



Issue Brief

Healthy Foundations for Healthy Youth

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Adolescents Have Unique Health Needs

In 2008, nearly one-sixth (1.4 million) of North Carolina's population were adolescents between the ages of 10 and 20.¹ These youth are in a period of great transition, moving from childhood to becoming young adults. Aside from infancy, there is no other time period when a person experiences such profound changes in their physical, cognitive, emotional, and social development. During this metamorphosis, new health behaviors emerge and many health habits that affect life outcomes are established.²

This time period offers great opportunities because adolescent behavior, health, and educational achievement can positively influence the rest of their lives. Unfortunately, data show that many youth engage in behaviors that compromise their health; between the ages of 10 and 20, rates of death and serious health problems double—primarily because of problematic adolescent behaviors. Intervening during adolescence provides a unique opportunity to improve not only adolescents' immediate health, but also their long-term health and well-being.² The health and well-being of youth are shaped by the environments created by parents, health professionals, schools, communities, and policymakers.³ Adults need to ensure that there are opportunities for adolescents to develop the skills and knowledge needed to be healthy adolescents, healthy adults, and productive members of society in the future.

In order to help ensure that North Carolina adolescents have the greatest chance of success in life, The Duke Endowment generously funded the North Carolina Metamorphosis Project (NCMP) to study ways to improve adolescent health in our state. The North Carolina Institute of Medicine (NCIOM) Task Force on Adolescent Health was one part of this larger project. The Task Force was co-chaired by J. Steven Cline, DDS, MPH, Deputy State Health Director, Division of Public Health, North Carolina Department of Health and Human Services (NC DHHS); Carol A. Ford, MD, Director, Adolescent Medicine, Program Director, NCMP, Associate Professor, School of Medicine

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and Gillings School of Global Public Health, University of North Carolina at Chapel Hill; and Howard Lee, Executive Director, North Carolina Education Cabinet. There were 38 other members of the Task Force.

The Task Force focused most of its work on examining the critical health issues for youth as identified by the Centers for Disease Control and Prevention (CDC), including unintentional injury, substance use and abuse, mental health, violence, sexual health, and prevention of chronic illnesses.⁴ Instead of focusing solely on *preventing* certain adolescent health issues, the Task Force also looked at ways to *invest* in youth so they can *develop* the skills and attributes needed to become productive adults. The Task Force made a total of 32 recommendations to improve adolescent health. This issue brief summarizes the Task Force's findings and 10 priority recommendations (in italics). A copy of the full report detailing the work of the Task Force and containing all of the recommendations is available on the NCIOM website at <http://www.nciom.org>.

Strengthening Adolescent Health Leadership and Infrastructure, and Improving the Quality of Youth Policies, Programs, and Services

Families, schools, communities, health care providers, and public policies all influence adolescent health and well-being. To maximize effectiveness, public health interventions

must be offered within schools, communities, and clinical settings and should be reinforced through social marketing campaigns and supportive public policies. Further, strategies that are “evidence-based” have been scientifically proven to positively influence specific health outcomes and youth development and thus are generally more effective uses of funding. *Therefore, the Task Force recommended North Carolina funders supporting adolescent initiatives place priority on funding evidence-based programs to address adolescent health behaviors across multiple domains. Further, program selection should take into account the racial/ethnic, cultural, geographic, and economic diversity of the population being served.*

Health Care Strategies to Improve Adolescent Health

Adolescents as a group are generally healthy. However, the majority of youth will, at some time, engage in behaviors that can lead to serious negative consequences. Regular preventive check-ups and counseling can help ensure that adolescents develop patterns of behavior that will favorably influence lifelong trajectories of health and provide opportunities for early diagnosis and intervention when problems emerge. Supporting and expanding health services in schools is an important strategy for ensuring that more adolescents have access to health care. *Therefore, the Task Force recommended that the state strengthen and expand school-based health services in middle and high schools.*

Education Strategies to Improve Adolescent Health

The guiding mission of the North Carolina State Board of Education (SBE) is to prepare students to graduate from high school and be successful in the 21st century. To meet this mission, schools must do more than teach students academic subjects; schools must also help provide students with the knowledge and skills needed to become healthy and responsible adolescents and future adults.⁵ Success in school and the number of years of schooling impact health across the lifespan; people with more years of education are more likely to live longer, healthier lives.⁶ *Therefore, the Task Force recommended that the state expand efforts to support and further the academic achievement of middle and high school students with the goal of increasing the high school graduation rate.*

