The Epidemic of Childhood Overweight and Obesity

Extent of the Problem and Prospects for Change

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North Carolina is experiencing an epidemic the costs of which will outstrip medical spending more than any other condition in the 21st century.[1] It will affect the majority of our population, will lead to more hospitalizations, require more medications, and underlie the premature maiming and killing of more people than any other condition currently known. Once persons are significantly affected, the disease is largely irreversible. This issue is so insidiously established amongst our youth that many children have this condition before they start kindergarten. Should a vaccine be developed that prevented all future cases, this affected generation will live with its consequences throughout their lifetime. The sources of this condition are pandemic and the vectors that spread it are present in every household, school, business, neighborhood, and community in North Carolina and across the nation. Sadly, there is no immunization, and there is no known medical cure.

Table 1. Costs to North Carolina, Year 2002 NC Prevention Report Card[2]

	NC	*Per business*	*Per employee*	*Per resident*
Tobacco use	$4.75 billion	$29,265	$1,429	$ 582
Nutrition, overweight, & obesity	$4.9 billion	$30,189	$1,474	$ 600
Physical activity	$6.2 billion	$38,198	$1,865	$ 759
Total	$15.85 billion	$97,652	$4,768	$1,941

A Costly Condition

The condition is overweight and obesity, and North Carolina, unfortunately, is a national leader in the prevalence of the condition as well as its contributing behaviors, particularly among young people. As seen in Table 1, the costs to the state of poor nutrition, overweight and obesity, and physical inactivity are over $11 billion per year.[2] Given that NC's annual state budget is $14.3 billion, the growing overweight epidemic and its high costs are a serious threat to the state's economy as well as its health.

While the entire country has experienced a marked upward trend in rates of overweight and obesity since the early 1980s, North Carolina adults are more overweight and obese than in other parts of the country (see Figure 1), and children in 39 states are at a healthier weight than are NC youth.[3] The root causes of overweight and obesity can be found throughout society; thus solving the problems will require changes to be made in many sectors. While medical science has not come up with a final blueprint for medical treatment, there is substantial scientific basis for immediate action by public health and healthcare systems that will decrease the numbers of children who become overweight and will improve the chance to minimize chronic illness among those already overweight.

The 2002 NC Prevention Report Card, as shown on pages 298-299, shows that our state has earned F's for both nutrition and physical activity, reflecting how far we have to go to create system-wide changes that will support a healthy weight among our population. These flunking grades were earned by comparing NC's progress, or lack thereof, with the goals set by *Healthy People 2010*.[2]

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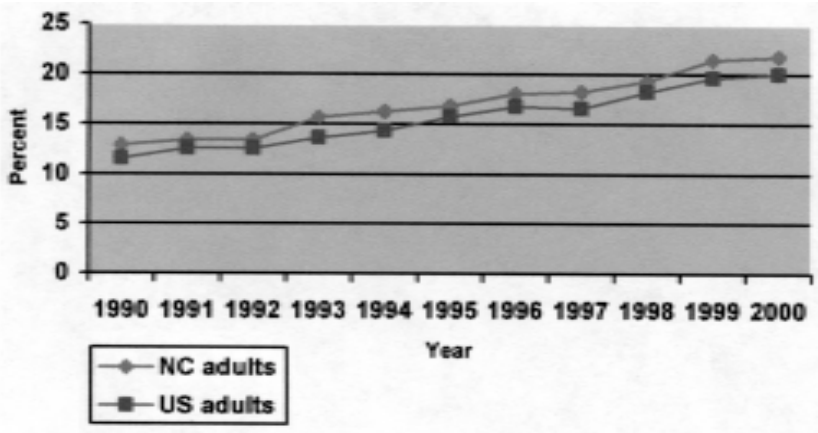

Figure 1. Obesity trends among adults in NC and the US, 1990-2000[4]

