plan 2015-2019](#)
- NC Sexual Violence Prevention Plan 2015-2019
- 2016 NC Governor's Highway Safety Program Plan

The strategies highlighted in this document are intended to be implemented in coordination with those of related plans, to advance injury and violence prevention in North Carolina in a comprehensive, coordinated, and multi-faceted manner.

The outline of this plan was also guided by Healthy North Carolina 2020: A Better State of Health, a report highlighting objectives developed on behalf of the Governor's Task Force for Healthy Carolinians. The following Healthy North Carolina 2020 objectives were considered in the development of this plan's goals:

- Reduce the unintentional poisoning mortality rate (per 100,000 population) to 9.9.
- Reduce the unintentional falls mortality rate (per 100,000 population) to 5.3.
- Reduce the percentage of traffic crashes that are alcohol-related to 4.7%.
- Reduce the suicide rate (per 100,000 population) to 8.3.

Although IVPB will have a leadership role in ensuring the implementation and evaluation of this plan, local communities, health departments, and other partner organizations can adapt the approaches and activities outlined here to best fit their specific circumstances.



## NEW APPROACH: SHARED AND RISK PROTECTIVE FACTORS

Given how complex violent behavior can be, North Carolina’s injury and violence prevention community is transitioning towards a risk and protective factor approach.

Many variables increase or decrease the likelihood of violence. The Centers for Disease Control and Prevention define risk factors as “things that make it more likely that people will experience violence” and protective factors as “things that make it less likely that people will experience violence or that increase their resilience when they are faced with risk factors.”

In recognition of the interconnectedness between different forms of injury and violence, this plan supports this transition and addresses risk and protective factors associated with multiple forms of injury, violence, and other negative outcomes when possible.

Focusing on shared risk and protective factors:

- increases opportunities for new partnerships and audiences
- allows advocates and practitioners to make the most of limited prevention resources
- acknowledges the complex reality in which violence takes place
- increases the available strategy and program options
- increases impact by ensuring that prevention work will affect more than one outcome and reach a broader audience

Referencing the [CDC’s Connecting the Dots: An Overview of the Links between Multiple Forms of Violence](#), North Carolina’s injury and violence prevention community organizes shared risk and protective factors into a set of five key strengths for violence prevention.<sup>1</sup> These key strengths are:

- healthy social and emotional development
- parent-child connectedness
- school climate and school connectedness
- community connectedness
- economic stability and economic opportunity

<sup>1</sup>Special thanks to Jen Counts of Prevent Violence NC for framing this approach.

## Burden of Injuries and Violence

Injury data are defined by two major categories: intentional and unintentional. Intentional injuries generally account for one-third of deaths, while unintentional injuries account for two-thirds of injury deaths.

**Table 1: Examples of Injury Types**

INTENTIONAL	UNINTENTIONAL
<ul style="list-style-type: none"><li>• Interpersonal or self-inflicted violence</li><li>• Homicide</li><li>• Assault</li><li>• Suicide or suicide attempt</li><li>• Child abuse and neglect</li><li>• Sexual abuse</li><li>• Sexual assault</li><li>• Intimate partner violence</li><li>• Elder abuse</li></ul>	<ul style="list-style-type: none"><li>• Motor vehicle crash</li><li>• Fall</li><li>• Fire</li><li>• Poisoning (includes prescription and illegal drugs)</li><li>• Drowning</li><li>• Suffocation</li><li>• Choking</li><li>• Recreational or sports-related activity</li></ul>

Additionally, there are cross-cutting issues such as traumatic brain injuries, which can result from a variety of mechanisms—such as a fall or motor vehicle crash.

North Carolina is fortunate to have strong data collection systems and analytical teams that provide a better understanding of the impact of injuries and violence among residents. Death data are obtained from the NC State Center for Health Statistics’ vital statistics records. Hospitalization data come from the NC State Center for Health Statistics’ hospital discharge data set. The North Carolina Disease Event Tracking and Epidemiologic Collection Tool (NC DETECT) provide the emergency department data. Injury surveillance and analysis is primarily conducted by the IVPB’s Injury Epidemiology and Surveillance Unit.

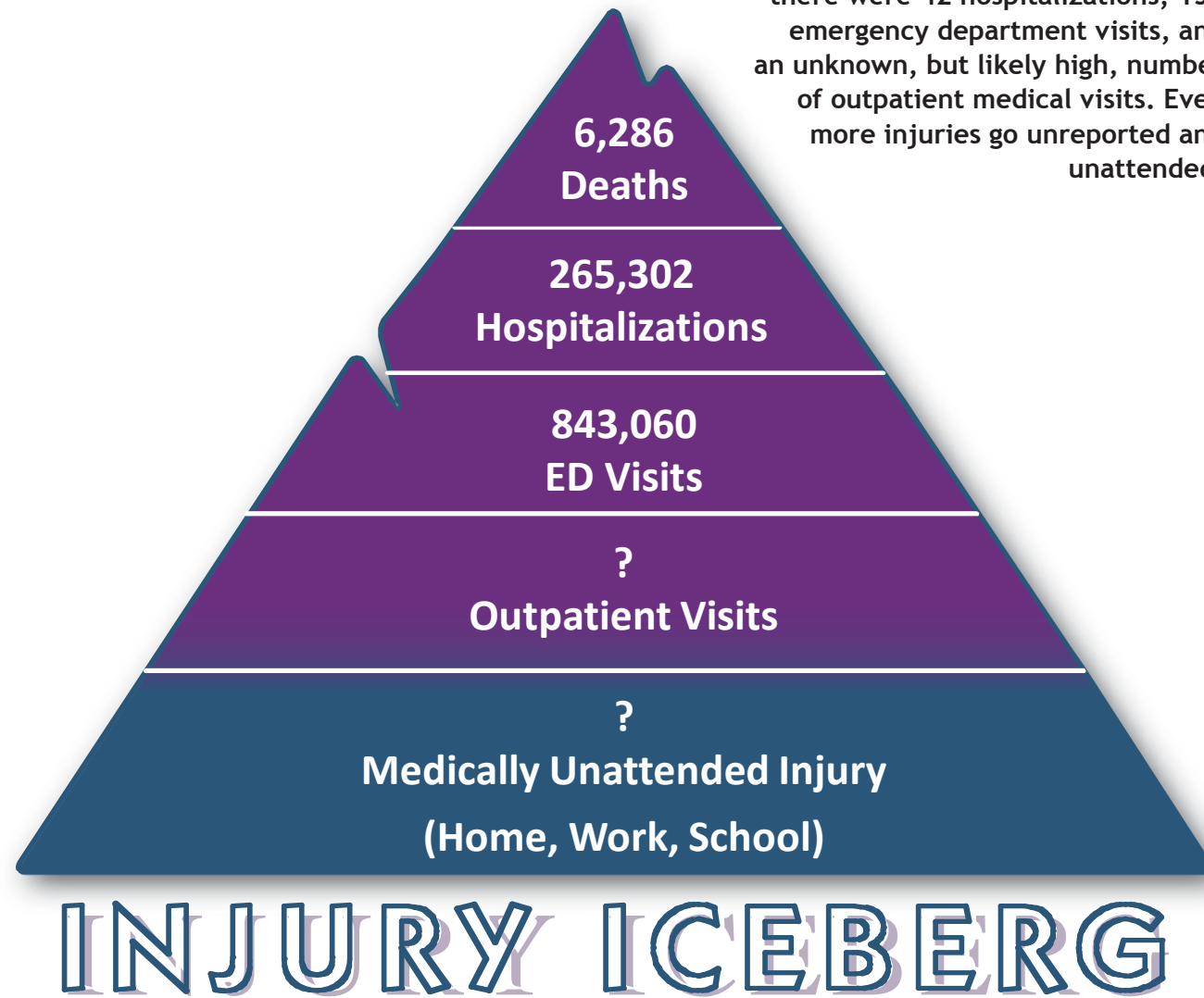
In 2014, injuries and violence were the sixth-leading overall cause of death for North Carolinians. For younger people (ages 1 to 49), injury is the number one cause of death. For 15 to 24 year olds, injury and violence are the four leading causes of death, with suicide ranked second and homicide ranked fourth.

