



National Injury and Violence Prevention Resource Center

North Carolina 2013 State Fact Sheet

Unintentional injuries and violence are the leading causes of death, hospitalization, and disability for children ages 1-18. This fact sheet provides a state snapshot of data on the injury-related Maternal and Child Health Block Grant National Performance Measures and Health Status Indicators, with a special focus on disparities based on race, gender, and rural/urban residence. The fact sheet is intended to be a helpful and easy-to-use tool for needs assessments, planning, program development, and presentations.

The Children's Safety Network (CSN) National Injury and Violence Prevention Resource Center, funded by the Maternal and Child Health (MCH) Bureau, works with states to utilize a science-based, public health approach for injury and violence prevention (IVP). CSN is available to provide information and technical assistance on injury surveillance and data; needs assessments; best practices; and the design, implementation, and evaluation of programs to prevent child and adolescent injuries.

Major Causes of Injury Death

Table 1: Leading Causes and Total 5-Year Incidence of Deaths by Age Group, North Carolina, 2006-2010

Rank	Age Groups					
	<1	1 - 4	5 - 9	10 - 14	15-19	20-24
1	Short Gestation 1,041	Unintentional Injury 252	Unintentional Injury 160	Unintentional Injury 174	Unintentional Injury 1,069	Unintentional Injury 1,571
2	Congenital Anomalies 952	Congenital Anomalies 78	Malignant Neoplasms 71	Malignant Neoplasms 68	Homicide 262	Homicide 542
3	SIDS 480	Homicide 57	Congenital Anomalies 25	Homicide 31	Suicide 235	Suicide 429
4	Maternal Pregnancy Comp. 365	Malignant Neoplasms 47	Homicide 22	Heart Disease 28	Malignant Neoplasms 84	Malignant Neoplasms 133
5	Placenta Cord Membranes 207	Heart Disease 41	Heart Disease 21	Suicide 28	Heart Disease 56	Heart Disease 123

Note. **** = indicates that the cell values range from 1-9 and are suppressed for data confidentiality purposes.

Table 2. Leading Causes and Total 5-Year Incidence of Injury Deaths by Age Group, North Carolina, 2006-2010

Age Groups						
Rank	<1	1 - 4	5 - 9	10 - 14	15-19	20-24
1	Suffocation 121	MV Traffic 83	MV Traffic 82	MV Traffic 101	MV Traffic 759	MV Traffic 956
2	Homicide 46	Drowning 64	Drowning 28	Homicide 31	Homicide 262	Homicide 542
3	MV Traffic 22	Homicide 57	Homicide 22	Suicide 28	Suicide 235	Suicide 429
4	Drowning 10	Fire/Burn 27	Fire/Burn 21	Drowning 15	Poisoning 145	Poisoning 416
5	Fire/Burn ****	Suffocation 23	Other land transport 10	Fire/Burn 13	Drowning 66	Drowning 49

Note. All mechanisms of suicide and homicide were combined according to intent. Each listed mechanism is unintentional except those otherwise noted. **** = indicates that the cell values range from 1-9 and are suppressed for data confidentiality purposes.

Major Causes of Hospital-Admitted Injuries

Table 3: Leading Causes and Annual Incidence of Hospital-Admitted Injuries by Age Group, North Carolina Residents, 2010

Age Groups						
Rank	<1	1 - 4	5 - 9	10 - 14	15-19	20-24
1	Other Specified, NEC 134	Fall 211	Fall 199	Fall 178	Self-Inflicted 714	Self-Inflicted 799
2	Fall 70	Other Specified, NEC 96	MV Traffic 101	Self-Inflicted 155	MV Traffic 598	MV Traffic 719
3	Assault 47	Bites & Stings 81	Other Specified, NEC 53	MV Traffic 134	Fall 192	Assault 311
4	Poisoning 21	Poisoning 77	Bites & Stings 38	Struck By/ Against 90	Assault 175	Fall 298
5	Suffocation 20	MV Traffic 55	Pedal Cyclist, Other 32	Other Specified, NEC 75	Other Specified, NEC 138	Other Specified, NEC 186

Note: MV = Motor Vehicle. NEC = Not Elsewhere Classifiable. Source: Children's Safety Network Economics and Data Analysis Resource Center (CSN EDARC), at the Pacific Institute for Research and Evaluation (PIRE), Calverton, MD, January 2013. Incidence based on 2010 data obtained from the North Carolina Department of Health and Human Services. State Inpatient Data (SID) from the Healthcare Cost and Utilization Project (HCUP) developed by the Agency for Healthcare Research and Quality (AHRQ). These injuries exclude patients who were dead at the time of discharge, readmission cases, transfers (e.g., from another short or long-term care facility, different acute care hospital), medical misadventures, and/or who suffered non-acute injuries. All counts were based on the patients' state of residence.