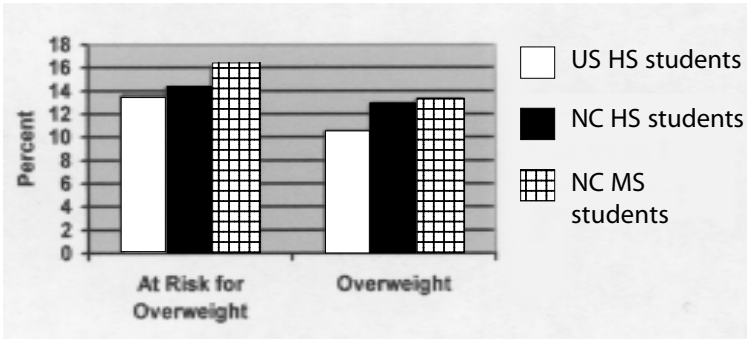

Figure 2. Overweight in adolescents in NC and the US, 2001.

Epidemiology

Nationally, obesity and overweight among children and adolescents have reached epidemic proportions. Obesity is now the most prevalent childhood and adolescent nutritional disease in the United States.[5] In 2001, 15.5% of 12- to 19-year-olds and 15.3% of 6- to 11-year-olds were overweight (at or above the 95th percentile of the body mass index [BMI]). An additional 15% of both age groups are at risk for becoming overweight (BMI between the 85th and 95th percentile).[6] Furthermore in the last two decades, childhood overweight has more than doubled (6.5% to 15.3%) and the percentage of adolescents who are overweight has more than tripled (5% to 16%).[6]

The same pattern, only intensified, has also occurred in North Carolina. As seen in Figure 2, NC adolescents are more likely than the US cohort to be at an unhealthy weight. In 2001, 27.2% of high school students in NC were either overweight or at risk for becoming overweight, compared with 24.1% of US 9th - to 12th -graders).[7] Nationally and in NC, boys are more likely than girls to be overweight; similarly, black middle and high school youth are more likely than white to be either overweight or at risk for overweight.[7] In NC between 1995 and 2001, the prevalence of overweight children increased by 14.6%, and those at risk for overweight increased by 9.5%. Rates of childhood overweight in NC increase with age: 12% of children ages 2-4 years, 20% of children ages 5-11 years, and 26% of youth ages 12-18 years are overweight.[8]

Overweight in Middle and High School Students, 2001

Behavioral indicators of overweight such as physical inactivity and unhealthy eating have also continued to worsen over time. In North Carolina, only 23.5% of high school and 47.5% of middle school students reported participating in regular, moderate physical activity.[9] In addition, only 17.8% of high school students report consuming the recommended five fruits and vegetables per day.[7] These numbers are cause for great concern, considering that most overweight in adolescents and children is caused by an imbalance of calorie intake and physical activity.[1]

Childhood overweight has widespread consequences, including the increased risk for developing Type 2 diabetes mellitus. In 1992, Type 2 diabetes represented 2%-4% of all diabetes cases among children. By 1999, that number had jumped to a range of 8%-45% depending on geographic region of the US.[10] Childhood overweight is also linked to high blood lipids, hypertension, early maturation, and orthopedic problems., The greatest concern for overweight children, however, is the increased likelihood that they will become overweight adults.[1] In fact, 25% of overweight adults were overweight as children.[11] Current research shows that 70% of today's overweight teens will be overweight or obese adults; if one or more parent is overweight or obese, this increases to 80%.[1] Overweight and obesity in adults increase risks for coronary heart disease, type 2 diabetes, certain cancers, and many other diseases.[1]

NC Task Force on Healthy Weight in Children and Youth

Recognizing that the issue of childhood obesity must be addressed, the NC Task Force on Healthy Weight in Children and Youth was formed in 2000. The 100-member task force released a statewide plan in September 2002, *Moving Our Children Toward a Healthy Weight: Finding the Will and the Way,*[12] with recommendations and strategies for action by groups and individuals in a variety of settings. Underlying these recommendations and strategies is the

Table 2. Key recommendations for change, NC Task Force on Healthy Weight in Children and Youth, September 2002.

