

# NC Child



North Carolina Institute of Medicine  
*shaping policy for a healthier state*

## North Carolina

2014



2014

## Child Health Report Card

WITH FINANCIAL SUPPORT FROM:



Annie E. Casey Foundation



# Access to Care and Preventive Health

North Carolina's future growth and prosperity depends on our ability to foster the health and well-being of our children. Health during childhood impacts not only children's daily life, but also their future health, educational outcomes, employment, and economic status. Having access to affordable health care is critical to ensuring the health and well-being of children and families in North Carolina.

North Carolina has reason to celebrate as more children today have access to health insurance, providing them the opportunity to receive needed medical care. In 2013, the percentage of uninsured children in North Carolina declined to 6.2%. One of the most effective strategies to cover children is to have affordable health insurance options available to their parents. North Carolina policymakers should consider the effect of changes to the Medicaid program and the private insurance market on both children and parents.

Although having health care coverage is necessary for gaining access to affordable health care services, having health insurance does not guarantee that a child will receive preventive primary care services. Preventive care is critical to ensuring children's health needs are met. Well-child visits provide opportunities for immunizations, developmental and health screenings, early detection of emerging concerns, and a chance to offer parents health education and advice for their children. Preventive dental care visits allow for professional cleanings, treatment of tooth decay, and the application of sealants or other necessary care. Although preventive visits are covered under private and public insurance, data from Medicaid and Health Choice show that many children do not receive the recommended levels of preventive care. North Carolina measures well compared to other states for rates of preventive medical and dental visits, but there is still room for substantial progress. As more children in North Carolina have access to affordable care, it is critical to continue efforts to ensure that families utilize their preventive care benefits.

Grade	Health Indicator	Current Year	Benchmark Year	Percent Change	Trend
<b>Insurance Coverage</b>		<b>2013</b>	<b>2009</b>		
<b>B</b>	Percent of all children (ages 0-17) uninsured <sup>+</sup>	6.2%	8.1%	-23.5%	Better
	Percent of children below 200% of poverty uninsured <sup>+</sup>	8.2%	11.7%	-29.9%	Better
	Number of children covered by public health insurance (Medicaid or Health Choice) (in December)	1,172,855	1,020,317	15.0%	Better
	Percent of Medicaid-enrolled children receiving periodic well-child screening assessments <sup>+</sup>	<b>2012</b> 57.1%	<b>2009</b> —	—	—
<b>School Health</b>		<b>2012-2013</b>	<b>2008-2009</b>		
<b>D</b>	School nurse ratio	1: 1,177	1: 1,207	—	—
<b>Breastfeeding</b>		<b>2011</b>	<b>2006</b>		
<b>B</b>	Percent of infants ever breastfed	77.2	*	*	*
	Percent of infants breastfed at least six months	48.3	*	*	*
<b>Immunization Rates</b>		<b>2013</b>	<b>2009</b>		
<b>C</b>	Percent of children with appropriate immunizations:				
	Ages 19-35 months <sup>1</sup>	76.6%	—	—	—
	At school entry <sup>+</sup>	97.2%	96.5%	0.7%	No Change
<b>Environmental Health</b>					
<b>A</b>	Asthma:	<b>2012</b>	<b>2008</b>		
	Percent of children ever diagnosed	17.5%	—	—	—
	Hospital discharges per 100,000 children (ages 0-14)	<b>2013</b> 148.9	<b>2009</b> 171.7	-13.3%	Better
<b>Dental Health</b>		<b>2013</b>	<b>2009</b>		
<b>A</b>	Percent of children: <sup>+</sup>				
	With untreated tooth decay (kindergarten)	13.0%	17.0%	-23.5%	Better
	With one or more sealants (grade 5)	45.0%	44.0%	2.3%	No Change
	Receiving fluoridated water	<b>2012</b> 87.5%	<b>2008</b> 85.6%	2.2%	No Change
	Percent of Medicaid children enrolled for at least 6 months who use dental services:	<b>2013</b>	<b>2009</b>		
	Ages 1-5	67.0%	55.0%	21.8%	Better
	Ages 6-14	71.0%	62.0%	14.5%	Better
	Ages 15-20	52.0%	48.0%	8.3%	Better

# Health Risk Behaviors

Children's health and well-being are impacted by their family's income, educational achievement, race, ethnicity, and other environmental factors. Children living in families with low incomes are restricted in their opportunities for health through reduced access to healthy and safe living conditions, healthy food, exercise, and good schools. Growing up in a family living in poverty or near poverty negatively impacts a child's health throughout his or her life. Education and health outcomes are also tightly intertwined; success in school and the number of years of schooling impact health across the lifespan. Policies to reduce poverty and improve educational outcomes also positively impact child health.