The North Carolina Healthy Schools Partnership, a partnership between the Department of Public Instruction and the NC DHHS, promotes the union of health and learning within public schools using a coordinated school health approach.⁷ The CDC has identified eight critical

elements that should be included in a coordinated school health approach: health education, physical education, health services, nutrition services, mental and behavioral health services, healthy school environment, health promotion for staff, and family/community involvement.⁸ Research has shown that well-executed components of the coordinated school health approach have a positive effect on some academic outcomes.⁹ Supporting and strengthening the Healthy Schools Partnership is critical to improving the health programs, policies, and services in schools. *Therefore, the Task Force recommended that the state should ensure implementation of the coordinated school health approach and expansion of the North Carolina Healthy Schools Partnership to include a local healthy schools coordinator in each local education agency.*

Preventing Unintentional Injuries

Unintentional injuries are the leading cause of death in North Carolina for people ages 10-20,¹⁰ and motor vehicle crashes are the most common cause of unintentional injury in this population.¹¹ Despite already being a national leader in implementing evidence-based strategies to minimize the rate of motor vehicle crashes in adolescents, North Carolina can make even more progress by developing and implementing an evidence-based drivers education curriculum as part of the comprehensive training program for young drivers. *Therefore the Task Force recommended that the North Carolina Department of Transportation should develop, implement, and evaluate a pilot driver education program.*

Reducing Substance Use and Abuse and Improving Mental Health for Adolescents and Young Adults

While most youth successfully navigate adolescence without significant psychological, social, or health problems, adolescence is a period when threats to mental and physical health increase and lifelong mental health problems begin or emerge.¹² Many youth also begin experimenting with drugs and alcohol during adolescence. While many youth use these substances on an occasional basis, some youth have become addicted. Almost 7% of adolescents age 12-17 and approximately 20% of young adults age 18-25 report alcohol or drug abuse or dependence.¹³ The misuse of drugs and alcohol during adolescence can have short- and long-term consequences including abuse and addiction, violence, high-risk sexual activity, injury, and criminal activity. However, North Carolina has not historically invested heavily in evidence-based substance abuse prevention programs, nor has the state done an effective job treating those youth in need.

The North Carolina Department of Health and Human Services estimates that 10%-12% of children ages 9-17 suffer from serious emotional distress.¹⁴ The majority of mental illness in adolescents goes unrecognized or untreated, leaving youth vulnerable to diminished school success and to social and behavioral impairments during this critical phase of development.¹⁵ *To address these issues, the Task Force recommended that the state ensure the availability of substance abuse and mental health services for adolescents.*

Youth Violence Prevention

Reducing youth violence requires a community-wide effort that involves individuals, families, schools, and government agencies in both in- and out-of-school strategies. There are several evidence-based programs to reduce risk behaviors that contribute to violence and to reduce violence. While it is important to implement such programs for all youth, using evidence-based programs and services is especially critical when targeting at-risk youth to ensure the best possible outcomes. *Therefore the Task Force recommended that the Department of Juvenile Justice and Delinquency Prevention strongly encourage Juvenile Crime Prevention Councils to fund evidence-based juvenile justice prevention and treatment programs.*

Reducing Teenage Sexual Activity and Preventing Sexually Transmitted Diseases and Teenage Pregnancies

More than half of North Carolina high school students report having had sex at least once.¹⁶ To reduce unwanted pregnancies, STDs, and HIV among youth, the Centers for Disease Control and Prevention recommends communities use a multifaceted strategy that promotes abstinence, helps youth who have been sexually active to return to abstinence, and educates youth who are sexually active in the correct and consistent use of condoms and other forms of contraception.⁴ North Carolina recently changed state law to ensure students receive comprehensive reproductive health and safety education

and has some programs and services aimed at reducing unwanted pregnancies, STDs, and HIV. However, the state's teen birth rate is one of the highest in the nation (50 births per 1,000 teenagers ages 15-19 compared to the national rate of 42 births per 1,000), and nearly half of all new STD infections in North Carolina occur in youth between the ages of 15-24.^{17,18} *Therefore, the Task Force recommended that the state develop and disseminate an unintended pregnancy prevention social marketing campaign, expand the Teen Pregnancy Prevention Initiative, and expand the Get Real. Get Tested. campaign for HIV prevention to include other STDs and reach more adolescents.*

