Prevention for the Health of North Carolina:

An Interim Report of the NCIOM Task Force on Prevention

March 2009

North Carolina Institute of Medicine

In collaboration with the North Carolina Division of Public Health

Supported by the Blue Cross and Blue Shield of North Carolina Foundation, The Duke Endowment, the Kate B. Reynolds Charitable Trust, and the North Carolina Health and Wellness Trust Fund

NCIOM

North Carolina Institute of Medicine

shaping policy for a healthier state

The North Carolina Institute of Medicine (NCIOM) is a nonpolitical source of analysis and advice on important health issues facing the state. The NCIOM convenes stakeholders and other interested people from across the state to study these complex issues and develop workable solutions to improve health, health care access, and quality of health care in North Carolina.

The full text of this report is available online at **http://www.nciom.org**

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Overview

North Carolinians Have Lower Life Expectancies and Experience Worse Health Outcomes than Most of the Rest of the Country

North Carolina fares poorly in overall state health state rankings, coming in 36th in terms of overall health and 38th in premature death.

North Carolina pays a high cost for the burden of chronic disease and other preventable conditions. Health care costs to individuals, families, businesses, and the state have escalated dramatically as a result of the increase in chronic illness and decline in population health. North Carolina fares poorly in overall state health state rankings, coming in 36th in terms of overall health and 38th in premature death.[1] It is also close to the bottom in other state rankings—ranking 10th lowest out of the 50 states and DC in terms of life expectancy at birth and 6th highest in infant mortality.[1,2] When compared to the national average, North Carolina's per capita public health spending is low (NC: $50 versus US: $88). Only 10 other states spend fewer public health dollars per capita than North Carolina.[3] North Carolina cannot afford to be complacent about the health of its citizens—as health impacts employee productivity, academic performance, and may potentially impact state economic recruitment efforts.[4,5]

Investing in Prevention Can Improve Health Outcomes

Leading causes of death and disability in North Carolina include cancer, heart disease, and type 2 diabetes. The most practical approach to address such conditions—from both a health and economic perspective—is to prevent them from occurring in the first place. However, health care spending in North Carolina, as elsewhere in the country, is drastically skewed toward paying for therapeutic procedures to manage or treat acute or chronic health problems, and not toward prevention. As a state, North Carolina has not invested heavily in the population and clinical interventions that can help keep people healthy. This is beginning to change as national and state leaders are realizing that we can no longer "treat" our way out of this problem. Relying on prevention as a basic strategy can potentially save lives, reduce disability, improve quality of life, and decrease costs. Addressing the preventable causes of death and disability through prevention-focused health care, health policy, and lifestyle interventions represents a true paradigm shift from the traditional focus on treatment alone.

Developing a Prevention Action Plan for the State

North Carolina's leading health foundations recognize the value of prevention in improving population health. These foundations—the Blue Cross and Blue Shield of North Carolina Foundation, The Duke Endowment, the Kate B. Reynolds Charitable Trust, and the North Carolina Health and Wellness Trust Fund—joined together to ask the North Carolina Institute of Medicine (NCIOM) to convene a Task Force to develop a Prevention Action Plan for the state. The NCIOM, in collaboration with the North Carolina Division of Public Health, convened the Task Force in the spring of 2008. The Task Force is co-chaired by William Roper, MD, MPH, CEO, University of North Carolina Health Care System, and Dean, UNC School of Medicine; Robert Seligson, MBA, Executive Vice President and CEO, North Carolina Medical Society; and Jeffrey P. Engel, MD, State Health Director, North Carolina Department of Health and Human Services. Former State Health Director Leah Devlin, DDS, MPH, served as co-chair during the development of this interim report (from April 2008-February 2009). The Task Force is comprised of 45 other members. The Task Force began meeting in April 2008 and will meet through the spring of 2009. In the fall of 2009, the work of the Task Force will culminate in a one-day summit to announce the state's Prevention Action Plan.

The Prevention Action Plan will be a comprehensive, statewide plan to improve population health.

The Prevention Action Plan will be a comprehensive, statewide plan to improve population health. The plan will include evidence-based strategies to reduce *preventable* risk factors that contribute to the state's leading causes of death and disability. To develop this plan, the Task Force first identified the preventable causes of the 10 leading causes of death and disability in the state. (See Table 1.) For example, cancer is the leading cause of death in North Carolina. Tobacco use, poor nutrition, physical inactivity, and alcohol and drug use are preventable risk factors—or underlying causes—which contribute to North Carolina's high cancer death rate. Genetics also contributes to poor health outcomes such as cancer, but the Task Force did not focus on non-modifiable or non-preventable risk factors. In addition, socioeconomic factors such as poverty, lack of education, and poor housing also contribute to poor health outcomes. These factors will be addressed in more detail in the final report.

Evidence has shown that comprehensive multifaceted strategies to address public health problems such as high cancer rates have the greatest likelihood of success. Thus, the Task Force identified strategies that have been shown to positively influence personal behaviors through public and health policies, community and environmental conditions, and clinical care. The Task Force spent considerable time

examining the evidence of what works—that is which strategies are *evidence-based*, and where necessary, what strategies are likely to work such as those reported as *best practices* or *promising practices*—in order to best ensure that targeted investments in prevention will lead to improved health outcomes.[a] Improving the health outcomes of the general population will lead to improved employee productivity (less absenteeism and less presenteeism), better school performance, and reduced future health care costs.[b] Indirect costs such as absenteeism and presenteeism in the worksite that are associated with poor health can exceed direct medical costs by two to three times. [6]

Table 1
Ten Leading Causes of Death and Disability in North Carolina and Their Underlying Causes

Leading Causes of Death and Disability	Underlying Causes: Alcohol and drug use	Bacteria and infectious agents	Diet, physical inactivity, overweight/obesity	Emotional and psychological factors	Exposure to chemicals and environmental pollutants	Tobacco use	Risky sexual behavior	Falls, unintentional poisonings, family violence, MVI	Socioeconomic factors
Cancer	✓		✓		✓	✓			✓
Heart disease	✓		✓	✓		✓			✓
Non-motor vehicle injury	✓		✓	✓		✓		✓	✓
Chronic lower respiratory disease			✓		✓	✓			✓
Alcohol and drug use	✓			✓					✓
Motor vehicle injuries (MVI)	✓							✓	✓
Cerebrovascular disease	✓		✓			✓			✓
Infectious disease	✓	✓			✓		✓		✓
Diabetes			✓						✓
Unipolar major depression	✓			✓					✓

a *Evidence-based strategies* are determined through a review of public scientific evaluations. When scientific evaluations are limited, *best practices* may be determined through a review of available published literature and program practices. *Promising practices* may be determined through reviews of program practice and reports. In terms of effectiveness, evidence-based strategies are always effective, best practices are sometimes effective, and promising practices can be effective. Best and promising practices are often used in community public health interventions when evidence-based strategies are not yet available. (Hopkins D. What counts as evidence-based public health? Presented to the North Carolina Institute of Medicine Task Force on Substance Abuse Services; May 8, 2008; Research Triangle Park, NC.)

b In this context, *presenteeism* refers to decreased job productivity due to a health problem or health risk, while *absenteeism* refers to being absent from work due to these problems.

About this Report

During the initial eight months of meeting, the Task Force examined ways to reduce the use of tobacco and prevent exposure to secondhand smoke; reduce obesity through improved nutrition and increased physical activity; prevent STDs, HIV, and unintended pregnancies; and prevent substance abuse and addiction. Throughout this period, the Task Force developed 37 recommendations to address the above risk factors that contribute to the state's poor health status. From these recommendations, the Task Force identified seven priority recommendations that would have the greatest impact on population health in the state. The Task Force, which is still in progress, will release the complete Prevention Action Plan and a full report in the fall of 2009, at which time the full set of evidence-based (or best and promising practice) strategies to improve population health in North Carolina will be made available. However, the state cannot afford to wait. Therefore, the Task Force decided to release this interim report with the seven priority recommendations developed thus far to provide information needed to support immediate action.

Reducing Tobacco Use and Preventing Exposure to Secondhand Smoke

Tobacco Use in North Carolina

Tobacco use is the leading cause of preventable death in North Carolina. In 2007, 11,900 North Carolinians died from smoking attributable deaths.[7] At least 30% of all cancer deaths and nearly 90% of lung cancer deaths—the leading cancer death among men and women—are caused by smoking.[8] Smoking also causes other diseases such as chronic obstructive lung disease and coronary heart disease. Additionally, the risk for health events such as stroke and heart attack are greatly increased in those who smoke.[9] Cigarettes are not the sole source of tobacco use-related cancer. Smokeless tobacco contains 28 cancer-causing substances. Other tobacco products like chewing tobacco lead to nicotine addiction and cause oral cancer.

Tobacco use is the leading cause of preventable death in North Carolina.

Like tobacco use, exposure to secondhand smoke has severe health consequences. Secondhand smoke contains 250 or more toxic chemicals, and more than 50 of them are known to cause cancer. There is no safe level of exposure to secondhand smoke, and even exposure for a short duration is harmful to health.[10] Secondhand smoke exposure has been linked to heart disease and lung cancer in nonsmoking adults.[11] It also increases the risk of heart attack, especially among people who have heart disease. Youth are uniquely affected by secondhand smoke. Lung development in children is hindered by secondhand smoke exposure, and exposure can also lead to acute respiratory infections and ear problems and exacerbate asthma causing more severe and frequent attacks.[12]

For years, North Carolina's smoking rate has consistently been above that of the nation. Although smoking rates in North Carolina declined from 2002-2006, tobacco use in North Carolina is still among the nation's highest. Currently, nearly 1.5 million, or 22.9%, of adults in this state smoke, ranking North Carolina 9th highest in smoking prevalence in the nation.[c,13,14] Adult tobacco use rates in North Carolina have generally decreased since 2002. However, the decline in tobacco use among North Carolina adults appears to have stalled: in 2007 the smoking rate began to climb again. Although much work still needs to be done among North Carolina's youth population, comprehensive prevention efforts aimed at North Carolina's young people have positively impacted youth smoking rates. From 1999 to 2007, smoking rates among high school students declined from 31.6% to 19.0% and from 15.0% to 4.5% among middle schools students.[15,16]

c Nationally, 20.8% of adults smoke. (Centers for Disease Control and Prevention. Fact sheet: adult cigarette smoking in the United States, current estimates. http://www.cdc.gov/tobacco/data_statistics/fact_sheets/adult_data/adult_cig_smoking.htm. Accessed November 7, 2008.)

