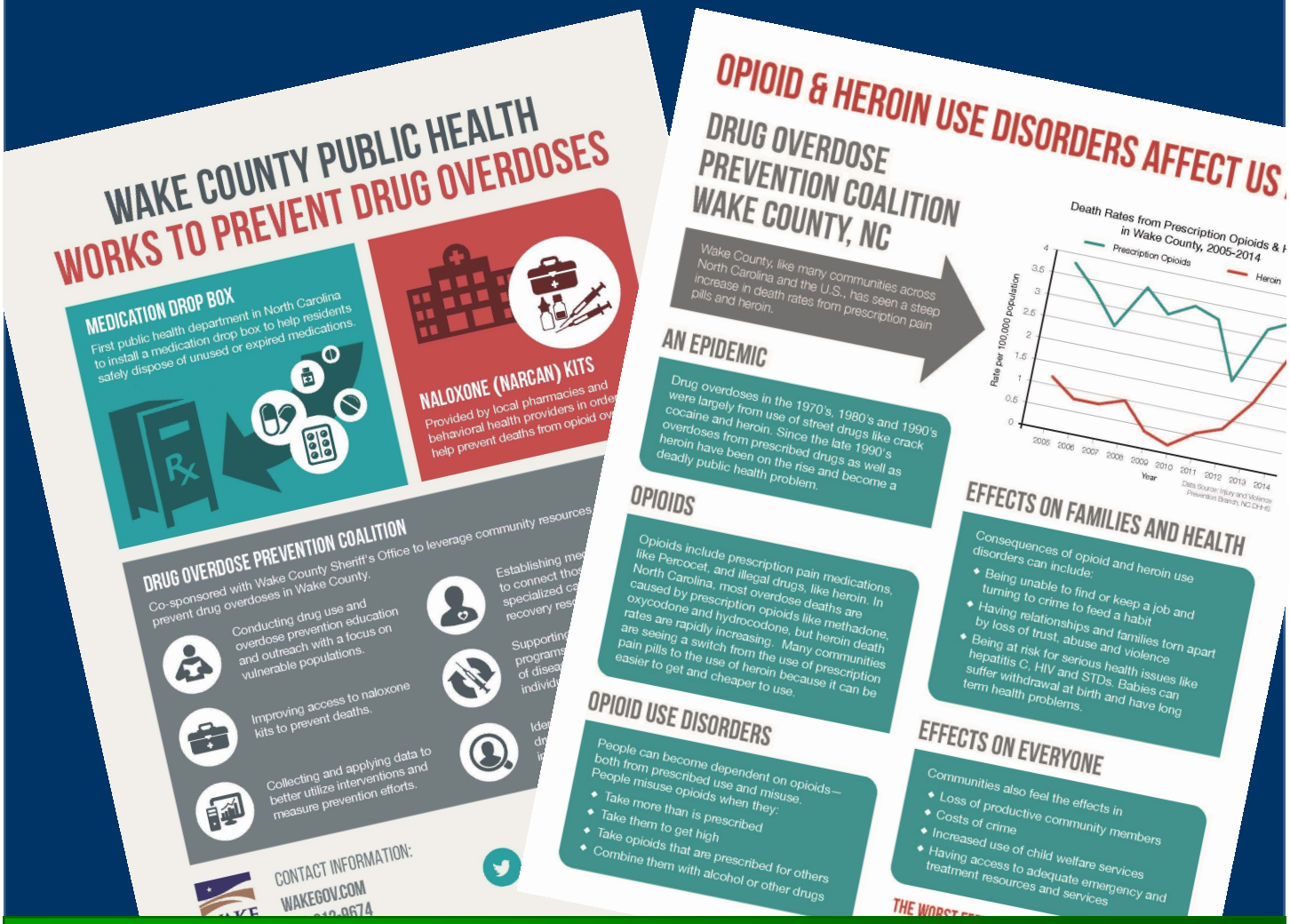
Wake County Human Services
Public Health Report

Injuries
2016



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NORTH CAROLINA Accredited Health Department 2015-2019 Local Health Department Accreditation Board

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1.0 Executive Summary

This report describes injuries and their impact on the health of those who live, work, play and learn in Wake County. It addresses the types of injuries, both intentional and unintentional, that lead to emergency department visits, hospitalizations and, in the worst outcome, death. Also described in the report are measures taken by Wake County Human Services, Wake County and community partners to prevent and limit the impacts of injury.

In Wake County, the 3 top causes of death by injury over the past 5 years are from motor vehicle traffic (MVT) unintentional, falls (unintentional) and poisonings (unintentional). The death rate for MVT has decreased from a high of 8.2 in 2013 to 6.1 in 2015 per 100,000 population. However, there were more deaths from falls and unintentional poisonings (that includes drug overdoses) than MVT in both 2014 and 2015. For MVT injuries, 75% of the deaths were males. The 65+ age group represented 84% of fall deaths.

Wake County, all of North Carolina and the nation are facing an epidemic of drug overdose deaths driven especially as a result of opioid and heroin use disorders. The 2015 death rate from heroin overdoses in Wake County is 5 times what it was in 2011. In 2016, there were two major changes in state law poised to have a positive impact on the health of Wake County citizens: a statewide naloxone standing order and legal syringe exchange.

Deaths from suicides continue to be a concern, especially in youth and young adults. Most suicides occurred among 25-44 year olds and more than 75% of all suicides were in people aged 44 years or younger.

Although the rate of children in foster care in Wake County has remained stable over the past 5 years, the annual number of children in foster care in Wake County has increased 16% from 854 in 2011 to 989 in 2015.

2.0 Introduction

While the dictionary definition of *injury* ("a particular form or instance of harm") may be common knowledge, injury prevention practitioners in public health use a more specific definition:

> Injury is defined as damage or harm to the body resulting in impairment or destruction of health; specifically, any unintentional and intentional damage to the body resulting from acute exposure to thermal, mechanical, electrical, or chemical energy that exceeds a threshold of tolerance in the body or from the absence of such essentials as heat or oxygen (1).

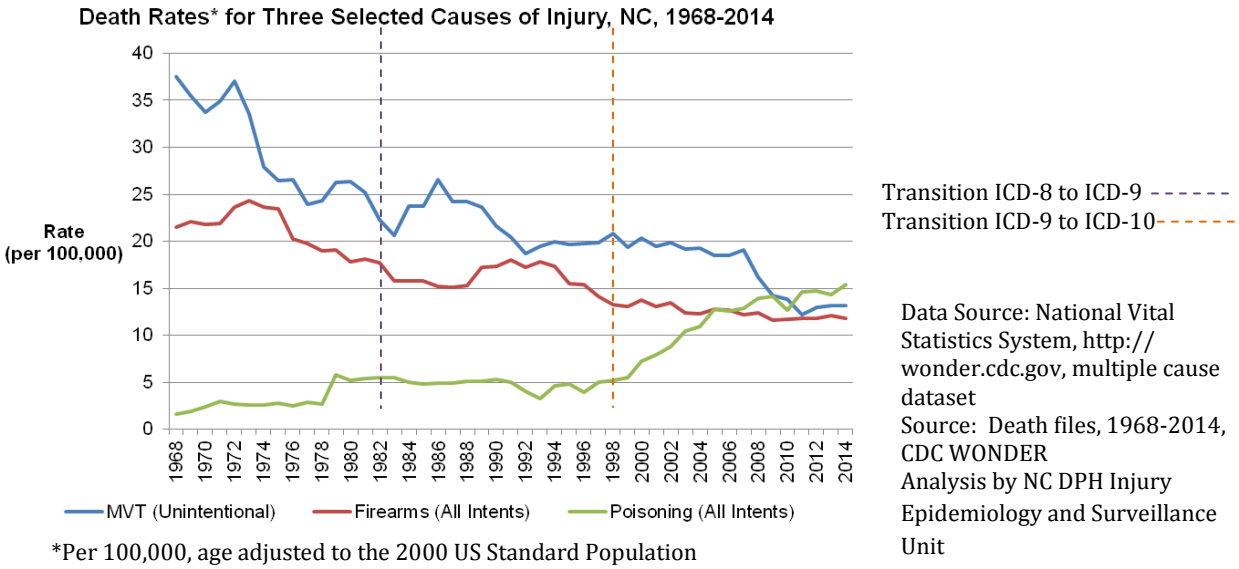
This more extensive definition—complete with terminology like 'acute exposure', 'threshold of tolerance' and 'such essentials as heat and oxygen'—demonstrates that injuries fall within the sphere of science and public health, just like communicable and chronic diseases.

