



Epidemiologic Profile
for
2005 HIV/STD Prevention
& Care Planning



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N.C. Department of Health & Human Services

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Note: References to regions in this document reflect unique HIV/STD Prevention & Care Branch regional designations. See the inside back cover for a region map.

North Carolina Epidemiologic Profile for 2005 HIV/STD Prevention & Care Planning

August 2004
(revised October 2004)



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EXECUTIVE SUMMARY

North Carolina ranks as the 11th most populous state in the nation and experienced rapid growth from the 1990 to the 2000 Census. It has the seventh largest non-white population in the nation. In 2000, the racial/ethnic makeup of the of the state was about 22 percent black or African American (non-Hispanic), 71 percent white (non-Hispanic), and five percent Hispanic, with the remaining proportion consisting of primarily American Indians and Asians or Pacific Islanders. Although American Indians only comprise just over one percent of the state's population, this group represents the largest population of American Indians in the eastern part of the nation. The state was ranked 34th in the nation for per capita income in 2002 and in 2001; 22 percent of its children were at or below the federal poverty level. Recognizing North Carolina's diverse makeup is important to understanding the impact of HIV/AIDS and other STDs on the state because these diseases are disproportionately represented among minorities and the economically disadvantaged.

In 2003, 2,100 new individuals were reported with an HIV and/or AIDS diagnosis (HIV disease). This represents the third consecutive year of increased reports. The overall infection rate was 25.2 per 100,000 persons. HIV is disproportionately distributed among the state's population. The 2003 rate of HIV infection for non-Hispanic blacks (76.6 per 100,000) was almost eight times greater than for whites (9.6 per 100,000). The rate of infection for Hispanics (25.4 per 100,000) was over three times that for whites, and the rate for American Indians (15.4 per 100,000) and the rate for Asian/Pacific Islanders (14.0 per 100,000) were almost 1.5 times that for whites. The highest rate of infection is found among black males (104.3 per 100,000). The largest disparity is found in comparing white and black females; the HIV infection rate for black females (51.9 per 100,000) is 14 times higher than that for white non-Hispanic females (3.6 per 100,000).

Risk of HIV transmission is very different for males and females; therefore it is important to discuss the risk separately for each. Also, in order to properly discuss risk, the mode of transmission assignment for cases must also be adjusted to include all available risk information and to take into account cases reported without risk information. In 2003, 62 percent of new adult and adolescent reports HIV disease reports for males were attributed to men who have sex with men (MSM) and MSM/IDU (injecting drug use), while heterosexual contact accounted for 27 percent. For adult and adolescent females, heterosexual contact accounted for about 83 percent of HIV disease reports in 2003, while injecting drug use accounted for about 11 percent. A recent outbreak of HIV (2002) in North Carolina was identified among young adults attending college or linked to students attending college. Subsequent studies have found that the state is experiencing a dramatic increase in HIV infections among young black men, especially young black MSM attending college.

Indicators of risk of infection with HIV vary considerably for different behavior groups. Most estimates of risk are based on a variety of direct and indirect measures. Men who have sex with men continue to account for a substantial proportion of new HIV disease reports even though the risk has spread to other groups. This risk is not evenly spread among races, as black MSM account for a larger proportion of new reports than do white MSM (32% vs. 24% respectively for 2003 male HIV disease reports). For younger or adolescent (13-24 years) male HIV disease reports, 82 percent were attributed to MSM or MSM/IDU behavior in 2003. According to

Counseling and Testing System (CTS) data, those reporting MSM and MSM/IDU risk have consistently had the highest percent of HIV positive test results. In 2002, MSM reports increased among patients interviewed through field services follow-up (partner counseling and referral services or PCRS) for both HIV and syphilis.

Injecting drug use risk (including MSM/IDU) accounted for about 12 percent of HIV disease reports in 2003. Since 1998, there has been a decrease in reported IDU among PCRS patients, but HIV positivity rates for IDU in CTS data (first-time testers) have remained fairly stable over the last five years. Among HIV cases (PCRS interviewees), males are 1.5 times more likely than females to have IDU risk. IDU risk is identified among a relatively older population of PCRS interviewees for both HIV and syphilis, with almost 46 percent being 40 to 49 years of age.

Heterosexual contact as a primary risk accounts for nearly half of new HIV disease reports. It is the principal risk for female cases, especially younger female cases, and accounts for almost 83 percent of female reports. Heterosexual HIV reports are higher among non-white males (32%-34%) than among white males (13%). The vast majority of first-time testers (2003 CTS data) report heterosexual risk (77% of 14,212 males tested and 73% of 23,618 females tested). Indications of heterosexual risk-taking behavior can be found in the high rates of infection for other sexually transmitted diseases. In 2002, North Carolina ranked 9th in the nation for gonorrhea rate. The male-to-female ratio for gonorrhea has remained stable and near 1.0, indicating the predominance of heterosexual transmission. Additionally, over 95 percent of female syphilis cases and 80 percent of male syphilis cases (PCRS data) reported heterosexual activity.

While trends among new HIV disease reports can inform prevention needs, estimates of persons living with HIV or AIDS can indicate service and care needs. Further, trends among AIDS cases may indicate the areas of most severe care needs. As of December 31, 2003, an **estimated** 25,000 persons were living with HIV or AIDS in North Carolina, including those who may be unaware of their infection. Of the persons who have been reported and are listed as living, 68 percent are males and 32 percent are females. With respect to race/ethnicity, 71 percent are black non-Hispanic, 25 percent are white non-Hispanic. Most of the people living with HIV are older, with over half being 40 years of age or older. In 2003, 1,086 new AIDS cases were reported in North Carolina, a seven percent increase from the previous year. New AIDS cases in the state have increased substantially in the last three years. The reasons for the reported increases in AIDS reports are varied and likely represent several factors including: variations in access to medical care, changes in HIV treatment effectiveness over time, the expected progression of disease for the high number of individuals infected with HIV in the mid-1990s, and enhanced surveillance efforts to capture accurate and timely report information. The rate for new AIDS cases in 2003 is eight times higher for blacks than whites. Increases have been noted for both black males and black females over the last five years.

Twelve consortia, along with other agencies and the state, provide Ryan White Title II services to HIV-infected persons across North Carolina. According to summary reports provided by service agencies, about 5,838 Ryan White Title II clients received or accessed funded services in 2003. In December 2003, about 3,628 individuals were enrolled in the AIDS Drug Assistance Program (ADAP). The demographics of Ryan White Title II clients and ADAP enrollees are very similar to the observed demographics of all persons listed as living in North Carolina with HIV or AIDS at the end of 2003.

INTRODUCTION

The 2005 version of North Carolina's HIV/STD Epidemiologic Profile describes the HIV (human immunodeficiency virus) and STD (sexually transmitted disease) epidemics among various populations in North Carolina. As in previous versions, the majority of the data presented are drawn from surveillance systems maintained by the HIV/STD Prevention & Care Branch. We have also integrated other appropriate sources in the analysis and discussion.

This profile is divided into three sections. Section I describes general population demographics and social characteristics, the HIV epidemic, and indicators of HIV transmission risk in North Carolina. Section II describes HIV/AIDS treatment and care in North Carolina. Section III describes the epidemics and impact of other bacterial STDs in North Carolina including syphilis, chlamydia and gonorrhea. Throughout the profile, the following questions are addressed:

1. What are the sociodemographic characteristics of the general population in North Carolina?
2. What is the scope of the HIV/AIDS and STD epidemics in North Carolina?
3. What are the indicators of risk for HIV/STD infection in North Carolina?
4. What are the patterns of utilization of HIV services of persons in North Carolina?

The HIV and STD epidemics in North Carolina are related in that many of the same populations at high risk for one disease may be at increased risk for others as well. Public health activities at the state level aimed at controlling these epidemics have long been integrated in order to make optimal use of limited resources. While AIDS cases reflect older HIV infections, examination of trends in AIDS cases can draw attention to other aspects of the epidemic. Treatment advances have delayed progression from HIV to AIDS and from AIDS to death. This pattern has been demonstrated to some extent in surveillance data. Thus, “from 1996 on, cases of AIDS and deaths will provide a valuable measure of the continuing impact of treatment, as well as describe populations for whom treatment is either not accessible or not effective.” (CDC, 1998, *Trends in the HIV & AIDS Epidemic*, Atlanta, GA.)

The Epidemiologic Profile content reflects a broad spectrum of information about sexually transmitted diseases to support the integrated activities of the HIV/STD Prevention & Care Branch. It seeks to add information to existing knowledge concerning HIV and other STD incidence in North Carolina. Along with prevention activities, the HIV/STD Prevention & Care Branch facilitates several key HIV/AIDS care and services programs across the state. Profile information on HIV/AIDS care and services for patients should assist various community-based organizations in assessing the need to provide or expand services in their service area. Some information in the profile is displayed or organized by HIV/STD Prevention & Care Regions. These regional designations represent assignments as of 12/31/2003 (see map on inside back cover).

DATA SOURCES

In order to properly interpret this profile, it is critical to consider data limitations when interpreting and evaluating identified trends and patterns. Data collection systems vary in completeness and relevancy. Listed below are the main data sources used in this profile.

1. Core HIV/AIDS Surveillance

HIV/AIDS Surveillance Data

Diagnosis of AIDS became reportable in North Carolina in 1984 and diagnosis of HIV infection (name-based) was made reportable in 1990. By state law, morbidity reports of HIV and AIDS from health providers are submitted to local health departments on confidential case report forms and communicable disease report cards. Surveillance reports include demographic and clinical information for the patient as well as mode of exposure and vital status. These surveillance reports are forwarded to the state's HIV/STD Prevention & Care Branch, which maintains the data from the 100 counties in the electronic HARS (HIV/AIDS Reporting System) surveillance system. In addition to providers, laboratories that provide diagnostic services must also report HIV positive results directly to the state.

Morbidity surveillance data represent the most complete and comprehensive single source of information available about HIV/AIDS in the state, but can only provide estimates of HIV infection because not all persons who are infected are tested and reported. Further surveillance data may not provide reliable information about newly acquired infections because there may be a significant delay between infection and testing.

Enhanced Perinatal Surveillance

As part of the routine surveillance of HIV-infected individuals, a systematic surveillance program was developed to collect comprehensive information on HIV-infected pregnant women and perinatally exposed babies. The dataset includes mother-infant pairs for births to infected mothers from 1999 to 2001. This supplemental HIV/AIDS surveillance project began in early 2002 and involves the extraction of medical records for all HIV-exposed babies and their mothers. Information collected includes testing, counseling and treatments administered during pregnancy, labor and delivery. Children were followed until their HIV status could be confirmed.

2. Behavioral Surveys

BRFSS

The Behavioral Risk Factor Surveillance System (BRFSS) is a random telephone survey of health behaviors and preventive health practices of state residents aged 18 years and older in households with telephones. North Carolina's BRFSS, conducted by the State Center for Health Statistics, is part of the national program which was developed in the early 1980s by the Centers for Disease Control and Prevention (CDC) in collaboration with state health departments. Some questions about basic HIV/AIDS knowledge are part of this survey, and in 2001 additional specific questions were added that addressed sexual behaviors.

3. STD Surveillance

STD Surveillance Data

Like other communicable diseases, diagnoses of certain bacterial STDs in North Carolina must be reported to local health departments, who in turn report the information to the state. The HIV/STD Prevention & Care Branch is responsible for receiving and aggregating surveillance reports for syphilis, chlamydia, gonorrhea, nongonococcal urethritis (NGU), pelvic inflammatory disease (PID), chancroid, granuloma inguinale, and lymphogranuloma venereum. Data on these diseases are maintained in the electronic surveillance system STD-MIS (STD Management Information System). Information collected includes complete demographic and clinical information for diagnosed cases. Periodic surveillance reports about STDs are published to assist public health officials across the state in monitoring morbidity and planning prevention activities. For a more complete description of chlamydia, gonorrhea and syphilis reporting, please see Appendix A on page 89.

4. Supplemental HIV/STD Surveillance

Gonococcal Isolate Surveillance Project (GISP)

GISP is a collaborative project between selected STD clinics, five regional laboratories, and the CDC. It was established in 1986 to monitor trends in antimicrobial susceptibilities of strains of *Neisseria gonorrhoeae* in the United States in order to establish a rational basis for the selection of gonococcal therapies. *N. gonorrhoeae* isolates are collected from the first 25 men with urethral gonorrhea attending STD clinics each month in 26 cities in the United States. The men are asked a number of behavioral questions and the samples are tested for resistance to a variety of antibiotics. The project includes one site in North Carolina, formerly located at Fort Bragg, now located at Greensboro.

Partner Counseling and Referral System (PCRS)

The HIV/STD Prevention & Care Branch's Field Services Unit has responsibility for conducting patient interviews of persons newly diagnosed with HIV or syphilis. The interviews are conducted to counsel patients on prevention of subsequent risk, assist with referrals for treatment and services, and help with partner notification. This program is referred to as the partner counseling and referral system (PCRS). Information is collected on clinical status and treatment, patient demographics and detailed mode of exposure risk. The information is maintained in local STD-MIS and referred to as PCRS data. Information is limited to interviewed patients.

5. HIV Counseling and Testing Data

Counseling and Testing System (CTS)

The HIV/STD Prevention & Care Branch of North Carolina supports confidential HIV testing and counseling through its CTPRN (Counseling Testing and Partner Referral and Notification) Program. This program began in 1985 and offered confidential and anonymous HIV testing; the anonymous testing was discontinued in 1997. HIV testing sites are available across the state (n=135) at county health departments or community-based organizations (CBOs). In addition, 13 non-traditional test sites offer testing at facilities that are more convenient for high-risk

individuals such as CBOs or at health departments outside of normal business hours. Along with testing results, information is collected about risk behaviors and reasons for testing. Results and information from counseling and testing data reflect the characteristics of the testing population and may not be applicable to other populations.

6. Substance Abuse Data

National Household Survey of Drug Abuse (NHSDA)

The NHSDA is an annual survey, conducted by the Federal Government since 1971, to gather information on trends in illicit drug use among the general U.S. population. The survey is administered by SAMHSA (the Substance Abuse and Mental Health Services Administration). Non-institutionalized persons over age 12 are interviewed using CAPI (Computer Assisted Personal Interview) technology in which survey responses are recorded directly into the computer. A trained interviewer is present to assist with the computer but does not know the responses given. The survey is designed to be large enough to provide estimates for each of the 50 states and the District of Columbia. Youth and young adults are over-sampled. Statistical estimates of results are available for North Carolina.

7. Vital Statistics Data

Birth and death data

All births, deaths, fetal deaths, marriages, and divorces that occur in North Carolina are reported to the state. The process involves a statewide system of hospitals, funeral directors, registers of deeds, local health department staff, and others who register vital events. Statewide vital events are registered and maintained by the Vital Records Unit of the N. C. Division of Public Health. Vital Records staff code information according to specific guidelines in order to produce statistical data that subsequently are used to characterize specific areas such as infant mortality and communicable disease. Reporting of deaths is nearly 100 percent complete. Death information includes the cause and underlying causes of death, but some causes of deaths, including HIV/AIDS, may be under-reported.

Abortion data

Beginning in 1978, abortion providers in the state of North Carolina began voluntarily reporting abortion data to the State Center for Health Statistics. Reports include demographics and basic medical information on the mothers, but no identifying information. Many sites report 100 percent of the procedures they perform. For those sites unable to report 100 percent, data are extrapolated from the cases they do report. Abortions provided for North Carolina residents are also reported by providers in other states, the largest number coming from those states directly bordering North Carolina.

Pregnancy Risk Assessment Monitoring System (PRAMS)

North Carolina PRAMS data comes from an ongoing mail/telephone survey of women who have recently given birth. Approximately 200 women have been randomly selected each month since the survey began in July 1997. The women were asked questions about their behavior during and after pregnancy, the intention and timing of their pregnancy, and demographic information.

8. Population Data

U.S. Census Bureau

The U.S. Census Bureau completes an official enumeration of the national population every 10 years, most recently in 2000. The data are used to provide timely information about the people and economy of the United States. Questionnaires are sent to all households, most often by mail but in some cases in person by Census personnel. Making questionnaires available in different languages, advertising campaigns, and canvassing door-to-door are employed to increase the census count. The final response rate for the entire U.S. population in 2000 was 67 percent. Data available include population counts and demographics for the state, county and smaller geographic units. Information is also available on family structure, education attainment, income level and housing status.

North Carolina State Data Center

The North Carolina State Data Center (SDC) is a consortium of state and local agencies established in cooperation with the U.S. Bureau of the Census to provide the public with data about North Carolina and its component geographic areas. The State Demographics unit is primarily responsible for producing population estimates and projections. County and state population projections — available by age, race (white/other) and sex — are used for long range planning. To produce these estimates and projections, the unit develops and enhances complex mathematical computer models, and collects and reviews a variety of data from federal, state and local government sources. It annually surveys North Carolina municipalities for annexation data, municipalities and counties for selected institutional data, and military bases for barracks population data.

Kaiser Family Foundation: State Health Facts Online

The Henry J. Kaiser Family Foundation (KFF) is an independent philanthropy organization focusing on the major health care issues facing the nation. The KFF provides information and analysis on a broad range of policy issues, emphasizing those that most affect low-income and vulnerable populations. Data presented on State Health Facts Online are a selection of key health and health policy issues collected from a variety of public and private sources, including original Kaiser Family Foundation reports, data from public websites, and information purchased from private organizations.

9. Ryan White CARE Act Data

In 1990, Congress enacted the Ryan White CARE Act to provide funding for states, territories and eligible metropolitan areas (EMAs) to offer primary medical care and support services for persons living with HIV disease who lack health insurance and financial resources for their care. The state administers this Title II program and provides funding for services to care consortia and other local service providers. The purpose of Title II funding is to improve the quality, availability and organization of health care and support services for individuals and families with, or affected by, HIV disease in each state or territory. Some Title II-funded services in North Carolina are administered and provided through local consortia. Data about CARE Act services is generated from summary reports prepared by local consortia and data collected in a HRSA-sponsored software program called CAREWare.

SECTION I: CORE EPIDEMIOLOGIC QUESTIONS

QUESTION 1: WHAT ARE THE SOCIODEMOGRAPHIC CHARACTERISTICS OF THE GENERAL POPULATION IN NORTH CAROLINA?

QUESTION 2: WHAT IS THE SCOPE OF THE HIV/AIDS EPIDEMIC IN NORTH CAROLINA?

QUESTION 3: WHAT ARE THE INDICATORS OF RISK FOR HIV INFECTION IN NORTH CAROLINA?

QUESTION 1: WHAT ARE THE SOCIODEMOGRAPHIC CHARACTERISTICS OF THE GENERAL POPULATION IN NORTH CAROLINA?

Highlights/Summary

- North Carolina ranks 9th in the nation in percentage population growth and is the 11th most populous state.
- From 1995 to 2000 North Carolina had the nation's 4th highest net in-migration rate.
- North Carolina's population grew by 21.4 percent from 1990 to 2000.
- Among the nation's top 50 metropolitan population growth areas in 2000 are Raleigh/Durham/Chapel Hill, ranking 12th; Wilmington, ranking 14th; Charlotte/Gastonia/Rock Hill, ranking 26th; and Greenville, ranking 40th.
- North Carolina has the 7th largest non-white population in the nation.
- North Carolina has the 15th largest Hispanic/Latino population in the nation.
- The median age for North Carolinians in 2000 was 35.3 years.
- In 2000, 24 percent of North Carolinians were 18 years and younger, while 12 percent were 65 years and older.
- North Carolina was 34th in the nation in per capita income in 2002 (\$27,785), or 90 percent of the national average (\$30,906).
- Twenty-two percent of North Carolina's children, 14 percent of adults and 19 percent of the state's elderly were at or below the federal poverty level between 2000 and 2001.
- During 2003, 17 percent of North Carolinians were eligible for Medicaid coverage, or an average of one out of eight people every month.

POPULATION

According to the 2000 Federal Census, the United States population grew by 13.4 percent between 1990 and 2000 (1990: 248,709,873–2000: 281,421,906). During this same period, North Carolina's population grew by 21.4 percent, ranking 9th in percentage growth among the states and 6th in the number of persons added to the state. North Carolina is ranked as the 11th most populous state. According to the North Carolina State Demographer, the total projected population for North Carolina in 2002 was 8,336,829 with county population ranging from 4,184 (Tyrrell) to 734,390 (Mecklenburg). Population projections for 2002 listed five counties with populations under 10,000 (Clay: 9,186; Graham: 8,045; Camden: 7,465; Hyde: 5,702; and Tyrrell: 4,193), with over half of North Carolina's population living in only sixteen of the state's one hundred counties (Mecklenburg, Wake, Guilford, Forsyth, Cumberland, Durham, Buncombe, Gaston, New Hanover, Davidson, Onslow, Catawba, Cabarrus, Union, Pitt, and Alamance). Figure 1 displays the population distribution among the counties in North Carolina for 2002.

The 2000 Census also recorded substantial growth in North Carolina metropolitan areas (MAs). The U.S. Office of Management and Budget (OMB) defines metropolitan areas as areas with specific social and economic links that have a central city of at least 50,000 persons. Among the nation's metro areas of 50,000 or more, the Triangle was the sixth-fastest growing in the 1990s, increasing 39 percent to 1.2 million people. In 2002, 70 percent of North Carolinians lived in a metropolitan area and 30 percent lived in a non-metropolitan area, as compared with the national proportion of 82 percent metropolitan, 18 percent non-metropolitan (Urban Institute and Kaiser Family Foundation). Four North Carolina areas were among the top 50 metropolitan population growth areas in the United States in 2000: Raleigh/Durham/Chapel Hill ranked 12th; Wilmington ranked 14th; Charlotte/Gastonia/Rock Hill ranked 26th; and Greenville ranked 40th. Three metropolitan areas ranked among the top 50 in the country for numerical population growth: Charlotte/Gastonia/Rock Hill; Raleigh/Durham/Chapel Hill; and Greensboro/Winston-Salem/High Point. Defined metropolitan areas are displayed in Figure 2.

According to the U.S. Census Bureau, Wake County ranked ninth nationwide in net in-migration (with about 53,000 people) and Mecklenburg County ranked 20th (with 37,000 people). Net in-migration is the number of people who arrived from other counties, minus the number who left. Migration from other states helped make North Carolina the ninth-fastest-growing state in the 1990s, with over 8 million residents, and giving North Carolina the nation's fourth-highest net in-migration rate (News & Observer, 8/14/03).

Figure 1. North Carolina Individual County Populations, 2002

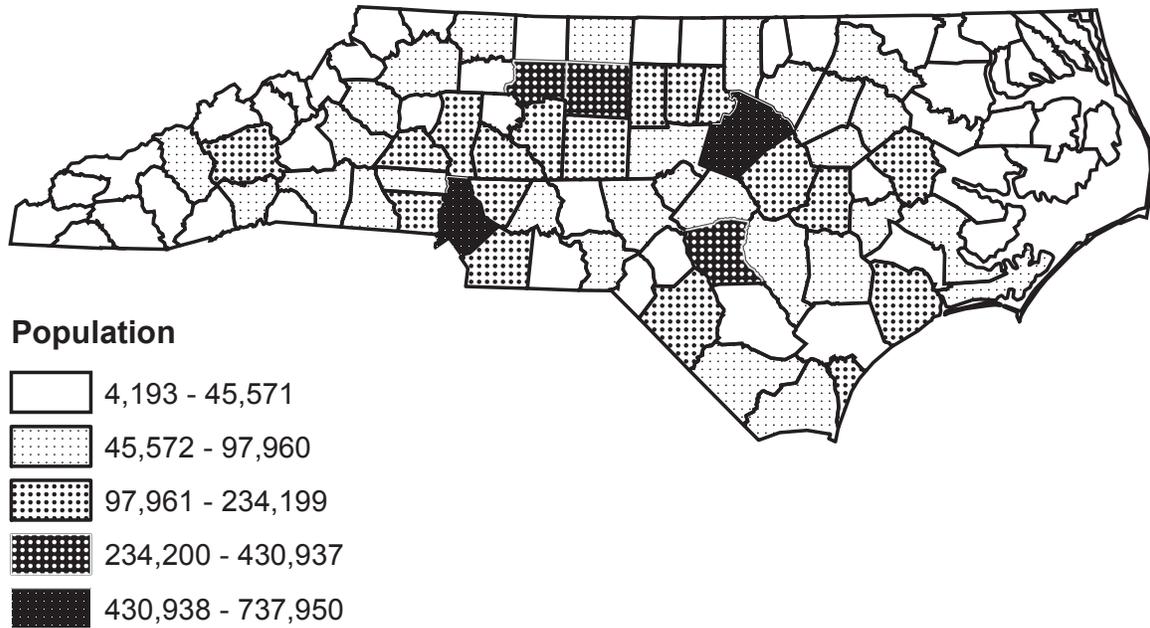
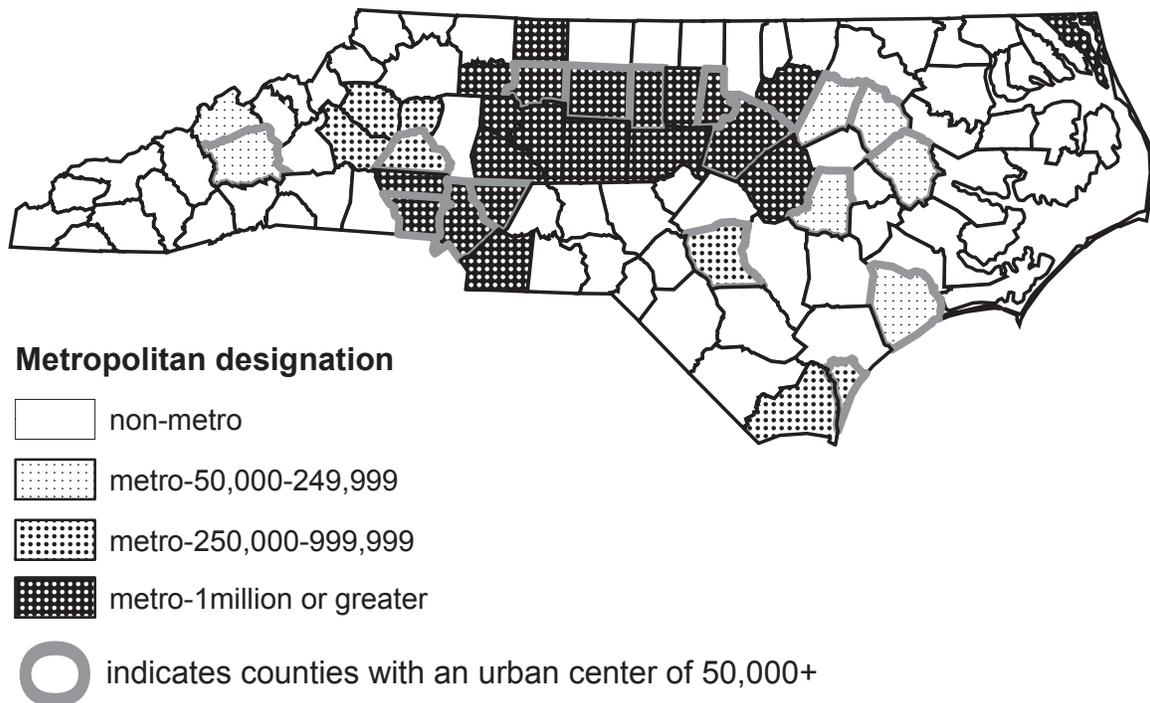


Figure 2. North Carolina Metropolitan Designations



DEMOGRAPHIC COMPOSITION

Race/Ethnicity and Gender

North Carolina varies in demographic composition from region to region. North Carolina has the 7th largest non-white population (2,141,397) in the United States. In 2000, 11 counties had populations consisting of more than 50 percent non-white residents (Robeson: 66.7 percent; Bertie: 63.5 percent; Hertford: 62.2 percent; Warren: 60.8 percent; Northampton: 60.7 percent; Edgecombe: 59.7 percent; Hoke: 54.5 percent; Halifax: 57.1 percent; Vance: 51.4 percent; Washington: 51.4 percent; and Anson: 50.2 percent). Figures 3-6 display the racial and ethnic make-up of North Carolina counties, as reported in the 2002 bridged-race estimates.

Table 1 displays the percentage of males and females for the major race/ethnicity categories in North Carolina, according to the bridged-race estimates for 2002 (please see pg. 101 for more information about Census data and the bridged race categories used to calculate rates). Note the ratio of Hispanic males to females for North Carolina and the ratio of black females to males. Figure 5 (pg. 13) displays the proportion of Hispanic population in 2002, by county. In 2000, North Carolina had the 15th largest Hispanic or Latino population in the nation. Within North Carolina, Duplin County had the highest proportion of Hispanic residents (15%), followed by Lee County (11.7%), Sampson County (10.8%), and Montgomery County (10.4%). Table 2 displays race/ethnicity by gender for 2002 by HIV/STD Prevention & Care Branch Regions. Note the larger proportion of white non-Hispanics in Region 1, American Indians in Region 5, and black non-Hispanics in Region 6. A state map of the HIV/STD Prevention & Care Branch Regions is displayed on the inside back cover.