Nationwide, more than 70% of individuals who smoke want to quit, and each year more than 40% try to quit.[17,18] In 2007, 56.8% of smokers in North Carolina stopped smoking for at least one day because they were trying to quit smoking.[19]

The Task Force developed two priority evidence-based recommendations to eliminate the devastating impact of tobacco use on North Carolinians.

- ***Priority Recommendation 1:*** Increase Tobacco Taxes on Cigarettes and Other Tobacco Products
- ***Priority Recommendation 2:*** Enact Laws to Establish Smoke-free Worksites and Public Places

Increase North Carolina's Tobacco Taxes

The Centers for Disease Control and Prevention (CDC) recommends increasing the tax on tobacco products as a primary method for states to reduce tobacco use and improve public health.[20] In 2005-2006, North Carolina increased its cigarette tax by 30 cents, bringing the state cigarette tax up to its current rate of 35 cents. With this increase, North Carolina still has the 5th lowest cigarette tax in the country (including DC).[21] Further, the state's tax on other tobacco products (OTPs), which is 10% of the wholesale price, is among the lowest in the country.[22]

Raising the tax on all tobacco products will deter initiation of tobacco use by young people, encourage tobacco users of all ages to quit, and save lives.

Raising the tax on *all* tobacco products will deter initiation of tobacco use by young people, encourage tobacco users of all ages to quit, and save lives.[20,23] Research shows that a 10% price increase in a pack of cigarettes results in a 4.1% decrease in tobacco use within the general population.[20] Further, youth are reportedly more sensitive to an increase in cigarette price: a 10% price increase results in a 4-7% decrease in the number of youth who smoke.[20,24]

Increasing North Carolina's cigarette tax to the national average would provide a tremendous gain for the state in terms of reducing death and disability due to tobacco use. Increasing North Carolina's cigarette tax to the national average of $1.19 (the average as of December 2008) would do the following:

- Reduce North Carolina's youth smoking rate by 14.2%
- Prevent more than 75,100 children in North Carolina from becoming addicted adult smokers
- Lead to 50,000 fewer current adults smokers in North Carolina
- Save 37,200 North Carolina residents from a premature smoking-caused death

In addition, increasing North Carolina's cigarette tax to the national average would generate $297 million in new revenue. (This is in addition to the revenue raised by the existing 35-cent tax.) The federal tax on cigarettes was increased to 61.66 cents with the February 2009 federal reauthorization of the State Children Health Insurance

Program (SCHIP).[d,e] All of these projections consider the impact of the 61.66-cent federal tax increase on state smoking levels, pack sales, and pack prices.[23]

Raising the tax on other tobacco products (OTP) such as chewing tobacco and snuff will discourage the use of these products with a more significant impact on youth initiation.[f, 25] According to a report of the US Surgeon General, adolescents who use smokeless tobacco are more likely than those who do not to use cigarettes.[26] In addition, an OTP tax comparable to the cigarette tax, which would be 50% of the wholesale price, would discourage the use of OTPs as an alternative by individuals who are quitting or reducing their cigarette consumption.[25] Therefore, implementing these tax increases at the same time is ideal. Increasing North Carolina's OTP tax to 50% would lead to an overall OTP consumption decline of 14%, with a youth use decline of 26%. In addition, the state would generate $60.8 million in new revenues.[25] Together, these two tobacco taxes (cigarette and OTP) would raise $357.8 million in new revenues. Revenues generated from the increased taxes on cigarettes and other tobacco products should be used to support tobacco cessation and prevention efforts.

Increasing North Carolina's cigarette tax to the national average would generate $297 million in new revenue.

Based on research findings and experiences of other states, the Task Force determined that raising North Carolina's tobacco taxes is one of the most effective ways to reduce initiation of tobacco use by young people and encourage all tobacco users to quit. In addition, North Carolina can show continued commitment to protecting public health and saving lives from tobacco use and secondhand smoke exposure by maintaining a cigarette tax rate that always meets or exceeds the current national average.

To reduce and prevent tobacco use in North Carolina, the Task Force recommends:

Priority Recommendation 1: Increase Cigarette and Other Tobacco Product Taxes

a) The North Carolina General Assembly should increase the tax on a pack of cigarettes to meet the current national average. The cigarette tax should be regularly indexed to the national average whenever there is a difference of at least 10% between the national average cost of a pack of cigarettes (both product and taxes) and the North Carolina average cost of a pack of cigarettes.

b) The North Carolina General Assembly should increase the tax on all other tobacco products to be comparable to the current national cigarette tax average, which would be 50% of the product wholesale price.

c) These new revenues should be used for a broad range of prevention activities including preventing and reducing dependence on tobacco, alcohol, and other substances.

d Pub L No.111-003

e The new federal tax will go into effect April 1, 2009.

f Taxable tobacco products are defined in this report as smoking tobacco, cigarettes, cigars, cigarillos, bidis, kreteks, snuff, chewing tobacco, snus, and also includes any other product expected or intended for consumption that contains tobacco or nicotine unless it has been approved by the United States Food and Drug Administration as a cessation-assistance product and is being distributed and sold exclusively for that approved cessation-assistance purpose.

Enact Comprehensive Smoke-Free Laws

The Centers for Disease Control and Prevention recommends smoking bans and restrictions to decrease exposure to secondhand smoke. Secondhand smoke causes the deaths of 35,000 Americans and approximately 2,270 North Carolinians every year.[27,28] Smoking bans are also effective in reducing cigarette consumption and in increasing the number of people who quit smoking.[g,20]

North Carolina does not have comprehensive smoke-free laws that prohibit smoking in all indoor workplaces and public areas. Current state laws only provide limited protection from secondhand smoke exposure. Twenty-four states and the District of Columbia have passed smoke-free laws that cover workplaces including restaurants and bars as of April 2008.[h] Four other states have smoke-free laws that cover restaurants but exempt stand-alone bars.[i,29]

All workers in North Carolina, no matter where they are employed, should be provided with a completely smoke-free work environment as a minimum level of protection from secondhand smoke exposure. A comprehensive state law would protect employees at all worksites including small worksites, private offices, factories, clubs or bars, and bowling alleys. Comprehensive statewide smoke-free laws to eliminate exposure to secondhand smoke in all workplaces would save lives and improve health outcomes in North Carolina.

To protect all North Carolinians from secondhand smoke, the Task Force recommends:

Priority Recommendation 2: Enact Smoke-free Laws

The North Carolina General Assembly should enact laws to mandate smoke-free worksites and public places including restaurants and bars to eliminate secondhand smoke exposure.

All workers in North Carolina, no matter where they are employed, should be provided with a completely smoke-free work environment as a minimum level of protection from secondhand smoke exposure.

g This recommendation was developed by the US Task Force on Community Preventive Services, which is a group of experts appointed and supported by the Centers for Disease Control and Prevention, US Department of Health and Human Services. The recommendations of the US Task Force on Community Preventive Services are compiled in the Guide to Community Preventive Services, which "serves as a premier source of high quality information on those public health interventions and policies (including law-based interventions) that have been proven to work in promoting health and preventing disease, injury, and impairment." http://www.thecommunityguide.org/index.html.

h States with smoke-free laws are Arizona, California, Colorado, Connecticut, Delaware, Hawaii, Illinois, Iowa, Maine, Maryland, Massachusetts, Minnesota, Montana (extends to bars Sept. 1, 2009), Nebraska (as of June 1, 2009), New Hampshire, New Jersey, New Mexico, New York, Ohio, Oregon, Rhode Island, Utah, Vermont, and Washington.

i States with smoke-free laws covering restaurants, but exempting stand-alone bars, are Florida, Idaho, Louisiana, and Nevada.

Improving Nutrition and Physical Activity to Help Reduce Obesity

Overweight and Obesity in North Carolina

Overweight and obesity pose significant health issues for both children and adults. Excess weight is not only a risk factor for several serious health conditions, but it also exacerbates existing conditions.[30] For the first time in two centuries, the life expectancy of children in the US is predicted to be lower than that of their parents. The root cause of this phenomenon is the increased prevalence of obesity.[31] Excess weight increases an individual's likelihood of developing type 2 diabetes and high blood pressure.[30] Excess weight also increases the likelihood of other life-threatening health problems including heart disease and stroke.[32-34] Other health consequences include increased risk of arthritis, pregnancy complications, sleep apnea, asthma, and depression.[30]

More than two-thirds of adults in North Carolina are considered overweight or obese.