Individual/Interpersonal Behavior Change

1. Ensure that all children and youth participate in at least 60 minutes of physical activity every day.
2. Limit consumption of sugar-sweetened beverages.
3. Limit TV/video time to no more than 1 to 2 hours a day.
4. Provide appropriate portion sizes of foods and beverages.
5. Prepare and eat more meals at home.

Policy and Environmental Change

6. Set state standards for all foods and beverages available in schools, after-school programs, and child care.
7. Establish state policies to ensure adequate time for physical activity in schools, including quality daily physical education, recess, and after-school activities.
8. Provide more community-based opportunities for leisure-time and recreational physical activity for all children and youth.
9. Create an environment that makes healthy eating and active lifestyles the norm rather than the exception.
10. Define obesity as a disease and ensure third-party coverage for prevention and treatment services for children who are overweight or at risk for overweight.
11. Ensure equitable access to childhood overweight prevention and treatment services to reduce health disparities.

Surveillance and Research

12. Ensure a comprehensive, continuous and reliable system for monitoring body mass index (BMI), weight-related chronic diseases, and nutrition and physical activity behaviors in children and young people.

understanding that significant progress will occur only when there is a groundswell of support for policy and environmental change sufficient to remove barriers and strengthen individual will to eat healthily and be physically active.

The 100-member task force used the best available information and their collective understanding of North Carolina issues to establish guidelines and set criteria for recommendations. The task force selected 12 key recommendations for individual and interpersonal behavior change, policy and environmental change, and surveillance and research needs (see Table 2). This state plan provides strategies for implementing these key recommendations in five settings: families, schools/child care, community, healthcare and the media.

Through the NC Cardiovascular Health (CVH) Program, NC DHHS, a CDC-funded project established in 1998 to reduce heart disease and stroke, North Carolina has considerable experience in shaping community environments and policies to support positive nutrition and physical activity behaviors.

Fast Foods and Eating Out

Americans consume over 60% of their meals away from home, either from fast food or other restaurants, worksite or school cafeterias, vending machines, or other dining venues.[13] This reflects a 30% increase since the late 1970s.[13] Foods eaten away from home are significantly higher in fat, calories, and sodium and lower in fruits, vegetables, whole grains, and calcium sources.[13] The CVH program investigated the availability of nutrition information in meals eaten away from home. From the restaurant inspections conducted by public health sanitation experts it was determined that only 25% of NC restaurants label certain menu items as healthy.[14] The CVH program has supported NC Prevention Partners for the development of the Winner's Circle [SM] Healthy Dining Program, which helps consumers across the state choose healthy options when eating away from home. Local health coalitions are trained and provided with materials to work with local restaurants, schools, hospital or worksite cafeterias, vending machines, recreational sites, and other food venues in identifying and promoting healthy foods with the Winner's Circle purple star and fork symbol (see Figure 3). In Durham, the Winner's Circle can be found in fifteen local restaurants, a chain of convenience stores, and the Durham Athletic Park, and it is beginning to appear in schools. The Charlotte-Mecklenberg school system adopted Winner's Circle in all of its schools in the fall of 2002, and stopped frying foods in elementary schools. "We removed all the fryers over the summer," notes Amy Harkey, Child Nutrition Director.

Community support for bringing the Winner's Circle

Figure 3. Logo of the Winner's Circle[SM] Healthy Dining Program

program to the local level has been significant. In three years, NCPP has trained and provided materials to nearly 70 coalitions and 25 school districts and works directly with chain restaurants. Currently Winner's Circle is found in 93 North Carolina counties, in 23 school districts, in all NC Subway Restaurants, Golden Corral, and Libby Hill Seafood Restaurants, the Family Fare chain of convenience stores, and even the Durham Bulls' ballpark. McDonald's has just agreed to go statewide, and Wendy's, Chick-Fil-A, and Burger King have been qualified and participate in one county at the present time. Restaurants are recognizing that significant numbers of customers are looking for healthier options, including parents who are seeking nutritious choices for their children when eating out. An up-to-date listing of Winner's Circle eating-out venues and the community coalitions establishing it in local communities is available at www.ncwinnerscircle.org.