Table 1. North Carolina race/ethnicity proportions by gender, 2002

	Am. Indian / AN*	Asian/Pacific Islander*	Black*	White*	Hispanic	Total
Males	0.61%	0.84%	10.28%	34.22%	3.11%	49.06%
Females	0.64%	0.89%	11.56%	35.63%	2.23%	50.94%
Total	1.25%	1.72%	21.84%	69.85%	5.34%	100%

* non-Hispanic

Table 2. North Carolina race/ethnicity proportions by gender, and HIV/STD Prevention and Care Branch Regions, 2002

	Am. Ind./AN*		Asian/PI *		Black*		White*		Hispanic		Total		
	M%	F%	M%	F%	M%	F%	M%	F%	M%	F%	M%	F%	%
Region 1	0.6	0.6	0.4	0.5	2.6	2.5	43.3	46.5	1.8	1.3	48.7	51.3	100
Region 2	0.2	0.2	1.2	1.2	9.0	10.2	35.4	36.8	3.5	2.5	49.2	50.8	100
Region 3	0.2	0.2	0.7	0.7	8.5	9.9	36.0	38.4	3.2	2.4	48.5	51.5	100
Region 4	0.2	0.2	1.4	1.5	11.8	13.5	31.5	32.9	4.2	2.8	49.2	50.8	100
Region 5	4.0	4.2	0.6	0.9	14.8	15.9	27.1	27.0	3.1	2.4	49.6	50.4	100
Region 6	0.3	0.3	0.3	0.4	17.2	19.7	28.8	30.0	1.7	1.3	48.3	51.7	100
Region 7	0.5	0.5	0.4	0.5	9.9	10.6	36.6	35.9	3.1	2.1	50.4	49.6	100

* non-Hispanic

Age and Gender

The median age for persons living in North Carolina in 2000 was 35.3 years old, with 24.4 percent 18 years and younger, and 12.0 percent 65 years and older. Table 3 displays the percentage of the population in each age group, by gender. The trend in North Carolina follows the typical age trend of slightly more males under 12 years old and more females 40 and older.

Table 3. North Carolina Age Groups by Gender, 2002

Age group (yrs.)	Pct. Males (N=4081520)	Pct. Females (N=4238626)	Pct. Total Population (N=8320146)
0-12	9.27%	8.85%	18.12%
13-19	4.80%	4.53%	9.34%
20-29	7.36%	6.79%	14.15%
30-39	7.73%	7.65%	15.38%
40-49	7.37%	7.67%	15.05%
≥ 50	12.52%	15.45%	27.97%
Total	49.06%	50.94%	100.00%

Table 4 displays the proportion of males and females by age group, for the HIV/STD Prevention & Care Branch Regions. Note the greatest proportion of children ages 0 to 12 years in Region 5, and adults ages 50 and older in Region 1. Region 7 has the highest proportion of 20 to 29 year old males.

Table 4. North Carolina characteristics of age by gender, and HIV/STD Prevention and Care Branch Regions, 2002

Age group (yrs.)	Gender	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7
0-12	Male	8.1%	9.7%	8.9%	9.4%	10.4%	9.1%	9.0%
	Female	7.6%	9.2%	8.5%	9.0%	10.0%	8.7%	8.6%
13-19	Male	4.6%	4.7%	4.6%	4.8%	5.3%	5.0%	5.0%
	Female	4.2%	4.4%	4.5%	4.6%	4.9%	4.8%	4.3%
20-29	Male	6.2%	6.9%	6.7%	8.0%	8.4%	7.0%	9.4%
	Female	5.8%	6.7%	6.7%	7.6%	7.0%	6.6%	6.9%
30-39	Male	6.9%	8.5%	7.5%	8.6%	7.6%	6.6%	7.0%
	Female	6.7%	8.3%	7.6%	8.5%	7.4%	6.8%	6.8%
40-49	Male	7.1%	7.7%	7.4%	7.7%	6.8%	7.3%	6.9%
	Female	7.4%	7.8%	7.7%	8.0%	7.2%	7.9%	7.2%
≥ 50	Male	15.9%	11.8%	13.3%	10.8%	11.1%	13.2%	13.1%
	Female	19.6%	14.4%	16.5%	13.2%	14.0%	16.8%	15.7%
Total	Male	48.7%	49.2%	48.5%	49.2%	49.6%	48.3%	50.4%
	Female	51.3%	50.8%	51.5%	50.8%	50.4%	51.7%	49.6%

Figure 3. North Carolina Black or African American Population, 2002

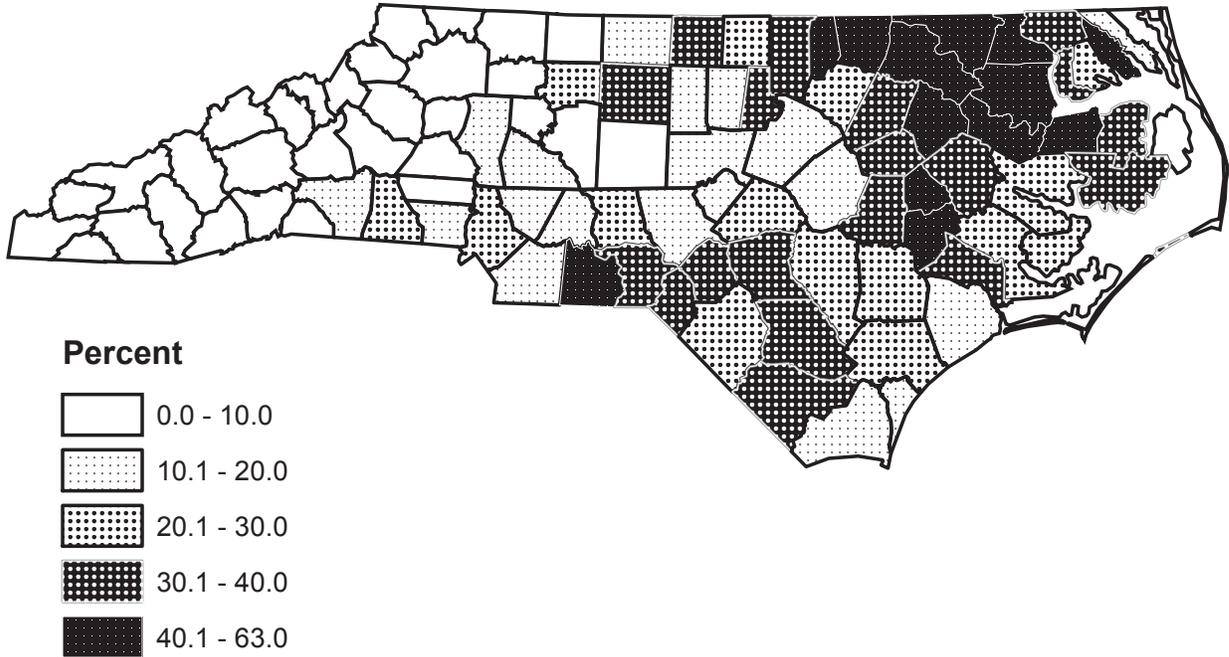


Figure 4. North Carolina American Indian, Alaskan Native Population, 2002

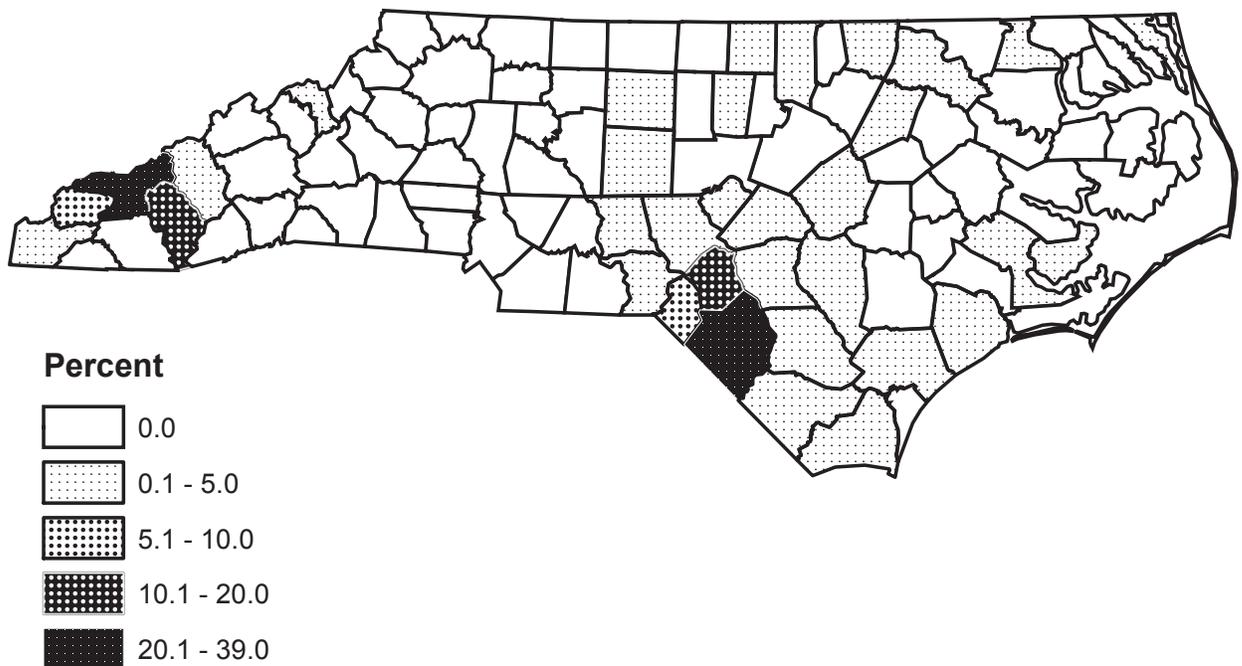


Figure 5. North Carolina Hispanic Population, 2002

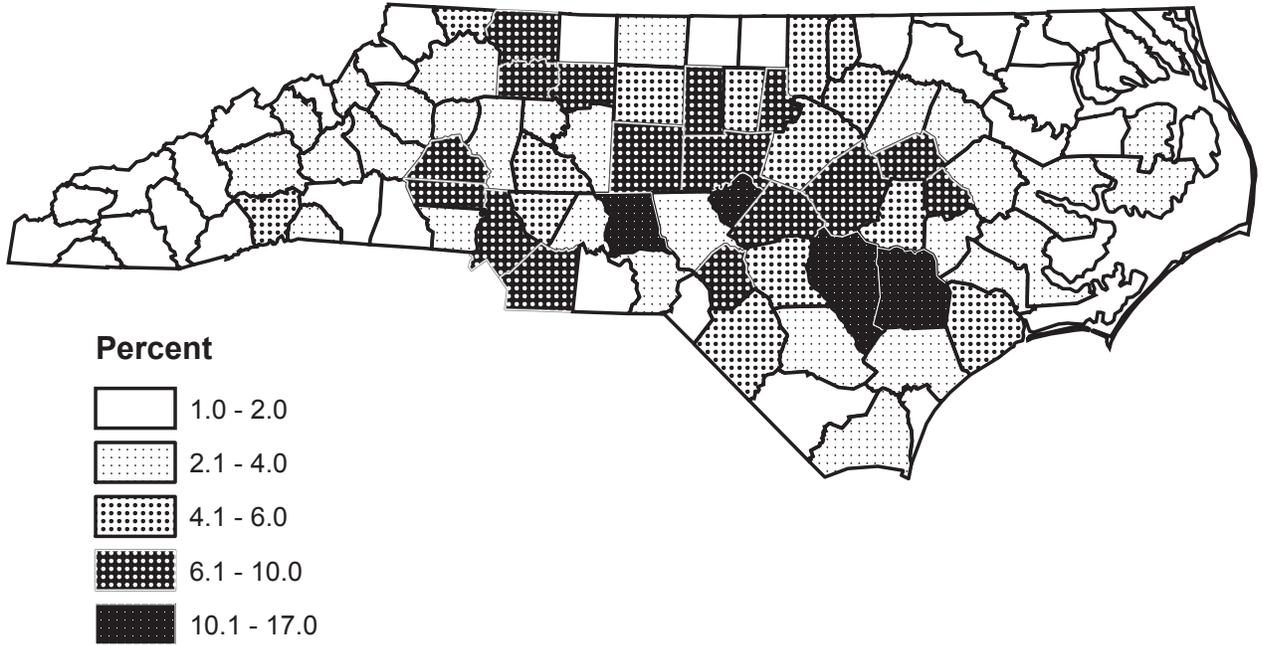
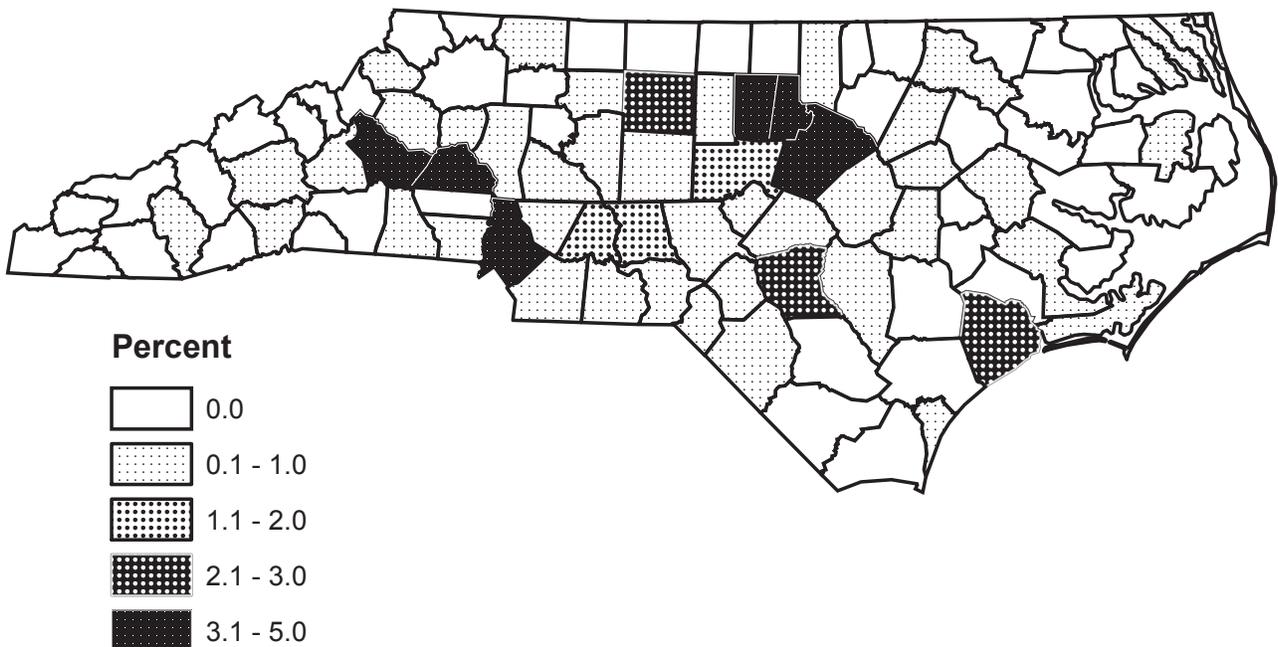


Figure 6. North Carolina Asian, Pacific Islander Population, 2002



Poverty, Income, and Education

According to the U.S. Department of Commerce’s Bureau of Economic Analysis, the per capita income for 2002 in North Carolina was \$27,785, or 90 percent of the national average of \$30,906. This places North Carolina 34th in the U.S. for personal per capita income and 4th in the Southeast. As of May 2004, a total of 223,500 North Carolinians were unemployed, or 5.3 percent of the N.C. civilian, non-institutional population. This rate is down from May 2003, when 273,100 North Carolinians were unemployed, or 6.5 percent. The national unemployment rate was 5.6 percent in May 2004 and 6.1 percent in May 2003 (Kaiser Family Foundation).

According to the U.S. Census Bureau, 45.9 percent of N.C. families with female head of household (no husband present), with children under 5 years old, were below the federal poverty level. For individuals 18 years and older living in North Carolina, 12.3 percent were below the federal poverty level at some point during 1999. From 2001 to 2002, 18 percent of North Carolinians were at or below the federal poverty level. Table 5 displays the individual poverty rate by age and gender for the state and the nation from 2000 to 2001 and Table 6 displays the individual poverty rate for N.C. and the U.S. during 2000-2001. Figure 10 (see page 18) displays the North Carolina per capita income for 2000.

Table 5. North Carolina and U.S. poverty rates by age, 2001-2002

Age in Years	N.C. (N)	N.C. (Pct.)	U.S. (N)	U.S. (Pct.)
Children 0-18	501,770	23%	16,673,410	22%
Adults 19-64	757,620	15%	25,489,100	15%
Elderly 65+	163,110	17%	4,794,210	14%

Source: Urban Institute and Kaiser Family Foundation

Table 6. North Carolina and U.S. income and poverty rate, 2000-2001

Race/Ethnicity	Individual Poverty Rate (% of each group at or below the federal poverty level)		Median Family Income	
	N.C. (Pct.)	U.S. (Pct.)	N.C.	U.S.
	White*	11%	11%	\$31,540
Black*	27%	30%	\$18,750	\$18,000
Hispanic	31%	29%	\$15,560	\$18,000
Other	30%	19%	\$16,470	\$27,940

* non-Hispanic

Source: Urban Institute and Kaiser Family Foundation

According to the 2000 Census, of North Carolinians 25 years and older, 7.8 percent had less than a 9th grade education; 14 percent had some high school but no diploma; 28.4 percent were high school graduates, including equivalency; 20.5 percent had some college, but no degree; 6.8 percent had an Associate's degree; 15.3 percent had a Bachelor's degree; and 7.2 percent had a graduate or professional degree. The state’s dropout rate declined from 2001 to 2002 for the third consecutive year; at the same time the standards and requirements for students have increased. The number of students dropping out of school fell to 21,046 from 22,365 in school year 2000-2001. This represents an 8.8 percent decrease from the previous year (see Statistical Profile, 2003 at <http://www.ncpublicschools.org/> for further information).

Public Aid

The grand total of Medicaid and Medicaid-related expenditures in North Carolina for SFY 2003 was \$7,439,757,929 for roughly 1.4 million Medicaid recipients (an average \$5,114 per recipient). During 2003, a total of 1,447,283 North Carolinians, or 17 percent of the total N.C. population, was eligible for Medicaid coverage at some point during the year. The Elderly and Disabled recipients numbered 29.9 percent of the total recipients, yet their expenditures amounted to \$4.6 billion, or 69.6 percent of the total service expenditures (see Figure 7 below). Recipients from the Families and Children group represented 69 percent of all recipients; however they accounted for \$2 billion, only 30 percent, of total service expenditures. Medicaid financed 40 percent of total births in N.C. during 2000. Figure 8 displays the percentage of North Carolinians by race who received Medicaid in 2003. Figure 9 displays the 10-year history of the number of monthly Medicaid eligibles in North Carolina. The monthly average number of eligibles was roughly one out of eight people in 2003 (SFY). Figure 11 displays the percent of Medicaid eligibles by county for 2003. (Division of Medical Assistance, see also *Medicaid in North Carolina Annual Report State Fiscal Year 2003*, also available at www.dhhs.state.nc.us/dma/annreport.htm.)

Figure 7. N.C. Medicaid Recipients & Service Expenditures, SFY 2003

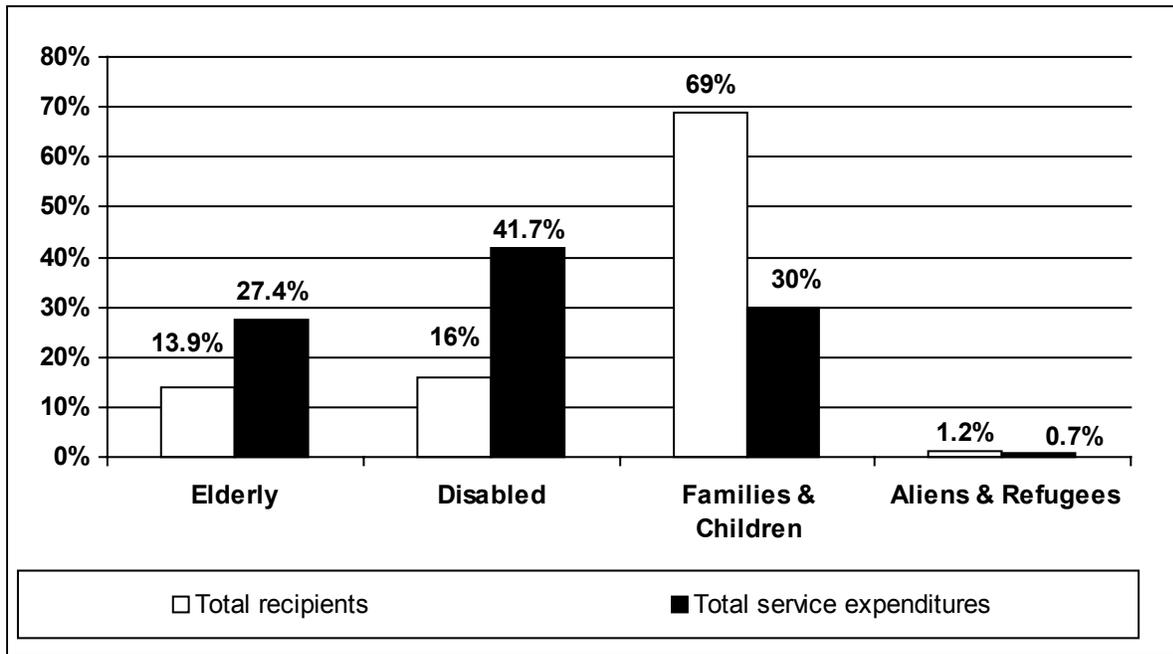
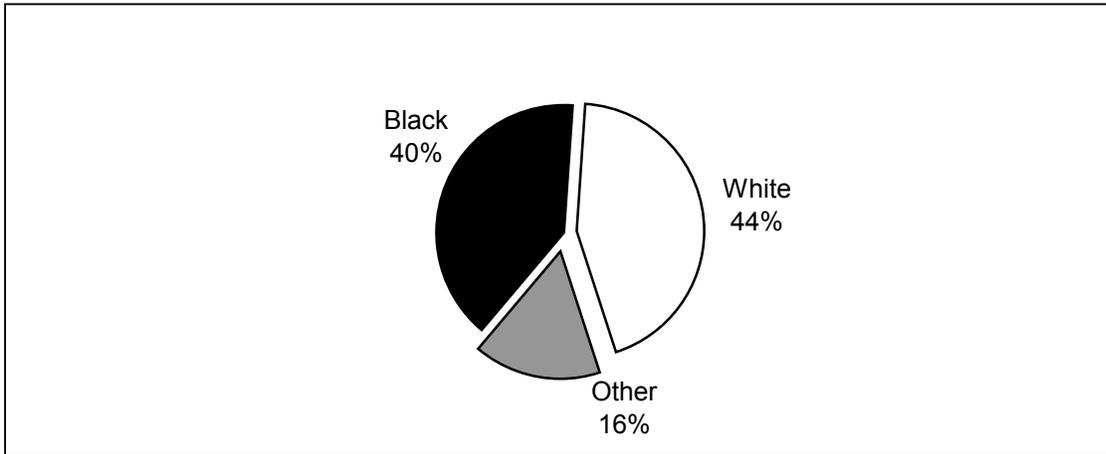


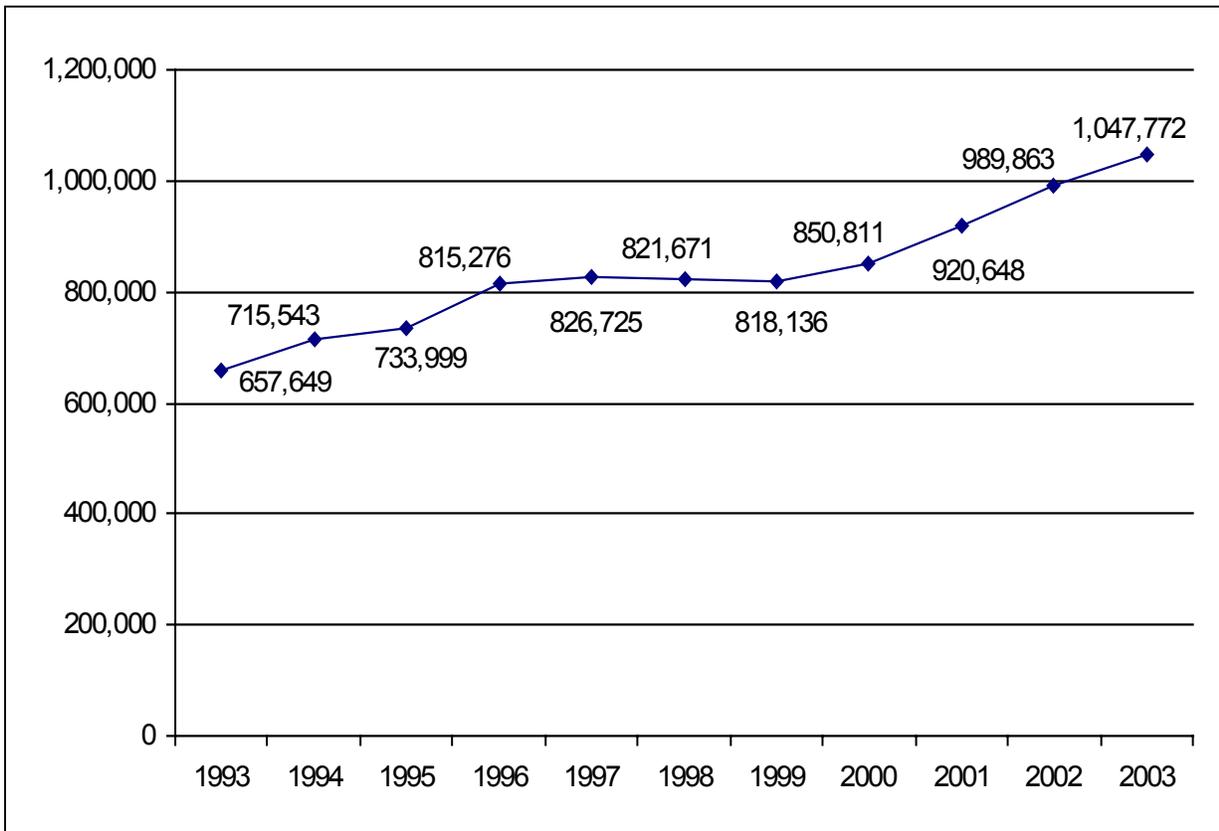
Figure 8. N.C. Medicaid Recipients by Race, SFY 2003



HEALTH INDICATORS

There are a variety of ways to measure the health of different populations, especially as related to sexual activity and access to health care. In 2002, North Carolina ranked 19th in the nation for reported chlamydia rate, 9th for reported gonorrhea rate, and 7th for reported primary and secondary syphilis rate (CDC, *Sexually Transmitted Disease Surveillance*, 2002, available at

Figure 9. N.C. Medicaid History of Average Monthly Medicaid Eligibles, SFY 1993-2003



<http://www.cdc.gov/std/stats/>). Another health indicator is to compare the state infant death rate to the national rate. The 2002 infant death rate for North Carolina was 8.2 per 1,000 live births, as compared to the national average of 7.0 per 1,000 live births (see the National Center for Health Statistics, available at http://www.cdc.gov/nchs/data/nvsr/nvsr51/nvsr51_02.pdf). Birth rates for young women can be an indirect marker for sexual activity. The teen birth rate (women ages 15-19) for North Carolina in 2002 was 52.2 per 1,000; the national teen birth rate in 2002 was 43 per 1,000 young women. Table 7, below, displays the teen birth rate, low birth weight percentage and the infant death rate for North Carolina, for race/ethnicity categories (note that data was not uniformly available for each year and for all race/ethnicity groupings). Note the teen birth rate for Hispanic women in the state fell from 219 per 1,000 in 1999 to 147 per 1,000 in 2000. Nationally, North Carolina had the highest teen birth rate in 2000. The North Carolina teen birth rate remains high as compared both to the national teen birth rate for Hispanic women and to the other race categories in the state.

Table 7. N.C. and U.S. teen birth rate, low birth weight and infant death rate, by race/ethnicity

Race/Ethnicity	Teen Birth Rate, per 1,000 births (2000)		Percentage of Low Birth Weight** Infants (2002)		Infant Death Rate, per 1,000 births (2001)	
	N.C.	U.S.	N.C.	U.S.	N.C.	U.S.
White*	43	32	7.6%	6.9%	6.1	5.7
Black*	79	77	14.1%	13.4%	15.8	14.0
Hispanic	147	87	6.1%	6.5%	-	-

* non-Hispanic **Low birth weight is birth weight of less than 2,500 grams (5lb. 8oz.)

