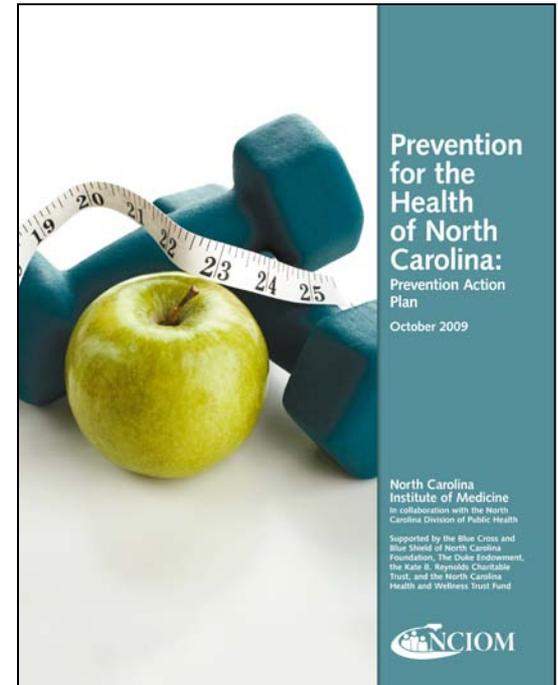
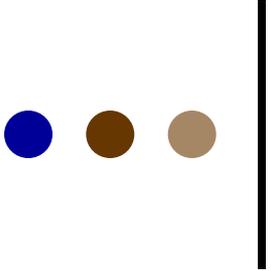




# Prevention for the Health of North Carolina: Prevention Action Plan



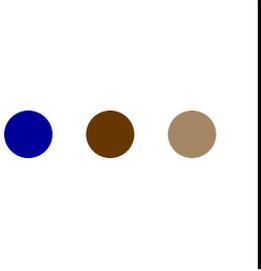


# NC Institute of Medicine

- Quasi-state agency chartered in 1983 by the NC General Assembly to:
  - Be concerned with the health of the people of North Carolina
  - Monitor and study health matters
  - Respond authoritatively when found advisable
  - Respond to requests from outside sources for analysis and advice when this will aid in forming a basis for health policy decisions

*NCGS 90-470*



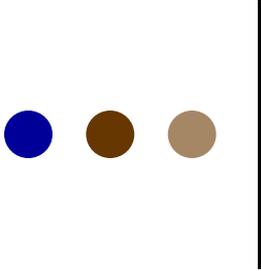


# NCIOM Prevention Task Force

- Initiated at the request of the Blue Cross and Blue Shield of North Carolina Foundation, The Duke Endowment, the North Carolina Health and Wellness Trust Fund, and the Kate B. Reynolds Charitable Trust.
- A collaboration with the NC Division of Public Health (DPH).
- Charged with developing a prevention action plan for the state.

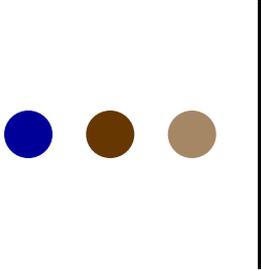
# Why Focus on Prevention?

- North Carolina ranks 37<sup>th</sup> in overall health status and 40<sup>th</sup> in premature deaths in 2009 (with “1” being the state with the best health status).
- North Carolina ranks in the bottom third for many health indicators including:
  - Adults who are current smokers (37<sup>th</sup>).
  - Obese adults (41<sup>st</sup>).
  - Air pollution (36<sup>th</sup>).
  - 4-year graduation rate (37<sup>th</sup>).



# Why Focus on Prevention?

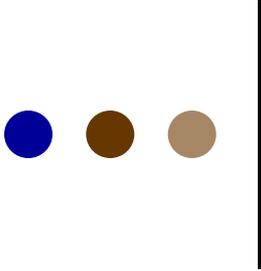
- The most practical approach to address these health problems is to prevent them from occurring in the first place.
- Investing more heavily in prevention can save lives, reduce disability, improve quality of life, and in some cases reduce costs.