Active Communities by Design

In 1996, the Surgeon General's Report on Physical Activity and Health emphasized the value of routine physical activity for at least 30 minutes on most days of the week.[15] Many North Carolinians are unaware that moderate routine physical activities, such as walking and bicycling, can reap significant health benefits. Media messages and product marketing often focus on the need to engage in a structured exercise regimen. While frequent vigorous physical activity can be even more beneficial for weight control and body composition, inactive children and adults are often intimidated by rigorous exercise and the need for special equipment or a gym membership.

Community design and policies of community institutions have a significant influence on routine physical activity behaviors and health. Our communities are structured in such a way that inactivity is easy and an active lifestyle is inconvenient. Studies suggest that walking to school has declined in recent decades.[16] In 2001, only 6% of NC high school students and 12% of middle school students reported that they walk or bike to school at least once a week.[9] Children are clearly following in their parent's footsteps, as only 15% of North Carolina adults reported in 2000 that they walk or bike for transportation.[4] For most, walking or bicycling to school, work, or shopping is a hazardous proposition.

The barriers contributing to inactivity among young people relate to policies and community environments. In recent decades, land use and transportation policies have left communities with residential neighborhoods that are far from schools, shopping, and other meaningful destinations. These patterns have thereby increased dependence on a passive transportation mode, namely the automobile. Contributing to the problem is a transportation system that tends to emphasize automobiles and trucks at the expense of safe pedestrian and bicycle travel.

Throughout North Carolina, health promotion coalitions are increasingly collaborating with transportation and planning officials to create environments in which people can walk or bike to work or school. In Hendersonville, for example, a bicycle and pedestrian citizen task force, created to champion an active community, worked with elected officials and the public works department to expand sidewalks and to install curb ramps, crosswalks, and pedestrian safety signs. In addition, health advocates are encouraging elementary schools to sponsor "Walk-to-School" events to educate children, parents, and school administrators about the importance of walking. These events also seek to highlight the need for local officials to consider pedestrians and bicyclists when making student transportation decisions.

In September 2002, NC DHHS launched the *Eat Smart, Move More…North Carolina* initiative and released two blueprints to provide science-based strategies to community groups who are working to create environments that support healthy eating and active living. Across NC, local Childhood Overweight Task Forces are forming as part of Healthy Carolinians, local fitness/nutrition councils, or diabetes coalitions to implement the strategies in these blueprints and the Healthy Weight Initiative's plan.[12]

Schools

Considering that children spend at least seven hours a day in schools, school policies and programs have a large impact on the health patterns of youth. The School Health Policies and Program Study (SHPPS), published in September 2001, was designed to monitor the impact of the Centers for Disease Control and Prevention's effort to improve school health programs through reducing tobacco use, poor nutrition, physical inactivity, and obesity among youth. The results of the study did not paint an attractive picture of the health policies and programs that exist in schools. None of the states

surveyed required schools to offer fruits and vegetables, and only 42.9% recommended that schools do so. More than 90% of high schools reported that students could purchase soft drinks in vending machines or from school snack bars. One half of districts reported having a contract that gives a company the exclusive right to sell soft drinks at schools in the district. In addition, one fifth (20.2%) of schools surveyed offer brand-name fast foods, such as Pizza Hut, Taco Bell, or Subway.[17]

Are We Selling Out the Health of Our Children?

