2011 Mecklenburg County

Annual Epidemiology Report

Mecklenburg County Community Child Fatality Prevention and Protection Team (CFPPT)

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August 8, 2011

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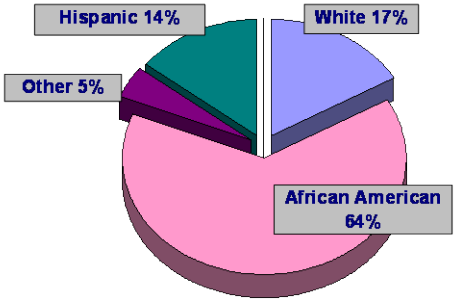
CFPT
The Child Fatality Prevention Team
Learning From Our Past To Protect Their Future

HIGHLIGHTS

- **Overall Infant and Child Mortality** - In 2009, there were 132 infant and child deaths. Of the 132 deaths, 57% were male, 43% were female, 67% were less than 1 year of age, and 33% were children ages 1 to 17. The child mortality rate was 58.0 per 100,000 children ages 0 to 17, a 6.8% decrease from 62.2 per 100,000 in 2008 and lower than the state rate of 67.0 per 100,00.

- **Race and Ethnicity** - African Americans are disproportionately represented among infant and child deaths. Of the 132 infant and child deaths, 17% were White Non-Hispanic, 64% were African American Non-Hispanic, 14% were Hispanic, and 5% were Other Non-White, Non-Hispanic.



- **Preventable Deaths** - While a majority of infant and child deaths are non-injury related, 18% were preventable. Of the 24 preventable deaths 7 (29%) occurred among infants and 17 (71%) occurred among children. This means roughly 1 in 5 infant and child deaths were injury related and preventable.

- **Infant Mortality** - In 2009 the infant mortality rate was 6.1 per 1,000 live births, down slightly from 6.6 in 2008. The rate for minority infants was 11.4 per 1,000 minority live births and was 4 times higher than the rate for White infants and two times higher than the overall rate.

- **SIDS/Unsafe Sleep** – Overall, 16% of all infant deaths had risk factors for an unsafe sleep environment present. The most significant risk factor identified was co-sleeping with a caregiver. Of the 15 deaths that occurred in the sleep environment, unsafe sleep practices directly contributed to the cause of death in 29% (4) cases, 21% (3) died of SIDS, and 50% (8) were Undetermined.

- **Child Deaths** - Injury is the leading cause of ***preventable*** death among children ages 1 to 17 in Mecklenburg County. In 2009, there were 44 child deaths accounting for 33% of all infant and child deaths. Motor Vehicle injuries, Other Unintentional Injuries (i.e. fall, fire, drowning), and Homicides are the predominant causes of injury death among children.

- **Intentional Injury** – In 2009, 14% of high school students reported attempting suicide one or more times in the past year up slightly from 13% in 2007. In addition, 45% of high school and 59% of middle school students agreed or strongly agreed that harassment and bullying by other students is a problem at their school and 59% of high school students though gang activity was a problem in their school.

- **Domestic Violence** - Overall, 14% of infant and child deaths had a history of DV in the home prior to the fatality or a caregiver had a history of DV. A history of DV was present in 33% of all preventable deaths among infants and children. Of the cases that were substantiated for neglect, abuse or both, by our local DSS/YFS, alcohol and drug abuse were the largest contributory factors for the caregivers, and domestic violence was the largest contributing household factor.

Prepared by the Mecklenburg County Health Department, Epidemiology Program, August 2011

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INTRODUCTION

The local Community Child Fatality Prevention and Protection Team (CFPPT) 2011 Annual Epidemiology Report presents the most recent trends in infant and child death data in Mecklenburg County. The data being presented is about 15 months old due to the time it takes the North Carolina State Center for Health Statistics (NC SCHS) to collect, enter, and distribute local data to each county. Regardless of the age of the data, the trends remind us of important issues regarding infant and child safety in Mecklenburg County. These trends highlight the need for continued support from our partner agencies to help improve the safety and well being of infants and children in our community.

In 1991, each county in the state of North Carolina was mandated by statute 7B-1406-1414 to establish a multi-disciplinary, community team to review all infant and child fatalities ages birth through seventeen years on a yearly basis. Our mission is to identify gaps and deficiencies in the local, comprehensive child services system (public and private agencies) and advocate for prevention efforts and policy change in a coordinated manner. Through our mission, the team works collaboratively to raise awareness around important safety issues on how to better protect infants and children from preventable injuries and death.

Members of our team include but are not limited to, local non-profit agencies serving families and youth, healthcare providers such as Carolinas Healthcare System and Novant Health, the Mecklenburg County Health Department, the Mecklenburg County Department of Social Services, CMS, Fire, Police, MEDIC, state agencies such as Guardian ad Litem (GAL), the courts, and mental health agencies.

We appreciate the time, commitment, and dedication of our team members:

- **District 26**
- **Alexander Youth Network, Inc.**
- **Mecklenburg County Area Mental Health Authority (AMH)**
- **CMC Randolph Behavioral Health**
- **Mecklenburg County Board of County Commissioners (BOCC)**
- **Carolinas HealthCare System Center for Injury Prevention & Safe Communities**
- **CMC Levine Children's Hospital**
- **Catholic Social Services**
- **Central Piedmont Community College (CPCC)**
- **Charlotte Mecklenburg Fire Department (CFD)**
- **Charlotte Mecklenburg Police Department (CMPD)**
- **Charlotte Mecklenburg Schools (CMS)**
- **Child Care Resources, Inc.**
- **Charlotte City Council**
- **Care Ring**
- **Mecklenburg County Community Support Services Women's Commission**
- **Community Volunteers**
- **Council for Children's Rights**
- **Mecklenburg County Department of Social Services (DSS)**
- **Mecklenburg County Youth and Family Services (YFS)**
- **Mecklenburg County District Attorney's Office**
- **Guardian ad Litem (GAL)**
- **Mecklenburg County Health Department**
- **NC Department of Juvenile Justice**
- **Mecklenburg County Medical Examiner's Office**
- **Emergency Medical Services (MEDIC)**
- **Mental Health Association of Central Carolinas, Inc.**
- **Pat's Place Child Advocacy Center**
- **Novant Health**
- **Mecklenburg County Sheriff's Office**
- **Teen Health Connection**
- **Thompson Child & Family Focus**
- **United Family Services**


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CAUSES OF DEATH

Injuries are ***preventable***. Injury strikes heaviest among our younger population resulting in the most potential years of life lost due to death or disability. Injury gains attention for only a few hours when an "incident" is covered by the media and then loses its appeal until the next incident, yet nationwide, 2 out of 5 teen deaths are the result of motor vehicle crashes and 82% of adolescents dying in violent activities are killed by firearms (CDC). In addition, 5 deaths a day occur to children under the age of 14 from motor vehicle crashes, half of which are unrestrained (CDC). Locally, statewide, and nationwide, there is very little funding and staff dedicated to injury prevention. Seatbelts, helmets, child safety seats, not driving while or with someone who is impaired, securing firearms, non-slip surfaces, strong anti-bullying policies, and safe sleep education are some examples of ways in which we can help prevent injuries and reduce deaths among infants and children in our community.

Infant and child deaths are categorized as due to injury or non-injury related causes with the focus on injury-related deaths since they are preventable. Injury is subdivided into two categories: 1) Unintentional Injury and 2) Intentional Injury. Unintentional Injury is comprised of two categories: 1) Motor Vehicle Injuries, and 2) Other Unintentional Injuries such as drowning, accidental suffocation, burn, and falls. Intentional Injury is comprised of Homicides and Suicides. Non-Injury deaths include causes such as cancer, infections, body system diseases, prematurity and low birth weight, birth defects, and SIDS. These types of deaths are multi-factorial in nature involving complex pathways affected by health behaviors, genetics, a mother's health status before, during, and after pregnancy, random exposure to infectious diseases, and in some cases unknown causes making community wide prevention efforts more challenging.

OVERVIEW

The 2009 overall child mortality rate was 58.0 per 100,000 children ages 0 to 17, a 6.8% decrease from 62.2 per 100,000 in 2008. It describes the rate at which infants and children are dying each year and is lower than the state rate of 67.0 per 100,00 . Since infant deaths make up the majority of child deaths, the overall child mortality rate is heavily influenced by changes in the infant mortality rate. An increase in natural deaths among infants in 2004 accounted for a marked increase in the child death rate from 2003 to 2004. The rate remained relatively high in 2005 when 9 accidental suffocations occurred among infants less than 1 year of age. As a result, 2005 was the first year in the history of infant deaths in which Unintentional Injury became the leading cause of death for infants in Mecklenburg County. Since 2004, the child mortality rate has decreased 26.4% and continues to decline. While a steady decline in child mortality is a marker of success in our community, the opportunity to prevent future infant and child fatalities still remains.

In 2009, there were a total of 132 infant and child deaths. Of the 132 deaths 57% were male, 43% were female, 67% were infants (less than 1 year of age), and 33% were children ages 1 to 17.

While a majority of infant and child deaths are non-injury related, 18% were preventable. Of the 24 preventable deaths 7 (29%) occurred among infants and 17 (71%) occurred among children. This means roughly 1 in 5 infant and child deaths were injury related and preventable.