Table 4: Leading Causes and Total Medical Cost in Thousands (\$1,000) for Hospital-Admitted Injuries by Age Group, North Carolina Residents, 2010

Rank	Age Groups					
	<1	1 - 4	5 - 9	10 - 14	15-19	20-24
1	Assault \$1,124	Fall \$2,513	Fall \$2,529	MV Traffic \$5,051	MV Traffic \$26,153	MV Traffic \$28,274
2	Unspecified \$949	MV Traffic \$2,207	MV Traffic \$1,970	Fall \$3,718	Fall \$6,534	Fall \$9,701
3	Fall \$705	Struck By/ Against \$911	Fire/ flame *	Transport, other \$1,747	Transport, other \$3,405	Motorcyclist \$5,981
4	Other Specified, NEC \$658	Assault \$825	Pedestrian \$874	Struck By/ Against \$1,369	Self-inflicted \$3,191	Transport, other \$5,028
5	Suffocation \$599	Bites and stings \$787	Transport, other \$768	Firearm \$993	Struck By/ Against \$2,473	Assault \$4,393

Note: MV = Motor Vehicle. NEC = Not Elsewhere Classifiable. Source: Children's Safety Network Economics and Data Analysis Resource Center (CSN EDARC), at Pacific Institute for Research and Evaluation (PIRE), Calverton, MD, January 2013. Incidence based on 2010 data from the state and obtained from the XYZ State Inpatient Databases (SID), Healthcare Cost and Utilization Project (HCUP), Agency for Healthcare Research and Quality (AHRQ). Costs presented are medical costs in thousands. These injuries exclude patients who were dead at the time of discharge, readmission cases, transfers (e.g., from another short or long-term care facility, different acute care hospital), medical misadventures, and/or who suffered non-acute injuries. All counts were based on the patients' state of residence.

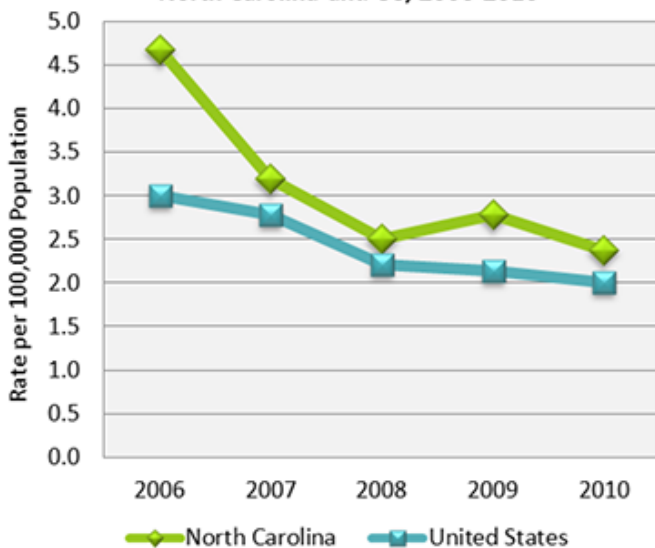
National Performance Measures

The Federal Maternal and Child Health Bureau Block Grant program requires State MCH programs to report on 18 National Performance Measures (NPM), two of which directly address injuries. NPM #10 addresses the rate of deaths to children aged 14 years and younger caused by motor vehicle crashes per 100,000 children. NPM #16 addresses the rate (per 100,000) of suicide deaths among youths aged 15 through 19.

The following figures provide information related to NPMs #10 and #16.