More than two-thirds of adults in North Carolina are considered overweight or obese.[j] In fact, North Carolina is the 17th most overweight/obese state in the nation with 64.6% of North Carolinians either overweight or obese. This is slightly higher than the national prevalence of 62.9%.[k,35] Between 1990 and 2007, the prevalence of overweight people in North Carolina grew slightly from 33.5% to 35.9%. However, the obesity rate grew much more rapidly during this time period. In 1990, 12.9% of North Carolinian adults were obese, and by 2007, 28.7% of North Carolinians were obese.[36-37]

A large proportion of youth in North Carolina are also at an unhealthy weight. North Carolina youth ages 10-17 rank 5th highest in the country for overweight and obesity.[38] In 2007, 16% of children ages 6-17 years were obese and 15.9% were overweight.[l,39] Among

j Body Mass Index (BMI) is weight in kilometers/height in meters^2. BMI is a measure used to determine an individual's weight status. In most individuals, it correlates to the amount of body fat. An individual with a BMI <18.5 is considered underweight; a BMI of 18.5-24.9 is considered normal weight; a BMI of 25.0-29.9 is considered overweight; and a BMI ≥30.0 is considered obese. It should be noted that BMI is a good measure to use on a population basis and that individuals with high muscle mass may have a high BMI even though they are not actually overweight or obese.

k Including all 50 states and the District of Columbia

l Note on the terms at-risk for overweight, overweight, and obese: 2007 Child Health Assessment and Monitoring Program(CHAMP) weight data are reported as follows: at-risk for overweight is defined as BMI ≥ 85th percentile but < 95th percentile, and overweight is defined as BMI ≥95th percentile. However, this report uses the following terminology for discussing child and adolescent weight: Overweight is defined as BMI ≥ 85th percentile but < 95th percentile. Obesity is defined as BMI ≥ 95th percentile. The convention used in this report is based on recommendations for defining overweight and obesity as determined by the Expert Committee on the Assessment, Prevention, and Treatment of Child and Adolescent Overweight and Obesity convened by the American Medical Association (AMA) and cofunded by the AMA, the Health Resources and Services Administration, and the CDC.

high school students specifically, 13% were obese and 17% were overweight.[40] According to the *2008 North Carolina Child Health Report Card,* the percent of obese low-income children ages 2-18 increased from 2002 to 2007.[41]

The economic impact of excess weight in North Carolina is significant. It is estimated to have cost North Carolina $2.81 billion in medical costs, $0.96 billion in prescription drug costs, and $11.80 billion in lost productivity costs in 2006 alone.[42]

Good nutrition and regular physical activity are paramount to reaching and maintaining a healthy weight. Three of the Task Force's priority recommendations address these health behaviors.

- ***Priority Recommendation 3:*** Implement Child Nutrition Standards in All Elementary Schools
- ***Priority Recommendation 4:*** Implement Quality Physical Education in All Elementary, Middle, and High Schools
- ***Priority Recommendation 5:*** Implement the *Eat Smart, Move More North Carolina Obesity Plan*

Support Implementation of Child Nutrition Standards in Elementary Schools

Child Nutrition Programs serve over 1.4 million meals every day to North Carolina's children enrolled in public schools.[m] All public schools in the state participate in the National School Lunch Program, and 95% participate in the School Breakfast Program. It is of the utmost importance that all foods and beverages made available through the Child Nutrition Program contribute to the optimal healthy growth and proper development of children.

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In 2005, the North Carolina General Assembly passed legislation directing the State Board of Education to adopt nutrition standards for elementary schools to be implemented by the end of the 2008 school year.[n] The State Board of Education, in collaboration with Child Nutrition Administrators in the school districts, developed nutrition standards that were pilot-tested in 124 elementary schools from January to May 2005. (The nutrition standards for elementary schools promote gradual changes to increase fruits and vegetables, increase whole grain products, and decrease foods high in total fat, trans fat, saturated fat, and sugar.)

m Hoggard, L. Director, Child Nutrition Services, North Carolina Department of Public Instruction. Written communication. September 29, 2008.
n NCGS § 115C-264.3.

The schools involved in the pilot test lost money implementing the new standards. Collectively, pilot schools lost approximately $1.3 million due to decreased *a la carte* sales and approximately $0.8 million due to increased food costs during the pilot.[o] Specifically, schools removed unhealthy *a la carte* items, and thus had only a few healthy *a la carte* items for sale. The decrease in *a la carte* revenue was due to fewer items being sold and lower profit margins on those items that were being sold. Schools also experienced a 7% increase in food costs, as healthier foods such as fresh fruits and vegetables and whole grain products cost more than less healthy foods.[p] Based on the results of the pilot, the North Carolina Department of Public Instruction projected that it would cost approximately $20 million to implement the child nutrition standards in all 1,170 elementary schools in North Carolina. As a result of losses, the North Carolina General Assembly has ultimately delayed mandatory implementation of the new nutrition standards in all elementary schools until the end of the 2010 school year.

Although the new elementary school nutrition standards are not yet mandatory, approximately 95% of the elementary schools in the state have implemented them voluntarily.

Although the new elementary school nutrition standards are not yet mandatory, approximately 95% of the elementary schools in the state have implemented them voluntarily.[q] The vast majority of districts that have implemented the standards report significant revenue losses. As with the pilots, the loss in earnings stem in large part from increased food prices and decreased sales revenues from *a la carte* foods and beverages.[r]

School nutrition programs incurred other expenses in implementing healthier food choices both during the pilot and afterwards. These expenses include increased labor costs (due to the need for additional personnel to prepare healthier foods versus using convenience foods), and new capital expenses to buy equipment needed to store and support healthy meals. School nutrition programs have also incurred other

o *A la carte items* are foods or beverages sold separately from reimbursable school meals in school cafeterias. During the pilot, many districts tried to improve the nutritional content of *a la carte* items in middle and high schools at the same time that they were implementing the nutrition standards in elementary schools. *A la carte* items have historically provided substantial revenue that schools have relied upon to subsidize the school meal programs. In the early 2000s, revenues from *a la carte* sales provided half of the operating funds for Child Nutrition Programs in the state. As districts have gradually reduced the availability of less healthful *a la carte* foods and beverages, operating budgets have suffered. (Hoggard, L. Director, Child Nutrition Services, North Carolina Department of Public Instruction. Written communication. September 24, 2008.) And while the termination of *a la carte* items often leads to increases in the sale of school meals, overall revenues still suffer because federal reimbursement for school meals is inadequate. (Sackin, B. B. Sackin and Associates. Oral communication. September 25, 2008.) In addition, there are few, if any, state and local funds to support the cost of serving healthful meals to children. (Hoggard, L. Director, Child Nutrition Services, North Carolina Department of Public Instruction. Written communication. October 14, 2008.)

p Hoggard L. Section Chief, Child Nutrition Services, North Carolina Department of Public Instruction. Written communication. October 30, 2008.

q During the 2007 and 2008 legislative sessions, the NC State Board of Education requested recurring state funds ($20 million) to support the implementation of the State Board of Education-adopted nutrition standards in all elementary schools in North Carolina. The North Carolina General Assembly has not appropriated funds for this purpose.

r Hoggard L. Section Chief, Child Nutrition Services, North Carolina Department of Public Instruction. Written communication. September 24, 2008.

expenses not directly related to the implementation of the nutrition standards. Unlike for other school personnel, the North Carolina General Assembly does not appropriate funds to pay the salaries and benefits of child nutrition personnel. Instead, the Child Nutrition Program must increase the sale of foods and beverages to students in order to meet payroll obligations. Since 2005, the North Carolina General Assembly has increased the salaries of the school nutrition personnel, but has not appropriated the $30 million necessary to pay for the salary and benefits increases.[s] Additionally, the majority of school districts charge indirect costs to the Child Nutrition Programs, which have amounted to more than $125 million since 2003. These indirect costs further deplete limited resources.

Child Nutrition Programs in 93 of 115 school districts in North Carolina are currently in significant financial trouble as a result of costs associated with implementing the child nutrition standards, increased personnel costs, and loss of revenues due to payments of indirect costs to the school systems.

Child Nutrition Programs in 93 of 115 school districts in North Carolina are currently in significant financial trouble as a result of costs associated with implementing the child nutrition standards, increased personnel costs, and loss of revenues due to payments of indirect costs to the school systems.[t] Many schools are having difficulties increasing their revenues sufficiently to offset these increased costs. Only six school districts had a three-month operating balance as of June 2008.[u] More than half (57%) of the funding for North Carolina's Child Nutrition Program comes from federal funds for reimbursable meals served to students who qualify for free or reduced price meals. There is also a federal supplement of $0.24 per meal served to students who pay for their meals as long as the meal meets the criteria for federal reimbursement.[v,43] A little less than half (42%) of Child Nutrition Program funding in the state comes from student purchases.[w] Only 1% of program funding comes from state funds (required state match).[43] Unlike 21 other states, North Carolina does not contribute to the costs of the school nutrition program above

s Hoggard L. Section Chief, Child Nutrition Services, North Carolina Department of Public Instruction. Written communication. September 24, 2008.

t Hoggard L. Section Chief, Child Nutrition Services, North Carolina Department of Public Instruction. Written communication. September 24, 2008.

u Hoggard L. Section Chief, Child Nutrition Services, North Carolina Department of Public Instruction. Written communication. February 4, 2009.

v In addition to federal funds for reimbursable meals, the state receives approximately $30 million annually in commodity foods and/or cash entitlement. Each district receives a pro-rata share based on the actual number of reimbursable meals served to students. (Hoggard L. Section Chief, Child Nutrition Services, North Carolina Department of Public Instruction. Written communication. October 30, 2008.)

w Local Education Agencies (LEAs) determine meal prices, which are then adopted by local Boards of Education. Increasing student meal costs to increase revenue is difficult, as almost half (49.2%) of all students attending public school in North Carolina qualify for free- or reduced-price meals. (Child Nutrition Services, North Carolina Department of Public Instruction. Outcome of the pilots of the nutrition standards as shown in "Eat Smart: NC's recommended standards for all foods available in schools. 2008.) Families at 130-225% of the federal poverty level cannot afford the full price of school meals, and raising the price of meals puts some children in jeopardy of having no food during the school day. (Hoggard L. Section Chief, Child Nutrition Services, North Carolina Department of Public Instruction. Written communication. September 3, 2008.) According to Child Nutrition Services, many North Carolina households cannot afford 70 cents a day to purchase reduced-price meals (30 cents for breakfast and 40 cents for lunch). (Hoggard L. Section Chief, Child Nutrition Services, North Carolina Department of Public Instruction. Written communication. September 29, 2008.)

Two-thirds of the school districts have returned to the sale of unhealthy, high-fat, high-sugar, and high-calorie foods and beverages in middle and high schools to offset losses due to the implementation of the improved nutrition standards in elementary schools.

the required federal match.[x] At this time, federal reimbursement and student meal repayments are inadequate to cover the operating costs of the program in North Carolina.[43]

Two-thirds of the school districts have returned to the sale of unhealthy, high-fat, high-sugar, and high-calorie foods and beverages in middle and high schools to offset losses due to the implementation of the improved nutrition standards in elementary schools.[y] These items produce a high profit margin, but may contribute to the growing obesity problem among North Carolina's youth. Continued implementation of the standards in elementary schools is not possible without state funding support. Restoring and maintaining the financial integrity of Child Nutrition Programs will enable districts to ensure child nutrition standards are being met in all North Carolina elementary schools.

