



health policy  
North Carolina Institute of Medicine



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The purpose of the *North Carolina Child Health Report Card* is to heighten awareness—among policymakers, practitioners, the media and the general public—of the health of children and youth across our state. All of the leading child health indicators are summarized in this one easy-to-read publication. This is the 12<sup>th</sup> annual *Report Card*, and we hope it will once again encourage everyone concerned about young North Carolinians to see the big picture, and then to rededicate themselves to improving the health and safety of the children whose lives they affect.

Statewide data are presented for the most current year available (usually 2005) with a comparative year (usually 2000) as a benchmark. Unless otherwise noted, data are presented for calendar years. The specific indicators were chosen not only because they are important, but also because there are data available. In time, we hope expanded data systems will begin to produce accurate data that will allow the “picture” of child health and safety to expand. For several indicators, county data can be accessed through Action for Children North Carolina’s website ([www.ncchild.org](http://www.ncchild.org)).

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**“Children expect adults to be bearers of joy.”**  
— **Loris Malaguzzi**

Adults—in the home, in the community and collectively through government—are challenged to protect children from harm and to provide them opportunities for healthy growth. In the past five years, the number of children younger than age 18 in our state has grown above two million for the first time. Regrettably, economic stresses in this period have resulted in a child poverty rate that now exceeds 21%. Poverty is associated with poor health outcomes. Thus, the responsibilities of North Carolina’s adults are greater than ever before. The data in this *Report Card* serve as indicators of how state policymakers have responded to child health challenges. Highlights include:

> Collectively, the response has been impressive. Through new safety statutes, additional legislative appropriations and innovative programs introduced by state and local agencies, almost all the indicators on the *Card* are being addressed (for more information, see the “Data Notes and Commentary” section). Many indicators show progress; for others, declines have been mitigated; for all, the potential for additional progress is a distinct possibility. Nevertheless, some indicators are not improving, others are worsening and many compare poorly against other states. Thus, we still have a long way to go.

> Though the number of children covered by public health insurance has increased dramatically, the percent of all children without insurance is increasing due to continued declines in employer-based coverage. Health insurance is critical to assuring access to health care, which itself can positively affect all of the indicators on the *Report Card*. Therefore, efforts should be continued to expand health insurance coverage and access to health care services for all children.

> All children deserve a healthy start. However, data indicate that racial disparities are disturbingly wide. Targeted efforts must be made to narrow these gaps, though health programs alone cannot adequately address this problem.

> Children’s health behaviors and risk-taking (overweight; physical activity; alcohol, tobacco and substance use; pregnancy; violence; driving habits) are largely determined by the actions of adults. Whether as role models (children see everything you do) or as accomplices (a teen would not get access to alcohol without the involvement of an adult at some point), individual adults—parents or other significant adults—are the key factors in determining children’s health outcomes. Government can play an important supportive role.

Children are 20% of our population, but they are 100% of our future. They will soon be our leaders, our producers and our consumers. Now is the time for adults—both collectively and individually—to make the investments that will assure a bright future for our state.

## **Grades and Trends**

Grades are assigned to bring attention to the current status of each indicator of child health and safety. Grades are assigned by a group of health experts from the sponsoring organizations. “**A**” indicates that the current status is “very good”; “**B**” is “satisfactory”; “**C**” is “mediocre”; “**D**” is “unsatisfactory”; “**F**” is “very poor”.

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% between the given data points. A percentage change of 5% or less between the two years of data is described as “No Change.” Additionally, in some cases where the sample size is quite small, percentage changes of more than 5% were described as “No Change.” Due to data limitations, only the indicators for alcohol and drug use have been tested for statistical significance.

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Tom Vitaglione and Berkeley Yorkery from Action for Children and Kristen L. Dubay and Mark Holmes from the North Carolina Institute of Medicine led the development of this publication, with valuable contributions from many staff members of the North Carolina Department of Health and Human Services.