NPM 10: Reducing Unintentional Motor Vehicle Deaths to Children Ages 0-14

Figure 1: Rate of Deaths Caused by Motor Vehicle Crashes, Children Aged 0 through 14, North Carolina and US, 2006-2010



Motor vehicle-related deaths remain a major cause of death for children 14 and under. Figure 1 shows the change in the rate of state motor vehicle-related deaths compared to the US rate from 2006-2010. Overall, the rate of death per 100,000 population declined steadily across the US during this period. Figure 2 provides a breakout of the fatalities by type distinguishing motor vehicle occupant deaths (of any vehicle type) from pedestrian and pedal cyclist fatalities. This information allows states to understand which types are responsible for most of the fatalities.

Figure 3 breaks out the fatalities by race and age group. There are considerable differences between races suggesting variations in social norms, safety practices, and the presence of risk factors, including child restraint system (CRS) or safety belt usage, alcohol involved crashes, and the use of helmets. Many factors may affect this variation. Figure 4 provides a breakdown of fatalities by gender and, although there is little variability between males and females for the 10-14 age group,

there is an increasing difference in the 15-24 age group. Figure 4 suggests that the female rate decreased for 20-24 year olds compared with the 15-19 year olds while male fatalities increased for 20-24 year olds.

Figure 2: Percentage Distribution of Motor Vehicle Traffic Fatalities by Type, Children Aged 0 through 14, North Carolina, 2006-2010

37% of children ages 0 through 14 involved in a motor vehicle fatality were occupants of the vehicle.

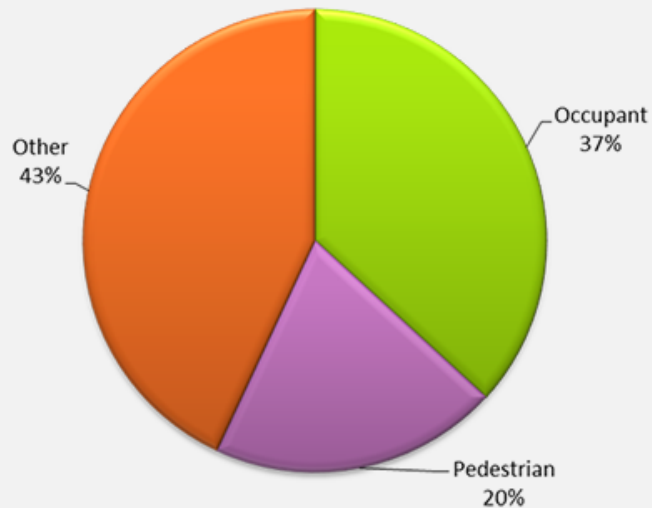


Figure 3: Motor Vehicle Traffic Fatality Rates by Race, Children and Youths Aged 0 through 24, North Carolina, 2006-2010

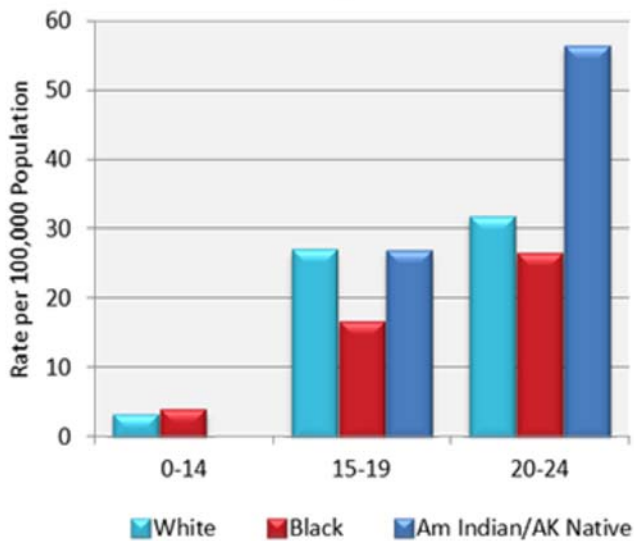
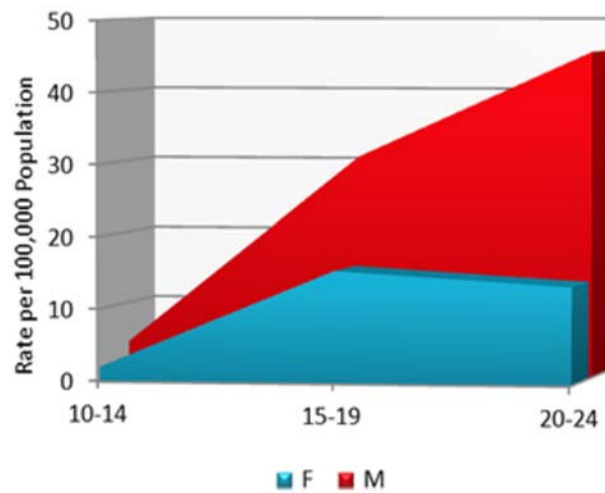