# NCIOM Prevention Task Force

- Chaired by:
  - Leah Devlin, DDS, MPH, Former State Health Director
  - Jeffrey Engel, MD, State Health Director
  - William Roper, MD, MPH, CEO, University of North Carolina Health Care System and Dean, UNC School of Medicine
  - Robert Seligson, MA, MBA, Executive Vice President, NC Medical Society
- Included 45 additional members



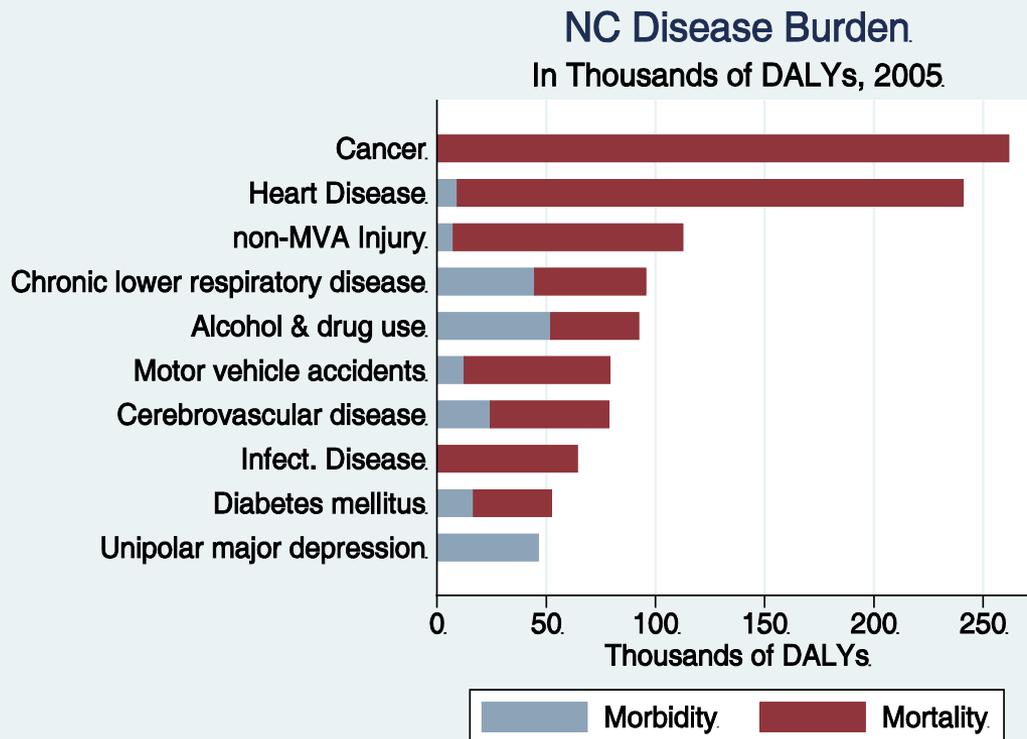


# Developing the Prevention Action Plan

In developing the Prevention Action Plan, the Task Force identified:

- 1) The diseases and health conditions that had the greatest impact on death and disability.
- 2) The underlying preventable risk factors that contribute to the leading causes of death and disability.
- 3) Evidence-based strategies that can prevent or reduce the risk factors.
- 4) Multi-level interventions based on the socioecological model of health behavior.

# #1) Identify the Leading Causes of Death and Disability



NCIOM staff identified the leading causes of premature death (Years of Life Lost, YLL) and years of life lost to a disability (YLD).

Together, these are considered DALYS: Disability Adjusted Life Years.