Health Indicator	Current Year	Benchmark Year	% Change	Grade	Trend
<b>Poverty</b>	<b>2005</b>	<b>2000</b>			
% of children in poverty	21.3%	19.0%	12.1%	<b>n/a</b>	Worse
<b>Insurance Coverage<sup>1</sup></b>	<b>2005</b>	<b>2000</b>			
% of all children (0-17) uninsured	11.9%	10.1%	17.8%	<b>C</b>	Worse
Number of children (0-18) covered by public health insurance (Medicaid or Health Choice)	841,840	580,861	44.9%	<b>A</b>	Better
% of Medicaid-enrolled children (0-18) receiving preventive care <sup>2</sup>	76.0%	66.8%	13.8%	<b>B</b>	Better
<b>Infant Mortality<sup>3</sup></b>	<b>2005</b>	<b>2000</b>			
Number of infant deaths per 1,000 live births:					
All	8.8	8.6	2.3%	<b>B</b>	No Change
White	6.4	6.3	1.6%	<b>B</b>	No Change
Other Races	14.9	14.4	3.5%	<b>D</b>	No Change
<b>Low Birth-Weight Infants<sup>4</sup></b>	<b>2005</b>	<b>2000</b>			
% of infants born weighing 5 lbs., 8 ozs. (2,500 grams) or less:					
All	9.3%	8.8%	5.7%	<b>D</b>	Worse
White	7.6%	7.1%	7.0%	<b>D</b>	Worse
Other Races	13.7%	13.0%	5.4%	<b>F</b>	Worse
<b>Immunization Rates<sup>5</sup></b>	<b>2005</b>	<b>2000</b>			
% of children with appropriate immunizations:					
At age 2	85.2%	82.8%	2.9%	<b>A</b>	No Change
At school entry	99.2%	99.7%	-0.5%	<b>A</b>	No Change
<b>Communicable Diseases<sup>6</sup></b>	<b>2005</b>	<b>2000</b>			
Number of newly-reported cases:					
Congenital Syphilis at birth	11	23	-52.2%	<b>B</b>	Better
Perinatal HIV/AIDS at birth	1	5	-80.0%	<b>A</b>	Better
Tuberculosis (age 0-19)	27	31	-12.9%	<b>B</b>	No Change

## Data Sources

Poverty: American Community Survey, "Selected Economic Characteristics: 2005," available online at <http://factfinder.census.gov/> and Population Reference Bureau, analysis of data from the U.S. Census Bureau, Census 2000 Supplementary Survey; Uninsured: Annual Social and Economic Supplement, Current Population Survey, U.S. Census Bureau and Bureau of Labor Statistics; Public Health Insurance: Special data request to the Division of Medical Assistance, N.C. DHHS, September 2006; Medicaid-enrolled preventive care: Calculated using data from the N.C. Division of Medical Assistance, N.C. DHHS, "Health Check Participation Data" available online at <http://www.dhhs.state.nc.us/dma/healthcheck.htm>; Infant Mortality: State Center for Health Statistics, N.C. DHHS, "2005 North Carolina Infant Mortality Report, Table 3." Released August 4, 2006. Available online at: <http://www.schs.state.nc.us/SCHS/deaths/ims/2005/>; Low Birth-Weight Infants: 2005 data: Special data request to the State Center for Health Statistics, N.C. DHHS, September 2006; 2000 data: Vital Statistics Yearly Report 2000, available online at [http://www.schs.state.nc.us/SCHS/vitalstats/volume1/2000/north\\_carolina.html](http://www.schs.state.nc.us/SCHS/vitalstats/volume1/2000/north_carolina.html); Immunization Rates: Special data request to the Division of Women and Children's Health, N.C. DHHS, August 2006; Communicable Diseases: Special data request to the HIV/STD section and Epidemiology section, Division of Public Health, N.C. DHHS, August 2006.

