

North Carolina's Plan to Promote the Health of People with Disabilities

Everywhere, Everyday, Everybody
2010–2020



The North Carolina Office on Disability and Health is a partnership between the Division of Public Health of the Department of Health and Human Services and the FPG Child Development Institute at The University of North Carolina at Chapel Hill.

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Foreword

As co-chairs of the Advisory Committee of the NC Office on Disability and Health, we are honored to present *North Carolina's Plan to Promote the Health of People with Disabilities* to the public and to our many state and community partners. The Plan is designed to advance the integration of disability into the health promotion and disease prevention infrastructure within our state and increase the focus on health and wellness in the disability community. It calls upon all North Carolinians to share expertise and resources to build the state's capacity to improve the health of people with disabilities across the lifespan. The Plan also challenges all of us to tackle inaccessible environments, discriminatory attitudes, policies and norms that result in barriers to health, wellness, and quality of life for people with disabilities.

We encourage you to review the entire Plan and focus on the leading health indicators most relevant to your work and passion. An exciting feature of the NC Plan is its emphasis on concrete action steps to eliminate health disparities for all citizens of our state. Please take time to consider how you can turn your good intentions into a PLEDGE to take action to improve the health of people with disabilities by selecting at least one specific leading health indicator as your focus for this year. Share your ideas, successes and challenges with us so that together we make North Carolina a state where people with disabilities have the opportunity everyday and in all places to be healthy and participate in all aspects of community life.

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Executive Summary

Background

A person with a disability, like anyone else, is capable of being healthy, and can improve or worsen his or her health in many of the same ways. Due to other conditions that relate to their primary disabilities, some people with disabilities may start at the lower end of the health continuum.¹ This means that the road to better health may be longer and more arduous. Consequently, there is an even greater need to focus on access to health care and health promotion for people with disabilities, since a minor illness could compromise a person's functional ability and possibly lead to an earlier decline in health and dependency on others for care.² For many people with disabilities, an inaccessible environment, discriminatory attitudes, government policies and community norms often present more of a barrier to health, wellness, and quality of life than their disabling condition.³

"We need to make sure that people with disabilities receive the same quality and access to care as everybody else in the community."

A disability can be physical, mental, emotional, intellectual, or communication-related. It may result in substantial limitations in one or more major life activities and the limitations are expected to be permanent or long term (chronic) in duration. Disability can be present from birth or may occur later in life as a result of injury, chronic disease, or aging.⁴ Disability increases as one ages, and the severity can vary considerably from one person to the next. A disability can be visible or invisible, and range in severity. Some, but not all, people with disabilities use assistive equipment, such as a wheelchair, communication board, or assistive listening device.

One out of five North Carolinians will have a disability during their lifetime. People with disabilities experience more health disparities than people without disabilities, and these disparities are similar to those reported by other minority racial and ethnic groups.⁵ While we do not have a complete understanding of why disability is associated with health disparities, there is evidence that low socioeconomic status, higher rates of unemployment, lower educational attainment, limited access to preventive care, and the cost

of health care are among some of the underlying factors associated with disparities in health between persons with and without a disability.⁶

Decisions about health are influenced by many factors, including family and friends, health care professionals, and the community and environment in which a person lives. Consequently, the most effective approach to promoting health is a combination of efforts at multiple levels--individual, interpersonal, organizational, community, and public policy.⁷

The NC Plan

The overarching purpose of *North Carolina's Plan to Promote the Health of People with Disabilities* is to improve the health of people with disabilities and eliminate health disparities experienced by them. This can be achieved through planning and programs that enable all people to attain a high quality of life free of preventable disease, disability, injury, and premature death; creating social and physical environments that promote good health for people with disabilities; and promoting quality of life, healthy development and healthy behaviors across all life stages for people with disabilities.⁸

Intent

The North Carolina Plan is intended to:

- Identify the health-related priorities of people with disabilities;
- Increase public awareness and understanding of the health-related needs of people with disabilities;
- Provide goals and action steps that are applicable at the state and local level;
- Engage multiple partners to take actions to strengthen policies and improve practices that are driven by the best available evidence and knowledge; and
- Identify critical disability research, evaluation and data collection needs.⁹

Focus

The North Carolina Plan is focused around a set of leading health indicators (LHI). These are high-priority public health issues that are intended to help everyone more easily understand how healthy we are as a nation and state.

Process

The development of the NC Plan included a series of key informant discussions on each leading health indicator with people with disabilities, families, advocates, public health, state government, and the private sector. For each LHI, stakeholders were asked to identify public health priorities, current state initiatives, evidence-based practices, and needs and gaps experienced by people with disabilities. Based upon the key informant discussions, a review of the literature, and consultation with subject matter experts, five common topical domains were identified across all LHIs: Data, Policy, Media and Educational Campaigns, Health and Social Interventions, and Environment. Each LHI is organized with a goal statement, background information, data highlights, and measurable action steps for each of five domains:

- **Data**

Assure that data on children, youth, and adults with disabilities is collected, analyzed, and disseminated.

- **Policy**

Advance policies, regulations, and laws that assure access for people with disabilities across the lifespan.

- **Media and Educational Campaigns**

Assure that public awareness messages and campaigns are inclusive of people with disabilities across the lifespan.

- **Health and Social Interventions**

Advance the development and statewide implementation of health and social interventions that promote health for people with disabilities across the lifespan.

- **Environment**

Assure that sites meet or exceed the Americans with Disabilities Act Standards for Accessible Design, the accessibility regulations of the Rehabilitation Act of 1973, and other relevant laws.

Leading Health Indicators

- access to care
- emergency preparedness
- environmental health
- immunization
- injury and violence
- mental health
- obesity and overweight
- physical activity
- oral health
- responsible sexual behavior
- substance abuse
- tobacco use

The Plan's goal is to increase awareness of the health disparities experienced by people with disabilities, so that priorities are set and attention and resources are focused on solutions that will benefit individuals with disabilities, their family members, community and our state. Success will require resource sharing and knowledge transfer along with active cooperation and collaboration among multiple and diverse local, state and national partners.

North Carolina's vision is a state where people with disabilities have the opportunity everyday and in all places to be healthy and participate in all aspects of community life.

Acknowledgements

Developing a comprehensive *NC Plan to Promote the Health of People with Disabilities* across the life span was not an easy or quick undertaking. Although the NC Office on Disability and Health led this planning effort, it would not have been possible without the expertise and contributions of people with disabilities, family members, advocates, public health colleagues, state government, health care professionals, and community members. We are sincerely grateful for everyone's contributions during meetings, their willingness to provide feedback as the Plan was written and revised, and most importantly, their commitment to taking action to improve the health of children, youth and adults with disabilities.

We wish to extend a special thank you to Michael Sanderson, Unit Manager of the Best Practices Unit in the NC Division of Public Health, Children and Youth Branch. Michael served as the interim program manager for NCODH during the development of the Plan and provided invaluable guidance and support throughout the process. We also want to thank Harry Herrick, State Center for Health Statistics, for his assistance with the review of BRFSS surveillance data and the discussion of health disparities. Harry's support for and contributions to the work of the NCODH are greatly appreciated.

A list of those who contributed to the key informant meetings is included in the Appendices.

Vision Statement

North Carolina is a state where people with disabilities have the opportunity everyday and in all places to be healthy and participate in all aspects of community life.

Purpose

The overarching purpose of *North Carolina's Plan to Promote the Health of People with Disabilities* is to improve the health of people with disabilities and eliminate health disparities experienced by them. This can be achieved by enabling all people to attain a high quality of life that is free of preventable disease, disability, injury, and premature death; creating social and physical environments that promote good health for people with disabilities; and promoting quality of life, healthy development and healthy behaviors across all life stages for people with disabilities.⁸

The North Carolina Plan is intended to align with Healthy People 2020 and Healthy NC 2020 and:

- Identify the health-related priorities of people with disabilities;
- Increase public awareness and understanding of the health-related needs of people with disabilities;
- Provide goals and action steps that are applicable at the state and local level;
- Engage multiple partners to take actions to strengthen policies and improve practices that are driven by the best available evidence and knowledge; and
- Identify critical disability research, evaluation and data collection needs.⁹

Health

Health has been defined as “a complete state of physical, social and mental wellbeing and not merely the absence of disease.”¹⁰ Health is not a fixed state, but rather a dynamic one that shifts back and forth over a person’s lifetime. An individual’s health status is affected by access to care, individual choices and behaviors, genetics, the environment and social determinants.³ A person with a disability is able to be healthy, and can improve or worsen his or her health in many of the same ways as anyone else. The difference is that some people with disabilities may start at the lower end of the health continuum due to other conditions that relate to their primary disability.¹ This means that there is an even greater need to focus on access to health care and health promotion for people with disabilities since a minor illness could compromise a person’s functional ability and possibly lead to an earlier decline in health and dependency on others for care.² For many people with disabilities, an inaccessible

environment, discriminatory attitudes, government policies and community norms present more of a barrier to health, wellness, and quality of life than their disabling condition.³

The Role of Public Health

Public Health is the science and art of preventing disease, prolonging life and promoting health through the organized efforts and informed choices of society, communities, organizations, and individuals. Public health focuses on protecting and improving the health of communities through education, promotion of healthy lifestyles, and research for disease and injury prevention. Overall, public health is concerned with protecting the health of entire populations. These populations can be as small as a local neighborhood, or as big as an entire country.¹¹

Core public health functions include monitoring health status to identify community health problems; diagnosing and investigating health problems and hazards in the community, and evaluating the effectiveness, accessibility, and quality of personal and population based health services. Public health professionals try to prevent problems from happening or re-occurring through implementing educational programs, developing policies, administering services, and conducting research.¹²

Prevention and Health Promotion

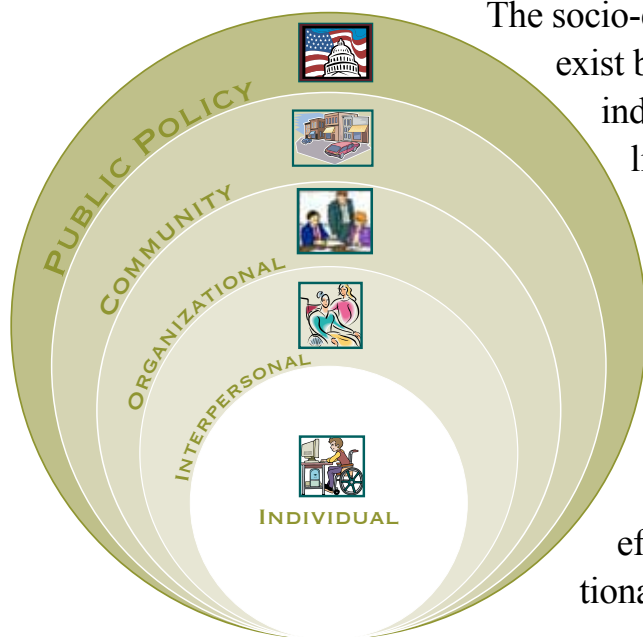
Prevention can save lives, improve quality of life, reduce the likelihood of secondary conditions, and, in some cases, decrease costs. Research has shown that several health behaviors, including tobacco use, exercise, nutrition, and substance use, can either positively or negatively affect an individual's health. However, we know that decisions about health are influenced by many factors, including family and friends, health care professionals, and the community and environment in which a person lives. Local, state and federal laws and policies can also have a major impact on the health of an individual, family and population.⁷

People with disabilities need accessible, relevant, and quality health promotion and disease prevention services as they are at risk for developing the same chronic conditions as the rest of the population and, in some instances, are at an increased risk.¹¹ Prevention must include self-care and management of health conditions, screening for early detection, appropriate and timely treatment, and early recognition and reduction of known risks. Health promotion for people with disabilities should reduce barriers to good health and include a focus on the reduction of secondary conditions (e.g., obesity, hypertension, pressure sores), maintenance of functional independence, and improved quality of life.¹²

Health promotion for people with disabilities should use theories and concepts drawn from a wide variety of disciplines such as health promotion, disability studies, and education; conduct evaluation that includes consumer satisfaction; emphasize outcomes data using disability-appropriate outcome measures; and ensure the on-going involvement of people with disabilities in the development, implementation and evaluation of health promotion programs.¹³

People with disabilities need to be supported to assume responsibility for their personal health status and lifestyle behaviors. Research has documented that some individuals with disabilities are unaware of their health risks and the need for screening and preventive services. Many people with disabilities also report that some health care providers focus on their disability and fail to deal with primary care issues and health and wellness.¹⁴

Social Ecological Model



The socio-ecological model recognizes the relationships that exist between the individual and their environment.¹⁵ While individuals are responsible for starting and maintaining lifestyle changes necessary to reduce risk and improve health, we must acknowledge that individual behavior is determined to a large extent by our social environment, e.g. community norms and values, regulations, and policies. As barriers to good health are lowered or removed, behavior change becomes more achievable and sustainable. The most effective approach to promoting health is a combination of efforts at all levels--individual, interpersonal, organizational, community, and public policy.¹⁶

Data: Its Importance and Limitations

Historically, people with disabilities have not been recognized as a distinct population and there has been limited data on the health status and health-related needs experienced by this population. Since surveillance serves as the foundation for public health action, it is critical that data on people with disabilities is collected, analyzed, and disseminated broadly, so that disparities, progress and emerging trends can be measured over time.

Currently, there are several surveys used nationally and in North Carolina that identify and track the health of persons with disabilities. National and state surveys include:

- US Census and American Community Survey (<http://www.census.gov/acs/www>)
- NC Behavioral Risk Factor Surveillance System (NC BRFSS) (<http://www.epi.state.nc.us/SCHS/brfss/>)
- NC Youth Risk Behavior Survey (NC YRBS) (<http://www.nchealthyschools.org/data/yrbs/>)
- Child Health Assessment and Monitoring program (CHAMP), (<http://www.epi.state.nc.us/SCHS/champ/>)
- National Survey of Children's Health (NSCH) (<http://childhealthdata.org/learn/nsch>) and
- Core Indicators Project (CIP) (<http://www2.hsri.org/nci/>)

Each survey includes questions that define and identify disability as a limitation in the ability to perform one or more major life activities. These data sources are referenced in the section on the leading health indicators.