There were 15 infant deaths related to the sleep environment and 14 of the 15 deaths had risk factors for unsafe sleep practices and/or an unsafe sleep environment present. Overall, 16% of all infant deaths had risk factors for an unsafe sleep environment present. Of the 15 deaths that occurred in the sleep environment, unsafe sleep practices directly contributed to the cause of death in 29% (4) cases, 21% (3) died of SIDS, and 50% (8) were Undetermined.

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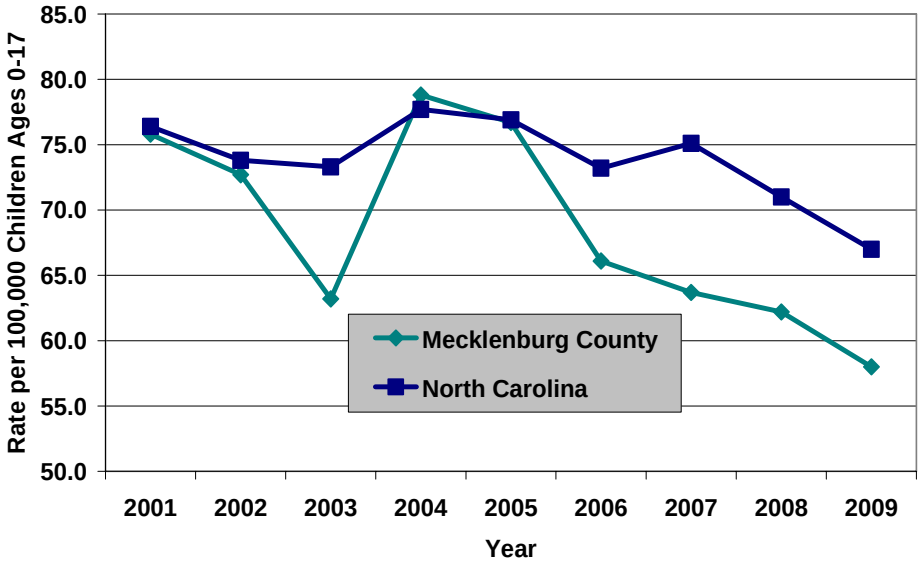
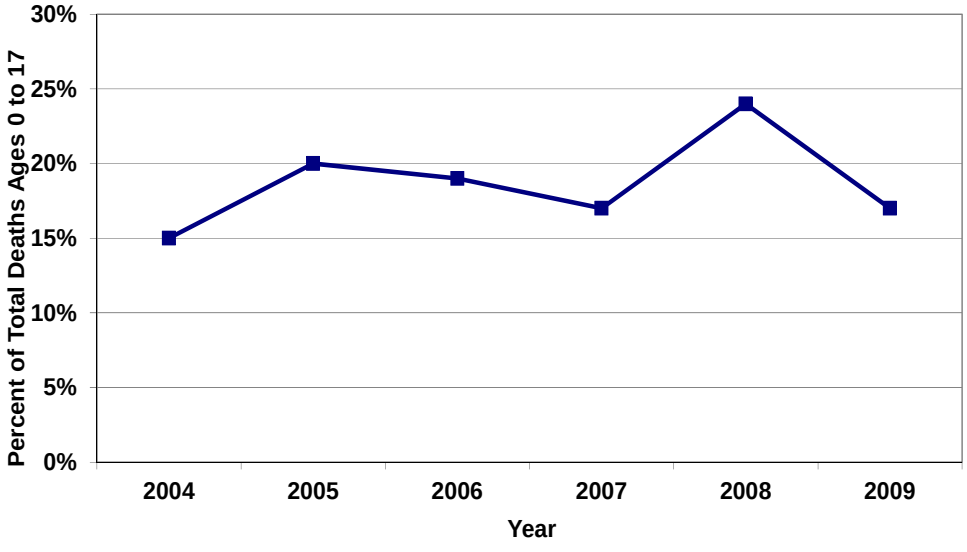
Annual Child Mortality Rate Ages Birth to 17 Years
Mecklenburg County and North Carolina
2001 through 2009



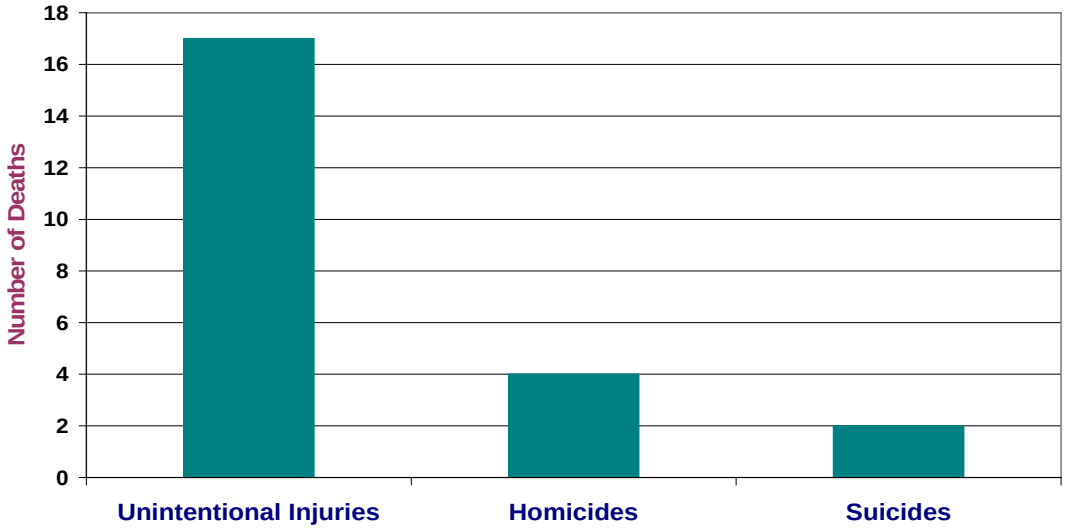
Source: NC DHHS/State Center for Health Statistics
Prepared by the Mecklenburg County Health Department, Epidemiology Program March 2011

Preventable Deaths as a Percentage of All Infant and Child Deaths
Mecklenburg County
2004 through 2009



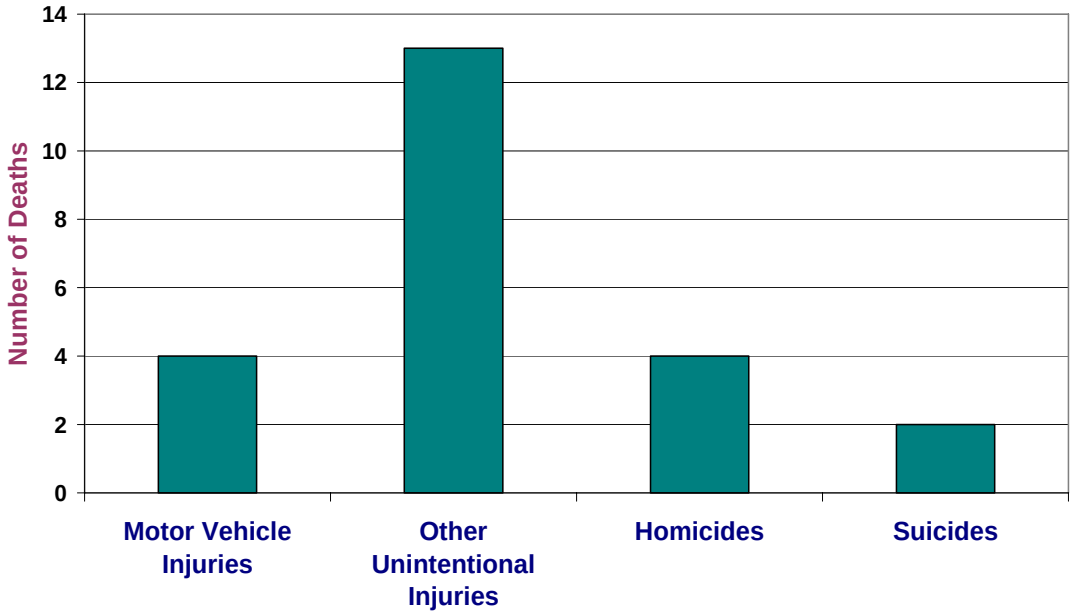
Source: NC DHHS/State Center for Health Statistics
Prepared by the Mecklenburg County Health Department, Epidemiology Program, March 2011

Injury Deaths by Manner of Death among Children Ages 0 to 17
Mecklenburg County
2009



Source: NC DHHS/State Center for Health Statistics
Prepared by the Mecklenburg County Health Department, Epidemiology Program, March 2011

Injury Deaths by Manner of Death among Children Ages 0 to 17
Mecklenburg County
2009



Source: NC DHHS/State Center for Health Statistics
Prepared by the Mecklenburg County Health Department, Epidemiology Program, March 2011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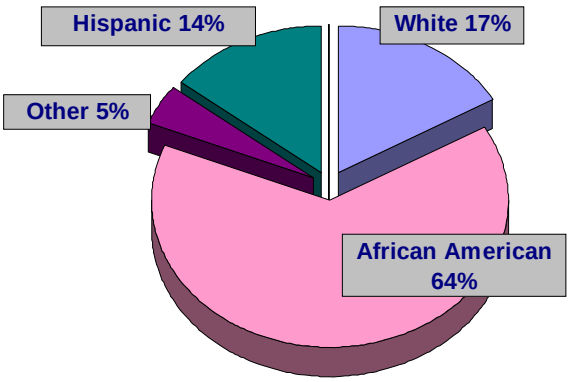
RACE AND ETHNICITY

African Americans are disproportionately represented among the total infant and child deaths, deaths due to injury, infant deaths, and preventable deaths. Of the 132 infant and child deaths, 17% were White Non-Hispanic, 64% were African American Non-Hispanic, 14% were Hispanic, and 5% were Other Non-White, Non-Hispanic.