Source: Kaiser Family Foundation

Figure 10. North Carolina Per Capita Income, 2000

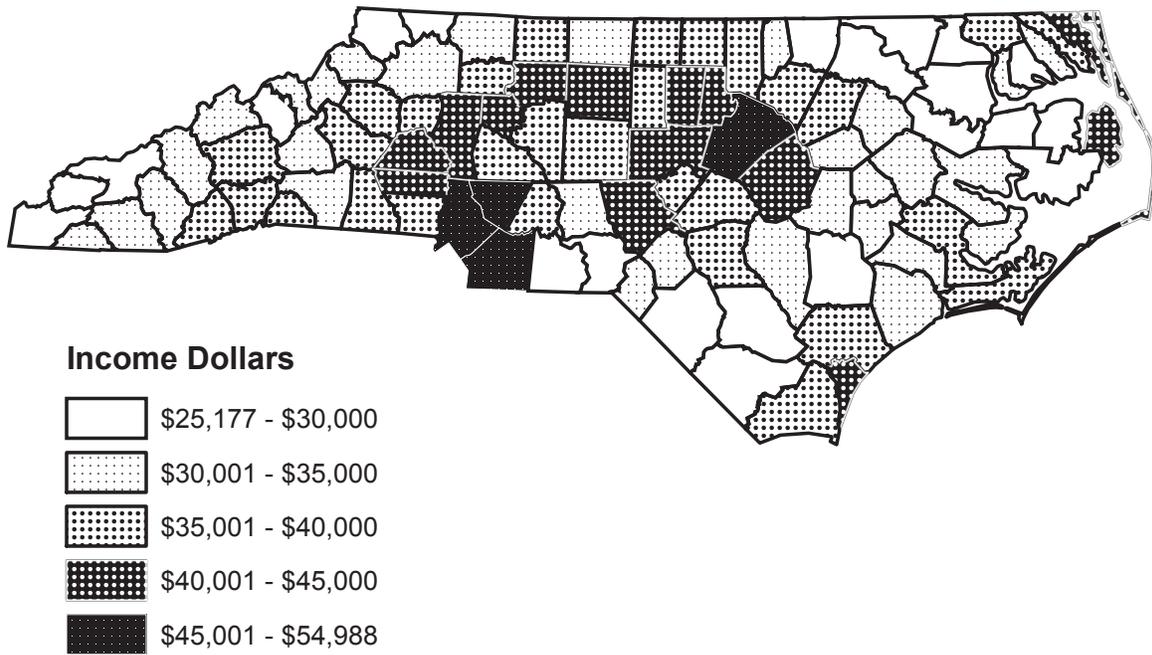
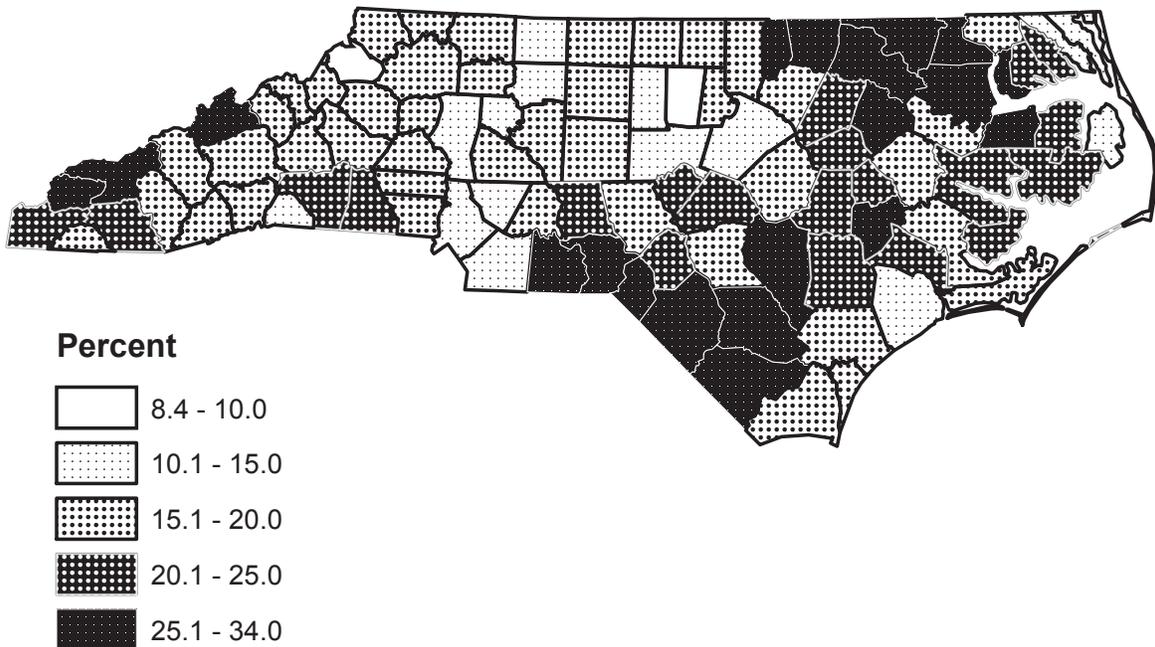


Figure 11. Medicaid Eligibles in North Carolina, 2003



QUESTION 2: WHAT IS THE SCOPE OF THE HIV/AIDS EPIDEMIC IN NORTH CAROLINA?

Special note: Unless otherwise noted, references to all racial groups in surveillance data exclude Hispanics. Hispanics are counted as a separate group. Thus “white” refers to white non-Hispanics, “blacks” refers to black non-Hispanics, etc.

Highlights/summary

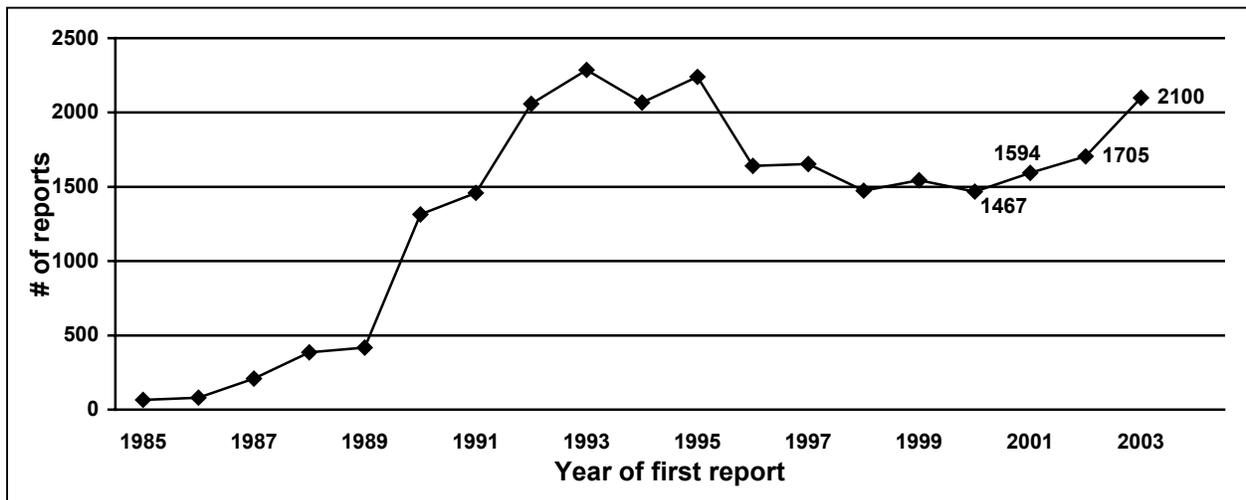
- In 2003, 2,100 new individuals were reported with an HIV diagnosis (HIV disease). N.C. has had increases in reports for the last three years.
- North Carolina’s overall rate of HIV infection in 2003 was 25.2 per 100,000.
- The cumulative number of individuals reported with HIV through December 31, 2003 was 25,813 persons.
- An estimated 25,000 persons were living with HIV or AIDS in North Carolina (including persons who may have been unaware of their infection) as of December 31, 2003.
- In 2003, the rate of HIV infection for non-Hispanic blacks (76.6 per 100,00) was almost eight times greater than for non-Hispanic whites (9.6 per 100,000). The rate of infection for Hispanics (25.4 per 100,000) was almost three times greater than that for whites, and the rates of infection for American Indians (15.4 per 100,000) and Asian/Pacific Islanders (14.0 per 100,00) were almost 1.5 times that for whites.
- The highest rate of HIV infection in 2003 was among black non-Hispanic males, at 104.3 per 100,000. This was almost seven times that for white non-Hispanic males (15.7/100,000).
- The largest disparity observed was for black non-Hispanic females with a rate of HIV infection (51.9 per 100,000) that was 14 times higher than that for white non-Hispanic females (3.6 per 100,000).
- Adults aged 30 to 39 years and 40 to 49 accounted for the greatest proportion of new HIV reports in 2003 (almost 32% each).
- For 2003 adult/adolescent HIV disease reports, heterosexual transmission risk was indicated in 44 percent of all reports; men who have sex with men (MSM) was indicated in 41 percent of reports; and injecting drug use (IDU) was indicated in nine percent of reports.
- In 2003, MSM and MSM/IDU accounted for 59 percent of new HIV disease reports among adult/adolescent males; heterosexual contact accounted for 27 percent.

- In 2003 HIV disease reports for adult/adolescent females, heterosexual contact accounted for about 83 percent of reports and injecting drug use accounted for about 11 percent.
- Nationally, in 2001, North Carolina was among the five states with the highest number of HIV infection reports (excluding AIDS cases) from non-metropolitan areas.
- Since the early 1990s, about 25 percent of North Carolina’s HIV disease reports have consistently come from rural, or non-metropolitan, areas.
- In 2003, Hertford County had the highest in-state HIV infection rate (based on a 3-year average for 2001-2003) of 57.4 per 100,000 population. This was more than twice the state’s 3-year average rate of 21.2 per 100,000 population. Edgecombe County ranked second with an HIV rate of 47.8, followed by Durham County (46.3), Mecklenburg County (45.6) and Martin County (41.2).
- In 2002, HIV/AIDS was listed as the 7th leading cause of death for adults 25- 44 years old.
- In 2002, HIV/AIDS was listed as the 7th leading cause of death for blacks overall. The crude HIV death rate for blacks is about 14 times higher than for whites (21.0 vs. 1.5 per 100,000).

OVERALL HIV/AIDS TRENDS

HIV Incidence

Figure 12. HIV disease reports over time

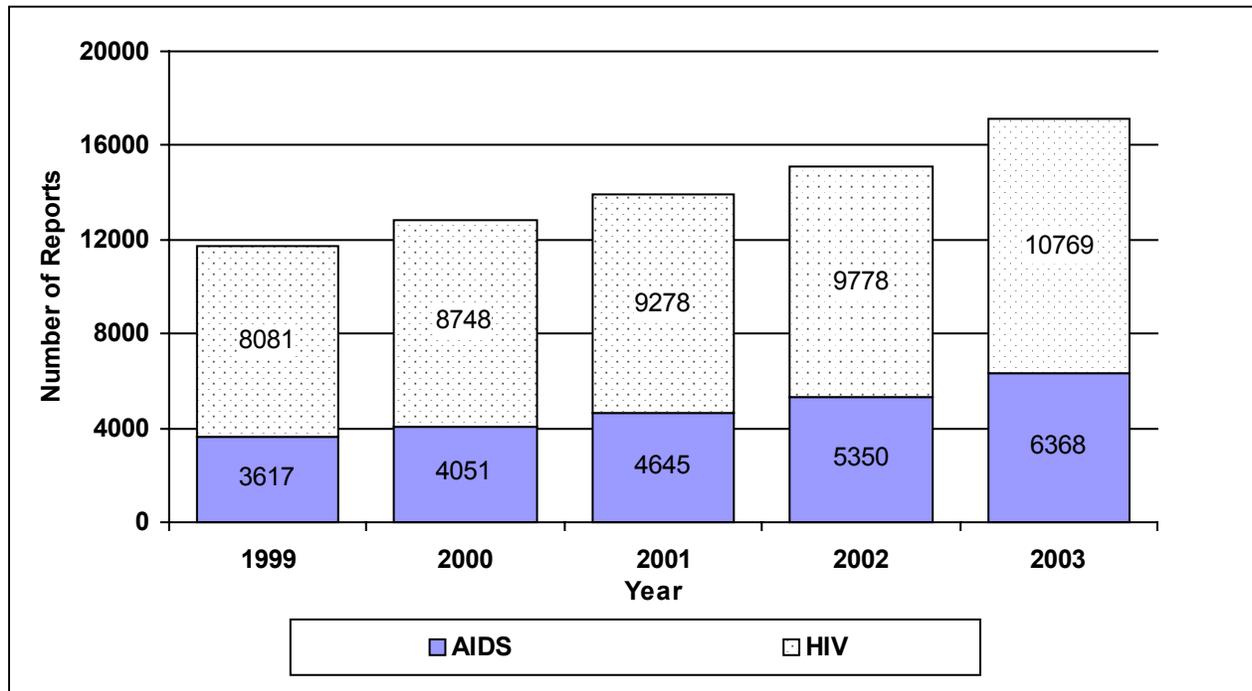


Although HIV surveillance reports do not reflect the true incidence of all new infections since not everyone infected is tested and reported, it is important to follow surveillance reporting trends to estimate whether incidence is increasing or decreasing. In 2003, 2,100 new individuals were reported with an HIV diagnosis (*HIV disease*). This brings the total number of individuals reported with *HIV disease* (through December 31, 2003) to 25,813. [*HIV disease* includes not only persons diagnosed with HIV but also persons diagnosed with HIV and AIDS at the same

time. Thus *HIV disease* includes all new individuals reported as infected by the date of their first report. More information about this designation of *HIV disease* can be found in the Appendix on page 99.] Figure 12 shows all HIV disease cases (HIV/AIDS) reported, by year of first report for the individual. The addition of state-required HIV infection reporting in 1990 accounts for the dramatic increase in reports beginning at that time. The number of cases reported was highest from 1992 through 1995, representing a time when HIV incidence was likely at its peak. It is important to note that some of this spike in reporting was also probably a result of better reporting from providers due to enhanced awareness about HIV/AIDS issues. This likely occurred because of the implementation of required HIV infection reporting, changes in the AIDS case definition and/or as a result of enhanced active surveillance activities by staff. Thus, part of this 1992 to 1995 spike was likely a reflection of prevalent cases being reported. An interesting correlation to note is that 1992 was the peak year for HIV seropositivity among women who gave birth in North Carolina (data from the Survey in Childbearing Women) and was also the peak year for syphilis cases reported in North Carolina.

Although the number of new HIV disease reports per year has moderated since 1996, yearly report totals have increased over the last three years. Reporting by type of initial case (HIV or AIDS) has been fairly consistent since the mid-1990s. Roughly 30 percent of new individuals reported each year with HIV disease also represented new AIDS cases (i.e., HIV and AIDS were reported at the same time for the individual).

Figure 13. Persons living with HIV in North Carolina, 1999-2003



HIV Prevalence

As stated earlier, the cumulative number of HIV disease cases reported through December 31, 2003 was 25,813, of whom 8,676 have either died or have an unknown vital status. Therefore, the total number of persons living with HIV and reported to the HIV/STD Prevention & Care

Branch is 17,137. Figure 13 displays the cumulative number of persons living with HIV or AIDS from 1999 to 2003. Reader may note that “living totals” for earlier years have been revised. HIV disease reports are periodically updated with vital status data available from the State Center for Health Statistics. An extensive update was completed in 2003.

One method for estimating HIV prevalence is based upon the CDC estimate that two-thirds to three-fourths of the persons living with HIV and AIDS have been tested and know their status. Applying this technique to our current surveillance total of 17,137 persons living in North Carolina with HIV/AIDS would increase the prevalence estimate to about 25,000.

HIV Demographics

Table 8 displays demographics of HIV disease reports for persons newly reported with HIV during 2003 and those persons living with HIV/AIDS as of December 31, 2003. The comparison of the two groupings (new reports vs. persons living) is very similar demographically, an indication that in a broad sense, the epidemic has not changed meaningfully in 2003 as compared to recent years. It is important to keep in mind that, because there can be significant delay between HIV infection and testing (reporting), changes in the epidemic will take longer to be observed in surveillance data. Two differences are noteworthy between the 2003 cases only and all persons living with HIV/AIDS. As expected, there is a larger representation of older persons among the persons living with HIV/AIDS as many persons live several years with a diagnosis. Note too, that there is a larger representation of Hispanics in new reports. This is not unusual, given the dramatic increase in the Hispanic population in North Carolina over the 1990s. Please refer to page 10 and Figure 5 (pg.13) in Question 1 for more information about North Carolina’s Hispanic population.

In 2003, the rate of HIV infection among males (35.5 per 100,000 population) was over twice that of females (15.4 per 100,000). The rate of HIV infection among non-white populations was much greater than among whites (9.6 per 100,000). The rate for blacks (76.6 per 100,000) was almost eight times greater; the rate for Hispanics (25.4) was almost three times greater; and the rate for American Indians (15.4) was over one and half times that for whites. It should be noted that the overall rate for HIV infection among Asian and Pacific Islanders is above that for whites and the rate difference has been increasing in recent years.

Table 8. North Carolina HIV/AIDS Demographics, 2003

	HIV disease (HIV/AIDS) reports (2003)			Persons living with HIV/AIDS [#] (as of 12/31/2003)		
	No.	Pct.	Rate (per 100,000)	No.	Pct.	Rate (per 100,000)
Total	2,100		25.2	17,137		206.0
Gender						
Male	1,447	68.9%	35.5	11,666	68.1%	285.8
Female	653	31.1%	15.4	5,471	31.9%	129.1
Race/ethnicity						
White*	556	26.5%	9.6	4,194	24.5%	72.2
Black*	1,391	66.2%	76.6	12,186	71.1%	670.7
Am Indian/ AI Native*	16	<1%	15.4	156	<1%	150.0
Asian/PI*	20	1%	14.0	77	<1%	53.7
Hispanic	113	5.4%	25.4	509	3.0%	114.5
* non-Hispanic						
Age group						
00-12	8	<1%	0.5	101	<1%	6.7
13-19	57	2.7%	7.3	127	<1%	16.3
(13-24)	241	(11.5%)	17.5	-	-	-
20-29	402	19.1%	34.1	1,852	10.8%	157.3
30-39	681	32.4%	53.2	5,651	33.0%	441.6
40-49	647	30.8%	51.7	6381	37.2%	509.7
50 and over	305	14.5%	13.1	2,998	17.5%	128.8

[#] includes HIV disease reports for 2003

Recent or New Infections

Serologic studies that identify true new infections (as opposed to newly identified individuals who are infected) can be difficult to implement and may not be generalizable to all populations. Some such studies have been initiated in various areas of the United States, but these studies are of limited use to North Carolina because its communities are inherently different in makeup. Although morbidity surveillance data is limited or prone to testing patterns of the population, which can change over time, it is the most complete information available about HIV for the population in North Carolina. Certain adjustments can be made to the surveillance data to eliminate reports that are known to reflect older infections. For analysis of recent infections, we exclude any new individuals reported if that individual's first report of infection included an AIDS diagnosis or if that individual developed AIDS within two years of first being reported. Tables E-G (pp. 107-109) display the demographics of such reports. As expected, this group of recent infections reflects a slightly younger population, but it also reflects proportions and trends that are very similar to the overall morbidity surveillance data, which can be found in Tables A-D on pp. 103-106. In comparing cases and rates for the two sets of tables, note that the same demographic trends for gender are represented in both the more recent reports and the overall reports, and there are about the same levels of disparities among racial/ethnic groups. Finally, modes of transmission categories in the recent reports (Table E) were proportionately similar to

the categories in the overall morbidity tables (Table D). All these comparisons lead us to the conclusion that the recent reports from the surveillance data do not substantially differ from the overall surveillance data. Thus, subsequent discussions in the profile will be limited to examining the trends identified in overall surveillance data, which includes older reports and contains more complete information.

HIV/AIDS BY RACE/ETHNICITY AND GENDER

Table 9. North Carolina HIV disease by race/ethnicity and gender, 2003

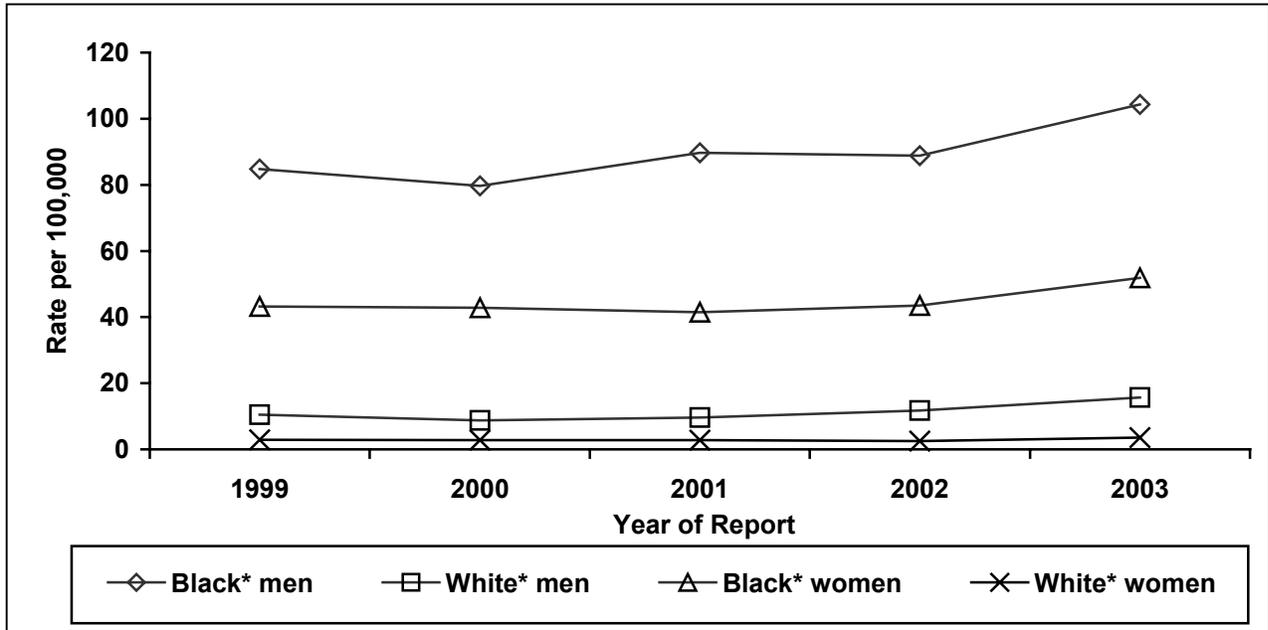
Race/ethnicity	Gender	Males			Females			Total		
		No.	Pct.	Rate*	No.	Pct.	Rate*	No.	Pct.	Rate*
White (non-Hispanic)		448	21%	15.7	108	5%	3.6	556	26%	9.6
Black(non- Hispanic)		892	42%	104.3	499	24%	51.9	1,391	66%	76.6
Hispanic		79	4%	30.5	34	2%	18.3	113	5%	25.4
Other or unknown		28	2%	--	12	2%	--	40	2%	--
Total		1,447	69%	35.5	623	31%	15.4	2100	100%	25.2

* per 100,000

Table 9 above indicates that the highest rate of HIV infection among racial/ethnic grouping by gender in 2003 is among black males (104.3 per 100,000), at almost seven times that for white males (15.7 per 100,000). The second highest rate of HIV infection is for black females (51.9 per 100,000), almost 14 times higher than the rate for white females (3.6 per 100,000). This disparity between white and black women represents the largest disparity noted within gender for race/ethnicity. Disparities also exist for Hispanics as compared to whites; the rate for Hispanic men (30.5 per 100,000) is almost twice that for white men and the rate for Hispanic women is over five times that of white women. Rates for other race/ethnic groups are based on numbers too small for meaningful comparisons but are displayed in Table B, pg. 104.

Table A on pg. 103 displays the gender distribution of HIV disease reports from 1999 through 2003. The gender distribution of reports is about two male reports for each female report. This trend has been fairly constant over time. Table B on page 104 also displays the race/ethnicity of reports stratified by gender from 1999 through 2003. Notable trends include the increase in white and Hispanic report rates (per 100,000) for males (11.7 to 15.7 and 23.2 to 30.5 respectively) and the general increase in reports for Asian/Pacific Islanders males and females combined (8.4 to 14.0). Figure 14 displays HIV disease rates from 1999 through 2003 for black and white males and for black and white females.

Figure 14. HIV/AIDS by race/ethnicity and gender over time



* non-Hispanic

In addition to routine surveillance data, comparisons or trends can be isolated among persons tested at HIV counseling and testing system (CTS) sites. The North Carolina Division of Public Health collects information from clients seeking HIV testing at any of the 149 publicly funded HIV CTS sites across the state. Information on client demographics, risk behaviors, and testing history is collected, but no personal identifying information is included. The risk information provided can be used to classify clients according to a risk hierarchy similar to the one that is used to classify reported cases; however, the self-reported risk may not be accurate. Because clients who use CTS services are self-selected, they do not represent a random sample of the state’s population. Also, because no personal identifying information is collected, it is impossible to know how many times an individual client is represented in the dataset. However, clients are asked if they have ever been tested for HIV before. Those who say they have tested before could be in the dataset one, two, three, or more times in a single year, depending on their testing frequency. Those who report that they have not been tested before the current test therefore comprise a group with each person represented only once; this is the most stable group from which to make estimates. (For a detailed description, please see Appendix A, page 92 and HIV testing discussion beginning on page 59.)

Although the CTS data is limited to persons who test at public clinics, it is very useful because information is available for persons who test HIV negative as well as persons who test HIV positive, so positivity rates can be calculated. Percent positivity among persons testing for the first time at HIV counseling and testing (CTS) sites in North Carolina is displayed in Figures 15 and 16. The relative rankings of positivity for males and females and among racial/ethnic groups are similar to those seen in routine surveillance data, but note the slight increase in positivity for males in 2003 and the slight decrease in positivity among females.