3.0 Overview

This report provides an up-to-date assessment of the impact of injuries (both unintentional and intentional) on residents in Wake County, using the latest data available. In 2014, 'all other unintentional injuries' was the #5 cause of death in Wake County, intentional self-harm (suicide) ranked #8 and motor vehicle injuries ranked #10. Together, these 3 causes were responsible for 381 deaths and 7.5% of all countywide deaths (2).

The data shown in Figure 1 show the changes in trends for 3 causes of injury and can be interpreted as both a genuine professional accomplishment and a new cause for concern for injury prevention practitioners (3). NC residents died on the roads at less than half the rate in 2014 as they did in 1968. This is due in large part to the work of Dr. William Haddon, Jr., a public health physician and first director of the National Highway Traffic Safety Administration, and others who helped establish injury prevention measures ranging from automobile safety requirements to changes in road design to drinking and driving laws. But when viewing this same graph, it is evident that deaths from poisoning (unintentional and intentional) in North Carolina have increased almost tenfold over the same time period, which should be of great concern to public health advocates.

Figure 1



*Per 100,000, age adjusted to the 2000 US Standard Population

Data Source: National Vital Statistics System, http://wonder.cdc.gov, multiple cause dataset
Source: Death files, 1968-2014, CDC WONDER
Analysis by NC DPH Injury Epidemiology and Surveillance Unit

Another important aspect in the context of public health's engagement is understanding the financial costs of injuries. While the exact methods of calculating injury costs are very complex and involve numerous data sources, the major cost categories (and their definitions) are listed below:

- *Wage and productivity losses* (total of wages and fringe benefits)
- *Employers' uninsured costs* (time lost by the uninjured workers investigating and reporting injuries, giving first aid, production slowdowns, training of replacement workers and overtime costs for uninjured workers)
- *Medical expenses* (doctor fees, hospital charges, cost of medicines, future medical costs, EMS and ambulance services)
- *Administrative expenses* (short- and long-term disability, public and private insurance overhead costs, police and legal system)
- *Property damage* (to motor vehicles) (4)

Tables 1, 2 and 3 illustrate national-level costs resulting from deaths, hospitalizations and treated-and-released ED visits for just three types of unintentional injuries—motor vehicle traffic, falls and poisonings—in a single year (2010)(5).

Table 1

Costs of Deaths by Motor Vehicle Traffic, Falls and Poisonings United States, 2010

		Motor Vehicle Traffic	Falls	Poisonings	Total Cost for Motor Vehicle Traffic, Falls and Poisoning Deaths
Deaths		33,687	26,009	33,041	
Medical Cost	**Average**	$11,114	$23,925	$4,817	
	Total	$374,396,000	$622,266,000	$159,170,000	
Work Loss Cost	**Average**	$1,206,210	$255,975	$1,286,095	
	Total	$40,633,595,000	$6,657,654,000	$42,493,864,000	
Combined Cost	**Average**	$1,217,324	$279,900	$1,290,912	
	Total	**$41,007,991,000**	**$7,279,920,000**	**$42,653,034,000**	**$90,940,945,000**

Data source: National Center for Health Statistics Vital Statistics System, National Electronic Injury Surveillance System and Pacific Institute for Research and Evaluation. https://wisqars.cdc.gov:8443/costT/cost_Part1_Intro.jsp, accessed 7/29/16.

Table 2

Costs of Hospitalizations by Motor Vehicle Traffic, Falls and Poisonings United States, 2010

		Motor Vehicle Traffic	Falls	Poisonings	Total Cost for Motor Vehicle Traffic, Falls and Poisoning Hospitalizations
Hospitalizations		178,505	992,452	206,479	
Medical Cost	**Average**	$54,197	$38,925	$14,573	
	Total	$9,674,460,000	$38,630,889,000	$3,009,058,000	
Work Loss Cost	**Average**	$119,618	$56,690	$6,645	
	Total	$21,352,388,000	$56,262,340,000	$1,372,048,000	
Combined Cost	**Average**	$173,815	$95,615	$21,218	
	Total	**$31,026,848,000**	**$94,839,229,000**	**$4,381,106,000**	**$130,247,183,000**

Data source: National Center for Health Statistics Vital Statistics System, National Electronic Injury Surveillance System and Pacific Institute for Research and Evaluation. https://wisqars.cdc.gov:8443/costT/cost_Part1_Intro.jsp, accessed 7/29/16.

Table 3

Costs of Emergency Department Visits by Motor Vehicle Traffic, Falls and Poisonings United States, 2010					
		Motor Vehicle Traffic	Falls	Poisonings	Total Cost for Emergency Department Visits due to Motor Vehicle Traffic, Falls and Poisoning
Emergency Department Visits		2,557,616	8,043,687	584,522	
Medical Cost	Average	$3,222	$2,552	$1,587	
	Total	$8,241,008,000	$20,526,699,000	$927,739,000	
Work Loss Cost	Average	$3,935	$3,764	$666	
	Total	$10,063,001,000	$30,278,638,000	$389,272,000	
Combined Cost	Average	$7,157	$6,316	$2,253	
	Total	**$18,304,009,000**	**$50,805,337,000**	**$1,317,011,000**	**$70,426,357,000**

Data source: National Center for Health Statistics Vital Statistics System, National Electronic Injury Surveillance System and Pacific Institute for Research and Evaluation. https://wisqars.cdc.gov:8443/costT/cost_Part1_Intro.jsp, accessed 7/29/16.

Taken together, the cost to the US of all 2010 deaths, hospitalizations and ED visits *for only three injuries* was $290 billion, a figure 3.5 times higher than the total federal Health and Human Services budget for 2010 ($78.7 billion).

Table 4 demonstrates the financial impact of injury deaths on North Carolina.

Table 4

Costs of Deaths by Motor Vehicle Traffic, Falls and Poisoning North Carolina, 2010					
		Motor Vehicle Traffic	Falls	Poisonings	Total Cost for Motor Vehicle Traffic, Falls and Poisoning Deaths
NC Deaths		1,317	858	965	
Medical Cost	Average	$10,213	$21,132	$5,067	
	Total	$13,451,000	$18,131,000	$4,890,000	
Work Loss Cost	Average	$1,229,774	$245,076	$1,302,439	
	Total	$1,619,612,000	$210,275,000	$1,256,854,000	
Combined Cost	Average	$1,239,987	$266,208	$1,307,506	
	Total	**$1,633,063,000**	**$228,406,000**	**$1,261,744,000**	**$3,123,213,000**

Data source: National Center for Health Statistics Vital Statistics System, National Electronic Injury Surveillance System and Pacific Institute for Research and Evaluation. https://wisqars.cdc.gov:8443/costT/cost_Part1_Intro.jsp, accessed 7/29/16.