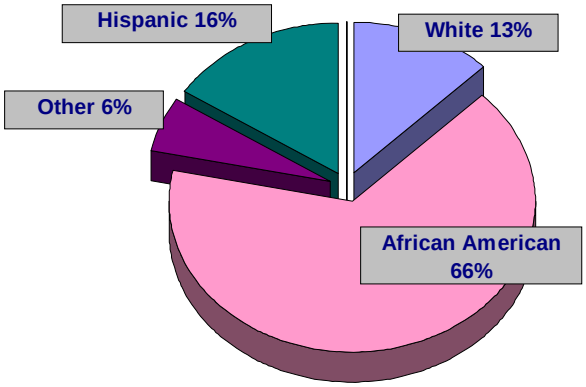
In 2009, there were 88 infant deaths. Of the 88 infant deaths, 13% were White Non-Hispanic, 66% were African American Non-Hispanic, 16% were Hispanic, and 6% were Other Non-White, Non-Hispanic. Of the 44 child deaths, 25% were White Non-Hispanic, 62% were African American Non-Hispanic, 11% were Hispanic, and 2% were Other Non-White, Non-Hispanic.

Of the 24 preventable deaths, 21% were White Non-Hispanic, 75% were African American Non-Hispanic, and 4% were Hispanic.

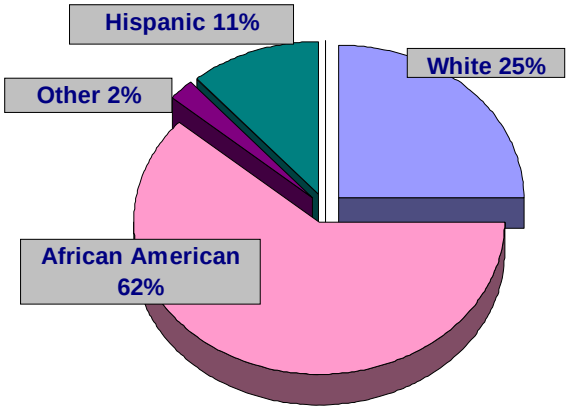
All Infant and Child Deaths = 132
2009



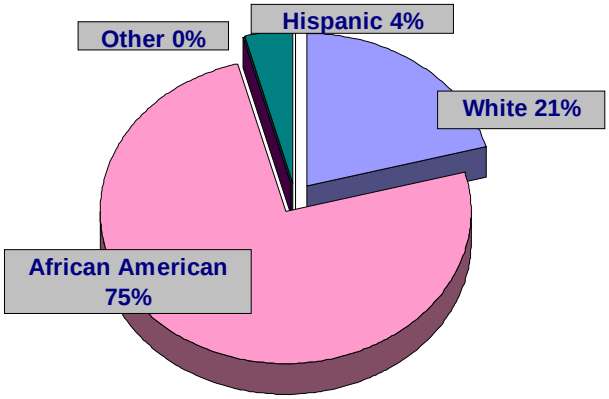
Infant Deaths = 88
2009



Child Deaths = 44
2009



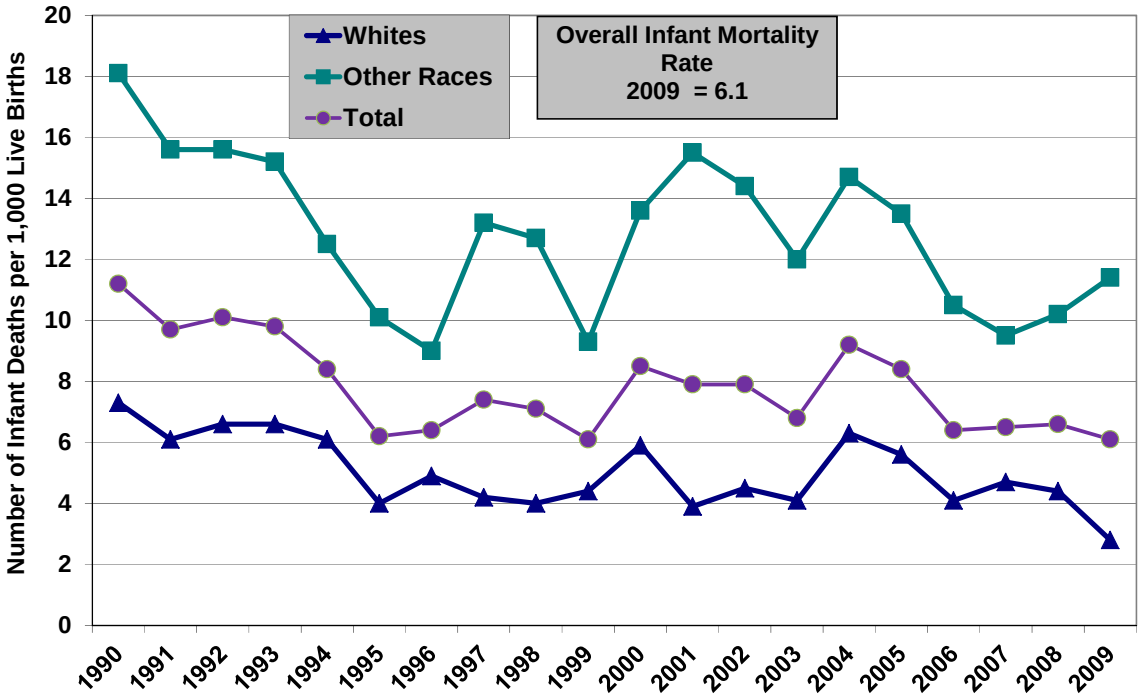
Preventable Deaths = 24
2009



INFANT MORTALITY (<1 YEAR)

The infant mortality rate is calculated per 1,000 live births and represents the risk of an infant dying before reaching 1 year of age. In 2009 the infant mortality rate was 6.1 per 1,000 live births, down slightly from 6.6 in 2008. The rate for minority infants (Other Races) was 11.4 per 1,000 minority live births and 2.8 per 1,000 live births for White infants. Since Hispanics are often categorized as White, it is important to separate race and ethnicity to better examine the health disparity between different race groups. The mortality rate for minority infants is four times the rate for White infants and two times higher than the overall rate of 6.1 per 1,000 live births. More importantly, the African American Non-Hispanic infant mortality rate was 7 times higher than the rate for White Non-Hispanic infants and 2.7 times higher than the infant mortality rate for Hispanic infants.

Annual Infant Mortality Rate per 1,000 live births by Race
Mecklenburg County
1990 through 2009



Source: NC DHHS/State Center for Health Statistics
Prepared by the Mecklenburg County Health Department, Epidemiology Program, July 2011

Despite efforts to improve prenatal care access and utilization, there has not been a concurrent decline in adverse birth outcomes (low birth weight and prematurity) locally or nationally. The absence of a decline suggests entry into prenatal care alone cannot impact infant mortality. We must consider the physical health status and health behaviors of females before, during, and after pregnancy. The preconception health model addresses the need for improving a women's physical and mental health status regardless of whether she intends to become pregnant or not. Efforts to improve birth outcomes should address multiple determinants that integrate social, behavioral, environmental, and biological factors that shape or affect pregnancy.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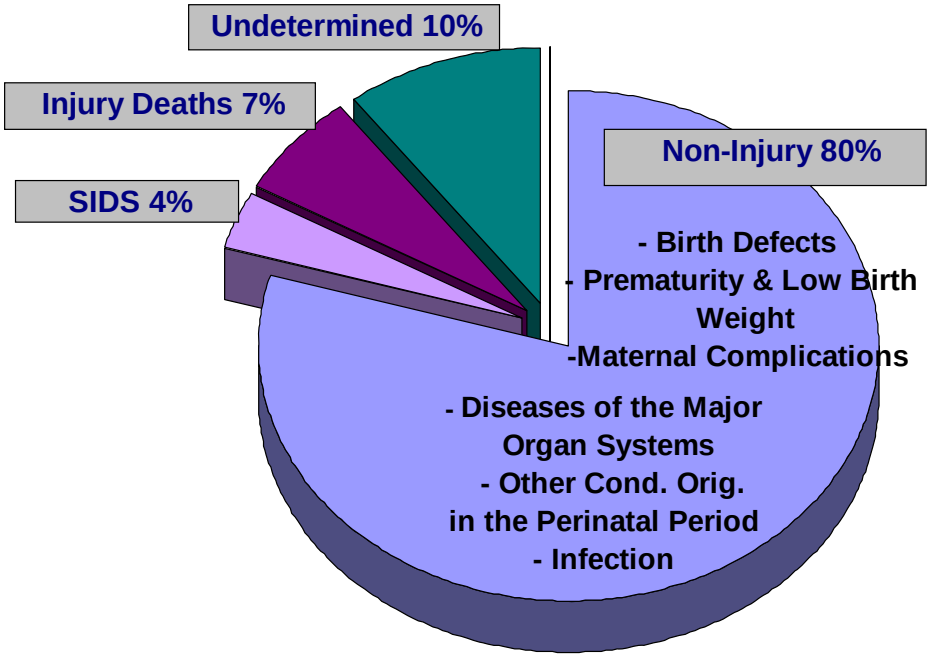
The leading causes of infant death are predominantly due to non-injury causes with injury-related deaths often occurring from accidental suffocation and motor vehicle crashes. In 2009, the top five leading causes of death among infants were: 1) Prematurity & Low Birth Weight, 2) Congenital Malformations (Birth Defects), 3) Unintentional Injury, 4) Diseases of the Circulatory System, and 5) Bacterial Sepsis (Infection). There were 7 preventable deaths among infants; 4 accidental suffocations, 1 drowning, 1 airway obstruction, and 1 undetermined intent. Unsafe sleep practices resulted in 4 accidental suffocations and continue to contribute to preventable deaths among infants in Mecklenburg County each year. Since injuries are preventable, we have the potential to reduce the number of infant deaths from 88 to 81 just through injury prevention, leading to an infant mortality rate of 5.6 per 1,000 live births which is an 8% reduction from the current rate of 6.1 per 1,000 live births.