Given that school districts acquire significant funds from the sales of fast foods, *à la carte* snack foods, and vending snack foods, it may not be a surprise that these foods are not required to follow the same nutritional standards as meals served in the National School Lunch Program (NSLP) and School Breakfast Program (SBP). School districts receive very lucrative contracts when agreeing to offer one brand of vending beverages exclusively within a district. The Wake County school district receives $1.5 million/year annually in a base contract, plus another half million in commissions based on sales.[18] As the priority for nutrition and overweight issues is outweighed by the financial pressures experienced by school districts, a dialogue must develop between the health and education communities to ensure that schools have adequate funds to support both the education and health of students, staff, and faculty.

Schools, child care settings, and after-school programs are in a unique position to provide nutritious meals and snacks and to promote healthy eating patterns. New standards were established in 1995 for meals served under the auspices of the NSLP and SBP, and a study in 1999 showed good progress toward meeting those standards. The average breakfast served in 1999 met standards for total fat and saturated fat, and the average school lunch served in 1999 dropped from 35% of calories from fat in 1992 to 33%. In addition there was a marked increase in the number of schools that offered students the opportunity to select lunches that met standards. In elementary schools the increase was from 34% in 1992 to 82% in 1999. Students in 91% of secondary schools had the opportunity to select a school lunch that met the standards.[19]

Despite the fact that most students now have the opportunity to select a lunch that meets standards, many do not do so. About 40% of students eat something besides the school lunch on any given day. Studies show that NSLP participation is inversely related to weekly *à la carte* revenues. Many students prefer individual food items that are high in fat and sugar, and they purchase such items *à la carte* in the school cafeteria. Others prefer the quickest choice, which is often a snack from vending machines or snack bars. Eating a school lunch often requires standing in long lines, as cafeteria facilities have not kept pace with increasing enrollments.[19]

This environment that has allowed students to practice unhealthy eating provides opportunities for changes to reverse the trend and help students develop healthy eating patterns. There is consensus in the health community that all foods available at school should contribute to healthy eating patterns. *Prescription for Change,* developed in 2000 by the American Academy of Family Physicians, the American Academy of Pediatrics, the National Hispanic Medical Association, the National Medical Association, the American Dietetic Association, and the US Department of Agriculture, recommends that decisions regarding the sale of foods in addition to the NSLP meals will be based on nutrition goals, not on profit-making.[20] Local schools and state policy-makers must make healthy eating among students a high priority and give thoughtful attention to the barriers that stand in the way. Physicians and other health professionals can contribute to that discussion and decision-making process.

Studies have shown that foods eaten at school are the primary predictor of the dietary fat intake for young persons.[21] The NSLP and SBP are required to follow dietary guidelines, yet this same requirement does not currently apply to fast foods, vending machines, and *à la carte* foods. These foods are a primary source of revenue for the school cafeteria and other school operations. A key recommendation from the Healthy Weight Initiative is to "Set state standards for all foods and beverages available in schools, after-school programs, and child care."[12] Future policy efforts must address this key issue by identifying options that will allow schools to continue to obtain needed revenues while supporting healthy weight and optimal health among students.

Schools and Physical Activity

The US Surgeon General recommends either 20 minutes of vigorous physical activity at least 3 days per week, or 30 minutes of moderate activities at least 5 days per week.[15] In 2001, NC high school students were consistently lower than their national cohort for the prevalence of vigorous and moderate physical activities and enrollment in a physical education class.[7,9] Sixty-four percent of NC high school students reported participating in 20 minutes of vigorous physical activity on at least 3 days per week, which represents a decline compared with NC middle schoolers (75.1%).[9] Although most NC middle school students are vigorously active, this proportion has steadily decreased since 1995, a relative reduction of 9%. NC high school students are only half as likely as middle school students to participate in moderately intense activities, such as walking and bicycling (23.5 % for high school versus 47.5% for middle school).[9] The state's Healthful Living Curriculum recommends that local school systems require students to take one year of physical education between ninth and twelfth grades.[22] Competing priorities within schools, including the standard curriculum and extra-curricular activities, are often emphasized over physical education. Only 34% of high school students attend physical activity classes daily.[7] The resulting message to students is that lifelong physical activity skills are not a priority learning objective.