It is important to acknowledge that all data systems have limitations. Currently, the surveys mentioned above contain slightly different disability-screener questions, thus making it challenging to compare disability data across data systems. In addition, due to the survey formats, some people with disabilities are left out of particular surveys. For example, the NC BRFSS is a random digit-dialed telephone survey. This survey would not identify persons who are deaf, those who live in congregate residential settings, or those without a phone. Similar limitations exist for all surveys and thus, people with disability may be under-represented in surveillance systems and reports. The limited availability of data on children and adults with disabilities presents a challenge to establishing baseline health data and monitoring progress and emerging trends. Despite these limitations, data from various surveys can serve as a resource for professionals, advocates, and policy makers as they set priorities, allocate resources, and design policies and services that are inclusive of, and meet the needs of, people with disabilities.

North Carolina's Plan to Promote the Health of People with Disabilities is focused around leading health indicators of Healthy People: access to care, environmental health, immunization, injury and violence, mental health, obesity and overweight, physical activity, responsible sexual behavior, substance abuse, and tobacco use. Emergency preparedness and oral health are also included given their importance to individual and community health.

The Definition and Measurement of Disability

A disability can be physical, mental, emotional, intellectual, or communication-related. Disability may result in substantial limitations in one or more major life activities and the limitations are expected to be permanent or long term (chronic) in duration. Disability increases as one ages, and the severity of disability also varies considerably from person to person. A disability can be visible or invisible. Some people with disabilities may use assistive equipment, such as a wheelchair, communication board, or

assistive listening device. Disability can be present from birth or occur later in life as a result of injury, chronic disease, or aging.⁴ The Americans with Disabilities Act (ADA) defines a person with a disability as “someone who has an impairment that causes a substantial limitation in a major life activity, or is regarded as having a disability, or has a record of a past disability.”¹⁷

According to US Census Bureau, over 54 million people (18% of the US population) have some level of disability and 35 million people (12%) have a severe disability.¹⁸ These 54 million Americans are roughly equal to the combined total populations of California and Florida. The BRFSS includes two disability questions that address activity limitations and use of special equipment. The questions are included in Appendix A. Since 1998 North Carolina has used two additional screener questions that ask if the individual considers themselves to have a disability and if they have difficulty with learning, remembering or concentrating due to a health problem. These questions are included in Appendix A.

Adults with Disabilities

According to the 2009 NC BRFSS, 31% of persons 18+ years report having a disability, an increase from 25% in 2001. Ethnic and racial minorities report higher rates of disability, with Native Americans at the highest rate of 46% and African Americans reporting a rate of 37%. It is clear that the occurrence of disability increases sharply among middle-aged adults (45–64 years) and continues to rise among those over age 75. Close to half (48.6%) of those with less than a high school education reportedly have a disability, compared to 21% for adults with a college education. The presence of a disability was also strongly associated with very low household income. About 54% of individuals with a total household income of less than \$15,000 reported a disability, compared to only 17% in the top income category (Table 1).

**Table 1:
2009 N.C. BRFSS Percentage of Adults Ages 18+
with a Disability by Gender, Race, Ethnicity, Age, Education
and Household Income**

Demographic Characteristics	Total Number of Respondents	Number of Respondents with a Disability	Percent of Respondents with a Disability*
Total	12,475	4,605	31
Gender			
Male	4,647	1,648	30
Female	7,828	2,957	32
Race/Ethnicity			
White	9,944	3,579	30
African American	1,697	717	37
Native American	293	158	46
Hispanic	399	100	23
Age			
18-24	361	85	25
25-34	1,119	207	19
35-44	1,841	393	22
45-54	2,452	795	32
55-64	2,661	1,080	40
65-74	2,256	1,015	43
75+	1,711	1,000	58
Education			
Less than High School	1,590	972	49
High School or GED	3,668	1,461	35
Some post High School	3,191	1,140	31
College Graduate	4,008	1,022	21
Household Income			
Less than \$15,000	1,370	917	54
\$15-\$24,999	1,975	945	41
\$25-\$34,999	1,283	492	35
\$35-\$49,999	1,614	488	27
\$50,000-\$74,999	1,734	468	24
\$75,000+	2,665	487	17

*Percentages are weighted to the NC adult population characteristics and cannot be calculated directly from the numbers in the table.

Health Disparities

Many people with disabilities experience more health disparities than people without disabilities, and these disparities are similar to those reported by other minority racial and ethnic groups.^z The NC BRFSS has documented that people with disabilities experience health disparities including a greater likelihood of not seeing a doctor due to cost of care and lower rates of access to oral health care and preventive health screenings. However, people with disabilities do report comparable access to routine check-ups and having a personal doctor or health care provider. Although the rate of immunization for persons with disability is slightly better than for those without disability, one would expect a higher rate of immunization of given the fact that persons with disabilities tend to be older.

Table 2:
Access to Care and Preventive Screenings Among Adults
Ages 18+ with and without a Disability: NC 2009 BRFSS Survey

	Percentage with Disability*	Percentage without a Disability*
Access to Care		
Could not see a doctor due to cost (2009)	26	39
Last saw a dentist 5 or more years ago, or never (2008)	17	11
Have one person as your personal doctor (2009)	68	67
Routine check up in the past 12 months (2009)	74	71
Preventive Screenings		
Immunization/flu shot past year (2008)	46	39
Women age 40 and older who have had a mammogram in the past 2 years (2008)	76	80
Had blood pressure taken within the past 12 months	6	11

* Estimated % of non-institutionalized adults with and without a disability.

Adults with disabilities are significantly more likely to report no physical activity within the past 30 days and also to be obese (Table 3). This is of concern, since obesity increases the risk of developing conditions such as diabetes and heart disease. The rate of current smoking is substantially higher for adults with disabilities, another significant concern given the fact that smoking is the leading cause of preventable death in the US. Similarly, the rate of kidney and heart disease is more than three times higher among persons with a disability.

**Table 3:
Health Risk Behaviors and Chronic Disease Among Adults
Ages 18+ with and without a Disability: NC BRFSS Survey 2009**

	Percentage with Disability*	Percentage without a Disability*
Health Risk Behaviors		
No leisure time physical activity in past month	39	21
Obese	37	28
Current Smoker	27	17
Chronic Disease		
Diabetes diagnosis	19	6
Hypertension diagnosis	48	26
Cardiovascular disease history (heart attack, coronary heart disease, or stroke)	19	5
Current asthma	13	6

* Estimated % of non-institutionalized adults with and without a disability.

While we do not have a complete understanding of why disability is associated with health disparities, there is evidence that low socioeconomic status, higher rates of unemployment, lower educational attainment, limited access to preventive care and health promotion, the cost of health care and inadequacy of health insurance coverage, as well as attitudinal, communication, and environmental barriers, are among some of the underlying causes.

Children with Disabilities

Children with special health care needs (CSHCN) are defined as children who need prescription medications or have an elevated need for medical, mental health, or educational services due to a medical, behavioral, or other health condition that has lasted or is expected to last for at least 12 months.¹⁹ NC CHAMP is a follow-up to the NC BRFSS and invites all NC BRFSS respondents with children under the age of 18 living in their households to participate in the NC CHAMP survey. The survey asks questions related to a wide variety of health-related topics, including breast feeding, early childhood development, health care access and utilization, oral health, mental health, physical health, nutrition, physical activity, family involvement, and parent opinion on topics such as tobacco and childhood obesity. In North Carolina, the 2006–2007 NC CHAMP survey showed that 22% of children were classified as CSHCN by this definition.

Table 4:
2006-2007 NC CHAMP Percentage of Children with Special Health Care Needs (CSHCN)* by Gender, Race, Ethnicity, and Age

	Total Number of Respondents	Respondents who are CSHCN	Percent of CSHCN
Total	5,742	1,296	22
Male	2,947	742	24
Female	2,795	554	20
Caucasian	4,040	967	23
African American	935	230	24
Other Minority**	759	99	13
Hispanic	587	56	9
Not Hispanic	5,145	1,236	23
Under 5	1,480	179	13
5–10	1,721	441	25
11–13	985	267	27
14–17	1,556	409	26

*Percentages are weighted to population characteristics and cannot be calculated directly from the numbers in the table.

**Includes American Indian, Asian, and other minority races.

Parents of children with special health care needs are significantly more likely to rate their child’s health as “fair” or poor” and these children are more likely to miss school due to illness or injury and have asthma (Table 5).

Table 5: NC CHAMP 2006-2007 data on Health Behaviors, Health Conditions and Access to Care

	Percentage for CSHCN*	Percentage for non-CSHCN
General health: parental rating of child’s health as ‘fair or poor’	8	2
Missed 2 or more weeks of school due to illness or injury	16	7
Doctor has ever told parent that child has asthma	34	11
Child still has asthma	28	5
Obese (BMI ≥ 95 sex and age percentile)	16	14
Has not been to a dentist within the past year	14	25
On a typical day spends no time in physically active play	3	2

* Estimated % of CSHCN defined as those who need prescription medications or have an elevated need for medical, mental health, or educational services due to a chronic medical, behavioral, or other health condition.

The Leading Health Indicators

The leading health indicators used in the NC Plan are a set of high-priority public health issues that are intended to help everyone more easily understand how healthy we are as a nation and state. The indicators help us identify important changes we can make to improve our own health as well as the health of our families and communities. The LHIs used in the NC plan are access to health care, emergency preparedness, environmental health, injury and violence, immunization, mental health, oral health, obesity, overweight, and physical activity, responsible sexual behavior, substance abuse, and tobacco use.

Developing North Carolina's Plan to Promote the Health of People with Disabilities

This Plan builds upon two previous plans: *North Carolina Plan for Promoting the Health of People with Disabilities 2003-2008* and *1997-2002 Plan: North Carolina Plan for Prevention of Secondary Conditions Experienced by Persons with Disabilities*.²¹

The planning process included a series of key informant discussions on each leading health indicator with people with disabilities, families, advocates, public health, state government, and the private sector. For each LHI, stakeholders were asked to identify public health priorities, current state initiatives, evidence-based practices, needs and gaps experienced by people with disabilities. Members of the NCODH Advisory Council, community partners, and families have reviewed all elements of the Plan through multiple rounds of feedback.

Based upon the key informant discussions, common topical domains were identified across all LHIs: Data, Policy, Media and Educational Campaigns, Health and Social Interventions, and Environment. Each LHI has been organized with a goal statement, rationale, data highlights, and action steps for each of the five domains.

Health Care Reform Highlights

On March 23, 2010, the Patient Protection and Affordable Care Act was signed into law. It is the most comprehensive piece of health care reform passed in over fifty years. The new law will make health care more affordable for working people, cover millions of Americans without health insurance, and strengthen Medicare and Medicaid. A comprehensive set of services has been recommended as part of the essential health care benefits package and includes hospital services, professional services, prescription drugs, rehabilitation and habilitative services, mental health and substance abuse services, maternity care, well-baby and well-child care, oral health and vision services for children under the age of 21 years.²²

The Affordable Care Act of 2010 provides new funding for prevention, long term care services, safety net providers, and improving quality of care. Some of the focus areas include: healthy lifestyle changes, reduction and control of chronic diseases, health disparities, public health infrastructure, obesity and tobacco reduction, oral health, immunizations and worksite wellness. There will be new funding for community health centers and school-based health centers and training and distribution of health care professionals.

Health care reform also includes expanded services and supports for community-based living options for people with disabilities, increased use of health information technology and improved collection and reporting of data on disability and access to care.¹⁴

North Carolina's Plan to Promote the Health of People with Disabilities is aligned with the goals of health care reform and provides the foundation for North Carolina to be a state where people with disabilities have the opportunity everyday and in all places to be healthy and participate in all aspects of community life.

Access to Health Care



Goal

Assure access to comprehensive, high quality health care services, including preventive health services, for all North Carolina residents with disabilities (Adapted from *Healthy Carolinians*, 2010).

Rationale

Over the past decade, family health insurance premiums for North Carolina workers rose five times more quickly than median earnings. On average, health care premiums for families rose by 97 percent, while median earnings rose by only 18 percent.²³ While getting and keeping health insurance coverage and quality health care is a critical issue for everyone, people with

Health care professionals need to see us as people. People who need all the same preventive guidance and health care services that all others receive.

—*Woman with a disability*

disabilities face additional barriers to receiving quality health care. Barriers include physically inaccessible health care locations, exam and diagnostic equipment that cannot be adjusted for a range of functional needs, and policies or practices that do not meet the communication and accommodation needs of patients with various disabilities. While federal laws, such as the Americans with Disabilities Act

of 1990, as well as many state laws, prohibit discrimination on the basis of disability, optimal health care access for people with disabilities has not yet been achieved.¹⁴ Health care reform provides an important opportunity to improve access to care for people with disabilities, but it will require con-



stant oversight to make sure that the new laws, regulations, and practices are implemented to meet the needs of people with disabilities.²²

In the United States:

- People with disabilities are more than twice as likely to postpone needed health care because they cannot afford it.¹⁴
- People with disabilities are four times more likely to have special needs that are not covered by their health insurance.¹⁴

Selected NC Disability Data

- 26% of adults with a disability report that within the past 12 months they could not see a doctor because of the cost, in comparison to 13% of adults without a disability (NC BRFSS, 2009).
- Only 63% of women with a disability age 45 and older report having a mammogram in the past 12 months (NC BRFSS, 2008).
- Only 33% of women over 40 with an intellectual disability living at home with their parents had a mammogram within the past 2 years (Core Indicators Project, 2008–09).
- Only 29% of men over 50 with an intellectual disability living in the community have had a PSA test within the past year (Core Indicators Project, 2007–2008).
- Only 59% of children with special health care needs (CSHCN) needing care coordination in the past 12 months received effective care coordination, a component of a Medical Home (National Survey of Children's Health, 2007).

Access to Health Care

- 13% of CSHCN had problems getting specialist care during the past 12 months (NSCH, 2007).
- Only 38% of parents of CSHCN report that a doctor or health care provider has ever given them or their child a written plan to help them manage their condition as they become an adult (CHAMP, 2009).

Data

Assure that data on access to health care for children, youth, and adults with disabilities is collected, analyzed, and disseminated.