Percent of Infant Deaths (< 1 year) by Cause
Mecklenburg County
2009

Total Infant Deaths = 88



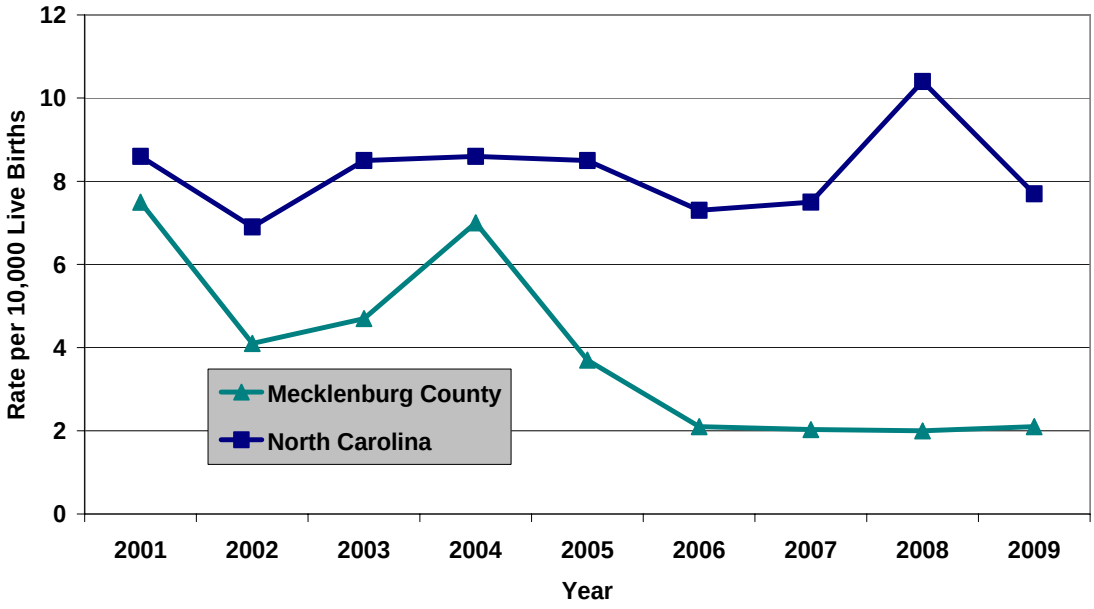
Source: NC DHHS/State Center for Health Statistics
Prepared by the Mecklenburg County Health Department, Epidemiology Program, March 2011

SUDDEN INFANT DEATH SYNDROME (SIDS)

Sudden Infant Death Syndrome (SIDS) is a sub category of Sudden Unexpected Infant Death (SUID) and is defined as the sudden death of an infant <1 year of age which cannot be explained after a thorough investigation including a complete autopsy, examination of the death scene, and review of the medical history (CDC). When an infant dies and there is no obvious explanation for the death, an investigation is conducted by law enforcement and the medical examiner. National and local data show minority infants and infants between the age of birth and 4 months are at greatest risk of dying from SIDS within the first year of life.

In 2009, there were 3 deaths due to SIDS. Since 2004, SIDS deaths in Mecklenburg County have been on the decline and hopefully this trend will continue. Deaths due to SIDS have remained low at 3 per year since 2006. In North Carolina an average of 100 SIDS deaths occur each year. SIDS is not considered preventable because there is no known cause associated with it. However, certain risk factors associated with SIDS and Accidental Suffocation provides an opportunity for prevention. The strongest risk factor associated with SIDS is an infant's sleep position. The 2007 NC Pregnancy Risk Assessment Monitoring System (PRAMS) survey shows 27.4% of NC African American mothers put their infants to sleep on their stomachs compared to 13.7% of White mothers. Putting an infant to sleep on its stomach was also higher for young adolescent mothers < 20 and mothers 35 years and older. Other risk factors associated with SIDS are smoking during pregnancy or around an infant, overheating an infant with too many clothes or the temperature of the infant's room is greater than 75 degrees, prematurity (<37 weeks), and not breastfeeding. To ensure infants remain safe during sleep, it is recommended they be placed on their back, in a crib alone, with no other blankets, pillows, stuffed animals, loose bedding, or bumper pads. By focusing on removing these risk factors in an infant's sleep environment, we can reduce the risk of SIDS and prevent Accidental Suffocation.

Annual Mortality Rate Due to Sudden Infant Death Syndrome (SIDS)
Mecklenburg County and North Carolina
2001 through 2009



Source: NC DHHS/State Center for Health Statistics
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UNSAFE SLEEP AND ACCIDENTAL SUFFOCATION

Unsafe sleep practices resulted in 4 accidental suffocations and continue to contribute to preventable deaths among infants each year. A 2009 study published by the Centers for Disease Control (CDC) reported an increase in the number of Sudden Unexpected Infant Deaths in the US due to Accidental Suffocation over the past 20 years. The most significant risk factor identified was co-sleeping with a caregiver. Due to different ways of examining infant death data today, we are now learning some of the deaths labeled as SIDS in the past may have been caused by suffocation due to safety hazards in the sleep environment and could have possibly been prevented. The evidence today shows the issue of safe sleep is too strong to ignore. Deaths due to Accidental Suffocation resulting from unsafe sleep practices are ***preventable***.

- **Safe Sleep Environment** - describes the position an infant is put to sleep on, area around where the infant sleeps, and the surface the infant is put to sleep on.

- **Accidental/Unintentional Suffocation (Unsafe Sleep)** – occurs when an infant is unintentionally suffocated during sleep and can be caused by several factors; sleeping on its stomach on a pillow or blanket where the airway can become obstructed; sleeping in bed with a parent/caregiver and/or siblings where it is possible to rollover on or wrap their arms around the infant's face; an infant is put to sleep on or is sleeping with a caregiver on a soft surface such as an adult bed or sofa and the infant becomes wedged between the bed frame and the bed or in between the couch and an adult or sibling; or the infant becomes entrapped in large blankets.

- **Undetermined** – when a complete autopsy has been performed, the medical history has been reviewed, a through investigation has been conducted, and there is no clear cause of death. A majority of undetermined deaths among infants are often associated with risk factors for an unsafe sleep environment. In some cases certain risk factors are present but there is not enough physical or scene investigation evidence to diagnose Accidental Suffocation or SIDS. The same risk factors present among deaths due to SIDS or Accidental Suffocation are seen in deaths classified as Undetermined. ***Sleep position*** – infants placed on their back to sleep are less likely to die of SIDS. ***Sleep Surface*** – infants should be placed on a firm surface to sleep such as a safety approved crib, with a crib mattress, and tightly fitted mattress sheet. ***Sleep Space*** – it is important not to surround an infant's sleep space with soft objects such as big pillows, loose blankets, or stuffed animals. ***Sleep Clothing*** – it is important to dress the infant properly for the temperature of the room. Overheating an infant can increase the risk of SIDS. ***Smoking*** – infants who are exposed to smoke have an increased risk of SIDS. A majority of undetermined infant deaths have the potential to be classified as SIDS or Accidental Suffocation.