The economic burden of injury and violence in North Carolina is enormous. For example, motor vehicle crash-related deaths alone had a total cost (including medical and work loss costs) of \$1.71 billion in 2013 (CDC, n.d.).

Mortality is only the tip of the iceberg when examining the overall burden of injury. In *Figure 1*, the wider tiers under deaths represent hospitalizations, emergency department (ED) visits, outpatient visits, and medically unattended injuries. These bigger tiers represent increasingly larger numbers of people that are injured, but survive, each year.

Many injuries are defined by mortality rates, but the detrimental effects of injuries to long-term health are not always defined. Repercussions from injury include life-long disabilities, psychological effects, and preventing a person from living to their full potential. Question marks label the widest levels of the iceberg because current data systems are unable to capture the breadth of this information, estimated to have very large numbers.

Figure 1: North Carolina Injury Iceberg, 2014



In 2014, for every 1 injury death, there were 42 hospitalizations, 134 emergency department visits, and an unknown, but likely high, number of outpatient medical visits. Even more injuries go unreported and unattended.

Data sources: Deaths: State Center for Health Statistics, death file 2014; Hospitalizations: State Center for Health Statistics, discharge file 2014; Emergency Department visits: NCDTECT, ED file 2014. NC Residents. Analyses conducted by Injury Epidemiology and Surveillance Unit.

Table 2 lists the 10 leading causes of mortality for North Carolina residents in 2014. For every age category, injury is within the 10 leading causes. Both intentional and unintentional injuries appear on the list.

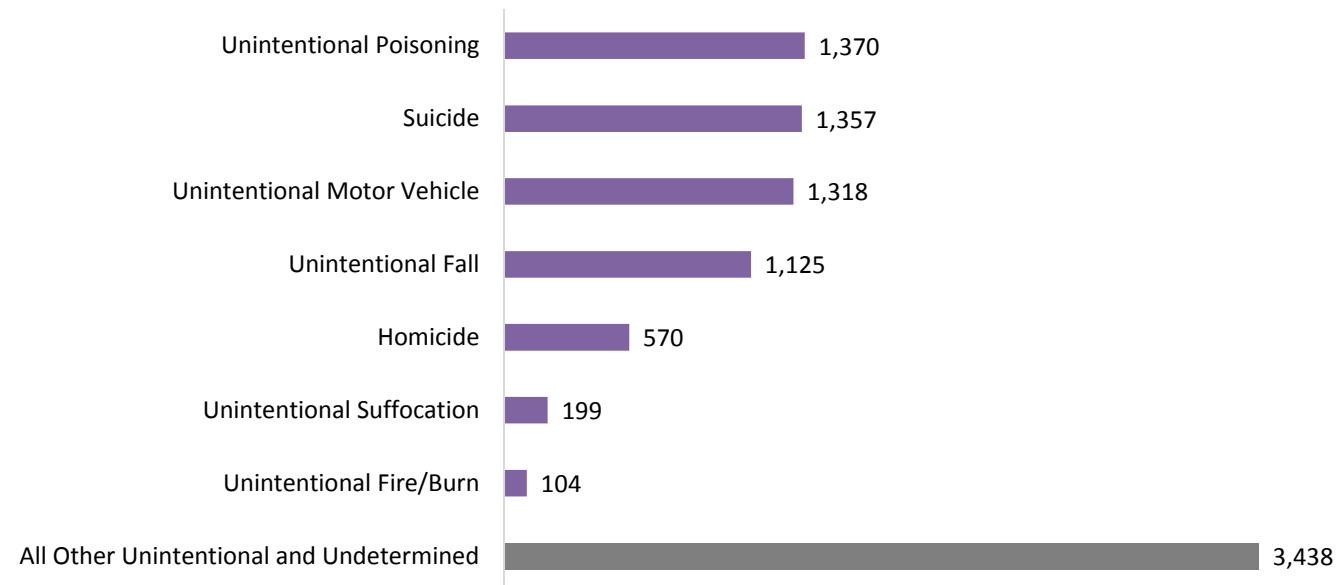
Table 2: Ten Leading Causes of Death (All Races, Both Sexes) by Age Group in North Carolina Residents, 2014

Rank	Age Group										All ages	
	<1	1-4	5-14	15-24	25-44	45-64	65+					
1	Short gestation (186)	Other unintentional injuries (35)	Cancer (29)	Motor vehicle injuries (266)	Other unintentional injuries (721)	Cancer (5,465)	Diseases of the heart (13,514)	Cancer (19,301)				
2	Congenital anomalies (125)	Motor vehicle injuries (16)	Motor vehicle injuries (26); Other unintentional injuries (26)	Suicide (161)	Cancer (511)	Diseases of the heart (3,508)	Cancer (13,241)	Diseases of the heart (17,547)				
3	Maternal complications of pregnancy (73)	Congenital anomalies (14)	Other unintentional injuries (26)	Other unintentional injuries (152)	Diseases of the heart (464)	Other unintentional injuries (842)	Chronic lower respiratory diseases (4,158)	Chronic lower respiratory diseases (5,020)				
4	Complications of placenta, cord, and membranes (41)	Cancer (13)	Suicide (14)	Homicide (134)	Suicide (420)	Chronic lower respiratory diseases (814)	Cerebrovascular disease (3,942)	Cerebrovascular disease (4,691)				
5	Diseases of the circulatory system (28); SIDS (28)	Homicide (10)	Congenital anomalies (7)	Cancer (41)	Motor vehicle injuries (407)	Diabetes mellitus (778)	Alzheimer's disease (3,207)	Alzheimer's disease (3,240)				
6	Other unintentional injuries (20)	Pneumonia and influenza (5)	Homicide (7)	Diseases of the heart (25)	Homicide (220)	Chronic liver disease and cirrhosis (676)	Diabetes mellitus (1,797)	Other unintentional injuries (3,152)				
7		Diseases of the heart (4)	Diseases of the heart (6)	Congenital anomalies (12)	Diabetes mellitus (104)	Cerebrovascular disease (653)	Pneumonia and influenza (1,525)	Diabetes mellitus (2,685)				
8	Neonatal hemorrhage (18); Respiratory distress (18)	Aortic aneurism and dissection (1); Cerebrovascular disease (1); Complications of medical and surgical care (1); Conditions originating in the perinatal period (1); Meningitis (1)	Chronic lower respiratory diseases (4); Pneumonia and influenza (4)	Pregnancy, childbirth, and puerperium (9)	Cerebrovascular disease (84)	Suicide (501)	Nephritis, nephrotic syndrome, and nephrosis (1,441)	Pneumonia and influenza (1,869)				
9				Cerebrovascular disease (8); Pneumonia and influenza (8)	Chronic liver disease and cirrhosis (80)	Motor vehicle injuries (402)	Other unintentional injuries (1,356)	Nephritis, nephrotic syndrome, and nephrosis (1,790)				
10	Bacterial sepsis (17)	Anemias (3)			HIV (65)	Nephritic, nephrotic syndrome, and nephrosis (307)	Septicemia (1,029)	Motor vehicle injuries (1,386)				
All other causes (Residual)	306	30	53	124	894	3,956	16,019	24,531				