- Action Step:** Adopt the use of standardized questions to include and identify people with disabilities in applicable North Carolina health care data systems.
- Action Step:** Report access to health care data in multiple formats to diverse audiences including policy makers, public health professionals, people with disabilities, families, care providers, health care professionals, advocacy and service organizations.
- Action Step:** Utilize data to identify and prioritize documented health disparities among people with disabilities and develop appropriate efforts.

Policy

Advance policies, regulations, and laws that assure access to health care for people with disabilities across the lifespan.

- Action Step:** Promote the adoption of patient centered medical homes for people with disabilities.
- Action Step:** Support the participation of people with disabilities and families in health related state and local advisory groups.
- Action Step:** Promote accessible communication through the provision of appropriate accommodations, such as assistive listening devices, qualified and licensed sign language interpreters, and speech communication devices and strategies.

- d) **Action Step:** Support enrolling uninsured children into Medicaid or the Children’s Health Insurance Program (CHIP) by simplifying enrollment and re-enrollment processes (e.g., express lane eligibility; automatic renewal; online automated enrollment/re-enrollment options; premium assistance programs; etc.)
- e) **Action Step:** Conduct and disseminate research on the health care needs and experiences of people with disabilities.

Media and Education Campaigns

Assure that public awareness messages and campaigns on access to health care are inclusive of people with disabilities across the lifespan.

- a) **Action Step:** Develop media campaigns and resources that are accessible and inclusive of people with disabilities through the use of diverse images of persons with disabilities, person first language, varied literacy levels, and alternate formats.

- b) **Action Step:** Foster disability awareness and development of specialized knowledge and skills by health care professionals for treating people with disabilities of all ages.

- c) **Action Step:** Promote outreach to people with disabilities, families, and care providers, by providing information on access to health care through state wide information and referral services, such as CARE-LINE, NCcareLINK and the NC Healthy Start Foundation (<http://www.ncdhhs.gov/ocs/careline.htm> and <http://www.nchealthystart.org/public/childhealth/index.htm>).

Breast cancer is the 2ND leading cause of cancer death for women. Women with disabilities should have equal access to breast health education and breast cancer screening and should always be included as a target audience when marketing about breast cancer.

—*Health care professional*

Access to Health Care

- d) **Action Step:** Develop partnerships with organizations who serve people with disabilities to assure that individuals and families learn about publicly funded health insurance programs and resources.
- e) **Action Step:** Support campaigns that educate parents about childhood development and encourage developmental screenings and evidence based interventions, such as the CDC campaign, *Learn the Signs. Act Early* (<http://www.cdc.gov/ncbddd/actearly/index.html>).

Health and Social Interventions

Advance the development and statewide implementation of health and social interventions that promote access to health care for people with disabilities across the lifespan.

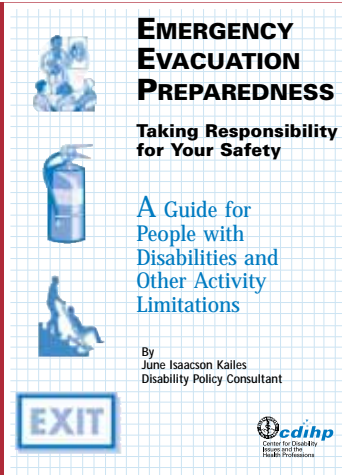
- a) **Action Step:** Provide education and resources for youth and adults with disabilities to effectively manage their health and advocate for necessary accommodations, such as assistive technology and accessible medical equipment.
- b) **Action Step:** Support the training of health care providers to address transition from child to adult-oriented health care, including health care transition plans and discussions on continuous health insurance coverage (www.medicalhomeimprovement.org).
- c) **Action Step:** Support service providers, including residential, employment, educational, and advocacy, to include preventive health services when addressing the health and well-being of persons with disabilities.

Environment

Assure that sites providing health care meet or exceed the Americans with Disabilities Act Standards for Accessible Design, the accessibility regulations of the Rehabilitation Act of 1973, and other relevant laws (<http://www.ada.gov/stdspdf.htm>, <http://www.dol.gov/dol/topic/disability/ada>).

- a) **Action Step:** Provide training and technical assistance on the Americans with Disabilities Act and universal design principles to ensure health care facilities, services, and programs are accessible to people with disabilities (<http://www.ncsu.edu/project/designprojects/udi/>).
- b) **Action Step:** Disseminate information on Section 508 of the Rehabilitation Act of 1973, the Web Accessibility guidelines of the World Wide Web Consortium, and other relevant guidelines and laws pertaining to accessible information technology (<http://www.section508.gov/index.cfm>).
- c) **Action Step:** Provide information on the use of financial incentives, including federal tax deductions, to remove environmental barriers (<http://www.ada.gov/taxcred.htm>).
- d) **Action Step:** Promote the availability of accessible medical equipment, such as accessible exam tables, accessible scales, and mammogram equipment, in diverse health care facilities (<http://www.rerc-ami.org/ami/tech/>).
- e) **Action Step:** Promote accessible transportation systems through the provision of appropriate accommodations, funding, and training, such as accessible paratransit and main line routes and vehicles, training for drivers and customer service personnel, and travel training for riders with disabilities (www.seniortransportation.easterseals.com).

Emergency Preparedness & Response



Goal

Assure that the state's overall preparation, response, and recovery efforts address the impact of disasters upon children and adults with disabilities in North Carolina and that individuals, families and households take personal responsibility for their own safety (Adapted from the mission of the NC Division of MH/DD/SAS as it relates to disasters).

Rationale

Emergency preparedness and response has become a renewed priority as a direct response to the devastation of the terrorist attacks of September

11, 2001 and recent devastating natural disasters. A study of the experiences of Hurricane Katrina evacuees documented a need for better plans for emergency communication and evacuation of low-income residents and citizens with disabilities.²⁴

Natural disasters and terrorism instantly result in more people with new disabilities and functional limitations. North Carolina is a state particularly vulnerable to natural,

weather-related disasters, such as hurricanes, flooding, and tornadoes. Following any type of natural disaster, emergency event or public health crisis, officials must be prepared to respond and meet the needs of the

I know that I have to plan ahead about the supplies and help that I will need during an emergency. I have to take charge and plan for my own safety.

—Person with a disability



affected community. Preparedness officials need to ensure that they are including people with disabilities in the planning, training, exercises, and response activities carried out at the community level.

Emergencies can intensify an individual's vulnerabilities. For example, loss of mobility equipment may cause independent wheelchair users to become totally reliant on others for mobility. Research suggests that home preparation for a disaster is less likely among persons with disabilities and that they are less likely to evacuate their home or community, but will likely need greater assistance when they do so.²⁵ All individuals, including people with disabilities, should take time before a disaster to plan for survival at home, in a shelter, or elsewhere in the event of an actual emergency. By planning ahead people with disabilities increase the likelihood that they will stay safe, healthy, informed, mobile, and independent during a disaster.

In the United States:

- Only 56 % of individuals reported having “supplies set aside in their home to be used only in the case of a disaster.”²⁶
- Only 44 % of individuals reported having a household emergency plan “that included instructions for household members about where to go and what to do in the event of a disaster.”²⁶
- Nearly 4 in 10 individuals said they would expect to need help to evacuate or get to a shelter in the event of a disaster.²⁶

Emergency Preparedness & Response

Selected Disability Data

- 28% of people responding to a national disaster reported having a physical or other disability or indicated they lived with and/or cared for someone with a physical or other disability that would affect their capacity to respond to an emergency situation.²⁶
- Only 43% of emergency managers had some idea of the possible number of persons with mobility impairments within their jurisdictions.²⁷

Data

Assure that data on emergency preparedness and response on children, youth, and adults with disabilities is collected, analyzed, and disseminated.

- Action Step:** Adopt the use of standardized questions to include and identify people with disabilities in applicable North Carolina emergency preparedness data systems.
- Action Step:** Establish an adequate data collection system that will assess the impact of disasters and monitor the outcomes of the implementation of disaster plans for people with disabilities.
- Action Step:** Disseminate emergency preparedness and response data in multiple formats to diverse audiences including policy makers, public health professionals, individuals with disabilities, families, care providers, health care professionals, and advocacy and service organizations.
- Action Step:** Utilize data to identify and prioritize documented disparities among persons with disabilities and develop appropriate efforts.

Policy

Advance policies, regulations, and laws that assure the emergency preparedness and response needs of people with disabilities are addressed.

- a) **Action Step:** Review current North Carolina emergency preparedness and response policies and integrate the needs of people with disabilities across governmental activities and operations.
- b) **Action Step:** Prioritize individuals with disabilities and families for accessible disaster housing assistance and expedited transition into permanent housing.
- c) **Action Step:** Promote accessible communication through the provision of appropriate accommodations such as assistive listening devices, qualified and licensed sign language interpreters, and speech communication devices and strategies.
- d) **Action Step:** Support the participation of people with disabilities and families in emergency preparedness and response related state and local advisory groups.
- e) **Action Step:** Implement the recommendations of the NC Disability and Elderly Emergency Management Task Force (http://www.nccrimecontrol.org/div/em/documents/DEEM_Report_of_Recommendations.pdf).
- f) **Action Step:** Support the development and maintenance of functional registries that include people with disability for emergency preparedness and response planning purposes. (http://www.jik.com.disasater_plan.html)
- g) **Action Step:** Conduct and disseminate research on the emergency preparedness and response experiences of people with disabilities.

Given our state's susceptibility to a wide range of disasters, it is important that responders and those in the disability community work together to improve communication, cooperation and coordination so we can ensure that everyone has access and support during an emergency or evacuation.

—*Disability services professional*

Emergency Preparedness & Response

Media and Education Campaigns

Assure that public awareness messages and campaigns on emergency preparedness and response are inclusive of people with disabilities.

- a) **Action Step:** Develop campaigns and resources that direct people with disabilities and care providers to be pro-active in planning for their personal safety and provide information about available local and state resources.
- b) **Action Step:** Develop public media campaigns and resources that are accessible and inclusive of people with disabilities through the use of disability images, person first language, literacy level, and alternate formats.
- c) **Action Step:** Foster disability awareness and development of specialized knowledge and skills by emergency planners and responders for serving people with disabilities of all ages.

Health and Social Interventions

Assure the development and statewide implementation of health and social interventions to promote emergency preparedness for people with disabilities across the lifespan.

- a) **Action Step:** Develop and disseminate fact sheets and toolkits for people with disabilities so they are supported in being proactive in planning for their personal safety (http://www.jik/disaster_plan.html).
- b) **Action Step:** Promote the delivery of educational programs and resources to families, advocates, and care providers to enable them to act as intermediaries for disaster planning and response when necessary.
- c) **Action Step:** Assure that NC Healthful Living Education Standard Course of Study and Grade Level Competencies provides appropriate emergency preparedness and response education to students with disabilities and is made available to all students, regardless of classroom settings (<http://www.dpi.state.nc.us/curriculum/healthfulliving/scos>).

Environment

Assure that sites involved in emergency planning and preparedness meet or exceed the Americans with Disabilities Act Standards for Accessible Design, the accessibility regulations of the Rehabilitation Act of 1973, and other relevant laws (<http://www.dol.gov/dol/topic/disability/ada>).

- a) **Action Step:** Support training and technical assistance on the Americans with Disabilities Act and universal design principles to local, regional and state emergency preparedness and response providers (http://www.ncsu.edu/project/design_projects/udi).
- b) **Action Step:** Assure the provision of safe, accessible and secure mass care shelter environments and access to essential services and supplies for people with disabilities.
- c) **Action Step:** Assure emergency preparedness and response transportation systems are sufficient and accessible to people with disabilities during emergency evacuations.
- d) **Action Step:** Disseminate information on Section 508 of the Rehabilitation Act of 1973, the Web Accessibility guidelines of the World Wide Web Consortium, and other relevant guidelines and laws pertaining to accessible information technology (<http://www.section508.gov/index.cfm>).
- e) **Action Step:** Provide information on the use of financial incentives, including federal tax deductions, to remove environmental barriers (<http://www.ada.gov/taxcred.htm>).
- f) **Action Step:** Promote accessible transportation systems through the provision of appropriate accommodations, funding and training, such as accessible paratransit and main line routes and vehicles, training for drivers and customer service personnel, and travel training for riders with disabilities (www.seniortransportation.easterseals.com).

Environmental Health



Goal

Assure a healthy living environment for people with disabilities by increasing public awareness of and action on environmental health issues (Adapted from *The Surgeon General's Call to Action to Promote Healthy Homes*, 2009).

Rationale

Environmental factors play a central role in human development, health, and disease. A poorly constructed and maintained living environment increases the risk for injury and illness. Factors influencing health and safety in homes, schools, work places, and communities include structural and safety aspects of the home, quality of indoor air and water, and the presence of toxic chemicals. These hazards can result in fire and fall-related injuries, poisonings, cancer, and asthma.²⁸

We need to promote best practices for healthy indoor and outdoor environments so that everyone's home, work and school protects them from harm.

—Family member

People with disabilities may be at greater risk of secondary health effects from toxic exposures than individuals without disabilities. The health impacts of adverse living environments may also pose a greater risk for people who already have compromising health issues.²⁹ Additionally, certain construction characteristics can affect the accessibility of one's home, neighborhood, and community, thereby enhancing or limiting participation in the community.



In the United States

- Carbon monoxide exposure is responsible for approximately 450 deaths and more than 15,000 emergency department visits annually; 64% percent of these exposures occurred in the home.³⁰
- 7% of adults and 9% of children currently have asthma.³¹
- Between 1999 and 2004, an estimated 240,000 children between the ages of 1 and 5 had elevated blood lead levels as a result of lead paint hazards in and around their homes.³²

Selected Disability Data

- Approximately 5.5 million people with disabilities in the United States face barriers to community participation because of inaccessible building design or the absence of sidewalks and curb cuts.³³
- People with disabilities and those who live in poverty and in rural areas are the groups most likely to live in homes without working smoke alarms.³⁴
- 19% of people with a disability report having asthma compared to 11% of people without a disability (NC BRFSS, 2009).
- 39% children and adolescents with special health care needs have visited the hospital emergency room or urgent care clinic due to asthma compared to 18% of people without disabilities (NC CHAMP, 2009).