Health Indicator	Current Year	Benchmark Year	% Change	Grade	Trend
<b>Environmental Health<sup>7</sup></b>	<b>2005</b>	<b>2000</b>			
Lead: % of children (age 12-36 months):					
Screened for elevated blood levels	40.6%	33.6%	20.8%	<b>C</b>	Better
Found to have elevated blood levels	0.9%	2.4%	-62.5%	<b>B</b>	Better
Asthma:					
% of children diagnosed	17.8%	-	-	<b>D</b>	n/a
Hospital discharges per 100,000 children (age 0-14)	<b>2004</b> 180.1	<b>1999</b> 262.2	-31.3%	<b>B</b>	Better
<b>Dental Health<sup>8</sup></b>	<b>2005</b>	<b>2000</b>			
% of children:					
% of children with untreated tooth decay (kindergarten)	20%	23%	-13.0%	<b>D</b>	Better
% of children with one or more sealants (Grade 5)	44%	37%	18.9%	<b>B</b>	Better
% of Medicaid-eligible children:	<b>2005</b>	<b>2001</b>			
Ages 1-5 who use dental services	28.0%	20.3%	37.9%	<b>D</b>	Better
Ages 6-14 who use dental services	45.4%	35.2%	29.1%	<b>D</b>	Better
Ages 15-20 who use dental services	31.5%	22.3%	41.0%	<b>D</b>	Better
<b>Early Intervention<sup>9</sup></b>	<b>2005-2006</b>	<b>2001</b>			
Number of children (age 0-3) enrolled in early intervention services to reduce effects of developmental delay, emotional disturbance and/or chronic illness	14,521	9,845	47.5%	<b>B</b>	Better
<b>Child Abuse and Neglect<sup>10</sup></b>	<b>2006</b> (first six months)	<b>2000</b>			
Number of children (in first six months of 2006):					
Receiving assessments for abuse and neglect	57,792	-	-	<b>n/a</b>	n/a
Substantiated as victims of abuse and neglect	9,538	-	-	<b>n/a</b>	n/a
Neglect in need of services	5,145	-	-	<b>n/a</b>	n/a
% of children experiencing recurrence of maltreatment within six months	<b>2005</b> 4.0%	<b>2000</b> 7.2%	-44%	<b>B</b>	Better
Confirmed child deaths due to abuse	37	29	28%	<b>F</b>	Worse
<b>Child Fatality<sup>11</sup></b>	<b>2005</b>	<b>2000</b>			
Number of deaths (age 0-17) per 100,000	76.9	81.0	-5.1%	<b>B</b>	Better

## Data Sources

Lead: Special data request to the N.C. Childhood Lead Poisoning Prevention Program, Department of Environment and Natural Resources, August 2006; Asthma Diagnosed: State Center for Health Statistics, N.C. DHHS Child Health Assessment and Monitoring Program. Available online at: <http://www.schs.state.nc.us/SCHS/champ/2005/topics.html>; Asthma Hospitalizations: Special data request to the State Center for Health Statistics, N.C. DHHS, August 2006; Dental Health: Special data request to the Oral Health Section, Division of Public Health, and the Division of Medical Assistance, N.C. DHHS, August 2006; Early Intervention: Special data request to the Women and Children's Health Section, N.C. DHHS, August 2006; Child Abuse and Neglect: Special data request to the Division of Social Services, N.C. DHHS, August 2006. Child abuse homicide information was obtained from the North Carolina Child Fatality Prevention Team (Office of the Chief Medical Examiner) for this report. However, the analysis, conclusions, opinions and statements expressed by the author and the agency that funded this report are not necessarily those of the CFPT or OCME; Child Fatality: N.C. DHHS, Division of Public Health -- Women's and Children's Health Section and the State Center for Health Statistics. "Child Deaths in North Carolina." Available online at: <http://www.schs.state.nc.us/SCHS/data/vitalstats.cfm>