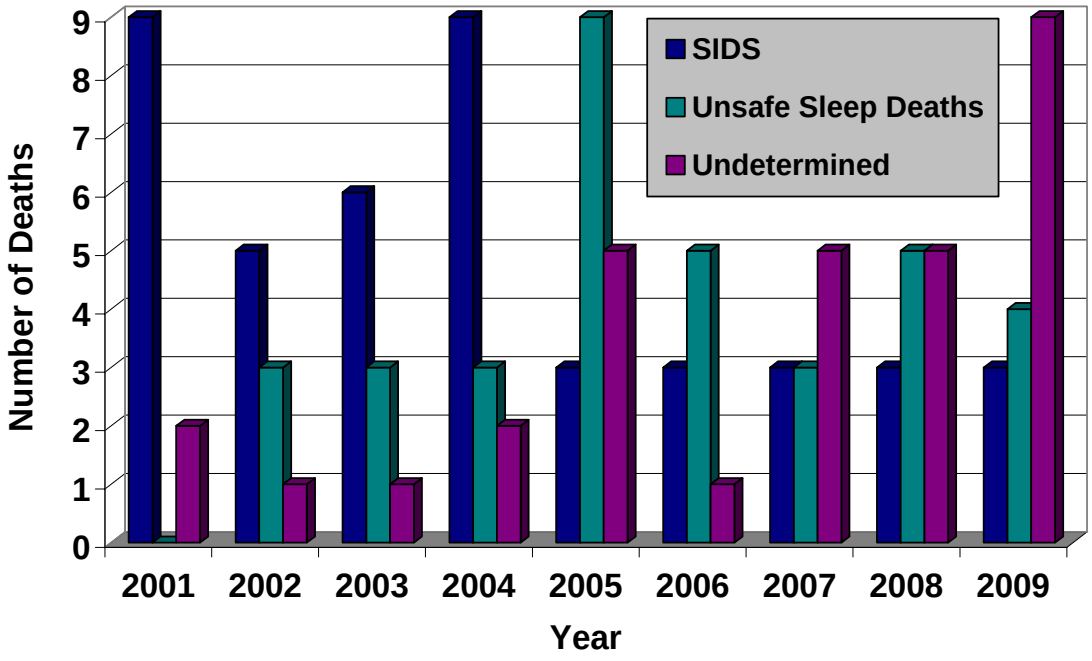
- **2009 8 Undetermined Deaths by Age, Gender, Race, and Ethnicity:**
  10 days – Hispanic Female –sleeping alone on an adult bed
  1 mos. – Hispanic Male – co-sleeping with mom, sleeping on king size bed
  1 mos. – Hispanic Male – co-sleeping with mom, in an adult bed, mom was drinking
  1 mos. – Black Female – co- sleeping with 10 people, make shift pallet on floor
  2 mos. – Hispanic Female – co-sleeping with mom, sleeping in an adult bed
  2 mos. – Black Male – co-sleeping with mom, in an adult bed, sleeping face down
  3 mos. – Black Female – out of state death

7 mos. – Black Male – put to sleep on couch on towel, face down, and premature

- **2009 4 Deaths Due to Accidental Suffocation by Age, Gender, Race, and Ethnicity**
  1 mos. – Black Female – Overlay – co-sleeping with parents and sibling
  2 mos. – Black Male – Overlay – co-sleeping with mother
  4 mos. – Black Male – Wedging/Overlay – co-sleeping on couch with parents
  7 mos. – Black Male – Wedging – co-sleeping, adult bed, and found between window & bed

- **2009 3 Deaths due to SIDS by Age, Gender, Race, and Ethnicity:**
  1 mos. – Black Male – co-sleeping, big blankets, overheating
  3 mos. – Black Male – too many blankets over infant, sleeping on stomach
  8 mos. – Other Non-White Female – sleeping in an adult bed alone

Number of Deaths Due to Sudden Infant Death Syndrome (SIDS), Unsafe Sleep, and Undetermined Causes
Mecklenburg County
2001 through 2009



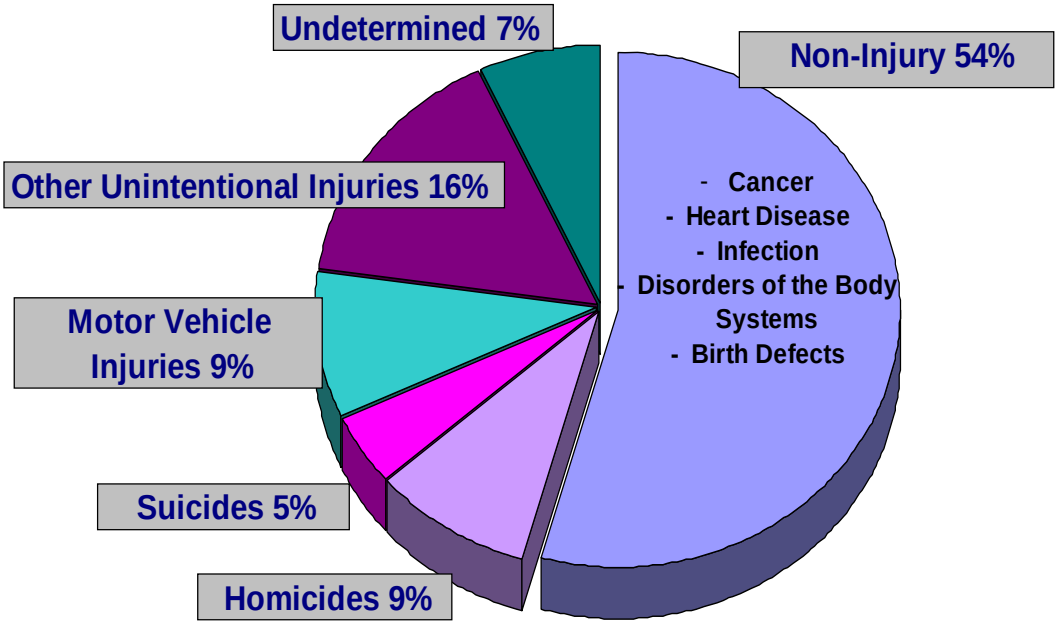
Source: NC DHHS/State Center for Health Statistics
Prepared by the Mecklenburg County Health Department, Epidemiology Program, August 2011.

CHILD DEATHS (1-17 YEARS)

Injury-related deaths occur more often among children than infants. Injury is the leading cause of ***preventable*** death among children ages 1 to 17 in Mecklenburg County. In 2009, there were 44 child deaths accounting for 33% of all infant and child deaths. The leading causes of death for children ages 1 to 17 were: 1) Unintentional Injury, 2) Cancer, 3) Homicide, and 4) Heart Disease. Unintentional Injuries due to Motor Vehicle injuries, Other Unintentional Injuries (i.e. fall, fire, drowning), and Homicides are the predominant causes of injury death among this age group.There were a total of 11(25%) deaths due to Unintentional Injuries, 6 (14%) due to Intentional Injuries (Homicide and Suicide), and 3 (7%) in which the cause of death was Undetermined or Unknown.

Percent of Child Deaths Ages 1 to 17 Years by Cause
Mecklenburg County
2009

Total Child Deaths = 44



Source: NC DHHS/State Center for Health Statistics
Prepared by the Mecklenburg County Health Department, Epidemiology Program, May 2011.

- **Motor Vehicle Crashes (MVC):** Decreased from 9 in 2008 to 4 in 2009; there were no drivers, but three were passengers, and one was a pedestrian. The age of the passengers were 1, 2, and 7 years of age, the pedestrian was 15. One passenger was male and two were female. The pedestrian was a male. Two passengers were white males and the third was Hispanic. The pedestrian was a black male.

- **Other Unintentional Injuries:** Decreased from 14 in 2008 to 7 in 2009. There were 7 Non-Motor Vehicle, Injury-related deaths among children in 2009. Of these deaths, one was a drowning (15 yrs.), three were involved in a fire (3, 2 and 13 yrs.), two resulted from a fall (1 and 17 yrs.), and one was exposed to mechanical forces (3 yrs.) in which the child's head and neck became entrapped in an electric car window.

- **Undetermined/Unknown:** In 2009, there were 3 child deaths in which the cause of death was undetermined or unknown. The ages of these deaths were 1, 7, and 17 years of age. The one year old, white female, was found down for an unknown amount of time. Due to inconsistent information and changes in the location of body at the scene, the exact cause of death was unable to be determined. The child was in the care of an eleven year old at the time of death. A seven year old white, female child had a history of a congenital, genetic, metabolic disorder and went into multi organ system failure but the cause of body failure was unknown. A seventeen year old black, male is suspected of experiencing an abnormal heart arrhythmia that was triggered by exercise leading to a sudden collapse and cardiac arrest.

- **Non-Injury Related Deaths:** In 2009, 58% (24) of all child deaths were due to non-injury related causes. These typed of deaths are often the result of Cancer, Congenital Malformations (or Birth Defects), Infection, and Chronic Disease.