Environmental Health

Data

Assure that data on environmental health issues for children, youth, and adults with disabilities is collected, analyzed, and disseminated.

- a) **Action Step:** Adopt the use of standardized questions to include and identify people with disabilities in applicable North Carolina environmental health data systems.
- b) **Action Step:** Report data on environmental health in multiple formats to diverse audiences including policy makers, public health professionals, individuals with disabilities, families, care providers, health care professionals, and advocacy organizations service organizations.
- c) **Action Step:** Utilize data to identify and prioritize documented disparities among persons with disabilities and develop appropriate efforts.

Policy

Advance policies, regulations, and laws that address environmental health recommendations and assure the needs of people with disabilities are addressed.

- a) **Action Step:** Promote screening for lead poisoning in high risk populations; all children receiving WIC and Medicaid, pregnant women and women of child bearing age, and ensure these programs are inclusive of people with disabilities.
- b) **Action Step:** Promote accessible communication with individuals with disabilities which is effective and includes the availability of appropriate assistive listening devices, qualified and licensed sign language interpreters.
- c) **Action Step:** Support the participation of individuals with disabilities and families in environmental health related state and local advisory groups.
- d) **Action Step:** Promote awareness of, and compliance with, the United States Department of Justice Fair Housing Act to ensure, safe, affordable, and accessible homes (www.justice.gov/ctr/about/hce/housing).
- e) **Action Step:** Conduct and disseminate research on the environmental health experiences of people with disabilities.

Media and Education Campaigns

Assure that public awareness messages and campaigns on environmental issues are inclusive of people with disabilities across the lifespan.

- a) **Action Step:** Develop media campaigns and resources that are accessible and inclusive of people with disabilities through the use of diverse images of persons with disabilities, person first language, varied literacy levels, and alternate formats.
- b) **Actions Step:** Promote environmental health programs and tools such as the North Carolina Asthma Program, asthma fact sheets, and school guides for teachers, families, and care providers (<http://www.asthma.ncdhhs.gov/>).
- c) **Action Step:** Assure that the NC Healthful Living Education Standard Course of Study and Grade Level Competencies provides appropriate environmental health education to students with disabilities and is made available to all students, regardless of classroom setting (<http://www.dpi.state.nc.us/curriculumhealthfulliving/scos>).

People with disabilities, chronic medical conditions, and who are economically disadvantaged are more likely to be adversely impacted by degraded outdoor and indoor environments and suffer more serious health outcomes than the general population.

—Public Health professional

Environmental Health

Health and Social Interventions

Assure the development and statewide implementation of health and social interventions to promote healthy environments for people with disabilities across the lifespan.

- a) **Action Step:** Educate people with disabilities, families, care providers, and advocates on how to improve the quality of their indoor and outdoor environment, including exposure to lead, asbestos, and pesticides (www.epa.gov).
- b) **Actions Step:** Provide tools and resources to service providers, including residential, employment, educational, and advocacy, on environmental health issues and how to reduce or eliminate unsafe exposures for people with disabilities (www.epa.gov).

Environment

Assure that sites providing environmental health education, screening and services meet or exceed the Americans with Disabilities Act Standards for Accessible Design, the accessibility regulations of the Rehabilitation Act of 1973, and other relevant laws (<http://www.ada.gov/stdspdf.htm>, <http://www.dol.gov/dol/topic/disability/ada>).

- a) **Action Step:** Promote the adoption of Visitability (inclusive home design) and smart growth development to ensure access to homes that support social participation, safety, affordable housing, and positive environmental outcomes (<http://www.epa.gov/smartgrowth/index.htm>) (www.concretechange.org).
- b) **Action Step:** Provide information on Section 508 of the Rehabilitation Act of 1973, the Web Accessibility guidelines of the World Wide Web Consortium, and other relevant guidelines and laws pertaining to accessible information technology (<http://www.section508.gov/index.cfm>).
- c) **Action Step:** Provide information on the use of financial incentives, including federal tax deductions, to remove environmental barriers (<http://www.ada.gov/taxcred.htm>).
- d) **Action Step:** Promote accessible transportation systems through the provision of appropriate accommodations, funding and training, such as accessible paratransit and main line routes and vehicles, training for drivers and customer service personnel, and travel training for riders with disabilities (www.seniortransportation.easterseals.com).

Immunization



Goal

Increase the number of North Carolinians with disabilities throughout the lifespan who are age-appropriately vaccinated (Adapted from the mission of the NC Immunization Branch).

Rationale

Vaccine-preventable disease levels are at or near record lows. However, high immunization coverage levels cannot be taken for granted. To continue to protect America's children and adults, we must obtain maximum immunization coverage in all populations, by establishing effective partnerships, conducting reliable scientific research, implementing immunization systems, and ensuring vaccine safety.³⁵

This is an emotional issue for many people. Parents and families need accurate information from someone they trust, so that they can make informed choices about immunization and their family's health.

—Parent

Vaccines can prevent a disease from occurring in the first place, rather than attempting to cure it after the fact. Vaccinations are one of the best ways to put an end to the serious effects of certain diseases.³⁶ Vaccines protect not only individuals but entire communities and are vital to the public health goal of preventing diseases. If we stopped immunizations, diseases that are almost unknown would stage a comeback. To continue to protect North Carolina's children, adolescents, and adults, we must obtain maximum immunization coverage in all populations, including people with disabilities.³⁷



In the United States:

- Only 66% adults aged 65 years and over received an influenza vaccination during the 2006–2007 vaccination periods (National Health Interview Survey, 2009).
- Only 35% of younger high-risk adults received an influenza vaccination during the 2006–2007 vaccination period (National Health Interview Survey, 2009).
- Only 11% of women aged 19–26 years had received at least one HPV vaccination (National Health Interview Survey, 2009).
- Only 6% of adults aged 18–64 years have received the Tetanus, Diphtheria and Pertussis (Tdap) vaccination (CDC, 2010).
- Only 38% of adolescents aged 11–18 years have received the Tdap vaccination (CDC, 2010).

Selected NC Disability Data

- Only 47% of adults with disabilities report receiving a flu shot within the past 12 months (NC BRFSS, 2009).
- Only 40% of adults with disabilities report ever having received a pneumonia shot (NC BRFSS, 2009).
- Only 39% of adults with intellectual disabilities living in their parents' home had a flu vaccination within the past year (Core Indicators Project, 2008).
- 67% of parents of adolescents with special health care needs indicate it would be very helpful to learn about immunization shots for teens (NC CHAMP, 2008).

Immunization

- Only 20% of adolescents with special health care needs have had the meningitis vaccine (NC CHAMP, 2008).

Data

Assure that data on children, youth, and adults with disabilities who have and have not been immunized is collected, analyzed, and disseminated.

- Action Step:** Adopt the use of standardized questions to include and identify people with disabilities in applicable North Carolina immunization data systems.
- Action Step:** Disseminate immunization data in multiple formats to diverse audiences including policy makers, public health professionals, individuals with disabilities, families, care providers, health care professionals, and advocacy and service organizations.
- Action Step:** Utilize data to identify and prioritize documented immunization disparities among persons with disabilities and develop appropriate efforts.

Policy

Advance policies, regulations, and laws that assure access to immunizations for children and adults with disabilities.

- Action Step:** Support adequate funding for universal access to immunizations for children.
- Action Step:** Support the participation of people with disabilities and families in immunization related state and local advisory groups.
- Action Step:** Promote accessible communication through the provision of appropriate accommodations such as assistive listening devices, qualified and licensed sign language interpreters, and speech communication devices and strategies.
- Action Step:** Conduct and disseminate research on the immunization status and experiences of people with disabilities.

Media and Education Campaigns

Assure that public awareness messages and campaigns on immunization are inclusive of people with disabilities across the lifespan.

- a) **Action Step:** Develop media campaigns and resources that are accessible and inclusive of people with disabilities through the use of diverse images of persons with disabilities, person first language, varied literacy levels, and alternate format.
- b) **Action Step:** Provide information about the importance of immunization for children with special health care needs less than 2 years of age through parent support groups, advocacy organizations, childcare providers, and health care professionals.
- c) **Action Step:** Provide information to new parents and siblings about the importance of immunization for all family members.
- d) **Action Step:** Publicize stories of people with disabilities and families who have followed the recommendations of the Advisory Committee for Immunization Practices (<http://www.cdc.gov/vaccines/pubs/acip-list.htm>).

Getting a flu vaccination is the best way to protect yourself and those you care about against the flu. Health professionals need to lead by example.

—Public Health professional

Immunization

Health and Social Interventions

Assure the development and statewide implementation of health and social interventions to promote immunizations for people with disabilities across the lifespan.

- a) **Action Step:** Enhance access to immunization services for people with disabilities through traditional and non-traditional opportunities, including medical homes, schools, work sites, home visits, drive thru clinics, and community events.
- b) **Action Step:** Provide education and easy access to immunization for families, direct support staff, and care providers.
- c) **Action Step:** Promote the use of multiple provider reminder strategies when patients with disabilities are due for all appropriate vaccinations (www.cdc.gov/vaccines/pubs).
- d) **Action Step:** Support health care providers inquiring of all patients with disabilities and children with special health care needs about their immunization status and make referrals as appropriate.

Environment

Assure that sites providing immunizations meet or exceed the Americans with Disabilities Act Standards for Accessible Design, the accessibility regulations of the Rehabilitation Act of 1973, and other relevant laws (<http://www.ada.gov/stdspdf.htm>, <http://www.dol.gov/dol/topic/disability/data>).

- a) **Action Step:** Provide training and technical assistance on the Americans with Disabilities Act and universal design principles to diverse providers, including local health departments, medical practices, hospitals, schools, and medical staffing companies (http://www.ncsu.edu/project/design_projects/udi).
- b) **Action Step:** Provide information on Section 508 of the Rehabilitation Act of 1973, the Web Accessibility guidelines of the World Wide Web Consortium, and other relevant guidelines and laws pertaining to accessible information technology (<http://www.section508.gov/index.cfm>).
- c) **Action Step:** Provide information on the use of financial incentives, including federal tax deductions to remove environmental barriers (<http://www.ada.gov/taxcred.htm>).
- d) **Action Step:** Promote accessible transportation systems through the provision of appropriate accommodations, funding and training, such as accessible paratransit and main line routes and vehicles, training for drivers and customer service personnel, and travel training for riders with disabilities (www.seniortransportation.easterseals.com).

Injury and Violence



Goal

Enable North Carolinians with disabilities to be free from injuries and violence and to foster an atmosphere where everyone may live to their fullest potential (Adapted from the mission of the NC Division of Public Health, Injury and Violence Prevention Branch).

Rationale

Injury is the number one cause of death for North Carolinians ages one to 48.³⁸ Falls, suicides, motor vehicle crashes, drowning, and youth violence are a few examples of this public health issue. Injuries and violence cause deaths and disabilities and keep people from living to their full potential. Often injuries are seen as inevitable parts of life and are labeled as “accidents.” Injuries are not accidents and they do not occur at random. There are identified risk and protective factors that make injuries and violence preventable.

Sexual assault and violence perpetrated against North Carolinians with disabilities is preventable. Working to reduce the number of assaults and injuries should be of the highest priority for us all.

—*Public Health professional*

Violence is second and suicide is the third leading cause of death for 15–24 year olds.³⁹ Highly associated with these injuries are adolescent behaviors such as physical fights, carrying weapons, making a suicide plan, and not using seatbelts. Numerous studies have documented that people with disabilities often experience injury and violence at higher rates than people without disabilities.



The two major categories of injury are intentional and unintentional. Intentional injuries include homicide, assaults, suicide and suicide attempts, child abuse and neglect, intimate partner violence, elder abuse, and sexual assault. Unintentional injuries include, but are not limited to, motor vehicle crashes, falls, fires, poisonings, drownings, suffocations, choking, and recreational and sports-related activities. Intentional injuries generally account for one-third of deaths, while unintentional injuries account for two-thirds of deaths.

In the United States:

- Injuries are the leading cause of death and disability for people aged 1 to 44 years (CDC, 2008).
- Approximately 72% of all deaths among adolescents aged 10-24 years are attributed to injuries from four causes: motor vehicle crashes (30 %), all other unintentional injuries (15%), homicide (15%), and suicide (12%) (CDC, 2008).
- In 2007, 36% of high school students had been in a physical fight in the past 12 months, 18% had carried a weapon in the past 30 days, 11% had made a plan about how they would attempt suicide in the past 12 months, and 11% never or rarely wore a seat belt when riding in a car (MMWR, 2006).

Injury and Violence

Selected NC Disability Data

- 13% of adults with a disability fell 2 or more times within the past 3 months compared to only 2% of persons without disabilities (NC BRFSS, 2008).
- 3% of adults with a disability had someone they knew, not including a partner or ex-partner, push, hit, slap, kick or physically hurt them in any other way compared to 1.4% of persons without disabilities (NC BRFSS, 2007).
- 15% of students with a disability, compared to 8% of students without a disability, had been physically forced to have sexual intercourse when they did not want to (NC YRBS, 2007).
- 13% of students with a disability, compared to 5% of students without a disability, had been threatened or injured with a weapon such as a gun or knife, on school property one or more times during the past 12 months (NC YRBS, 2007).
- 16% of children (0-5 years) with special health care needs had been injured and required medical attention during the past 12 months compared to 11% of children without special health care needs (NSCH, 2007).

Data

Assure that data on children, youth, and adults with disabilities and the rates of injury and violence is collected, analyzed, and disseminated.

- Action Step:** Adopt the use of standardized questions to include and identify people with disabilities in applicable North Carolina injury and violence data systems.
- Action Step:** Disseminate injury and violence data in multiple formats to diverse audiences including policy makers, public health professionals, people with disabilities, families, care providers, health care professionals, and advocacy and service organizations.
- Action Step:** Utilize data to identify and prioritize documented disparities among persons with disabilities and develop appropriate efforts.

Policy

Advance policies, regulations, and laws that address injury and violence prevention and response and ensure the needs of people with disabilities are addressed.