Health Indicator	Current Year	Benchmark Year	% Change	Grade	Trend
<b>Deaths Due to Injury<sup>12</sup></b>	<b>2005</b>	<b>2000</b>			
Number of deaths (age 0-18):					
Motor vehicle-related	155	172	-9.9%	<b>C</b>	Better
Drowning	21	37	-43.2%	<b>C</b>	Better
Fire/Burn	13	18	-27.8%	<b>B</b>	Better
Bicycle	7	6	16.7%	<b>B</b>	No Change
Suicide	29	34	-14.7%	<b>C</b>	No Change
Homicide	78	57	36.8%	<b>F</b>	Worse
Firearm	61	47	30%	<b>F</b>	Worse
<b>Alcohol, Tobacco &amp; Substance Abuse<sup>13</sup></b>	<b>2005</b>	<b>2001</b>			
% (Grades 9-12) who used the following in the past 30 days:					
Cigarettes	20.3%	27.8%	-27.0%	<b>D</b>	Better
Smokeless Tobacco	9.2%	8.9%	3.4%	<b>C</b>	No Change
Marijuana	21.4%	20.8%	2.9%	<b>F</b>	No Change
Alcohol (including beer)	42.3%	38.2%	10.7%	<b>F</b>	No Change
Cocaine (lifetime)	7.9%	6.7%	17.9%	<b>D</b>	No Change
Methamphetamines (lifetime)	6.5%	7.8%	-16.7%	<b>D</b>	No Change
<b>Physical Activity<sup>14</sup></b>	<b>2005</b>	<b>2001</b>			
% (Grades 9-12) of students who were physically active for a total of 60 minutes or more per day on five or more of the past seven days					
	45.9%	n/a	-	<b>D</b>	n/a
<b>Overweight<sup>15</sup></b>	<b>2005</b>	<b>2000</b>			
% of low-income children who are overweight:					
Age 2-4	14.6%	12.2%	19.7%	<b>D</b>	Worse
Age 5-11	24.5%	20.6%	18.9%	<b>F</b>	Worse
Age 12-18	27.3%	26.0%	5.0%	<b>F</b>	No Change
<b>Teen Pregnancy<sup>16</sup></b>	<b>2004</b>	<b>1999</b>			
Number of pregnancies per 1,000 girls (age 15-17):					
All	35.9	49.4	-27.3%	<b>C</b>	Better
White	28.0	38.2	-26.7%	<b>C</b>	Better
Non-White	51.5	74.2	-30.6%	<b>D</b>	Better

## Data Sources

Deaths Due to Injury: N.C. DHHS, Division of Public Health -- Women's and Children's Health Section and the State Center for Health Statistics. "Child Deaths in North Carolina." Available online at: <http://www.schs.state.nc.us/SCHS/data/vitalstats.cfm>; Tobacco Use: North Carolina Tobacco Prevention and Control Branch, N.C. DHHS. N.C. Youth Tobacco Survey. Available online at: <http://www.communityhealth.dhhs.state.nc.us/tobacco.htm>; Alcohol, Substance Abuse and Physical Activity: 2005 Youth Risk Behavior Survey, North Carolina High School Survey, detailed tables. Available online at: <http://www.nchealthyschools.org/data/>; Overweight: 2005 NC-NPASS Data. "Proportion of Overweight (BMI >= 95th Percentile) Children by Age, Race, and Gender, NC-NPASS\* 2005." Available online at: <http://www.eatsmartmovemorenc.com/index.htm>; Teen Pregnancy: N.C. DHHS, State Center for Health Statistics. "North Carolina Reported Pregnancies." Available online at: <http://www.schs.state.nc.us/SCHS/data/county.cfm>.

## Data Notes and Commentary

1. Insurance Coverage. Access to care through insurance is a critical underpinning of children's health status. A decade ago, more than 16% of North Carolina's children were uninsured. Through investments in expansions in Medicaid coverage, as well as the implementation of the nationally-recognized Health Choice for Children Program, the uninsured rate for children dropped to 10.1% in 2000. Though enrollment in these public programs has continued to grow, the economic downturn and continued loss of employer-based insurance is now being reflected in increasing uninsured rates for children. It is critical that this problem be addressed before even more children lack the coverage they need to grow up healthy.