Injury deaths from 2015 data are shown in *Figure 2*. Unintentional motor vehicle crashes have historically been the leading cause of injury death in NC, but declines in motor vehicle crash deaths led suicide to surpass it as the leading cause of injury death in the state from 2012 to 2014, despite the rates of suicide remaining relatively stable over time.

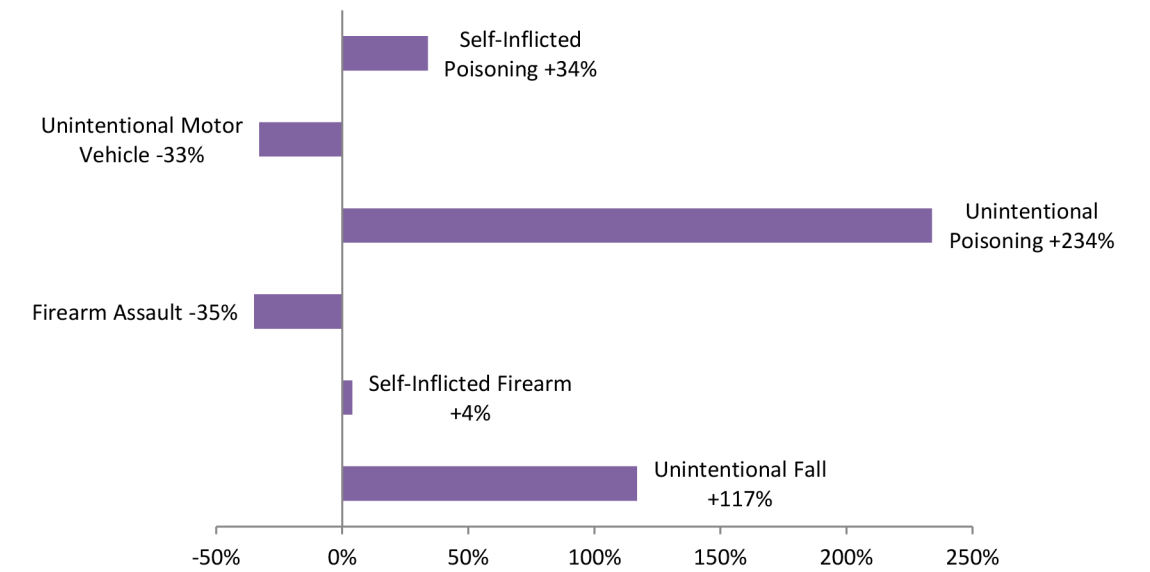
An epidemic of unintentional poisoning deaths, largely made up of opioid overdoses, continues to affect North Carolina. As represented in *Figure 2*, unintentional poisoning was the leading cause of injury death in the state in 2015. Fall injuries are not only a major cause of ED visits, but were also the cause of 1,125 deaths in North Carolina in 2015 - equivalent to nearly three people dying from falls every day.

**Figure 2: Leading Causes of Injury Death, North Carolina Residents, All Ages, 2015 (n=6,754)**



*Figure 3* illustrates the change of rates for different causes of injury death in North Carolina from 1999 to 2014. The largest rate increase was in *unintentional* poisonings, which grew by 234 percent over the 15-year period. *Intentional* self-inflicted poisonings also increased. Firearm assaults experienced the largest decrease in rates during this time period.

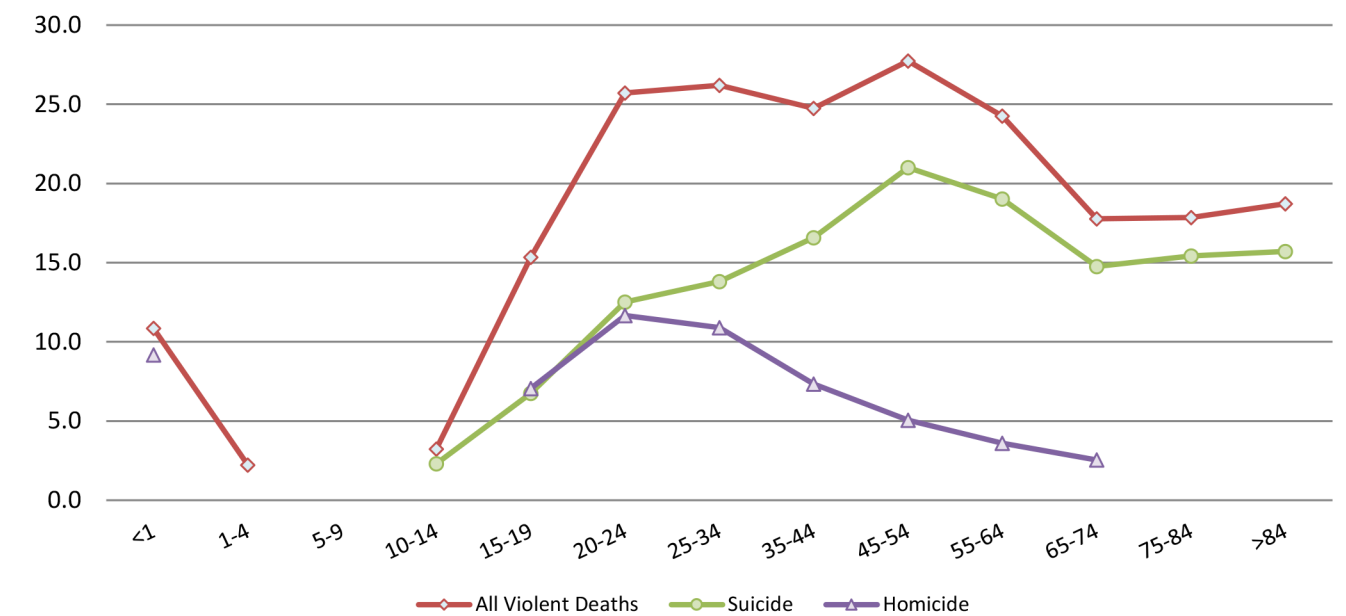
**Figure 3: Percent Change in Rates of Leading Causes of Injury Death, 1999-2014**



Source: NC State Center for Health Statistics, Vital Statistics-Deaths, 1999-2014. Analysis by Injury Epidemiology and Surveillance Unit.