## #2) Identify Underlying Preventable Risk Factors

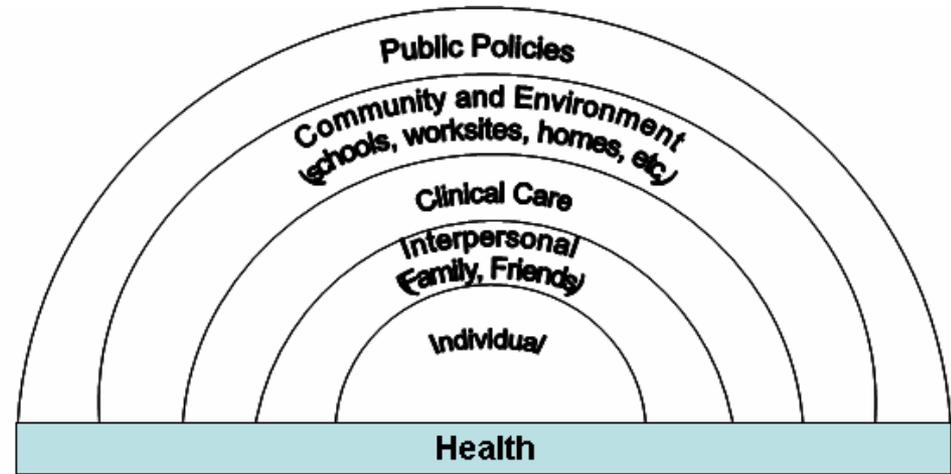
- Tobacco use
- Diet, physical inactivity, overweight/obesity
- Risky sexual behavior
- Alcohol and drug use
- Emotional and psychological factors
- Exposure to chemical and environmental pollutants
- Unintentional and intentional injuries
- Bacterial and infectious agents
- Racial and ethnic disparities
- Socioeconomic factors

# #3) Identify Evidence-Based Strategies

- Evidence-based strategies have been subject to rigorous evaluation and shown to produce positive outcomes.
- The Task Force examined the work of other national organizations that review the evidence of program effectiveness and determine the strength of the evidence.
  - Examples: US Preventive Services Task Force, US Task Force on Community Preventive Services

# #4) Develop Recommendations Using Socioecological Model

- The Task Force recognized that health outcomes are often influenced by persons behaviors and choices.
- However, people do not act in a vacuum. Their actions are influenced by:
  - Interpersonal relationships, clinical care, community and environment, and public policies.



# Prevention Task Force Recommendations

- 45 recommendations in total were developed addressing the 10 preventable risk factors.
- 11 are priority recommendations.



Issue Brief

## Prevention for the Health of North Carolina

A Prevention Action Plan

October 2009

**The burden of chronic diseases and other preventable conditions in our state is high and increasing steadily. North Carolina is 36th in overall health and 38th in premature death.<sup>1</sup> Further, North Carolina ranks poorly on many other health indicators, including health outcomes, health behaviors, access to care, and socioeconomic measures.**

**Why Prevention?**  
The most practical approach to address such conditions—from both a health and an economic perspective—is to prevent them from occurring in the first place. However, health care spending is drastically skewed toward paying for therapeutic procedures to manage or treat acute and chronic health problems, and not toward prevention. Reorienting our health system, as well as our overall society, towards a prevention focus represents a fundamental paradigm shift involving all members of our society. In addition to individual personal responsibility for health, health care providers, employers, schools, communities, businesses, and other institutions also play a critical role in ensuring the long-term health of our state. We must all invest in prevention before the burden on individuals, their families, employers, and the broader community becomes too great.

**North Carolina Ranks Poorly on Most of the Major Health Indicators\***

Indicator	North Carolina	United States	National Rank
Adults who are current smokers (2008)	20.9%	18.4%	37th
Overweight and obese adults (2008)	29.5%	26.7%	41st
Physically active adults (2007)	44.0%	49.5%	46th
Incidence of new STD cases (syphilis, gonorrhea, chlamydia) per 100,000 population (2007)	537.4	492.9	37th
Adults with alcohol and illicit drug abuse or dependence (2006-2007)	8.2%	9.2%	6th
Adults with serious psychological distress (2006-2007)	10.9%	11.1%	15th
Average air pollution (micrograms of fine particulate per cubic meter) (2005-2007)	13.6	13.1	35th
Motor vehicle fatalities per 100,000 (2008)	15.5	12.3	35th
Children ages 19 to 35 months with recommended childhood immunizations (4-3-1-3-0) (2007)	80.0%	80.1%	27th
Low-income families (<200% FPG) (2007-2008)	39.4%	35.8%	39th
Graduation rate (2004-2005)	72.6%	74.7%	39th
Race and ethnicity equity (2007)	33.7	24.1	42nd
Uninsured (2006-2007)	17.2%	15.3%	38th

Data sources for all figures are located in the reference section.