2. Medicaid Preventive Care. Investments in expanding Community Care of North Carolina, which links children with primary care providers (medical homes), have resulted in great progress in assuring that Medicaid-enrolled children receive preventive care on a continuous basis. Recent surveys indicate that almost 20% of all children still do not have a medical home. Hopefully, the continued expansion of Community Care to reach more of the Health Choice population will help ensure that more children have a medical home.

3. Infant Mortality. The infant mortality rates of 8.2 in both 2002 and 2003 were the lowest ever recorded in North Carolina. Following a national trend, the rate increased to 8.8 in 2004 and 2005. Though this still represents a remarkable 12% reduction in the infant mortality rate in the past decade, the possible beginning of an upward trend is cause for concern. (North Carolina continues to rank in the mid-forties among the states.) N.C. Department of Health and Human Services (DHHS) already has in place a State Infant Mortality Collaborative, which is focusing on the problem. Attention is being given to the overall health of women as a determining factor. In addition, significant attention is focused on the wide disparity in the rates for whites and other races.

4. Low Birth-Weight Infants. Low birth-weight is a serious component of infant mortality and is also associated with childhood developmental delays. (The same is true for prematurity, defined as less than 37 weeks' gestation.) Efforts to reduce these problems are shifting to the preconception period. The wide disparity between whites and other races remains a cause for great concern, and warrants additional investments.

5. Immunization Rates. Federal reports indicate that North Carolina's immunization rate for children at age 2 has been among the best in the nation for several years. This success is directly attributable to a decision by the General Assembly to make vaccines available at low or no cost, as well as the development of a statewide public awareness campaign and an immunization registry, which benefits from the participation of public and private primary care providers.

6. Communicable Diseases. A decade-long N.C. DHHS initiative has dramatically reduced the number of newly-reported congenital syphilis cases, and it is hoped that this progress will continue. Another remarkable initiative has made the transmission of HIV/AIDS from mother to child during birth a rare event. This is due to a statewide system of voluntary testing, counseling and drug intervention for which public and private providers should be proud. Though diminishing, tuberculosis has rebounded in children and youth in North Carolina, likely due to the entry of migrants with the disease.

7. Environmental Health. The percent of children screened for blood lead levels continues to increase due to a statewide awareness initiative and the participation of primary care physicians and local health departments' Special Supplemental Nutrition Program for Women, Infants and Children (WIC). However, the 40% screening rate remains disappointingly low given the adverse effects of elevated blood lead levels (defined as 10 micrograms per deciliter or greater) on child development. Conversely, the percent of children with elevated blood lead levels has declined dramatically to its lowest point ever in North Carolina, largely due to awareness campaigns and the continued reduction in exposure to products containing lead. The N.C. Department of Environment and Natural Resources' plan to eliminate childhood lead poisoning by 2010 deserves both public and private support. A new survey (CHAMP) sponsored by N.C. DHHS confirms that asthma is the leading chronic illness among our children. The decline in the discharge rate reflects the successful efforts of the N.C. Medical Society Foundation and Community Care of North Carolina to educate primary care providers in the management of asthma.

8. Dental Health. Data from surveys conducted by the N.C. DHHS Oral Health Section show little improvement in the dental health of children entering kindergarten. Awareness regarding the effectiveness of fluoride varnish for young children is growing, which hopefully will reduce the prevalence of tooth decay at school entry. Happily, the percent of school-age children with the protection of sealants continues to grow. Although access to dental care for Medicaid-enrolled children has grown, it remains disappointingly low. Many dentists continue to not accept Medicaid patients, despite recent increases in reimbursement rates.

