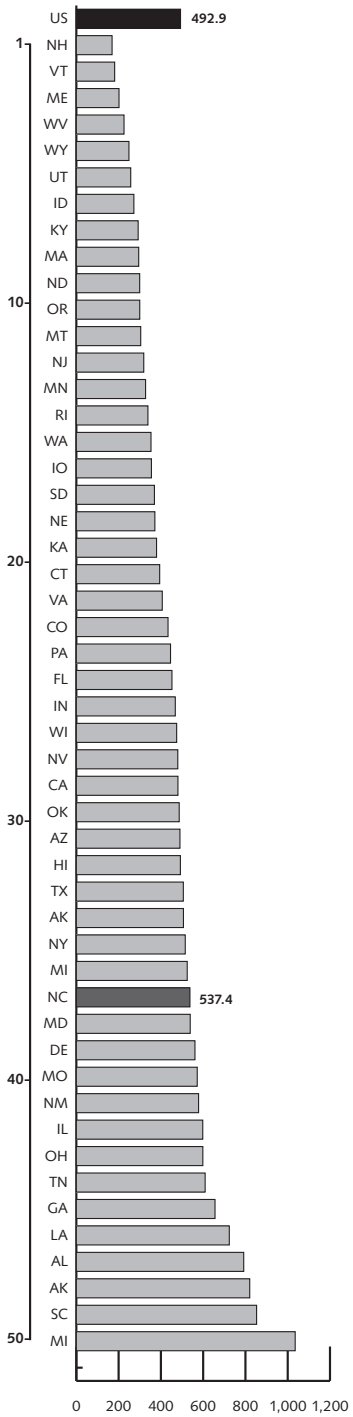
Risky sexual behaviors can lead to sexually transmitted diseases (STDs), human immunodeficiency virus/acquired immune deficiency syndrome (HIV/AIDS), and unintended pregnancy. These potentially preventable conditions can lead to reduced quality of life, as well as premature death and disability, and result in millions of dollars in preventable health expenditures annually in North Carolina. In 1997 the estimated annual direct medical cost to North Carolina for all STDs, including HIV, was $228.4 million.[1] Unintended pregnancy among the Medicaid population alone leads to over $500 million in costs annually.[1] The National Campaign to Prevent Teen and Unplanned Pregnancy estimated teen pregnancy in North Carolina cost taxpayers more than $312 million in 2004.[a,2] All of these costs are largely preventable.

While the financial impact of STDs, HIV, and unintended pregnancy is important, the most serious toll these have is on loss of life and disability. In 2007, nearly 54,000 cases of STDs (non-HIV) were reported in North Carolina.[3] In addition, 1,943 new cases of HIV disease were diagnosed, and 953 new AIDS cases were reported.[3] Forty-five percent of all live births in 2006 resulted from unintended pregnancies.[4] While unintended pregnancy does not usually result in loss of life or disability, it can lead to adverse social, economic, and health outcomes. As with many health diseases and conditions, the burden of STDs, HIV, and unintended pregnancy fall disproportionately on disadvantaged populations, young people, and minorities.

Sexually Transmitted Diseases (Non-HIV)

STDs are illnesses and infections that are transmitted by direct sexual contact. They include both bacterial and viral infections and can cause serious health problems.[5] In many cases individuals are infected but do not show symptoms and unknowingly infect others.[5] In North Carolina, 18 STDs and related conditions are reportable to state authorities.[b,3] The most prevalent reportable STDs in the state include chlamydia, gonorrhea, and syphilis.[c,3] Data show that North Carolinians contract these three STDs as well as HIV at rates above the national average.[3] (See Table 5.1.) High STD rates are particularly problematic as STD infection is associated with an increased risk for HIV infection.[6]

Syphilis, Gonorrhea, and Chlamydia Cases Per 100,000, 2007



Source: North Carolina Institute of Medicine. Analysis of Centers for Disease Control and Prevention, Sexually Transmitted Disease Surveillance Data, 2007.

a The National Campaign to Prevent Teen and Unplanned Pregnancy includes public health care, child welfare, incarceration, and lost tax revenue in the calculation of total costs associated with teen parents and their children. Because all costs and outcomes cannot be measured, these estimates represent conservative predicted costs. (The National Campaign to Prevent Teen and Unplanned Pregnancy. By the numbers: the public costs of teen childbearing in North Carolina. http://www.thenationalcampaign.org/costs/pdf/states/northcarolina/fact-sheet.pdf. Published November 2006. Accessed June 29, 2009.)

b § 10A NCAC 41A 0.101 Reportable Diseases and Conditions. The 18 mentioned here do not include HIV and AIDS. Reportable diseases and conditions are those that laboratories and health care providers are legally required to report confirmed diagnoses to the North Carolina STD Surveillance data system. Reporting is for monitoring and reporting disease trends.

c Hepatitis A and B are also reportable. (§ 10A NCAC 41A 0.101 Reportable Diseases and Conditions) However, only the three most common STDs (chlamydia, gonorrhea, and syphilis) were studied by the Task Force.

Table 5.1
Selected 2007 STD Incidence Rates per 100,000 Population in North Carolina and the United States

	2007 STD Incidence Rates		
	North Carolina	United States	North Carolina Rank
Chlamydia	345.6	370.2	26th
Gonorrhea	188.2	118.9	45th
Syphilis	3.6	3.8	36th
HIV (2006)	32.2	22.8	*

*North Carolina is ranked 19th of the 22 states participating in surveillance of HIV incidence estimates (with 1st being the state with the lowest rate).

Note: States were ranked in descending order by rate, with 1st being the state with the lowest rate.

Sources: Chlamydia, Gonorrhea, and Syphilis data from: Centers for Disease Control and Prevention. Sexually Transmitted Disease Surveillance, 2007. Atlanta, GA: U.S. Department of Health and Human Services; December 2008. HIV data from: Engel J. HIV/STD and unintended pregnancy in North Carolina. Presented to: The North Carolina Institute of Medicine Task Force on Prevention; October 3, 2008; Cary, NC.

Risky sexual behaviors can lead to sexually transmitted diseases (STDs), human immunodeficiency virus/acquired immune deficiency syndrome (HIV/AIDS), and unintended pregnancy.

In many cases, treatments are available to reduce STD symptoms, decrease or eliminate the risk of STD transmission, and cure STDs. Two STDs, the hepatitis B virus and the human papillomavirus (HPV), are vaccine-preventable. However, the majority of STDs are not vaccine-preventable.[7] (See Chapter 9, Recommendation 9.1 for information about the HPV vaccine.)