\* When rankings appear throughout this Issue Brief, number "1" reflects the state with the best health status.

Overview | Tobacco | Obesity | Risky Sexual Behaviors | Substance Abuse and Mental Health | Environmental Risks
Injury | Infectious Agents | Disparities | Socioeconomic Factors | Prevention Strategies | Data | Conclusion | References

Complete North Carolina Prevention Action Plan available at <http://www.nciom.org> 

The full set of Task Force recommendations are in the report. Only the Task Force's priority recommendations are covered in the issue brief.



# 1. Reduce Tobacco Use

- Tobacco use is the leading cause of preventable death in North Carolina.
  - Tobacco contributes to 30% of all cancer deaths and 90% of lung cancer deaths.
  - 20.9% of adults and 19% of high school youth smoke.
  - NC has the 7<sup>th</sup> lowest cigarette tax in country.

# ● ● ● | Reduce Tobacco Use

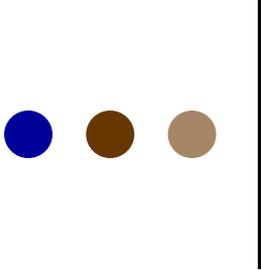
- *Priority recommendation:* Increase the North Carolina tobacco tax to the national average.
  - Will result in a 14% decline in youth smoking, with 74,000 fewer future youth smokers, and 46,000 fewer adult smokers.
  - Will raise approximately \$300 million in new revenues.

## 2. Promote Healthy Eating and Physical Activity

- Good nutrition and regular physical activity are cornerstones of a healthy lifestyle and healthy weight.
- Excess weight increases the risk of type 2 diabetes, high blood pressure, heart disease, and stroke.
- North Carolina is the 10<sup>th</sup> most overweight/obese state in the nation.
  - 2 out of 3 adults are overweight/obese.
  - 30% youth are at an unhealthy weight.

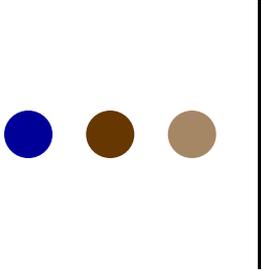
# Promote Healthy Eating and Physical Activity: *Priority Recommendation*

- *Priority Recommendation:* Implement quality physical education and Healthful Living in schools.
  - 150 minutes/week of physical education in elementary school, 225 minutes of Healthful Living in middle school, and 2 units of Healthful Living in high school.
- *Priority Recommendation:* Implement the *Eat Smart, Move More North Carolina Obesity Plan*, and increase social marketing to promote nutrition and physical activity.



## 3. Reduce Risky Sexual Behaviors

- Risky sexual behavior can lead to sexually transmitted diseases (STDs), HIV/AIDS, and unintended pregnancies.
  - North Carolina had the 14<sup>th</sup> highest rate of STDs (chlamydia, gonorrhea, and syphilis) in 2007.
  - Nearly half of all new STD infections occur in youth ages 15-24.
  - North Carolina had the 4<sup>th</sup> highest rate of HIV in 2006.\*
  - 45% of all births in the state are unintended.



# Reduce Risky Sexual Behavior: *Priority Recommendation*

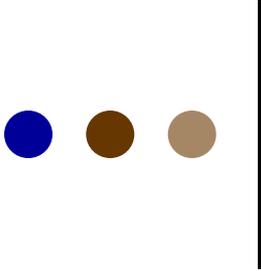
- North Carolina General Assembly (NCGA) recently changed the laws to require schools to teach comprehensive sexuality education.
  - School districts must create a consent process for parents.
- *Priority Recommendation:* Schools should adopt an opt-out consent process so that children will be enrolled in the comprehensive sexuality education unless parents specifically opt-out.