Figure 15. Percent HIV positivity among persons tested (CTS) for the first time by gender, 1999-2003

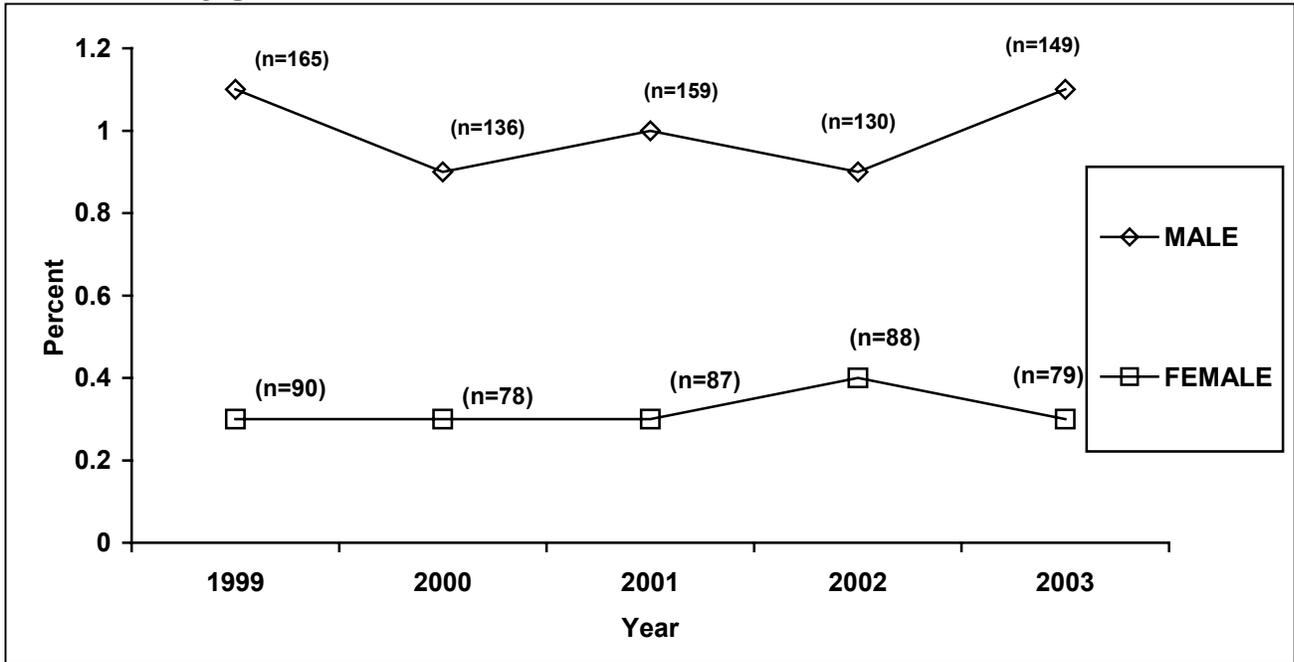
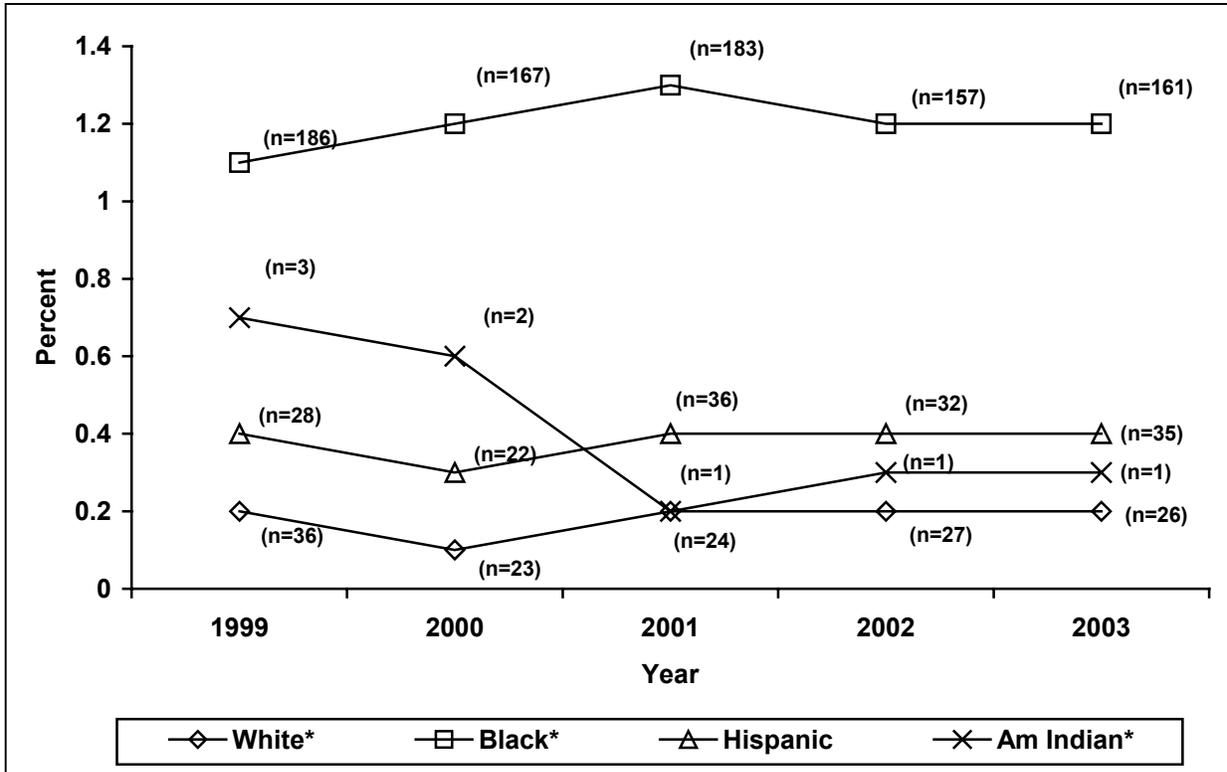


Figure 16. Percent HIV positivity among persons tested (CTS) for the first time, by race/ethnicity, 1999-2003



* non-Hispanic

HIV/AIDS BY AGE GROUP

Most HIV disease reports are for adults and adolescents, as less than one percent of new reports represent infants or children younger than 13 (Table A, pg. 103). In 2003, adults aged 30 to 39 years accounted for the greatest proportion of reports (see Table 10 below). Together, reports for 20 to 49 year olds accounted for 82 percent of all reports. HIV is reported among an older population when compared to other sexually transmitted diseases like gonorrhea and chlamydia. However, the age distribution of HIV cases is similar to that of syphilis reports (see section III). Figure 17 displays the trend of age groups from 1999 to 2003 by rate per 100,000 population. Note that rates have increased for all groups as reports have increased in 2003. The sharpest increase was noted for 40 to 49 year olds overall. This may be a result of enhanced surveillance activities that caused some previously diagnosed but never reported individuals to be included as new reports in 2003. Figure 18 displays the percent positivity for persons tested for the first time at CTS sites from 1999 to 2003. Positivity is highest for 40 to 49 year olds. Increases for positivity were noted in 2003 for 30 to 39 year olds, 40 to 49 year olds, and those aged 50 years or older. Positivity has remained fairly constant for other persons. Readers are reminded that CTS data only represent the testing population at public clinics and may not be generalizable to larger populations

Table 10. North Carolina HIV disease by age group and gender, 2003

Age (yrs.)	Males			Females			Total		
	No.	Pct.	Rate	No.	Pct.	Rate	No.	Pct.	Rate
0-12	4	0.3%	0.5	4	0.6%	0.5	8	0%	0.5
13-19	23	1.6%	5.8	34	5.2%	9.0	57	2.7%	7.3
20-29	253	17.5%	41.3	149	22.8%	26.4	402	19.2%	34.1
30-39	480	33.2%	74.6	201	30.8%	31.6	681	32.4%	53.2
40-49	458	31.7%	74.6	189	28.9%	29.6	647	30.8%	51.7
50 & over	229	2.0%	22.0	76	11.6%	5.2	305	14.5%	13.1
Total	1,447	100%	35.5	653	100%	15.4	2,100	100%	25.2

ADULT/ADOLESCENT HIV/AIDS BY EXPOSURE CATEGORIES

As part of HIV surveillance activities, a great deal of importance is placed on determining the key HIV risk factors associated with each case. This is achieved by interviewing the patient, the sex and/or drug-using partners, and the treating physician. Ultimately, each case is assigned to a primary risk category based on a hierarchy of disease transmission developed by the CDC and others. Table 11 displays the mode of transmission for adult/adolescent HIV disease cases for 2003. Three principal risk categories are evident: men who have sex with men (MSM), injection drug use (IDU), and heterosexual contact. Note that the proportion of cases for which there is no identified risk (NIR) is substantial, and is higher among females than among males when proportions are compared for each gender separately. Part of these NIR cases are classified as such not because of missing or incomplete information, but because reported risks do not meet one of the CDC-defined risk classifications. Consequently, inferring trends from exposure category or risk data should be done with extreme caution. Some NIR cases have been reevaluated and reassigned to a “presumed heterosexual” risk category based on information from follow-up interviews with newly diagnosed individuals, such as the exchange of sex for

Figure 17. HIV/AIDS by age group, 1999-2003

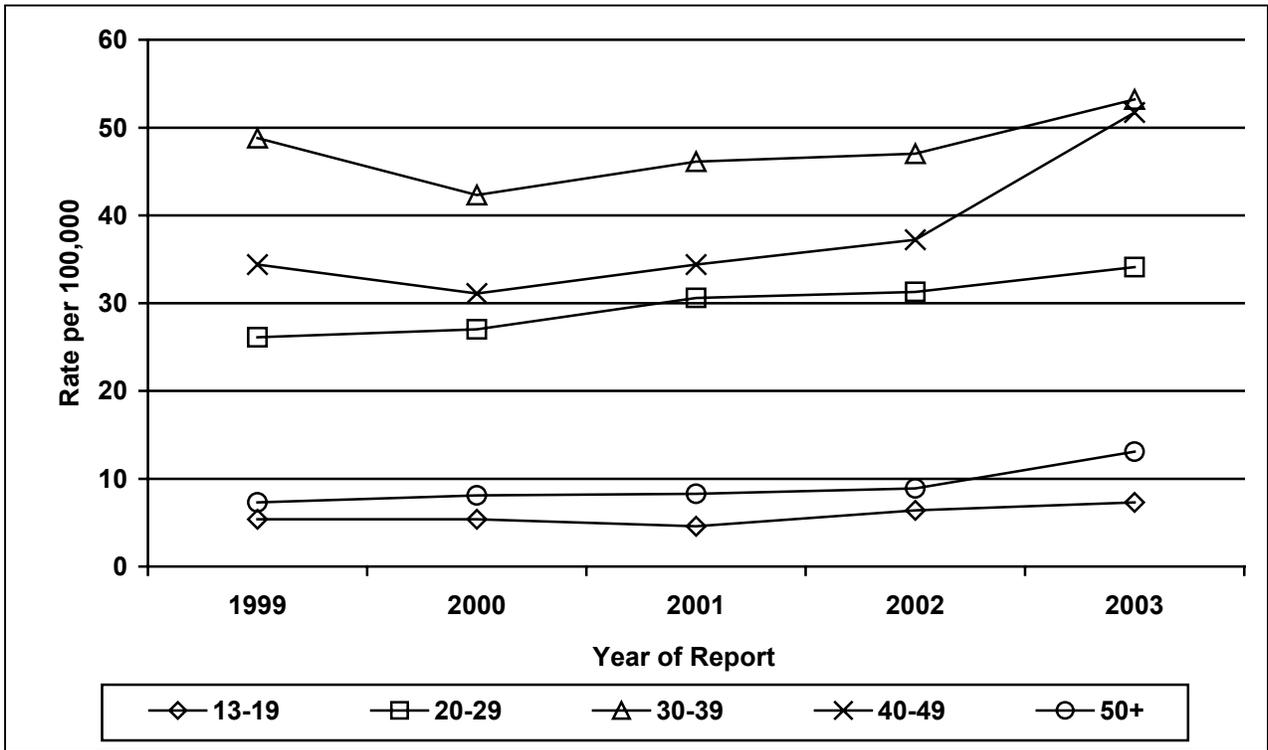
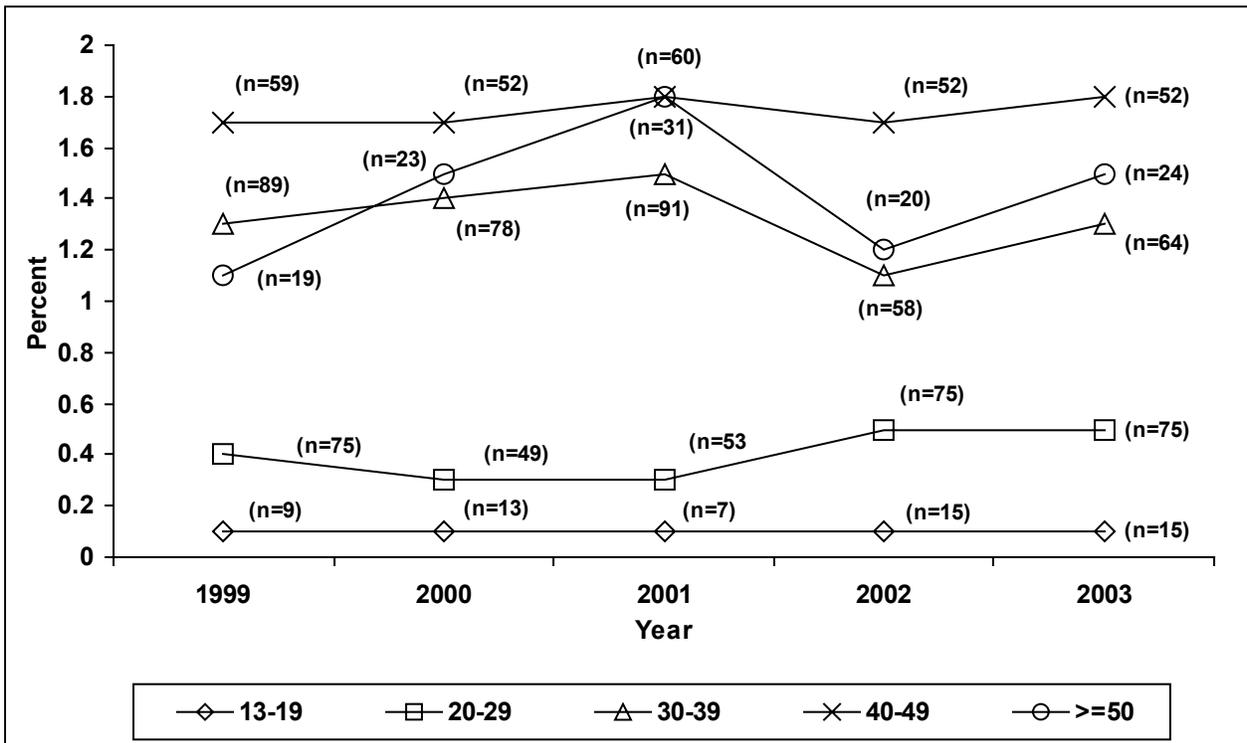


Figure 18. Percent positivity among persons tested (CTS) for the first time by age group, 1999-2003



drugs or money, previous diagnoses with other STDs, multiple sexual partners, etc. Even with this reassignment of presumed heterosexual risk for some NIR reports, a substantial proportion of NIR reports remain, and it is somewhat difficult to follow changes in the proportions among the risk groups. To simplify the discussion and better describe the overall changes, the remaining NIR cases have been assigned a risk based on the proportionate representation of the various risk groups within the surveillance data (see Table 12 below). More explanation of this general risk reassignment of NIR cases can be found in Appendix B on page 100. **Further discussions of risk or exposure categories in this profile will be based on the fully redistributed risk of all HIV/AIDS cases.**

Table 11. Adult/adolescent HIV disease by exposure category, NIRs included, 2003

Exposure Category	Males		Females		Total	
	No.	Pct.	No.	Pct.	No.	Pct.
MSM	615	42.5%	--	--	615	29.3%
IDU	90	6.2%	45	6.9%	135	6.4%
MSM/IDU	34	2.3%	--	--	34	1.6%
Blood Products/ Hemophilia/other	22	1.5%	23	3.5%	45	2.1%
Heterosexual	136	9.4%	200	30.6%	336	16.0%
NIR (presumed heterosexual)	144	10.0%	129	19.8%	273	13.0%
NIR	402	27.8%	252	38.6%	654	31.1%
Total	1,443	100%	649	100%	2,092	100%

Table 12. Adult/adolescent HIV disease by exposure category, NIRs redistributed, 2003

Exposure Category	Males		Females		Total	
	No.	Pct.	No.	Pct.	No.	Pct.
MSM	853	58.9%			853	40.6%
IDU	125	8.6%	73	11.3%	198	9.4%
MSM/IDU	47	3.3%			47	2.3%
Blood Products/ Hemophilia/other	30	2.1%	38	5.8%	68	3.2%
Heterosexual	388	26.8%	538	82.4%	926	44.1%
Total	1,443	100%	649	100%	2,092	100%

For 2003 adult/adolescent HIV disease reports, heterosexual transmission risk represents about 44 percent of all reports; MSM and MSM/IDU (men who have sex with men and inject drugs) represent about 43 percent of all reports; and IDU represents about 12 percent (including MSM/IDU). This gives a very broad look at how the HIV epidemic is spread among risk groups. However, it is difficult to apply this broad information to effective prevention strategies because risk is very different for males and females. Thus it is necessary to discuss risk for each gender separately. Figures 19 and 20 display risk for each gender. For males, MSM and MSM/IDU together account for about 62 percent of HIV disease reports; heterosexual contact cases account for about 27 percent of reports; and IDU account for about nine percent. For females, heterosexual contact accounts for about 82 percent of reports and IDU about 11 percent. Tables H and I (pp. 110-111) display the risk categories for the sexes for reports from 1999 to 2003.

For males, MSM reports have been fairly consistent as a proportion, with a noted increase in 2003 (48.7% to 58.9%). IDU reports (1999-2003) for males have continued to decline as a proportion of reports (19.9% to 8.6%), while reports for females do not show a discernable trend. As a proportion of reports, heterosexual contact has been less constant for males, but has increased slightly for females (75.5% to 82.4%).

Figure 19. Adult/adolescent female HIV disease reports, 2003

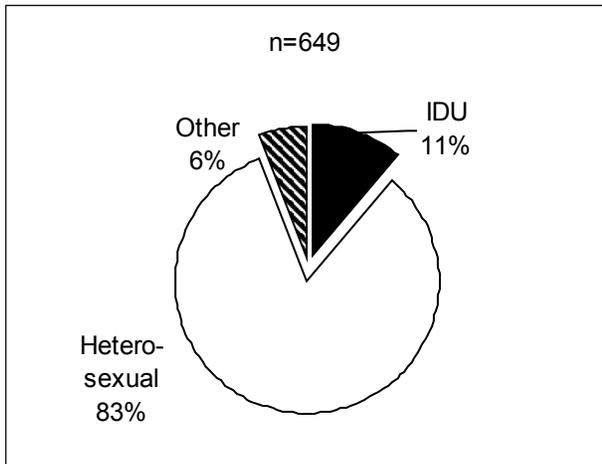


Figure 20. Adult/adolescent male HIV disease reports, 2003

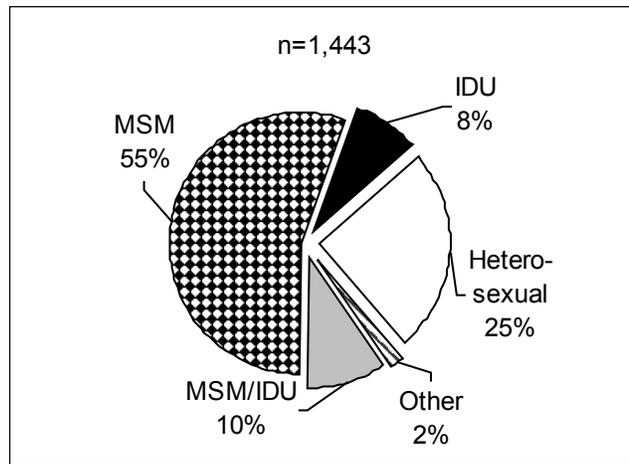


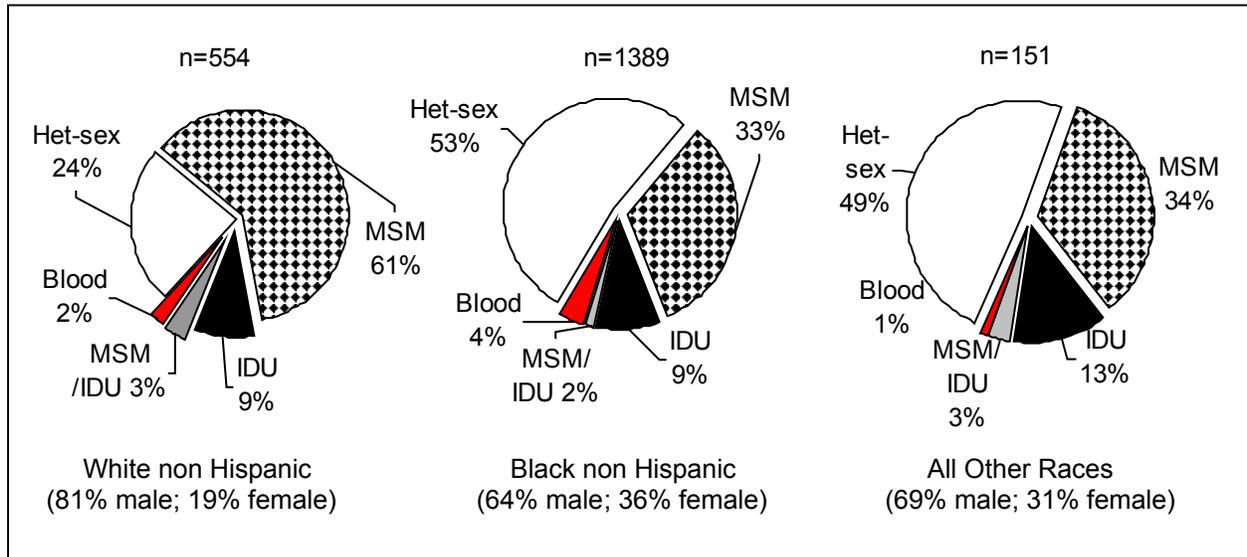
Table 13. HIV adult/adolescent disease reports by exposure category (N=2094), 2003

Exposure Category	White non Hispanic		Black non Hispanic		All Other Races	
	No.	Pct.	No.	Pct.	No.	Pct.
MSM	338	61.0%	455	32.8%	52	34.4%
IDU	49	8.8%	128	9.2%	20	13.3%
MSM/IDU	20	3.6%	20	1.4%	5	3.3%
Blood Products*	13	2.3%	53	3.8%	2	1.3%
Heterosexual	134	24.2%	730	52.6%	72	47.7%
Total	554	100%	1,389	100%	151	100%

*Blood products includes Hemophilia

Just as HIV is distributed differently among racial/ethnic groups, it is also distributed differently with respect to risk categories for racial/ethnic groups. Table 13 displays the 2003 HIV risk information for racial/ethnic groups. Figure 21 displays the exposure categories for racial/ethnic groups, with the proportions calculated separately for each group. Note that for whites, MSM represented 61 percent of reports, heterosexual risk about 24 percent of reports, and IDU about nine percent of reports. For blacks, heterosexual risk represented about 53 percent of reports, MSM about 33 percent of reports, and IDU about nine percent of reports. The risk breakdown for other races/ethnicities (Hispanics, American Indians, and Asian/Pacific Islanders) are grouped together because of low case numbers. Within this aggregated group, heterosexual risk was reported for 48 percent of reports, MSM for 34 percent of reports and IDU for 13 percent of reports. Much of the difference observed across racial/ethnic groups can be accounted for by the difference in risk for males and females and how this risk is defined for each of the racial/ethnic groups.

Figure 21. HIV disease report by exposure category by race/ethnicity, 2003



GEOGRAPHIC DISTRIBUTION OF HIV/AIDS

According to the Centers for Disease Control and Prevention (CDC) in the United States most HIV and AIDS reports are from large metropolitan areas (greater than 500,000 population) in all regions of the country. The South, as a region, has the greatest proportion of reports from small metropolitan areas (50,000-500,000 population) and non-metropolitan areas (less than 50,000). North Carolina’s HIV epidemic, like that of other states in the South, is more rural in nature than the national epidemic. According to the CDC, more than 25 percent of North Carolina’s AIDS reports in 2001 were from non-metropolitan areas. North Carolina was among five states (including Florida, Mississippi, Texas and New York) that reported the most HIV infection (not AIDS) cases from non-metropolitan areas at that time. It is important to note that HIV was not consistently reported in all states; thus the region/state HIV (not AIDS) comparisons are only for those states that reported HIV.

The distribution of HIV disease (HIV & AIDS) is uneven across North Carolina, as can be seen in Figures 22 and 23. This distribution can be partly explained by the population distribution (see Figure 1, pg. 9), as the epidemic tends to be concentrated in urban areas although it reaches rural areas as well. North Carolina’s epidemic has a significant rural component. Since the early 1990s, roughly 25 percent of North Carolina’s HIV disease reports have consistently come from rural or non-metropolitan counties. This trend seems fairly steady and reflects the demographics of the state (Figure 2, pg. 9). Tables L-N (pp. 114-120) give individual county totals of HIV disease and AIDS cases reported, cases listed as living at the end of 2003, and a ranking of case rates (per 100,000) based on a three-year average [rate was calculated using the average of rates for the three previous years, ending in 2003]. Readers are cautioned to view rates carefully, as rates based on small numbers (generally less than 20) are considered unreliable. Hertford County ranked number one with the highest 3-year average rate (per 100,000 population) of HIV in 2003 (57.4), followed by Edgecombe County (47.8), Durham County (46.3), Mecklenburg County (45.6), and Martin County (41.2).

Figure 22. North Carolina HIV Disease Cases, 2003

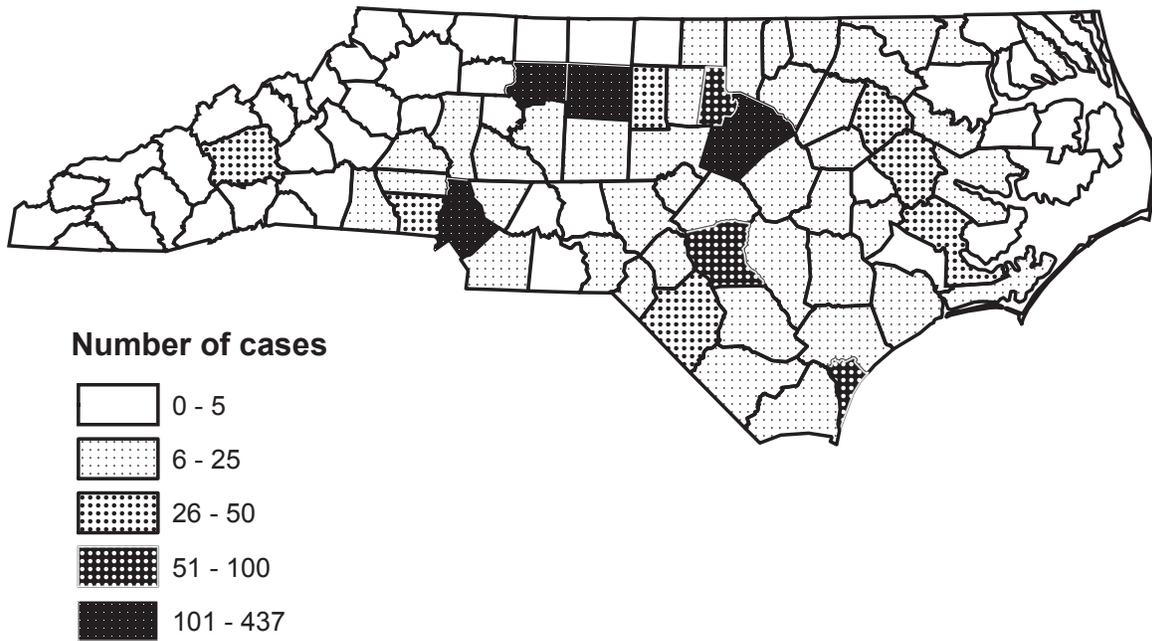
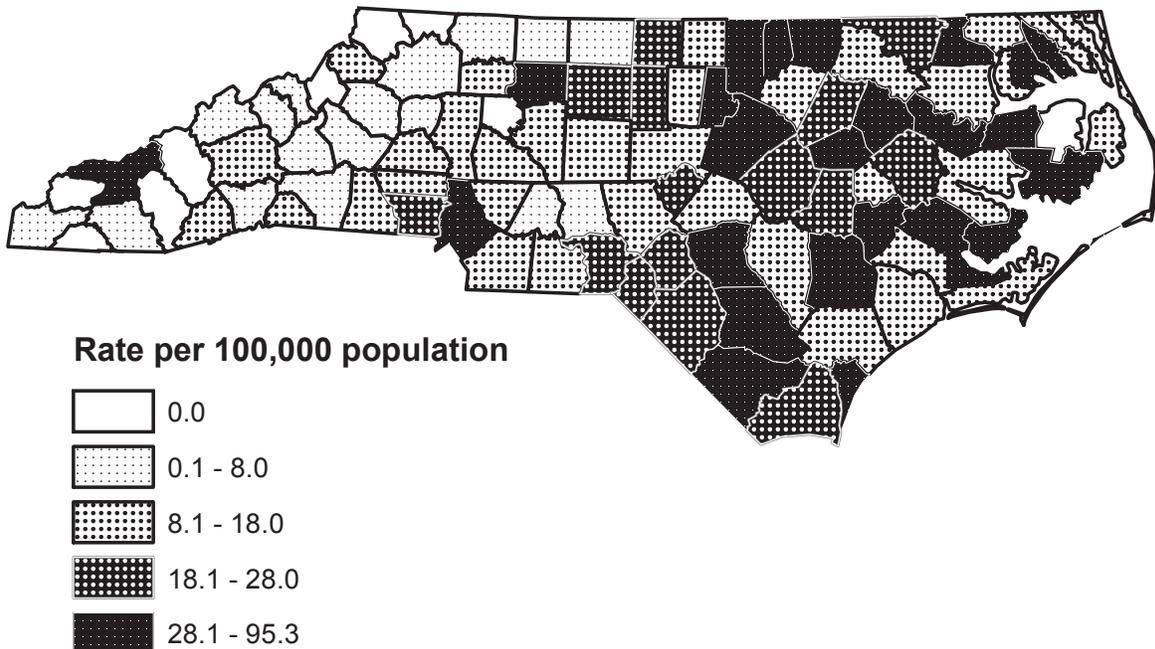


Figure 23. North Carolina HIV Disease Rates, 2003



HIV/AIDS-RELATED DEATHS

Unlike chronic diseases with high death rates, such as cancer or cardiovascular diseases, HIV/AIDS death rates are concentrated among the young and middle-aged. The case fatality rate for cumulative AIDS cases reported through 2003 is 52 percent; however, for those cases diagnosed and reported before 1990, the case fatality rate is 90 percent. Unfortunately, sometimes we learn of the diagnosis only at the time the person dies.

According to the North Carolina Center for Health Statistics, 484 HIV/AIDS deaths were reported in 2002, 25 more than the 459 HIV/AIDS-related deaths reported in 2001. Although the ranking of HIV/AIDS among all causes of death for all ages was not among the top 10, it was listed as 8th for ages 15 to 24 and 7th for ages 25 to 44 (see Table 14 below). HIV/AIDS was also listed as the 7th leading cause of death among blacks of all ages. Table 15 (below) displays HIV/AIDS deaths by race for each gender from vital records data maintained by the North Carolina State Center for Health Statistics. The crude death rate per 100,000 is about 14 times higher for blacks than for whites.

Table 14. Leading causes of death for North Carolina residents, 2002

15-24 years			25-44 years		
Rank	Cause	No.	Rank	Cause	No.
1	Motor vehicle injuries	387	1	Cancer	654
2	Homicide	161	2	Motor vehicle injuries	547
3	Other unintentional injuries	135	3	Diseases of the heart	545
4	Suicide	89	4	Other unintentional injuries	460
5	Cancer	40	5	Suicide	379
6	Diseases of the heart	29	6	Homicide	303
7	Congenital anomalies	12	7	HIV disease	266
8	HIV disease	7	8	Cerebrovascular diseases	105
9	Septicemia	5	9	Diabetes mellitus	99
10	Anemias	4	10	Chronic liver disease/ cirrhosis	84
	All other causes	120		All other causes	841
Total deaths		989	Total deaths		4,283

Table 15. N.C. HIV/AIDS-related deaths by race/ethnicity and gender, 2002

Race/ ethnicity	Males			Females			Total		
	No.	Pct.	Rate [#]	No.	Pct.	Rate [#]	No.	Pct.	Rate [#]
White*	73	15.1%	2.6	13	2.7%	0.4	86	17.8%	1.5
Black*	253	52.3%	29.6	129	26.7%	13.4	382	78.9%	21.0
Other	14	2.9%		2	0.4%		16	3.3%	
Total	340	70.3%	8.3	144	29.8%	3.4	484	100%	5.8

* not Hispanic

[#] crude death rates per 100,000 using bridged race data--see Appendix for more information about rates

ADOLESCENT ACQUIRED HIV/AIDS

Tables J and K (pp. 112-113 and Figures 24 and 25, below) display the percentage of new HIV disease reports by risk and demographic categories for each gender for individuals aged 13 to 24 years at time of report. Because there can be significant delay between infection and subsequent testing and reporting, it is felt that the age group 13 to 24 years better describes infections that likely occurred during adolescence. In 2003, while just under three percent of reports are found among teenagers aged 13 to 19, the percentage increases to almost 12 percent of all cases if 20 to 24 year olds are included (see Table 8, pg. 23).