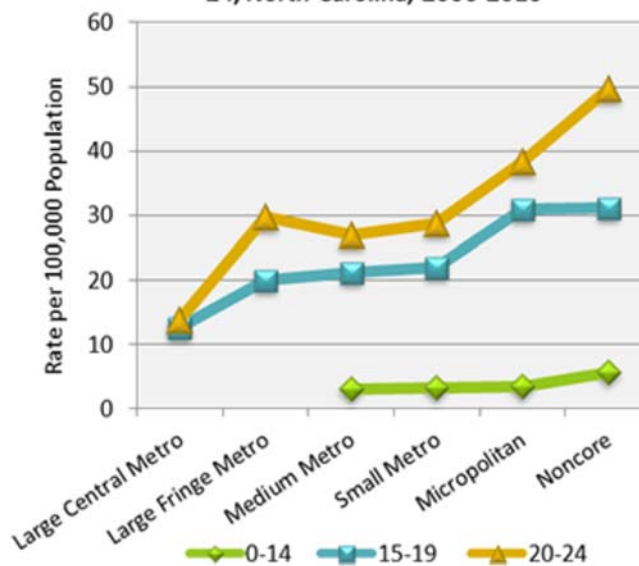
Figure 4: Motor Vehicle Traffic Fatality Rates by Gender, Children and Youths Aged 10 through 24, North Carolina, 2006-2010



One way of understanding disparities is to look at the rate of injuries by place of occurrence. To show this, CSN has provided the rates for the 0– 14, 15-19 and 20-24 age groups using the urban-rural classification system developed by the National Center for Health Statistics (NCHS). To show how injury rates vary by level of urbanization, a [table based on the classification system can be found here](#) and defines six levels of urbanization: large central metro, large fringe metro, medium metro, small metro, micropolitan, and noncore. Figure 5 shows how the rate varies by age group by place of occurrence/urban-rural setting. This information allows the state to better understand any disparity that may occur between the different settings. Data are provided only for those areas in which 20 or more deaths occurred.

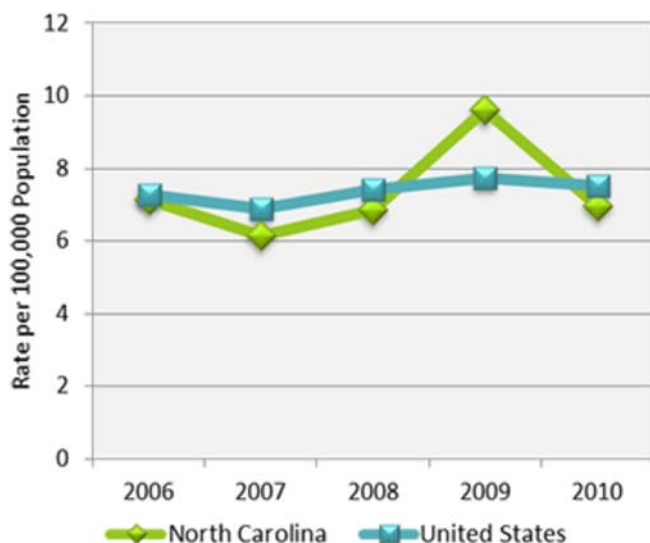
Many of these motor vehicle related deaths can be prevented through the implementation of a broad range of evidence-informed interventions and programs. These data are intended to provide a broad overview of the magnitude of the problem and to highlight possible disparities which may exist by race, gender, and urbanicity.