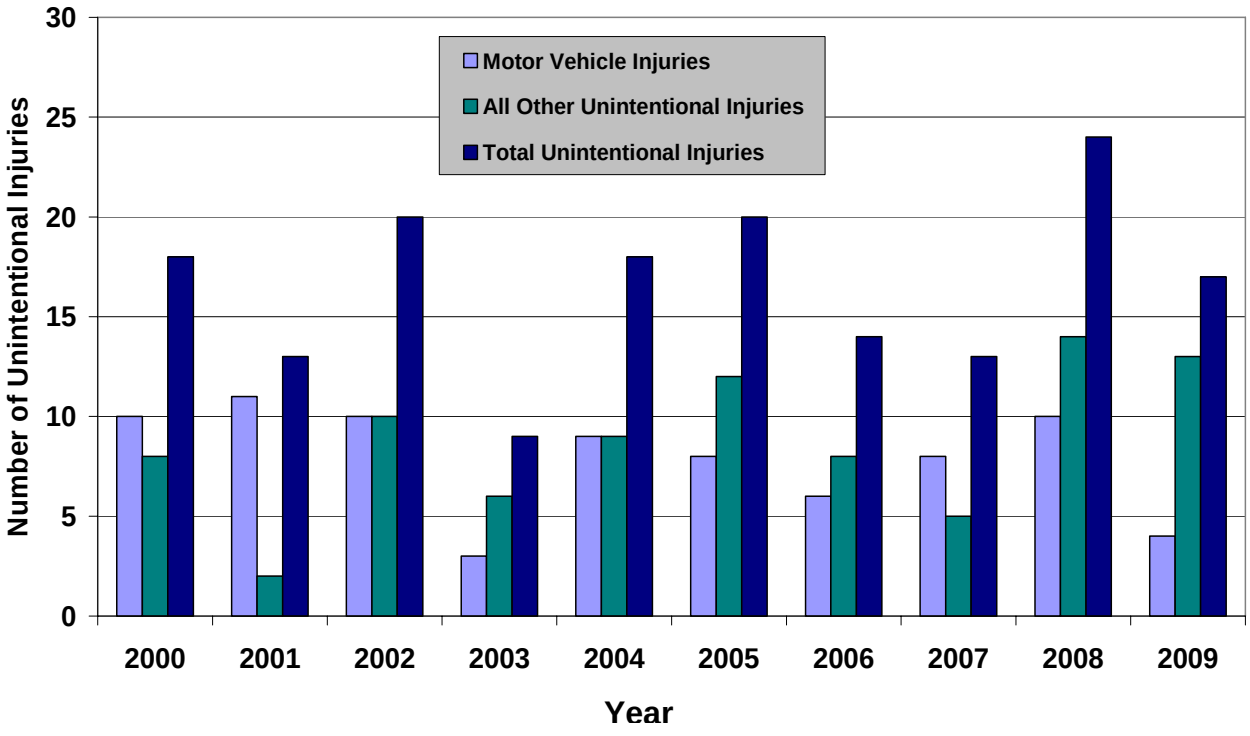
- **Suicides:** Increased from to 1 in 2008 to 2 in 2009. The primary methods used were firearms and hanging/strangulation. The two teens who committed suicide were both 17 years old and White, Non-Hispanic males. Suicide is more common among white males compared to any other race group. From 2005 to 2009 there were 11 suicides and 55% occurred among Whites, 36% were African American, and 9% were Hispanic. Of the 11 suicides 73% were male and 28% were female.

- **Homicides (Assault):** Decreased from to 9 in 2008 to 4 in 2009. The ages ranged from 1 year to 17 years. The 4 homicides among teens ages 12 to 17 ***all*** involved guns. The teen homicides occurred among two Black, Non-Hispanic Males (15 and 17 yrs.) and one Black, Non-Hispanic Female (15yrs.). The one year old homicide was a Black, Non-Hispanic Female. Homicide is more common among black males compared to any other race group. From 2005 to 2009 there were 38 homicides and 16% occurred among Whites, 68% were African American, and 16% were Hispanic. Of the 38 suicides 63% were male and 37% were female.

UNINTENTIONAL INJURY

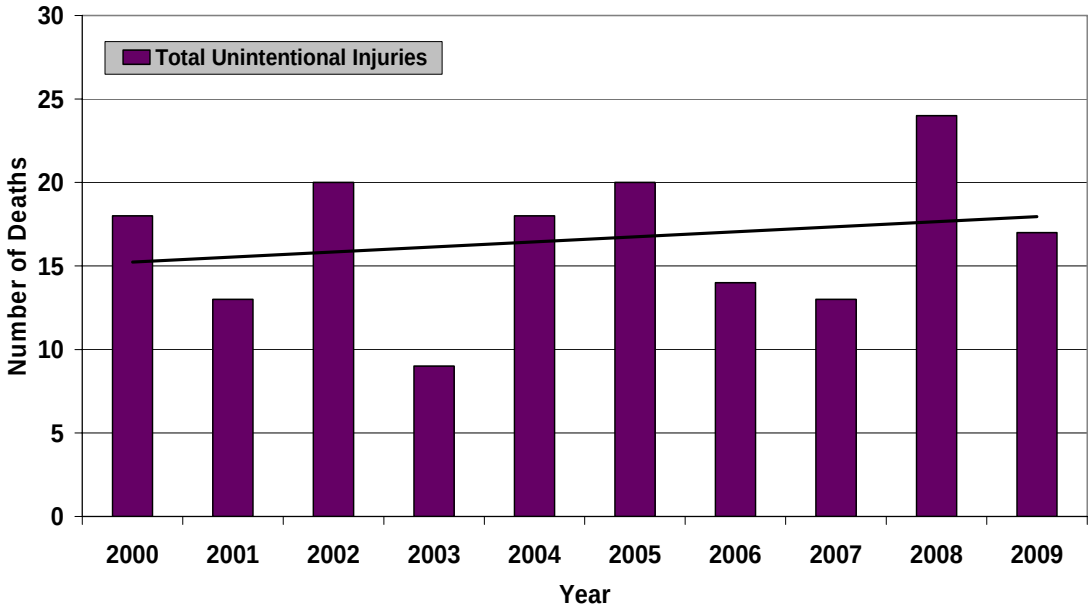
Unintentional Injury deaths are considered ***preventable***. Unintentional Injury is divided into two categories: 1) Motor Vehicle Injuries and 2) Other Unintentional Injuries. In 2009, Unintentional Injury was the leading cause of death among children ages 1 to 17 in Mecklenburg County. There were a total of 11 deaths due to Unintentional Injuries. Motor Vehicle Injuries comprised 36% and Other Unintentional Injuries comprised 64% of all injury-related deaths. Of the 7 Other Unintentional Injury deaths there were; 2 drownings, 4 accidental suffocations, 1 accidental ingestion, 3 fires, 2 falls, and 1 exposure to mechanical forces (see page 11).

Number of Unintentional Injury Deaths among Infants and Children Ages 0 to 17
Mecklenburg County
2000 through 2009

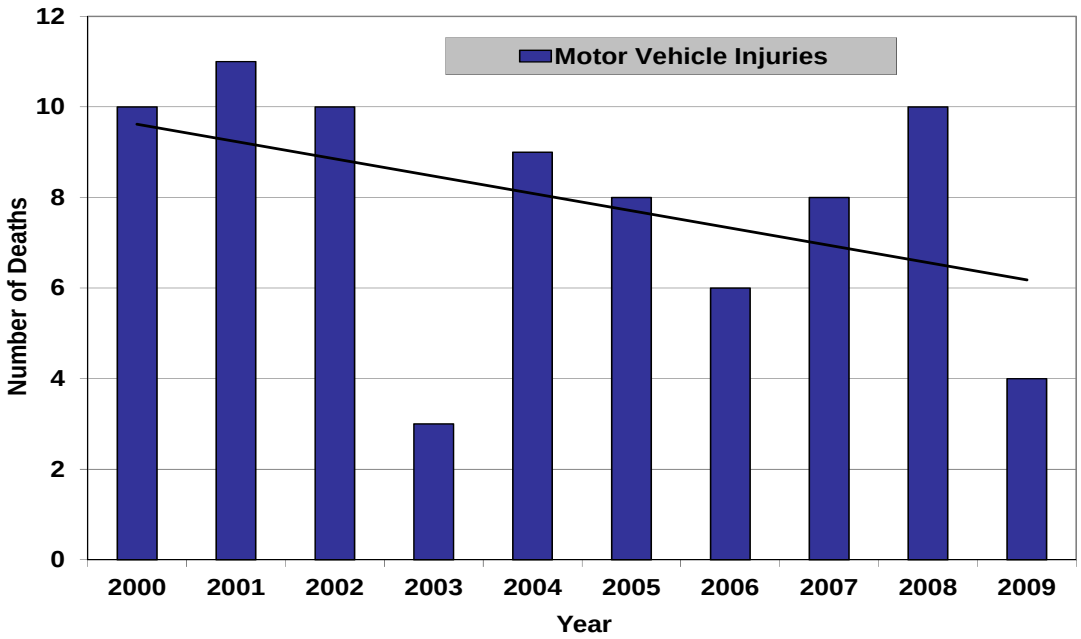


Source: NC DHHS/State Center for Health Statistics
Prepared by the Mecklenburg County Health Department, Epidemiology Program, May 2011.