Therefore, the Task Force recommends:

Priority Recommendation 3: Implement Child Nutrition Standards in Elementary Schools

a) Elementary schools should fully implement the State Board of Education-adopted nutrition standards. Districts should receive support for implementation from the North Carolina General Assembly under the following conditions:

1) The school district is in full compliance with the State Board of Education (SBE) policy on nutrition standards in elementary schools (GS 115C-264.3).

2) The school district is not charging indirect costs to the Child Nutrition Program until such time as the Child Nutrition Program achieves and sustains a three-month operating balance.

b) The North Carolina General Assembly should appropriate $20 million in recurring funds to the North Carolina Department of Public Instruction to support the full and consistent implementation of the SBE-adopted nutrition standards in elementary schools.

x Sackin B. B. Sackin and Associates. Written communication. September 5, 2008.
y Hoggard L. Section Chief, Child Nutrition Services, North Carolina Department of Public Instruction. Written communication. September 24, 2008.

Implement Quality Physical Education in All Elementary, Middle, and High Schools

The physical and psychological benefits of increased physical activity for children and adolescents include improving strength and endurance, building healthy bones and muscles, helping control weight, reducing anxiety and stress, and increasing self-esteem.[44] Studies also show that increased levels of physical activity coupled with an increased curricular focus on physical education—even with a reduction in class time—has a beneficial impact on students' academic achievement.[45,46]

Both physical activity and physical education are critical to the healthy development of children.

Both physical activity and physical education are critical to the healthy development of children. Physical activity is actual bodily movement such as jumping rope or walking. In contrast, physical education "involves teaching students the skills, knowledge, and confidence they need to lead physically active lives."[47] Students are physically active during physical education time, but not necessarily physically educated during physical activity time. Because children spend such a large percentage of their time at school, policies that increase the amount of physical activity a child has during the school day are likely to make a significant impact on a child's activity level, and therefore their overall health. Likewise, policies that emphasize physical education are likely to have positive impacts on lifelong health and physical activity behavior.

Currently, the State Board of Education policy HSP-S-000—known as the Healthy Active Children Policy—requires that children in grades K-8 be provided 30 minutes of *physical activity* daily.[z] This physical activity can be accumulated in 10-15 minute periods through classroom-based movement, recess, activity during physical education courses, and sports that occur before, during, and after school.[46] However, the current law does not require that physical activity be taught by certified physical education teachers, nor does it mandate physical education.

The CDC recommends that children and adolescents receive at least 60 minutes of moderate to vigorous physical activity every day of the week.[44] Too few of North Carolina's youth meet this standard. Slightly more than half (55%) of middle school students in North Carolina report being physically active for at least 60 minutes per day on just five or more of the past seven days. Less than half (44.3%) of high school students report being active at this level five or more days a week. In addition, levels of physical activity are lower for girls and racial and ethnic minorities, and tend to decrease as children get older. A reduction in activity levels is seen as students progress through grades: 50.3% of 9th graders achieve the recommendation compared to 46.1% of 10th graders, 40.4% of 11th graders, and 38.1% of 12th graders.[48] Further, this age-activity pattern continues beyond high school; as adults age, data show they are less likely to meet the recommended levels of physical activity.[49] When it comes to physical education, less than half (41.2%) of high school students attended physical education classes one or more days during an average school

z §HSP-S-000

week in 2007. While a greater proportion (79.2%) of middle school students did, not all middle school students participate in regular physical education. In fact, slightly fewer than 4 out of 10 (37.2%) middle school students had daily physical education during an average week in 2007.[48]

Quality physical education programs are described as emphasizing knowledge and skills for a lifetime of physical activity.

Children and adolescents need not receive all of their 60 minutes of physical activity in the school setting. However, recognizing that youth spend much of their time in school, the National Association for Sport and Physical Education (NASPE) recommends that middle and high school students receive 225 minutes per week and elementary school students receive 150 minutes per week of formal instruction in *physical education*.[aa,50] Quality physical education programs are described as emphasizing knowledge and skills for a lifetime of physical activity, meeting the needs of all students, keeping students active for most of physical education time, teaching self-management as well as movement skills, and being enjoyable for students.[51] These courses should be taught by physical educators with appropriate qualifications.[52] In October 2008, the State Board of Education passed a policy stating that by 2012 physical education teachers must be licensed in health education, physical education, or both.[53]

Quality physical education in all public schools will help ensure that North Carolina's young people are receiving adequate physical activity while also gaining the skills and knowledge to enable them to be active individuals throughout their lifetimes.

Therefore, the Task Force recommends:

Priority Recommendation 4: Implement Quality Physical Education in Schools

a) The North Carolina General Assembly should require the State Board of Education (SBE) to implement a five-year phase-in requirement of quality physical education by 2013 that includes National Association for Sport and Physical Education (NASPE) Opportunities to Learn with 150 minutes of elementary school physical education weekly, 225 minutes weekly of Healthful Living in middle schools, and 2 units of Healthful Living as a graduation requirement for high schools.[bb] The State Board of Education shall be required to annually report to the Education Oversight Committee regarding the physical education program and Healthy Active Children policy.

b) The State Board of Education should work with appropriate staff members in the North Carolina Department of Public Instruction, including curriculum and finance representatives, to examine the experiences of other states and develop cost estimates for the five-year phase-in, which will be reported to the research division of the North Carolina General Assembly and the Education Oversight Committee by April 1, 2009.

aa The National Association for Sport and Physical Education (NASPE) is a leading national authority on physical education. NASPE has 16,000 members including K-12 physical education teachers, coaches, athletic directors, researchers, and college/university faculty among others. It is one of five national associations in the American Alliance for Health, Physical Education, Recreation and Dance (AAHPERD). http://www.aahperd.org/naspe.

bb The North Carolina Healthful Living Standard Course of Study equally emphasizes physical education and health education.

Implement the *Eat Smart, Move More North Carolina Obesity Plan*

Eat Smart, Move More: North Carolina's Plan to Prevent Overweight, Obesity, and Related Chronic Diseases 2007-2012 (also known as the *North Carolina Obesity Plan*) is the state's plan to prevent obesity. The plan was collaboratively developed by leaders from across the state and offers local-level organizations and groups guidance in their obesity prevention efforts. The *Eat Smart, Move More* leadership team, which includes the North Carolina Division of Public Health and other expert groups and organizations provides technical assistance to help guide initiatives implemented in response to the *North Carolina Obesity Plan*. Many North Carolina communities are addressing the growing obesity epidemic by implementing evidence-based strategies and best or promising practices to improve nutrition and increase physical activity. However, long-term, sustainable community-level efforts are needed statewide in order to reach all North Carolinians and to make an impact.

Long-term, sustainable community-level efforts are needed statewide in order to reach all North Carolinians and to make an impact.

In 2008, the North Carolina General Assembly appropriated $2.0 million in non-recurring funds to the North Carolina Division of Public Health to establish community-based obesity reduction demonstration projects. The North Carolina Division of Public Health distributed the funds to five communities. However, this one-year funding will not provide a sufficient amount of time to create needed changes and yield positive outcomes within these communities. Longer term, multifaceted interventions are needed to achieve measurable results.[cc] Additional appropriations are needed over a longer period of time to test the viability of community-based obesity reduction interventions in North Carolina.

Creating local capacity and increasing the availability of expert technical assistance is a necessary component in the effective implementation of the *North Carolina Obesity Plan*. Funding is needed to build local capacity in each county, expand the existing community competitive grants program, and to further develop the school case management program. This funding will enable interventions at multiple levels including the county, community, and school level. In addition, evaluation of all of these initiatives is critical to determine which initiatives have the greatest impact on reducing obesity and overweight. This is especially true for those interventions that have not been thoroughly evaluated elsewhere.

cc A three-year community-based intervention in Massachusetts aimed at preventing childhood obesity resulted in a decrease in body mass index (BMI) among participating children. This intervention showed that sustained, multifaceted community-based environmental change can impact children's weight status as shown by the significant decrease in BMI within the intervention community compared to the control community. (Economos CD, Hyatt R, Goldberg JP, et al. A community intervention reduces BMI z-score in children: Shape Up Somerville first year results. *Obesity.* 2007;15(5):1325-1336.)

Given the need to build local-level capacity and to have supported, coordinated, sustainable obesity-prevention interventions at multiple levels, the Task Force recommends:

Priority Recommendation 5: Implement the *Eat Smart, Move More North Carolina Obesity Plan*

a) The North Carolina Division of Public Health along with its partner organizations should fully implement the *Eat Smart, Move More North Carolina Obesity Plan* for combating obesity in selected local communities and identify best practices for improving nutrition and increasing physical activity that will ultimately be adopted across the state.

b) The North Carolina General Assembly should provide $10.5 million in recurring funding to the North Carolina Division of Public Health to support this effort. Funding should be allocated as follows:

1) $5 million ($50,000 per county) in recurring funds to support local capacity (1 FTE) for the dissemination of evidence-based prevention programs and policies in North Carolina communities.

2) $3.5 million annually for six years to continue the demonstration projects initially funded by the North Carolina General Assembly in 2008. Funding will be distributed to the five current demonstration counties and to three additional counties (on a competitive basis) for interventions in preschools, schools, local communities, faith organizations, and health care settings to promote and support physical activity and healthy eating. The North Carolina Division of Public Health should work in collaboration with *Eat Smart, Move More North Carolina* partners, NC Prevention Partners, the UNC Center for Health Promotion and Disease Prevention, and others to provide technical support and disseminate best practices.

3) $1 million in recurring funds to *Eat Smart, Move More North Carolina* to expand community competitive grants. Communities should be limited to grants of up to $40,000 to support evidence-based strategies or best and promising practices that improve nutrition and/or physical activity behavior, thereby promoting healthy weight and reducing chronic disease.