The NC Violent Death Reporting System (NC VDRS) is a CDC-funded state-wide surveillance system that collects detailed information on violent deaths that occur in the state – specifically homicide, suicide, unintentional firearm deaths, deaths from legal intervention, and deaths where the intent could not be determined. The NC VDRS gathers information from death certificates, medical examiner reports and law enforcement reports to develop a better understanding of the factors that surround violent deaths in the state. Data from the NC VDRS are presented in *Figure 4*.

**Figure 4: Violent Death Rates by Age Group, 2013**



**Note:** The lines appear broken because the number of deaths were too small to support the calculation of a rate.  
Source: NC Violent Death Reporting System

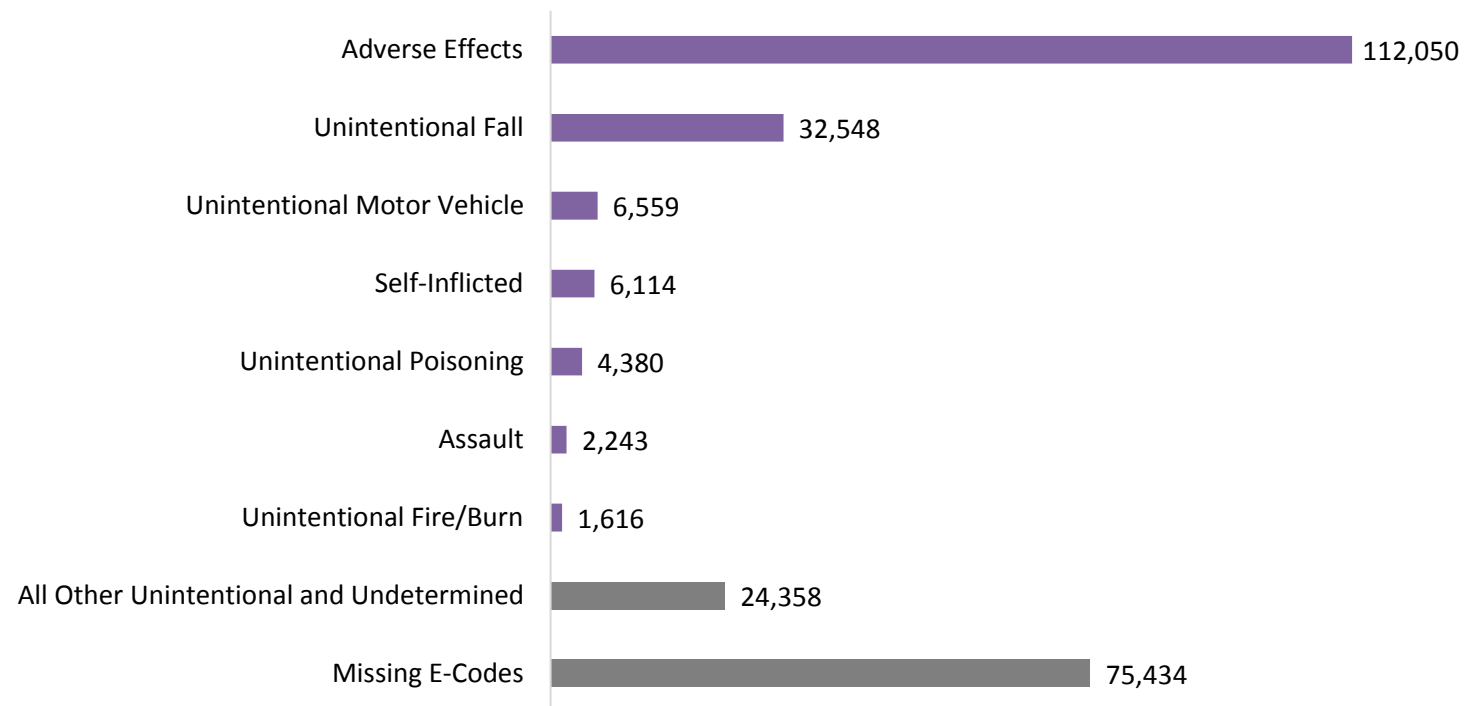
Violence accounted for 1,914 resident deaths in 2013 in North Carolina. More than 66 percent of these deaths were due to suicide and 28 percent were due to homicide.

The data indicate that violent deaths are concentrated among certain populations:

- The majority of suicide and homicide victims were male
- Most suicide victims were white (89.4 percent), while 8.7 percent were black. In contrast, 56.5 percent of homicide victims were black, and 39.0 percent were white
- Suicide rates rose steadily from 10 to 54 years of age and then plateaued at over 14 deaths per 100,000 for all older age groups
- Infants (under age 1) have the highest rate of violent death among all children under 15 (NC IVPB, 2015d)

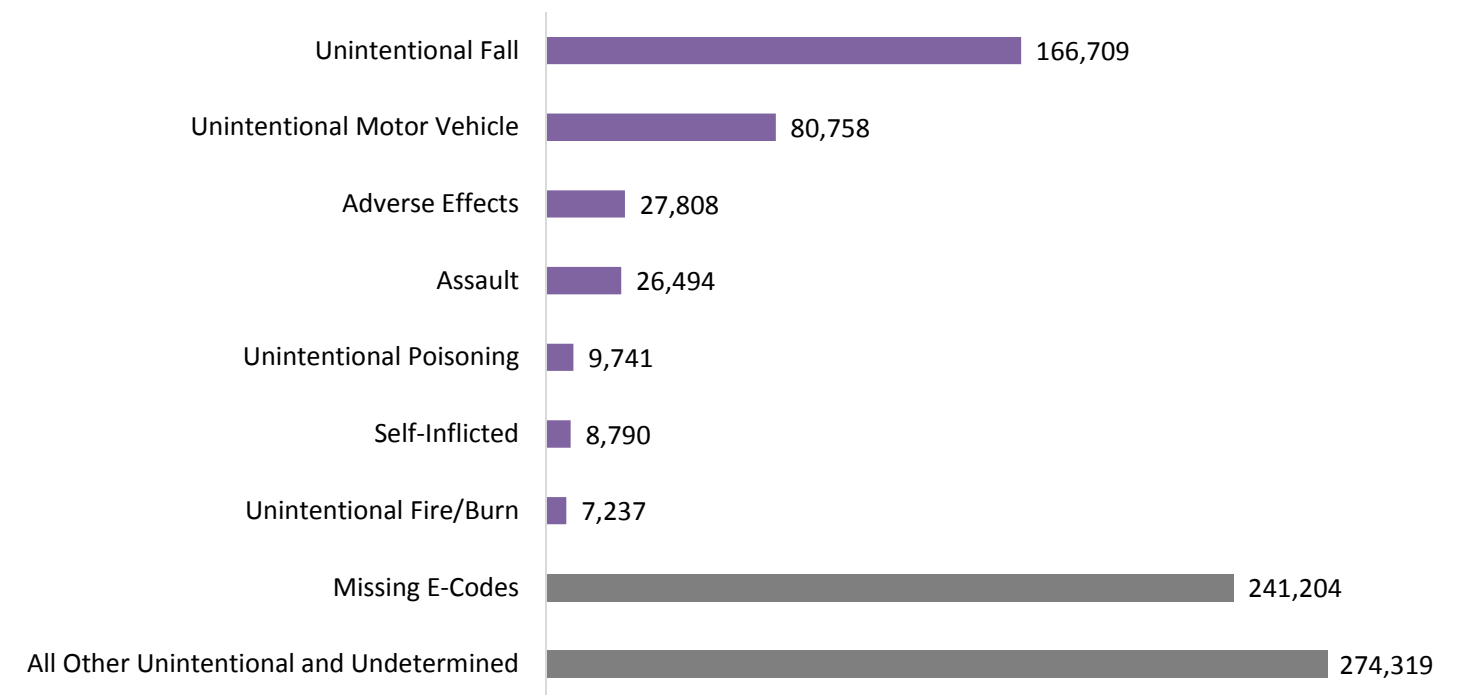
Hospitalizations for injuries in 2014 totaled to over 260,000 admissions, with the leading causes outlined in *Figure 5*. Adverse effects of medical care, unintentional falls, and all other and undetermined unintentional injuries are the top three causes of injury hospitalizations. Improvements of E-Coding (the medical coding used to enumerate specific injuries) are necessary to get a more accurate understanding of what is causing injury hospitalizations. Of the data shown in *Figure 5*, 28.4 percent of injury hospitalizations were missing an E-Code.