Deaths for just these three injuries cost North Carolina more than $3 billion in 2010; extrapolating the averages in Table 4 to Wake's 2010 MVT, fall and poisoning deaths shows the county's cost was over $165 million:

- 76 MVT deaths = $94,239,012
- 52 fall deaths = $13,842,816
- 44 poisoning deaths = $57,530,264

4.0 Leading Causes of Death , Hospitalization and Emergency Department Visits by Injury

The five leading causes of death, hospitalizations and emergency department visits in Wake County by injury are displayed in Table 5. As in previous years, motor vehicle traffic (MVT) is the number one cause of death, while falls are the number one cause of hospitalizations and emergency department visits in Wake County.

Table 5

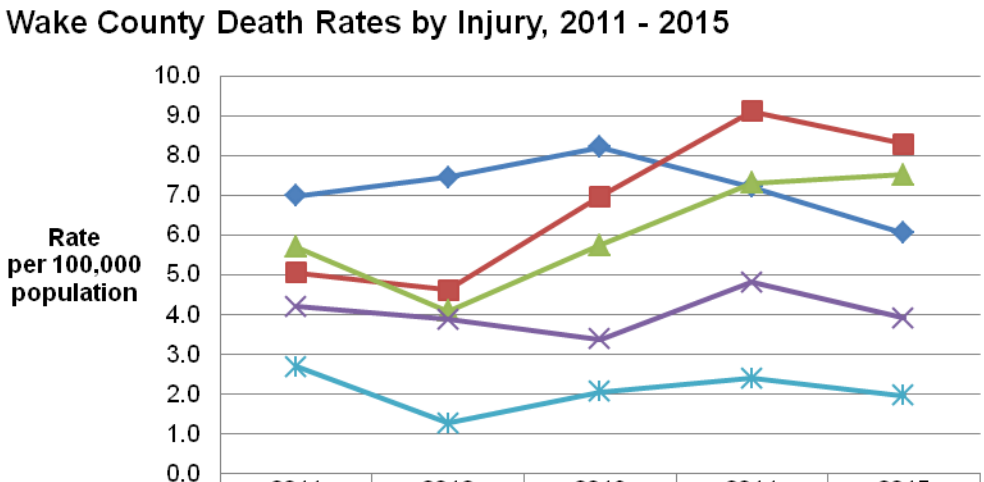
Top Five Causes of Injury: Five Year Trends Wake County						
INJURY	**Number of Deaths 2011-15**	**Rank**	**Number of Hospitalizations 2010-14**	**Rank**	**Number of Emergency Department Visits 2010-14**	**Rank**
Motor Vehicle Traffic, Unintentional	350	1	1,992	2	33,522	2
Falls, Unintentional	335	2	8,295	1	59,350	1
Poisoning, Unintentional	298	3				
Firearm, Self-inflicted	197	4				
Suffocation, Self-inflicted	101	5				
Other Spec/Class*			1,441	4		
Unspecified, Unintentional**			1,271	5		
Poisoning, Self-Inflicted			1,458	3		
Struck-Unintentional					24,612	3
Overexertion, Unintentional					16,293	4
Cut/Pierce-Unintentional					12,069	5

*Other Spec/Class--intent established and specific mechanism identified but does not fall into major categories.
**Unspecified--intent established, mechanism is unclear or not documented.
Data Source: NCDHHS, Division of Public Health, Injury Violence and Prevention Branch, 8/3/16.

4.1 Deaths by Injury

While MVT exceeded both falls and poisonings in the total number of deaths over the entire 2011-15 period in Wake County, there were more deaths from falls and unintentional poisonings (including drug poisonings) than MVT in both 2014 and 2015 (Figure 2). The increases in both fall and poisoning death rates will require close monitoring. Similarly, in North Carolina, the death rates due to drug poisonings have surpassed that of MVT and firearms beginning in 2010 (Figure 1).

Figure 2



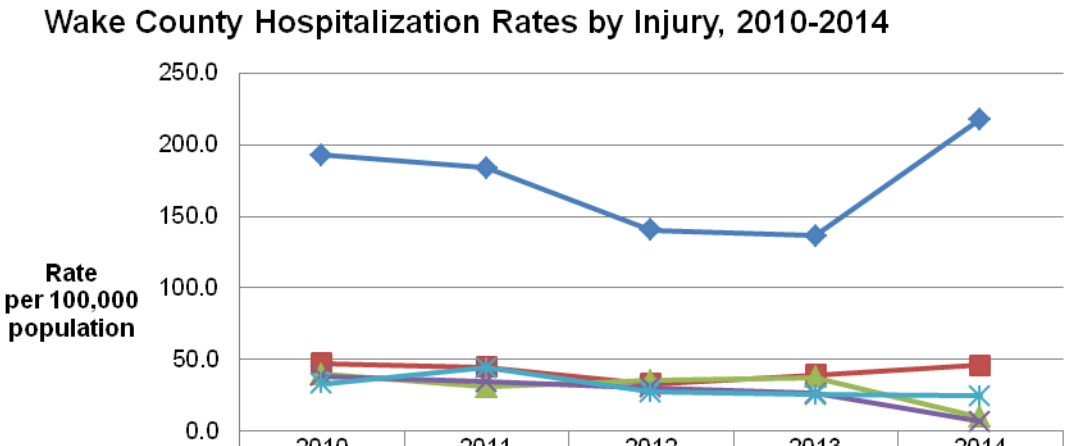
	2011	2012	2013	2014	2015
MVT, UNINTENTIONAL	7.0	7.5	8.2	7.2	6.1
FALLS, UNINTENTIONAL	5.1	4.6	7.0	9.1	8.3
POISONING, UNINTENTIONAL	5.7	4.1	5.7	7.3	7.5
FIREARM, SELF-INFLICTED	4.2	3.9	3.4	4.8	3.9
SUFFOCATION, SELF-INFLICTED	2.7	1.3	2.1	2.4	2.0

Data Source: NCDHHS, Division of Public Health, Injury Violence and Prevention Branch, 8/3/16.

4.2 Hospitalizations by Injury

Hospitalization rates for falls are much higher than for all other causes, as shown in Figure 3.

Figure 3



	2010	2011	2012	2013	2014
Fall-Unintentional	193.0	184.0	140.5	136.6	217.9
MVT-Unintentional	47.2	44.4	32.9	39.2	46.0
Other Spec/Class*	39.6	30.8	35.1	37.6	9.8
Unspecified, Unintentional	38.3	34.2	30.0	26.4	6.5
Poisoning, Self-Inflicted	32.9	44.2	27.1	25.5	24.5

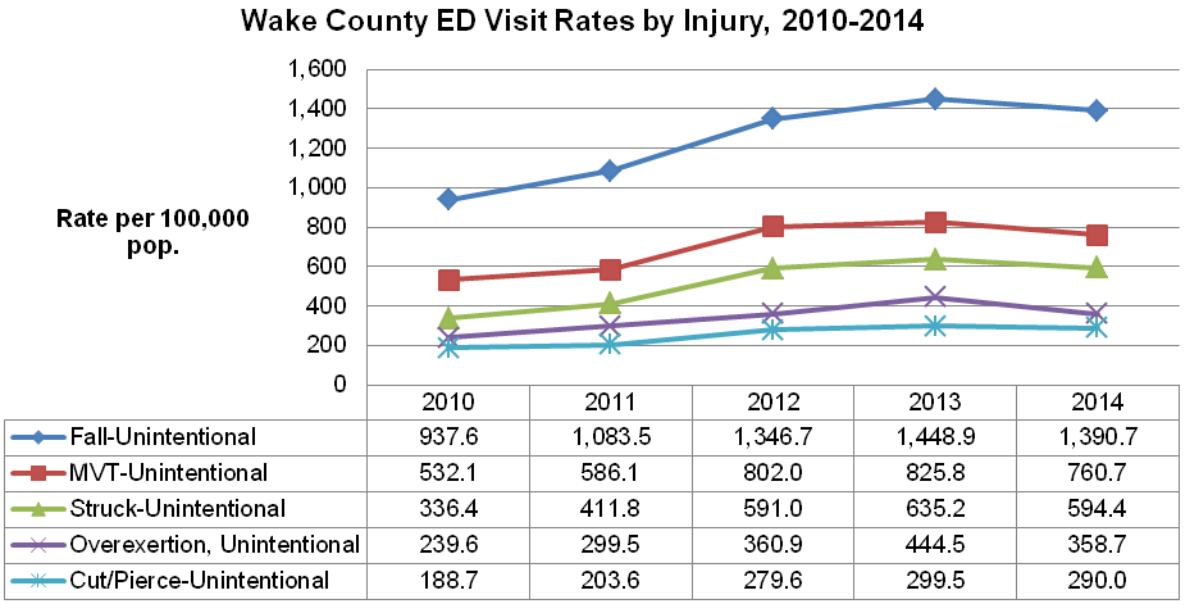
*Other Spec/Class--intent established and specific mechanism identified but does not fall into major categories.
Data Source: NCDHHS, Division of Public Health, Injury Violence and Prevention Branch, 8/3/16.