The exposure or risk categories for male adolescents and for female adolescents are very different. This difference is even more pronounced than for older adults. For adolescent females, the proportion of HIV disease reports attributed to heterosexual contact in 2003 accounted for over 92 percent of the cases. For adolescent males, the proportion of HIV disease reports attributed to MSM risk accounted for 82 percent of the 2003 reports, up from the 70 percent of reports in 1999.

Figure 24. Male HIV disease rpts. (13-24 yrs) that likely represent adolescent exposures, 2003

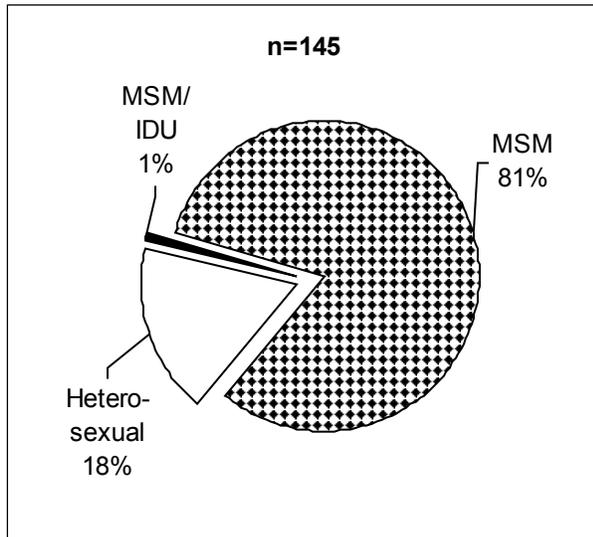
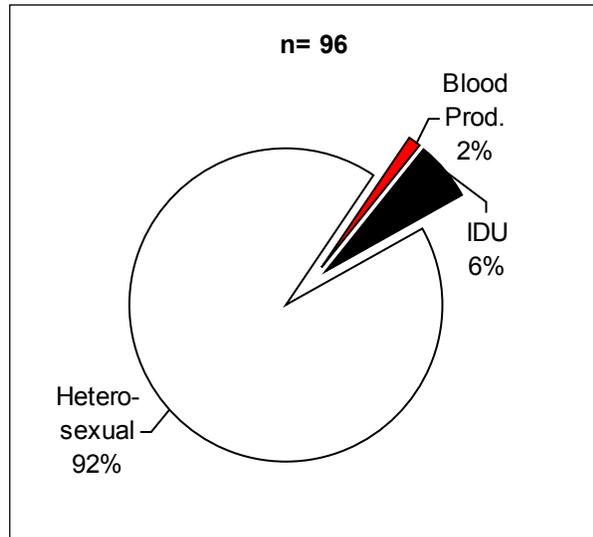


Figure 25. Female HIV disease rpts. (13-24 yrs) that likely represent adolescent exposures, 2003



PEDIATRIC HIV/AIDS

Between 1985 and 2003, 260 pediatric HIV cases were identified in North Carolina. Of these 260 pediatric cases, 76 percent were black, 19 percent were white, four percent were Hispanic, and one percent were some other or unknown race. Table 16 displays the mode of transmission reported for these cumulative, pediatric HIV cases. The leading modes of pediatric transmission were by HIV-positive mothers, mothers who had sex with HIV-positive men, and mothers who injected drugs. Most of the pediatric HIV cases that resulted from blood transfusions or related blood products occurred prior to 1990.

Table 16. Pediatric HIV Cases by Mode of Transmission, 1985-2003

Expanded Mode of Transmission	Cases	Pct.
Pediatric Hemophilia/Blood Products	46	17.7%
Mother with HIV/AIDS	86	33.1%
Mother IDU	43	16.5%
Mother had sex with IDU	28	10.8%
Mother had sex with HIV+ Male	50	19.2%
Mother with additional risk factors*	7	2.7%
Total	260	100%

* receiving blood products, sex with a bisexual or hemophiliac male, or sex with a man who received blood products

Enhanced Perinatal Surveillance Project

The North Carolina Enhanced Perinatal Project systematically collected retrospective data on HIV-infected pregnant mothers and perinatally-exposed and HIV-infected children from 1999 to 2001. Demographic and clinical data for the mother-infant pairs were abstracted from medical records, prenatal records, adult and pediatric HIV clinic records, labor and delivery records, and birth records. HIV-exposed children were followed for approximately six months or until adequate laboratory information could classify them as infected or uninfected. These data address the prevention of perinatal transmission by evaluating prenatal care, HIV counseling and testing during pregnancy, the use of antiretroviral medications, and other treatment issues for pregnant HIV-positive women and HIV-exposed neonates. Table 17 summarizes the number of infants born to HIV-positive women who were followed up. Of the 410 perinatal HIV exposures identified from 1999-2001, 12 children are confirmed HIV positive (3%); 341 have seroreverted and are HIV negative (83%); 24 had indeterminate HIV test results (6%); and 33 are missing current HIV status information (8%). Over half (58%) of the women with HIV who gave birth from 1999-2001 were 20 to 24 years of age (Figure 27), and 73 percent are black (Figure 27a).

Table 17. Number of HIV-exposed infants by year of birth, 1999-2001

Year of Birth	1999	2000	2001	Total
Number of HIV Exposed Infants	139	139	132	410

Figure 27. Mothers' age at delivery

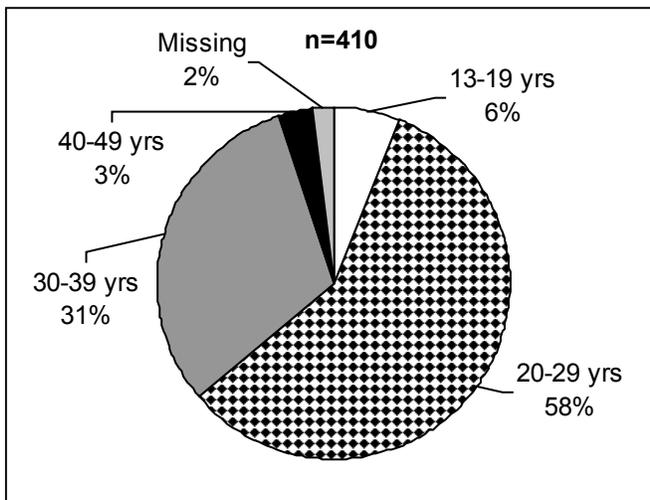


Figure 27a. Mothers' race/ethnicity

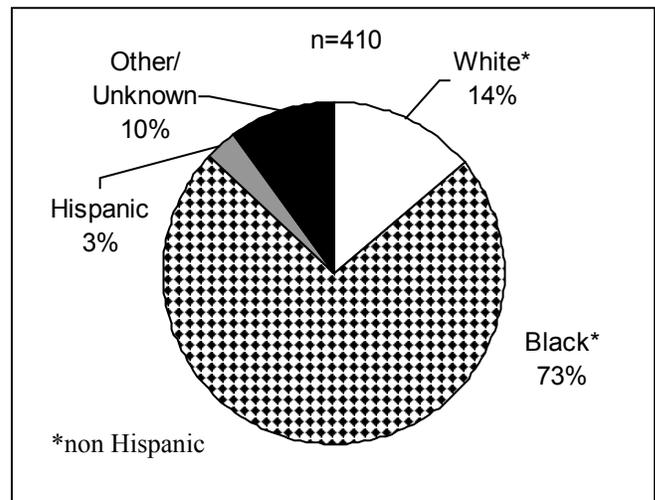


Figure 28. Antiretroviral therapy

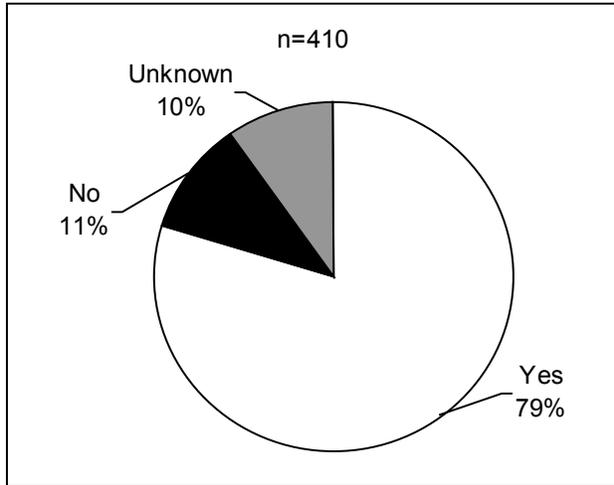
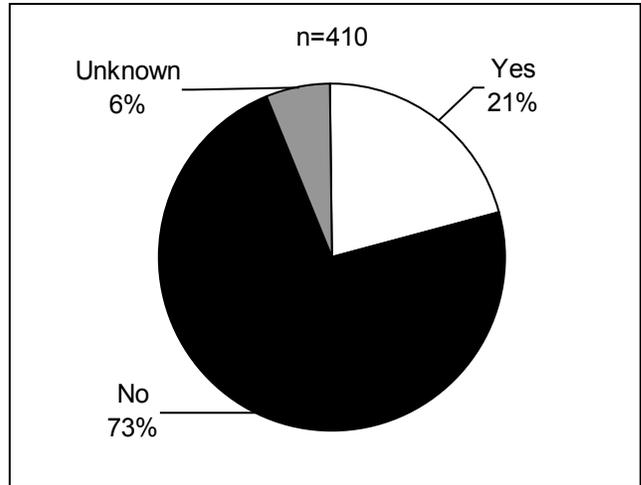


Figure 28a. Mothers used illegal drugs



Between 1999 and 2001, 79 percent of HIV-positive mothers had received antiretroviral therapy during pregnancy or during labor and delivery (Figure 28). Among mothers whose mode of HIV exposure has been identified, 82 percent had contracted HIV infection through heterosexual activity; approximately one in seven had contracted HIV through injecting drug use (data not shown). A substantial portion of HIV-positive mothers (21%) used illegal drugs during their pregnancies (Figure 28a).

Table 18. Mothers' HIV positive diagnosis in relation to pregnancy, 1999-2001

HIV Diagnosis	Cases	Pct.
Before this pregnancy	238	58%
During this pregnancy	145	35%
At the time of delivery	8	2%
Before birth, exact time unknown	4	1%
After child's birth	8	2%
Mother refused testing	1	0%
Unknown when diagnosed	6	1%
Total	410	100%

Nearly all mothers (95%) had been diagnosed prior to delivery. Early HIV positive diagnosis is essential in the effective use of antiretroviral intervention on behalf of HIV exposed infants. Though some of these pregnancies were no doubt unintended, 58 percent of mothers were informed of their HIV status before they became pregnant (see Table 18 above).

Table 18a. N.C. HIV disease reports that were likely perinatal transmissions, 1993-2002

Year of Birth	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Reports	19	11	14	11	3	6	4	4	4	2

Table 18a above displays the number of pediatric reports that represent likely perinatal transmission based on exposure categories found in routine HIV surveillance data. These cases were HIV reports for children whose mother had HIV or an HIV risk, and thus represent *likely* perinatal transmission.

QUESTION 3: WHAT ARE THE INDICATORS OF RISK FOR HIV/AIDS INFECTION IN NORTH CAROLINA?

Relative risk for HIV among various groups defined by exposure or risk categories is extremely difficult to ascertain because rate information is unavailable for some groups. In order to calculate rates, we must have estimates of the number of persons infected and estimates of the uninfected population. Part of the difficulty in estimating these populations is that risk behavior is highly stigmatized, so surveys that attempt to estimate risk behaviors can be biased. When estimates have been made, they are oftentimes not generalizable to local populations. Since we do not have reliable population estimates for some of the groups defined by risk behaviors, the best information may be limited to the representation of these groups in surveillance data.

In order to frame a discussion of populations at risk for exposure to HIV, it is important to first understand what we know about HIV and AIDS cases from surveillance data, since a great deal of effort is placed on determining key HIV risk factors associated with each case. (Readers should keep in mind that surveillance data is based on a hierarchical assignment of risk. More detailed descriptions of surveillance data and the assignment of risk or exposure categories can be found in Appendix A [pg. 87] and Appendix B [pg. 99]). We will begin the discussion of risk indicators for each primary risk group by summarizing pertinent surveillance information. Changes in overall surveillance proportions can isolate trends for these groups if the populations are stable, but these simple proportions don't measure relative risk among the groups. ***It is important to keep in mind that the relative risk of infection among these groups may vary greatly depending on the size of the uninfected population for that group.*** Groups that represent the smallest population may represent the greatest relative risk. To better ascertain HIV exposure risk, the discussion that follows will rely heavily on direct and indirect measures of risk found in other data sources for each group.

Highlights/summary

Men who have sex with men (MSM)

- MSM have continued to account for a substantial proportion of all HIV disease reports even as HIV has spread to other risk groups. In 2003, MSM and MSM/IDU represented 43% of all indicated risks for HIV reports.
- Among males, MSM and MSM/IDU risk represent almost 59% of 2003 reports. The proportion is much higher among adolescent males (82%).
- Black MSM account for a larger proportion of 2003 male HIV disease reports than non-Hispanic white MSM (32% vs. 24%, respectively).
- Among people reporting risk factors, those reporting MSM and MSM/IDU risk consistently have the highest percent of HIV positive test results in CTS data.
- In 2002, MSM reports increased among patients interviewed through field services follow-up.

- Reported injecting drug use among interviewed MSM (for both HIV and syphilis cases) has decreased (1998-2002).
- In 2002, male reports for hepatitis A increased significantly, indicating a likely increase in MSM activity.

Injecting Drug Use (IDU)

- Reported IDU risk accounted for over 9% (12% including MSM/IDU) of HIV disease reports in 2003.
- HIV positivity rates for IDU in CTS data (first-time testers) have remained fairly stable over the last 5 years (1999-2003).
- From 1998 to 2002, there was a decrease in reported IDU use among patients interviewed through field services follow-up.
- Among HIV cases interviewed through field services (1998-2002), males were 1.5 times more likely than females to have IDU risk.
- IDU risk was identified among a relatively older population among interviewed HIV and syphilis cases (1998-2002). Almost 46% were 40-49 years old.
- Among interviewed people (1998-2002) reporting IDU risk, 40% also reported exchanging sex for drugs or money.

Heterosexual Contact

- Nearly half of all HIV disease reports (1999-2003) indicated heterosexual contact as their main risk.
- Heterosexual contact was reported as the main risk for over 82% of all female 2003 HIV cases, and the proportion is even higher among younger women (92%).
- Heterosexual HIV reports were higher among non-white males (32-34%) in 2003 than among white males (13%). Female heterosexual reports remained stable at 81-87% across racial categories.
- The vast majority of first-time testers in 2003 CTS data reported heterosexual risk (77% of 14,212 males tested and 73% of 23,618 females tested).
- The male-to-female ratio for gonorrhea remained stable and near 1.0 (1999-2003), indicating the predominance of heterosexual transmission.
- Over 95% of female syphilis cases and 80% of male syphilis cases interviewed (1998-2002) by state DIS (disease intervention specialists) reported heterosexual activity.
- In the 2001 BRFSS survey, 12% of males and 5% of females reported that they had 2 or more sexual partners during the previous year.

Special Populations

- A recent (2002) outbreak of HIV in N.C. was identified among young adults attending college or linked to students attending college. Subsequent studies have found that N.C. is experiencing a dramatic increase in HIV infections among young black men, especially young black MSM attending college.
- A study of persons diagnosed with both HIV and syphilis (1993-2002) indicates that these persons represent about 5% or more of all those diagnosed with HIV or syphilis. Demographics and risk information for these comorbid persons is different from persons with just HIV or syphilis.

MEN WHO HAVE SEX WITH MEN (MSM)

Surveillance Data Background

In the early part of the HIV epidemic (1983-1989), MSM cases accounted for almost 65 percent of all morbidity. By the mid 1990s, the epidemic in North Carolina had spread to other risk groups and MSM accounted for a smaller proportion (~38%) overall. MSM have, however, continued to account for a substantial proportion of all reports, even as HIV has spread to other risk groups. While white MSM accounted for a larger portion of male reports in the early part of the epidemic, black MSM have accounted for a larger proportion of male reports since the early 1990s and continued to do so through 2003. This represents a significant disparity, because blacks as a racial group represent less than one-fourth of the general North Carolina population. If HIV occurrence was equal among MSM, then white MSM should outnumber black MSM by the same proportion as their representation by race in the population. The proportion of MSM cases among HIV-positive males has risen in the last two years (see Table I, pg. 111), with reports for MSM (including MSM/IDU) accounting for almost 60 percent of reports. Another important fact is the high prevalence of MSM risk among young males. In 2003, MSM risk (including MSM/IDU) was indicated on over 82 percent of male adolescent reports (see Figure 24 on pg. 34). The consistent and significant representation of MSM risk in HIV morbidity data suggests that efforts to minimize risk in the gay community should continue, especially among younger men.

Direct Measures of MSM Risk Behavior

Counseling and Testing System Data (CTS)

Because risk information is collected on all persons having an HIV test, the North Carolina counseling and testing system (CTS) is one of the few sources of data for which rates can be calculated for MSM. CTS data only represent the testing population at public clinics and can not be generalized to other populations. More detailed information about CTS data can be found on pages 59 – 64 and page 92.

Among CTS risk groups, MSM and MSM/IDU consistently have the highest percent of people testing HIV-positive. Table 19 below displays the proportion of positivity for MSM and MSM/IDU in CTS data for persons tested for the first time. Positivity for MSM is typically just over five percent. No discernable change is noted for MSM positivity in the five-year period; values remained fairly constant. Values were too small to make meaningful comments about positivity of MSM/IDU over time.

Table 19. Number and percent of positive reports (CTS) among persons with MSM risk tested for the first time, 1999-2003

Risk group	1999		2000		2001		2002		2003	
	n	Pct.	n	Pct.	n	Pct.	n	Pct.	n	Pct.
MSM	52	6.1%	38	4.7%	48	5.2%	52	5.6%	62	6.4%
MSM/IDU	4	10.0%	1	2.1%	2	8.3%	2	8.7%	1	3.8%

Partner Counseling and Referral Services Data (PCRS)

Disease Intervention Specialists (DIS) interview all persons newly diagnosed with HIV and syphilis. The DIS work with the Field Services Unit of the HIV/STD Prevention & Care Branch. Part of the interview includes the collection of risk information for patients. Risk information collected includes type of sexual or risk behavior, condom use, substance abuse, and number of sexual partners. Approximately 98 percent of reported syphilis cases and 85-90 percent of reported new HIV cases are ultimately interviewed regarding risk behaviors and partners. This data is referred to as the PCRS data. A few patients diagnosed with other STDs are included in the data set. For our discussion, patients will be divided into two groups: those interviewed as a result of an HIV diagnosis and all others grouped together. Readers should keep in mind that the reference to syphilis cases in PCRS data does include a few cases with other diagnoses, but this inclusion does not significantly change any of the reported results. More information about the Field Services and the PCRS data source can be found in Appendix A on page 91.

MSM behavior

Among the interviewed male cases, MSM activity was identified in over 40 percent of HIV reports and over 10 percent of syphilis reports. Over time, increased MSM activity was noted in 2002 for both HIV and syphilis reports interviewed. Table 20 below displays identified MSM behavior among interviewed cases.

Table 20. Interviewed patients – number and proportion of males with identified MSM risk by disease category, 1998-2002

Disease	1998		1999		2000		2001		2002	
	n	Pct.								
HIV	413	43.1%	323	42.6%	346	42.7%	428	43.9%	507	46.7%
Syphilis	75	8.9%	76	11.6%	72	11.5%	841	13.3%	90	16.8%

Condom use

Condom use is asked about during the interview of newly identified HIV and syphilis cases, and is available for more than 75 percent of the cases with MSM risk. Condom use is described by three categories: always, never, and sometimes used. Proportionately, the HIV interviewees and the syphilis interviewees indicated similar practices. Of MSM with HIV (interviewed from 1999-2002), 8.8 percent indicated that they “always” used a condom, 20.9 percent indicated that they “never” used a condom and 70.3 percent indicated that they “sometimes” used a condom. Among the MSM with syphilis, 9.2 percent indicated “always”, 23.5 percent indicated “never” and 66.9 percent indicated “sometimes” (see Figures 28 and 29).

Figure 28. Condom use among MSM with HIV, 1999-2002

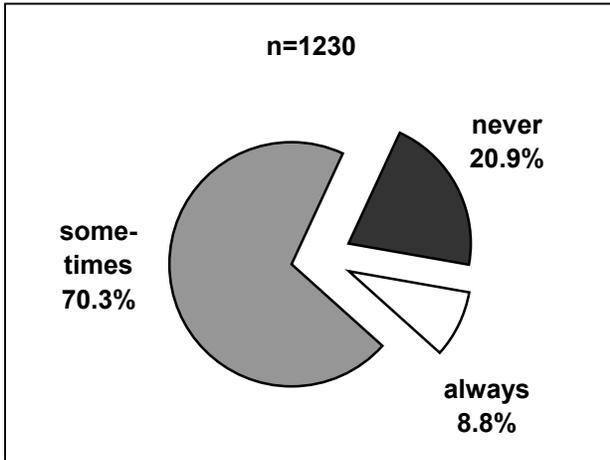
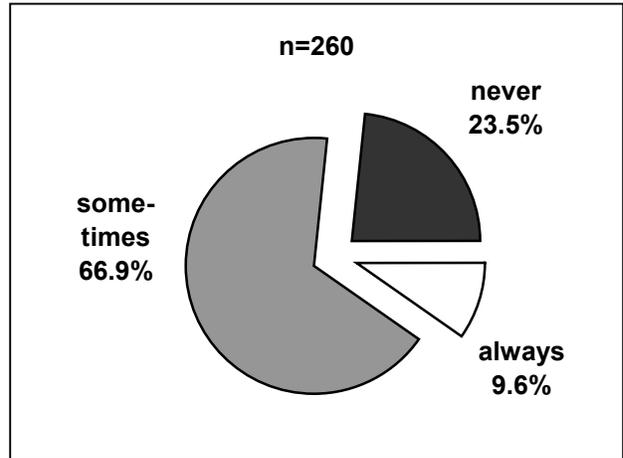


Figure 29. Condom use among MSM with syphilis, 1999-2002



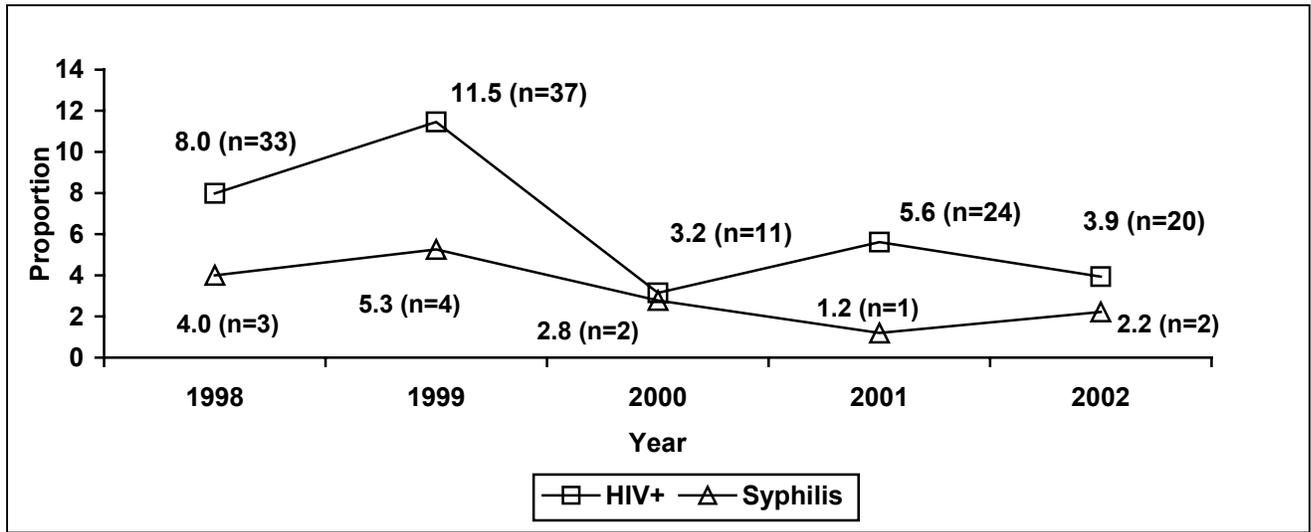
Multiple sexual partners

Among the interviewed MSM cases (PCRS), about 34 percent of those with an HIV diagnosis indicated that they had multiple sexual partners within the last year. About 53 percent of those with syphilis indicated that they had multiple sexual partners. These proportions may not be directly comparable because of differences in time between infection and testing/diagnosis for the two groups; however, these proportions indicate substantial risk activity for each group.

IDU among MSM

Information regarding injecting drug use (IDU) is also asked during the interview of newly infected persons and is available for most persons. Because of the data structure, IDU is better identified among field records for HIV interviewees than syphilis interviewees, so direct comparison of proportions should not be made. However, comparing the trends or changes from year to year for each group is appropriate. Figure 30 displays the proportion of reported IDU within interviewed MSM patients from 1998 to 2002. Among MSM patients interviewed as a result of an HIV diagnosis, the proportion that has an identified IDU risk has decreased from a high of 11 percent in 1999 to about four percent in 2002. Among those MSM interviewed with syphilis diagnosis, identified IDU risk has decreased from about five percent in 1999 to about two percent in 2002. This decrease in IDU risk among HIV interviewees reporting MSM risk is substantial, at over 65 percent.

Figure 30. Number and proportion of IDU risk among interviewed MSM by disease category (1998-2002)



Indirect Measures of MSM Risk Behavior

Hepatitis Data

Another measure of MSM risk behavior includes the identification of possible MSM transmission of other communicable diseases, such as hepatitis, which can be spread through sexual activity. Even if MSM risk is not directly identified through surveillance, monitoring changes in male-to-female ratios can provide an indirect measure. If diseases are spread primarily through heterosexual sexual contact, the ratios generally are close to one. Increases in the male to female ratio could indicate increased MSM activity. It should be noted however, that these ratios can be affected by other risks, such as IDU or screening practices; thus it is an imperfect measure of MSM risk.

Table 21 (below) displays hepatitis cases for the 1999 to 2003 period. Note the male to female ratios for hepatitis B have been fairly stable, with a slight increase noted in 2003. The ratios for hepatitis A have changed from year to year. Hepatitis A is primarily spread person-to-person through the fecal-oral route. Many outbreaks can be traced to food-borne transmission, but some can be linked to sexual contact. Hepatitis C is generally associated with IDU activity.

Table 21. Male:Female ratios for hepatitis A, B (chronic and acute) , and C (1999-2003)

	1999	2000	2001	2002	2003
Hepatitis A	2.9 (124/43)	1.0 (76/77)	2.1 (164/78)	3.3 (160/48)	1.9 (81/43)
Hepatitis B acute	1.7 (142/82)	1.9 (169/87)	1.7 (139/82)	1.7 (145/87)	2.0 (109/54)
Hepatitis B chronic	1.2 (404/328)	1.3 (360/268)	1.5 (388/255)	1.3 (500/379)	1.3 (568/448)
Hepatitis C	0.9 (16/17)	0.8 (9/11)	1.8 (14/8)	1.1 (15/14)	0.1 (1/12)

The increase in the male-to-female ratio among hepatitis A cases in 2002 prompted a review of surveillance data by the Epidemiology Section of the Division of Public Health. The review suggested a likely increase in MSM activities among cases in 2002, as it showed a 4.5-fold

increase in the number of men self-reporting recent sexual contact with men compared to the average over the 1997 to 2001 time period. (More information about the review can be found at <http://www.epi.state.nc.us/epi/gcdc/pdf/HepatitisA.pdf>.)

INJECTING DRUG USE (IDU)

Surveillance Data Background

While almost 46 percent of all HIV surveillance reports were attributed to IDU and MSM/IDU in the early 1990s, this proportion has declined to about nine percent of all cases in 2003 (see Table D, pg. 106). For males, IDU risk in 2003 (including MSM/IDU) represented about 12 percent of reports. For females, IDU risk represented about 11 percent of reports (see Tables H and I, pp. 110-111). IDU as a risk has declined as a proportion for both sexes over the 1999 to 2003 period.

Direct Measures of IDU Risk Behavior

National Household Survey on Drug Abuse (NHSDA)

The National Household Survey on Drug Abuse (NHSDA) makes estimates of drug abuse among the national population, states and some metropolitan areas (see pg. 92 for more information). The survey of illicit drug use includes marijuana, cocaine, heroin, hallucinogens, inhalants, and non-medical use of prescription-type pain relievers, tranquilizers, stimulants, and sedatives, and is not unique to injecting drug use. Among persons aged 12 years or older in North Carolina interviewed in NHSDA (1999-2000), about 6.7 percent reported having used an illicit drug at least once during the last month, compared to the national estimate of 6.3 percent. Comparison of illicit drug use by age is part of the NHSHA survey. Responses are available for three age groups: 12 to 17 years of age, 18 to 25 years of age, and 26 years of age and older. The 26 years and older age group reported the highest proportion of illicit drug use, 16.7 percent in North Carolina in 1999-2000.