Figure 5: Motor Vehicle Traffic Fatality Rates by Urbanicity, Children and Youths Aged 0 through 24, North Carolina, 2006-2010



NPM 16: Reducing Suicide Deaths Among Teens Ages 15-19

Figure 6: Rate of Suicide Deaths, Youths Aged 15 through 19, North Carolina and US, 2006-2010



Suicide is the 4th leading cause of death and the 3rd leading cause of injury-related death among US youth 10-24 years of age. According to the 2011 Youth Risk Behavior Surveillance Survey (YRBSS), 15.8% of students seriously considered attempting suicide and 7.8% of students attempted suicide one or more times in the 12 months prior to the survey. Although progress has been made over the past decade in reducing the rate of completed suicides nationally, this reduction has leveled off in the last few years. The following figures provide state-specific data related to suicide. Figure 6 shows the state rate from 2006-2010 for 15-19 year olds in comparison to the US rate for the same age group and time period. Figure 7 provides information on the means used by the 15-19 year olds for completed suicides. It is important to note that the actual number of suicides is often quite small thus resulting in considerable variation when looking at year to year rates.



Figure 7: Percentage Distribution of Completed Suicides by Means, Youths Aged 15 through 19, North Carolina, 2006-2010

54% of youths ages 15 through 19 completed suicide by using a firearm.

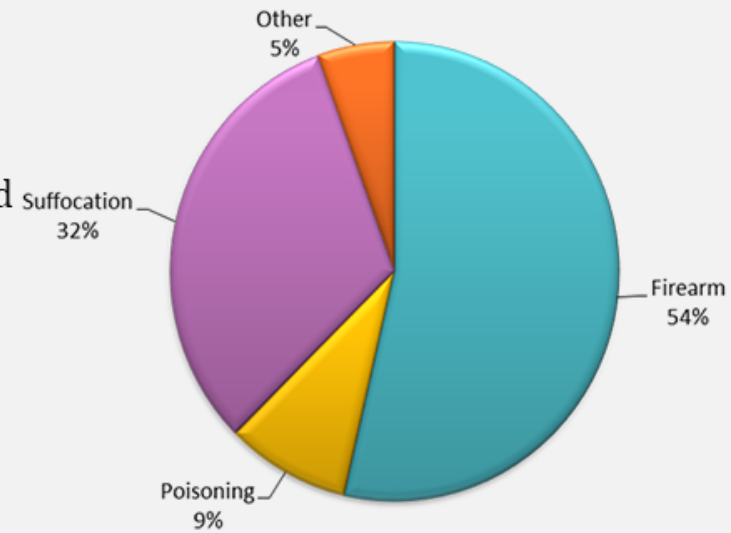


Figure 8: Percentage of High School-Aged Children with Suicide Ideation, North Carolina and US, 2003-2011

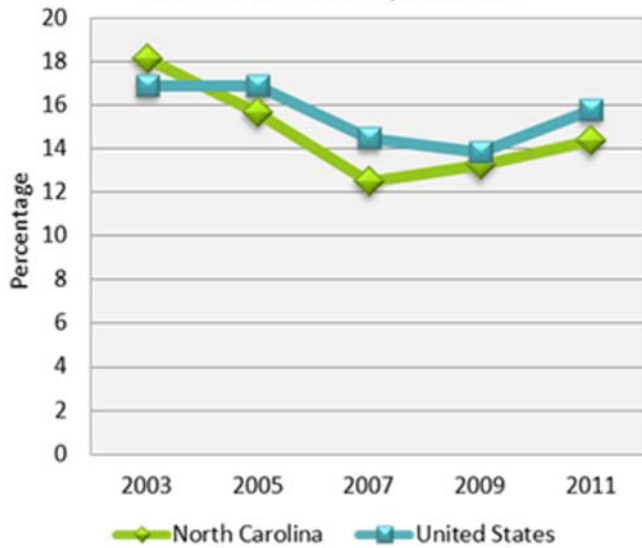


Figure 9: Percentage of High School-Aged Children Treated for Suicide Attempt, North Carolina and US, 2003-2011