Healthcare

Data show clearly that modest weight loss, from 5% to 10%, can greatly improve risk factors and improve quality of life; even more importantly, it can prevent or delay serious conditions such as Type 2 diabetes and heart disease. [23] In 1996, recommendations were published by a national expert committee for the evaluation and treatment of pediatric obesity. [24]

There are no specific data on the level of weight management care provided to NC children or adolescents, but it is clear that, among adult healthcare providers, skilled practice is lacking. While 59% of NC adults are overweight, only 19% of overweight adults report that they received advice from a healthcare provider to lose weight.[25] A recent national survey of 940 pediatricians, pediatric nurse practitioners, and registered dietitians showed that the majority were following positive practices in the treatment of child and adolescent obesity: 60% met national guidelines for eating interventions for school-aged children and adolescents, 80% successfully met guidelines for physical activity interventions for all age groups, and two thirds of pediatricians and pediatric nurse practitioners often referred to registered dietitians.[24]

While healthcare professionals recognize the need to address childhood or adult overweight and obesity, most report a lack of proficiency in behavioral counseling. They indicate an interest in additional training in behavior change, motivational counseling for families, guiding parents in consistent limit setting and reinforcement techniques, and identifying and addressing family conflicts that interfere with successful behavior change.[26]

Health insurance coverage for the prevention or treatment of overweight and obesity is lacking partially because obesity is not defined as a disease at the federal level. While the majority of NC's private health insurers currently cover medical nutrition therapy for some conditions, it is not covered for the conditions of overweight or obesity. Some health plans offer discounts to Weight Watchers or fitness centers. The NC Medicaid program does address individual nutrition counseling for overweight persons and those at risk for overweight, but not for group programs or for medical or behavioral services addressing overweight. Detailed information about NC health plan coverage of nutrition, physical activity, and overweight and obesity is located at: www.ncpreventionpartners/basic.html. [27]

Conclusion

The complex set of issues that contribute to NC's epidemic of childhood overweight present a daunting challenge for healthcare professionals, state and local policy makers, the school and business communities, and individuals. Science can quantify the problem of overweight and obesity far more readily than it can articulate absolute solutions, but there is a growing body of evidence about what works, and it is time for our healthcare leaders to take action based on this evidence. Behavioral obesity expert Kelley Brownell, PhD, of Yale University, has described the United States as having a 'toxic environment,' and he calls the inexpensive, readily available, super-sized portions of high-fat, high-sugar foods, along with the shift to computerized recreation and gas-powered transportation, a "deadly cocktail." The conditions that lead to childhood overweight must be seriously addressed in every community and institution to prevent the current generation of children from becoming obese adults, and to reduce the level of childhood overweight in future generations.

NC is in a far better position than most states to take action, with a strong foundation upon which it can build, practical plans ready to guide local efforts, and leaders who are committed to track progress and outcomes. Strategic changes in multiple settings will accomplish significant health improvements. NC's childhood overweight epidemic is a trend that can and must be reversed.

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Tobacco Grade: D-

The costs of tobacco use in North Carolina are over $4.25 billion each year.[3]
The economic costs of smoking are estimated to be about $3,391 per smoker per year.[3]

Behavior

T1. 26% of NC adults are current smokers.[7]

T2. 36% of high school students use tobacco products.[8]

T3. 17% of middle school students use tobacco products.[8]

T5. 14% of all NC pregnant women smoke.[9]

Health Service

T11. 73% of NC smokers have been counseled within the past year to quit smoking.[7, i] Counseling by physicians is the #2 reason adults quit.[12]

T12. 47% of NC smokers on Medicare who were hospitalized for heart attacks were offered smoking cessation counseling.[16]