Counseling and Testing System Data (CTS)

Rates of HIV positivity among first-time testers with IDU risk are displayed below in Table 22. Although the proportion of IDU represented in surveillance data has been decreasing in recent years, the percent positivity in CTS data shows a trend that has been more constant. This might indicate that because IDU reports are relatively small in number, surveillance reporting issues could be under-emphasizing risk. It is also important to keep in mind that CTS data only represent the testing population at public clinics and can not be generalized to other populations. More detailed information about CTS data can be found on pages 59-64 and page 92.

Table 22. HIV Positive tests among persons tested at CTS for the first time and reporting IDU risk, 1999-2003

	1999		2000		2001		2002		2003	
	n	Pct.								
IDU	17	2.3%	19	2.7%	13	2.6%	8	1.9%	9	1.9%

Partner Counseling and Referral Services Data (PCRS) (see pg. 91 for more information)

Persons newly diagnosed with HIV or syphilis are asked about drug use in two general categories: intravenous drug use (IDU), and non-intravenous drug use. Only IDU will be discussed below. Because of the data structure, IDU is better identified among field records for HIV interviewees than syphilis interviewees, so direct comparisons of proportions should not be made. Comparing trends (changes) within the groups, however, is appropriate. From 1998 to 2002, IDU risk was reported by 10.9 percent of interviewed HIV cases and 2.5 percent of interviewed cases with syphilis. Among HIV cases, IDU risk decreased between 1998 and 2000, but remained fairly constant from 2000 to 2002 (see Table 23). Among syphilis cases interviewed, the proportion of IDU risk has been consistent.

Table 23. Number and proportion of injecting drug use (IDU) among interviewed cases by disease category, 1998-2002

	1998		1999		2000		2001		2002	
	n	Pct.	n	Pct.	n	Pct.	n	Pct.	n	Pct.
HIV	258	18.3%	161	14.1%	97	7.8%	106	7.3%	122	7.6%
Syphilis	39	2.4%	34	2.7%	27	2.4%	31	2.7%	15	1.6%

Gender and Age

Gender differences don't appear to be substantial among those with syphilis identified with IDU risk in field service interview data. Among HIV cases, though, males (560 IDU/4,594 total male cases) are 1.5 times more likely to be have IDU risk as compared to females (184 IDU/2,255 total female cases). IDU risk varies by age similarly for HIV cases and syphilis cases; thus the proportions of drug use by age category are presented for both case groups combined (Figure 31). IDU risk is identified among a relatively older population; specifically, 45.9 percent of self-identified intravenous drug users in this data set were 40-49 years old.

Race

Among American Indians, IDU is a prominent risk when compared to other races. Among HIV-positive American Indians interviewed through field services follow-up, 18.5 percent report IDU as a risk factor, compared to 11.5 percent of all HIV-positive white cases and 11.1 percent of HIV-positive black cases. Among those interviewed and diagnosed with syphilis, however, whites appear to have the greatest IDU risk (Table 24).

Figure 31. Proportion of IDU by age for interviewed cases (HIV & syphilis), 1998-2002

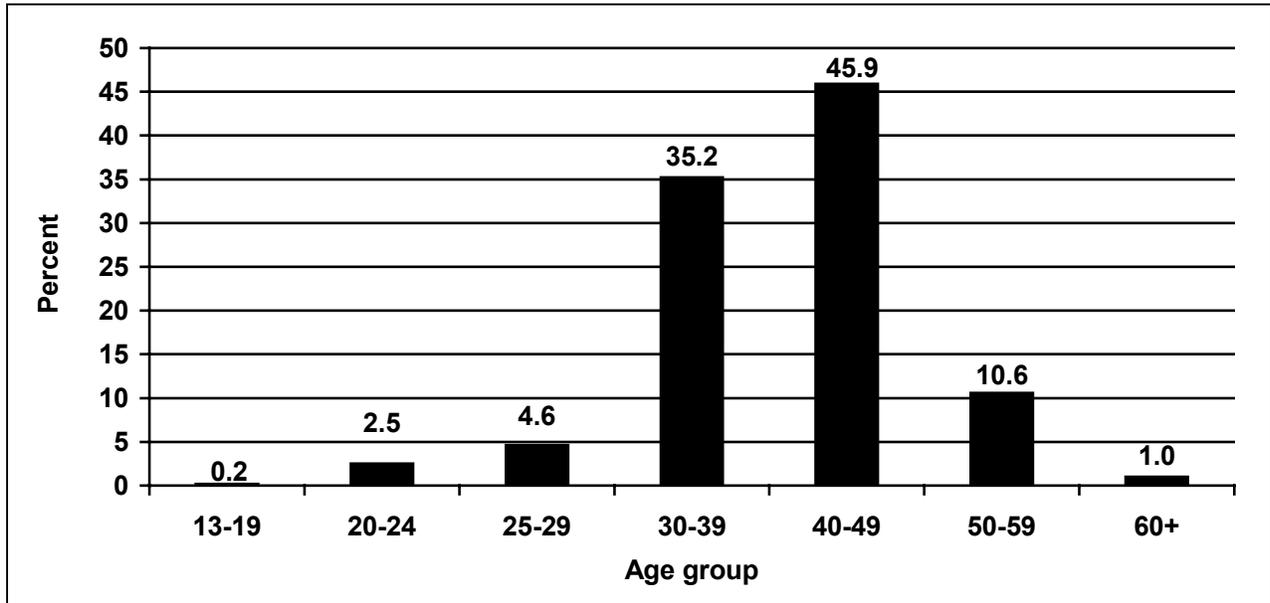


Table 24. Proportion of IDU by race/ethnicity by disease category (1998-2002)

	White		Black		Am. Indian		Hispanic		Unknown	
	n	Pct.	n	Pct.	n	Pct.	n	Pct.	n	Pct.
HIV	163	11.5%	532	11.1%	12	18.5%	17	4.6%	20	12.9%
Syphilis	34	3.9%	97	2.3%	6	1.9%	2	0.5%	7	2.8%

Condom Use

Condom use data (1999-2002) are available for 348/426 HIV cases with identified IDU risk (72%) and 79/107 syphilis cases with identified IDU risk (74%). Condom use among those interviewed and diagnosed with syphilis is much less frequent than among HIV cases. (This is true for both male and female cases.) Interviewees with syphilis reported 1.4 times more often than HIV cases that they “never” use condoms. Furthermore, none of the syphilis cases reporting IDU risk said that they “always” use condoms compared to 5.5 percent of all HIV cases with IDU risk. There was also a smaller proportion of “sometimes” condom users among those with syphilis (50.6%) than those diagnosed with HIV (59.2%).

Multiple Sex Partners

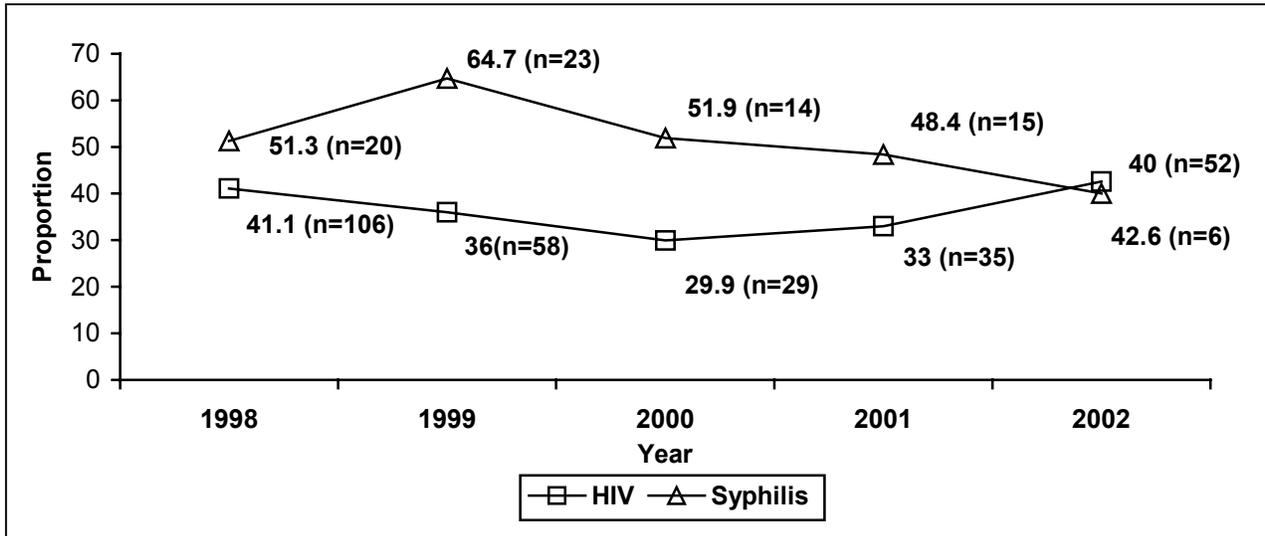
Among those interviewed and identified as IDU, the risk of having multiple sex partners in the last year was reported more among those with syphilis (59.8%) than those with HIV diagnoses (22.0%). While the proportion of multiple sex partners doesn’t differ by gender among HIV IDU, 71.4 percent of females versus 52.3 percent of males reported multiple sex partners among IDU with syphilis diagnoses. (Note that risk regarding multiple sex partners was not uniformly collected until 1999; thus, the measures above were calculated using data from 1999-2002.)

Sex for Drugs or Money

Exchanging sex for drugs or money is a fairly common risk factor identified among interviewed IDU (40.1%). This risk is equal among females with HIV diagnoses and females with syphilis

diagnoses (50.0% each). In contrast, 54.9 percent of males with syphilis diagnoses reported exchanging sex for drugs or money, while only 33.6 percent of males with HIV diagnoses reported the same risk. It is noteworthy that this risk has been generally decreasing among those with syphilis, but may be increasing among HIV cases as shown in Figure 32.

Figure 32. Number and proportion of interviewed IDU cases reporting exchange of sex for drugs or money, 1998 - 2002

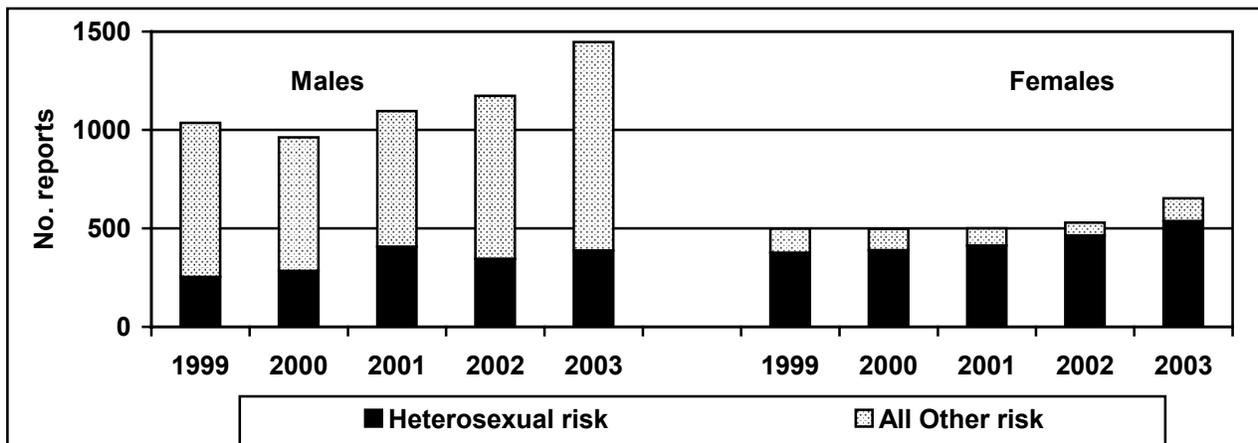


HETEROSEXUAL CONTACT

Surveillance Data Background

Although the number of HIV disease surveillance cases reported each year is nearly twice as high for males as females, the number of cases reported with a primary risk of heterosexual transmission is only slightly higher for females. However, these heterosexual risk reports consistently represent over three-quarters of the female cases, whereas they represent only one-quarter to one-third of the male reports. Together, male and female HIV disease reports with primary heterosexual risk make up 40-50 percent of all HIV disease reports (Table D, pg. 106).

Figure 33. HIV disease reports – heterosexual risk vs. all other risks 1999-2003



The proportion of total HIV disease reports with heterosexual transmission risk classification has remained quite stable over the past five years (Figure 33). This pattern is nearly identical for recent infections (Table E, pg. 107), indicating that North Carolina continues to experience an HIV epidemic in which close to half of the cases are among persons for whom heterosexual sex is their primary risk. For more information on ‘recent infections’ methodology, please see the discussion on pages 23-24.

The pattern is slightly different for young people. HIV disease reports among persons 13-24 years of age indicate that a slightly smaller proportion of the male cases are attributed to heterosexual transmission, as compared to all males. Among young females, a slightly higher proportion of cases are attributed to heterosexual transmission, compared to all female cases (see Table D, pg. 106; Table J, pg. 112). This indicates that young females may be at particularly high risk of heterosexually acquired HIV infection, compared to young males.

The most dramatic gender differences can be seen when the data are stratified by race. White females are less likely to be classified with heterosexual risk than black females or females of other races (81% vs. 87% in 2003). (See Table H, pg. 110; Figure 34.)

Figure 34. Proportion of HIV disease cases with heterosexual risk classification for females, 2003

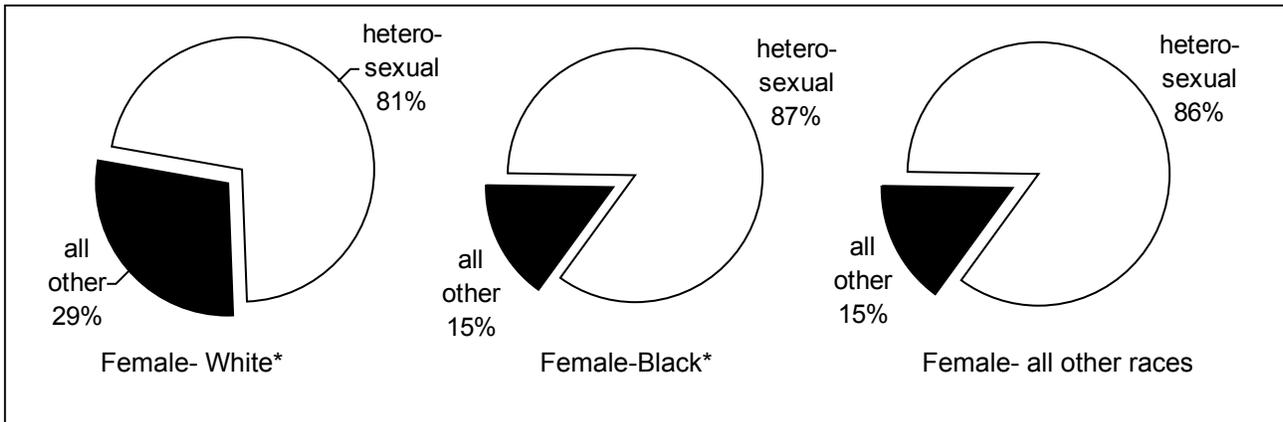
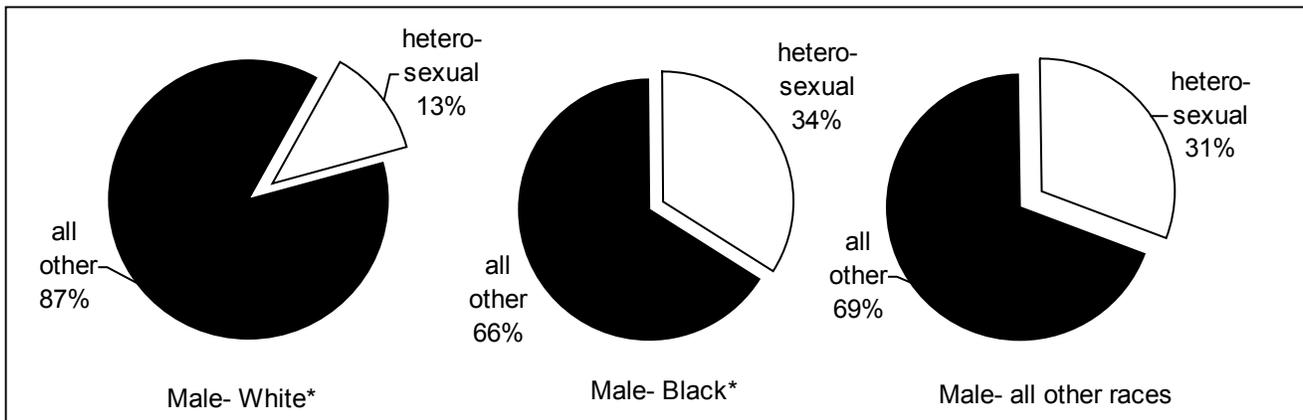


Figure 35. Proportion of HIV disease cases with heterosexual risk classification for males, 2003



*non-Hispanic

Among males, the differences are more dramatic. For white males in 2003, heterosexual risk classification is listed for 13 percent of cases, compared to 34 percent for blacks and 31 percent for all other racial groups (Table I, pg. 111; Figure 35). This is largely due to the much larger proportion of MSM cases among white males, but it does indicate that the heterosexual HIV epidemic is of particular concern among non-white males.

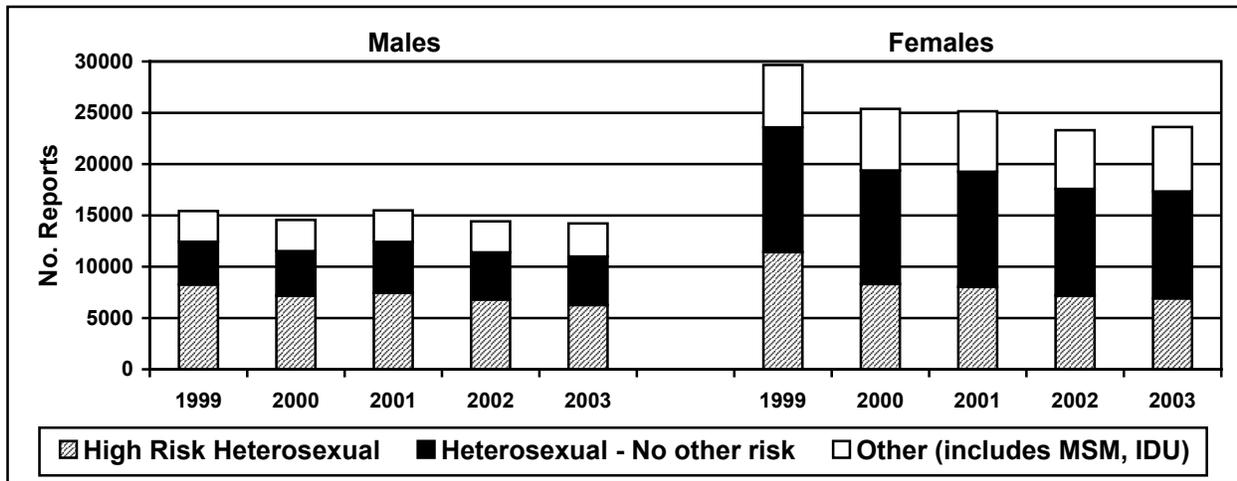
Direct Measures of Heterosexual Risk Behavior

Counseling and Testing System Data (CTS)

Because clients who use HIV counseling and testing system (CTS) services are self-selected, they do not represent a random sample of the state’s population or the state’s heterosexual population. Those who report that they had not been tested before the current test represent a group with each person represented only once, and comprise the most stable group from which to make estimates. First-time testers represented 39.2 percent of all male tests and 33.7 percent of all female tests in 2003.

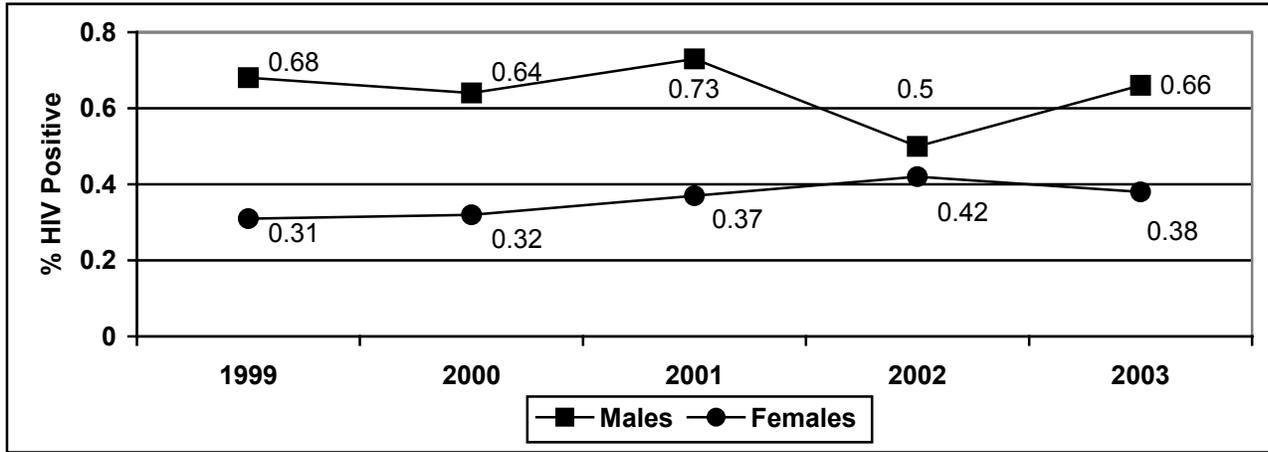
The vast majority (75-80%) of first-time testers at CTS sites are either high-risk heterosexuals (includes clients reporting previous STDs, risky sexual partners, sex for drugs or money, sex using non-injecting drugs, victim of sexual assault) or heterosexuals with no other reported risk. The proportions are nearly the same for males and females, although many more females are tested, due to testing in prenatal care and family planning clinics (Figure 36).

Figure 36. HIV risk among first-time HIV testers at N.C. CTS sites, 1999-2003



The number of self-identified heterosexual males seeking HIV testing for the first time at CTS sites has remained stable over the past five years, while the number of females has dropped slightly. In 2003, there were 10,986 males and 17,340 females tested for HIV for whom heterosexual activity was their primary HIV risk. This represents a group who either perceive themselves to be at risk for HIV infection (those who seek voluntary testing) or agree to testing when offered by health care or other professionals (e.g., prenatal care). Percent HIV positivity among this group has remained stable among females and appears to be dropping slightly among males (Figure 37). For the 1999-2003 period, males and females together represent an average of 145 new HIV diagnoses per year.

Figure 37. Percent positivity (among high-risk heterosexual and heterosexual-no other risk), first-time testers at N.C. CTS sites 1999-2003



Indirect Measures of Heterosexual Risk Behavior

Behavioral Risk Factor Surveillance System (BRFSS)

The Behavioral Risk Factor Surveillance System (BRFSS) is collaborative project of the Centers for Disease Control and Prevention (CDC) and U.S. states and territories. Interviewers conduct monthly telephone surveys in order to collect various information on health behaviors from adults age 18 and older. (For a more detailed description and strengths and limitations, please see Appendix A on page 88.)

The survey is designed to include core sections (data collected by all areas), CDC-designed optional modules, and state-added questions. In 1999, North Carolina added its own questions on sexual assault and continued them through 2002. In 2001, some sexual behavior questions were added and used in that year only.

Sexual Assault

The proportion of adults reporting sexual assault within the last 12 months may represent a population at risk for HIV infection as a result of these sexual exposures. In particular, the proportion of women reporting sexual assault during the last 12 months may represent a population at risk for heterosexual exposure to HIV, assuming that few female sexual assaults are perpetuated by other females.

In the 2002 survey, 1.4 percent of women reported that they had been sexually assaulted in the last 12 months by a stranger, a partner or ex-partner, or an acquaintance. Extrapolated to the North Carolina female population age 18 to 64, this represents over 34,000 women who are at possible risk of heterosexual HIV exposure.

Sexual Partners and Condom Use

For the 2001 survey only, several questions about sexual behavior were added. Adults age 18 to 64 were asked how many different people they had sexual intercourse with over the past 12 months. Twelve percent of males and five percent of females reported that they had two or more sexual partners over the past year. This extrapolates to over 295,000 men and 128,000 women in

North Carolina. The gender of the sexual partners was not specified, so it is not possible to know exactly what proportion of the respondents were referring to heterosexual partners, but it is likely to be large (see condom use data below).

Only 20 percent of respondents reported that they had used a condom during their last sexual intercourse. A much higher proportion (50.7%) agreed that a properly used condom would be effective in preventing an individual from getting infected with HIV. Another 37.8 percent thought condoms would be somewhat effective.

Among those who had used a condom during their last intercourse, 35.9 percent did so specifically to prevent pregnancy and another 51.6 percent to prevent both pregnancy and disease. These represent over 739,000 North Carolina heterosexuals. Note: condom use is most certainly effective in preventing HIV infection. However, condom use data should be interpreted with caution. Those who report condom use are often a mixture of those at the very lowest risk (because they consistently use the condoms and are protected) and those at the very highest risk (using condoms due to their high-risk behavior and possibly inconsistent condom use).

Pregnancy Risk and Monitoring System (PRAMS)

The North Carolina Pregnancy Risk and Monitoring System (PRAMS) is an ongoing random survey of women who delivered a live infant in North Carolina. Data are currently available from 1997 to 2001 (n=7,935). For a further description and strengths and limitations of this study, please see Appendix A on page 94. The survey includes questions designed to determine if the woman wanted to be pregnant someday but not at this time (pregnancy mistimed) or if the woman never wanted to be pregnant (pregnancy unwanted). All pregnancies represent unprotected heterosexual sex. However, such sexual activity that results in a planned pregnancy is more likely to be among low-risk heterosexuals with only one partner. Mistimed or unwanted pregnancies may be a more reasonable proxy for unprotected heterosexual sex among possible high-risk partners.

A detailed study of the 1997 to 2000 PRAMS data (n=5,943) show that 45 percent of the pregnant women interviewed had unintended pregnancies (11% completely unwanted and another 34% mistimed). Extrapolated to all births in North Carolina, this represents 12,000 unwanted and 37,000 mistimed pregnancies per year. With respect to HIV risk, this represents 49,000 women and 49,000 men engaged in unprotected heterosexual sex per year who may be at risk for HIV infection. Latest data for 2001 (n=1,655 responding to question) shows a similar trend, with 42.6 percent unintended (10.1% unwanted and 32.5% mistimed pregnancies).

The study indicates that pregnancies among black women are the most likely to be unintended (67.5%, compared to 37.1% among white women). Black women also make up the majority of female HIV disease reports (Table B, pg. 104). It is also noteworthy that approximately 75 percent of these unintended pregnancies are to women age 20 and older, which is precisely the age group representing the largest proportion of HIV disease reports (see Table A, pg.103). Again, the trend remains similar for the 2001 data (63.1% black and 33.8% white). Other factors that increase the likelihood of unintended pregnancy include high school education or less, eligibility for WIC, eligibility for Medicaid, unmarried status, and household income less than \$14,000 per year, all of which may be coupled with HIV risk.

Abortion Data

As discussed above, unwanted pregnancies may be used as a proxy for heterosexual populations at risk for HIV. PRAMS estimates the number of such pregnancies that come to term. Another way of measuring unwanted pregnancies (possible high-risk, unprotected sex) is to use the number of reported abortions in the state. Abortion data are voluntarily reported to the State Center for Health Statistics by abortion providers. (For more information and strengths and limitations of the data, please see Appendix A on page 93.)

Abortion data closely mirror the unwanted pregnancy data presented above. Non-whites comprise only 29.1 percent of the state population (2000 Census), but approximately half of the abortions are performed on non-white women. This proportion has risen slightly in the past five years, from 48.9 percent in 1998 to 51.9 percent in 2002. This is the same population making up the greatest proportion of HIV disease reports. During the same period, over three-quarters of North Carolina resident abortions have been to women age 20 and older, again the population comprising the majority of HIV disease reports (Table A, pg. 103). With respect to HIV risk, this represents approximately 27,000 women and 27,000 men engaged in unprotected heterosexual sex per year who may be at risk for HIV infection.

Table 24. North Carolina residents who received abortions 1998 - 2002

	1998	1999	2000	2001	2002
Total abortions	29,868	28,136	26,944	27,096	25,883
% age 20 and over	80.4	82.3	82.7	82.8	83.4
% non-white	48.9	50.0	52.1	53.3	51.9
% unmarried	74.9	73.6	72.1	64.6	71.3

STD Morbidity Data

Trends

Sexually transmitted disease (STD) surveillance data provide information on the degree to which various populations are practicing unprotected sex. In some cases it is quite possible to infer that STDs are being acquired through heterosexual sex. North Carolina law requires that cases of chlamydia, gonorrhea, and syphilis be reported to the HIV/STD Prevention & Care Branch at the State Division of Public Health. However, not all persons infected with STDs are diagnosed and not all diagnosed individuals are reported, so the data must be interpreted with caution. (For more information on the details of case reporting and the strengths and limitations of the data for each STD, please see Appendix A on page 89.)

Chlamydia – Case Reports

Chlamydia is the most frequently reported bacterial STD and is easily treated with antibiotics. Most people infected with *Chlamydia trachomatis* experience no symptoms (approximately 75% of infected females and 50% of infected males). Since the disease can severely damage the reproductive systems of women, sometimes resulting in infertility, screening is recommended for all sexually active women age 24 and under and all pregnant women in the state. There are no comparable screening programs for young men. For these reasons, most reported chlamydia cases are found through screening and most are, therefore, female. For example, in 2003 there were 21,722 female cases reported and only 4,343 male cases.