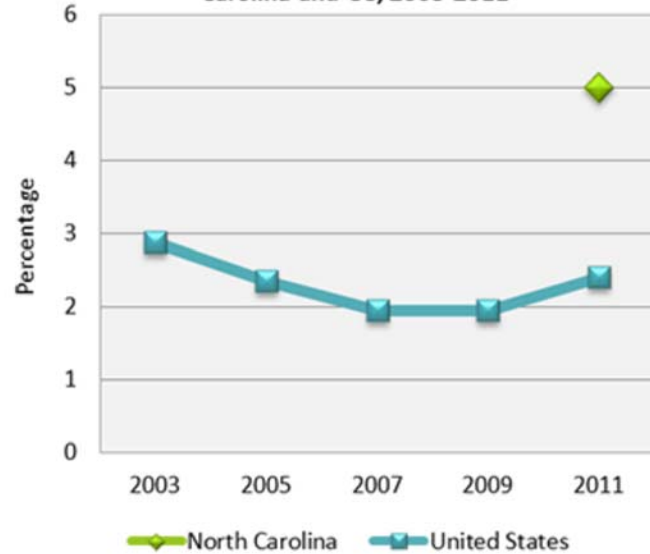


Figure 10: Rate of Completed Suicides by Race, Youths Aged 15 through 24, North Carolina, 2006-2010

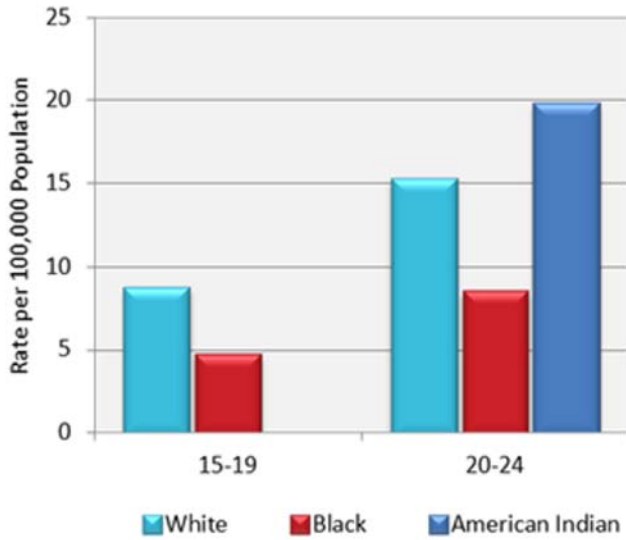
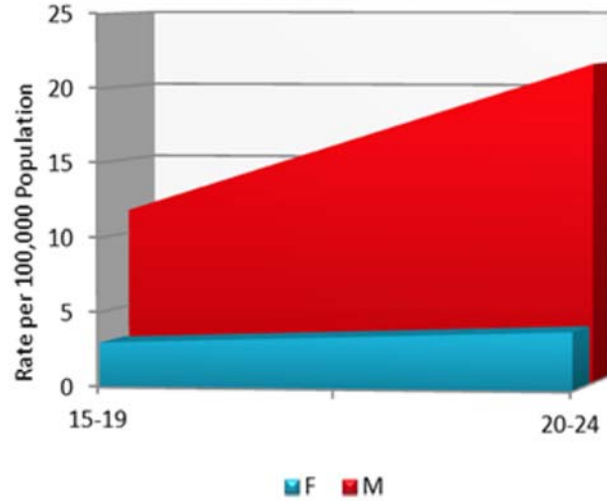


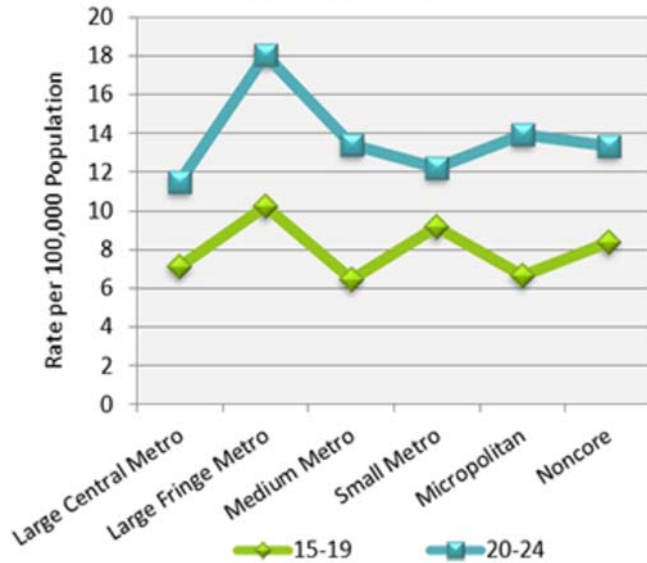
Figure 11: Rate of Completed Suicides by Gender among Youths Aged 15 through 24, North Carolina, 2006-2010