Table 1
Many North Carolina High School Students* Engage in Health Risk Behaviors and Have Mental Health Problems

Substance Abuse and Mental Health		2007
Used in the past 30 days:		
Marijuana		19.1%
Alcohol (beer included)		37.7%
Binge Drinking (5 or more drinks within a couple of hours)		21.1%
Depressed**		26.9%
Seriously considered attempting suicide during the past 12 months		12.5%
Mental Health		2006
Parent told by doctor/nurse/school representative, child (14-17) has ADD or ADHD		17.3%
Parent told by doctor/health professional, child (14-17) has depression/anxiety		10.2%
Violence		2007
In a physical fight one or more times during the past 12 months		30.1%
Carried a weapon (i.e. gun, knife, club) on one or more of past 30 days		21.2%
Homicide Deaths (ages 10-20)		87
Firearm Deaths (ages 10-20)		70
Unintentional Injury		2007
Never or rarely used a seat belt		7.9%
Rode in a car driven by someone who had been drinking alcohol one or more times in the past 30 days		24.7%
Motor Vehicle Deaths (Ages 10-20)		197
Sexual Health		2007
Ever Had Sex		52.1%
Currently Sexually Active		37.5%
Chronic Illness		2007
Used tobacco products in the past 30 days		26.6%
Were not physically active for a total of 60 minutes or more per day on five or more of the past seven days		55.7%
Low-income children (12-18) who are overweight		29.6%

* Data are for students in grades 9-12 unless otherwise noted.

** Felt so sad or hopeless almost every day for two weeks or more in a row that they stopped doing usual activities (during past 12 months)

Data Sources: Parent report data: State Center for Health Statistics. Child Health Assessment and Monitoring Program, 2006; Death data: Scott K. Proescholdbell, MPH; Head, Injury Epidemiology and Surveillance Unit, Injury and Violence Prevention Branch, Chronic Disease and Injury Section, Division of Public Health, NC DHHS. Written (email) communication. October 23, 2009; Tobacco data: Tobacco Prevention and Control Branch, NC DHHS. North Carolina Youth Tobacco Survey, 2007; Obesity data: Eat Smart Move More North Carolina. North Carolina-Nutrition and Physical Activity Surveillance System (NC-NPASS). Includes data on children seen in North Carolina Public Health Sponsored WIC and Child Health Clinics and some School Based Health Centers; All other data: North Carolina Department of Public Instruction. Youth Risk Behavior Survey, 2007.

Chronic Disease Prevention

Although most adolescents do not have a chronic health condition, behaviors developed in adolescence can lead to chronic disease in adulthood. Currently, roughly half of US adults have at least one chronic disease;¹⁹ addressing the behaviors leading to subsequent chronic disease is one way to stem the increased burden of chronic disease. The Task Force chose to focus on tobacco use and obesity because they often develop in adolescence and are two of the leading causes of adult chronic disease. *Therefore, to reduce tobacco use, the Task Force recommended that the state support the implementation of North Carolina's tobacco control program. To promote healthy eating and reduce overweight and obesity, the Task Force recommended that North Carolina funders provide funds to test and evaluate innovative strategies to deliver healthy meals in middle and high schools.*

North Carolina Needs to Take a Multifaceted Approach to Improving Adolescent Health

Adolescents need support—at home, at school, in clinics, in the community—to help them develop the skills and knowledge needed to be healthy adolescents, healthy adults, and productive members of society in the future. North Carolina can achieve this vision by strengthening leadership around adolescent health, using evidence-based programs, policies, and services whenever possible, and implementing multifaceted interventions to improve adolescent health. By implementing many of the Task Force's recommendations, the state can help ensure that today's adolescents successfully transition into tomorrow's leaders.

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A copy of the full report, including the complete recommendations, is available on the North Carolina Institute of Medicine website, <http://www.nciom.org>.

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