T13–14. 75% of private health plans and 50% of public health plans offer a tobacco use cessation benefit, rider, quitting program or cover pharmaceuticals.[17]

T15. 25 out of 113 NC hospitals have smoking cessation programs.[18]

Community

T4. 75% of NC employees report that smoking is not allowed in their workplace.[7] Smoke-free worksites are the #1 reason adults quit smoking.[12]

T6. 58% of NC counties have smoke-free indoor recreational sites.[10]

T7. 29% of NC restaurants protect their customers from tobacco smoke.[11]

T8. Only 15 out of 117 NC school districts are 100% smoke-free for all campus and school-related events.[13]

T9. NC tax is only 5 cents vs. an average of 59 cents for the nation.[14]

T10. 20% of stores that were checked showed violations of selling tobacco to minors.[15]

Nutrition Grade: F

The costs of poor nutrition, overweight, and obesity in North Carolina are over $4.9 billion each year.[4]

Behavior

N1. Only 25% of adults get the daily requirements of 5 vegetables and fruits each day.[7]

N2. 59% of NC adults are overweight or obese.[7, ii]

N3. Only 18% of high school youth eat the daily requirements of 5 vegetables and fruits each day.[20]

N4. 12% of children age 2–4 years, 20% of children age 5–11 years, and 26% of children age 12–18 years who are serviced in WIC and local health departments are overweight.[21]

N5. 32% of senior citizens eat the daily requirements of 5 vegetables and fruits each day.[7]

N6. 56% of senior citizens are overweight or obese.[7, ii]

N7. 42% of women of child-bearing age (18–44) take folic acid daily.[7]

Community

N8. 25% of restaurants label certain menu items as "healthy."[11]

N9. In the past year, 23 out of 117 school districts have established a Winner's Circle℠ Healthy Dining Program.[22]

N10. 93% of NC counties have a Winner's Circle℠ Healthy Dining Program in local restaurants.[22]

Health Service

N11. 19% of overweight or obese adults have received advice in the previous 12 months from a health professional to lose weight.[7]

N12–13. 75% of private health plans and 50% of public plans offer nutrition benefit, rider, or discount program.[17]

N14. 74 out of 113 of NC hospitals offer weight control programs or nutrition centers.[18]

N15. 30% of adults were counseled by a provider to eat fewer high fat or high cholesterol foods within the past year.[7]

Physical Activity Grade: F

The costs of physical inactivity in North Carolina are over $6.2 billion each year.[5]

Behavior

P1. 42% of NC adults get the recommended amount of physical activity.[7, iii]

P2. 15% of NC adults report that they walk or bike for transportation.[7]

P3. 24% of high school students and 46% of middle school students reported participation in regular, moderate physical activity.[20, iv]

P4. 64% of high school students and 48% of middle school students reported participation in vigorous physical activity.[20, v]

P5–6. Only 6% of high school students and 12% of middle school students walk or bike to school at least once a week.[20]

P7. 34% of senior citizens get the recommended amount of physical activity.[iii, 7]

Community

P13. 39% of residents report that their neighborhood has sidewalks.[24]

P14. 24% of NC workers report that their worksites have indoor or outdoor facilities or equipment to use for physical activity.[24]

P15. 34% of high school students attend physical education classes daily.[20]

Health Service

P8–9. 36% of adults and 43% of overweight or obese adults report that their doctors counseled them about physical activity or exercise within the past year.[7]

P10–11. 50% of private and public health plans offer a physical activity benefit, rider, or discount program.[17]

P12. 33 out of 113 of NC hospitals have a fitness center or physical activity prevention or treatment program.[18]

Strengths

NC State School Board passed a resolution for all school campuses to be 100% tobacco free.[13]

NC's Health and Wellness Trust Commission allocated $6.2 million per year for three years for Tobacco Use Prevention and Cessation youth programs.[13]

NC Alliance for Health is a new statewide movement to promote policies for tobacco use prevention and cessation.[19]