Chlamydia, Gonorrhea, and Syphilis

Chlamydia

Chlamydia is the most frequently reported STD in North Carolina. In 2007, 30,612 cases of chlamydia were reported, and over 24,000 of these cases were in females. The gender disparity is generally believed to be due to the fact that women are screened for the disease more often than men, not because more women than men are infected.[3] Chlamydia infection can cause severe damage to the female reproductive tract, including infertility and pelvic inflammatory disease (PID). Although it is easily treated with antibiotics, approximately three-quarters of infected females and half of infected males have no symptoms, and therefore may not seek treatment.[d,3,8]

d For these reasons, the US Preventive Services Task Force recommends that all sexually active females age 24 years and under, as well as all pregnant women who are at increased risk, be screened for chlamydia. The Centers for Disease Control and Prevention recommends that men are tested for chlamydia when they visit STD clinics or attend the National Job Training Program. In addition, men under age 30 who are sexually active should be screened in the military and when they enter jail. (National Center for HIV/AIDS, Viral Hepatitis, STD and TB Prevention, Centers for Disease Control and Prevention. Male Chlamydia screening consultation: meeting report. http://www.cdc.gov/std/chlamydia/chlamydiascreening-males.pdf. Published May 22, 2007. Accessed June 24, 2009.) Despite these recommendations, there is currently no state or federal funding for chlamydia screening in men. (Leone P. HIV, STDs and unintended pregnancy: what are we doing in NC to address these? Presented to the North Carolina Institute of Medicine Task Force on Prevention; October 3, 2008; Morrisville, NC.)

Gonorrhea

Gonorrhea is the second most commonly reported STD in North Carolina, with 16,665 cases reported in 2007.[3] While the incidence of gonorrhea declined for many years in North Carolina, it increased 15% from 2005 to 2006.[7] Symptoms among infected males include discharge and burning upon urination. Women may or may not have symptoms, and symptoms may be mild. However, untreated gonorrhea can damage the female reproductive tract, causing PID and infertility.[7] Males are more likely than females to have symptoms associated with gonorrhea infection that would encourage them to visit an STD clinic. The state has not seen a gender bias in gonorrhea reporting, as with chlamydia, because males typically have symptoms that prompt them to receive care. About half of reported gonorrhea cases are in males.[7] However, females in publicly-funded prenatal care, family planning, and STD clinics are screened for gonorrhea, while males are screened at STD clinics only.

The most prevalent reportable STDs in the state include chlamydia, gonorrhea, and syphyilis. Data show that North Carolinians contract these three STDs as well as HIV at rates above the national average.

Syphilis

Syphilis is a complex, multi-stage disease and the third most prevalent non-HIV reportable STD in North Carolina. In 2007, 1,103 cases were reported.[3] Primary and secondary syphilis—often called early syphilis—are the most infectious stages and are the stages where symptoms are most perceptible. Syphilis is identified by a single sore skin rash and lesions in the mucous membrane. Fever, sore throat, headaches, and weight loss characterize the second stage. Late and latent stages are marked by damage to internal organs, paralysis, blindness, and dementia.[9]

In 1999, a national syphilis eradication initiative, the Syphilis Elimination Effort (SEE), was launched in counties with particularly high rates of syphilis. Six of the 50 counties were in North Carolina.[e] Due to this effort, North Carolina's syphilis rates declined. However, since 2003, rates of early syphilis in the state have risen, and North Carolina's national ranking for cases of syphilis has increased. In 2003, North Carolina ranked 31st; however, by 2006, North Carolina ranked 38th (with only 12 states having higher rates of syphilis), as shown in Table 5.1.[1,7] Most of the infections (56%) reported in 2007 were found in the six SEE counties.[3]

North Carolina law requires that medical providers test all pregnant women who are between 28-30 weeks gestation for syphilis.[f] However, women who do not receive adequate prenatal care services often miss these opportunities for screening. Untreated syphilis is especially dangerous in pregnant women. The disease can infect the infant and cause severe complications, including premature birth and infant death.[7] Syphilis can generally be treated with antibiotics such as penicillin.[10]

e Including Durham, Forsyth, Guilford, Mecklenburg, Robeson, and Wake
f 15A NCAC 19A.0204 Control Measures—Sexually Transmitted Disease

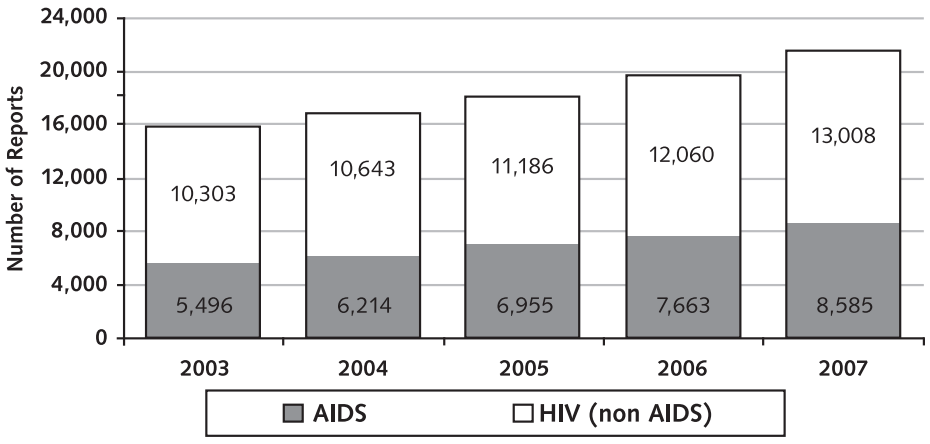
HIV/AIDS

HIV is a virus that weakens the immune system and can lead to AIDS.[g,11] The primary ways in which HIV is transmitted are through sexual contact or sharing needles with an infected person.[12] HIV infection in humans is pandemic, and HIV/AIDS is estimated to have killed more than 25 million people worldwide to date.[13] In 2006, 56,300 people in the United States contracted HIV; of those new cases, 2,022 were in North Carolina.[7,14] In North Carolina in 2006, HIV/AIDS was the 10th leading cause of death among 13-24 year olds, the 7th leading cause of death among 25-44 year olds, and the 9th leading cause of death among African Americans in all age groups.[3]

In North Carolina in 2006, HIV/AIDS was the 10th leading cause of death among 13-24 year olds, the 7th leading cause of death among 25-44 year olds, and the 9th leading cause of death among African Americans in all age groups.

According to the North Carolina Division of Public Health (DPH) HIV/STD Prevention & Care Branch, nearly 21,600 people in the state were known to be living with HIV/AIDS in 2007. (See Figure 5.1.) However, given that not all infected persons are aware of their status, it is estimated that 33,000 people in North Carolina are living with HIV or AIDS.[3] This is extremely troubling, as it is estimated that over half of new infections are caused by people who are unaware that they are infected.[15] Additionally, the most recent data (from 2006) show that only 62% of North Carolinians living with HIV who knew of their status were in care.[3]

Figure 5.1
Total HIV/AIDS Cases in North Carolina, 2003-2007



Source: Division of Public Health, North Carolina Department of Health and Human Services. Epidemiologic profile for HIV/STD prevention & care planning. http://www.epi.state.nc.us/epi/hiv/epiprofile1008/Epi_Profile_2008.pdf. Published October 2008. Revised May 2009. Accessed July 1, 2009.

g Human immunodeficiency virus (HIV) is a retrovirus that attacks the immune system and causes acquired immune deficiency syndrome (AIDS). AIDS is the final stage of an HIV infection, and a person may be infected with HIV for many years before AIDS develops. (Centers for Disease Control and Prevention. Living with HIV/AIDS. Centers for Disease Control and Prevention website. http://www.cdc.gov/hiv/resources/brochures/livingwithhiv.htm. Updated July 21, 2007. Accessed August 12, 2009.