During adolescence, new health behaviors emerge and many health habits that affect life outcomes are established. Unfortunately, data show that many North Carolina youth engage in behaviors that compromise their health. North Carolina had made tremendous gains in reducing cigarette use among youth over the past twenty-five years, however, emerging tobacco products, including e-cigarettes, hookahs, and flavored cigars, are quickly erasing those gains. More than one in five high school students reported current use of an emerging tobacco product in 2013. Use of other illegal substances also remains quite high. North Carolina's past success in implementing a multifaceted, evidence-based approach to reduce youth smoking, including implementing educational, clinical, regulatory, economic and social strategies, provides examples of policies that could be implemented to reduce youth substance use in other areas.

Grade	Health Indicator	Current Year	Benchmark Year	Percent Change	Trend
	<b>High School Graduation</b>	<b>2012-2013</b>	<b>2008-2009</b>		
<b>B</b>	Percent of high school students graduating on time with their peers <sup>+</sup>	82.5%	71.8%	14.9%	Better
	<b>Child Poverty</b>	<b>2013</b>	<b>2009</b>		
<b>D</b>	The percent of children in poverty				
	Under age 5	28.0%	26.7%	4.9%	No Change
	Under age 18	25.2%	22.5%	12.0%	Worse
	<b>Teen Pregnancy</b>	<b>2013</b>	<b>2009</b>		
<b>B</b>	Number of pregnancies per 1,000 girls (ages 15-17):	16.6	30.1	-44.9%	Better
	<b>Weight and Physical Activity</b>	<b>2012</b>	<b>2008</b>		
<b>D</b>	Percent of Children:				
	Meeting the recommended guidelines of 60 minutes or more of exercise 6 or 7 days a week				
	Ages 2-9	36.7%	*	*	*
	Ages 10-17	26.7%	*	*	*
	Meeting the recommended guidelines of less than two hours of screen time every day <sup>2</sup>				
	Ages 2-9	43.2%	*	*	*
	Ages 10-17	13.8%	*	*	*
	Ages 10-17 who are overweight or obese <sup>3</sup>	36.3%	*	*	*
	<b>Tobacco Use</b>	<b>2013</b>	<b>2009</b>		
<b>D</b>	Percent of students (grades 9-12) who used the following in the past 30 days:				
	Cigarettes	13.5%	16.7%	-19.2%	Better
	Smokeless tobacco	8.3%	8.5%	-2.4%	No Change
	Emerging Tobacco Product <sup>4</sup>	22.4%	—		
	<b>Mental Health, Alcohol and Substance Abuse</b>	<b>2013</b>	<b>2011</b>		
<b>D</b>	Percent of Middle School students who have ever tried to kill themselves	10.5%	9.5%	10.5%	Worse
	Percent of High School students who required medical treatment during the past 12 months due to a suicide attempt by injury, poisoning, or overdose	5.3%	5.0%	6.0%	Worse
	Percent of students (grades 9-12) who used the following:	<b>2013</b>	<b>2009</b>		
	Marijuana (past 30 days)	23.2%	19.8%	17.2%	Worse
	Alcohol (including beer) (past 30 days)	32.2%	35.0%	-8.0%	Better
	Cocaine (lifetime)	4.9%	5.5%	-10.9%	Better
	Prescription drugs without a doctor's prescription (lifetime)	17.2%	20.5%	-16.1%	Better

# Death and Injury

Children thrive when they are healthy and supported by safe, stable, and nurturing relationships and environments. Child maltreatment is a significant public health problem that negatively impacts North Carolina's future. Child maltreatment impacts health across an individual's lifespan and is associated with a broad range of health problems including substance abuse, intimate partner violence, teenage pregnancy, anxiety, depression, suicide, diabetes, heart disease, sexually transmitted diseases, smoking and obesity. Significant adversity during childhood, such as child maltreatment, can cause toxic stress which can disrupt a child's brain development. In the absence of protective factors, such as nurturing relationships with caregivers, these disruptions produce changes in the brain that can lead to difficulty learning and lifelong impairments in both physical and mental health. Child maltreatment is a problem that can be prevented, if communities take steps to promote positive development of children and families and prevent family violence. Research has shown that safe, stable, nurturing relationships and environments are fundamental to healthy child development, reduce the occurrence of child maltreatment, and can help protect children against the negative effects of child maltreatment and other adversity.