The YRBSS provides information about behaviors that contribute to unintentional and intentional violence among youth. Figures 8 and 9 provide information on the percentage of high school students with suicide ideation and the percentage who reported being medically treated for a suicide attempt from 2003-2011, respectively. This information and other information available in the YRBSS can help states understand how behaviors are changing within this age group.

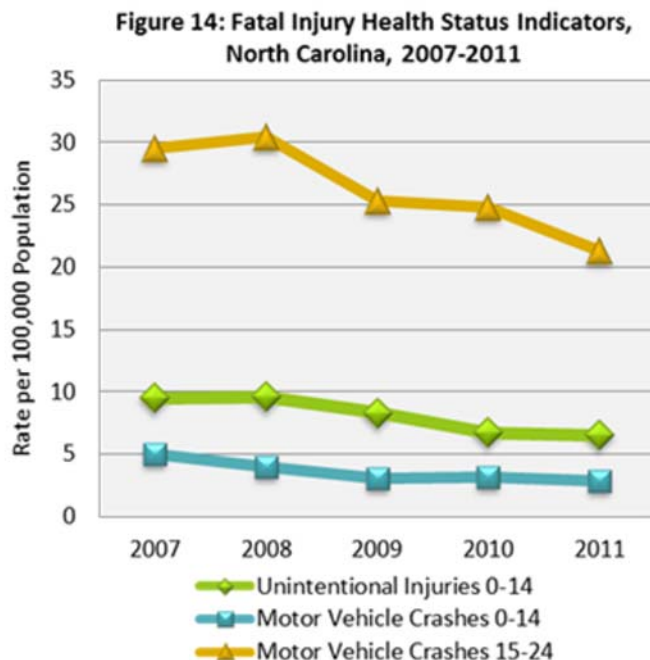
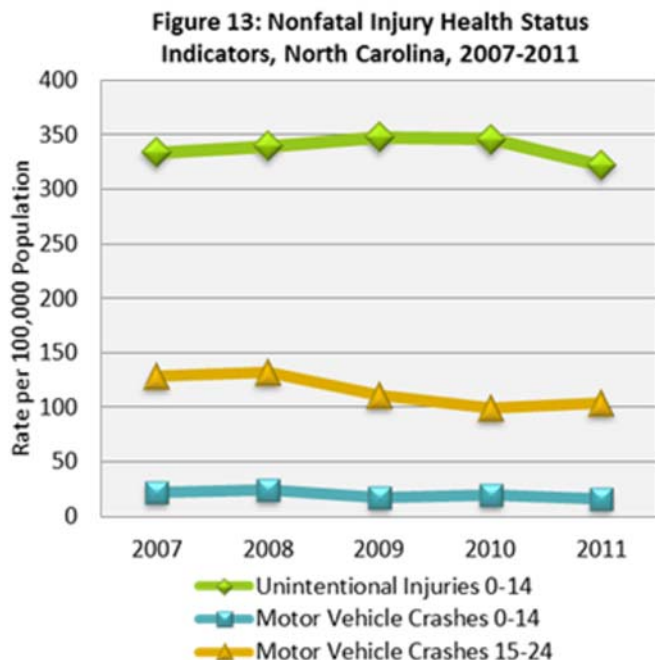
Figure 10 shows how the rate differs by race for 15-19 and 20-24 year olds from 2006-2010. Figure 11 shows the difference by gender for the same age group and time period with the male rate for both age groups exceeding the female rate. Figure 12 looks at the variation in rate by urbanicity for 15-24 year olds with the rate increasing as rurality increases (see definition of urbanicity in Motor Vehicle section). This information provides a better understanding of the magnitude of the problem in different parts of the state, helping the state to identify environmental risk factors and facilitate decision making on where to target its suicide prevention efforts.