Among adult and adolescent males in 2007, 76% of new HIV cases were from men having sex with men (MSM) and MSM who were injection drugs users (IDU).[3] Among adult and adolescent females, 86% of HIV cases were from heterosexual transmission and 9% were from IDU. Heterosexual transmission of HIV accounted for nearly 4 out of 10 of all new HIV reports in 2007; whereas MSM and MSM who inject drugs accounted for 5 out of 10 of all reports.[h,3]

Unintended Pregnancy

Nearly half of all pregnancies in North Carolina are unintended.

The term *unintended pregnancy* refers to a pregnancy that was mistimed or unwanted at the time of conception. This term does not necessarily reflect parental perception of the child at the time of birth.[16] Nearly half of all pregnancies in North Carolina are unintended. Unintended pregnancy can result in serious health, social, and economic consequences for women, families, and communities. It is associated with delayed entry into prenatal care as well as low-birth weight babies and poor maternal nutrition.[17] Additionally, women giving birth resulting from unintended pregnancies are more likely to smoke and less likely to breastfeed.[4]

Approximately 45% of the 123,500 live births in North Carolina yearly from 2004-2006 were unintended. Of these, 11% of women indicated they did not want to become pregnant at that time or at any time in the future, and 34% indicated the timing of the pregnancy was not optimal.[4] In 2006, Medicaid covered 61,190 births at an average cost of $12,874 for each pregnancy and first year of infant care.[1] According to the North Carolina Pregnancy Risk Assessment Monitoring System (PRAMS), 72% of women with unintended pregnancies in 2004-2006 were Medicaid recipients just before pregnancy, during pregnancy, or after delivery.[4] Significant cost savings for the state would result from the prevention of these unintended pregnancies (see cost information in Recommendation 5.4). An estimated 467,630 North Carolina women were in need of publicly financed family planning services in 2006; however, only 42% were served. Services that were delivered helped to prevent an estimated 45,300 unintended pregnancies across the state.[18]

Although the majority of unintended pregnancies occur in adults, most teen pregnancies are unintended.

Although the majority of unintended pregnancies occur in adults, most teen pregnancies are unintended.[19] While more than 3 out of 4 unintended pregnancies are among women ages 20 years and older, the risk of unintended pregnancy is higher among younger women.[20] North Carolina is ranked 37th in the country in teen pregnancy rates (with 50th being the state with the highest rate). Teen pregnancy rates in North Carolina have leveled off over the past 5 years following a 14-year period of decline. In 2007, the rate of teen pregnancy among girls ages 15-19 was 63 per 1,000, resulting in 19,615 pregnancies. Of teens in this age group that became pregnant in 2007, almost 30% were repeat pregnancies.[i,22] North

h The other 10% of HIV reports were due to no information, identified source, or identifiable risk. (Leone P. Medical Director, HIV/STD Prevention and Care Branch, Division of Public Health, North Carolina Department of Health and Human Services. Written (email) communication. August 4, 2009.)

Carolina's 2006 teen birth rate among girls ages 15-19 years was higher than the national rate (49.7 per 1,000 versus 41.9 per 1,000).[21]

North Carolina's relatively high rate of teen pregnancy is related to the sexual practices of the state's young people. In 2007 52.1% of high school students reported having ever had sexual intercourse, and 37.5% reported having sexual intercourse in the last three months.[23] As grade level increases, youth are more likely to be sexually active. Among high school students ages 15 and younger, 36.4% reported ever having had sexual intercourse; among those ages 18 and older, 69% had ever had sexual intercourse. Among students who had sexual intercourse during the past three months, one in five drank alcohol or used drugs before last sexual intercourse. Additionally, many youth report not using protection against STDs, HIV, and unintended pregnancy. Among sexually active high school students, 61.5% reported using a condom the last time they had sex and 17.4% said they used birth control pills.[23]

In 2007 52.1% of high school students reported having ever had sexual intercourse, and 37.5% reported having sexual intercourse in the last three months.

Compared with women who have their first child after age 19, adolescents who become mothers are more likely to suffer adverse social and health consequences.[24] Approximately 70% of young mothers drop out of high school, and the children of teenage mothers score lower on tests of mathematics and reading up to age 14.[24] In addition, these children are twice as likely as other children to repeat a grade in school and receive unfavorable ratings by teachers in high school. Children born to young teenage mothers are much more likely to be victims of abuse and neglect, and, if placed in foster care, spend a longer time there.[25] Further, the children of teenage mothers are three times more likely to spend time in a jail or prison during adolescence or their early twenties. It is estimated that if females delayed their first birth from age 17 and younger to age 20 or 21, there would be a 9% increase in the chance that their children would graduate from high school. Moreover, according to the North Carolina State Advisors on Adolescent Sexual Health, national savings in foster care spending would be approximately $1 billion annually, while incarceration costs would be reduced by $900 million.[i,25] As mentioned previously, the National Campaign to Prevent Teen and Unplanned Pregnancy estimated teen pregnancy in North Carolina cost taxpayers more than $312 million in 2004, including $36 million in child welfare costs and $61 million in incarceration costs.[2] In FY 2009, only $3.5 million in Temporary Assistance for Needy Families (TANF), Medicaid, and state appropriations was spent on teen pregnancy prevention initiatives in North Carolina.[k]

i The teen pregnancy rate is defined as the sum of live births and legal induced abortions per 1,000 women ages 15-19 years. The teen birth rate is defined as the number of live births per 1,000 women ages 15-19 years. (Centers for Disease Control and Prevention, US Department of Health and Human Services. Teenage pregnancy and birth rates—United States, 1990. http://www.cdc.gov/mmwr/preview/mmwrhtml/00021930.htm. Published September 19, 1998. Accessed July 6, 2009.)

j The North Carolina State Advisors on Adolescent Sexual Health is composed of representatives from the North Carolina Department of Public Instruction, North Carolina Department of Health and Human Services, and the Office of Minority Health and Health Disparities.

k Crownover R. Team Pregnancy Prevention Team Leader, Women's Health Branch, Division of Public Health, North Carolina Department of Health and Human Services. Written (email) communication. July 13, 2009.