Strengths

National and regional chains, including Subway, Golden Corral, Libby Hill Seafood, and Family Fare Convenience Stores, have now joined NC Winner's Circle℠ Healthy Dining Program.[22]

A blue ribbon Task Force has released *Moving our Children to a Healthy Weight,* a plan dedicated to reducing the incidence of youth being overweight.[23]

Strengths

Active Living by Design, a new national foundation, has been established in NC by the The Robert Wood Johnson Foundation to create communities that support and increase physical activity behaviors of their residents.[25]

The State released *NC Blueprints for Changing Policies and Environments in Support of Healthy Eating and Increased Physical Activity.*[26]

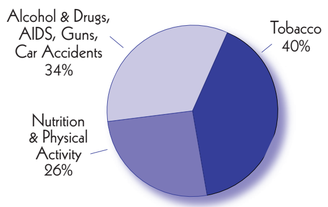
Henderson County's Cardiovascular Health Program formed a BiPeds Task Force that champions a walkable/bikeable community and has created curb ramps, crosswalks, pedestrian safety signs, bike map and *Share the Road* signs.[27]

Why Focus on Tobacco, Nutrition, and Physical Activity?

1 Zeroing in on Critical Prevention Issues

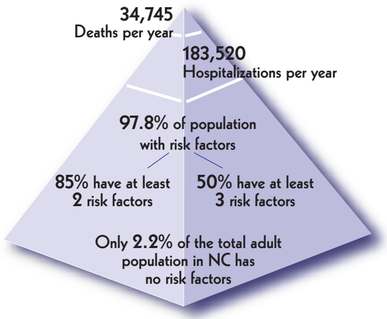
Two-thirds of North Carolina preventable deaths are related to tobacco, nutrition, and physical activity.

Preventable Deaths in North Carolina[1]



2 Linking Behaviors to Health Outcomes

North Carolina deaths, hospitalizations, and risk factors linked to tobacco use, poor nutrition, physical inactivity, and overweight.[2]



3 Costs to North Carolina

Estimation of medical and lost productivity costs per year in NC related to tobacco use, poor nutrition, overweight and obesity, and physical inactivity.

	North Carolina[6]	Per Business[6]	Per Employee[6]	Per Resident[6]
Tobacco Use[3]	$4.25 billion	$26,184	$1,278	$520
Nutrition, Overweight & Obesity[4]	$4.9 billion	$30,189	$1,474	$600
Physical Activity[5]	$6.2 billion	$38,198	$1,865	$759
Total	$15.35 billion	$94,571	$4,617	$1,879

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24 NC Six County Cardiovascular Health Survey, 2000 (Cabarrus, Henderson, Robeson, Surry, Pitt, Wake).

25 Active Living by Design, NC Institute for Public Health, School of Public Health, University of North Carolina at Chapel Hill.

26 Physical Activity and Nutrition Unit, Health Promotion Branch, NC DHHS, 2002.

27 Cardiovascular Health Unit, Health Promotion Branch, NC DHHS, 2002.

Notes

i Among adults reporting smoking during the last 12 months and who had seen a health professional for health care during the last 12 months.

ii Body Mass Index (weight in kilograms divided by height in meters squared) of 25.0 or more.

iii Moderate activity for 30 minutes or more on 5 or more days per week or vigorous activity for 20 minutes on 3 or more days per week.

iv 30 minutes or more moderate activity per day, 5 or more days per week.

v 20 minutes or more of vigorous activity per day, 3 or more days per week.

Prevention Partners

Putting Prevention First for a Healthier NC

Data for this report card were compiled by the NC Prevention Partners Report Card Committee. Grades were calculated using the *Making an "A" in Prevention Grading Wheel* which is based on the Healthy People 2010 objectives for the nation. Details of the Grading Wheel may be found at www.ncpreventionpartners.org/improving.

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Does North Carolina Make the Grade for Prevention?

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