# 4 & 5. Prevent Substance Abuse and Improve Mental Health

- Substance abuse and dependence and mental health disorders are both problems themselves, and contribute to other health problems.
  - Approximately 8% of North Carolinians (age 12 or older) report alcohol or drug dependence or abuse.
  - 17% of 18-25 year olds, and 10% of people older than age 26, report serious psychological distress.

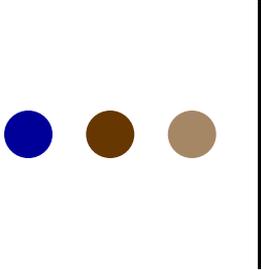
# ● ● ● | Prevent Substance Abuse and Improve Mental Health: *Priority Recommendation*

- *Priority Recommendation:* Develop and implement a comprehensive substance abuse prevention plan that includes:
  - An increased tax on beer and wine.
  - Implementation of comprehensive, community-based, evidence-based prevention programs that both prevent substance use and abuse, and improves emotional well-being.



# 6. Decrease Environmental Risks

- The environment in which we live affects our health.
  - Air and water pollution are both linked to certain health conditions including cancer.
  - North Carolina has the 15th highest rate of air pollution (2005-2007).
  - 34% of North Carolinians rely on well water.
- The built environment—including neighborhood design, land use patterns, and transportation—also affects health.
  - People with access to sidewalks, trails, and neighborhood parks are more likely to be active.
  - 60% of North Carolinians report they would increase their physical activity if they had more accessible trails.



# Decrease Environmental Risks

- The 2009 American Recovery and Reinvestment Act (ARRA) provided states with new funding to reduce environmental risks, promote sustainability, and support “green” initiatives.
  - NC received \$148 million through the EPA.
- *Recommendation:* The NCGA or Governor should create an interagency leadership commission to promote healthy communities, minimize environmental risks, and promote green initiatives.

# 7. Reduce Unintentional and Intentional Injuries

- Unintentional injury and violence are significant problems leading to death and disability for thousands of North Carolinians every year.
  - Injury leads to ~150,000 hospitalizations and 800,000 emergency department visits each year in NC.
  - Motor vehicle and other unintentional injuries were the 4th leading cause of death in North Carolina leading to 4,300 fatalities in 2007.
- Historically, North Carolina has not given the same priority to injury prevention as to other public health activities.

# ● ● ● | **Reduce Unintentional and Intentional Injuries: *Priority Recommendation***

- *Priority Recommendation:* North Carolina should create a high-level task force to reduce unintentional injuries and violence.
  - The Task Force should examine data, make evidence-based policy and program recommendations, monitor implementation, and examine outcomes to prevent and reduce injury and violence.

## 8. Reduce Vaccine- Preventable Diseases and Food-Borne Illnesses

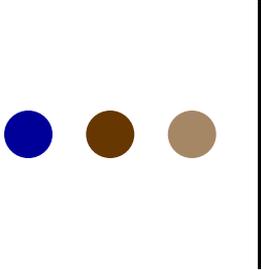
- Infectious diseases, including pneumonia and influenza, were the 10<sup>th</sup> leading cause of death in North Carolina in 2007.
  - Vaccines are available to prevent many, but not all, of these diseases.
- Food-borne illnesses are the most common infectious diseases causing 76 million illnesses, 325,000 hospitalizations, and 5,000 deaths every year in the US.
  - Food safety is regulated by multiple federal and state agencies that do not all provide the same level of oversight or protection.

# ● ● ● | **Reduce Vaccine Preventable Diseases & Food-Borne Illnesses: *Priority Recommendation***

- *Priority Recommendation:* The Division of Public Health should aggressively seek to increase the immunization rates for all vaccines recommended by the Centers for Disease Control and Prevention.
  - DPH should particularly monitor the immunization rates for vaccinations that are not currently part of the state's Universal Childhood Vaccine Distribution Program to see if rates drop.

# 9. Eliminate Racial and Ethnic Disparities

- Racial and ethnic minorities have poorer health status and experience worse health outcomes than non-minorities—even after adjusting for other socioeconomic factors (e.g. insurance coverage, income, etc).
  - This translates into lower life expectancies (72.1 years in NC versus 76.8 years for whites).
- Racial and ethnic minorities are also more likely to engage in, or be exposed to, some of the preventable risk factors that contribute to poor health.