Disparities in STDs, HIV, and Unintended Pregnancy

There are significant disparities in the infection rates of STDs and HIV and in the rate of unintended pregnancies by race/ethnicity, age, and gender.

Race and Ethnicity

Severe racial and ethnic disparities exist in STD and HIV infection rates as shown in Table 5.2. For example, African American men have a gonorrhea rate that is 24 times higher and an HIV rate that is six times higher than the rates of white men.[7] African American women have an HIV rate that is 16 times higher and a syphilis rate that is 11 times higher than those of white women. The HIV/AIDS disparity between African Americans and whites is one of the largest health disparities in the state. Approximately 70% of those infected with AIDS in North Carolina are African Americans, which is almost 25% higher than the national average.[7] Further, North Carolina has the 6th highest rate of African Americans living with AIDS in the country. African Americans in North Carolina also have higher rates of other STDs than whites, as shown in Table 5.2. American Indians also experience much higher rates of chlamydia, gonorrhea, and syphilis than whites in the state, although this is not shown in the table. Not only do African Americans have a higher rate of STDs and HIV/AIDS, the rate of unintended pregnancy among African American women is almost twice as high as that among white women.[26]

Severe racial and ethnic disparities exist in STD and HIV infection rates.

Table 5.2
African Americans and Latinos are More Likely to have STDs and HIV than Whites

STD and HIV Rates per 100,000 in North Carolina, 2007						
		Males			Females	
	White	African American (times (x) higher than white males)	Latino (times (x) higher than white males)	White	African American (times (x) higher than white females)	Latino (times (x) higher than white females)
Chlamydia	34.8	385.3 (11.1x higher)	144.8 (4.2x higher)	202.6	1374.7 (6.8x higher)	711.2 (3.5x higher)
Gonorrhea	27.8	660.7 (23.8x higher)	68.6 (2.5x higher)	57.1	578.0 (10.1x higher)	65.7 (1.2x higher)
Syphilis	3.2	33.1 (10.3x higher)	7.1 (2.2x higher)	0.9	10.2 (11.3x higher)	5.1 (5.7x higher)
HIV	18.7	108.5 (5.8x higher)	51.2 (2.7x higher)	3.2	52.4 (16.4x higher)	18.2 (5.7x higher)

Source: Division of Public Health, North Carolina Department of Health and Human Services. Epidemiologic profile for HIV/STD prevention & care planning. http://www.epi.state.nc.us/epi/hiv/epiprofile1008/Epi_Profile_2008.pdf. Published October 2008. Revised May 2009. Accessed July 1, 2009.

Risky sexual behavior cannot fully account for these racial disparities. Although African American women tend to have the highest STD rates, studies consistently show they do not have the highest levels of risky behavior.[27] According to data from the Centers for Disease Control and Prevention (CDC), African Americans report more risky behaviors on some measures, but whites appear to be more risky

A multifaceted approach that includes outreach to high-risk groups, accessible screening and testing, appropriate care for infected people, comprehensive education, family planning, and pregnancy prevention programs holds significant promise for reducing the impact of STDs, HIV, and unintended pregnancy on North Carolinians and the state.

on many measures.[l,28] A combination of access to health care services, socioeconomic factors, and the makeup of sexual networks, in addition to screening and reporting bias in some cases, may explain some of the disparities across race and ethnicity.[3]

Unintended pregnancy also varies dramatically by race and ethnicity. From 2004-2006 in North Carolina, 63% of pregnant African American women and 48% of pregnant Latino women reported unintended pregnancies compared to 38% of pregnant white women[4]

Age and Gender

North Carolina's youth—especially young women—are at particularly high risk for STD and HIV infection. Nearly half of all new STD infections occur in youth between ages 15-24.[3] In 2007, youth ages 13-19 accounted for 37% of North Carolina's new chlamydia cases and 26% of new gonorrhea cases. People under age 30 accounted for 89% of new chlamydia cases and 77% of new gonorrhea cases, with women accounting for 60% of new gonorrhea cases and 84% of new chlamydia cases in this age group.[29] Estimates suggest that one in two new HIV infections occur among people younger than 25 years, with one in four infections occurring among youth ages 22 years or younger.[30]

As mentioned above, age is an important factor in the rate of unintended pregnancy in North Carolina. The overwhelming majority of teen pregnancies (70%) are unintended.[4] However, because teen pregnancies are actually a small percentage of all pregnancies (12.2%), most (five out of six) of the unintended pregnancies in North Carolina are to women who are older than age 20.[4]

Prevention of STDs, HIV, and Unintended Pregnancy

There are many promising approaches to reduce STDs, HIV, and unintended pregnancy in North Carolina. Evidence-based educational programs have been shown to decrease risky sexual behavior and increase the use of contraception, which decreases the chances of both infection and unintended pregnancy. Screening for STD and HIV infection helps lower prevalence and reduce transmission. Pregnancy prevention programs have been shown to be extremely effective. A multifaceted approach that includes outreach to high-risk groups, accessible screening and testing, appropriate care for infected people, comprehensive education, family planning, and pregnancy prevention programs holds significant promise for reducing the impact of STDs, HIV, and unintended pregnancy on North Carolinians and the state.

l Unmarried African American women of all ages are less likely to have had four or more partners in the past year than their white counterparts, and a lower percentage of African American women reported having had 15 or more partners in their lives than white women. Lower percentages of African Americans report ever having had anal sex than whites. Fewer white men report using a condom during their last sexual intercourse than Latino or African American men (35.1%, 45.9%, and 55.5% respectively). However, African American men are more likely (34%) than white (22%) or Latino men (18%) to report having had 15 or more female sexual partners in their lifetime. African American teenagers are more likely than white teenagers to have had vaginal intercourse. (Mosher WD, Chandra A, Jones J. Sexual behavior and selected health measures: men and women 15-44 years of age, United States, 2002. *Adv Data.* 2005;362:1-55.)

Social Marketing and Screenings

Certain population groups are at high risk for contracting STDs and HIV and have an increased likelihood of transmitting these diseases. DPH and local health agencies are required to provide certain essential services including communicable disease control, health promotion, and risk reduction.[m] Educating and empowering individuals about health issues such as STDs and HIV are part of DPH's mission.

Social Marketing

One way DPH has acted to reduce the risk of STD and HIV and prevent the spread of these communicable diseases is through the *Get Real. Get Tested.* campaign. In 2006, DPH launched this statewide educational campaign to encourage North Carolinians to get tested to learn their HIV status. The HIV transmission rate is around 3.5 times higher for those undiagnosed compared to those who know their status, meaning increased knowledge of HIV status could lower transmission rates.[31] The campaign also provides HIV/AIDS prevention and education messages to the general public and helps identify persons living with HIV/AIDS in need of care. The campaign—executed in collaboration with community organizations, local health departments, and other partners—includes television spots, radio messages, and a 24/7 toll-free HIV/AIDS Hotline.[n,32] In 2007, *Get Real. Get Tested.* commercials aired during primetime shows to media markets statewide and reached over three million viewers across the state. During this time, HIV testing increased by 18.0%, which translates to an increase of 25,939 tests. Over 7,000 rapid HIV tests were administered at nontraditional testing sites, resulting in the identification of 71 new cases of HIV. Other *Get Real. Get Tested.* events led to more than 2,000 tests (part of the 25,939 tests noted above) and the identification of another 27 HIV-positive people. An additional 23 people tested positive for syphilis during these testing events.[33]

The effectiveness of the *Get Real. Get Tested.* campaign indicates that North Carolinians are receptive to messages regarding sexual health and behavior.