While North Carolina has taken many steps to prevent maltreatment and promote healthy families, more could be done to promote children's positive development. Children spend the vast majority of their time at home, in early care and education settings, and in school. North Carolina's child care star rating system has helped to increase the quality and safety of early care and education environments. Incorporating measures of learning environments that support children's social and emotional development, language skills, and health could further raise the quality of child care settings. Schools, like early care and education settings, should be free of violence. The implementation of Positive Behavior Intervention and Support, an evidence-based program which all schools in North Carolina use, to support student performance and reduce behavior problems can help ensure safer schools. Eliminating corporal punishment in schools is another step towards ensuring North Carolina schools provide safe and supportive learning environments. North Carolina should continue to take steps to ensure that all children are able to grow up with the safe, stable, and nurturing relationships and environments they need to thrive.

Grade	Health Indicator	Current Year	Benchmark Year	Percent Change	Trend
<b>Birth Outcomes</b>		<b>2013</b>	<b>2009</b>		
<b>B</b>	Number of infant deaths per 1,000 live births	7.0	7.9	-11.4%	Better
	Percent of infants born weighing less than 5 lbs., 8 ozs (2,500 grams)	8.8	9.1	-3.3%	No Change
	Percent of preterm births (before 37 weeks of pregnancy)	11.4	13.2	-13.6%	Better
<b>Maternal Risk Factors</b>		<b>2013</b>	<b>2009</b>		
<b>C</b>	Percent of babies born to women who smoke	10.7	*	*	*
	Percentage of births to mothers receiving late or no prenatal care	6.6	*	*	*
<b>Child Fatality</b>		<b>2013</b>	<b>2009</b>		
<b>B</b>	Number of deaths (ages 0-17) per 100,000	56.5	65.4	-13.6%	Better
	Number of deaths:				
	Motor Vehicle-related	87	114	-	-
	Drowning	23	28	-	-
	Fire/Burn	8	8	-	-
	Bicycle	0	1	-	-
	Suicide	34	35	-	-
	Homicide	41	36	-	-
	Firearm	42	46	-	-
	Poisoning (ages 10-17)	7	15	-	-
	All Other Injury Deaths	49	33		
<b>Child Abuse and Neglect</b>		<b>2013</b>	<b>2009</b>		
<b>C</b>	Number of children: <sup>4</sup>				
	Children investigated for child abuse or neglect	129,842	126,187	-	-
	Substantiated as victims of abuse or neglect <sup>5</sup>	10,255	11,301	-	-
	Recommended services <sup>5</sup>	20,052	23,479	-	-
	Confirmed child deaths due to abuse	19	16	-	-

**T**wenty years ago, NC Child and the North Carolina Institute of Medicine partnered to produce and disseminate the first North Carolina Child Health Report Card. The goal was to compile the latest data on leading indicators of child health and safety into an easy-to-understand document that highlights trends, enhances discussions about child well-being in North Carolina, and informs public policy decisions about investment to support a North Carolina in which every child can live a healthy, productive life.

By many measures, North Carolina's 2.2 million children are safer and healthier than they were a generation ago. A child born today is half as likely to die before his or her first birthday as a child born in the 1990s. Health insurance coverage has reached a historic high, providing more children access to the care they need to achieve and maintain good health. Teens are less likely to engage in behaviors that endanger their lives and their future health: after peaking in 1990, teen pregnancy rates have fallen to just one-third of previous levels; 86 percent of high school students report they do not smoke; and the percentage of students graduating on time from high school continues to climb.

---

**“What gets measured gets done, what gets measured and fed back gets done well, what gets rewarded gets repeated.” —John E. Jones**

---

This long-term progress in child well-being is not accidental, it is the direct result of intentional commitments by policymakers, advocates, practitioners, and local communities to strengthen critical services and implement policies that bolster child well-being. The data are clear: public policy decisions can profoundly affect children's chances of growing up healthy, safe, and educated. Enhanced safety measures like seatbelts and helmet regulations, expanded access to health insurance through NC Health Choice, and targeted prenatal care for women at risk of poor birth outcomes offer concrete evidence of the significant returns on investment generated for children and our state by data-informed public policy solutions.

Even as we celebrate the hard-earned improvements of the past two decades, we acknowledge this year's report contains disturbing trends that foreshadow future threats to children's development and their ability to lead healthy, productive lives. The percent of children living in poverty, a bellwether for current and future health, remains above the U.S. average at one in every four children (25 percent). More than one-third of adolescents and teens report being overweight or obese (36 percent), and sobering gaps in health outcomes by race and ethnicity persist across indicators.