The biology of *C. trachomatis* infection dictates that nearly all female cases can be assumed to have been acquired through heterosexual contact. The data on females can therefore provide some information about levels of unprotected heterosexual sex in the community. The number of total reported female cases remained relatively steady from 1999 to 2001, rising slightly in 2002 to 20,388 and then to 21,722 in 2003. This represents a minimum number of cases of unprotected heterosexual sex that may also be at risk for HIV. As with HIV disease, reported chlamydia cases are disproportionately black (Table 25). However, chlamydia tends to affect a much younger age population than HIV. Part of this may be due to the practice of screening younger women, but there is also evidence that younger women may be more susceptible to infection (Critchlow et. al. *American Journal of Obstetrics and Gynecology* 1995).

Table 25. Reported female chlamydia cases 1999-2003

Reported Cases	1999	2000	2001	2002	2003
	18,416	18,800	18,689	20,388	21,722
% White (non-Hispanic)	26.3	25.8	25.8	26.4	26.2
% Black (non-Hispanic)	66.1	65.5	64.7	64.8	64.5
% <age 20	46.0	45.1	43.2	44.4	43.6
% age 20-39	49.2	53.7	55.7	54.5	55.2

Gonorrhea – Case Reports

Gonorrhea is the second-most frequently reported bacterial STD and it, too, can be treated with antibiotics. Infection with *Neisseria gonorrhoeae* produces symptoms in the majority of cases (nearly all males and over 75% of females) and cases are primarily identified when a patient presents with symptoms. Gonorrhea can cause female reproductive tract damage much like chlamydia, so screening for asymptomatic cases is recommended for females in prenatal care, family planning and STD clinics and for males in STD clinics. Gonorrhea case reporting is slightly skewed, with more males than females reported each year. Part of this may be due to the slightly greater likelihood of symptoms in males and part may be due to cases contracted through MSM activity. As with chlamydia, nearly all gonorrhea cases in females can be assumed to have been acquired through heterosexual sex.

Table 26. Male/Female ratio of reported gonorrhea cases 1999-2003

	1999	2000	2001	2002	2003
Male	10,339	9,458	8,857	7,835	7,719
Female	9,089	8,539	7,875	7,514	7,366
M/F Ratio	1.14	1.11	1.12	1.04	1.05

The total number of both female and male gonorrhea cases has declined steadily since 1999. The ratio of male-to-female cases, however, has remained virtually the same, indicating no major shifts from heterosexually acquired disease patterns (Table 26 above).

Gonorrhea tends to affect a slightly younger population than HIV, but like HIV, reported cases are disproportionately high among blacks (Table 27). Part of this may be due to reporting bias (reporting is better from public clinics) and part may be due to health care access. Gonorrhea cases, particularly among females, indicate a population experiencing unprotected heterosexual sex that may also be at risk for HIV infection.

Table 27. Reported female gonorrhea cases 1999-2003

Reported Cases	1999	2000	2001	2002	2003
Reported Cases	9,089	8,539	7,875	7,514	7,366
% White (non-Hispanic)	18.3	17.8	17.0	17.2	18.9
% Black (non-Hispanic)	78.2	78.1	79.1	79.1	77.0
% <age 20	38.1	38.4	39.7	38.9	37.8
% age 20-39	55.0	58.6	57.1	58.4	59.2

Syphilis – Case Reports

Despite the fact that syphilis infection is far less common than chlamydia or gonorrhea, case reporting trends for syphilis may provide more information about HIV risk than the other STDs. Syphilis affects a slightly older population that more closely mirrors HIV disease reports, and the race and gender distributions are similar. There is also evidence that the presence of syphilis lesions may increase the likelihood of HIV transmission (Wasserheit, *Sexually Transmitted Diseases* 1992; Fleming & Wasserheit, *Sexually Transmitted Infections* 1999). Syphilis reporting is also the most reliable reporting of the bacterial STDs because, like HIV, each suspected case is investigated and confirmed cases undergo complete contact tracing and partner notification. Cases have dropped dramatically since 1998 due to the efforts of the Syphilis Elimination Project.

As with the other bacterial STDs discussed so far, essentially all female cases can be assumed to be the result of heterosexual transmission. The male-to-female ratio of early syphilis cases gradually rose from 2001 to 2003 (Table 28 below). This may indicate increased MSM-acquired syphilis but it could also indicate increased transmission via females who exchange sex for drugs or money with many male partners.

Table 28. Reported primary, secondary & early latent syphilis cases 1999-2003

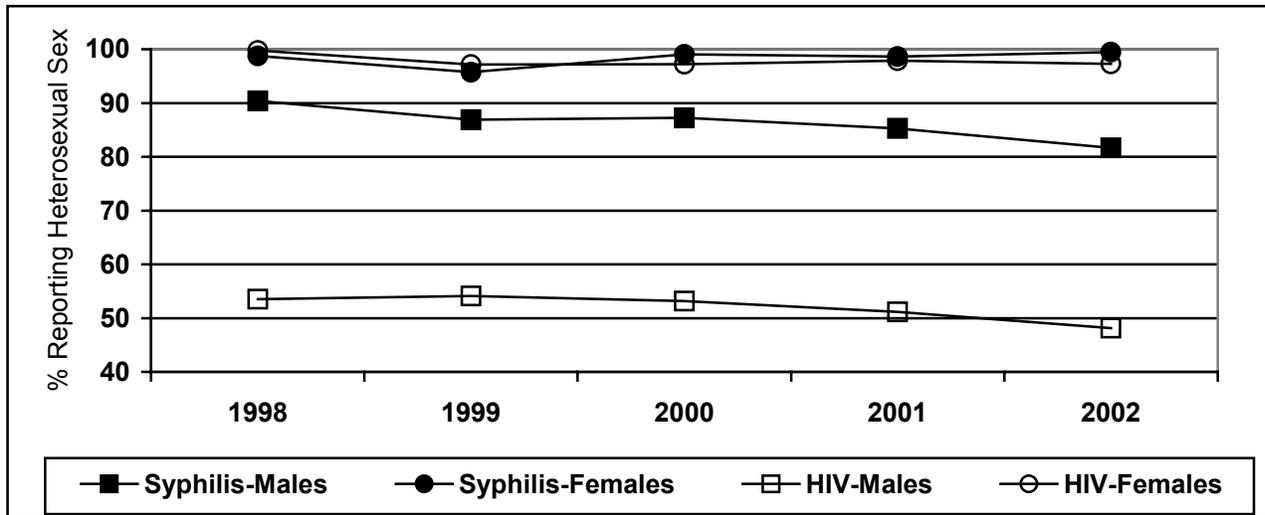
	1999	2000	2001	2002	2003
Male	623	551	503	342	236
Female	581	550	438	274	160
M/F Ratio	1.07	1.00	1.15	1.25	1.48

Partner Counseling and Referral Services Data (PCRS)

As part of contact tracing and partner notification, reported cases of STDs (primarily syphilis and HIV) are interviewed in depth by Disease Intervention Specialists (DIS) working for the health department. Interviews are attempted on all reported cases but occasionally the DIS are unable to locate a patient, the patient is located but refuses to answer questions, or the patient dies before the interview can take place (see please see Appendix A on page 91 for data limitations).

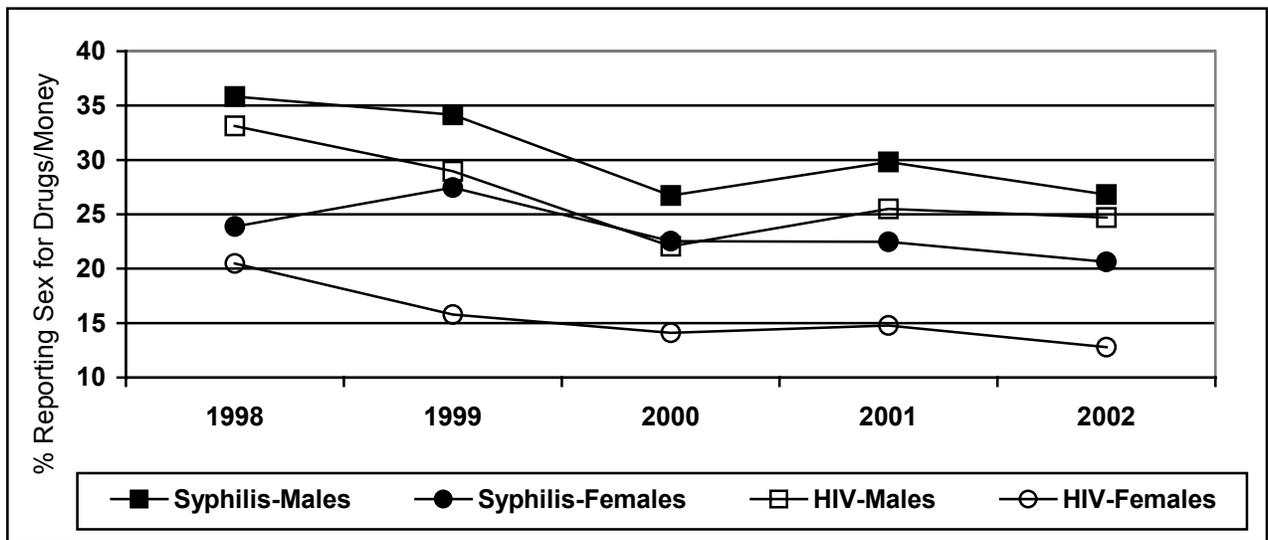
During the 1998-2002 period, over 95 percent of interviewed females infected with HIV (mean n = 451/year) or syphilis (mean n = 656/yr) have reported heterosexual activity (Figure 38 above). Because some males are exclusively MSM, a smaller proportion of males report heterosexual activity and the proportion differs by disease. Over 80 percent of interviewed syphilis cases (mean n = 561) and over 40 percent of interviewed HIV cases (mean n = 919) report sexual contact with females.

Figure 38. Interviewed syphilis & HIV cases reporting heterosexual sex, 1998-2002



Restricting the analysis to those who reported heterosexual sex partners in 2002, less than one-third of interviewed HIV cases reported multiple sexual partners in the last year while around half of the interviewed syphilis cases reported multiple partners. The exchange of sex for drugs or money is also frequently reported among this infected heterosexual population. Proportions were highest in 1998, when over 30 percent of interviewed males and over 20 percent of interviewed females reported the activity (Figure 39).

Figure 39. Interviewed syphilis and HIV cases (heterosexual) reporting exchange of sex for drugs or money, 1998-2002

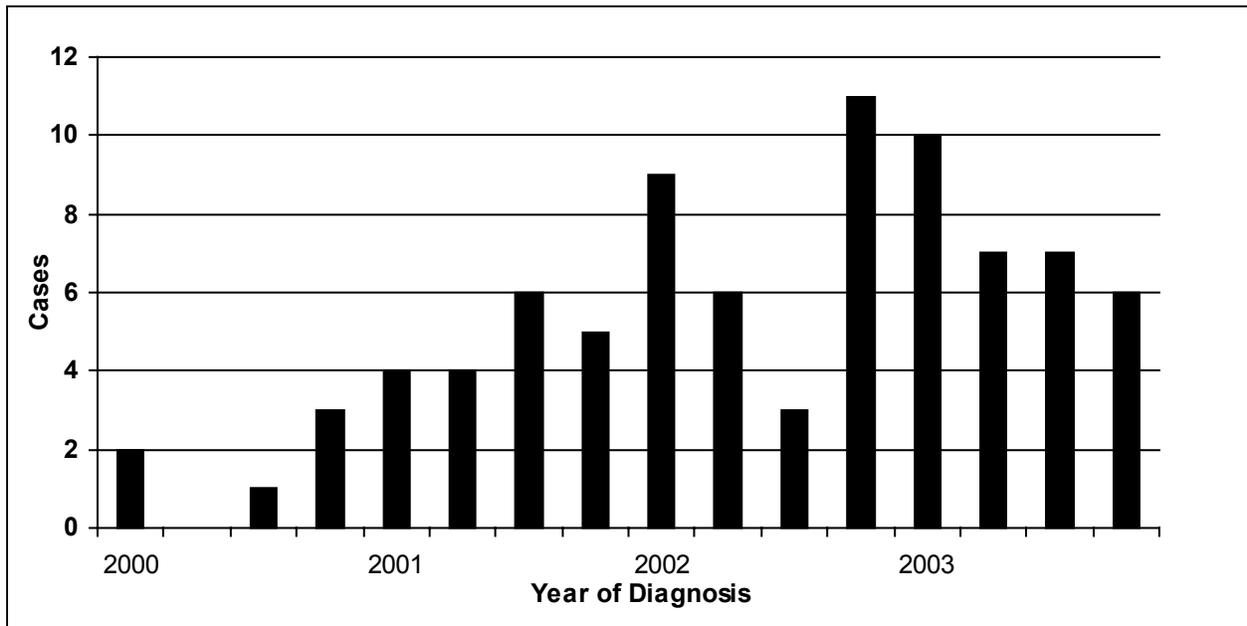


SPECIAL POPULATIONS

HIV Among Young Adults Attending College

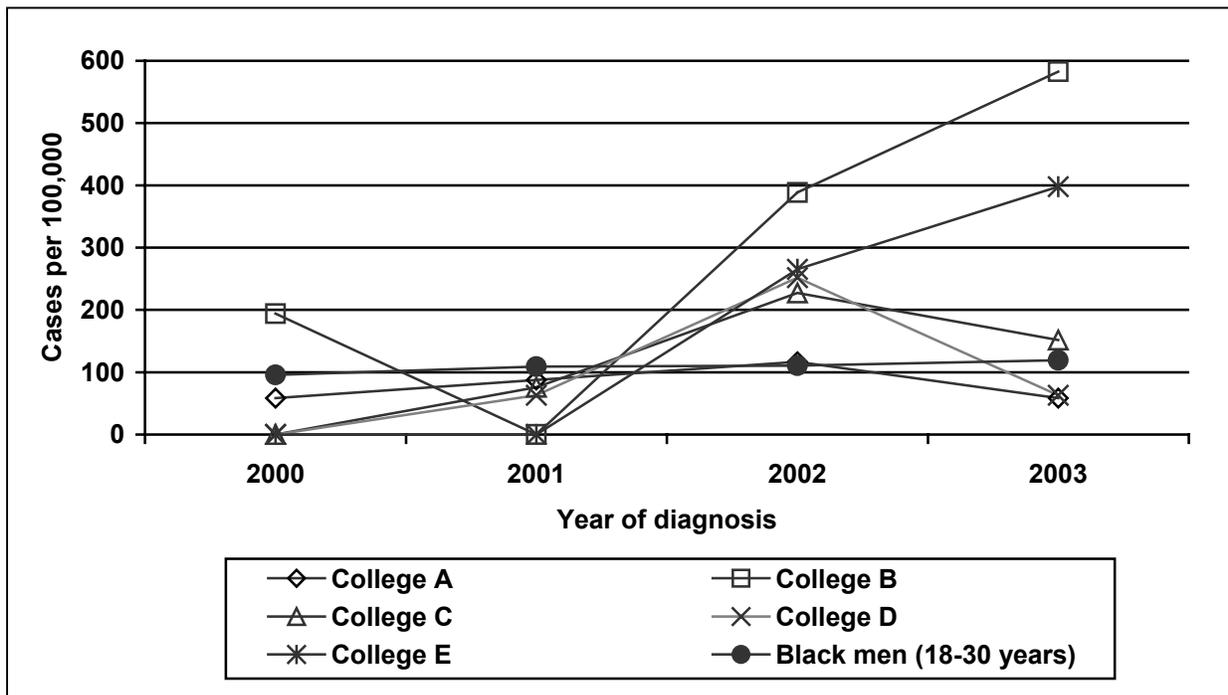
North Carolina has identified a previously unrecognized HIV outbreak among young adults attending college or linked to students attending college. The outbreak was found as a result of the state’s STAT (Screening Tracing Active Transmission) HIV testing program. The STAT program uses specialized laboratory testing and procedures to identify recently-infected individuals that might be missed using standard testing alone. In early 2002, two newly-positive HIV male college students were identified by the STAT project, triggering a retrospective review of state HIV case reports in the Triangle (Wake, Durham, and Orange counties). The review revealed 25 new cases of HIV infection in males attending college in the Triangle between January 1, 2001 and March 1, 2003. A sexual partner network investigation linked several colleges together. These 25 cases represented a dramatic increase in new HIV cases for males attending college as compared to similar new cases reported in 2000. An expansion of the review (January 2000 to December 2003) identified a total of 84 new cases of HIV-infected males who were attending 37 colleges throughout the state (Figure 39.1, below). Of these 73, (88%) were black and the vast majority of cases were either men who have sex with men (MSM) or men who have sex with men and women (MSM/W). These HIV-infected college males were compared to newly diagnosed males who were not enrolled in college. An examination of potential sexual partners and social/sexual network links was performed using disease intervention specialist (DIS) interview records and counseling and testing (CTS) data about cases. The study revealed that college students with newly-diagnosed HIV infection were more likely than non-college students to visit gay bars or dance clubs, use Ecstasy/club drugs or meet sexual partners over the Internet. These data suggested that the use of the Internet as a way to meet sexual partners is not uncommon among HIV-infected college-age gay men. The initial outbreak demonstrated the need to increase student awareness about HIV and the need for specialized interventions to target young African American or black bisexuals and MSM.

Figure 39.1. Newly-diagnosed cases of HIV among college males (n=84)



Many steps were taken as a result of the outbreak. Local health department personnel, all of the campuses involved in the outbreak, and local community-based organizations (CBOs) were notified of the outbreak findings, and counseling and testing activities were expanded. In addition, a Centers for Disease Control and Prevention (CDC) Epi-Aid team comprised of HIV-prevention experts in collaboration with University of North Carolina researchers and N. C. Division of Public Health staff conducted a behavioral study of young black MSM in the state. The study found: a) high-risk behaviors were occurring in both HIV-positive and HIV-negative young MSM; b) college students were less likely to identify themselves as gay and/or disclose sexual orientation; and c) venues for meeting sex partners were not limited to college campuses. The investigators concluded that North Carolina is experiencing a dramatic increase in HIV infections among young black men. The epicenter of the outbreak is the college population. Several schools have rates of new infections that represent alarming increases (Figure 39.2, below).

Figure 39.2. New infection rates among black men, age 18-30, at 5 N.C. Colleges/Universities (2000-2003)



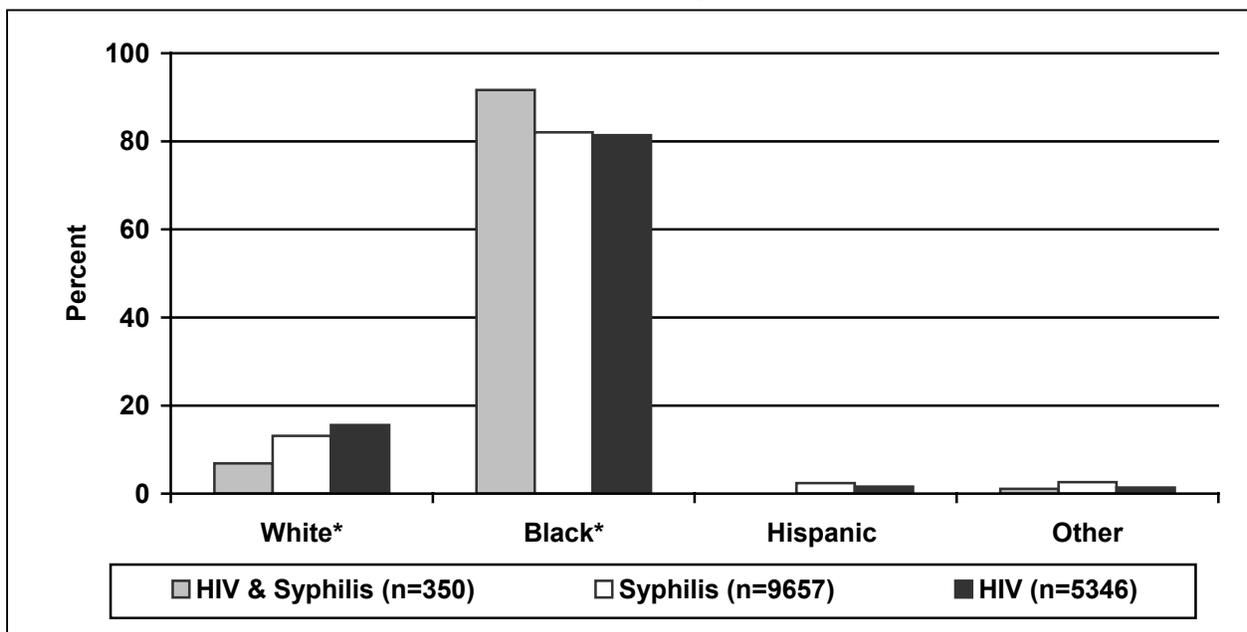
Persons Diagnosed with Both HIV and Syphilis

Clinicians and managers of STD prevention programs need comprehensive information about persons at risk of contracting both syphilis and HIV. Persons who contract both diseases may be less responsive to traditional prevention messages and likely engage in riskier behaviors. To identify and fully describe the demographic and risk factor profile of these persons, epidemiologists at the N. C. Division of Public Health’s HIV/STD Prevention & Care Branch retrieved and analyzed information from multiple databases. These databases included the state’s partner counseling and referral services (PCRS) data system and the state’s morbidity databases (HARS and STD-MIS). See Appendix A for more information on these data sources.

HIV/AIDS case reports (17,669) were extracted for persons newly diagnosed and reported between 1993 and 2002 from the morbidity database and 19,510 syphilis cases (primary, secondary, early latent, and late syphilis) for the same period were extracted from the PCRS data system. Pertinent clinical, demographic and risk-behavior information for cases from each data source was combined into a single data set for analysis. Nine hundred eighty-two (982) persons who contracted both HIV and syphilis were identified and compared to persons who had contracted only syphilis or only HIV.

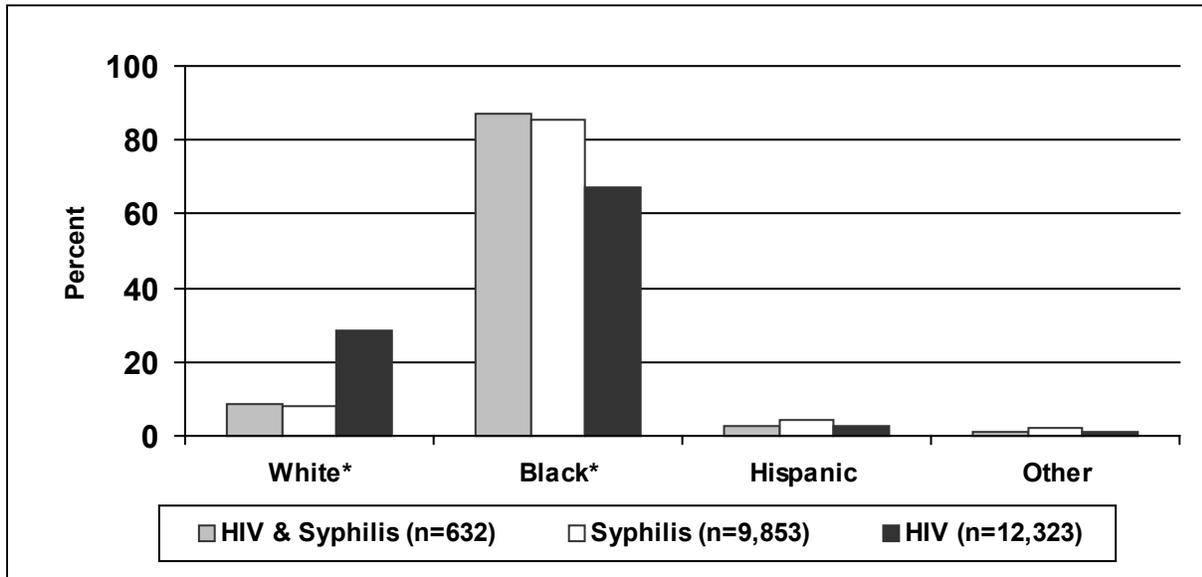
These 982 co-morbid cases represented about 5.5 percent of the HIV reports and 5 percent of the syphilis reports. While the co-morbid cases were somewhat similar to the respective syphilis and HIV/AIDS populations, there were some notable differences (Figures 39.3 and 39.4 below). For males, co-morbid cases were slightly more likely to be black non-Hispanic (87% as compared to 85% for syphilis alone and 67% for HIV alone). For females, co-morbid cases also were more likely to be black non-Hispanic (91% as compared to 82% for syphilis alone and 81% for HIV alone). Although only 16 Hispanic co-morbid cases were identified, all were males and were recently infected. There was also a gender difference in which disease was reported first. Of males, 28 percent were reported with syphilis first as opposed to 41 percent of females. Some striking differences in the proportions of risk factors between genders existed for co-morbid cases (Table 28.1, below). Risk factor categories reported here are not exclusive; persons may be reported with more than one risk. A greater proportion of co-morbid females indicated that they had exchanged sex for drugs or money (44% compared to 29% for co-morbid males); had heterosexual sex with an HIV-positive person or IV drug user (61% compared to 46% for males); or had used crack, marijuana, or non-injecting cocaine (83% compared to 52% for males). These gender differences for risk were partly explained by homosexual activity among males—a risk category exclusive to males—but some differences remained even when controlling for this risk activity.

Figure 39.3. Proportion of race/ethnicity for females by diagnosis: syphilis (PSEL and late), HIV and both syphilis and HIV, 1993-2002



*non Hispanic

Figure 39.4 Proportion of race/ethnicity for males by diagnosis: syphilis (PSEL and late), HIV and both syphilis and HIV, 1993-2002



*non Hispanic

Table 28.1. Proportion of risk factors by gender for persons with HIV and syphilis (PSEL and late), 1993-2002

Risk Factor*	Males		Females	
	n	Pct.*	n	Pct.*
MSM	307	48.6%	N/A	N/A
IDU	125	19.8%	88	25.2%
Heterosexual sex	493	78.0%	323	92.3%
Heterosexual sex with HIV+	175	27.7%	132	37.7%
Heterosexual sex with IDU	87	13.8%	80	22.9%
Exchange of sex for drugs or money	185	29.3%	153	43.7%
History of STD	154	24.4%	85	24.3%
Multiple Sex partners/ past year	131	20.7%	63	18.0%
Multiple Sex partners/last 90 days	58	09.2%	38	10.9%
New Sex partners in last 90 days	50	07.9%	23	06.6%
Crack	130	20.6%	146	41.7%
Marijuana	136	21.5%	97	27.7%
Casual alcohol	131	20.7%	60	17.1%
Alcohol abuse	100	15.8%	61	17.4%
Cocaine (non-injecting)	61	09.7%	49	14.0%

*risk factor categories are not exclusive; proportions do not total 100

HIV TESTING

HIV Counseling, Testing and Referral (CTS)

Testing for HIV infection is provided at no charge to clients in all local health departments and a number of community-based organizations in North Carolina through the Counseling, Testing and Referral component of cooperative agreements for prevention of HIV and sexually transmitted diseases. The testing program is more typically known in North Carolina as CTS (Counseling and Testing System), in reference to the data management system used for the collection and analysis of the data. The North Carolina Commission for Health Services' ruling to discontinue anonymous testing for HIV in May 1997 raised concern that, by removing the anonymous test option, testing among persons at high risk for HIV infection would be reduced. Before the option for anonymous testing was removed, the HIV/STD Prevention & Care Branch implemented procedures to make HIV testing available in nontraditional settings. Nontraditional HIV test sites (NTS) operate as either stand-alone test sites that deliver HIV testing in non-routine settings and times through a community-based organization (CBO) or local health department (LHD), or are physically located in a local health department but have hours of operation other than the normal working hours for the health department. The sites other than NTS have been designated as traditional test sites (TTS) in this chapter. Traditional test sites are predominately local health departments and some CBOs. While the CTS data does not provide a true monitoring of seroprevalence, it is a useful tool to evaluate voluntary testing for HIV in the public sector.

The raw number of tests, number of positives and positivity rate for the most recent five years for publicly funded HIV testing in North Carolina is presented in Table 29. While there has been some fluctuation in the number of tests processed by the State Laboratory of Public Health, the raw positivity rate (calculated as proportion of positive tests) has remained relatively constant at between 0.68 percent and 0.73 percent.

Table 29. HIV testing in publicly funded sites in N.C., 1999-2003

Year of Test	Tests*	Positives	Positivity (%)
1999	103,275	702	0.68
2000	105,860	739	0.70
2001	109,176	803	0.73
2002	105,686	754	0.71
2003	106,861	754	0.70

*Readers should be aware that some clients are tested multiple times for various reasons (see Table 30).

In general, there has been a decline in the proportion of all tests performed where the client indicates no previous HIV testing history. The resulting increase in proportion of repeat tests has been in the category of having had a previous negative test.

In order to provide a meaningful analysis of testing and positivity trends, when calculating positivity rates, one must take into account the previous test status. Earlier parts of this section of the *Profile* address the use of the CTS data in the evaluation of HIV incidence. For some parts of this discussion, repeat tests will be included in the total test denominator, but for other discussions previous positive tests or any previous test may be excluded.