Fall death and hospitalization rates have generally increased since 2013 (Figures 2 & 3). Death rates from unintentional poisonings (that includes drug overdoses) have steadily increased since 2012 (Figure 2).

4.3 Emergency Department (ED) Visit Rates by Injury

Over the entire 2010-14 period, ED visit rates increased for all five of the top causes (Figure 4), despite the slight dip in 2014. Falls are responsible for ED visits at almost double the rate of any other cause.

Figure 4



	2010	2011	2012	2013	2014
Fall-Unintentional	937.6	1,083.5	1,346.7	1,448.9	1,390.7
MVT-Unintentional	532.1	586.1	802.0	825.8	760.7
Struck-Unintentional	336.4	411.8	591.0	635.2	594.4
Overexertion, Unintentional	239.6	299.5	360.9	444.5	358.7
Cut/Pierce-Unintentional	188.7	203.6	279.6	299.5	290.0

Data Source: NCDHHS, Division of Public Health, Injury Violence and Prevention Branch, 8/3/16.

5.0 Motor Vehicle Traffic

For the 5-year period from 2011-2015, the leading cause of death by injury in Wake County was by MVT. Males represented 74% of MVT deaths, and the death rate for males was triple that of females (10.9 vs. 3.6 per 100,000 population—rates not shown in Figure 5). Blacks represented 31% of MVT deaths compared to 64% for whites, yet blacks had a higher rate of MVT deaths than whites (10.2 vs. 6.5 per 100,000 population). Comparing death rates between Hispanics and non-Hispanics is unreliable, because ethnicity data was either unknown or missing for 18% of the cases. Teens and young adults (ages 15-24) had the highest percentage of deaths among all age groups (26%) as well as the highest death rates (13.9 per 100,000 population).

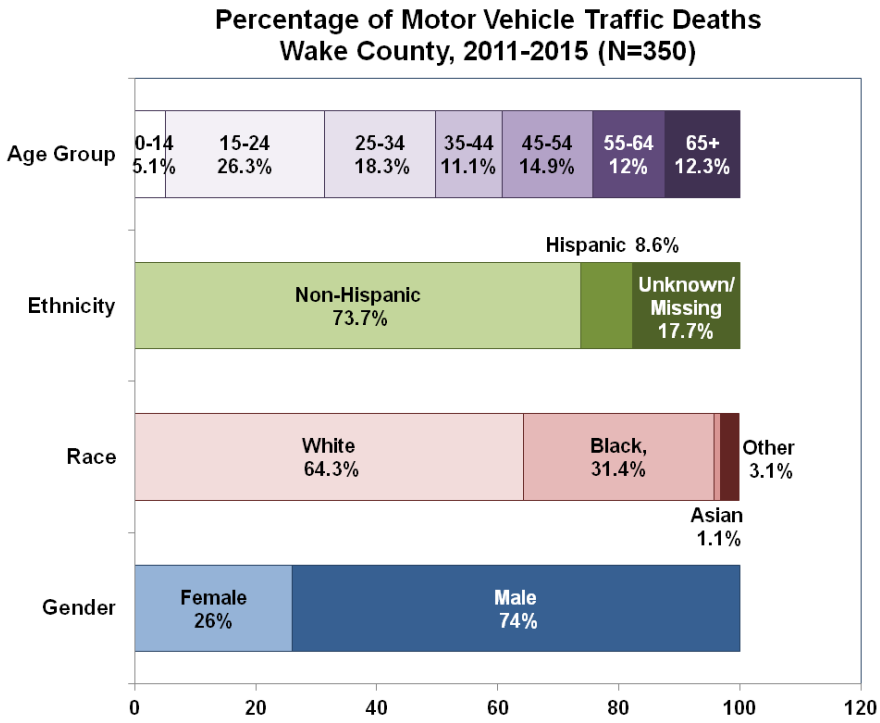


Figure 5

Data Source: NCDHHS, Division of Public Health, Injury Violence and Prevention Branch, 8/3/16.

6.0 Falls

The #2 cause of injury deaths in Wake County from 2011-15 was falls. Fall deaths for males and females were evenly distributed in terms of percentage (48% to 52%) and rates (6.9 vs 6.8 per 100,000 population —rates not shown in Figure 6). Whites represented 88% of fall deaths, and death rates were much higher than any other racial group (8.6 vs 3.1 per 100,000 population for blacks). Ethnicity data for falls was unknown or missing in 25% of cases. The 65+ age group represented 84% of fall deaths and died at a rate of 12 times compared to the next highest group (59.6 vs. 4.8 per 100,000 population for ages 55-64).