4) $500,000 for county adolescent grants of up to $100,000 per year with priority given to counties that have a focus on case management through schools for adolescents who are at risk for obesity and overweight status.

5) $500,000 in recurring funds to the North Carolina Division of Public Health to provide technical assistance for the implementation of the *Eat Smart, Move More North Carolina Obesity Plan* and/or the competitive grants, and to conduct an independent evaluation.

Reducing STDs, HIV, and Unintended Pregnancies Among Young People

STDs, HIV, and Unintended Pregnancy in North Carolina's Young People

Sexually transmitted diseases, HIV, and unintended pregnancy significantly impact North Carolina's young people. Sexually transmitted diseases (STDs) are illnesses and infections that are transmitted by direct sexual contact and include both bacterial and viral infections, which can cause serious health problems. The most prevalent reportable STDs (excluding HIV) in the state include chlamydia, gonorrhea, and syphilis.[dd,54]

Nearly half of all new STD infections occur in youth between ages 15-24.

Depending upon the disease and the case, a person infected with an STD may be asymptomatic and potentially infect others. Infection with chlamydia or gonorrhea can lead to damage of the female reproductive tract and can lead to infertility and pelvic inflammatory disease.[54,55] Syphilis, a complex disease with various stages, can eventually lead to internal organ damage, paralysis, blindness, and dementia.[56]

Data show that North Carolinians contract these three STDs and HIV at rates above the national averages.[54] When it comes to STDs, North Carolina's youth are at particularly high risk. Nearly half of all new STD infections occur in youth between ages 15-24.[54] Further, national estimates suggest that one in two new HIV infections occur among people younger than 25 years, with one in four infections occurring among adolescents 22 years of age or younger.[57]

Compared with women who have their first child after age 19, adolescents who become mothers are more likely to suffer adverse social and health consequences.[58] Approximately 70% of young mothers drop out of high school, and the children of teen mothers score lower on tests of mathematics and reading up until age 14.[58]

North Carolina is ranked 13th highest in the nation in teen *pregnancy* rates. In 2007, the rate of teen pregnancy among 15-19 year-olds was 63.0 per 1,000 resulting in 19,615 pregnancies. Almost 30% of the teens in North Carolina who became pregnant in 2007 had been pregnant before.[59] North Carolina's teen *birth* rate among 15-19 year

dd Hepatitis A and B are also reportable. However, only the three most common STDs (chlamydia, gonorrhea, and syphilis) were studied by the Task Force.

olds is higher than the national rate (49.7 per 1,000 versus 41.9 per 1,000).[60] In addition, the National Campaign to Prevent Teen and Unplanned Pregnancy estimates that teen childbearing cost North Carolina $312 million in 2004; however, only $2.5 million is spent each year on teen pregnancy prevention.[59,61]

North Carolina is ranked 13th highest in the nation in teen pregnancy rates.

The Task Force developed one priority recommendation to ensure that all young people in North Carolina receive medically accurate information and skills to prevent pregnancy, and STD and HIV infection.

- ***Priority Recommendation 6***: Mandate Comprehensive Sexuality Education in Public Schools

Mandate Comprehensive Sexuality Education in Public Schools

In 1995, North Carolina passed a law requiring public schools to deliver an abstinence curriculum for sexuality education.[ee] The major premise of North Carolina's abstinence-until-marriage education policy is that abstinence is the "only certain means of avoiding out-of-wedlock pregnancy and sexually transmitted diseases." In contrast, comprehensive sexual education programs emphasize the benefits of abstinence while also teaching about and encouraging contraception and disease-prevention methods among those who are sexually active.

Although abstinence until marriage is the goal of many abstinence policies and programs, few Americans wait until marriage to initiate sexual intercourse. According to research, 88% of teenagers who pledge to remain abstinent until marriage break that pledge. When they do have sex, they are less likely than other teens to use condoms or be tested for STDs. At a six-year follow-up, the prevalence of STDs (chlamydia, gonorrhea, trichomoniasis, and human papillomavirus) was similar among those taking the abstinence pledge and non-pledgers.[62] In North Carolina, more than half (52.1%) of high school students reported in 2007 that they have had sexual intercourse. The percentage increases as students get older: 69% of seniors reported they have had sexual intercourse in 2007. Additionally, more than one in three high school students reported to have had intercourse with one or more people in the last three months. Further, only 61.5% reported using a condom, and only 17.4% used birth control pills.[63] These numbers indicate many sexually active young people in North Carolina are at risk for STD and HIV infection, pregnancy, or both.

According to research, 88% of teenagers who pledge to remain abstinent until marriage break that pledge.

Reviews and other scientific literature have found little evidence that abstinence-only programs are successful in encouraging teenagers to delay sexuality activity until marriage.[64-67] In addition, evaluations of many abstinence programs, including abstinence-until-marriage

ee NCGS §115C-81

programs, have shown no overall impact on delaying age of initiation of sex, number of sexual partners, or condom or contraceptive use.[ff,66] In fact, at least 24 states, including Virginia, Tennessee, and Ohio, have now turned down Federal Abstinence Grant funds for abstinence-based education due to overwhelming evidence that the programs they fund do not appear to work.[gg,68] North Carolina, however, still receives federal funds for abstinence-based education.

In contrast, comprehensive sexuality education programs have been shown to be effective at delaying the initiation of sex, reducing frequency, reducing the number of sexual partners, increasing contraceptive use, and reducing sexual behavior that increases risk.[66] It is important to note that the evidence is very strong that these programs *do not* increase sexual behavior, even when they do encourage condom or other contraceptive use.[69] The American Psychological Association, American Medical Association, National Association of School Psychologists, Society for Adolescent Medicine, American Academy of Pediatrics, and American Public Health Association maintain that sexuality education needs to be comprehensive to be effective.[70-75]

Evaluation of many abstinence programs, including abstinence-until-marriage programs, have shown no overall impact on delaying age of initiation of sex, number of sexual partners, or condom or contraceptive use.

North Carolina's current law offers local school boards the option of adopting a comprehensive sexuality education curriculum. However, the school board must first hold a public hearing and allow for a public review period, and school administrators often perceive the public hearing process as potential for parental disapproval and controversy. Therefore, school boards are discouraged from going through the prescribed legal channel to offer comprehensive sexual education to students.[hh] Currently, an estimated 10-12 Local Education Agencies (LEAs) have gone through the public hearing process; however, it is not known how many LEAs actually offer comprehensive sexuality education.[ii,jj] According to the 2006 NC School Health Education Profiles Survey, 18% of North Carolina schools teach a curriculum that is more restrictive than the state requires, and 38% do not teach the effectiveness rates of birth control, including condoms.[kk,76] The state law also forbids the provision of any contraceptive, including condoms, on school property. Local school boards have the option of providing students information on where to obtain contraceptives;

ff While not all abstinence programs have been evaluated, Kirby notes "there is no strong evidence that any abstinence program is effective in delaying sex."

gg These funds are known as "Title V, Section 510" funds, from the section of the Social Security Act in which they are found.

hh Breitenstein D. Director, North Carolina School Health Training Center. Oral communication. January 9, 2009.

ii Breitenstein D. Director, North Carolina School Health Training Center. Oral communication. January 9, 2009.

jj LEAs are not required to report this information to the North Carolina Department of Public Instruction.

kk The NC School Health Education Profiles Survey is coordinated by the North Carolina Department of Public Instruction and the North Carolina Department of Health and Human Services.

however, a public hearing process is also required to approve this. It is not known how many LEAs have policies that allow for referrals for contraceptives.

The overwhelming majority of North Carolina parents (90.5%) support sexuality education programs in public schools.

Local decision-making regarding sexuality education leads to disparities in sexual education in North Carolina, both in terms of who receives education and what type of education is received. Since young people spend a considerable amount of time in schools and are accustomed to gaining information in the school setting, public schools are the ideal venue through which to reach a majority of young people in the state. A joint report by the North Carolina Department of Public Instruction and the North Carolina Department of Health and Human Services found that the overwhelming majority (90.5%) of North Carolina parents support sexuality education programs in public schools. Nearly 9 out of 10 (88.9%) parents believe it is important for sexuality education programs to include information about the effectiveness and failure rates of birth control methods, including condoms.[77] The results from the parent survey are corroborated by experience of the New Hanover County School District. The New Hanover County School Board allows parents to choose whether their children will receive abstinence-until-marriage or comprehensive sexuality education in grades 6, 7, and 8. In 2008, of the parents who chose for their children to receive sexuality education, 75% of parents of 7th graders and 80% of parents of 8th graders signed a permission form for their children to take comprehensive sexuality education.[ll,mm]

It is important for any sexuality education curriculum to be *medically accurate* and be based on rigorous, peer-reviewed science, show promise for delaying the onset of sexual activity, and reduce sexual behavior that puts youth at risk for STDs, HIV, or pregnancy. The only sexual education curricula that have been found to effective are comprehensive ones.[66] Comprehensive sexuality education is integral to a comprehensive statewide approach to prevent STDs, HIV, and pregnancy among North Carolina's youth. In addition, mandating statewide comprehensive sexual education would provide *all* young people in North Carolina with the necessary information and life skills to modify their sexual behavior to prevent STDs, HIV, and pregnancy.

ll Nine percent of parents of 7th graders and 13% of parents of 8th graders chose for their children to not receive any sexuality education, while 16% and 20% respectively did not respond.

mm Family Life Education Department, New Hanover County Schools. Written communication. January 21, 2009 and February 13, 2009.

Therefore, the Task Force recommends:

Priority Recommendation 6: Mandate Comprehensive Sexuality Education in Public Schools

The North Carolina General Assembly should replace the existing NCGS §115C-81(e1) to require complete and medically accurate sexuality education be taught as part of the Healthful Living Standard Course of Study. The State Board of Education should create an Advisory Group, comprised of representatives of the North Carolina Division of Public Health, North Carolina Medical Society, North Carolina Pediatric Society, North Carolina Academy of Family Physicians, and other appropriate health professional organizations to identify different evidence-based curricula that offer complete and medically accurate sexuality education to be used by Local Education Agencies to meet the requirements for the Healthful Living Standard Course of Study.

a) The curriculum should be developmentally appropriate.

b) The curriculum should include, but not be limited to:

1) Factually accurate information related to human reproduction;

2) Information on the benefits of abstinence;

3) Information on the effectiveness of condoms and other forms of contraceptives in preventing or reducing the risk of pregnancy, HIV/AIDS, and sexually transmitted diseases;

4) Skills-building exercises to avoid becoming pregnant and to avoid contracting HIV/AIDS or other sexually transmitted diseases, including skills to reduce the social pressures that influence sexual behaviors; and

5) Information about community resources to reduce the risk of pregnancy, STDs, and HIV.