**Figure 5: Leading Causes of Injury Hospitalization, All Ages, 2014 (n=265,302)**



The leading causes of injury-related emergency department (ED) visits are unintentional injuries, according to 2014 data. When looking at ED visits motivated by an injury, about one-fifth of injuries are caused by unintentional falls. Over 28 percent of cases are missing E-Codes in *Figure 6*, reinforcing the need for improved data collection methods.

**Figure 6: Leading Causes of Injury Emergency Department Visits, All Ages, 2014 (n=843,060)**





## Emphasis 1: Data and Surveillance

### GOALS

- A. Increase the accuracy and availability of injury and violence data through a comprehensive, coordinated injury surveillance system.
- B. Use data to write grants, justify policy recommendations, and plan, implement, and evaluate programs at the local, regional, and state levels.

### A. Surveillance Quality Improvement

#### STRATEGIES

1. Improve injury and violence data quality
2. Develop and promote standard case definitions and injury indicators
3. Assess emerging sources of injury data for utilization in injury surveillance

#### INDICATORS OF PROGRESS

- Report of missing e-codes
- Number of surveillance quality improvement products created to assess injury data collection methods
- Identification and utilization of additional injury data source(s)
- Dissemination of new injury definitions to injury prevention programs

### B. Violent Death Reporting System (VDRS)

#### STRATEGIES

1. Maintain and continue improvement of NC-VDRS timeliness, data quality, and comprehensiveness
2. Increase accessibility to NC-VDRS data
3. Expand partnerships between NC-VDRS and end users for collaborative data projects

#### INDICATORS OF PROGRESS

- Submission of violent death data to the CDC by the specified deadline
- Number of new data provider partnerships
- Number of requests for NC-VDRS data
- Creation of a common dataset file
- Number of data projects using NC-VDRS data (e.g. faculty collaborations to support student research)

### C. Translation and Dissemination

#### STRATEGIES

1. Enable local entities to use data to make informed decisions regarding programs/services and advocacy
2. Train local coalitions or agencies on injury data location, what it means, and how to use it
3. Develop products that feature injury and violence data for academic and public use

#### INDICATORS OF PROGRESS

- Number of publications, reports, fact sheets, and presentations produced
- Incorporation of injury data into Local Health Department Community Health Assessment
- Number of community stakeholders trained to access, interpret, and use injury data sources
- Updated data fact sheets, tables, and resources posted on the IVPB website
- Quarterly newsletter with focus on data resources or surveillance updates

#### POTENTIAL IMPLEMENTING AGENCIES

- Colleges and universities
- Local health departments
- Local law enforcement agencies
- NC Controlled Substances Reporting System
- NC Division of Public Health, Epi Section
- NC Division of Public Health, Injury and Violence Prevention Branch
- NC Harm Reduction Coalition
- NC Office of Emergency Medical Service
- NC State Center for Health Statistics
- NC-VDRS Advisory Board
- Office of the Chief Medical Examiner
- UNC Highway Safety Research Center
- UNC Injury Prevention Research Center
- University of North Carolina at Chapel Hill, Emergency Medicine Department and NC DETECT
- Safe Kids NC
- Research institutions

## Emphasis 2: Messaging, Policy, and Environmental Change

### GOALS

- A. Frame unintentional injuries and violence as preventable by developing strong, vocal community support for the creation of safe, secure, and accessible environments.
- B. Promote policies (formal or informal rules that guide decisions and action) that support the prevention of injuries and violence.

### STRATEGIES

1. Create and disseminate quarterly Injury and Violence Prevention newsletters
2. Maintain the Injury-Free NC website; promote its use as a resource for strategies focused on improving population health and for educating policy makers and stakeholders
3. Create and disseminate research-based information about current and prospective policy agenda items to partners
4. Track introduction, hearings, and passage or defeat of state bills related to injury or violence funding or policy

### INDICATORS OF PROGRESS

- Number of Injury-Free NC newsletters
- Number of views and visitors to the Injury Free NC website
- Number of issue specific fact-sheets, posters, or other communication products developed and distributed to stakeholders and advocates

### POTENTIAL IMPLEMENTING AGENCIES

- Injury and Violence Prevention State Advisory Council
- Local Health Directors Association
- Media (e.g. North Carolina Health News)
- NC Child Fatality Task Force
- NC Coalition against Domestic Violence
- NC Coalition against Sexual Assault
- NC Controlled Substances Reporting System
- NC Division of Mental Health, Developmental Disabilities, and Substance Abuse Services
- NC Division of Public Health, Injury and Violence Prevention Branch
- NC Essentials for Childhood
- NC Falls Prevention Coalition
- NC Governor's Highway Safety Program
- NC Harm Reduction Coalition
- NC Institute of Medicine
- Prevent Child Abuse North Carolina
- Safe Kids NC
- UNC Highway Safety Research Center
- UNC Injury Prevention Research Center

## Emphasis 3: Building the Injury and Violence Prevention Community

### GOAL

Increase coordination among injury and violence prevention partners at the local, regional, and state levels to create a more efficient system and a broader, stronger constituency.