The effectiveness of the *Get Real. Get Tested.* campaign indicates that North Carolinians are receptive to messages regarding sexual health and behavior. Moreover, the success of this campaign shows that social marketing is an effective tactic for increasing screening rates among high-risk individuals in North Carolina. However, the reach of this campaign is limited due to finite funding. Encouraging high-risk North Carolinians to get tested can increase the proportion of individuals with STDs or HIV who know their status and receive proper treatment and can thereby lead to lower rates of transmission.

STD and HIV Screening

Providing access to screening is a necessary complement to such a campaign. DPH and local health departments play a vital role in providing access to STD and HIV screenings. All of the state's 100 local health departments offer no-cost, confidential STD and HIV/AIDS services including screening and counseling.[34] In an effort to increase screening among high-risk populations, DPH works with

m NCGS §130A-1.1(b)
n Additional partners include WRAZ/FOX 50 and Gilead Sciences.

Since HIV in young adults is almost always nonsymptomatic, there is little impetus for this population to get tested. Offering tests in nontraditional settings such as churches, chain stores, and college campuses may increase the number of young adults screened for the disease.

private providers and emergency departments to increase HIV screenings.[o] Since HIV in young adults is almost always nonsymptomatic, there is little impetus for this population to get tested.[35] Offering tests in nontraditional settings such as churches, chain stores, and college campuses may increase the number of young adults screened for the disease.

Although the benefits of STD and HIV screenings are clear, surveys show that STD screening levels are well below practice guidelines.[36] Even among populations for whom screening is covered by insurance, nonsymptomatic individuals rarely get screened for STDs including HIV.[36] In North Carolina, less than 50% of adults report ever having had an HIV test.[37] And as mentioned earlier, a large proportion of people do not know they are living with the HIV.

Reducing barriers to HIV and STD screening has consistently been shown to increase testing rates. Research indicates that HIV testing is infrequently performed because of multiple perceived barriers, including legally mandated counseling and the requirement for a separate, signed informed consent; lack of knowledge of STDs and available services; cost; shame associated with seeking services; long clinic waiting times; discrimination; and urethral specimen collection methods.[35,38]

Opt-out HIV Testing

In 2006, the CDC changed its recommendations for HIV testing from opt-in to opt-out testing for all persons ages 13 to 64 in all health care settings.[p] That means that when a person signs a general consent for any health care procedure, she or he will also be considered to have given consent for HIV testing. A separate consent for HIV testing is no longer needed. People who do not want to be tested need to affirmatively "opt-out" of the testing. Other changes include recommending that all persons at high risk be screened annually and that pre-test counseling not be required.[39] In November 2007, changes were made to the North Carolina Administrative Code, which reflect the revised CDC recommendations regarding HIV testing. Changes that went into effect in North Carolina in April 2008 include the following:

- There is no longer a requirement for pre-test counseling prior to HIV testing.
- Post-test counseling is only required for positive test results.
- Opt-out HIV testing should be offered to pregnant women at the first prenatal visit and in the third trimester.

o Foust E. Branch head. Communicable Disease Branch, Division of Public Health, North Carolina Department of Health and Human Services. Written (email) communication. September 24, 2008.

p There are two types of voluntary HIV testing: opt-in and opt-out. Under the opt-in approach, HIV testing can only be performed once informed consent has been obtained. (Committee on Perinatal Transmission of HIV and Commission on Behavioral and Social Sciences and Education, Institute of Medicine. *Reducing the odds: preventing perinatal transmission of HIV in the United States*. Washington, DC: National Academies Press; 1999.) (Branson BM, Handsfield,HH, Lampe MA, et al. Revised recommendations for HIV testing of adults, adolescents, and pregnant women in health care settings. *MMWR Recomm Rep*. 2006; 55(RR-14):1-17.)

- A separate consent for HIV testing is not required, and testing can be included in a panel of tests using a general consent for treatment and routine laboratory testing. Patients must be notified and can opt-out of the testing.[40,41]

Given the novelty of these changes, many providers in the state may be unaware of the new guidelines set forth in the North Carolina Administrative Code. Opt-out testing increases HIV testing rates among at-risk populations. Pregnant women are also more comfortable with the opt-out testing model. In addition, the majority of adults in the United States (65.0%) think that HIV screening should be the same as for any other disease and that special procedures to gain consent are not necessary.[39]

Rapid Testing for HIV

Rapid HIV testing procedures offer individuals in clinical and nonclinical settings an opportunity to learn their HIV status immediately. These types of HIV tests produce on-site results, which increases the chance that the individual being tested will actually learn their HIV status. Not learning test results is a considerable problem. The 1995 National Health Interview Survey found that 13.3% of people tested did not receive their HIV test results. Further, an estimated 30% of HIV-positive patients tested at public-sector testing sites in 2000 did not return to get their results according to the CDC.[42] A 1995-2000 study conducted in Wake County, North Carolina, showed that 55% of study subjects tested in publicly-funded STD clinics did not return for their HIV test results at their scheduled 2-week follow-up appointment.[43]

The North Carolina Division of Public Health Communicable Disease Branch currently offers nine HIV counseling, testing, and referral trainings each year. Rapid HIV testing is included in these trainings. Increasing the number of trainings will enable DPH to train more nontraditional providers and nonmedical professionals on the use of rapid HIV testing and accompanying procedures so that screenings can be offered at more nontraditional sites.

Bridge Counseling for HIV-Positive Individuals

Bridge counseling services for HIV-positive individuals benefit not only the infected individual but can also protect the community by reducing the spread of the disease. Roughly 30% of individuals infected with HIV do not know their status and would need case management services if or when diagnosed. Another 20%-30% of those who do know their HIV-positive status are not in care and need case management.[q] Individuals who test positive for HIV—particularly those from marginalized populations—often have trouble accessing the services required for them to comply with prescribed medications. Having a bridge counselor has been associated with increased medication use.[44] In addition, bridge counseling services

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q Leone P. Medical Director, HIV/STD Prevention and Care Branch, Division of Public Health, North Carolina Department of Health and Human Services. Written (email) communication. August 4, 2009.

for HIV-infected individuals prevent transmission of disease by changing behaviors that spread the disease.[45] Unfortunately, research also indicates that the supportive service needs (e.g. income assistance, housing, health insurance, home health care) of people infected with HIV often go unmet.[46]

Evidence-Based Pregnancy Prevention Programs

There are numerous pregnancy prevention programs in North Carolina. For example, many communities in North Carolina offer programs to prevent teen pregnancy. The Teen Outreach Program (TOP), a nationally-recognized evidence-based program, is one such program being implemented that has been shown through rigorous evaluation to reduce pregnancy rates among participants. The program helps teens to develop life management skills, a positive self-image, and goals. The main components of the program include service learning, curriculum-based classroom group exercises, and relationships between students and facilitators. In addition to reduced pregnancy rates, participants perform better academically and have lower rates of school dropout and suspension.[33,47]

Many sex partners of persons with gonorrhea or chlamydia infections are not treated, which leads to frequent reinfections and further transmission.