Preventing Substance Abuse and Addiction

Substance Abuse in North Carolina

Addiction to alcohol and other drugs is a chronic illness, much like asthma, diabetes, or hypertension. Addiction cannot be "cured" in the sense that we can cure or fix someone with strep throat or a broken bone. However, substance use and addiction can be prevented—as can many of the other chronic illnesses discussed in this report. Further, addiction disorders can be managed to prevent more serious long-term health impacts.

Addiction to alcohol and other drugs is a chronic illness, much like asthma, diabetes, or hypertension.

People with substance abuse problems or addiction are at risk for premature death, comorbid health conditions, and disability. Furthermore, substance abuse carries additional adverse consequences for the individual, his or her family, and society at large. People with addiction disorders are more likely than people with other chronic illnesses to end up in poverty, lose their jobs, or experience homelessness. Further, addiction to drugs or alcohol contributes to the state's crime rate, family upheaval, and motor vehicle fatalities. Approximately 90% of the criminal offenders who enter the prison system have substance abuse problems.[78] More than two out of five youth in the juvenile justice system are in need of further assessment or treatment services for substance abuse.[79] Further, substance abuse is one of the primary causes for motor vehicle fatalities, contributing to more than one-quarter (26.8%) of crash-related deaths.[80] Nationally, parental use of alcohol or drugs contributes to more than 75% of cases in which children are placed in foster care.[81] The direct and indirect costs of alcohol and drug abuse in North Carolina totaled more than $12.4 billion in 2004.[82]

The direct and indirect costs of alcohol and drug abuse in North Carolina totaled more than $12.4 billion in 2004.

The Substance Abuse and Mental Health Service Administration (SAMHSA) estimates that in 2005-2006 approximately 709,000 North Carolinians were dependent on illicit drugs, alcohol, or both.[nn,83] A large majority of these—551,000—were estimated to have alcohol dependence or abuse, and 250,000 were estimated to have illicit drug dependence or abuse.

Youth are particularly susceptible to the influence of drugs or alcohol, as these substances affect the developing brain. Thus, the state should target prevention strategies to youth and adolescents. Currently, the state is not doing a particularly effective job in preventing the use of alcohol or drugs among this age cohort. Youth and young adults are the most likely to report drinking or using illegal drugs. Almost 40% of North Carolina high school students reported having at least one drink in the last 30 days, and more than 20% reported binge drinking.

nn Illicit drugs include marijuana, hashish, cocaine, heroin, hallucinogens, inhalants, and prescription drugs that are used non-medically.

About one in five high school students reported using marijuana in the last 30 days. While not as large, a sizeable proportion of middle school students also report using these substances.[63] Evidence-based prevention strategies have been shown to be effective in delaying initiation and reducing use. In fact, communities can save four to five dollars for every one dollar spent on substance abuse prevention.[84] The most effective prevention strategies are those that include multifaceted interventions that include the individual, family, schools, and community.

The Task Force developed one priority recommendation to ensure that substance abuse prevention strategies reach North Carolinians of all ages.

- ***Priority Recommendation 7:*** Develop and Implement a Comprehensive Substance Abuse Prevention Plan

Develop and Implement a Comprehensive Substance Abuse Prevention Plan

Effective programs, policies, and health care interventions are integral to a comprehensive substance abuse prevention plan in North Carolina. Programs that reach children, adolescents, young adults, and parents with the intention of preventing or delaying use of alcohol, tobacco, or other drugs are vital. Minimizing risk factors and maximizing protective factors, while increasing knowledge and skills is critical, particularly for youth. In addition, a comprehensive substance abuse prevention plan should include tailored outreach to reach groups at various risk levels to ensure that all members of the population are reached.

Programs that reach children, adolescents, young adults, and their parents with the intention of preventing or delaying use of alcohol, tobacco, or other drugs are vital.

Although schools are required to teach information about the risks of using alcohol, tobacco, or other drugs as part of the Healthful Living Standard Course of Study, most schools are not implementing evidence-based prevention programs.[85] Further, evidence-based prevention programs reach few of the youth at risk of developing substance abuse problems.[oo] All 732,000 children and adolescents ages 12-17 in North Carolina could benefit from prevention programs, especially the 276,000 who have specific risk factors that make them more likely to develop substance abuse problems. However, the Division of Mental Health, Developmental Disabilities and Substance Abuse Services (DMHDDSAS) estimates that the state's prevention programs only reach approximately 42,000 youth in North Carolina.[pp,86]

A statewide substance abuse prevention plan should also incorporate evidence-based policies that protect all North Carolinians from the risk of substance use and abuse. For example, increasing taxes on

oo Certain groups have a higher risk of developing a substance abuse disorder, including those who have a parent with substance abuse problems, have academic difficulties in school, and/or have started experimenting with these substances themselves.

pp The US Substance Abuse Prevention Treatment block grants and Safe and Drug-Free Schools and Communities Act (SDFSC) grants are the two main sources of funds for prevention efforts in North Carolina. Other state funding provided by the North Carolina General Assembly in 2007 supports the North Carolina Coalition Initiative that currently supports 11 coalitions (that are at various stages of development) throughout the state. However, funding from these three sources is inadequate to support a statewide comprehensive substance abuse prevention plan that reaches all North Carolinians in need of preventive interventions.

alcohol products has been shown to reduce use, just as increased tobacco taxes reduces use of tobacco. Both youth and heavy drinkers have been shown to respond to tax increases.[87-89] Taxes on beer are especially important as malt beverages (including beer) are popular alcoholic drinks among youth.[90,91] Although North Carolina has the 4th highest beer tax in the country, it has not been raised since 1969. Similarly, the wine tax—currently the 18th highest in the nation—has not been raised since 1979.[qq] Raising taxes on these alcoholic beverages to adjust for inflation would raise the beer tax to 29 cents per bottle ($3.13 per gallon) and the wine tax to $2.36 gallon.[92] Table 2 shows projected increased revenues and decreased consumption.

A statewide substance abuse prevention plan should also incorporate evidence-based policies that protect all North Carolinians from the risk of substance use and abuse.

Table 2
Projected Increased Revenues and Decreased Consumption Due to Tax Increases in Beer and Wine[rr]

Beer Tax		
Current Tax Per Gallon	*Current Revenues*	
$0.53	$100,533,960	
Potential New Tax Per Gallon	*Increased Revenue*	*Percent Decrease in Consumption*
$0.75	$41,300,454	0.96
$1.00	$86,502,261	2.04
$1.50	$173,791,378	4.22
$2.50	$335,911,622	8.57
$3.13	$429,518,636	11.31
Wine Tax (unfortified wine)		
Current Tax Per Gallon	*Current Revenues*	
$0.79	$14,320,319	
Potential New Tax Per Gallon	*Increased Revenue*	*Percent Decrease in Consumption*
$1.00	$3,737,327	0.38
$1.50	$12,518,514	1.29
$2.00	$21,134,608	2.20
$2.36	$27,235,972	2.86

Notes: Calculations are based on 2007 NC consumption and revenues (NC Beer and Wine Wholesalers Association). Calculations were performed using the calculator available through the Alcohol Policies Project, Center for Science in the Public Interest. Accessed at http://www.cspinet.org/booze/taxguide/TaxCalc.htm. National average beer and wine retail prices per gallon were used ($4.86 per gallon of beer, $34.23 per gallon wine) as provided by the Alcohol Policies Project. The -0.35 price elasticity used for beer was obtained from Phillip J. Cook, PhD, Duke University.[ss] The price elasticity used for wine was -0.58. (Nelson JP. Economic and demographic factors in U.S. alcohol demand: a growth-accounting analysis. *Empirical Econ.* 2007;22(1):83-102.)

qq Wine projections in Table 2 are for unfortified wine only, as current consumption for unfortified wine is far higher than it is for fortified wine. (Fortified wine has a higher alcohol content. Some examples of fortified wine include port and sherry). Note that unfortified and fortified wines are taxed differently. The current excise tax rate for unfortified wine is 79 cents per gallon (or 21 cents per liter), while the rate for fortified wine is 91 cents per gallon (or 24 cents per liter).

rr The predicted price increase (and implied consumption decrease) assumes that the price increases by 7.5% more than the excise tax increase, consistent with the findings by Young and Bielinska-Kwapisz who find that retail price increases by an amount greater than the increase in excise tax. (Center for Science in the Public Interest. Beer consumption and taxes. http://www.cspinet.org/booze/Fact Sheets/0308Beer&Taxes.pdf. Published August 2003. Accessed January 19, 2009.)

A comprehensive substance abuse prevention plan should also include secondary prevention strategies to prevent individuals who have started to use these substances inappropriately from becoming addicted. The primary care setting provides an ideal and practical location to screen, provide a brief intervention for those who are at-risk, and refer others with more severe problems into specialized treatment. This model, called SBIRT (Screening, Brief Intervention, and Referral into Treatment), has been shown to be effective in reducing consumption among people who drink heavily or who use illegal drugs.[tt,93] The program has been tested and shown to be effective in multiple settings, including primary care providers' offices, federally qualified health centers, health departments, school-based clinics, emergency departments, and hospitals.[94-96] Implementation of SBIRT within the primary care setting can halt substance use before it progresses to abuse and addiction. Many providers are unaware of SBIRT, and as a result, this effective screening, brief intervention, and referral system is not offered in many primary care practices.

North Carolina needs to introduce multifaceted, evidence-based prevention and early intervention strategies to reduce the burden of substance abuse on individuals, their families, and society.