### STRATEGIES

1. Elevate focus on injury and violence topics within the public health and safety communities in NC
2. Convene regular Injury and Violence Prevention State Advisory Council (IVP-SAC) meetings to discuss issues relevant to injury and violence prevention in North Carolina
3. Seek new members for IVP-SAC to ensure diverse stakeholder involvement
4. Work closely with local health departments and coalitions to prioritize injury and violence prevention topics; promote the implementation of evidence-based strategies

### INDICATORS OF PROGRESS

- Number of stakeholders on IVPB distribution lists for newsletters, announcements, and event invitations
- Number of quarterly meetings of the IVP-SAC
- Number of local health departments with injury and violence prevention priorities in their Community Health Assessments

### POTENTIAL IMPLEMENTING AGENCIES

- Community coalitions
- General public
- Injury and Violence Prevention State Advisory Council (IVP-SAC)
- Local Health Departments
- NC Division of Public Health, Injury and Violence Prevention Branch
- Safe Kids NC



## Emphasis 4: Workforce Development, Practical Learning and Implementation Training

### GOAL

Strengthen a statewide injury and violence prevention workforce that achieves [core injury and violence prevention competencies](#) as outlined by the National Training Initiative for Injury and Violence Prevention (NTI) and the Safe States Alliance.

### STRATEGIES

1. Expand and enhance the Injury-Free NC Academy; increase participants' knowledge and practice of the core injury and violence prevention competencies; and provide technical assistance, coaching, and increased access to a growing network of injury prevention colleagues
2. Identify needs for and develop state-wide summits on various injury prevention topics to share information about evidence-based programs, resources, and lessons learned
3. Provide ongoing capacity building opportunities and technical assistance to local health departments on injury and violence prevention topics, data and surveillance, and evidence-based strategies
4. Train the next generation of injury researchers and practitioners through graduate student learning, internships, and practicum opportunities

### INDICATORS OF PROGRESS

- Annual meeting of Injury-Free NC Academy; number of participants
- Number of state-wide summits and meetings; attendance numbers
- Number of training and educational opportunities offered to local health departments
- Number of student learning projects completed or positions created

### POTENTIAL IMPLEMENTING AGENCIES

- Area Health Education Centers
- Care Share Health Alliance
- Governor's Institute on Substance Abuse
- Local health departments
- NC Coalition Against Domestic Violence
- NC Coalition Against Sexual Assault
- NC Division of Public Health, Injury and Violence Prevention Branch
- NC Department of Public Instruction
- NC Falls Prevention Coalition
- NC Harm Reduction Coalition
- NC Medical Board
- NC Pharmacy Board
- North Carolina Institute for Public Health
- South to Southwest Injury Prevention Network
- UNC Gillings School of Global Public Health
- UNC Injury Prevention Research Center
- UNC School of Medicine
- UNC School of Pharmacy
- UNC School of Social Work

## Emphasis 5: Prevention Focus Topics

### OVERALL GOAL

Reduce the rate of morbidity caused by injury and violence, and consequently reduce injury and violence-related mortality by implementing innovative, data-driven strategies, programs, policies, and practices.

### FOCUS TOPICS

- a. Falls
- b. Unintentional Poisoning
- c. Sexual and Intimate Partner Violence
- d. Suicide
- e. Transportation Crashes
- f. Traumatic Brain Injuries (Cross-Cutting)
- g. Child Maltreatment

## a. Falls

As North Carolina's elderly population increases, unintentional fall-related injuries and deaths become an increasingly serious public health issue. From 2000-2013, the death rate from unintentional falls increased by 80 percent, mostly seen in patients ages 65 and older. The increases in unintentional fall death rates among the general population have been driven by increases in rates among those ages 65 and older. In 2013, 85 percent of the 960 fall-related deaths were among North Carolinians age 65 and older. Falls can result in additional serious injuries, such as traumatic brain injury.

### NOTABLE FACTS

- Over 1,000 NC residents died from a fall in 2014 - that is almost three people every day (NC SCHS, 2014)
- Unintentional falls were the leading cause of traumatic brain injury hospitalizations among NC residents in 2013 (NC SCHS, 2013)
- Falls are the leading cause of injury-related emergency department (ED) visits and hospitalizations (NC SCHS, 2013)

### GOAL

Reduce the unintentional falls mortality rate from 9.7 in 2013 to 5.3 per 100,000 population (NC SCHS, 2000-2013)

### PREVENTION STRATEGIES

- Build an integrated falls prevention network that connects clinical systems and community coalitions
- Increase risk awareness and knowledge of prevention methods among specific populations (e.g., older adults, caregivers)
- Enhance capacity for falls prevention coalitions and health care systems to implement evidence-based, -informed, or promising falls prevention programs

### INDICATORS OF PROGRESS

- Number of active falls prevention coalitions in the state
- Number of organizations and communities observing Falls Prevention Awareness Week
- Website views and unique visitors to the online Falls Prevention "hub": [www.healthyagingnc.com](http://www.healthyagingnc.com)
- Patient referrals to evidence-based programs
- Participants in evidence-based falls prevention programs
- Number of healthcare organizations with integrated fall risk screening

### POTENTIAL IMPLEMENTING AGENCIES

- AARP, Inc.
- Area Agencies on Aging and senior centers
- Assisted living facilities
- Emergency Medical Services (EMS) and Community Paramedicine
- Hospital systems
- Local health departments
- Medical providers - primary care, outpatient rehabilitation clinics, private practice clinics, home health aides
- NC Division of Aging and Adult Services
- NC Division of Public Health, Injury and Violence Prevention Branch
- NC Falls Prevention Coalition and local/regional coalitions
- Remembering When, SafeKids NC, NC Office of the Chief Fire Marshal
- Skilled nursing facilities
- Trauma Centers and Emergency Departments
- UNC Asheville Center for Health and Wellness
- UNC Health Promotion and Disease Prevention, Center for Aging and Health
- YMCAs and recreation departments, centers, and programs

## b. Unintentional Poisoning

Poisoning, largely due to prescription drug and heroin overdoses, has erupted as a public health epidemic across the nation and in North Carolina. In particular, opioid pain medication deaths involving drugs such as methadone, oxycodone, and hydrocodone have increased significantly in the state.

### NOTABLE FACTS

- Prescription opioid pain medications are responsible for more deaths in North Carolina than heroin and cocaine combined (NC IVPB, 2016b)
- Unintentional poisoning death rates increase with age, peaking between the ages of 45-54 (23.3 per 100,000 persons), and then decrease after age 55 (NC IVPB, 2016b)
- Between August 1, 2013 and June 30, 2016, there were more than 3,400 drug overdose reversals performed in North Carolina using naloxone distributed through the NC Harm Reduction Coalition (NCHRC, n.d.)