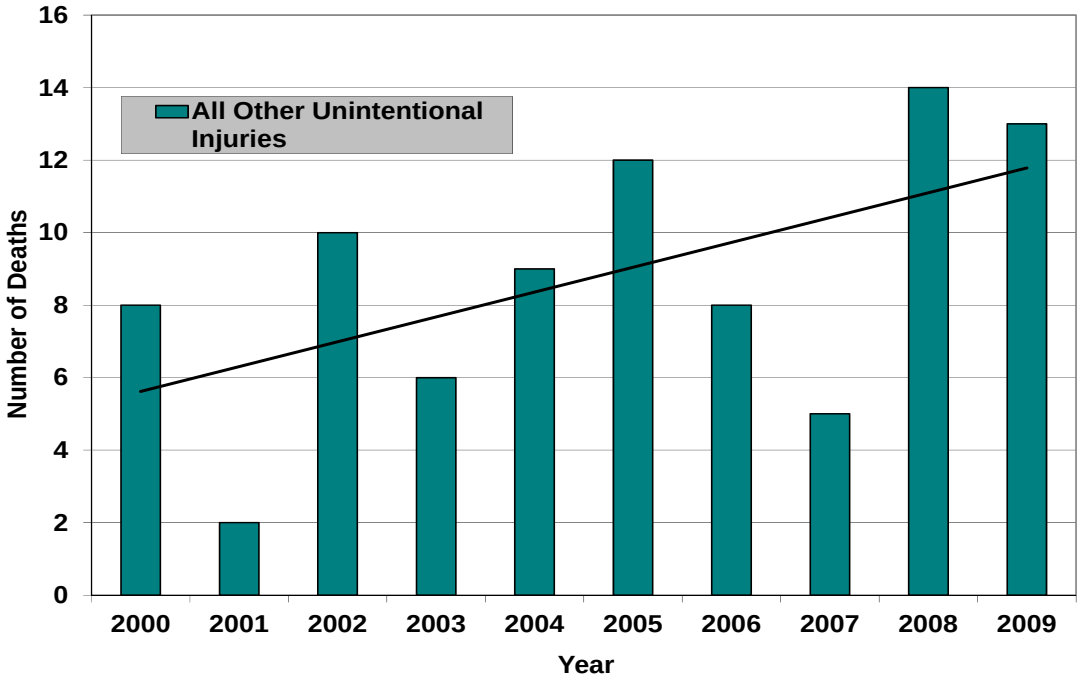
Total Unintentional Injury Deaths among Infants and Children Ages 0 to 17 Mecklenburg County
2000 through 2009



Motor Vehicle Injury Deaths among Infants and Children Ages 0 to 17 Mecklenburg County
2000 through 2009



All Other Unintentional Injury Deaths among Infants and Children Ages 0 to 17 Mecklenburg County
2000 through 2009



Source: NC DHHS/State Center for Health Statistics
Prepared by the Mecklenburg County Health Department, Epidemiology Program, May 2011.

While historically Motor Vehicle Injuries have been the predominant cause of injury death among children, Other Unintentional Injuries are increasing and having an impact on infant and child deaths. The reasons for this increase are unclear and may be due to more education and regulation around motor vehicle travel (i.e. seatbelts, speed limits). Accidental suffocations among infants are contributing to injury deaths among our most vulnerable population. Efforts to increase awareness and education on safe sleep practices is becoming more of a focus but only time will tell if these efforts will have an impact on injury and deaths among infants.

INTENTIONAL INJURY AND VIOLENCE

Violence is a serious problem in the US. It affects all age ranges and all types of people causing death, injury, and disability, and increases the risk of physical, reproductive, and emotional health problems which can devastate a community.

Intentional Injury deaths are comprised of Suicides and Homicides. In 2009, Suicide was the 11th leading cause of death in Mecklenburg County. There were 86 Suicides with a rate of 9.6 per 100,000 residents which is lower than the 2009 state rate of 12.4 per 100,000 and the national rate of 11.8 per 100,000 in 2008. Fortunately, suicide is not a leading cause of death for children ages 1 to 17 in Mecklenburg County but it is the 3rd leading cause of death for adolescents and young adults ages 15 to 24. The number of fatalities due to suicide among teens ages 17 or younger only reflects the most severe outcome of intentional self-harm. While these numbers may seem low, they do not reflect the prevalence of psychological issues and behaviors among youth that can lead to suicide. The number of suicide attempts among teens is often underreported and the 2009 Youth Risk Behavior Data below shows suicidal behaviors are occurring among the youth in our community.

Suicides: In 2009, there were 2 suicides among children ages 13 to 17 years of age. Historically, males are more likely than females to commit Suicide. The Youth Risk Behavior Survey (YRBS) produced by the Centers for Disease Control and conducted every two years, assesses health risk behaviors among middle and high school students that contributes to some of the leading causes of morbidity and mortality among our youth. Data from the 2009 YRBS shows middle and high school students think about committing and attempt suicide more often than they succeed. The YRBS data shows the mental health needs of youth in our community should be a concern and the opportunity to reach out to teachers is there but unfortunately children do not feel comfortable approaching teachers when experiencing signs and symptoms of depression. Perhaps more efforts to encourage children to seek help from a teacher at school would be beneficial for early recognition and intervention for depression and other emotional problems that can lead to suicide.

According to the 2009 YRBS data:

- 14% of high school students attempted suicide one or more times in the past year up slightly from 13% in 2007
- 10% of high school students and 14% of middle school students made a plan about how they would attempt suicide in the past year
- 14% of high school students and 20% of middle school students seriously considered attempting suicide in the past year
- 28% of high school students and 23% of middle school students felt so sad or hopeless almost every day for two weeks or more in a row that they stopped doing some usual activities in the past year
- 1% of high school students and 3% of middle school students reported they would most likely talk to a teacher or other adult in their school when they feel sad, empty, hopeless, angry, or anxious

From 2000 to 2009 there were a total of 22 suicides among youth ages 11 to 17 years. Of the 22 suicides, 77% (17) were males and 23% (5) were females. More than half were White Non-Hispanic at 59% (13) followed by 36% (8) among Black Non-Hispanic, and 5% (1) were Hispanic. A majority of these deaths occurred among youth 15 to 17 years of age at 77% (17) and 23% (5) were less than 15 years of age. Although nationally firearms are the most common cause of suicide among youth, 59% of teen suicides from 2000 to 2009 were due to hanging/strangulation/suffocation and 41% were caused by firearms.

INTENTIONAL INJURY AND VIOLENCE CONT.

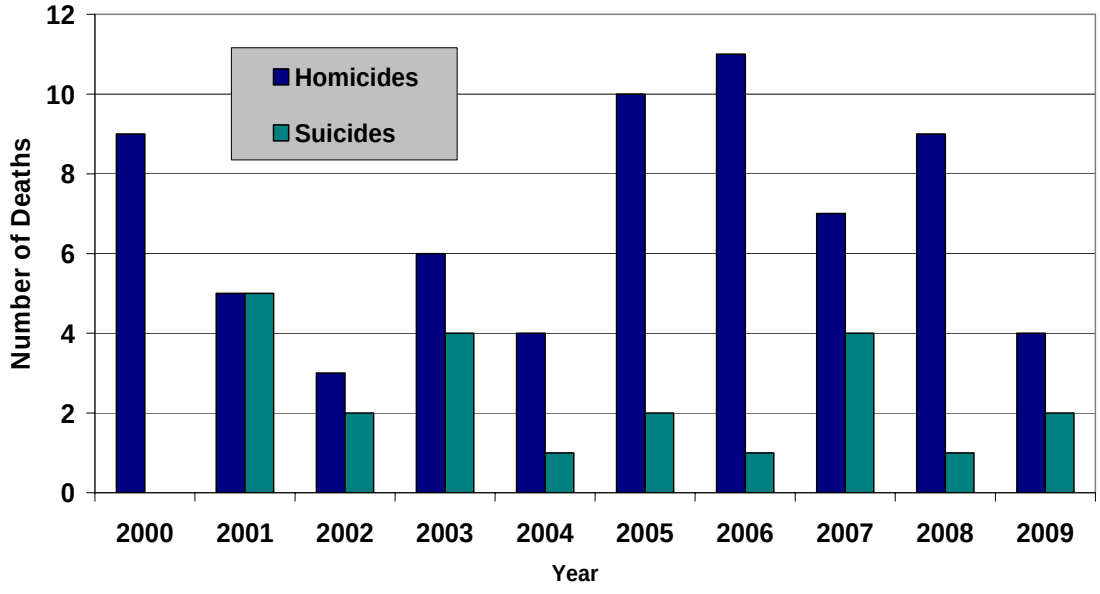
In 2009 Homicide was the 14th leading cause of death in Mecklenburg County with a rate of 6.2 per 100,000 residents which is higher than the 2009 state rate of 6.0 per 100,000 and the national rate of 5.8 per 100,000 population in 2008. Homicide was the third leading cause of death for children ages 1 to 17 and is the leading cause of death for adolescents and young adults ages 15 to 24. Of all homicide deaths in 2009, 7% occurred among children 17 years of age and younger and 87% among adolescents and adults ages 15 to 44 as a whole.

Homicides: Unlike Suicide, deaths due to Homicide show a wider gap for gender and race disparities. Homicides occur more often among Non-Hispanic Black Males than Non-Hispanic White males. Of the 4 teen Homicides, 2 were Non-Hispanic Black males and 2 were Non-Hispanic Black females.