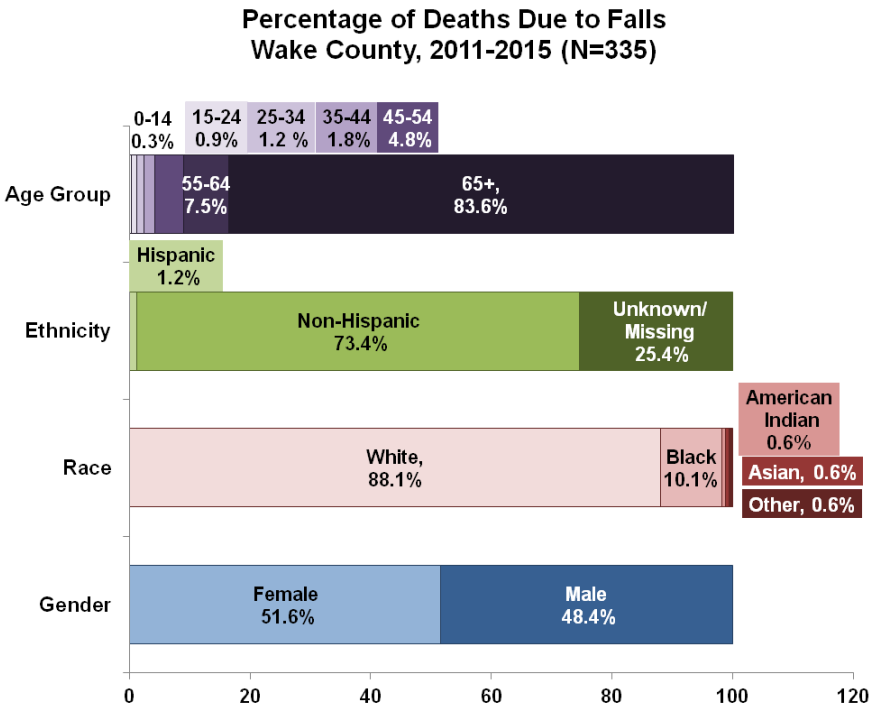


Figure 6

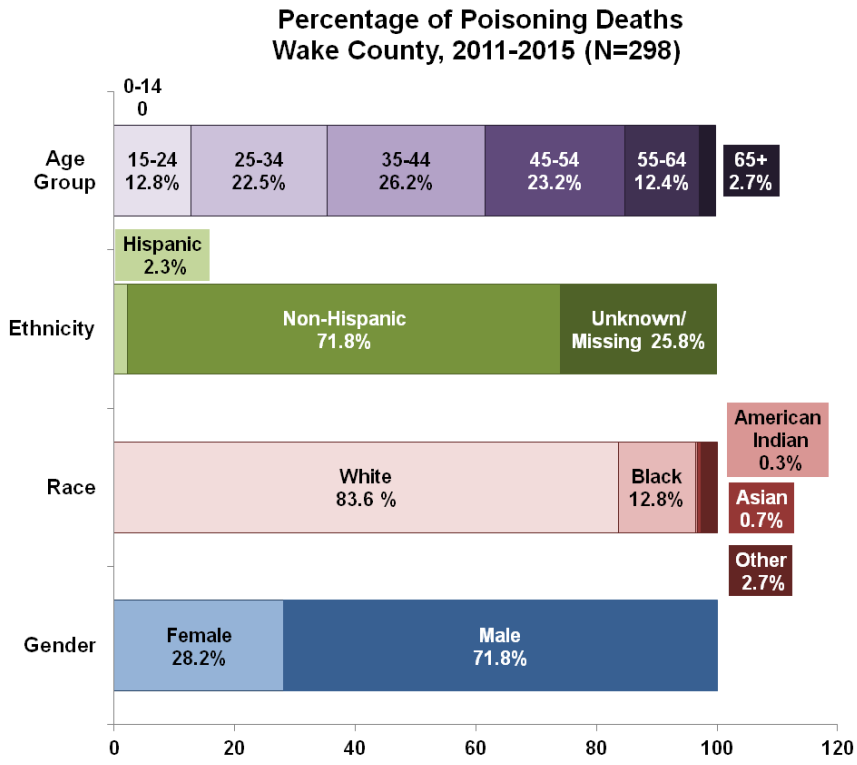
Data Source: NCDHHS, Division of Public Health, Injury Violence and Prevention Branch, 8/3/16.

7.0 Poisonings

Unintentional poisonings were the #3 cause of injury death in 2011-2015. When looking at poisoning-related data, "intentional" poisonings refer to those resulting from purposeful human action, whether directed at oneself or others. "Unintentional" poisonings are unplanned, and do not deliberately seek a harmful outcome. (6) The death rate for unintentional poisoning surpassed the MVT death rate in 2014 (Figure 2). Males represented 72% of poisoning deaths and the death rate was 9.0 per 100,000 population compared to 3.4 for females (rates not shown in Figure 7). Whites comprised 84% of poisoning deaths and died at double the rate of blacks (7.2 to 3.5 per 100,000 population). Ethnicity data was unknown or missing in 26% of poisoning cases. The highest percentage of poisoning deaths (26%) and the highest death rate (10.2 per 100,000 population) was seen in the 35-44 year old age group (death rate not shown in Figure 7).

Figure 7

Data Source: NCDHHS, Division of Public Health, Injury Violence and Prevention Branch, 8/3/16



7.1 Opioid Use

Wake County, all of North Carolina and the nation are facing an epidemic of drug overdose deaths. The death rate for heroin overdoses nearly quadrupled from 2012 to 2015 (0.8 to 2.9), and the death rate for prescription opioid overdoses doubled over the same time frame (1.9 to 3.7) (Figures 9 & 12).
In North Carolina and Wake County prescription opioid followed by heroin use contribute to the highest number of deaths in recent years (Figure 8 & 9). There were 35 deaths from prescription opioid overdoses in Wake County in 2015.

Figure 8

Data Source: N.C. State Center for Health Statistics, Vital Statistics-Deaths, 1999-2015
Analysis by Injury Epidemiology and Surveillance Unit

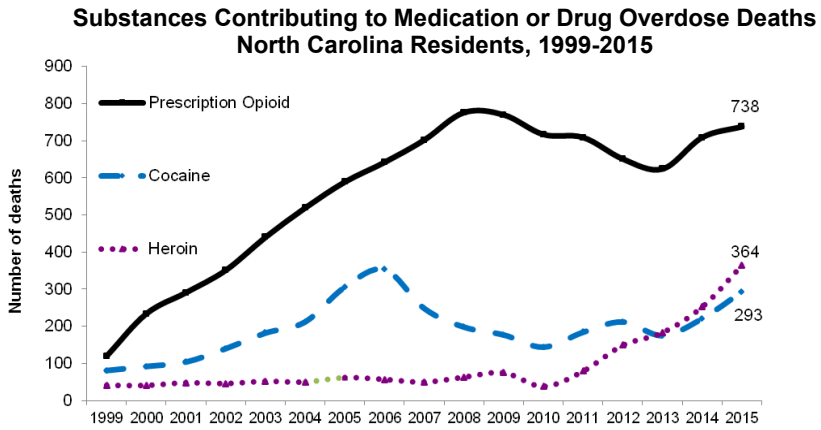
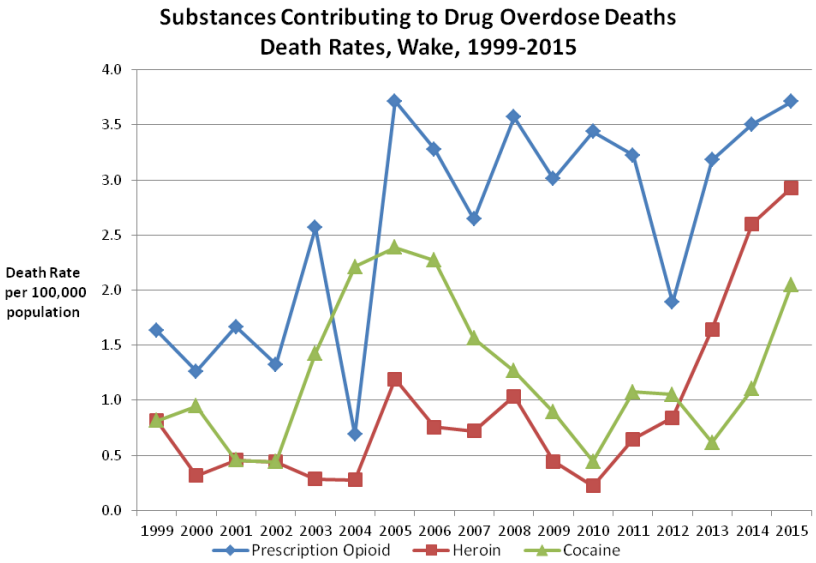


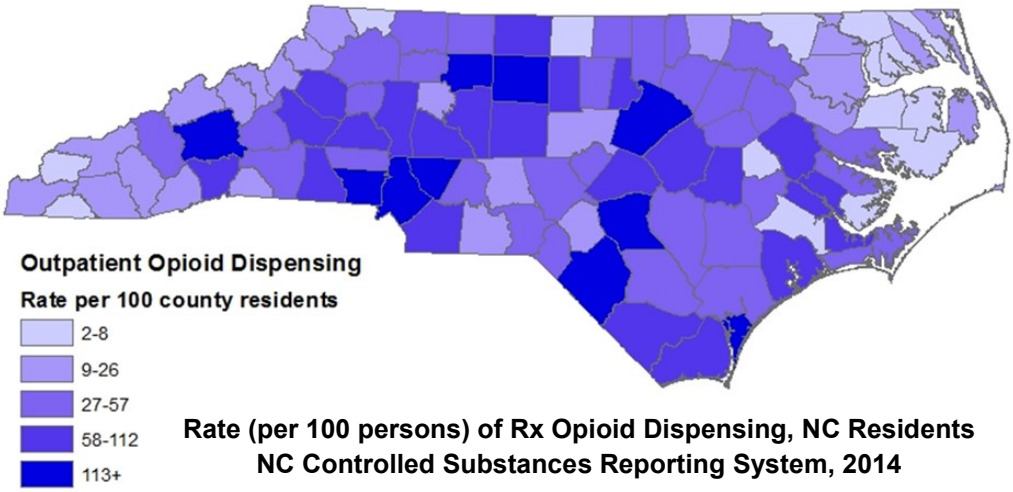
Figure 9

Data Source: NC DPH
Injury Epidemiology and Surveillance Unit



Wake County ranks among the highest prescribers of outpatient opioid medications in North Carolina at a rate of 113+ per 100 residents of opioid dispensing (Figure 10).