- a) **Action Step:** Support the recommendations and activities of the North Carolina Falls Prevention Coalition and the American Public Health Association (<http://www.med.unc.edu/aging/ncfp/>) and National Fire Protection Association (<http://www.nfpa.org>).
- b) **Action Step:** Support the recommendations and activities of state initiatives to prevent sexual violence and domestic violence, including North Carolina's Plan to Prevent Intimate Partner Violence and the work of the EMPOWER (Enhancing and Making Programs Outcomes Work to End Rape) project (<http://www.injuryfreenc.ncdhhs.gov/About/EMPOWER.htm>, <http://www.nccadv.org/pdf/2009/NC10YearPlantoPreventIPV.pdf>).
- c) **Action Step:** Promote the Fundamental Elements of Accessibility that address communication, information, built environment, staff training and policies developed to improve the accessibility of domestic violence and sexual assault services (<http://www.fpg.unc.edu/~ncodh/fea>).
- d) **Action Step:** Promote accessible communication through the provision of appropriate accommodations such as assistive listening devices, qualified and licensed sign language interpreters, and speech communication devices and strategies.
- e) **Action Step:** Support the participation of individuals with disabilities and families in injury and violence related state and local advisory groups.
- f) **Action Step:** Conduct and disseminate research on injury and violence experiences of people with disabilities.

Adults with disabilities need access to education and services about violence and assault. We deserve to know how to live a healthy and safe life!

—Advocate

Media and Education Campaigns

Assure that public awareness messages and campaigns on issues relating to injury and violence are inclusive of people with disabilities.

- a) **Action Step:** Develop media campaigns and resources that are accessible and inclusive of people with disabilities through the use of diverse images of persons with disabilities, person first language, varied literacy levels, and alternate formats.

Injury and Violence

- b) **Action Step:** Provide information about prevention of injury and violence and relevant services to individuals with disabilities, families, health care professionals, care providers, advocates, and teachers.
- c) **Action Step:** Provide information on shaken baby syndrome, the period of purple crying, and SIDS for parents and caregivers of children with special health care needs less than 2 years through health care professionals, parent support groups and advocacy organizations (<http://www.dontshake.org/>, <http://www.purplecrying.info/>, <http://www.nchealthystart.org/backtosleep/index.htm>).
- d) **Action Step:** Promote evidence based family education and support programs that prevent child abuse and neglect, such as Parents as Teachers (PAT) (<http://www.parentsasteachers.org/>).

Health and Social Interventions

Assure the development and statewide implementation of health and social interventions necessary to decrease the risk of injury and violence for people with disabilities.

- a) **Action Step:** Promote the implementation of evidence-based interventions, such as A Matter of Balance, in a variety of environments including Centers of Independent Living, support groups and residential settings and assure the inclusion of adults with disabilities (www.healthagingprograms.org).
- b) **Action Step:** Support the delivery of school-based programs addressing violence prevention topics, such as gang violence, domestic violence, sexual assault, hate crimes, gun violence and bullying, and ensure that they are delivered to all children including students with disabilities using modified curriculum, when needed (<http://www.ncset.org/publications/viewdesc.asp?id=1332>).
- c) **Action Step:** Assure that the NC Healthful Living Education Standard Course of Study and Grade Level Competencies provides appropriate injury and violence prevention education to students with disabilities and is made available to all students, regardless of classroom setting (www.dpi.state.nc.us/curriculum/healthfulliving/scos).

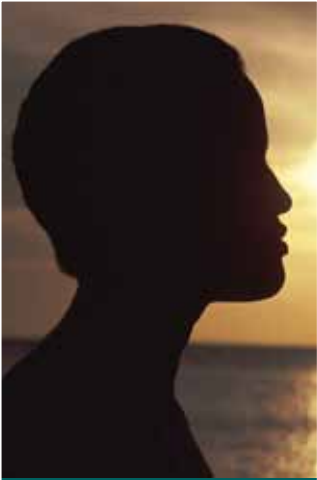
- d) **Action Step:** Support the adoption of evidence based interventions, such as Strengthening Families and Incredible Years, in reducing child maltreatment for families and caregivers of people with disabilities (<http://www.strengtheningfamiliesprogram.org/>, <http://www.incredibleyears.com/>).

Environment

Assure that sites providing injury and violence education and services meet or exceed the Americans with Disabilities Act Standards for Accessible Design, the accessibility regulations of the Rehabilitation Act of 1973, and other relevant laws (<http://www.ada.gov/stdspdf.htm>, <http://www.dol.gov/dol/topic/disability/data>).

- a) **Action Step:** Provide training and technical assistance on the Americans with Disabilities Act and universal design principles to diverse providers, including local health departments, medical professionals, hospitals, schools, sexual assault and domestic violence agencies, and senior centers (http://www.ncsu.edu/project/design_projects/udi).
- b) **Action Step:** Provide information on Section 508 of the Rehabilitation Act of 1973, the Web Accessibility guidelines of the World Wide Web Consortium, and other relevant guidelines and laws pertaining to accessible information technology (<http://www.section508.gov/index.cfm>).
- c) **Action Step:** Provide information on the use of financial incentives, including federal tax deductions, to remove environmental barriers. (<http://www.ada.gov/taxcred.htm>)
- d) **Action Step:** Promote the adoption of Visitability to ensure that everyone has basic access to visit homes with ease and promote safety and flexibility through smart residential construction design (<http://www.visitability.org/>).
- e) **Action Step:** Promote accessible transportation systems through the provision of appropriate accommodations, funding and training, such as accessible paratransit and main line routes and vehicles, training for drivers and customer service personnel, and travel training for riders with disabilities (www.seniortransportation.easterseals.com).

Mental Health*



Goal

Assure that people with disabilities and their families receive the necessary prevention, intervention, treatment, and supports they need to achieve optimal mental health to live successfully in communities of their choice (Adapted from the mission of Division of Mental Health, Developmental Disabilities and Substance Abuse Services).

Rationale

Mental disorders have an enormous impact on the overall health of the Nation. Four of the ten leading causes of disability for persons aged 5

We know that people with serious mental illness have high rates of chronic disease and often have poor access to primary care. It is essential that we build and sustain models of community care that meet the needs of the whole person: medical, dental, behavioral, and social support.

*—Medical director,
statewide service agency*

years and older involve mental disorders. More than one in four adults in the United States have experienced some form of mental illness in the past 12 months, and among these 22 percent have experienced serious mental illness.⁴⁰ Mental disorders are not only the cause of limitations of various life activities, but also can be a secondary problem among people with other disabilities. Research documents the

need for increased education of service providers, educators, families, and the general public on recognizing the signs and symptoms of mental and emotional health problems in children, youth, and adults with disabilities.

* For this section, the terms Mental Health and Behavioral Health are used interchangeably.



Strategies to address social isolation, depression, and suicide are needed, as well as assisting people with disabilities in accessing preventive and therapeutic mental health services.

Coordination of physical and behavioral health care is another major concern. Public behavioral health services are targeted at individuals with the most severe and persistent mental illness and generally operate in a system that runs parallel and outside the general medical community. The general public often uses their primary care provider (PCP) or the Emergency Department for acute care. Yet, many PCPs are poorly equipped and uncomfortable screening, diagnosing and managing many of the behavioral health problems that present to them. Because people with serious mental illness have higher rates of chronic health problems, including obesity, cardiovascular disease, diabetes, and pulmonary disease, it is imperative that physical and behavioral health care professionals and systems become more integrated.⁴¹

In the United States:

- Approximately 21 million American adults, or about 9.5% of the U.S. population age 18 and older in a given year, have a mood disorder.⁴²
- Major depressive disorder affects approximately 15 million American adults, or about 7% of the U.S. population age 18 and older in a given year.⁴²
- In 2006, 33,300 people died by suicide in the U.S (CDC, 2009).

Mental Health

- 39% of children with special health care needs ages 2 to 17 required but did not receive mental health services during the past 12 months.

Selected NC Disability Data

- 24% of people with disabilities report current depression in comparison with 9% of people without a disability (NC BRFSS, 2007).
- 13% of people with a disability reported that their mental health was not good the past 30 days; this is in contrast to about two percent for adults with no disability (NC BRFSS, 2009).
- 25% of students with a disability compared to 10% of students without disability seriously considered attempting suicide during the past 12 months (NC YRBS, 2007).
- 38% of students with a disability compared to 17% of students without disability strongly agree or agree that they feel alone in their life (NC YRBS, 2007).

Data

Assure that data on children, youth, and adults with disabilities and mental health is collected, analyzed, and disseminated.

- Action Step:** Adopt the use of standardized questions to include and identify people with disabilities in North Carolina mental health data systems.
- Action Step:** Disseminate data in multiple formats to diverse audiences including policy makers, public health professionals, people with disabilities, families, care providers, health care professionals, and advocacy and service organizations.
- Action Step:** Utilize data to identify and prioritize documented disparities among persons with disabilities and develop appropriate efforts.

Policy

Advance policies, regulations, and laws that promote optimal mental health and ensure that services are accessible to people with disabilities.

- a) **Action Step:** Advance the goals of the Mental Health Integration Pilot, a state level collaboration to integrate mental health service into primary care practices (<http://commonwealth.communitycarenc.org/>).
- b) **Action Step:** Support the expansion of the Nurse-Family Partnership Initiative in North Carolina, an evidence-based, nurse home visiting program that improves the health, well-being, and self-sufficiency of low-income, first-time parents and their children (<http://www.zerotothree.org/publicpolicy>).
- c) **Action Step:** Promote accessible communication through the provision of appropriate accommodations such as assistive listening devices, qualified and licensed sign language interpreters, and speech communication devices and strategies.
- d) **Action Step:** Support the participation of individuals with disabilities and families in state and local advisory groups focused on mental health.
- e) **Action Step:** Conduct and disseminate research on the mental health experiences of people with disabilities.

Media and Education Campaigns

Assure that public awareness messages and campaigns on mental health are inclusive of people with disabilities across the lifespan.

- a) **Action Step:** Develop media campaigns and resources that are accessible and inclusive of people with disabilities through the use of diverse images of persons with disabilities, person first language, varied literacy levels, and the availability of alternate format.
- b) **Action Step:** Provide information about risk factors for mental health disorders and relevant services to people with disabilities, families, health care professionals, care providers, advocates, and teachers.

- c) **Action Step:** Provide information about the prevalence of chronic health problems and the importance of addressing preventive care to people with disabilities, families, health care professionals, care providers, and advocates.

Health and Social Interventions

Assure the development and statewide implementation of health and social interventions to promote optimal mental health for people with disabilities across the lifespan.

- a. **Action Step:** Support the delivery of evidence-based interventions and programs and ensure that they are inclusive of, and accessible to, people with disabilities, such as the North Carolina Practice Improvement Collaborative (NCPIC) (<http://www.ncpic.net/>).
- b. **Action Step:** Assure that the *NC Healthful Living Education Standard Course of Study* and Grade Level Competencies provides mental health education to students with disabilities and is made available to all students, regardless of classroom setting (www.dpi.state.nc.us/curriculum/healthfulliving/scos).
- c. **Action Step:** Support statewide implementation of the integration of behavioral and physical health care through collaborations with multiple partners such as the Integrated, Collaborative, Accessible, Respectful and Evidence-based (ICARE) Partnership and Mountain Area Health Education Center's (MAHEC) Integrated Care Project (<http://www.icarenc.org/>, <http://www.ncpic.net/>).
- d. **Action Step:** Enhance access to evidence based interventions addressing depression through traditional and non-traditional opportunities, including home visits, work sites, schools, and in the community.

Environment

Assure that sites providing mental health services meet or exceed the Americans with Disabilities Act Standards for Accessible Design, the accessibility regulations of the Rehabilitation Act of 1973, and other relevant laws (<http://www.ada.gov/stdspdf.htm>, <http://www.dol.gov>).

- a. **Action Step:** Provide training and technical assistance on the Americans with Disabilities Act and universal design principles to diverse providers including local health departments, medical practices, hospitals, and schools to ensure mental health services and environments are accessible to people with disabilities (<http://www.ncsu.edu/project/design-projects/udi>).
- b. **Action Step:** Disseminate information on Section 508 of the Rehabilitation Act of 1973, the Web Accessibility guidelines of the World Wide Web Consortium, and other relevant guidelines and laws pertaining to accessible information technology (<http://www.section508.gov/index.cfm>).
- c. **Action Step:** Provide information on the use of financial incentives, including federal tax deductions, to remove environmental barriers (<http://www.ada.gov/taxcred.htm>).
- d) **Action Step:** Promote accessible transportation systems through the provision of appropriate accommodations, funding and training, such as accessible paratransit and main line routes and vehicles, training for drivers and customer service personnel, and travel training for riders with disabilities (www.seniortransportation.easterseals.com).

If people can be engaged in their community, this contributes to their mental health. The community must be accessible, welcoming and willing to see beyond the person's disability so their personal skills and assets can be acknowledged.

—Community advocacy organization

Obesity, Overweight, & Physical Activity



Goal

Increase healthy eating and physical activity opportunities for people with disabilities in North Carolina by fostering supportive policies and environments (Adapted from the goals of *Eat Smart Move More North Carolina*).

Rationale

Lack of adequate physical activity and poor eating habits are widely recognized contributors to the overweight epidemic in North Carolina. The leading causes of death in North Carolina are heart disease, cancer, and stroke; overweight and obesity are risk factors for all these diseases.⁵ Physical inactivity and unhealthy eating combined is the second leading preventable cause of death in North Carolina and increase the risk of heart

disease, certain types of cancer, diabetes, high blood pressure, stroke, and obesity.⁴³ Overweight and obesity are also associated with arthritis, breathing problems, osteoarthritis, asthma, and psychological disorders, such as depression. Regular physical activity can help control weight, reduce risk of cardiovascular disease, reduce risk for type 2 diabetes and metabolic syndrome, reduce risk of

some cancers, strengthen bones and muscles, improve mental health and mood, improve ability to do daily activities and prevent falls, and increase chances of living longer.⁴⁴

Many students with disabilities miss out on the benefits of physical activity and education because professionals lack the training to include them in quality educational activities.