The Nurse-Family Partnership is an evidence-based, home visiting program that has been shown to reduce or delay second pregnancies. The program provides first-time, low-income mothers with home visitation services from public health nurses. Numerous published research reports have demonstrated that the program significantly improves the health and well-being of low-income, first-time parents and their children. The program has also been shown to improve school readiness, reduce child abuse and neglect, improve economic self-sufficiency for parents, and decrease crime, substance abuse, and dependence on welfare.[48-50] In addition, the program provides an estimated $5.70 return for every dollar directed towards higher-risk populations, with a $2.88 return for the entire population served, not including cost savings attributable to reductions in subsequent pregnancies or preterm births.[51] The program currently serves parents and children in Guilford, Cleveland, McDowell, Mecklenburg, Polk, Robeson, Rutherford, Pitt, and Wake counties.[52] However, with its limited presence in the state, only a small percentage of women who would benefit from this program are being reached and served.

Expedited Partner Therapy

Many sex partners of persons with gonorrhea or chlamydia infections are not treated, which leads to frequent reinfections and further transmission.[53] One way to reduce and prevent transmission is to ensure that both partners are treated. Typically, the standard medical practice is to ask infected individuals to refer their partners into treatment. However, studies have shown that Expedited Partner Therapy (EPT), which involves providing a prescription or medication to a patient identified with an STD to give to their sexual partner(s), is an effective way to reduce persistent or recurrent gonorrhea or chlamydia infections. According to the CDC, the benefits of EPT outweigh the risks, and it should be a clinical option for partner management in heterosexual men and women with chlamydia or gonorrhea.[54] Patient-delivered EPT is included in the CDC's treatment guidelines for sexually transmitted diseases in cases where "evaluation, counseling, and treatment" of partners is not possible.[10]

North Carolina regulations state that guidelines and recommendations from the CDC should become required communicable disease control measures.[r] As of April 2009, EPT is allowed in 15 states.[s,55] Currently, EPT is not the standard of care in North Carolina, and current legal uncertainty is likely to prevent physicians from prescribing EPT in North Carolina as recommended by the CDC. It is the position of the North Carolina Medical Board that "prescribing drugs to an individual the prescriber has not personally examined, or has never met based solely on answers to a set of questions, as is common on the Internet or toll-free telephone prescribing, is inappropriate and unprofessional."[56] Further, North Carolina law requires that each prescription bear the name of the patient to whom it was prescribed.[t] However, the North Carolina Attorney General's office has ruled that there are no legal barriers to EPT.[u]

The Task Force examined these and other evidence-based strategies to raise awareness, increase screenings and help link individuals into health care. Based on this review, the Task Force recommends:

Recommendation 5.1: Increase Awareness, Screening, and Treatment of Sexually Transmitted Diseases and Reduce Unintended Pregnancies

a) The North Carolina General Assembly should appropriate $6.2 million in recurring funds beginning in SFY 2011 to the North Carolina Division of Public Health (DPH) to support efforts to reduce sexually transmitted diseases (STDs) and HIV infection and transmission and prevent unintended pregnancy. Of these funds, DPH should use:

1) **$2.4 million to expand the *Get Real. Get Tested.* campaign for HIV prevention, create STD prevention messages, and collaborate with local health departments to offer nontraditional testing sites to increase community screenings for STDs such as chlamydia and syphilis and for HIV among adolescents, youth, and high-risk populations.**

2) **$300,000 to hire bridge counselors in high-prevalence-county local health departments to link individuals who test positive for HIV into medical care in order to prevent transmission.**

3) **$3.5 million to develop and disseminate an unintended pregnancy prevention campaign and expand community-based, evidence-based pregnancy prevention programs such as the Nurse Family Partnership, Teen Outreach Program, and other evidence-based pregnancy prevention programs to reach more adolescents and young adults.**

r 10A NCAC 41A.0201

s States where Expedited Partner Therapy (EPT) is permissible: Arizona, California, Colorado, Iowa, Louisiana, Minnesota, Mississippi, Nevada, New Mexico, New York, Pennsylvania, Tennessee, Utah, Washington, and Wyoming. In addition, Baltimore, MD, permits EPT.

t GS 106.134.1

u Leone P. Medical Director, HIV/STD Prevention and Care Branch, Division of Public Health, North Carolina Department of Health and Human Services. Written (email) communication. August 4, 2009.

b) **DPH should also take the following additional steps to prevent STD and HIV transmission among high-risk populations:**

1) **Collaborate with academic health centers and other major health systems to promote the new rules that allow for opt-out HIV testing.**

2) **Expand the training and certification of nontraditional providers to increase the use of rapid testing for HIV in high-risk populations.**

3) **Work with the North Carolina Medical Board, the North Carolina Board of Pharmacy, and the North Carolina Medical Society to explore how to implement Expedited Partner Therapy for chlamydia and gonorrhea in North Carolina.**

Rates of infectious disease in general—and STDs in particular—in prisons and jails generally far exceed those in the general population.

HIV Testing in Prisons, Jails, and Juvenile Centers

Rates of infectious disease in general—and STDs in particular—in prisons and jails generally far exceed those in the general population.[57] In particular, HIV prevalence among the incarcerated population is much higher than it is for the general population. National estimates are that HIV prevalence is 8 to 10 times higher among prison inmates.[7] Further, it is estimated that 13%-19% of all HIV-positive individuals in the country are released from a correctional facility every year.[58] A 2001-2002 study found that an estimated 26% of released inmates who were HIV-positive in North Carolina were having sex with their main partners without using a condom.[7]

Correctional facilities are important settings because they provide a unique opportunity to reach high-risk individuals from a population that may otherwise only present for care after symptoms develop, and sometimes not even then.[59,60] For many offenders, incarceration may be the only time they access primary care.[61] Thus, prisons are important settings in which to provide HIV prevention, testing, and treatment.[58] Not only do inmates benefit from testing and treatment, but so do the communities to which they return.[62]