According to the 2009 YRBS data:

- 39% of high school students and 16% of middle school students reported being harassed or bullied on school property one or more times during the past 12 months
- 27% of high school students and 52% of middle school students reported having been a victim of teasing or name calling because of their weight, size, or physical appearance during the past 30 days
- 12% of high students and 18% of middle school students reported having been electronically bullied, such as through email, chat room, instant messaging, web sites, or text messaging
- 45% of high school students and 59% of middle school students agreed or strongly agreed that harassment and bullying by other students is a problem at their school
- 14% of high school students reported carrying a weapon such as a gun, knife, or club in the past 30 days and 4% reported carrying a weapon on school property in the past 30 days
- 31% of middle school students reported carrying a weapon such as a gun, knife, or club
- 59% of high school students thought gang activity was present in their school

Number of Homicide and Suicide Deaths among Children Ages 0 to 17
Mecklenburg County
2001 through 2009



OTHER TYPES OF VIOLENCE

Deaths resulting from firearms, weapons, and child abuse only represent the physical aspect of violence. However, exposure to violent behaviors such as bullying, domestic violence (DV), and dating violence can cause emotional harm leading to injury or death. Poverty, social isolation, and increased pressure to succeed academically can also lead to emotional and physical harm. Domestic Violence, sexual abuse, and child abuse can often be passed from generation to generation as a learned behavior. These behaviors can lead to difficulty in forming relationships and create an injurious environment for infants and small children. Recognition and reporting the signs and symptoms of these types of behaviors is essential for the intervention of social services and other agencies that protect children and serve families.

DOMESTIC VIOLENCE

Domestic Violence is the largest risk factor associated with infant and child deaths. It results in not only physical and emotional trauma, but it can also lead to self-destructing behaviors that affects a child's ability to exist in a social setting. From 2005-2009, there were 45 domestic violence related homicides in Mecklenburg County with an average of 9 per year. In some cases domestic violence occurs in conjunction with substance abuse. Overall, 14% of infant and child deaths had a history of domestic violence in the home prior to the fatality or a caregiver had a history of DV. Of the 19 deaths with a history of DV, 42% (8) were preventable deaths. A history of DV was present in 33% of all preventable deaths among infants and children. Unfortunately, domestic violence can directly cause the death of an infant or child as a result of child abuse and the frequency with which DV is identified among infant and child deaths remains a concern to the team. In 2009, a 1 yr. old was physically abused by a caregiver and lost her life. A history of domestic violence was identified in the case.

Increased efforts to support mental health services for adults and children impacted by domestic violence, provides an opportunity to reduce the risk of death for infants and children in our community. Support and expansion of services for Domestic Violence and Substance Abuse and implementation and enforcement of strong policies to reduce bullying in the schools should remain a high priority in Mecklenburg County.

TEEN DATING VIOLENCE

While domestic violence in the home can put infants and children at risk of injury or death, violence among teens in relationships also known as teen dating violence is also a concern. Dating violence is a type of intimate partner violence between two people who are in a close relationship. The nature of dating violence can be physical, emotional, or sexual. Nationally, 1 in 4 adolescents report verbal, physical, emotional, or sexual abuse from a dating partner each year and 10% of students nationwide report being physically hurt by a boyfriend or girlfriend in the past 12 months (CDC). According to the 2009 Mecklenburg County YRBS data, 11.7% of students reported being physically hurt by a boyfriend or girlfriend in the past 12 months and dating violence increased 18% from 2005 to 2009. Physical violence was more often reported by youth 16 to 18 years of age and by Black Non-Hispanic and Hispanic teens. The reporting of physical violence was almost equal between males and females but more females reported being sexually assaulted than males. High school teens were asked if they have ever been forced to have sexual intercourse when they did not want to. Sexual assault was more often reported among teens ages 16 to 18 and among Black Non-Hispanic and Hispanic teens. Dating violence can negatively impact a teen's health throughout life and result in behaviors that lead to poor academic performance, substance abuse, eating disorders, and attempted suicide. Risk factors for harming a dating partner include but are not limited to depression, aggressive behavior, trauma symptoms (emotional or physical), alcohol use, having a friend involved in dating violence, belief that dating violence is acceptable, exposure to harsh parenting, exposure to inconsistent discipline, and lack of parental supervision, monitoring, and warmth. (CDC)

CHILD ABUSE AND NEGLECT

From 2000 to 2009 there have been 27 infant and child deaths from violence in the form of child abuse. Of the 27 deaths, 26% (7) occurred among infants less than one year of age, 70% (19) occurred among children between the ages of 1 and 10, and 4% (1) occurred among children greater than 11yrs of age.

Fatalities from child abuse only reflect the most severe outcome of violence committed against children. The death of a child in some cases may be the first event to trigger a referral to DSS but too late to protect the child. Family members, friends, or neighbors are often reluctant to call and report abuse and neglect behaviors to avoid DSS intervention and others simply do not recognize the signs and symptoms of domestic violence and why they should report it.

In 2009, there were a total of 1,694 reports of abuse 13,714 reports of neglect, 1,262 reports of abuse and neglect among children to DSS. Approximately 7% of cases were substantiated, 13% were found to be in need of services, and 36% were recommended for services. Of the cases that were substantiated for neglect, abuse or both, behavioral problems were the largest contributory factor for children, alcohol and drug abuse were the largest contributory factors for the caregivers, and domestic violence was the largest contributing household factor. Opportunities to better protect our most vulnerable population still remain.

INTENSIVE REVIEW

The Prevention Team is a sub-committee of the local CFPPT team. The prevention team meets once a month to review all infant and child deaths in the county from the previous year. All 132 infant and child fatalities from 2009 were reviewed in 2010. The purpose of this committee is to identify systems gaps and opportunities for prevention. Issues identified from these cases are addressed with the full team and a coordinated response to raise awareness in the community through education along with other prevention measures is implemented.

On a larger scale, an intensive review is an in-depth review over a 2-3 day period of all records associated with a specific death pursuant to statue 143B-150.20 in which the infant or child was involved with Mecklenburg County Youth and Family Services 12 months preceding the fatality. According to paragraph (b) of the statute, “The purpose of these reviews shall be to implement a team approach to identifying factors which may have contributed to conditions leading to the fatality and to develop recommendations for improving coordination between local and state entities which might have avoided the threat of injury or fatality and to identify appropriate remedies.”

The intensive review team is composed of members of the local Mecklenburg County Community Child Prevention and Protection Team, DSS, YFS, Division staff, Law Enforcement, and other community agencies and is conducted by an assigned reviewer from the state. The team reviews all records including police investigation data, the Medical Examiner’s autopsy report, social service records, medical records, mental health records, Department of Juvenile Justice records, court records, and any other pertinent records. The team interviews relevant personnel who provide professional information regarding their role in the case. A timeline of the nine life domains (safe place to live, family, emotional/psychological, vocational/educational, physical health, legal, safety/crisis, social life/supports, and cultural/ethnic) is completed upon review of all the records and is discussed as a team. A summary of the review findings and recommendations is provided by the state to the local Community Child Prevention and Protection Team after the review to discuss with partner agencies.

In 2010, the Mecklenburg County Child Fatality Team developed a Core Team of reviewers who are present during each review. The purpose of the Core Team is to build consistency in how the cases are analyzed, data is collected, and recommendations are brought back to the full team. The Larry King Center in conjunction with the Council for Children’s Rights, developed a tracking tool for our local intensive reviews to better capture risk factors, contributing factors, strategies to address risk/causal factors, and identify which agencies will be accountable for change with each recommendation. The Core Team and the tracking

tool will allow findings and recommendations to be presented to the full team in a timelier manner in order to better facilitate prevention efforts with our partner agencies.
In addition to the Core Team and the intensive review tracking tool, our local DSS/YFS has recently started conducting an internal review of any fatality the agency is involved with. The internal review occurs immediately following the fatality to better identify deficiencies and the need for system changes. Information from the internal review will be used in the intensive reviews to better understand what agency changes have already been made and any future changes that could be made to prevent another child fatality.

There were 4 intensive reviews in 2009:

- **Motor Vehicle Crash (MVC)** - 6 month old, White Male – who was not properly restrained in a car seat and was placed in the front passenger side of car (illegal in the state of NC). The mother was speeding and had a history of substance abuse and reckless driving. There were two other children in car who were injured and other bystanders were injured at the scene.

- **Sudden Infant Death Syndrome (SIDS)** - 6 month old, Black Male - who died from SIDS in a DSS foster care family. Risk factors for SIDS and an unsafe sleep environment were present. The foster family was educated about safe sleep practices and how to reduce the risk of SIDS.

- **Homicide by Child Abuse** - a 23 month old, White Male – who was repeatedly assaulted over a 2 day period by the father in front of his sibling while the mother was at work in a hotel room. The couple had a strong history of domestic violence in the home and previous episodes of abuse by the father were known by the mother.

- **Homicide by Child Abuse** – 3 year old, Black Female – who was assaulted by her mother's boyfriend while the grandmother was at work. The mother was incarcerated.

Data Sources:

Mecklenburg County Community Child Fatality Prevention and Protection Team, 2009 data

Mecklenburg County Department of Social Services/Youth and Family Services 2009 data

Mecklenburg County Youth Risk Behavior Surveillance Survey, 2009 data

CDC. Understanding Teen Dating Violence Fact Sheet, 2010

CDC. National Vital Statistics Report, Vol. 59(2), December 9, 2010: Deaths: Preliminary Data for 2008

CDC. North Carolina Pregnancy Risk Assessment Monitoring System, 2007 data

NC DHHS/State Center for Health Statistics, Mecklenburg County, 2009 data