Figure 10



Another concerning trend is the number of deaths involving ingestion of excessive doses of loperamide (Imodium®) seen by the North Carolina Office of the Chief Medical Examiner since 2012. Of the 21 cases involving loperamide, the pathologist implicated the drug as either an additive or primary to the cause of death in 19 cases (7).

Figure 11

Data Source: NCDHHS, Division of Public Health, Injury Violence and Prevention Branch.

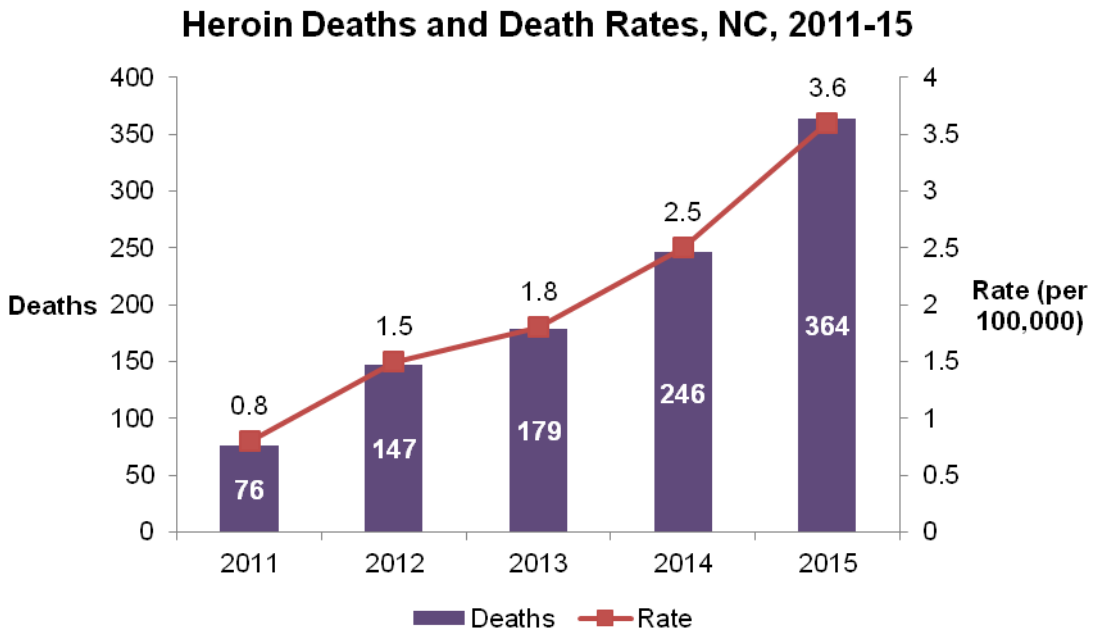


Figure 12

Data Source: NCDHHS, Division of Public Health, Injury Violence and Prevention Branch

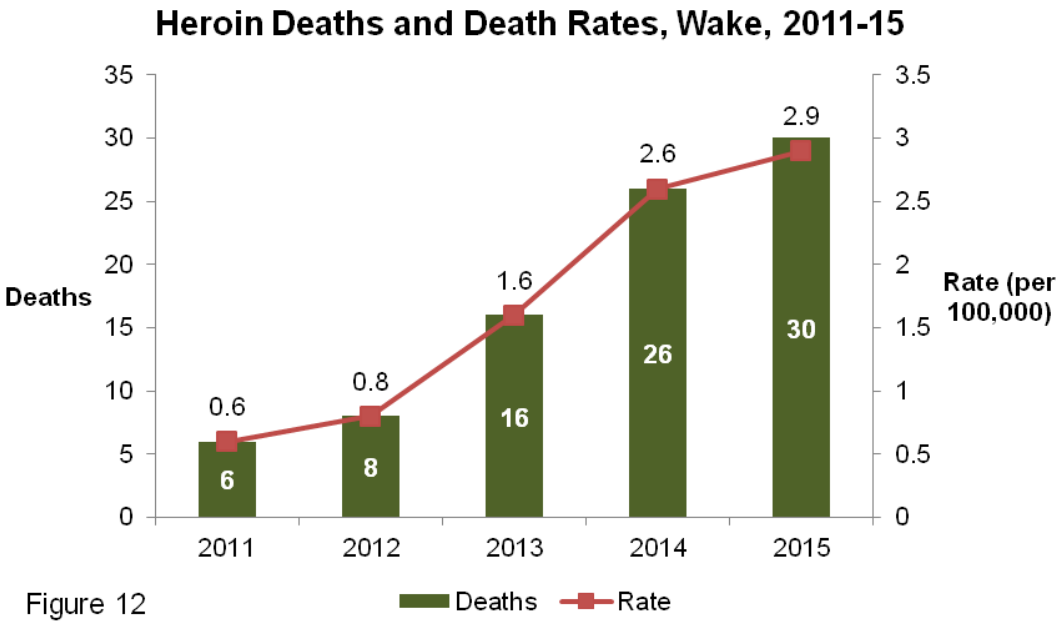


Figure 12

7.2 Wake County Drug Overdose Prevention Coalition

In response to these alarming trends, Wake County formed a Drug Overdose Prevention Coalition in November 2015. Wake County Human Services and Wake County Office of the Sheriff brought together groups and organizations in Wake County that are working to prevent and respond to the epidemic of heroin and opioid overdoses. This group formed a coalition to leverage resources to more effectively prevent drug overdoses in Wake County. The Coalition, which meets quarterly, has identified current drug overdose prevention and treatment strategies, gaps in service and other needs. To address gaps and other needs the Coalition formed the following 5 committees that work on these focus areas:

- Syringe Exchange and Naloxone Distribution
    - ◊ Improving access to naloxone kits to prevent deaths
    - ◊ Supporting needle exchange programs that reduce the spread of disease and connect people to treatment

- Education and Outreach
  - ◊ Conducting drug use and overdose prevention education and outreach with a focus on people most at risk
- Medical Intelligence Committee
  - ◊ Collecting and using data to allocate resources and measure prevention efforts
- Recovery Initiation and Maintenance Committee
  - ◊ Establishing mechanisms to connect those in need to specialized care and recovery resources
- Policy, Law Enforcement and Diversion Changes
  - ◊ Identifying and supporting community based treatment that meets the needs of drug offenders

7.3 Statewide Naloxone Standing Order

Table 6 and Figure 13 show naloxone overdose reversals from two different sources, the NC Harm Reduction Coalition and Wake Emergency Medical Services (EMS). From January to June, 2016, there was a 31% increase in the number of times EMS administered naloxone compared to the same time period in 2015 (Figure 13). It is important to note that not all uses of naloxone by EMS were for drug overdoses. Raleigh had the highest number of overdose reversals in Wake County from August 2013 to August 2016.