To achieve this, the Task Force recommends:

Priority Recommendation 7: Develop and Implement a Comprehensive Substance Abuse Prevention Plan

a) The Division of Mental Health, Developmental Disabilities and Substance Abuse Services (DMHDDSAS) should develop a comprehensive substance abuse prevention plan for use at the state and local levels.

1) The plan should increase the capacity at the state level and within local communities to implement a comprehensive substance abuse prevention system, prioritizing efforts to reach children, adolescents, young adults, and their parents.

2) The goal of the prevention plan is to prevent or delay the onset of use of alcohol, tobacco, or other drugs, reduce the use of addictive substances among users, identify those who need treatment, and help them obtain services earlier in the disease process.

3) The Division of Mental Health, Developmental Disabilities and Substance Abuse Services should pilot test this prevention plan in six counties or multi-county areas and evaluate its effectiveness. If effective, the prevention plans should be implemented statewide.

ss Cook PJ. ITT/Terry Sanford Professor of Public Policy Studies; Professor of Economics and Sociology and Associate Director, Terry Sanford Institute of Public Policy, Duke University. Written communication. January 19, 2009.

tt For more information on SBIRT, visit the SAMHSA website at http://sbirt.samhsa.gov/index.htm.

4) **The North Carolina General Assembly should appropriate $1,945,000 in SFY 2010 and $3,722,000 in SFY 2011 in recurring funds to the North Carolina Division of Mental Health, Developmental Disabilities and Substance Abuse Services to support these efforts.**

b) **The excise taxes on malt beverages and wine should be indexed to the consumer price index so they can keep pace with inflation.**

1) **The increased fees should be used to fund effective prevention and treatment efforts for alcohol, tobacco, and other drugs.**

2) **The North Carolina General Assembly should appropriate $2.0 million in recurring funds in SFY 2010 to support a comprehensive alcohol awareness education and prevention campaign aimed at changing cultural norms to prevent initiation, reduce underage alcohol consumption, reduce alcohol abuse or dependence, and support recovery among adolescents and adults.**

c) **The Division of Mental Health, Developmental Disabilities and Substance Abuse Services should develop a Memorandum of Agreement with the North Carolina Office of Rural Health and Community Care (ORHCC), the Governor's Institute on Alcohol and Substance Abuse, North Carolina Area Health Education Centers (AHEC) program, and other appropriate organizations to educate and encourage health care professionals to use evidence-based screening tools and offer counseling, brief intervention, and referral to treatment (SBIRT) to help patients prevent, reduce, or eliminate the use of or dependency on alcohol, tobacco, and other drugs as outlined in the SBIRT model. The North Carolina General Assembly should appropriate $1.5 million in recurring funds to the Division of Mental Health, Developmental Disabilities and Substance Abuse Services to support this effort.**

Conclusion

Preventing and reducing tobacco use, secondhand smoke exposure, poor nutrition, physical inactivity, risky sexual behavior, and substance abuse and dependence will improve the health of North Carolinians. In addition, addressing these underlying causes of death and disability among North Carolinians will improve the state's national health rankings, reduce health and health care related costs, and create a state where health is a top priority.

It is the hope of the Task Force that the information presented in this interim report will be useful to public health and local leaders, state agencies, policy makers, advocates, and foundations. Additional recommendations for preventing death and disability due to the above factors and many other factors such as environmental risks, injury, and infectious disease will be released by the Task Force in the fall of 2009. These recommendations will include behavioral, public and health policy, clinical care, and community and environment strategies.

Appendix A shows the state agencies, organizations, and groups that would be responsible for funding and implementing these recommendations. The funding source, revenues generated, and public health impact are also shown. **Implementing these seven recommendations would cost the state approximately $40 million, but would generate over $357 million in new tobacco tax revenue alone.[uu] In addition, the public health impact would be enormous. Nearly 37,200 North Carolinians would be saved from a smoking-related death, all North Carolinians would be protected from secondhand smoke, and obesity prevention capacity would be strengthened in every county. Moreover, young people would receive evidence-based sexuality education, and substance abuse prevention initiatives would be widespread. Taken together, these recommendations create a strong foundation for health improvement in North Carolina.**

uu The cost does not include an estimate for Priority Recommendation 4 regarding implementation of physical education. This estimate is being determined.

Appendix A

Priority Recommendation	Implementers	Funding Source and Amount Needed or Revenue Generated	North Carolinians Benefited
Priority Recommendation 1: Increase Cigarette and Other Tobacco Product Taxes a) The North Carolina General Assembly should increase the tax on a pack of cigarettes to meet the current national average. The cigarette tax should be regularly indexed to the national average whenever there is a difference of at least 10% between the national average cost of a pack of cigarettes (both product and taxes) and the North Carolina average cost of a pack of cigarettes. b) The North Carolina General Assembly should increase the tax on all other tobacco products to be comparable to the current national cigarette tax average, which would be 50% of the product wholesale price. c) These new revenues should be used for a broad range of prevention activities including preventing and reducing dependence on tobacco, alcohol, and other substances.	NCGA	New revenues generated from cigarette tax in year 1: $297 million New revenues generated from other tobacco products (OTPs) tax in year 1: $60.8 million	• 14.2% decrease in the youth smoking rate • More than 75,100 children in NC will not become addicted adult smokers • 50,000 of current adult smokers in NC would quit • 37,200 NC residents would be saved from a premature smoking-caused death
Priority Recommendation 2: Enact Comprehensive Smoke-free Laws The North Carolina General Assembly should enact laws to mandate smoke-free worksites and public places including restaurants and bars to eliminate secondhand smoke exposure.	NCGA	n/a	All North Carolinians
Priority Recommendation 3: Support Implementation of Child Nutrition Standards in Elementary Schools a) Elementary schools should fully implement the State Board of Education-adopted nutrition standards. Districts should receive support for implementation from the North Carolina General Assembly under the following conditions: 1) The school district is in full compliance with the State Board of Education policy on nutrition standards in elementary schools (GS 115C-264.3). 2) The school district is not charging indirect costs to the child nutrition program until such time as the Child Nutrition Program achieves and sustains a three-month operating balance. b) The North Carolina General Assembly should appropriate $20 million in recurring funds to the North Carolina Department of Public Instruction to support the full and consistent implementation of the SBE-adopted nutrition standards in elementary schools.	SBE, DPI	NCGA appropriations: $20 million in recurring funding	688,029 (All elementary students in public schools)

vv A full list of abbreviations used in Appendix A is on page 38.

Priority Recommendation	Implementers	Funding Source and Amount Needed or Revenue Generated	North Carolinians Benefited
Priority Recommendation 4: Implement Quality Physical Education in All Elementary, Middle, and High Schools a) The North Carolina General Assembly should require the State Board of Education (SBE) to implement a five-year phase-in requirement of quality physical education by 2013 that includes National Association for Sport and Physical Education (NASPE) Opportunities to Learn with 150 minutes of elementary school physical education weekly, 225 minutes weekly of Healthful Living in middle schools, and 2 units of Healthful Living as a graduation requirement for high schools. The State Board of Education shall be required to annually report to the Education Oversight Committee regarding the physical education program and Healthy Active Children Policy. b) The State Board of Education should work with appropriate staff members in the North Carolina Department of Public Instruction, including curriculum and finance representatives, to examine the experiences of other states and develop cost estimates for the five-year phase-in, which will be reported to the research division of the North Carolina General Assembly and the Education Oversight Committee by April 1, 2009.	NCGA, SBE, DPI	n/a	1.45 million students (All public school students)
Priority Recommendation 5: Implement the *Eat Smart, Move More North Carolina Obesity Plan* a) The North Carolina Division of Public Health along with its partner organizations should fully implement the *Eat Smart, Move More North Carolina Obesity Plan* for combating obesity in selected local communities and identify best practices for improving nutrition and increasing physical activity that will ultimately be adopted across the state. b) The North Carolina General Assembly should provide $10.5 million in recurring funding to the North Carolina Division of Public Health to support this effort. Funding should be allocated as follows: 1) $5 million ($50,000 per county) in recurring funds to support local capacity (1 FTE) for the dissemination of evidence-based prevention programs and policies in North Carolina communities.	DPH in collaboration with local health departments, *Eat Smart, Move More NC* partners, NC Prevention Partners, and UNC Center for Health Promotion and Disease Prevention	NCGA appropriations: $10.5 million in recurring funding	b) 1) 204,000 2) 409,600 3) 34,000 4) 1,500 5) n/a

Priority Recommendation	Implementers	Funding Source and Amount Needed or Revenue Generated	North Carolinians Benefited
Priority Recommendation 5: Implement the *Eat Smart, Move More North Carolina Obesity Plan* (continued) 2) $3.5 million annually for six years to continue the demonstration projects initially funded by the North Carolina General Assembly in 2008. Funding will be distributed to the five current demonstration counties and to three additional counties (on a competitive basis) for interventions in preschools, schools, local communities, faith organizations, and health care settings to promote and support physical activity and healthy eating. The North Carolina Division of Public Health should work in collaboration with *Eat Smart, Move More North Carolina* partners, NC Prevention Partners, the UNC Center for Health Promotion and Disease Prevention, and others to provide technical support and disseminate best practices. 3) $1 million in recurring funds to *Eat Smart, Move More North Carolina* to expand community competitive grants. Communities should be limited to grants of up to $40,000 to support evidence-based strategies or best and promising practices that improve nutrition and/or physical activity behavior, thereby promoting healthy weight and reducing chronic disease. 4) $500,000 for county adolescent grants of up to $100,000 per year with priority given to counties that have a focus on case management through schools for adolescents who are at risk for obesity and overweight status. 5) $500,000 in recurring funds to the North Carolina Division of Public Health to provide technical assistance for the implementation of the *Eat Smart, Move More North Carolina Obesity Plan* and/or the competitive grants, and to conduct an independent evaluation.	DPH in collaboration with local health departments, *Eat Smart, Move More* NC partners, NC Prevention Partners, and UNC Center for Health Promotion and Disease Prevention	NCGA appropriations: $10.5 million in recurring funding	b) 1) 204,000 2) 409,600 3) 34,000 4) 1,500 5) n/a
Priority Recommendation 6: Mandate Comprehensive Sexuality Education in Public Schools The North Carolina General Assembly should replace the existing NCGS §115C-81(e1) to require complete and medically accurate sexuality education be taught as part of the Healthful Living Standard Course of Study. The State Board of Education should create an Advisory Group, comprised of representatives of the North Carolina Division of Public Health, North Carolina Medical Society, North Carolina Pediatric Society, North Carolina Academy of Family Physicians, and other appropriate health professional organizations to identify different evidence-based curricula that offer complete and medically accurate sexuality education to be used by Local Education Agencies to meet the requirements for the Healthful Living Standard Course of Study.	NCGA (Curriculum advisory group: DPH, NCMS, NCPS, NCAFP)	n/a	764,391 (All middle and high school students in public schools)