At the time of the first report card, research linking the complex influence of social and demographic factors (income, education, and environments) with child health was still emerging. Today, a substantial body of evidence shows the communities and homes where children live, learn, and grow have a profound effect on lifelong health. Children thrive in safe, stable, and nurturing relationships and environments. Children born into poverty are more likely to experience developmental and other health problems, to accumulate health risks as they age, and to live in poverty as adults. Education and health outcomes are tightly intertwined, with success in school and the number of years of schooling impacting health throughout one's life. These links between health and other factors have expanded our understanding of how investments in health, education and family well-being are intertwined. Wise investments in children and families can lead to better health, future savings, and increased productivity.

Tackling the next generation of child health and safety challenges will require both a continued commitment to investing in safe, stable families and communities, as well as new strategies to address emerging threats to children's health and well-being. There's reason to be encouraged; North Carolina has a history of making investments to improve the health and well-being of children. Today we have a strong body of evidence on the types of programs and policies that are effective, which can be used to inform decision making. As decision-makers evaluate policies and practices to improve child health and well-being, the North Carolina Child Health Report Card will remain a resource to help inform key policy debates.

## Data Sources 2014 Child Health Report Card

### Access to Care and Preventive Health

**Uninsured:** U.S. Census Bureau, American Community Survey, Table B27016. Available online at [factfinder.census.gov](http://factfinder.census.gov); **Public Health Insurance:** Division of Medical Assistance, North Carolina Department of Health and Human Services. Special data request in August 2014; **Medicaid-Enrolled Preventive Care:** Division of Medical Assistance, North Carolina Department of Health and Human Services. Special data request in November 2014; **School Nurse Ratio:** Women's and Children's Health Section, Division of Public Health, North Carolina Department of Health and Human Services. Annual School Health Services Reports. Available online at <http://www.ncdhhs.gov/dph/wch/stats/>; **Breastfeeding:** Centers for Disease Control and Prevention. Breastfeeding Practices—Results from the National Immunization Survey. Available online at: [http://www.cdc.gov/breastfeeding/data/NIS\\_data/index.htm](http://www.cdc.gov/breastfeeding/data/NIS_data/index.htm); **Immunization Rates for 2-year-olds:** Centers for Disease Control and Prevention, National Immunization Survey. Available online at <http://www.cdc.gov/vaccines/stats-surv/imz-coverage.htm#nis>; **Immunization Rates at School Entry:** Special data request to the Women and Children's Health Section, Division of Public Health, North Carolina Department of Health and Human Services, October 2014; **Asthma Diagnosed:** State Center for Health Statistics, North Carolina Department of Health and Human Services, Special data request August 2014; **Asthma Hospitalizations:** State Center for Health Statistics, North Carolina Department of Health and Human Services. County Health Data Book. Available online at: <http://www.schs.state.nc.us/SCHS/about/cha.html>; **Untreated Tooth Decay and Sealants:** Special data request to the Oral Health Section, Division of Public Health, North Carolina Department of Health and Human Services. October 2014; **Medicaid-Enrolled Children Receiving Dental Services:** Division of Medical Assistance, North Carolina Department of Health and Human Services. Special data request in August 2014.

### Health Risk Behaviors

**Graduation Rate:** North Carolina Department of Public Instruction. State Four-Year Cohort Graduation Rate. Available online at <http://www.ncpublicschools.org/graduate/statistics/>; **Poverty:** U.S. Census Bureau, American Fact Finder. Table CP02. Available online at [www.americanfactfinder.census.gov](http://www.americanfactfinder.census.gov); **Teen Pregnancy:** State Center for Health Statistics, North Carolina Department of Health and Human Services. North Carolina Reported Pregnancies. Available online at <http://www.schs.state.nc.us/SCHS/data/vitalstats.cfm>; **Weight and Physical Activity:** State Center for Health Statistics, North Carolina Department of Health and Human Services. Child Health Assessment and Monitoring Program. Special data request in November 2014; **Tobacco Use:** Tobacco Prevention Branch, Division of Public Health, North Carolina Department of Health and Human Services. North Carolina Youth Tobacco Survey. Available online at <http://www.tobaccopreventionandcontrol.ncdhhs.gov/data/index.htm>; **Mental Health, Alcohol and Substance Abuse:** North Carolina Department of Public Instruction. Youth Risk Behavior Survey, North Carolina High School Survey detailed tables. Available online at <http://www.nchealthyschools.org/data/yrbs/>.