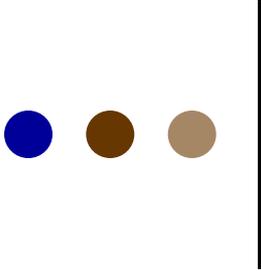


# Eliminate Racial and Ethnic Disparities

- Understanding disparities and their sources is important to target prevention activities.

## *Recommendations:*

- Public health should partner with trusted community leaders to improve the health-seeking behaviors of underserved communities.
- Strategies should be used to increase the linguistic and cultural competency of health care professionals.



## 10. Reduce Socioeconomic Health Disparities

- A person's income, wealth, educational achievement, and where they work and live can have profound health impacts.
  - People with higher incomes, more years of education, and who live in healthy and safe environments have longer life expectancies and better overall health outcomes.
  - Low-income adults and those with lower educational achievement are more likely to have certain chronic illnesses and engage in risky behaviors.

# Reduce Socioeconomic Health Disparities: *Priority Recommendations*

- Poverty: North Carolina had the 11<sup>th</sup> highest percentage of low-income people (more than one-third were below 200% FPG) in 2008.
  - *Priority Recommendation:* Increase economic security by increasing the state's Earned Income Tax Credit, and enrollment in the Supplemental Nutrition Assistance Program.
- Education: North Carolina has the 12<sup>th</sup> worst 4-year high school graduation rate in the country.
  - *Priority Recommendation:* Increase the high school graduation rate.

# Prevention Strategies in Schools, Worksites, and Clinical Settings

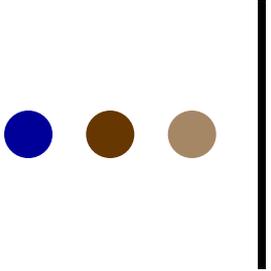
- School-aged children spend approximately one-third of their waking time per week in school.
- *Priority Recommendation:* Promote and enhance the Coordinated School Health Program (CSHP) in schools.
  - CSHP includes 8 focus areas to improve student and staff health: health education, physical education, health services, nutrition services, mental and behavioral health services, healthy school environment, health promotion for staff, and family and community involvement.
  - Partnership between DPI and DPH.

# Prevention Strategies in Schools, Worksites, and Clinical Settings

- Adults spend approximately one-half of their waking hours in the workplace during the work week.
- *Recommendation:* North Carolina should create a worksite wellness collaborative to encourage employers to offer comprehensive worksite wellness programs.

# Prevention Strategies in Schools, Worksites, and Clinical Settings

- Health care professionals can influence health choices of children and adults.
- *Priority recommendation:*
  - Expand health insurance coverage to more North Carolinians, so that they can access needed health services.
  - Enhance insurance coverage to cover all US Preventive Services Task Force's recommended preventive screening, counseling, and treatment.

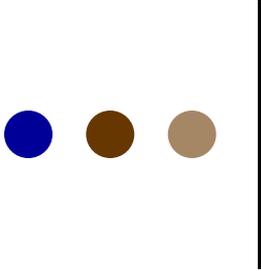


# Data

- Reliable data are needed to help identify North Carolina's most pressing health problems and the health risks contributing to those problems, and to ensure that our efforts to improve population health are producing meaningful results.
- *Recommendation:* North Carolina needs to enhance existing data systems and coordinate across data systems to ensure we have the needed data.

# Implementing Evidence-based Strategies Will Improve Population Health

- North Carolina has seen a steep decline in youth smoking by implementing multifaceted evidence-based interventions:
  - Examples: TRU social marketing campaign aimed at youth, 100% tobacco-free schools and hospitals, NC Quitline, increased tobacco taxes.
  - The dramatic decline in youth smoking rates is due to a concerted effort of multiple partners at the state and local level, although more work is still needed.