### GOAL

Reduce the mortality rate of unintentional poisoning from 10.6 to 9.9 per 100,000 people (NC IVPB, 2016b)

### PREVENTION STRATEGIES

- Facilitate collaboration and communication between state and local government agencies, nonprofit and private organizations, academia, law enforcement, state licensure boards, and community coalitions
- Increase data access, utilization, and integration for surveillance, prevention, treatment, evaluation and research
- Promote best practices and evidence-based programs to prevent unintentional poisonings
- Provide training and education tailored to policymakers, medical providers, pharmacies, community groups, and law enforcement
- Evaluate the effects of laws, policies, regulations, and community intervention
- Disseminate materials effective in reducing unintentional poisonings

### INDICATORS OF PROGRESS

- Formation of NC Department of Health and Human Services Prescription Drug Abuse Advisory Committee
- Creation and implementation of action plans based on goals from the *NC Strategic Plan to Reduce Prescription Drug Abuse*
- Completion of activities outlined in the Evaluation Plan for the *CDC Prevention for States Prescription Drug Overdose Prevention* cooperative agreement, awarded to the NC Division of Public Health, Injury and Violence Prevention Branch

### POTENTIAL IMPLEMENTING AGENCIES

- Carolinas Poison Center
- Community Care of NC
- Fayetteville Police Department
- LEAD Program
- Governor's Institute on Substance Abuse
- Local Health Departments
- Local Management Entities/Managed Care Organizations
- NC Association for the Treatment of Opioid Dependence
- NC Board of Nursing
- NC Board of Pharmacy
- NC Board of Podiatry Examiners
- NC Controlled Substances Reporting System
- NC Division of Mental Health, Developmental Disabilities, and Substance Abuse Services
- NC Division of Public Health, Injury and Violence Prevention Branch
- NC Harm Reduction Coalition
- NC Medical Board
- NC Medical Society
- NC Office of Rural Health
- NC State Board of Dental Examiners
- Operation Medicine Drop, Safe Kids NC
- The Pain Society of the Carolinas
- Project Lazarus, Inc.
- State Bureau of Investigation
- UNC Injury Prevention Research Center
- Urban Survivors Union

## c. Sexual and Intimate Partner Violence

Sexual violence refers to any sexual activity where consent is not obtained or freely given. Perpetrators are usually someone known to the victim. There are many types of sexual violence, including physical acts, such as unwanted touching and unwanted sexual penetration, as well as acts that do not involve physical contact between the victim and the perpetrator—including sexual harassment, threats, and peeping.

Intimate partner violence (IPV) is abuse that occurs between two people in a close relationship. This includes current and former spouses and dating partners. IPV exists along a continuum from a single episode of violence to ongoing battering. IPV includes four types of behavior: physical abuse, sexual abuse, threats of physical or sexual abuse, and emotional abuse.

### NOTABLE FACTS

- According to the NC Council for Women and Domestic Violence Commission, the 75 rape crisis centers across North Carolina received 22,031 crisis calls and served 13,736 victims of sexual assault between March 2013 and March 2014
- About ten percent of women over the age of 18 in North Carolina report ever experiencing sexual violence in their lifetime (CDC, 2010)
- Twenty-one percent of homicides with known circumstances in 2013 were associated with IPV (NC IVPB, 2015a)

### GOAL

Prevent the first-time perpetration of sexual and intimate partner violence

### PREVENTION STRATEGIES

- Increase understanding of strengths and gaps of NC laws, policies, and procedures related to sexual and intimate partner violence
- Eliminate gaps in laws, policies, and procedures related to sexual and intimate partner violence
- Strengthen capacity of rape crisis centers, domestic violence service providers, health departments, communities, and key stakeholders, including businesses and faith institutions, to prevent sexual and intimate partner violence, with an emphasis on reducing risk and increasing protective factors
- Increase the capacity of NC public schools to address sexual violence, teen dating violence, and intimate partner violence prevention
- Increase the capacity of higher education institutions to address sexual and intimate partner violence prevention

### INDICATORS OF PROGRESS

- Report outlining strengths and gaps within laws, policies, procedures related to sexual and intimate partner violence
- Selection of strategies to maximize strengths and address gaps
- Number of college/university campuses, school districts, local health departments, businesses, and faith institutions with sexual and intimate partner violence prevention policies, procedures, and protocols in place
- Number of ED visits due to cases or suspected cases of sexual or intimate partner violence

### POTENTIAL IMPLEMENTING AGENCIES

- Businesses
- Campus Consortium for Sexual Assault Prevention
- Colleges and Universities
- DELTA FOCUS State Steering Committee
- Faith communities
- Local domestic violence service providers
- Local health departments
- Local rape crisis centers
- NC Coalition Against Domestic Violence
- NC Coalition Against Sexual Assault
- NC Department of Public Instruction
- NC Division of Public Health, Injury and Violence Prevention Branch
- NC Office on Disability and Health
- NC Sexual Violence Prevention Team
- Rape Prevention Education Program Grantees
- School districts

## d. Suicide

Suicide occurs when a person intentionally ends their own life. People can help prevent suicide by recognizing signs and symptoms of suicide risk, learning how to appropriately intervene, and taking steps to provide support to people in need. Providing support to and engaging those who have survived a suicide attempt, as well as those who have lost someone to suicide, is increasingly recognized as an important component of suicide prevention work.

### NOTABLE FACTS

- Suicide was the leading cause of injury death among all NC residents in 2012 and 2013 (NC SCHS, 2013)
- For people in NC between the ages of 15 and 24, it is the second leading cause of death (NC IVPB, 2015b)
- Of the 1,914 violent deaths in NC during 2013, 1,272 were suicides (66.5 percent) (NC IVPB, 2015b)
- After firearms (60.1 percent), hanging (18.6 percent) and poisoning (17.0 percent) were the second and third leading mechanisms of suicide, respectively (NC IVPB, 2015b)

### GOAL

Reduce suicide rate from 14.8 in 2013 to 8.3 per 100,000 population (NC IVPB, 2004-2013)

### PREVENTION STRATEGIES

- Develop a statewide network of governmental agencies, community organizations, and survivors focused on suicide prevention
- De-stigmatize help-seeking for suicidal behavior and mental health/substance use disorders by integrating supportive suicide prevention policies and activities into governments, military entities, healthcare systems, educational and community institutions, and families
- Promote suicide prevention skill enhancement for early identification, timely referrals, and assessment for individuals at risk for suicide
- Implement comprehensive suicide prevention programming and safe messaging within communities, schools, and organizations to assess and care for those at risk or survivors

### INDICATORS OF PROGRESS

- Number of representative agencies, organizations, or individuals' involvement within the network
- Number of education or activities focused on promotion of help-seeking for suicidal behavior or ideation
- Number and diversity of communities and organizations implementing suicide prevention programming

### POTENTIAL IMPLEMENTING AGENCIES

- Colleges and universities
- Division of Mental Health, Developmental Disabilities, and Substance Abuse Services
- Department of Public Instruction
- Emergency departments
- Law enforcement and CIT officers
- Local health departments
- Local Management Entities/Managed Care Organizations
- Local suicide prevention coalitions/groups
- Mental Health Associations
- Mobile crisis units
- National Alliance on Mental Illness - North Carolina
- NC Chapter of American Foundation for Suicide Prevention
- NC Division of Public Health, Injury and Violence Prevention Branch
- NC School Counselor Association
- NC School Health Training Center
- Survivors
- Youth-serving organizations



## e. Transportation Crashes (Confounding Factor: Alcohol)

Transportation crashes, for the purpose of this document, refer to unintentional injuries and deaths that occur on a public highway, street, or road and involve occupants of motorized or non-motorized vehicles or pedestrians. As evidenced by *Table 1*, motor vehicle injuries are in the top 10 causes of death for all ages.