—Health educator



More than one third of U.S. adults and sixteen percent of U.S. children are obese. Since 1980, obesity rates for adults have doubled and rates for children have tripled. Obesity rates among all groups in society—irrespective of age, sex, race, ethnicity, socioeconomic status, education level, geographic region or disability—have increased dramatically.⁴⁵

- Approximately 300,000 deaths each year in the United States may be attributable to obesity.⁴⁶
- Many people live sedentary lives; in fact, 40% of adults in the United States do not participate in any leisure-time physical activity.⁴⁶
- Less than 33% of adults engage in the recommended amounts of physical activity, at least 30 minutes most days.⁴⁶
- Between 1987 and 2001, diseases associated with obesity accounted for 27% of the increases in medical costs.⁴⁵

Selected NC Disability Data

- Only 35% adults with disabilities report participating in moderate physical activity compared to 46% percent of adults without disability (NC BRFSS, 2009).
- 71% of adults with disabilities have a body mass index (BMI) greater than 25 (overweight or obese) (NC BRFSS, 2009).
- Only 24% of adults with developmental disabilities report being physically active for at least 30 minutes three times per week (Core Indicators Project, 2007-2008).

Obesity, Overweight, & Physical Activity

- 36% of children with special health care needs aged ten to seventeen are overweight or obese (NC CHAMP, 2009).
- Only 37% of students with a disability are physically active for a total of at least 60 minutes per day on five or more of the past seven days compared to 48% of students without a disability (NC YRBS, 2007).

Data

Assure that data on children, youth, and adults with disabilities and obesity, overweight, and physical health is collected, analyzed, and disseminated.

- Action Step:** Adopt the use of standardized questions to include and identify people with disabilities in North Carolina data systems that track obesity, overweight, and physical activity.
- Action Step:** Disseminate data on rates of obesity and physical activity in multiple formats to diverse audiences including policy makers, public health professionals, people with disabilities, families, care providers, health care professionals, and advocacy organizations and service organizations.
- Action Step:** Expand surveillance to include data on the eating habits of people with disabilities.
- Action Step:** Utilize data to identify and prioritize documented disparities among persons with disabilities and develop appropriate efforts.

Policy

Advance policies, regulations, and laws that promote inclusive and accessible physical activity and healthy eating habits at home, school, work, and in the community.

- a) **Action Step:** Promote the implementation of Eat Smart, Move More, North Carolina’s plan, and ensure the plan addresses the needs of children and adults with disabilities across the life span (<http://www.eatsmartmovemorenc.com/ESMMPlan/ESMMPlan.html>).
- b) **Action Step:** Support the participation of people with disabilities and families in obesity and physical activity related state and local advisory groups.
- c) **Action Step:** Support School Health Advisory Councils across North Carolina to enact health promotion policies that are inclusive of all staff and students with disabilities, regardless of classroom setting (<http://www.nchealthyschools.org/schoolhealthadvisorycouncil>).
- d) **Action Step:** Promote accessible communication through the provision of appropriate accommodations such as assistive listening devices, qualified and licensed sign language interpreters, and speech communication devices and strategies.
- e) **Action Step:** Conduct and disseminate research on overweight, obesity and physical activity needs and experiences of people with disabilities.

Without access to adaptive sports, I believe we are denying children and youth with disabilities the right to learn basic developmental skills crucial for living in our world.

—Parent

Obesity, Overweight, & Physical Activity

Media and Education Campaign

Assure that public awareness messages and campaigns on obesity and physical activity are inclusive of people with disabilities across the lifespan.

- a) **Action Step:** Develop media campaigns and resources that are accessible and inclusive of people with disabilities through the use of diverse images of persons with disabilities, person first language, varied literacy levels, and alternate formats.
- b) **Action Step:** Publicize success stories of people with disabilities engaging in physical activity and healthy nutrition at home, school, work, and in the community.
- c) **Action Step:** Develop social marketing campaigns on healthy eating specifically for youth and young adults with disabilities, with an emphasis on those living alone.
- d) **Action Step:** Provide information about nutrition and physical activity and relevant services to individuals with disabilities, families, health care professionals, care providers, advocates, and teachers.

Health and Social Interventions

Assure the development and statewide implementation of health and social interventions that promote physical activity and healthy eating habits for people with disabilities across the lifespan.

- a) **Action Step:** Assure that the *NC Healthful Living Education Standard Course of Study* and Grade Level Competencies provide appropriate nutritional and physical education to students with disabilities and is made available to all students, regardless of classroom setting (www.dpi.state.nc.us/curriculum/healthfulliving/scos).
- b) **Action Step:** Provide training and resources on inclusive and adapted PE and physical activity opportunities to physical education, education, special education teachers, and after-school staff (www.pecentral.org and www.ncpad.org).
- c) **Action Step:** Promote the availability of appropriate adapted equipment, facilities, and staffing for students with disabilities in physical education classes, and in school and after-school physical activity opportunities (www.pecentral.org and www.ncpad.org).

- d) **Action Step:** Promote the availability of worksite health programs that are inclusive of people with disabilities.
- e) **Action Step:** Support health care providers in counseling patients with disabilities on healthy eating, weight control, and daily physical activity.

Environment

Assure that sites providing physical activity and nutrition education, counseling, referrals, and treatment meet or exceed the Americans with Disabilities Act Standards for Accessible Design and where applicable, the accessibility regulations of the Rehabilitation Act of 1973 and other relevant laws.

- a) **Action Step:** Promote community-scale and street-scale design and land use policies and practices that incorporate accessibility and inclusion (www.completestreets.org).
- b) **Action Step:** Provide training and resources so that state and municipal planners incorporate Americans with Disabilities Act accessibility guidelines, standards, and concepts of universal design into a wide variety of physical activity and health promotion environments (<http://www.ncsu.edu/project/design-projects/udi/>).
- c) **Action Step:** Promote the accessibility of playgrounds, gyms, fitness centers, senior centers, and other built environments so they are inclusive of, and accommodate, people with disabilities (www.ncaonline.org).
- d) **Action Step:** Provide information on Section 508 of the Rehabilitation Act of 1973, the Web Accessibility guidelines of the World Wide Web Consortium, and other relevant guidelines and laws pertaining to accessible information technology (<http://www.section508.gov/index.cfm>).
- e) **Action Step:** Provide information on the use of financial incentives including federal tax deductions to remove environmental barriers (<http://www.ada.gov/taxcred.htm>).
- f) **Action Step:** Promote accessible transportation systems through the provision of appropriate accommodations, funding and training, such as accessible paratransit and main line routes and vehicles, training for drivers and customer service personnel, and travel training for riders with disabilities (www.seniortransportation.easterseals.com).

Oral Health



Goal

Promote conditions in which all North Carolinians, including people with disabilities, can achieve oral health as a part of overall health (Adapted from the mission statement of the NC Division of Public Health, Oral Health Section).

Rationale

Oral health is a critical component of overall health for everyone as it can affect one's ability to eat, maintain proper nutrition, and communicate. Although a cause-and-effect relationship has not yet been established, there is increasing evidence of an association between gum disease and conditions such as cardiovascular disease or bacterial pneumonia.⁴⁷ Millions of people in the United States are at higher risk for oral health problems because of underlying medical conditions. Often, people with disabilities and their caregivers pay more attention to disability related issues while ignoring oral health. For some individuals with significant disabilities, caring for an individual's teeth requires a significant amount of extra help and time. Dental professionals need to be able to provide comprehensive quality care for patients with disabilities and special health care needs in a variety of environments.

We need to make sure that people with disabilities receive the same quality and access to dental care as everybody else in the community.

—Dental provider



In the United States:

- Dental caries (tooth decay) is the single most common chronic childhood disease. It is five times more common than asthma and seven times more common than hay fever.⁴⁸
- Over 50% of children ages 5–9 years have at least one cavity or filling, and that proportion increases to 78% among 17-year-olds.
- People below the poverty level are less likely to have seen a dentist in the past 12 months.⁴⁹
- Severe periodontal disease affects about 14 % of adults aged 45–54.⁵⁰

Selected NC Disability Data

- Only 59% of adults with disability have visited a dentist, dental hygienist or dental clinic within the past year (for any reason), compared to 71% of adults with no disability (NC BRFSS, 2008).
- Only 57% of students with a disability saw a dentist for a check-up, exam, teeth cleaning, or other dental work during the past 12 months (NC YRBS, 2007).
- Only 53% of persons with developmental disabilities had a routine dental exam in the past six months (Core Indicators Project, 2007–2008).
- School-age children with special health care needs are less likely than non-CSHCN to receive an ‘excellent’ dental health rating, and are more likely to receive a rating of ‘fair/poor’ (NC CHAMP, 2009).

Data

Assure that data on children, youth, and adults with disabilities and oral health is collected, analyzed, and disseminated.

- a) **Action Step:** Adopt the use of standardized questions to include and identify people with disabilities in applicable North Carolina oral health data systems.
- b) **Action Step:** Disseminate oral health data on people with disabilities to diverse audiences including policy makers, public health professionals, people with disabilities, families, care providers, health care professionals, and advocacy organizations service organizations.
- c) **Action Step:** Develop fact sheets and articles on rates of oral disease and prevention practices of people with disabilities.
- d) **Action Step:** Utilize data to analyze and prioritize documented disparities among persons with disabilities to develop appropriate efforts.

Policy

Advance policies, regulations, and laws that promote optimal oral health and ensure that services are accessible to people with disabilities.

- a) **Action Step:** Disseminate and support the recommendations developed by the NC Special Care Advisory Group to the NC Commission on Aging and NC Public Health Study Commission, to people with disabilities, families, disability organizations, dental professionals, communities, and policy makers (<http://www.ncmedicaljournal.com/wp-content/uploads/NCIOM/docs/dentalrpt.pdf>).
- b) **Action Step:** Support efforts to develop enforceable minimal oral health service standards and reimbursement policies in nursing homes and other residential facilities.
- c) **Action Step:** Expand Medicaid dental services to include reimbursement for preventive evidence-based chemotherapeutic agents like fluoride and periodontal therapies for high risk adults with special health care needs.

- d) **Action Step:** Promote accessible communication through the provision of appropriate accommodations such as assistive listening devices, qualified and licensed sign language interpreters, and speech communication devices and strategies.
- e) **Action Step:** Support the participation of individuals with disabilities and families in state and local advisory groups focused on oral health.
- f) **Action Step:** Conduct and disseminate research on the oral health needs and experiences of people with disability.

Media and Education Campaigns

Assure that public awareness messages and campaigns on oral health are inclusive of people with disabilities across the lifespan.

- a) **Action Step:** Develop media campaigns and resources promoting oral health that are accessible and inclusive of people with disabilities through the use of diverse images of persons with disabilities, person first language, varied literacy levels, and alternate formats.
- b) **Action Step:** Develop and deliver public awareness campaigns that educate people with disabilities, families, health care professionals, care providers, advocates, and educators on the importance of oral health.
- c) **Action Step:** Partner with statewide disability and advocacy organizations to disseminate information on the importance of, and myths surrounding, community water fluoridation (www.sdds.org/F-FactsmythsFAQ.htm).
- d) **Action Step:** Support NC Schools of Dentistry, the NC Community Colleges, and the NC Area Health Education Centers in providing training on oral health care for special needs patients.

We need to increase the focus on the prevention of oral disease and begin to foster better oral health and overall disease prevention for children, youth and adults with disabilities.

—Family Advocate

Health and Social Interventions

Assure the development and implementation of health and social interventions that promote optimal oral health for people with disabilities across the lifespan.

- a) **Action Step:** Ensure that programs that provide dental screenings and the delivery of dental sealants to children in school-based or school-linked settings are inclusive of children with special health care needs and provide appropriate, accessible educational materials.
- b) **Action Step:** Provide education and training for dental and medical professionals on the oral health needs of people with disabilities (www.scdonline.org).
- c) **Action Step:** Support the application of fluoride varnish by health care providers for infants and children with disabilities.
- e) **Action Step:** Assure that the *NC Healthful Living Education Standard Course of Study* and Grade Level Competencies provides appropriate oral health education to students with disabilities, regardless of classroom setting (www.dpi.state.nc.us/curriculum/healthfulliving/scos).
- f) **Action Step:** Promote the use of a pediatric dental home for infants identified with special health care needs through the use of care coordination or case management services.
- g) **Action Step:** Expand the number of mobile dental programs available to provide accessible services for persons residing in long-term care facilities and residential facilities.

Environment

Assure that sites providing oral health services meet or exceed the Americans with Disabilities Act Standards for Accessible Design, the accessibility regulations of the Rehabilitation Act of 1973, and other relevant laws (<http://www.dol.gov/dol/topic/disability/data>).

- a) **Action Step:** Provide training and technical assistance on the Americans with Disabilities Act and universal design principles to dental practices, mobile dental units, teaching hospitals, safety net clinics, local health departments, and community hospitals (<http://www.ncsu.edu/project/design-projects/udi>).
- b) **Action Step:** Disseminate information on principles of universal design and dental practice environment through state and local dental and dental hygiene organizations.
- c) **Action Step:** Provide information on Section 508 of the Rehabilitation Act of 1973, the Web Accessibility guidelines of the World Wide Web Consortium, and other relevant guidelines and laws pertaining to accessible information technology (<http://www.section508.gov/index.cfm>).
- d) **Action Step:** Provide information on the use of financial incentives, including federal tax deductions, to remove environmental barriers (<http://www.ada.gov/taxcred.htm>).
- e) **Action Step:** Promote accessible transportation systems through the provision of appropriate accommodations, funding and training, such as accessible paratransit and main line routes and vehicles, training for drivers and customer service personnel, and travel training for riders with disabilities (www.seniortransportation.easterseals.com).

Responsible Sexual Behavior



**GET REAL.
GET TESTED.**

Goal

Eliminate morbidity and mortality due to sexually transmitted diseases and reduce the rate of unplanned pregnancies among people with disabilities (Adapted from NC Division of Public Health, HIV/STD Prevention & Care Branch).

Rationale

While there are many positive aspects of sexuality, it is also necessary to acknowledge that there are undesirable consequences as well; alarmingly high levels of sexually transmitted disease (STD) and HIV/AIDS infection, unintended pregnancy, abortion, sexual dysfunction, and sexual violence.

Reproductive health and family planning information and services are an important part of health care for people with disabilities. Unfortunately, people with disabilities are often left out of discussions about these issues. It is important for all people to have the information and resources they need to prevent unplanned pregnancies and protect their reproductive health.