Figure 12: Rate of Completed Suicides by Urbanicity, Youth Aged 15 through 24, North Carolina, 2006-2010



IVP Health Status Indicators

The Maternal and Child Health Bureau requires every state to report on 12 Health Status Indicators. Six of the indicators are related to IVP. The two figures below reflect the data reported for the IVP Health Status Indicators by the state in their Maternal and Child Health Block Grant Application Form 17, 2012.



State Specific Performance Measures and Priority Needs

Each state develops up to 7 – 10 State Performance Measures and priority needs. The following provides information about the states' selected 2013 injury-related performance measures and priority needs.

North Carolina has the following injury-related State Performance Measure:

- Reduce the number of children affected in substantiated reports of abuse and/or neglect as compared with previous years.

North Carolina has the following injury-related Priority Need:

- Prevent child deaths.

State Contact Information

MCH Director: Kevin Ryan, kevin.ryan@dhhs.nc.gov

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EMSC Contact: Gloria Hale, gloria.hale@dhhs.nc.gov

CDR Coordinator: Krista Ragan, krista.ragan@dhhs.nc.gov

State Fact Sheets Figure & Table Source Data

Table 1 Source: [WISQARS Leading Causes of Death Reports, 2006-2010](#)

Table 2 Source: National Center for Health Statistics, Multiple Cause of Death Data, 2006-2010

Table 3 Source: Children's Safety Network Economics and Data Analysis Resource Center (CSN EDARC), at Pacific Institute for Research and Evaluation (PIRE), Calverton, MD, January 2013.

Table 4 Source: Children's Safety Network Economics and Data Analysis Resource Center (CSN EDARC), at Pacific Institute for Research and Evaluation (PIRE), Calverton, MD, January 2013.

Figure 1 Source: [WISQARS Fatal Injury Reports, 2006-2010 and WISQARS Injury Mortality Reports, 2003-2007](#)

Figure 2 Source: [WISQARS Fatal Injury Reports, 2006-2010 and WISQARS Injury Mortality Reports, 2003-2007](#)

Figure 3 Source: [WISQARS Injury Mortality Reports, 2006-2010](#)

Figure 4 Source: [WISQARS Fatal Injury Reports, 2006-2010 and WISQARS Injury Mortality Reports, 2003-2007](#)

Figure 5 Source: [CDC WONDER Multiple Cause of Death data, 2006-2010 and Urban-Rural Definition Classification System](#)

The classification scheme can be found at: <http://wonder.cdc.gov/wonder/help/CMF/Urbanization-Methodology.html>. 2006 NCHS Urban-Rural Classification Scheme for Counties, by Deborah D. Ingram and Sheila Franco.

Figure 6 Source: [WISQARS Fatal Injury Reports, 2006-2010 and WISQARS Injury Mortality Reports, 2003-2007](#)

Figure 7 Source: [WISQARS Fatal Injury Reports, 2006-2010 and WISQARS Injury Mortality Reports, 2003-2007](#)

Figures 8 & 9 Source: [Youth Online: High School Youth Risk Behavior Survey \(YRBS\), 2003-2011](#)

Figure 10 Source: [WISQARS Injury Mortality Reports, 2006-2010 and WISQARS Injury Mortality Reports, 2003-2007](#)

Figure 11 Source: [WISQARS Fatal Injury Reports, 2006-2010 and WISQARS Injury Mortality Reports, 2003-2007](#)

Figure 12 Source: [CDC WONDER Multiple Cause of Death data, 2006-2010 and Urban-Rural Definition Classification System](#)

Figures 13 & 14 Source: [HRSA, Title V Information System Multi-Year Report](#). Some states may have changed their method of calculation.

About Children's Safety Network

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In this fact sheet CSN provides a cursory review of the injury morbidity and mortality data available for the state. The figures and tables in this fact sheet can help you understand the state's progress in addressing motor vehicle traffic injuries and suicide. To target and address these and other injury issues, it is critical to understand this data. CSN can assist you in conducting detailed data analyses, utilizing surveillance systems, and undertaking needs assessments. For assistance, contact the Children's Safety Network at csninfo@edc.org.

Connect with the Children's Safety Network

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Need TA? Have Questions? E-mail: csninfo@edc.org

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