9. Early Intervention. Program caseloads continue to increase dramatically, and North Carolina's collaborative early intervention system continues to receive national acclaim. Despite these impressive enrollment numbers, program administrators estimate that less than 60% of the target population is being served. Administrators have reorganized the system to expand capacity, and the General Assembly has increased appropriations by \$12 million in the past two years. Hopefully, the system will be able to keep pace with the growing demand.

10. Child Abuse and Neglect. Due to changes in the N.C. Division of Social Services (DSS) reporting system, case data presented are for the first six months of 2006 only. This is the first year in which all 100 counties are using the Multiple Response System (more information is available online at [www.dhhs.state.nc.us/dss/mrs/](http://www.dhhs.state.nc.us/dss/mrs/)). Since this is the first year of full implementation under this system, no trend can be computed. The count of maltreatment reports investigated includes all assessments/investigations initiated in the first six months of 2006; the count of assessments substantiated includes reports that were substantiated for "abuse," "neglect" and "abuse and neglect" with case decision dates during this time; the count of family assessments indicating "services needed" includes reports with case decision dates during this time. Recurrence of maltreatment is defined by the federal government as "Among all the children who had a substantiated report of abuse and/or neglect in the first six months of the reporting period, what percentage had another substantiated report within six months of their first report." There is optimism that the recurrence percentage will continue to decline. The number of child abuse homicides is determined by the N.C. Child Fatality Prevention Team. Tragically, the number of these deaths continues to increase.

11. Child Fatality. After rising slightly in 2004, the 2005 rate returned to its downward trend. Due to legislative investments and the strengthening of child safety laws, the child fatality rate declined by 5% in the past five years and by 11% in the past decade. The N.C. Child Fatality Task Force, as well as state and local review teams, continue to explore ways to prevent child deaths.

12. Deaths Due to Injury. This is the primary cause of death in children older than 1 year of age. The numbers of deaths due to unintentional injuries continue to decline, though more awareness campaigns are necessary to promote the vigilance needed to prevent these deaths. Cases of suicide are a continuing tragedy, and the sharp increase in homicides warrants special study.

13. Alcohol, Tobacco, Substance Abuse and Physical Activity. N.C. DHHS and the N.C. Health and Wellness Trust Fund have invested in initiatives that continue to decrease the use of cigarettes. However, risk-taking behaviors regarding the use of alcohol and drugs are particularly alarming. Hopefully, recent legislative investments in school nurses and social workers can help in this area.

14. Physical Activity. New national standards for physical activity indicate the need for lots of improvement among our high school students.

15. Overweight. This is conservatively defined as a body mass index equal to or greater than the 95<sup>th</sup> percentile using federal guidelines. This area is receiving increased attention. The N.C. DHHS-sponsored Healthy Weight Initiative, as well as an array of investments made by the N.C. Health and Wellness Trust Fund, deserves consideration and support. New laws and policies promoting physical activity and restricting the availability of certain foods/drinks in schools should bring positive results. It is critical to work toward reversing this trend, because childhood obesity not only compromises child health, but also can lead to adult health problems, such as high blood pressure, heart disease and diabetes.

16. Teen Pregnancy. The national decline in teen pregnancies continues to be experienced in North Carolina as well. While the data are encouraging, it is clear that more progress must be made in this area. The continuing wide disparity between whites and other races is of particular concern. There is hope that the recently-implemented expansion of Medicaid coverage for family planning services will help mitigate this problem further.

### Action for Children North Carolina

1300 Saint Mary's St., Suite 500  
Raleigh, NC 27605-1276  
PHONE 919.834.6623 x 202  
FAX 919.829.7299  
E-MAIL [admin@ncchild.org](mailto:admin@ncchild.org)  
WEBSITE [www.ncchild.org](http://www.ncchild.org)

### North Carolina Institute of Medicine

5501 Fortunes Ridge Dr., Suite E  
Durham, NC 27713  
PHONE 919.401.6599 x 25  
FAX 919.401.6899  
WEBSITE [www.nciom.org](http://www.nciom.org)