Each of these problems carries with it the potential for lifelong consequences—for individuals, families, communities, and the nation as a whole. As is the case with so many public health problems, there are serious disparities among the populations affected. The economically disadvantaged, racial and ethnic minorities, people with different sexual identities, people with disabilities, and adolescents often bear the heaviest burden.⁵²

—Public Health professional



In general, North Carolinians experience a higher rate of many sexually transmitted diseases when compared with the rest of the country. In 2005, North Carolina had higher rates of gonorrhea, chlamydia, primary and secondary syphilis, and HIV disease.⁵ North Carolina is ranked 13TH highest in the nation in teen pregnancy rates.⁵³ According to statistics compiled by the State Bureau of Investigation, there were 1,954 cases of rape reported in North Carolina in 2010.⁵⁴

Additional information on sexual assault and domestic violence is included in the leading health indicator, Injury and Violence.

In the United States:

- Sexually transmitted diseases (STDs) infect approximately 12 million people each year.⁵²
- An estimated one million people are living with HIV (CDC, 2010).
- An estimated one-third of those living with HIV are aware of their status and are in treatment, one-third are aware of their status but not in treatment, and one-third have not been tested and are not aware.⁵²
- An estimated 50,000 new HIV infections occur each year.⁵⁵
- One third of girls get pregnant before the age of twenty.⁵⁶
- There are 750,000 teen pregnancies annually. Eight in ten of these pregnancies are unintended and more than 80% are to unmarried teens.⁵⁶

Responsible Sexual Behavior

Selected NC Disability Data

- 5% of adults (ages 18–64) with disabilities reported that in the past year they had used intravenous drugs, been treated for a sexually transmitted or venereal disease, given or received money or drugs in exchange for sex, OR had anal sex without a condom compared to 3% of adults without a disability (NC BRFSS, 2008).
- 44% of students with a self reported disability have had sexual intercourse with one or more people during the past three months compared to 37% of students without a disability (NC YRBS, 2007).
- 73% of parents of adolescents with special health care needs indicate it would be very helpful to learn about sexually transmitted diseases (NC CHAMP, 2008).

Data

Assure that data on the sexual health of children, youth, and adults with disabilities is collected, analyzed, and disseminated.

- Action Step:** Adopt the use of standardized questions to include and identify people with disabilities in North Carolina sexual health data systems.
- Action Step:** Disseminate data on the sexual health status of people with disabilities in multiple formats to diverse audiences including policy makers, public health professionals, people with disabilities, families, care providers, health care professionals, and advocacy and service organizations.
- Action Step:** Utilize data to identify and prioritize documented disparities among persons with disabilities and develop appropriate efforts.

Policy

Advance policies, regulations, and laws that address responsible and safe sexual behavior, and ensure the needs of people with disabilities are addressed.

- a) **Action Step:** Review current North Carolina policies about responsible sexual behavior and safety to determine necessary policy changes to protect the rights of people with disabilities.
- b) **Action Step:** Promote accessible communication through the provision of appropriate accommodations such as assistive listening devices, qualified and licensed sign language interpreters, and speech communication devices and strategies.
- c) **Action Step:** Support the participation of individuals with disabilities and families in sexual health related state and local advisory groups.
- d) **Action Step:** Conduct and disseminate research on the sexual health of people with disabilities.

Media and Education Campaigns

Assure that public awareness messages and campaigns on issues relating to responsible sexual behavior and sexual health are inclusive of people with disabilities across the lifespan.

- a) **Action Step:** Develop media campaigns and resources that are accessible and inclusive of people with disabilities through the use of diverse images of persons with disabilities, person first language, varied literacy levels, and alternate formats.
- b) **Action Step:** Support the development and delivery of “Get Real, Get Tested” messages on prevention, testing and treatment relevant for persons with disabilities (<http://www.epi.state.nc.us/epi/hiv/grgt.html>).
- c) **Action Step:** Provide age and developmentally appropriate, medically accurate HIV/STD and teen pregnancy prevention education to children and youth with disabilities and their families.

Responsible Sexual Behavior

Health and Social Interventions

Assure the development and statewide implementation of health and social interventions to promote responsible sexual behavior for people with disabilities across the lifespan.

- a) **Action Step:** Increase the knowledge, skills and abilities of education and health care professionals to provide supportive and developmentally appropriate sexual health education to people with disabilities.
- b) **Action Step:** Assist families of children with disabilities in providing responsible sexual behavior education that is consistent with their values and beliefs.
- c) **Action Step:** Promote access to sexual health education and resources on safe relationships, informed decision making, problem solving, self-determination, and effective communication for people with disabilities in schools, worksites, residential settings, and the community.
- d) **Action Step:** Ensure that the NC Healthful Living Education Standard Course of Study and Grade Level Competencies provide appropriate responsible sexual behavior education to all students with disabilities, regardless of classroom setting (www.dpi.state.nc.us/curriculum/healthfulliving/scos).
- e) **Action Step:** Support the funding of primary prevention programs for children, youth and adults with disabilities, targeting a variety of settings including schools, colleges, work sites, and residential programs.
- f) **Action Step:** Support the availability of screening programs in a variety of non-traditional settings.

Environment

Assure that sites providing counseling, testing, referral, and treatment for HIV/STD and/or pregnancy prevention meet or exceed the Americans with Disabilities Act Standards for Accessible Design, the accessibility regulations of the Rehabilitation Act of 1973, and other relevant laws (<http://www.dol.gov/dol/topic/disability/data>).

- a. **Action Step:** Support training and technical assistance on the Americans with Disabilities Act universal design principles to ensure testing, treatment, and education programs are accessible to people with disabilities (<http://www.ncsu.edu/project/design-projects/udi/>).
- b. **Action Step:** Provide information on Section 508 of the Rehabilitation Act of 1973, the Web Accessibility guidelines of the World Wide Web Consortium, and other relevant guidelines and laws pertaining to accessible information technology (<http://www.section508.gov/index.cfm>).
- c. **Action Step:** Provide information on the use of financial incentives including federal tax deductions to remove environmental barriers (<http://www.ada.gov/taxcred.htm>).
- d) **Action Step:** Promote accessible transportation systems through the provision of appropriate accommodations, funding and training, such as accessible paratransit and main line routes and vehicles, training for drivers and customer service personnel, and travel training for riders with disabilities (www.seniortransportation.easterseals.com).

We know that society often erroneously views people with disabilities as not needing, wanting, and/or thinking about sexual relationships.

Many people are uncomfortable talking about sexuality with children and adults with disabilities. We must support parents, educators, and health care professionals to have these conversations, so that all people can make informed choices about their reproductive and sexual health.

—Parent and Advocate

Substance Abuse



Goal

Reduce substance abuse by children, adolescents, and adults with disabilities to protect their health, safety, and quality of life (Adapted from Healthy People 2010 goal).

Rationale

People with substance abuse problems or addiction are at risk for premature death, comorbid health conditions, and disability. People with addiction disorders are more likely than people with other chronic illnesses to live in poverty, lose their jobs, or experience homelessness. Further, addiction to

drugs or alcohol contributes to the crime rate, family upheaval, and motor vehicle fatalities.⁵⁷

Substance use disorders occur more often in persons with disabilities than in the general population. Persons with disabilities often face multiple risk factors, including higher use of medications, pain, multiple health problems, and a

lack of accessible and appropriate prevention and treatment services.⁵⁸ Existing substance abuse prevention, intervention and treatment services are often not sufficiently responsive to the needs of persons with disabilities, and as a result, access to education, prevention, and treatment services for substance use and abuse can be limited, incomplete, or misdirected.⁵⁹

Families, care providers and professionals are generally not aware of problems with substance abuse, including the growing problem of prescription drug abuse. We need to make sure people with disabilities, their families, and service providers receive prevention, intervention and treatment services to address substance use issues.

—*Substance Abuse professional*



Prescription drugs are the second most commonly abused category of drugs, behind marijuana and ahead of cocaine, heroin, methamphetamine and other drugs. The National Institutes of Health estimates that nearly 20 percent of people in the United States have used prescription drugs for non-medical reasons. Some prescription drugs can easily become addictive, especially when the drugs are used for reasons they were not prescribed. Some people think that prescription drugs are safer than illegal street drugs and thus under estimate the risk of addiction and harm. Drug addiction is a biological, pathological process that alters how the brain functions and prolonged drug use changes the brain in fundamental and long-lasting ways.⁶⁰

In the United States

- In 2008, an estimated 20 million Americans aged 12 or older were illicit drug users. Illicit drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used non-medically.⁶¹
- In 2000, about 43% of hospital emergency admissions for drug overdoses (nearly 500,000 people) happened because of misused prescription drugs.⁶⁰
- Slightly more than half of Americans aged 12 or older reported being current drinkers of alcohol.⁶¹
- Twenty three million persons aged 12 or older needed treatment for an illicit drug or alcohol use problem.⁶¹

Substance Abuse

- Of those in need of treatment, only approximately 10% received treatment at a specialty facility, and 21 million people did not receive treatment.⁶¹

Selected N.C. Disability Data

- 10% of people with disabilities reported binge drinking during the past 30 days (NC BRFSS 2009).
- 45% of students with a disability compared to 36% of students without a disability had at least one drink of alcohol on one or more of the past 30 days (NC YRBS, 2007).
- 26% of students with a disability compared to 15% of students without a disability have taken a prescription drug such as Oxycontin, Percocet, Demerol, Adoral, Ritalin, or Zanax without a doctor's prescription one or more times during their life (NC YRBS, 2007).
- 68% of parents of adolescents with special health care needs indicate it would be very helpful be to learn about teens and alcohol (NC CHAMP, 2008).

Data

Assure that data on children, youth, and adults with disabilities and substance abuse is collected, analyzed, and disseminated.

- a) **Action Step:** Adopt the use of standardized questions to include and identify people with disabilities in North Carolina substance abuse data systems.
- b) **Action Step:** Disseminate substance abuse data in multiple formats to diverse audiences including policy makers, public health professionals, individuals with disabilities, families, care providers, health care professionals, and advocacy and service organizations.
- c) **Action Step:** Utilize data to identify and prioritize documented disparities among persons with disabilities and develop appropriate efforts.

Policy

Advance policies, regulations, and laws that address substance abuse concerns and ensure the needs of people with disabilities are addressed.

- a) **Action Step:** Promote the inclusion of youth with disabilities in all efforts to educate the public about underage drinking in partnership with government, alcohol manufacturers and retailers, the entertainment industry, parents and the community.
- b) **Action Step:** Support the participation of individuals with disabilities and families in state and local advisory groups focused on substance abuse.
- c) **Action Step:** Promote accessible communication through the provision of appropriate accommodations such as assistive listening devices, qualified and licensed sign language interpreters, and speech communication devices and strategies.
- d) **Action Step:** Support the work of the NC Controlled Substance Reporting System to assist clinicians in identifying and referring for treatment patients misusing controlled substances (<http://www.ncdhhs.gov/mhddsas/controlledsubstance>).
- e) **Action Step:** Conduct and disseminate research on the substance abuse needs and experiences of people with disabilities.

Substance Abuse

Media and Education Campaigns

Assure that public awareness messages and campaigns on substance abuse are inclusive of people with disabilities across the lifespan.

- a) **Action Step:** Develop substance abuse media campaigns and resources that are accessible and inclusive of people with disabilities through the use of diverse images of persons with disabilities, person first language, varied literacy levels, and alternate formats.
- b) **Action Step:** Develop and deliver public awareness campaigns that educate people with disabilities on the risk of substance abuse, including prescription drugs.
- c) **Action Step:** Develop messaging for individuals and families on the importance of keeping medications and toxic substances locked and protected.

Health and Social Interventions

Assure the development and statewide implementation of health and social interventions necessary to decrease substance abuse for people with disabilities across the lifespan.

- a) **Action Step:** Support education campaigns that target high-risk alcohol consumption.
- b) **Action Step:** Increase the knowledge, skills and abilities of education and health care professionals to provide supportive and developmentally appropriate substance abuse education to people with disabilities.
- c) **Action Step:** Assure that NC Healthful Living Education Standard Course of Study and Grade Level Competencies provide appropriate substance abuse education to students with disabilities and is made available to all students, regardless of classroom setting (www.dpi.state.nc.us/curriculum/healthfulliving/scos).
- d) **Action Step:** Support the funding of primary prevention programs for children, youth and adults with disabilities, targeting a variety of settings including schools, colleges, work sites, and residential programs.

Environment

Assure that sites providing substance abuse education, counseling, referrals, and treatment meet or exceed the Americans with Disabilities Act Standards for Accessible Design, the accessibility regulations of the Rehabilitation Act of 1973, and other relevant laws (<http://www.dol.gov/dol/topic/disability/data>).

- a) **Action Step:** Support training and technical assistance on the Americans with Disabilities Act and universal design principles to diverse providers, including local health departments, medical practices, hospitals, counselors, and schools (<http://www.ncsu.edu/project/design-projects/udi>).
- b) **Action Step:** Provide information on Section 508 of the Rehabilitation Act of 1973, the Web Accessibility guidelines of the World Wide Web Consortium, and other relevant guidelines and laws pertaining to accessible information technology (<http://www.section508.gov/index.cfm>).
- c) **Action Step:** Provide information on the use of financial incentives including federal tax deductions to remove environmental barriers. (<http://www.ada.gov/taxcred.htm>).
- d) **Action Step:** Promote accessible transportation systems through the provision of appropriate accommodations, funding and training, such as accessible paratransit and main line routes and vehicles, training for drivers and customer service personnel, and travel training for riders with disabilities (www.seniortransportation.easterseals.com).

People with disabilities are often in health situations that might provide opportunity for substance abuse. Education and knowledge about this issue is important to help people not fall into substance abuse and dependence. Providers also need to be aware that there could be a dual diagnosis of mental and physical health issues that could lead to substance abuse.

—*Individual with a disability*

Tobacco Use



Goal

Prevent the initiation and promote quitting of tobacco use among youth and adults with disabilities and eliminate exposure to environmental (“secondhand”) tobacco smoke (Adapted from *NC Comprehensive Plan to Prevent and Reduce the Health Effects of Tobacco Use*, Vision 2010).