Priority Recommendation	Implementers	Funding Source and Amount Needed or Revenue Generated	North Carolinians Benefited
Priority Recommendation 6: Mandate Comprehensive Sexuality Education in Public Schools (continued) a) The curriculum should be developmentally appropriate. b) The curriculum should include, but not be limited to: 1) Factually accurate information related to human reproduction; 2) Information on the benefits of abstinence; 3) Information on the effectiveness of condoms and other forms of contraceptives in preventing or reducing the risk of pregnancy, HIV/AIDS, and sexually transmitted diseases; 4) Skills building exercises to avoid becoming pregnant and to avoid contracting HIV/AIDS or another sexually transmitted disease, including skills to reduce the social pressures that influence sexual behaviors; 5) Information about community resources to reduce the risk of pregnancy, STDs, and HIV.	NCGA (Curriculum advisory group: DPH, NCMS, NCPS, NCAFP)	n/a	764,391 (All middle and high school students in public schools)
Priority Recommendation 7: Develop and Implement a Comprehensive Substance Abuse Prevention Plan a) The Division of Mental Health, Developmental Disabilities and Substance Abuse Services (DMHDDSAS) should develop a comprehensive substance abuse prevention plan for use at the state and local levels. 1) The plan should increase the capacity at the state level and within local communities to implement a comprehensive substance abuse prevention system, prioritizing efforts to reach children, adolescents, young adults, and their parents. 2) The goal of the prevention plan is to prevent or delay the onset of use of alcohol, tobacco, or other drugs, reduce the use of addictive substances among users, identify those who need treatment, and help them obtain services earlier in the disease process. 3) DMHDDSAS should pilot test this prevention plan in six counties or multi-county areas and evaluate its effectiveness. If effective, the prevention plans should be implemented statewide. 4) The North Carolina General Assembly should appropriate $1,945,000 in SFY 2010 and $3,722,000 in SFY 2011 in recurring funds to DMHDDSAS to support these efforts. b) The excise taxes on malt beverages and wine should be indexed to the consumer price index so they can keep pace with inflation. 1) The increased fees should be used to fund effective prevention and treatment efforts for alcohol, tobacco, and other drugs.	a) DMHDDSAS; NCGA b) NCGA c) DMHDDSAS, ORHCC, GI, AHEC, NCGA	NCGA appropriations: a) $1.945 million (SFY 2010), $3.72 million (SFY 2011) in recurring funds b) $2.0 million recurring funds c) $1.5 million in recurring funds Revenues generated: b) Depends on level of tax selected by NCGA. A 22-cent beer tax increase would generate over $40 million in new revenues. A 21-cent tax increase on unfortified wine would generate almost $4 million in new revenues.	a) Depends on 6 pilots selected b) All North Carolinians (~9.2 million) c) 969,000

Appendix A

Priority Recommendation	Implementers	Funding Source and Amount Needed or Revenue Generated	North Carolinians Benefited
Priority Recommendation 7: Develop and Implement a Comprehensive Substance Abuse Prevention Plan (continued) 2) The North Carolina General Assembly should appropriate $2.0 million in recurring funds in SFY 2010 to support a comprehensive alcohol awareness education and prevention campaign aimed at changing cultural norms to prevent initiation, reduce underage alcohol consumption, reduce alcohol abuse or dependence, and support recovery among adolescents and adults. c) The Division of Mental Health, Developmental Disabilities and Substance Abuse Services (DMHDDSAS) should develop a Memorandum of Agreement with the North Carolina Office of Rural Health and Community Care (ORHCC), the Governor's Institute on Alcohol and Substance Abuse, North Carolina Area Health Education Centers (AHEC) program, and other appropriate organizations to educate and encourage health care professionals to use evidence-based screening tools and offer counseling, brief intervention, and referral to treatment (SBIRT) to help patients prevent, reduce, or eliminate the use of or dependency on alcohol, tobacco, and other drugs as outlined in the SBIRT model. The North Carolina General Assembly should appropriate $1.5 million in recurring funds to the Division of Mental Health, Developmental Disabilities and Substance Abuse Services to support this effort.	a) DMHDDSAS; NCGA b) NCGA c) DMHDDSAS, ORHCC, GI, AHEC, NCGA	NCGA appropriations: a) $1.945 million (SFY 2010), $3.72 million (SFY 2011) in recurring funds; b) $2.0 million recurring funds; c) $1.5 million in recurring funds Revenues generated: b) Depends on level of tax selected by NCGA. A 22-cent beer tax increase would generate over $40 million in new revenues. A 21-cent tax increase on unfortified wine would generate almost $4 million in new revenues.	a) Depends on 6 pilots selected b) All North Carolinians (~9.2 million) c) 969,000

Abbreviations

AHEC: North Carolina Area Health Education Centers program
DMHDDSAS: North Carolina Division of Mental Health, Developmental Disabilities and Substance Abuse Services
DPH: North Carolina Division of Public Health
DPI: North Carolina Department of Public Instruction
GI: Governor's Institute on Alcohol and Substance Abuse
NCAFP: North Carolina Academy of Family Physicians
NCGA: North Carolina General Assembly
NCMS: North Carolina Medical Society
NCPS: North Carolina Pediatric Society
ORHCC: North Carolina Office of Rural Health and Community Care
SBE: State Board of Education

Notes

1) Data on the number of students enrolled in North Carolina public schools were obtained from the North Carolina Department of Public Instruction's *Statistical Profile 2008, North Carolina Public Schools*.
2) Because the NC Council of Churches is made up of religious bodies with differing positions on sexuality education and on the use of contraceptives, the Council does not speak to these issues. Therefore the Council's Executive Director who is a Task Force member abstained from voting on Task Force recommendation 6.

Acknowledgements

Appendix B

The combined efforts of the Prevention Task Force members and steering committee members made this interim report possible. In addition, many speakers contributed to the Task Force's study of the preventable health issues addressed within this report. The North Carolina Institute of Medicine (NCIOM) appreciates the following speakers who contributed their time and expertise to the Task Force from April to November 2008: Alice Ammerman, DrPH, RD, Director, UNC Center for Health Promotion and Disease Prevention, and Professor, Department of Nutrition, UNC Gillings School of Global Public Health; Phil Bors, MPH, Project Officer, Active Living by Design; Paula Hudson Collins, Senior Policy Advisor, Healthy Responsible Students, NC State Board of Education; Jeffrey Engel, MD, former Chief, Epidemiology Section, Division of Public Health, North Carolina Department of and Human Services (NC DHHS); Jackie Epping, MEd, Lead Public Health Scientist and Team Leader, Division of Nutrition, Physical Activity, and Obesity, Centers for Disease Control and Prevention; Adam Goldstein, MD, MPH, Professor, Family Medicine and Director, Tobacco Prevention and Evaluation Program, UNC School of Medicine; Mark Holmes, PhD, Vice President, North Carolina Institute of Medicine; David Hopkins, MD, MPH, Coordinating Scientist and Chief Medical Officer, Community Guide, Centers for Disease Control and Prevention; Peter Leone, MD, Medical Director, HIV/STD Prevention and Care Branch, NC DHHS; Sally Malek, MPH, Head, Tobacco Prevention and Control Branch, Division of Public Health, NC DHHS; Danny McGoldrick, Vice President, Research, Campaign for Tobacco-free Kids; Meg Molloy, DrPH, MPH, RD, President and CEO, NC Prevention Partners; Justin Moore, PhD, MS, Assistant Professor, Department of Public Health, Brody School of Medicine, East Carolina University; Jimmy Newkirk, Physical Activity Manager, Physical Activity and Nutrition Branch, Division of Public Health, NC DHHS; Marcus Plescia, MD, MPH, Chief, Chronic Disease and Injury Section, Division of Public Health, NC DHHS; Thomas Ricketts, PhD, Professor, Health Policy and Management, UNC Gillings School of Global Public Health, and Chair, Scientific Advisory Committee, America's Health Rankings; John Santelli, MD, MPH, Department Chair and Professor, Mailman School of Public Health, Columbia University; Vandana Shah, LLM, Executive Director, North Carolina Health and Wellness Trust Fund; Pam Silberman, JD, DrPH, President and CEO, North Carolina Institute of Medicine; Margo Wootan, DSc, Director, Nutrition Policy, Center for Science in the Public Interest; and Joyce Young, MD, MPH, Preventive Medicine Specialist, and Well-Being Director, IBM.

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In addition to the above individuals, the staff of the North Carolina Institute of Medicine contributed to the Task Force's study and the development of this interim report. Pam Silberman, JD, DrPH, President and CEO, and Mark Holmes, PhD, Vice President, guided the work of the Task Force. Jennifer Hastings, MS, MPH, Project Director and Director of Communications, served as project director for the Task Force and primary author of the report. Christine Nielsen, MPH, Managing Editor, *North Carolina Medical Journal*, contributed to the report and provided editorial assistance. Berkeley Yorkery, MPP, Project Director, and Jesse Lichstein, MSPH, Project Director, also provided editorial assistance. Interns David K. Jones, Corey Davis, JD, and Julia Lerche also contributed to the report. Thalia Fuller, Administrative Assistant, assisted in coordination of Task Force meetings.

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