North Carolina ranked 7th highest in the number of HIV-infected inmates in 2006.[63] From 2002-2006, 636 people were diagnosed with HIV in state correctional facilities.[7] Approximately 3.4% of prisoners within the North Carolina Department of Correction (DOC) tested positive for HIV from January 2004 to May 2006, according to a 2009 University of North Carolina at Chapel Hill study. HIV rates among incarcerated males were 3.6% versus 2.6% for women; the majority (84.0%) of HIV positive inmates had been previously diagnosed.[58] Testing upon intake and prior to release is important given that some prisoners engage in risky sexual practices with other men while in prison.[64]

In November 2008, the DOC began providing opt-out HIV-testing to prisoners upon intake and annually during physical exams.[63] However, prisoners are not

tested prior to release.[v] Testing prisoners immediately prior to release would provide an opportunity to identify HIV-positive individuals prior to their assimilation back into communities. The benefits of this are two-fold: 1) individuals identified as HIV-positive can be referred into care, and 2) the risk of HIV transmission can be reduced through awareness of HIV status and behavior modification. Further, research indicates that intensive case management for HIV-positive ex-offenders being released into the community has many positive effects, including mental illness triage and referral, substance abuse assessment and treatment, appointments for HIV and other medical conditions, and referral for assistance to community programs that address basic survival needs. Additionally, ex-offenders will access HIV-related health care after release when given adequate support.[61]

Testing prisoners immediately prior to release would provide an opportunity to identify HIV-positive individuals prior to their assimilation back into communities.

In addition, expansion of HIV screening programs into county jails, youth development centers, and youth detention centers would likely detect a large number of HIV cases and contribute to decreases in transmission, as many individuals in these institutions are also at high risk for HIV transmission.[7] County jails are currently required to provide a comprehensive health exam to detainees who are incarcerated for at least 14 days, although they may provide these screenings earlier. Offering opt-out HIV screening upon intake to individuals in county jails, youth development centers, and youth detention centers provides another unique opportunity to reach a high-risk population.

Given that incarcerated individuals have a high prevalence of HIV and are at increased risk for contracting HIV and that correctional facilities can play an instrumental role in identification and coordination of care, the Task Force recommends:

Recommendation 5.2: Increase HIV Testing in Prisons, Jails and Juvenile Centers

The North Carolina Department of Correction (DOC) should expand its existing HIV-testing policy to include opt-out testing for all prisoners upon release. The North Carolina General Assembly should provide $1 million in recurring funding beginning in SFY 2011 to the DOC to support this effort.

a) **The North Carolina Department of Juvenile Justice and Delinquency Prevention (DJJDP) should offer opt-out HIV screening in their institutional facilities including youth development centers and youth detention centers. The North Carolina General Assembly should appropriate $7,000 in recurring funds beginning in SFY 2011 to the DJJDP to support this effort.**

b) **Counties should include opt-out HIV testing as part of the comprehensive exam given to inmates in county jails.**

v Leone P. Medical Director, HIV/STD Prevention and Care Branch, Division of Public Health, North Carolina Department of Health and Human Services. Written (email) communication. August 4, 2009.

c) The DOC and the North Carolina Division of Public Health should collaborate to ensure prisoners identified as HIV-positive are coordinated for outpatient care prior to release to help them manage their disease and prevent transmission.

Ensuring Comprehensive Sexuality Education for More Young People in North Carolina

In 1995 North Carolina passed a law requiring public schools to deliver an abstinence curriculum for sexuality education.[w] The major premise of North Carolina's abstinence-until-marriage education policy was that abstinence is the "only certain means of avoiding out-of-wedlock pregnancy and sexually transmitted diseases." Although abstinence until marriage is the goal of many abstinence policies and programs, few Americans wait until marriage to initiate sexual intercourse. As discussed, many of North Carolina's high school students report engaging in risky sexual behaviors such as engaging in sexual intercourse and having unprotected sex. (See page 134.) These behaviors indicate many young people in North Carolina are at risk for STD and HIV infection, pregnancy, or both. Since young people spend a considerable amount of time in schools and are accustomed to gaining information in the school setting, public schools are the ideal venue to reach a majority of young people in the state. Comprehensive sexuality education for youth is integral to a comprehensive statewide approach to prevent STDs, HIV, and pregnancy among North Carolinians because it can provide youth with the information and life skills needed to modify their sexual behavior and protect themselves.

Comprehensive sexuality education programs have been shown to be effective at delaying the initiation of sex, reducing frequency, reducing the number of sexual partners, increasing contraceptive use, and reducing sexual behavior that increases risk.

Reviews and other scientific literature have found little evidence that abstinence-only programs are successful in encouraging teenagers to delay sexuality activity until marriage.[65-68] In addition, evaluations of many abstinence programs, including abstinence-until-marriage programs, have shown no overall impact on delaying age of initiation of sex, number of sexual partners, or condom or contraceptive use. In contrast, comprehensive sexuality education programs have been shown to be effective at delaying the initiation of sex, reducing frequency, reducing the number of sexual partners, increasing contraceptive use, and reducing sexual behavior that increases risk.[67] It is important to note that the evidence is very strong that these programs *do not* increase sexual behavior, even when they do encourage condom or other contraceptive use.[69] The American Psychological Association, American Medical Association, National Association of School Psychologists, Society for Adolescent Medicine, American Academy of Pediatrics, and American Public Health Association maintain that sexuality education needs to be comprehensive to be effective.[70-75]

In its interim report, the North Carolina Institute of Medicine Task Force on Prevention recommended that the North Carolina General Assembly amend the existing NCGS §115C-81(e1) to require that comprehensive sexuality education,

w NCGS §115C-81

which is complete and medically accurate sexuality education, be taught as part of the Healthful Living Standard Course of Study. Specifically, the Task Force's recommendation stated that the curriculum should be developmentally appropriate and include factually accurate information related to human reproduction, information on the benefits of abstinence, information on the effectiveness of condoms and other forms of contraceptives, skills-building exercises to avoid becoming pregnant and to avoid contracting HIV/AIDS and STDs, and information on community resources to reduce the risk of pregnancy, STDs, and HIV.

Since the release of the interim report, the North Carolina General Assembly enacted HB 88 (SL 2009-213), which accomplishes much of what the Task Force on Prevention recommended by requiring comprehensive sexuality education curricula to be offered by local education agencies. Specifically, the new law amends GS §115C-81, which mandated abstinence-based sexuality education only. The amended law requires each school to offer a reproductive health and safety education program starting in the seventh grade that includes, but is not limited to, information about abstinence; skills to resist engaging in sexual activity; factually accurate biological and pathological information related to the human reproductive system; information on the effectiveness and safety of all FDA-approved methods of birth control and methods to reduce the risk of contracting sexually transmitted diseases; information on local resources for testing and treatment of sexually transmitted diseases; and awareness of sexual assault, sexual abuse, and risk reduction. In addition, it states that the materials that are used must be age-appropriate and that the information presented in class must be objective and based upon scientific evidence. Also, schools must provide health education that meets the requirements of the statute but can expand on the subject areas that are taught.