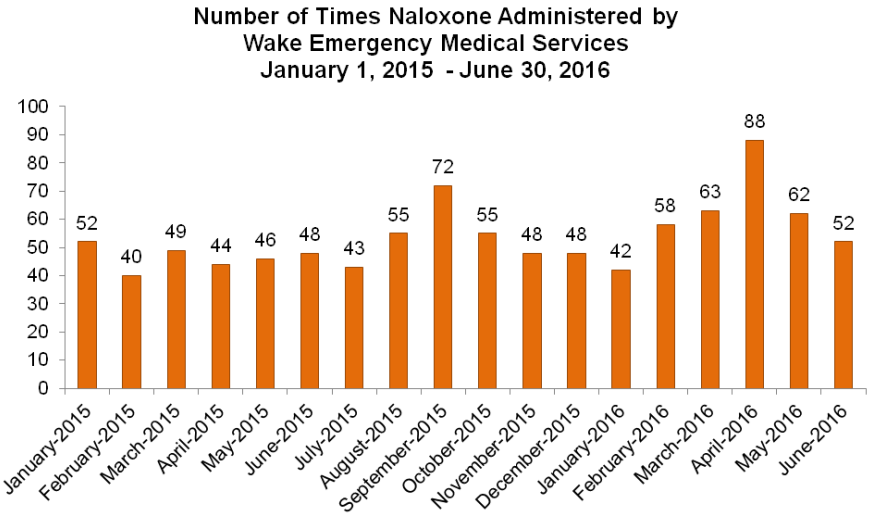
A recent change in state law may obviate the need for tracking these statistics in the future, as naloxone has recently become much more widely available to the general public. On June 20, 2016, Governor Pat McCrory enacted a statewide standing order allowing North Carolina pharmacies to dispense naloxone without a prescription. The standing order is signed by the NC State Health Director. It authorizes pharmacists to dispense naloxone according to broad eligibility criteria, including distribution to not only those with substance use disorders but also to family members, friends or people who could assist a person at risk of experiencing an opiate related overdose (8).

Table 6

Overdose Reversals in Wake County August 1, 2013 to August 31, 2016	
City/Town	**OD Reversals**
Apex	1
Cary	8
Fuquay-Varina	2
Garner	13
Knightdale	5
Morrisville	0
New Hill	0
Raleigh	114
Rolesville	0
Wake Forest	3
Wendell	2
Zebulon	1

Data Source: North Carolina Harm Reduction Coalition, at http://www.nchrc.org/programs-and-services/nc-od-reversals/, accessed on 9/1/16.

Figure 13



Data Source: NCDETECT, Syndrome Line Listing, PreMIS, accessed 8/31/16.

7.4 Syringe Exchange Now Legal in North Carolina

Syringe exchange programs became legal in North Carolina on July 11, 2016 when Governor McCrory signed House Bill 972 into law (G.S. 90-113.27). Any governmental or nongovernmental organization "that promotes scientifically proven ways of mitigating health risks associated with drug use and other high risk behaviors" can start a syringe exchange program (9). This includes, but is not limited to, harm reduction organizations, health departments, AIDS Service Organizations and community based organizations (CBOs).

The new law does not fund syringe exchange programs and it prohibits the use of public funds to purchase syringes and other injection supplies. Public funds can still be used for all other expenses, including personnel, health care costs, HIV and hepatitis C testing, naloxone, wound care, treatment and social service referrals, etc. Organizations will have to secure funding for syringes and injection supplies through sources such as private grants, individual donors, corporate giving, fundraisers, donations from medical organizations, etc.

Other highlights of the new syringe exchange law include:

- Under HB 972, no employee, volunteer or participant of the syringe exchange can be charged with possession of syringes or other injection supplies, or with residual amounts of controlled substances in them, obtained from or returned to a syringe exchange. To avoid confusion and encourage participation, an exchange should offer people written documentation that they participate in an exchange. This can be shown to law enforcement if needed.
- Syringe exchange programs operating in North Carolina are required to provide the following:
    1. Disposal of used needles and hypodermic syringes
    2. Needles, hypodermic syringes, and other injection supplies without a limit and at no cost
    3. Reasonable and adequate security of program sites, equipment, and personnel. (Written plans for security shall be provided to the police and sheriff's offices with jurisdiction in the program location and shall be updated annually)
    4. Educational materials on all of the following:
        * overdose prevention
        * the prevention of HIV, AIDS, and viral hepatitis transmission
        * Substance use disorder prevention
        * treatment for mental illness, including treatment referrals
        * treatment for substance use disorders including referrals for medication assisted treatment
    5. Access to naloxone kits or referrals to programs that provide access to naloxone
    6. For each individual requesting services, personal consultations from a program employee or volunteer concerning appropriate mental health or addiction treatment
- Each syringe exchange program must report the following information to the North Carolina Division of Public Health before starting operations, including:
    1. The methods by which the program will meet the requirements for starting an exchange (i.e. how will your program provide syringes, dispose of syringes, and provide adequate security,

treatment referrals, education on HIV/hepatitis C/overdose prevention, naloxone, personal consultation, etc)

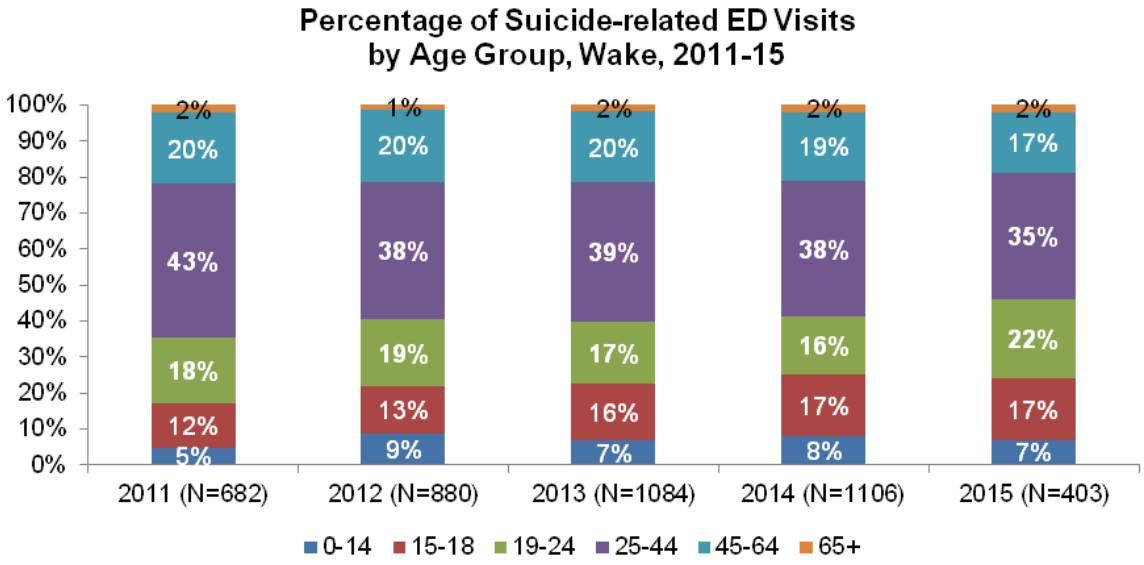
2. Each syringe exchange program must provide an annual report to the North Carolina Division of Public Health containing the following information:
    * number of individuals served by the program
    * number of needles, hypodermic syringes, and needle injection supplies dispensed by the program and returned to the program
    * number of naloxone kits distributed by the program
    * number and type of treatment referrals provided to individuals served by the program, including a separate report of the number of individuals referred to programs that provide access to naloxone

The North Carolina Harm Reduction Coalition, in partnership with Sigma Health Services, started a syringe exchange program in Raleigh on September 6, 2016. The program is located at 2321 Crabtree Blvd, Raleigh, NC, 27604, and will be open on Tuesdays from 3-8 pm. It is anticipated that other syringe exchange programs will be established with the help of this Coalition along with the Wake County Overdose Prevention Coalition.