### NOTABLE FACTS

- Nineteen percent of fatal crashes in NC involve an alcohol-impaired driver (NC ECHS, 2015)
- From 2009 to 2013, alcohol-related crashes NC took the lives of over 400 people and caused over 500 serious injuries on average each year (NC ECHS, 2015)
- From 2009 to 2013, motorcycle crashes in NC resulted in an annual average of 155 fatalities and 350 serious injuries
- Additionally, an average of 433 unrestrained occupants died each year in crashes on NC's roadways (NC Executive Committee for Highway Safety (NC ECHS), 2015)

### GOALS

1. Reduce the percentage of traffic crashes that are alcohol related from 5.3% in 2012 to 4.7% (NC IVPB)
2. Reduce fatalities and serious injuries related to occupant protection and motorcycles
3. Reduce pedestrian and bicyclist fatalities and serious injuries

### PREVENTION STRATEGIES

- Build and maintain partnerships to support the safety of drivers, occupants, motorcyclists, bicyclists, and pedestrians
- Integrate ED and traffic crash reports through NC DETECT dashboards to increase data access for interventions
- Promote the strengthening of NC occupant protection laws
  - a. Allow primary enforcement for passengers in the rear seating position of all vehicles
  - b. Increase occupant protection fines for passengers in the rear seating position
- Reduce DWI via policy recommendations for required interlock installation within two weeks of DWI charge
- Increase visibility of DWI enforcement efforts
- Promote and preserve NC's universal motorcycle helmet law
- Support lifelong driver education and enhance driver education courses

### INDICATORS OF PROGRESS

- Identification and presentation of priority policy issues to stakeholders
- Creation of NC DETECT traffic crash dashboards; number of views/visits by unique organizations
- Laws adopted or amended to strengthen occupant protection
- Preservation of motorcycle helmet law
- Publicity to promote awareness of DWI checking stations and enforcement efforts

### POTENTIAL IMPLEMENTING AGENCIES

- AARP, Inc.
- Child Fatality Task Force
- Department of Public Safety
- Division of Public Health, Forensic Tests for Alcohol
- Division of Public Health, Injury and Violence Prevention Branch
- NC Governor's Highway Safety Program
- Law enforcement agencies
- Mothers Against Drunk Driving
- NC and local Departments of Transportation
- NC DETECT
- NC Division of Motor Vehicles
- NC Parent Teacher Associations
- Older Drivers Workgroup
- Remembering When
- Safe Kids NC
- Traffic Records Coordinating Committee
- Trauma Regional Advisory Committee
- UNC Highway Safety Research Center



## f. Traumatic Brain Injury (Cross-Cutting)

A traumatic brain injury (TBI) is caused by a bump, blow, or jolt to the head or a penetrating head injury and disrupts the normal function of the brain. Each year, TBIs contribute to a substantial number of deaths and cases of permanent disability. Those who survive a TBI can face effects lasting a few days to disabilities which may last the rest of their lives. Effects of TBI can include impaired thinking or memory, movement, sensation (e.g., vision or hearing), or emotional functioning (e.g., personality changes, depression).

### NOTABLE FACTS

- During 2013, a TBI was sustained by 73,131 people in North Carolina
- Children ages zero to four have high rates of hospitalization (49.7 per 100,000) and even higher rates of ED visits (1,429.5 per 100,000)
- Falls were the leading cause of injury among those hospitalized with a TBI, as a single mechanism or in combination with other injuries or conditions
- The highest number of TBI-related deaths was among persons ages 65 and older (NC IVPB, 2015c)

### GOALS

1. Increase identification of concussion injuries and improve post-concussion injury management in NC children and youth
2. Decrease TBI-related death rate in children 0-18 years old
3. Decrease the rate of motor vehicle crash-related TBIs
4. Reduce TBIs in older adults: See *Falls* and *Transportation Crashes*
5. Reduce transportation crash-related TBIs: See *Transportation Crashes*

### PREVENTION STRATEGIES

- Improve safety in youth sports: Enhance the [Gfeller-Waller Concussion Awareness Act](#), to provide education, post-concussion protocols, and clearance for return to play following concussion for student athletes.
  - a. Expand the types of schools (charter and private) and sports leagues covered under the Act
- Shift cultural norms related to youth sports that increase risk of concussion and a culture of denial about symptoms by implementing the CDC HEADS UP initiative in middle and high schools

### INDICATORS OF PROGRESS

- Number of school types and sports leagues covered by the *Gfeller-Waller Concussion Awareness Act*
- Provision of training and informational materials for the new schools and leagues covered under the expansion of the Act
- Number of school staff, coaches, parents, and student-athletes trained on HEADS UP initiative

### POTENTIAL IMPLEMENTING AGENCIES

- Athletic coaches and trainers
- Brain Injury Association of NC
- Colleges and universities
- Department of Public Instruction
- Division of Public Health, Injury and Violence Prevention Branch
- Emergency departments, trauma centers
- Hospital systems
- NC Division on Aging and Adult Services
- NC Division of Mental Health, Developmental Disabilities, and Substance Abuse Services, TBI Program
- NC High School Athletic Association
- Middle and High Schools
- UNC Injury Prevention Research Center
- UNC Matthew Gfeller Sport-Related TBI Research Center

## g. Child Maltreatment

The Centers for Disease Control and Prevention defines child maltreatment as any act or series of acts of commission or omission by a parent or caregiver (e.g., clergy, coach, teacher) that results in harm, potential for harm, or threat of harm to a child. Child maltreatment includes:

- Physical abuse
- Sexual abuse
- Psychological abuse
- Physical neglect
- Emotional neglect
- Medical and dental neglect
- Educational neglect
- Inadequate supervision
- Exposure to violent environments

### NOTABLE FACTS

From July 2014 to June 2015, there were 128,002 children with investigated reports of possible abuse and neglect in North Carolina (Duncan et al., 2016)

### GOAL

Increase protective factors and decrease risk factors that contribute to child maltreatment

### PREVENTION STRATEGIES

- Enhance capacity to implement evidence-based, -informed, or promising programs to strengthen protective factors/prevent child maltreatment
- Educate groups on adverse childhood experiences and relationships to negative health outcomes

### INDICATORS OF PROGRESS

- Increase number of people trained on implementation of evidence-based strategies to promote safe, stable, nurturing relationships and environments
- Increase number of policies implemented that support safe, stable, nurturing relationships and environments for children

### POTENTIAL IMPLEMENTING AGENCIES

- Early childhood education providers
- Child Fatality Task Force
- Essentials for Childhood stakeholders
- Faith communities
- Local health departments
- Local departments of social services
- NC Child
- NC Division of Public Health, Injury and Violence Prevention Branch
- NC Division of Public Health, Women's and Children's Health Section
- NC Division of Social Services
- NC Pediatric Society
- NC Sexual Violence Prevention Team
- Prevent Child Abuse North Carolina
- Redwood Foundation
- Schools
- UNC Injury Prevention Research Center
- YMCAs and recreation departments, centers, and programs

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North Carolina  
Injury & Violence   
PREVENTION Branch

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Division of Public Health • Injury and Violence Prevention Branch  
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