The North Carolina General Assembly enacted HB 88 (SL 2009-213), which requires comprehensive sexuality education curricula to be offered by local education agencies.

The new legislation is an important improvement over the prior law in that it expands the health topics to be covered and includes a requirement that the content be objective, based upon peer-reviewed scientific evidence, and accepted by professionals in the field of sexual health education. However, this law does not require that all students receive this comprehensive sexuality education curriculum. Specifically, the new law does not change existing statute in that each local Board of Education is still required to adopt a policy to allow parents or legal guardians to consent or withhold consent for their student's participation in any of this education. An opt-out consent process would ensure that more young people in North Carolina receive evidence-based, effective sexuality education.

A joint report by the North Carolina Department of Public Instruction and the North Carolina Department of Health and Human Services found that the overwhelming majority (90.5%) of North Carolina parents support sexuality education programs in public schools. Nearly 9 out of 10 (88.9%) parents believe it is important for sexuality education programs to include information about the effectiveness and failure rates of birth control methods, including condoms.[76] The results from the parent survey are corroborated by the experience of the New

Hanover County School District. The New Hanover County School Board allows parents to choose whether their children will receive abstinence-until-marriage or comprehensive sexuality education in grades 6, 7, and 8. In 2008, of the parents who chose for their children to receive sexuality education, 75% of parents of 7th graders and 80% of parents of 8th graders signed a permission form for their children to take comprehensive sexuality education.[x,y]

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

As noted above, studies have shown that providing students access to comprehensive sexuality education using an evidence-based curriculum results in delayed initiation of sex, reduced frequency of sexual intercourse, reduced number of sexual partners, increased contraceptive use, and reduced sexual behavior that increases risk. As a result of this evidence, the Task Force on Prevention members continue to support efforts to provide all students with comprehensive and medically accurate reproductive health information. Local Boards of Education should therefore enact opt-out provisions, so that students will automatically receive the more comprehensive reproductive health and safety education unless their parent specifically signs a form to request that that their child not receive this education.

To ensure that more students receive comprehensive sexuality education, the Task Force recommends:

Recommendation 5.3: Ensure Students Receive Comprehensive Sexuality Education in North Carolina Public Schools (PRIORITY RECOMMENDATION)

a) Local school boards should adopt an opt-out consent process to automatically enroll students in the comprehensive reproductive health and safety education program unless a parent or legal guardian specifically requests that their child not receive any or all of this education.

b) The State Board of Education should require Local Education Agencies to report their consent procedures, as well as the number of students who receive comprehensive reproductive health and safety education and those who receive more limited sexuality education. Information should be reported by grade level and by school.

x Nine percent of parents of 7th graders and 13.0% of parents of 8th graders chose for their children to not receive any sexuality education, while 16.0% and 20.0%, respectively, did not respond.

y Family Life Education Department, New Hanover County Schools. Written (email) communication. January 21, 2009, and February 13, 2009.

Increasing Access to Family Planning Resources

Unintended pregnancy is a serious concern in the state. Providing women with access to low-cost, highly effective birth control can help prevent unintended pregnancy.[26] North Carolina receives Title X federal funds to help pay for family planning services. These funds flow to health departments that provide family planning services. In addition, counties also contribute $13.3 million in funding to help pay for family planning services. In total, these funds help pay for family planning services to 138,076 people through local health departments. However, the health departments are unable to provide family planning services to everyone in need, and many are not able to afford long-acting, reversible contraceptives, such as Implanon, and intrauterine devices (IUDs).[z]

In order to expand the availability of family planning services, North Carolina sought and obtained approval from the US Centers for Medicare and Medicaid Services (CMS) to operate a Medicaid family planning waiver. The state's Medicaid family planning waiver, *Be Smart*, provides Medicaid-funded family planning services to individuals who would not otherwise be eligible for Medicaid. In North Carolina, the waiver provides family planning services to men and women with incomes at or below 185% of the federal poverty line.[aa] States that have received the Medicaid family planning waiver are required to show budget neutrality to the federal government. That is, by reducing the number of unintended pregnancies, the state is able to save more money from averted prenatal and delivery expenses than it spends on family planning services. In North Carolina, the program is estimated to have averted approximately 1,139 unintended births in the state in FY 2007 at a cost of $267 per participant. These averted pregnancies are estimated to have saved the state and federal government more than $14 million over a 12-month period. Additionally, counties also benefit from the Medicaid family planning waiver, as the availability of federal and state Medicaid funding reduces the need for county funds to support family planning services. North Carolina will need to renew the family planning waiver in FY 2010.

The current Medicaid family planning waiver has enrolled less than 15% of women who could be eligible for these services.

Unfortunately, the current Medicaid family planning waiver has enrolled less than 15% of women who could be eligible for these services. North Carolina could do more to enroll eligible individuals by using some of the best practices from other states, including more targeted outreach and streamlined enrollment processes.[77] The federal government pays 90% of family planning services costs, a much higher percentage than it pays for other Medicaid-covered services. Additionally, 310,790 other low-income women in North Carolina do not qualify for Medicaid or the *Be Smart* Medicaid family planning waiver.

z Eleven of the 85 local health departments do not offer IUDs, and 68 do not offer Implannon. (Holliday J. Branch Head, Women's Health, Women's and Children's Health Section, Division of Public Health, North Carolina Department of Health and Human Services. Written communication (email). July 7, 2009.)

aa Family planning services are limited to family planning related clinical services and contraceptive methods.

Because access to family planning services is a cost effective and practical method for decreasing both STD and unplanned pregnancy in the state, the Task Force recommends:

Recommendation 5.4: Expand the Availability of Family Planning for Low-income Families

a) The North Carolina Division of Medical Assistance and North Carolina Division of Public Health should enhance access to and utilization of family planning services by low-income families, including providing access to the full range of contraceptives.

1) Local health departments, in partnership with local social services departments, should have a dedicated intake specialist to take Medicaid applications, including the Medicaid *Be Smart* Family Planning Waiver applications.

2) The North Carolina Division of Public Health should direct existing federal family planning funds towards increasing the number of low-income families that are provided services who do not qualify for Medicaid or the Medicaid *Be Smart* Family Planning Waiver program.

3) The North Carolina Division of Medical Assistance should apply to the Centers for Medicare and Medicaid Services to extend the Medicaid *Be Smart* Family Planning Waiver program beyond October 2010 and should incorporate best practices from other states into the program.

b) The North Carolina Division of Public Health should purchase long-acting, highly effective, reversible contraceptive methods for low-income women who do not qualify for Medicaid or the Medicaid *Be Smart* Family Planning Waiver. The North Carolina General Assembly should appropriate $931,000 in recurring funds beginning in SFY 2011 to the North Carolina Division of Public Health to support these efforts.

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