8.0 Suicides

Figure 14

Data Source: NCDETECT, Custom Event Line Listing, Injury: Suicide and Self-Inflicted, accessed 8/31/16.



Because disease trends for certain case definitions in NCDETECT (including suicide-related visits) were impacted when ICD-10-CM replaced ICD-9-CM as the new diagnostic coding standard on October 1, 2015, rate comparisons for 2015 to previous years are not reliable. However, when comparing age groups against each other for each of the last 5 years (Figure 14), the percentage of each age group's share of suicide-related ED visits has remained largely stable. In all 5 years, most suicides occurred among the 25-44 year olds and more than 75% of all suicides were in people ages 44 years or younger.

9.0 Child Maltreatment

Child maltreatment is defined as any act or series of acts of commission or omission by a parent or other caregiver (i.e. clergy, coach, teacher) that results in harm, potential for harm, or threat of harm to a child. While the words abuse and neglect are often used interchangeably, each type of maltreatment is distinct. Abuse is the intentional maltreatment of a child and can be physical, sexual, or emotional in nature. Neglect, on the other hand, is the failure to give children the necessary care they need.

North Carolina law (NCGS 7B-301) mandates that any person or institution that suspects a child is being abused or neglected, or has died from being mistreated, must report what they know to the county Department of Social Services.

In Wake County those reports are received by the Wake County Human Services Child Welfare Division. A Child Protective Services (CPS) intake social worker receives the report and utilizes a structured tool to determine if the information meets the state requirements for acceptance and entry into the Multiple Response System (MRS). The MRS affords CPS the ability to assign CPS assessments to two different tracks (investigative assessment and family assessment) based on the allegations found in the report. This system:

- protects the safety of children by not treating all reports in the same way
- engages families in services that could enable them to better parent their children
- focuses on the family's strengths, supports, and motivation to change
- serves many of the families reported to CPS better by helping rather than "punishing" them

All reports of abuse must be taken as an investigative assessment. Certain reports of neglect must also be taken as an investigative assessment. These include (but are not limited to): child fatalities, a child in the custody of a local Department of Social Services or any child taken into protective custody by a physician or law enforcement personnel. A complete list of the types of reports subject to the investigative assessment can be found at https://www2.ncdhhs.gov/info/olm/manuals/dss/csm-60/man/cs1408.pdf. For all other reports of neglect or dependency[+] the family assessment track is utilized.

CPS uses a structured decision-making tool to make the final determination concerning the allegations in a report. In making these decisions, CPS takes into consideration:

- the specific behavior of the caretaker that resulted in harm to the child or clarification that there is no risk of harm
- current safety issues that may or may not be present
- any future risk of a child's safety should they remain in the home
- whether a child is in need of protection.

[+]Dependency—when a child is in need of assistance or placement because:

- There is no parent or guardian responsible for their care
- The parent or guardian is unable to provide care and there is no other child care arrangement

In 2015, a total of 4,550 reports were accepted, with 18% resulting in either a substantiation of abuse, neglect or dependency. In the past 5 years, there has been a general increase in the annual number of reports, with the highest number occurring in 2013. During the same time, the percentage of reports either found in need of services or substantiated has decreased (See Table 7).

Table 7

Child Maltreatment Reports Wake County 2011-2015										
Year	2011		2012		2013		2014		2015	
Number/Percentage	#	%	#	%	#	%	#	%	#	%
Substantiated*/ Services Needed**	1033	23	1026	23	977	24	864	20	819	18
Unsubstantiated/ Services Not Needed***	3438	77	3331	77	3936	76	3634	80	3731	82
*Substantiation: Denotes a finding of abuse, neglect or dependency at the conclusion of an investigative assessment **Services Needed: Denotes a finding of neglect at the conclusion of a family assessment ***Services Not Needed, Denotes that there was no finding of neglect in a family assessment										

Data source: The Jordan Institute for Families, http://ssw.unc.edu/jordan , accessed 8/31/16

Table 8 identifies the types of maltreatment that were reported and found to have occurred.

Table 8

Child Maltreatment Case Decisions Wake County 2011-2015										
Year	2011		2012		2013		2014		2015	
Number/Percentage	#	%	#	%	#	%	#	%	#	%
Abuse and Neglect	39	4	50	5	58	6	56	6	54	7
Abuse	39	4	34	3	63	6	37	4	34	4
Neglect	267	26	265	26	294	30	275	32	275	34
Dependency	9	1	2	0	3	0	4	0	4	0
Services Needed	581	56	562	55	416	43	414	48	401	49
Services Provided; No Longer Needed	98	9	113	11	143	15	78	9	51	6
Total	1033	100	1026	100	977	100	864	100	819	100

Data source: The Jordan Institute for Families, http://ssw.unc.edu/jordan , accessed 8/31/16

While the majority of families are found in need of services, there has been an increase in the number of more serious abuse and neglect reports.

Protective services are provided to help families keep children who have been abused or neglected safely at home whenever possible. Children are taken into foster care when no other means are adequate to protect them. Every effort is made to quickly reunify children with their families whenever possible. Although the rate of children in foster care in Wake County has remained stable over the past 5 years, the annual number of children in foster care in Wake County has increased 16% from 854 in 2011 to 989 in 2015 (Table 9).

Table 9

Wake County Youth In Foster Care 2011-2015					
	2011	**2012**	**2013**	**2014**	**2015**
Annual number of children in foster care	854	933	917	953	989
Rate (per 1,000) in general population	3.6	3.9	3.8	3.9	4

Data source: The Jordan Institute for Families, http://ssw.unc.edu/jordan , accessed 8/31/16

10.0 References

1. Society for the Advancement of Violence and Injury Research and Safe States Alliance, 2005. http://www.emorycenterforinjurycontrol.org/community/safety/definitions/, accessed 8/1/16.
2. North Carolina State Center for Health Statistics. http://www.schs.state.nc.us/interactive/query/lcd/getleadcauses.cfm, accessed 9/1/16.
3. Figure 1.Healthy Communities Strategy Call, NC Division of Public Health, Injury and Violence Prevention Branch, April 22, 2016. Power Point Presentation.
4. *Estimating the Cost of Unintentional Injuries, 2014*. National Safety Council. http://www.nsc.org/NSCDocuments_Corporate/estimating-costs-unintentional-injuries-2016.pdf, accessed 8/21/16.
5. Number of deaths in Table 1, National Center for Health Statistics Vital Statistics System. Nonfatal injuries data in Tables 2 and 3, National Electronic Injury Surveillance System. All Injury Program. Unit cost estimates, all tables, Pacific Institute for Research and Evaluation. All data obtained at https://wisqars.cdc.gov:8443/costT/cost_Part1_Intro.jsp, accessed 7/29/16.
6. Definitions. *Maine Injury Prevention Program*. http://www.maine.gov/dhhs/mecdc/population-health/inj/intentional.html, accessed 9/18/16.
7. *Loperamide-Related Deaths in North Carolina.* Sandra C. Bishop-Freeman, Marc S. Feaster, Jennifer Beal, Alison Miller, Robert L. Hargrove, Justin O. Brow*er*, and Ruth E. Winecker. **Journal of Analytical Toxicology**, 2016;1–10.
8. *North Carolina State Health Director's Standing Order for Naloxone*. https://www.naloxonesaves.org/files/2016/05/Statewide-Standing-Order-Dated-6-20-2016-signed.pdf, accessed 8/21//16.
9. *FAQs on Legal Syringe Exchange Program in North Carolina*. North Carolina Harm Reduction Coalition. http://www.nchrc.org/syringe-exchange/syringe-exchange-in-nc-faq/, accessed 8/30/16.

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