### Death and Injury

**Birth Outcomes and Maternal Risk Factors:** State Center for Health Statistics, North Carolina Department of Health and Human Services. Table 1 and 10. Available online at: <http://www.schs.state.nc.us/SCHS/data/vitalstats.cfm>; **Child Fatality and Deaths Due to Injury:** State Center for Health Statistics, North Carolina Department of Health and Human Services. Available online at: <http://www.schs.state.nc.us/SCHS/data/vitalstats.cfm>; **Poisoning ages 10-17:** North Carolina Department of Health and Human Services. NC DETECT. Special data request in August 2014; **Child Abuse and Neglect and Recurrence of Maltreatment:** Duncan, D.F., Kum, H.C., Flair, K.A., Stewart, C.J., Vaughn, J., Bauer, R., and Reese, J. (2014). Management Assistance for Child Welfare, Work First, and Food & Nutrition Services in North Carolina. Special data request in August 2014. Data available online from the University of North Carolina at Chapel Hill Jordan Institute for Families website. URL:<http://ssw.unc.edu/cw>; **Firearm Deaths and Child Abuse and Neglect Homicides:** North Carolina Child Fatality Prevention Team, Office of the Chief Medical Examiner, North Carolina Department of Health and Human Services. Special data request in August 2014. Please note the analysis, conclusions, opinions and statements expressed within this report are not necessarily those of the CFPT or OCME.

### Data Notes 2014 Child Health Report Card

1. Immunization is measured for children 19-35 months of age using the 4:3:1:3:3:1 measure. 4:3:1 plus full series Haemophilus influenzae type b (Hib-FS) vaccine, ≥3 doses of hepatitis B (HepB) vaccine, and ≥1 dose of varicella (Var) vaccine.
  2. Screen time includes TV, videos, or DVDs OR playing video games, computer games or using the Internet.
  3. Overweight is defined as a body mass index equal to or greater than the 85th percentile using federal guidelines; obese is defined as a body mass index equal to or greater than the 95th percentile.
  4. Emerging tobacco products include electronic cigarettes, clove cigars, dissolvable tobacco products, flavored cigarettes or little cigars, hookahs or waterpipes, roll-your-own cigarettes, and snus.
  5. Findings represent exclusive counts of reports investigated in a state fiscal year. The number substantiated includes those substantiated of abuse, neglect, or abuse and neglect.
- + Data for indicators followed by a + sign are fiscal or school year data ending in the year given. For example, immunization rates at school entry labeled 2010 are for the 2009-2010 school year.
- \* Data years are not comparable over time.

### Grades and Trends

Grades are assigned by a panel of health experts to bring attention to the current status of North Carolina children in salient indicators of health and safety. Grades are a subjective measure of how well children in North Carolina are faring in a particular area, and are not meant to judge the performance of the state agency or agencies providing the data or the service. Please note that several agencies have made a great deal of progress in recent years, which may not be reflected in these grades.

Data trends are described as "Better," "Worse," or "No Change." Indicators with trends described as "Better" or "Worse" experienced a change of more than 5% during the period. A percentage change of 5% or less is described as "No Change." Percent change and trends have not been given for population count data involving small numbers of cases. Due to data limitations, only the indicators for alcohol and drug use have been tested for statistical significance. Grades and trends are based on North Carolina's performance year-to-year and what level of child health and safety North Carolina should aspire to, regardless of how we compare nationally.

---

Laila A. Bell from NC Child and Berkeley Yorkery and Adam Zolotor, MD from the North Carolina Institute of Medicine led the development of this publication, with valuable input from colleagues, child health experts, and many staff members of the North Carolina Department of Health and Human Services.

This project was supported by the Annie E. Casey Foundation's KIDS COUNT project, and Blue Cross and Blue Shield of North Carolina Foundation. NC Child and the North Carolina Institute of Medicine thank them for their support but acknowledge that the findings and conclusions do not necessarily reflect the opinions of financial supporters.

#### NC Child

3109 Poplarwood Court, Suite 300  
Raleigh, NC 27604  
PHONE 919.834.6623  
FAX 919.829.7299  
WEBSITE [www.ncchild.org](http://www.ncchild.org)



#### North Carolina Institute of Medicine

630 Davis Drive, Suite 100  
Morrisville, NC 27560  
PHONE 919.401.6599  
FAX 919.401.6899  
WEBSITE [www.nciom.org](http://www.nciom.org)