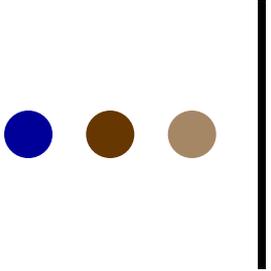


# Multifaceted Interventions: Healthy Eating/Physical Activity Example

<b>Individual/ Family</b>	<b>Eat healthy and exercise more; provide nutritious meals and snack choices</b>
<b>Clinical</b>	<b>Offer obesity screening and counseling</b>
<b>Schools</b>	<b>Implement child nutrition standards, high quality physical education, and evidence-based healthful living classes</b>
<b>Worksites</b>	<b>Institute worksite wellness programs; promote healthy foods and physical activity; provide coverage for obesity screening/counseling</b>
<b>Insurers</b>	<b>Pay for obesity screening, counseling, treatment</b>
<b>Community</b>	<b>Fund and implement <i>Eat Smart, Move More NC Obesity Plan</i>; promote menu labeling; build active living communities</b>
<b>Public Policies</b>	<b>Fund schools to provide nutritious meals and require physical education; fund <i>Eat Smart, Move More NC Obesity Prevention Plan</i></b>

# Implementing Evidence-based Strategies Will Improve Population Health

- ***Prevention for the Health of North Carolina: Prevention Action Plan*** includes evidence-based strategies, that, if followed, will lead to improved population health in North Carolina.
- Together, we can improve the health of North Carolina and move towards the ultimate goal of making North Carolina the healthiest state in the nation.



# Next Steps

- Further dissemination of the Prevention Action Plan.
  - Development of Prevention Action Steps targeted to specific audiences including individuals/families, communities, schools, employers, physicians/practitioners, hospitals, insurers, and policy makers/legislators.
- Development of Healthy North Carolina 2020 objectives.
- Launch of broader campaign to make North Carolina the healthiest state in the nation.

# NCIOM Prevention Task Force, Steering Committee, and Expert Consultants

- *Co-chairs:* Leah Devlin, Jeffrey Engel, William Roper, Robert Seligson
- *Task Force Members:* Thomas Bacon, Rep. Jeff Barnhart, Ronny Bell, Moses Carey Jr., Paula Hudson Collins, Lew Ebert, Calvin Ellison, Rep. Bob England, John Frank, Barbara Goodmon, Robert Greczyn, Greg Griggs, Kathy Higgins, Rep. Hugh Holliman, Olson Huff, Rep. Verla Insko, Sherman James, Polly Johnson, Tara Larson, William Lawrence Jr., Peter Lehmuller, Michael Lewis, Meg Molloy, Peg O'Connell, Robert Parker, Mary Piepenbring, Austin Pittman, Fran Preston, Barbara Pullen-Smith, William Pully, Sen. William Purcell, Sen. Joe Sam Queen, Kelly Ransdell, J. George Reed, Lynn Scott Safrit, George Saunders III, Pam Seamans, Vandana Shah, Florence Simán, William Smith, Michael Tarwater, Lisa Ward, Charles Willson, Joyce Young
- *Steering Committee Members:* Danielle Breslin, Paul Buescher, J. Steven Cline, Jennifer MacDougall, Ruth Petersen, Marcus Plescia, Meka Sales, Kristie Thompson
- *Expert Consultants:* Alice Ammerman, Carol Runyan

# Collaborating Partner and Supporters



A handwritten signature in black ink, which appears to be "J. B. Duke".

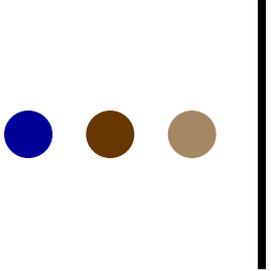
THE DUKE ENDOWMENT



# Prevention for the Health of North Carolina: Prevention Action Plan

- Full Report  
<http://www.nciom.org/deliver.php?productid=13>
- Issue Brief  
<http://www.nciom.org/deliver.php?productid=14>
- *North Carolina Medical Journal*  
<http://www.ncmedicaljournal.com/Jan-Feb-10/toc0110.shtml>





# For More Information

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