Rationale

Tobacco use is the leading preventable cause of death in North Carolina and in the nation.⁶² Smoking results in more deaths each year in the United States than AIDS, alcohol, cocaine, heroin, homicide, suicide,

motor vehicle crashes, and fires—combined. In addition to the health risks that smokers face, evidence clearly demonstrates serious health consequences related to people’s exposure to secondhand smoke. It has been shown to cause lung cancer and heart disease in nonsmoking adults, and respiratory infections, chronic ear infections, and asthma in children and adolescents.⁶³

There is no safe level of exposure to secondhand smoke, so we must ensure that people with disabilities are not exposed to smoke at home, work or in public places.

—*Public Health professional*

Data suggests that people with disabilities are more likely to smoke cigarettes than compared to people without disabilities. People with disabilities share the same health risks of tobacco use and exposure to secondhand smoke as all people, yet few initiatives have specifically addressed the needs of people with disabilities.



In the United States

- Cigarette smoking is the leading preventable cause of death.⁶⁴
- Cigarette smoking is responsible for about one in five deaths annually, or about 443,000 deaths per year.⁶⁴
- An estimated 49,000 of tobacco-related deaths are the result of secondhand smoke exposure.⁶⁴

Selected NC Disability Data

- 27% of adults with a disability are current smokers as compared to 20% of people without a disability (NC BRFSS, 2009).
- 9% of adults with developmental disabilities report tobacco use, which is higher than the proportion of people with developmental disabilities across the other states that collect Core Indicators Project data (CIP, 2007-2008).
- 60% of parents of adolescents with special health care needs indicate it would be very helpful to learn about teens and tobacco (NC CHAMP, 2008).
- 14% of students with disability compared to 8% of students without disability smoked cigarettes on 20 or more of the past 30 days (NC YRBS, 2007).
- 14% of CSHCN live in smoking households (NSCH, 2007).

Tobacco Use

Data

Assure that data on children, youth, and adults with disabilities who have initiated tobacco use, successfully quit tobacco use, and are exposed to secondhand smoke and tobacco use is collected, analyzed, and disseminated.

- a) **Action Step:** Adopt the use of standardized questions to include and identify people with disabilities in North Carolina tobacco use data systems.
- b) **Action Step:** Disseminate tobacco use data in multiple formats to diverse audiences including policy makers, public health professionals, individuals with disabilities, families, care providers, health care professionals, and advocacy and service organizations.
- c) **Action Step:** Utilize data to identify and prioritize documented disparities among persons with disabilities and develop appropriate efforts.

Policy

Advance policies, regulations, and laws that limit smoking at home, school, work, hospitals, and in the community.

- a) **Action Step:** Support increasing the unit price for tobacco products.
- b) **Action Step:** Support and monitor tobacco free policies in diverse environments, including schools, residential settings, community rehab programs, worksites, hospitals, and other public areas.
- c) **Action Step:** Support the participation of individuals with disabilities and families in state and local advisory groups focused on tobacco control.
- d) **Action Step:** Increase health insurance coverage of medications that address tobacco addiction.
- e) **Action Step:** Conduct and disseminate research on the tobacco use of people with disabilities.

Media and Education Campaign

Assure that public awareness messages and campaigns on issues relating to preventing tobacco initiation and cessation are inclusive of people with disabilities across the lifespan.

- a) **Action Step:** Develop tobacco use media campaigns and resources that are accessible and inclusive of people with disabilities through the use of diverse images of persons with disabilities, person first language, varied literacy levels, and alternate formats.
- b) **Action Step:** Distribute success stories of people with disabilities who have been successful in tobacco use cessation.
- c) **Action Step:** Target youth with disabilities in schools by ensuring that prevention and cessation interventions are made available to students in all classroom settings and are based on accessible and developmentally appropriate strategies, including the TRU (tobacco reality unfiltered) youth groups (<http://www.realityunfiltered.com>).
- d) **Action Step:** Maintain ongoing training for QuitlineNC staff in providing accessible services for people with disabilities (<http://www.quitlinenc.com/>).
- e) **Action Step:** Develop educational campaigns for persons with disabilities to correct misperceptions about the acceptability of tobacco use.

People with disabilities are commonly overstressed and may have a more difficult time quitting because of that stress. They need to know that they aren't alone, never stop trying to quit, realize that it may take several attempts, and reach out to others for support and assistance.

—Individual with a disability

Tobacco Use

Health and Social Interventions

Assure the development and statewide implementation of health and social interventions that promote tobacco use cessation for people with disabilities.

- a) **Action Step:** Promote health care providers implementing standard questions for people with disabilities in regards to tobacco use, tobacco cessation, exposure to second hand smoke, and provide counseling, information, and resources as appropriate.
- b) **Action Step:** Encourage counselors to ask, advise, and refer persons with disabilities who are tobacco users to individual counseling and treatment for nicotine dependence, including combined pharmacotherapies.
- c) **Action Step:** Support the use of school-based education programs that correct misperceptions of prevalence of tobacco use among youth and are inclusive of children with disabilities.
- d) **Action Step:** Assure that the NC Healthful Living Education Standard Course of Study and Grade Level Competencies provides appropriate tobacco use prevention education to students with disabilities and is made available to all students, regardless of classroom setting
(www.dpi.state.nc.us/curriculum/healthfulliving/scos).
- e) **Action Step:** Expand the use of evidence based interventions supported by the NC Evidence Based Practices Center, such as the pilot program for people with mental illnesses who receive services in psychosocial clubhouses and rehabilitation programs
(<http://www.ncebpcenter.org/>).

Environment

Assure that sites providing tobacco free education, counseling, referrals, and treatment meet or exceed the Americans with Disabilities Act Standards for Accessible Design, the accessibility regulations of the Rehabilitation Act of 1973, and other relevant laws (<http://www.dol.gov/dol/topic/disability/data>).

- a. **Action Step:** Provide training and technical assistance on the Americans with Disabilities Act and universal design principles to ensure tobacco prevention and treatment programs are accessible to people with disabilities (<http://www.ncsu.edu/project/design-projects/udi>).
- b. **Action Step:** Provide information on Section 508 of the Rehabilitation Act of 1973, the Web Accessibility guidelines of the World Wide Web Consortium, and other relevant guidelines and laws pertaining to accessible information technology (<http://www.section508.gov/index.cfm>).
- c. **Action Step:** Provide information on the use of financial incentives including federal tax deductions to remove environmental barriers (<http://www.ada.gov/taxred.htm>).
- d) **Action Step:** Promote accessible transportation systems through the provision of appropriate accommodations, funding and training, such as accessible paratransit and main line routes and vehicles, training for drivers and customer service personnel, and travel training for riders with disabilities. (www.seniortransportation.easterseals.com)

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Appendix A: Survey Questions

NC Behavioral Risk Factor Surveillance Survey (BRFSS) Disability Screener Questions

A disability can be physical, mental, emotional, or communication related.
Do you consider yourself to have a disability?

Do you now have any health problem that requires you to use special
equipment, such as a cane, a wheelchair, a special bed, or a special tele-
phone?

Are you limited in any way in any activities because of physical, mental,
or emotional problems?

Because of any impairment or health problem, do you have any trouble
learning, remembering, or concentrating?

—North Carolina State Center for Health Statistics
<http://www.epi.state.nc.us/SCHS/brfss/>

NC Youth Risk Behavior Survey (YRBS) Disability Screener Questions

A disability can be physical, mental, emotional, or communication-related.
Do you consider yourself to have a disability?

Are you limited in any way in any activities because of any impairment or health problem?

Because of any impairment or health problem, do you have any trouble learning, remembering, or concentrating?

—NC Healthy Schools
NC Department of Health and Human Services and
NC Department of Public Instruction
<http://www.nchealthyschools.org/data/yrbs/>

Appendix B:

ADA and Universal Design

Americans with Disabilities Act (ADA)

Under the ADA, an individual with a disability is a person who:

- Has a physical or mental impairment that substantially limits one or more major life activities
- Has a record of such an impairment
- Is regarded as having such an impairment.

Title I focuses on **employment**. Businesses, or employers, must provide reasonable accommodations to protect the rights of individuals with disabilities in all aspects of employment. Possible accommodations may include restructuring jobs, altering the layout of workstations, or modifying equipment. Employers may not discriminate in the application process, hiring, wages, benefits, and all other aspects of employment.

Title II focuses on **public services**. Public services, which include state and local government instrumentalities, the National Railroad Passenger Corporation (AMTRAK), and other commuter authorities, cannot deny services to people with disabilities or deny participation in programs or activities that are available to people without disabilities. In addition, public transportation systems, such as public transit buses, must be accessible to individuals with disabilities.

Title III focuses on **public accommodations**. All new construction and modifications must be accessible to individuals with disabilities. For existing facilities, barriers to services must be removed if readily achievable. Public accommodations include facilities such as restaurants, hotels, grocery stores, retail stores, etc., as well as privately owned transportation systems.

Title IV: Telecommunications companies offering telephone service to the general public must have telephone relay service to individuals who use telecommunication devices for the deaf (TTYs) or similar devices.

Title V: Includes a provision prohibiting either (a) coercing or threatening or (b) retaliating against the disabled or those attempting to aid people with disabilities in asserting their rights under the ADA.

www.ada.gov

Principles of Universal Design

- 1. Equitable Use:** The design does not disadvantage or stigmatize any group of users.
- 2. Flexibility in Use:** The design accommodates a wide range of individual preferences and abilities.
- 3. Simple, Intuitive Use:** Use of the design is easy to understand, regardless of the user's experience, knowledge, language skills, or current concentration level.
- 4. Perceptible Information:** The design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities.
- 5. Tolerance for Error:** The design minimizes hazards and the adverse consequences of accidental or unintended actions.
- 6. Low Physical Effort:** The design can be used efficiently and comfortably, and with a minimum of fatigue.
- 7. Size and Space for Approach & Use:** Appropriate size and space is provided for approach, reach, manipulation, and use, regardless of the user's body size, posture, or mobility.

—Compiled by advocates of Universal Design and copyrighted by the
Center for Universal Design, School of Design,
NC State University [USA]

Appendix C

Guidelines for Health Promotion Programs Developed by Oregon Health and Science University

This checklist was developed to ensure health promotion programs recognize that a significant portion of the population has some level of disability. These guidelines were developed to provide best practices for community-based health promotion programs for people with disabilities.

	Question	Yes	No
1.	Does your program use well-researched theories drawn from a wide variety of disciplines such as health promotion, disability studies, and/or education?		
2.	Does your program integrate theories that include people with disabilities into the entire health promotion program, from planning to implementation and evaluation?		
3.	Do you measure your program's effectiveness?		
4.	If so, are the measures appropriate for people with disabilities, e.g., not penalizing for functional limitations?		
5.	Did people with disabilities, families, and caregivers participate in the development of your program by identifying program outcomes or reviewing program content before implementation?		
6.	Are people with disabilities, families, and caregivers involved in implementing the program?		
7.	Are the beliefs, practices, and values of people with disabilities reflected in your program's mode of delivery, training materials, and written materials?		

	Question	Yes	No
8.	Does your program support participants in identifying and achieving personal health goals?		
9.	Does your program consider social, behavioral, and programmatic barriers that reduce participation among people with disabilities?		
10.	Does your program consider environmental barriers that reduce participation among people with disabilities, including environmental accessibility of the program site (e.g., accessible parking, entrance, meeting room, restroom, and signage)?		
11.	Is your program site available via accessible public transportation?		
12.	Do your program materials (training materials, hand-outs) lend themselves to being translated into alternate formats?		
13.	Are program materials produced in a variety of alternative formats including but not limited to Braille, large print, and computer disk?		
14.	Are accommodations provided when requested?		
15.	Does your program maintain reasonable participant fees?		
16.	Does your program ensure low-cost transportation for participants?		
17.	Does your program ask people with disabilities, families and caregivers, to provide feedback, including rating satisfaction with your program?		
18.	Does your program make changes based on participant feedback?		
19.	If you are asking for feedback, do you make sure that you are reaching people with disabilities by using alternate formats, such as interpreters or readers?		
20.	Does your program record intervention-related expenses such as cost of materials, recruitment, equipment, space, and personnel?		

(<https://www.ohsu.edu/cdrc/rrtc/surveys.cfm>)

Appendix D

Pledge Card

NC's Plan to Promote the Health of People with Disabilities	Pledge of Support
Every where. day. body!	Name _____
	Agency _____
Health Indicator our organization will work on: _____	
Domain	
<input type="checkbox"/> Data <input type="checkbox"/> Environment <input type="checkbox"/> Health & Social Interventions <input type="checkbox"/> Policy <input type="checkbox"/> Media & Education Campaigns	
Action Step	_____

Partners	_____

Assistance that would help?	_____

Appendix E

Acronyms

Acronym	Organization / Project / Term
ADA	Americans with Disabilities Act
BMI	Body Mass index
BRFSS	Behavioral Risk Factor Surveillance System
CDC	Centers for Disease Control and Prevention
CHAMPS	Child Health Assessment Monitoring Program
CHIP	Children’s Health Insurance Program
CIL	Center for Independent Living
CME	Continuing Medical Education
CYSHCN	Children and Youth with Special Health Care Needs
DHHS	Department of Health and Human Services
DPH	Division of Public Health
ESMM	Eat Smart Move More
FPG-CDI	Frank Porter Graham Child Development Institute
FEA	Fundamental Elements of Accessibility
HP 2020	Healthy People 2020
IOM	Institute of Medicine
LHI	Leading Health Indicator
NGA	National Governor’s Association
NCA	National Center on Accessibility
NSCH	National Survey of Children’s Health
NCODH	North Carolina Office on Disability and Health
NCCIP	NC Core Indicators Project
NCPAD	National Center on Physical Activity and Disability
MH/DD/SAS	Division of Mental Health, Developmental Disabilities and Substance Abuse Services
SCHC	State Center for Health Statistics
SCD	Special Care Dentistry
STD	Sexually Transmitted Diseases
UD	Universal Design
WBH	Women Be Healthy
WHLH	Work Healthy, Live Healthy
YRBS	Youth Risk Behavior Survey

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