Table 30. HIV counseling and testing by previous test result, 1999-2003

Previous Test Result	Year of Test									
	1999		2000		2001		2002		2003	
	Test	Pct.	Test	Pct.	Test	Pct.	Test	Pct.	Test	Pct.
No Previous Test	45,402	44.0	40,319	38.1	41,219	37.8	38,317	36.2	38,406	35.7
Negative	56,278	54.5	63,734	60.2	65,828	60.3	65,507	62.0	67,115	62.4
Positive	211	0.2	252	0.2	275	0.3	246	0.2	190	0.2
Inconclusive	78	0.1	91	0.1	85	0.1	89	0.1	105	0.1
Unknown/ Missing	1,306	1.3	1,465	1.4	1,770	1.6	1,582	1.5	1814	1.7
Total	103,275	100	105,861	100	109,177	100	105,741	100	107,630	100

Table 31 presents the corrected overall positivity; reports that indicated the client had a previous positive test were removed from consideration. The denominator used in the positivity calculation in this table does include other previous tests (for example, previous negative tests are included). All subsequent discussions of testing and positivity rates in this section are based on these corrected values, with previous positive tests removed from consideration.

Table 31. Corrected CTS positivity, 1999-2003

Year of Test	Positives	Positivity (%)
1999	539	0.52
2000	530	0.50
2001	584	0.54
2002	554	0.53
2003	580	0.54

The first year during which the number of HIV tests conducted in public sites did not increase was 1997. The long-term trend of decreasing positivity rate noted during the 1990s has continued through 2000. The positivity rate (number of positives per 100 tests performed) has been less than 1 percent since 1994. High-risk clients (MSM, MSM/IDU, IDU, persons who exchange sex for drugs or money, persons who have sex while using non-injecting drugs and persons who are sex partners of persons at risk or persons infected with HIV) continue to seek testing through publicly funded test sites. However, HIV testing in nontraditional test sites continues to identify a greater *proportion* of positives than testing in other publicly funded sites. The NTS positivity rate was 1.11 percent, compared to 0.50 percent for all other public site testing for CY 2003 (Table 32). Since its inception, NTS positivity has been at least twice that of traditional test sites.

Table 32. Number of positive tests and positivity (%) venue and year of test, 1999-2003

Testing Venue	Year of Test									
	1999		2000		2001		2002		2003	
	Tests	Pct.	Tests	Pct.	Tests	Pct.	Tests	Pct.	Tests	Pct.
Nontraditional	38	1.26	47	0.96	81	1.20	81	1.06	88	1.11
Traditional	501	0.50	483	0.48	503	0.49	473	0.48	492	0.50

The major difference noted between clients seen in NTS and other sites is the proportion of tests comprising high-risk clients. Men who have sex with men (MSM), injecting drug users (IDU) and clients reporting both MSM and IDU risks made up approximately 18 percent of the clients tested in NTS during 2003, compared to approximately five percent of the traditional venue clients during the same time (Table 33). High-risk heterosexual activity (sex partner at risk for, or infected by HIV; exchange of sex for drugs or money; having sex while using non-injecting drugs; multiple sexual partners; or a recent STD diagnosis) made up 41 percent of the NTS clients and 45 percent of the traditional venue clients. These proportions of tests have varied somewhat over time, but without a clear trend. However, there are differences in testing behavior within the high-risk heterosexual groups in the two venues. At NTS during 2003, testers with a sex partner at risk or who had a recent STD diagnosis comprised approximately 11 percent and 15 percent (respectively) of the tests. In comparison, in traditional sites these risk groups accounted for approximately 20 percent each of tests during the same time period. During 2003, testers with exchange of sex for drugs or money or use of non-injecting drugs while having sex as risks were both found more often in NTS (~4% and 11%, respectively) than traditional sites (<1% and 5%, respectively).

**Table 33. HIV CTS tests mode of transmission by venue, 1999-2003
(previous positives removed)**

Nontraditional Venue Mode of Transmission	Year of Test									
	1999		2000		2001		2002		2002	
	Tests	Pct.	Tests	Pct.	Tests	Pct.	Tests	Pct.	Tests	Pct.
MSM IDU	21	0.7	38	0.8	44	0.7	55	0.7	73	0.9
MSM	371	12.2	502	10.3	647	9.6	730	9.5	919	11.5
IDU	152	5.0	389	8.0	533	7.9	569	7.4	496	6.2
High-Risk Heterosexual	1,254	41.3	2,310	47.3	3,350	49.6	3,374	44.1	3,245	40.7
Heterosexual, No Other Risk	663	21.8	1,024	20.9	1,441	21.3	1,816	23.7	2,056	25.8
All Other	578	19	625	12.8	744	11	1,106	14.5	1,182	14.8
Total	3,039	100	4,888	100	6,759	100	7,650	100	7,971	100
Traditional Venue (LHD)										
Mode of Transmission										
MSM IDU	142	0.1	155	0.2	120	0.1	94	0.1	112	0.1
MSM	2,082	2.1	2,252	2.2	2,588	2.5	2,699	2.8	2,797	2.8
IDU	2,439	2.4	2,698	2.7	1,965	1.9	1,872	1.9	1,923	1.9
High-Risk Heterosexual	49,529	49.5	47,300	47	48,098	47.1	45,876	46.9	44,606	44.8
Heterosexual, No Other Risk	31,385	31.4	32,391	32.2	33,716	33	32,107	32.8	33,065	33.2
All Other	14,448	14.4	15,925	15.8	15,656	15.3	15,197	15.5	16,966	17.1
Total	100,025	100	100,721	100	102,143	100	97,845	100	99,469	100

In 2003, males were tested more often than females in NTS (61% vs. 38%), while in traditional test sites 67 percent of the tests were for females (Table 34). The male : female ratio for testing in NTS changed from a 1.2:1 ratio in 1999 to a 1.6:1 ratio by 2003, while the gender ratio remained essentially unchanged in traditional sites. It is important to note that NTS do not have prenatal/OB or family planning services, which are found in the local health department sites.

Table 34. HIV CTS tests by gender, 1999-2003 (previous positives removed)

Nontraditional Venue	Year of test									
	1999		2000		2001		2002		2003	
Gender	Tests	Pct.	Tests	Pct.	Tests	Pct.	Tests	Pct.	Tests	Pct.
Male	1,610	53	2,902	59.4	4,349	64.3	4,580	59.9	4,856	60.9
Female	1,399	46	1,922	39.3	2,324	34.4	2,912	38.1	2,995	37.6
Missing	30	1.0	64	1.3	86	1.3	158	2.1	124	1.6
Total	3,039	100	4,888	100	6,759	100	7,650	100	7,971	100

Traditional Venue (LHD)										
Gender	1999		2000		2001		2002		2003	
Gender	Tests	Pct.	Tests	Pct.	Tests	Pct.	Tests	Pct.	Tests	Pct.
Male	30,419	30.4	31,240	31.0	32,053	31.4	30,837	31.5	31,280	31.4
Female	68,891	68.9	68,694	68.2	68,868	67.4	65,876	67.3	66,969	67.3
Missing	715	0.7	786	0.8	1,222	1.2	1,135	1.2	1,220	1.2
Total	100,025	100	100,720	100	102,143	100	97,845	100	99,469	100

Table 35. HIV CTS testing by race/ethnicity, 1999-2003 (previous positives removed)

Nontraditional Venue	Year of Test									
	1999		2000		2001		2002		2003	
Race/Ethnicity	Tests	Pct.	Tests	Pct.	Tests	Pct.	Tests	Pct.	Tests	Pct.
White	1,265	41.6	1,819	37.2	2,237	33.1	2,409	31.5	2,255	29.5
Black	1,289	42.4	2,404	49.2	3,382	50	4,079	53.3	4,404	55.3
Hispanic	393	12.9	516	10.6	953	14.1	855	11.2	971	12.2
Asian/ Pacific Islander	16	0.5	26	0.5	31	0.5	38	0.5	41	0.5
American Indian other/not known	10	0.3	32	0.7	47	0.7	109	1.4	50	0.6
	66	2.1	91	1.9	109	1.6	160	2	150	1.9
Total	3,039	100	4,888	100	6,759	100	7,645	100	7,971	100

Traditional Venue (LHD)										
Race/Ethnicity	1999		2000		2001		2002		2003	
Race/Ethnicity	Tests	Pct.	Tests	Pct.	Tests	Pct.	Tests	Pct.	Tests	Pct.
White	43,573	43.6	41,529	41.2	40,125	39.3	37,684	38.5	37,257	37.5
Black	44,002	44	43,856	43.5	44,067	43.1	42,336	43.3	43,697	43.9
Hispanic	9,363	9.4	12,401	12.3	14,222	13.9	14,645	15.0	15,538	15.6
Asian/ Pacific Islander	741	0.7	723	0.7	726	0.7	732	0.7	663	0.7
American Indian other/not known	1,083	1.1	1,020	1	1,273	1.2	1,043	1.1	988	1.0
	1,263	1.2	1,191	1.1	1,730	1.7	1,404	1.4	13,44	1.4
Total	100,025	100	100,720	100	102,143	100	97,845	100	99,769	100

During the first years of NTS availability, approximately the same proportion of clients seen in local health departments (LHD) and NTS sites were white, with 42-44 percent reported white in 1999 (Table 35). An increase in proportion of tests for blacks in NTS was noted from 1999 through 2003. From 1999 through 2003, an increase in the proportion of tests for Hispanics was seen in LHD sites, while the proportion of Hispanics tested at NTS sites remained largely unchanged.

Some unexpected positivity rates were found among the various risk group populations tested in the two venues. While MSM testing represents a higher proportion of tests in NTS sites, the positivity rate is greater in LHD sites than NTS sites (Table 36). The positivity rates for IDU clients are roughly the same in both venues, although IDU testing proportions are about two times greater in NTS sites than LHD sites. Repeat test behavior is equivalent in the two test sites (about 60% of clients were previously tested with negative results). Among the clients who were tested and found to be positive, between 50 and 55 percent of the clients in both venues had a previous negative test. We believe all of these findings, taken together, indicate that the NTS are serving a population at higher risk even though the seroprevalence in this population does not appear to be higher than that found in the population visiting LHD sites. The NTS model may provide a testing venue where clients are more likely to return for repeat testing. In terms of the recent recommendations by the Centers for Disease Control regarding multiple/ongoing risk reduction message delivery, NTS venues might present opportunities for such risk reduction message activity to occur.

**Table 36. HIV CTS positivity by mode of transmission , 1999-2003
(previous positives removed)**

Nontraditional Venue Mode of Transmission	Year of Test									
	1999		2000		2001		2002		2003	
	Tests	Pct.	Tests	Pct.	Tests	Pct.	Tests	Pct.	Tests	Pct.
MSM IDU	0	0	0	0	1	2.3	2	3.6	4	5.5
MSM	14	3.8	13	2.6	15	2.3	19	2.6	35	3.8
IDU	4	2.6	5	1.3	9	1.7	6	1.1	6	1.2
High-Risk Heterosexual	15	1.2	25	1.1	38	1.1	33	1	27	0.8
Heterosexual, No Other Risk	3	0.5	3	0.3	17	1.2	10	0.6	13	0.6
All Other	2	0.3	1	0.2	1	0.1	11	1	3	0.3
Total	38	1.3	47	1	81	1.2	81	1.1	88	1.1
Traditional Venue										
Mode of Transmission										
MSM IDU	9	6.3	4	2.6	4	3.3	2	2.1	0	0
MSM	105	5	100	4.4	120	4.6	129	4.8	140	5.0
IDU	37	1.5	38	1.4	17	0.9	16	0.9	18	0.9
High-Risk Heterosexual	241	0.5	223	0.5	226	0.5	212	0.5	220	0.5
Heterosexual, No Other Risk	69	0.2	77	0.2	90	0.3	68	0.2	70	0.2
All Other	40	0.3	41	0.3	46	0.3	46	0.3	35	0.2
Total	501	0.5	483	0.5	503	0.5	473	0.5	492	0.5

Positivity rates by race/ethnicity are presented in Table 37. The positivity for blacks tested in NTS is approximately two to three times that for whites. In the traditional sites, the differential between these two groups is four-fold. We found that an equally high proportion of the positive tests found in both testing venues were among persons who had previously tested and persons who were positive on their first HIV test. Twenty-five of 113 positives (22%) reported through NTS testing in 2003 said that they were previously tested with a positive result. One hundred thirty-eight of 630 (22%) of the positives reported from traditional test sites in 2003 reported a previous positive result. These previous positive reports are self-reports from clients and should be viewed with some caution, however. Of the NTS clients reporting a previous positive test, 35 percent (11/31) and 19 percent (6/31) were found to be negative on their tests reported in 2002 and 2003, respectively. Among the clients tested in LHD, 15 percent (32/215) and 11 percent (18/159) of the clients reporting a previous positive test were found to be negative for the tests reported in 2002 and 2003. We believe these results suggest either client recall errors or unclear pretest counseling questions about previous test status.

Table 37. HIV CTS positivity by race/ethnicity, 1999-2003 (previous positives removed)

Nontraditional Venue	Year of Test									
	1999		2000		2001		2002		2003	
Race/Ethnicity	Tests	Pct.	Tests	Pct.	Tests	Pct.	Tests	Pct.	Tests	Pct.
White	10	0.8	11	0.6	13	0.6	19	0.8	21	0.9
Black	25	1.9	32	1.3	62	1.8	57	1.4	58	1.3
Hispanic	3	0.8	4	0.8	5	0.5	2	0.2	7	0.7
Asian/Pacific Islander	0	0	0	0	0	0	0	0	0	0
American Indian	0	0	0	0	0	0	0	0	0	0
Undetermined	0	0	0	0	1	1.5	3	2.5	2	3.0
Total	38	1.3	47	1	81	1.2	81	1.1	88	1.1

Traditional Venue										
Race/Ethnicity	1999		2000		2001		2002		2003	
Race/Ethnicity	Tests	Pct.								
White	80	0.2	81	0.2	72	0.2	70	0.2	79	0.2
Black	376	0.9	362	0.8	379	0.9	349	0.8	35	0.8
Hispanic	33	0.4	29	0.2	40	0.3	44	0.3	49	0.3
Asian/Pacific Islander	0	0	0	0	1	0.1	0	0	3	0.5
American Indian	5	0.5	5	0.5	4	0.3	4	0.4	4	0.4
Undetermined	7	1	6	8.4	7	0.9	6	1	7	1.2
Total	501	0.5	483	0.5	503	0.5	473	0.5	492	0.5

SECTION II: HIV/AIDS TREATMENT & CARE QUESTIONS IN NORTH CAROLINA (Including Ryan White HIV/AIDS Care Act Special Questions and Considerations)

Question 1: What is the impact of AIDS in North Carolina?

Question 2: What are Ryan White HIV/AIDS CARE Act and other service considerations?

Highlights/Summary

- As of December 31, 2003, the cumulative total of AIDS cases reported in the state was 13,270.
- 1,086 new AIDS cases were reported in North Carolina in 2003. This represents a 7% increase from the previous year and is the third year of an increase in reported cases.
- The AIDS case rate in 2003 is eight times higher for blacks than whites. Increases in AIDS case rates were noted for both black males and black females over the last five years.
- 5,838 Ryan White Title II clients received or accessed funded services in 2003.
- In December 2003, about 3,628 individuals were enrolled in North Carolina's ADAP (AIDS Drug Assistance Program).
- The demographics of Ryan White Title II clients and ADAP enrollees are similar to the observed demographics of all persons listed as living in North Carolina with HIV or AIDS at the end of 2003.

QUESTION 1: WHAT IS THE IMPACT OF AIDS IN NORTH CAROLINA?

AIDS

This section focuses on information that pertains specifically to AIDS in North Carolina. AIDS cases represent HIV-infected individuals who have reached a later, more serious, stage of disease and who meet the case definition for an AIDS diagnosis. This case definition includes confirmation of HIV infection along with CD4+ T-lymphocyte counts of less than 200 cells/ μ L or HIV infection with the presence of one of 23 clinical conditions indicating an impaired immune system. The date of AIDS report represents the date that an individual is reported as an AIDS case. Individuals are usually reported with an HIV diagnosis and then later with an AIDS diagnosis. However, some individuals are reported with both an HIV diagnosis and an AIDS diagnosis at the same time.

Monitoring changes in AIDS cases helps provide a valuable measure of the continuing impact of treatment as well as describing those who may not have access to care. Increases in reports may indicate that more individuals are not receiving effective treatments or that current treatments are not as effective as they were earlier. Close attention should be paid to the demographic changes in AIDS cases, especially by agencies that provide care services for clients.

As of December 31, 2003, a total of 13,270 cases of AIDS had been reported in the state since 1983 with North Carolina as residence at the time of diagnosis. In 2003, 1,086 new AIDS cases were reported. About 66 percent of these new AIDS cases represented new individuals reported (*HIV disease*/ HIV and AIDS reported concurrently); the remaining 34 percent represented individuals who had been previously reported as infected with HIV but who subsequently had an AIDS diagnosis in 2003 (Table O, pg. 123). The 1,086 reports for 2003 represented a seven percent increase in AIDS reports from 2002, making 2003 the third year for which an increase in AIDS cases had been reported in North Carolina; the new 1,015 AIDS reports received in 2002 represented a 16 percent increase from the previous year. The reasons for the reported increases in AIDS reports are varied and likely represent several factors. These factors include variations in access to medical care, changes in HIV treatment effectiveness over time, the expected progression of disease for the high number of individuals infected in the mid-1990s, and enhanced surveillance efforts to capture report information. It is important to remember that reporting delays can cause changes in the report totals for recent years. In North Carolina, diagnosed cases are sometimes not reported to the HIV/STD Prevention & Care Branch in a timely manner. For instance, for cases reported between 1990 and 1994, 47 percent were reported within 3 months of diagnosis, and 78 percent were reported within 12 months of diagnosis. By comparison, CDC reports nationally that 50 percent of cases are reported to CDC within 3 months and 80 percent within one year.

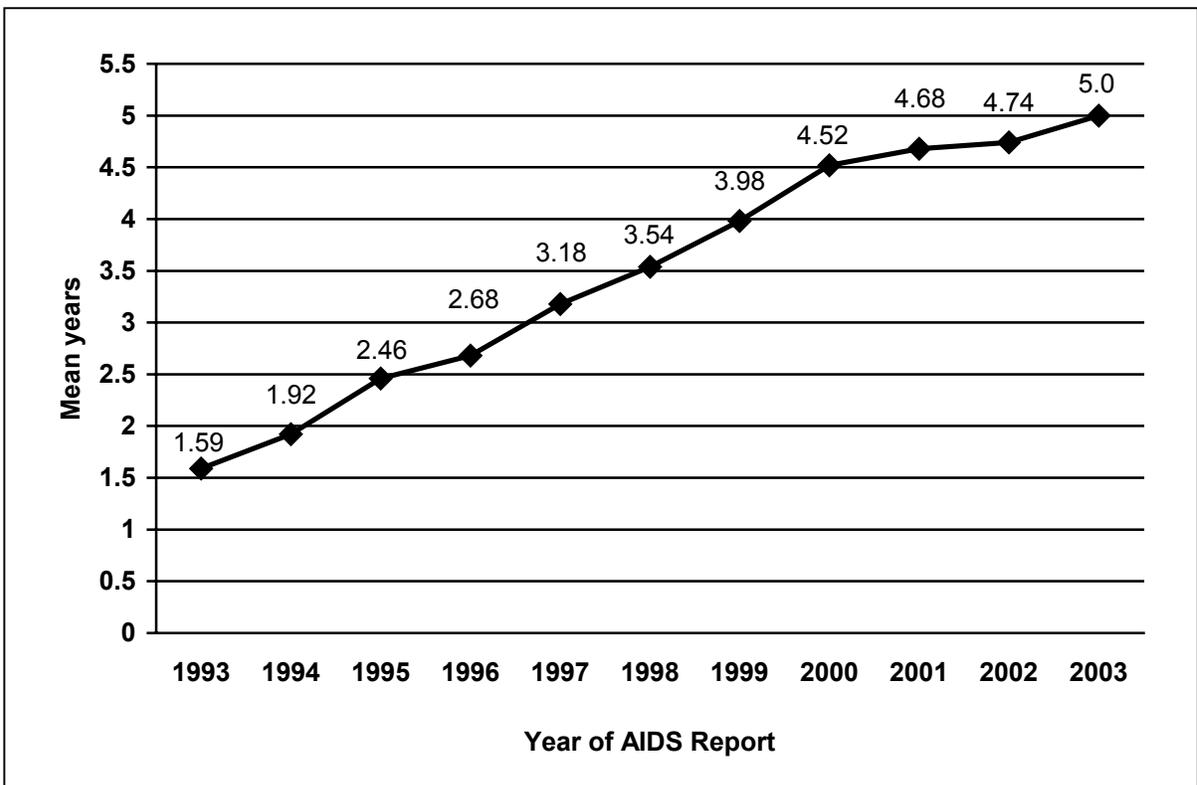
Tables P and Q (pp. 124-125) display the AIDS report cases and rates for the last 5 years. Changes in rates may indicate changes in anticipated care need for certain groups. In 2003,

black males represented 45 percent of AIDS cases, black females represented 22 percent of cases, and white males represented 22 percent of cases. The case rate for AIDS among blacks was eight times higher than for whites. AIDS cases for black males increased from 50 per 100,000 in 1999 to 58 per 100,000 in 2003, while AIDS cases for black females have increased from 19 per 100,000 in 1999 to 25 per 100,000 in 2003. This represents significant increases in case rates for both groups.

TREATMENT

As mentioned earlier, the introduction of new more effective AIDS treatments such as antiretroviral therapy (ART) has made a tremendous impact on delaying the progression of HIV to AIDS. This was evident in national surveillance data, as AIDS incidence and deaths dropped for the first time in 1996. North Carolina surveillance data also suggest that these treatments are having an impact. Figure 40 shows the average number of years between a report with HIV and a report with AIDS in surveillance data. The increase in the time between reports indicates that these new treatments are likely slowing the progression from HIV to AIDS. It should be noted that the rate of increase has slowed since 2000. This, like the increase in AIDS reports, could indicate changes in treatment effectiveness or delivery of AIDS care. It will be important to monitor these trends closely in the near future.

Figure 40. Average Number of Years Between First Reported HIV Test and Reported AIDS Diagnosis, 1993-2003



QUESTION 2: WHAT ARE RYAN WHITE HIV/AIDS CARE ACT AND OTHER SERVICE CONSIDERATIONS?

RYAN WHITE

This section focuses on information that pertains to Health Resources and Services Administration (HRSA) HIV/AIDS care planning groups. Specifically, this section characterizes some patterns in the use of HIV care services by a number of populations in North Carolina. Some of the information provided is based on surveys of HRSA-funded programs in the state.

In 1990, Congress enacted the Ryan White CARE Act to provide funding for states, territories, and eligible metropolitan areas (EMAs) to offer primary medical care and support services for persons living with HIV disease who lack health insurance and financial resources for their care. Congress reauthorized the Ryan White CARE Act in 1996 and in 2000 to support Titles I-IV, Special Projects of National Significance (SPNS), the HIV/AIDS Education Training Centers and the Dental Reimbursement Program, all of which are part of the CARE Act. Title program support varies from state to state depending on program requirements and mandates.

The purpose of Title II funding is to improve the quality, availability, and organization of health care and support services for individuals and families with, or affected by, HIV disease in each state or territory. The state administers the Title II program and provides funding for services to care consortia and other local service providers. Some Title II-funded services in North Carolina are administered and provided through local consortia. Descriptions of the clients and services provided through consortia are collected through a HRSA-sponsored computer software program called CAREWare. At its core, CAREWare collects and stores data for completion of the annual Care Act Data Report (CADR). Moreover, CAREWare is a tool used to move programs beyond mere data reporting and into information management and quality improvement (QI). Using the various components of CAREWare allows programs to monitor a number of clinical and psychosocial indicators in a way that satisfies both CQI initiatives and CADR requirements. CY 2003 marks the first full year in which data was collected and submitted via the CAREWare computer software program. Table 38 below summarizes the CAREWare service information for Title II clients during 2003. The majority of visits involved case management (n=20,712) and client advocacy (n=12,597). The complete data includes service information as well as clinical information. The baseline data provided by CY 2003 will be used to evaluate the Quality Improvement/Quality Assurance initiative that began in January 2004.

In calendar year (CY) 2003, a total of 5,838 clients received services funded through Ryan White Title II awards in North Carolina. During 2003, the distribution of Title II CARE Act clients by race/ethnicity, sex and age was similar to the distribution of these characteristics among persons known to be living with HIV/AIDS in North Carolina at the end of 2003 (see Table 38.1).

State estimates of the number of persons reported with HIV/AIDS and listed as living by county of residence and sorted by consortia are found in Table N on pages 118-120. This estimation of reported persons living with HIV can be used to approximate care needs or anticipated care need within the consortia.

Table 38. Services Provided to Ryan White Title II Clients, 2003 (CAREWare)

SERVICES	No. Clients	Pct. Clients Receiving Service (n=5,838)*	No. of Services Provided (n=56,486)
Ambulatory/outpatient medical services	1,856	31.8%	5,863
Mental health services	86	1.5%	392
Oral health services	417	7.1%	1,129
Substance abuse services: outpatient	7	0.1%	14
Rehabilitation services	2	0.0%	2
Home health: para-professional care	15	0.3%	140
Home health: professional care	12	0.2%	68
Case management services	2,261	38.7%	20,712
Child care services	38	0.7%	363
Client advocacy	2,422	41.5%	12,597
Day or respite care for adults	2	0.0%	2
Emergency financial assistance	2,121	36.3%	5,505
Food bank/home-delivered meals	1,548	26.5%	3,696
Health education/risk reduction	15	0.3%	16
Legal services	124	2.1%	175
Nutritional counseling	20	0.3%	20
Permanency planning	50	0.9%	98
Psychosocial support services	34	0.6%	94
Referral for health care/supportive services	91	1.6%	144
Transportation services	1,484	25.4%	5,269
Treatment adherence counseling	28	0.5%	87
Other services	19	0.3%	100

*persons may receive more than one service

AIDS DRUG ASSISTANCE PROGRAM (ADAP)

Since 1987, Congress has appropriated funds to assist states in providing AIDS patients antiretroviral therapy (ART) approved by the Federal Drug Administration (FDA). With the initial passage of the Ryan White CARE Act in 1990, the assistance programs for ART were incorporated into Title II and became commonly known as ADAP. ADAP now provides FDA-approved HIV-related prescription drugs to underinsured and uninsured persons living with HIV/AIDS. For many people with HIV, access to ADAP serves as a gateway to a broad array of health care and supportive services as well as other sources of coverage, including Medicaid, Medicare and private insurance.

Table 38.1 N.C. Living HIV/AIDS Cases, Ryan White Title II and ADAP Clients, 2003

	Ryan White Title II clients (n=5,838)	ADAP enrollees (12/01/2003) (n=3,628)	Persons living with HIV/AIDS (12/31/2003) (n=17,137)
Gender			
Male	64.3%	71.7%	68.1%
Female	35.3%	28.3%	31.9%
Transgender	<1%		-
Race/ethnicity			
White*	23.1%	28.0%	24.5%
Black*	65.4%	62.2%	71.1%
Am Indian/ AI Native*	1.6%	1.3%	<1%
Asian/PI*	<1%	<1%	<1%
Hispanic	4.1%	7.6%	3.0%
Unknown	5%	<1%	
Age Group			
<2	<1%	<1%	0%
2-12	1.0%	<1%	<1%
13-24	4.5%	4.4%	4.3%
25-44	59.8%	62.3%	61.5%
45-64	32.4%	31.8%	31.9%
65 and over	1.1%	1.4%	1.6%
Unknown	<1%		

* excludes Hispanics for case reports only

North Carolina’s HIV Medications Program (or ADAP) uses a combination of state and federal funds to provide low-income residents with assistance in purchasing medications to fight HIV/AIDS and the opportunistic infections that often accompany the disease. In order for someone to be eligible for ADAP in North Carolina, the individual must have a net family income that is at or below 125 percent of the federal poverty level, not have third-party coverage (e.g., private insurance or Medicaid), and meet other program criteria. In December 2003, just over 3,600 individuals were enrolled in N.C. ADAP. Table 38.1 above displays the demographics on enrollees at that time. ADAP enrollees represent a population that is very similar demographically to the total number of persons who were living with HIV or AIDS at the end of 2003.

North Carolina’s ADAP Program had a waiting list for much of the year (2003). As part of an effort to make existing resources go farther, the Program is currently in the process of converting the operational model from the current “reimbursement and rebate model” to a “direct purchase/centralized pharmacy model.” An RFP is being developed and will be issued in 2004. Subject to the receipt of an acceptable proposal from a potential vendor/contractor, it is anticipated that the date for the complete transition to the new model will be April 1, 2005.

HOUSING OPPORTUNITIES FOR PERSONS WITH AIDS (HOPWA)

Since 1992, the federal government has allocated more than \$2 billion for the HOPWA program to support community efforts to create and operate HIV/AIDS housing and provide related services. In the first year of the program, 27 eligible metropolitan statistical areas (EMSAs) and 11 eligible states received formula allocations of \$42.9 million. EMSAs and states receive direct allocations of HOPWA funding when 1,500 cumulative cases of AIDS are diagnosed in a HUD-determined geographic region. By fiscal year 2004, \$292 million in HOPWA funds was available for formula allocations and competitive awards. A total of 117 jurisdictions—79 metropolitan areas and 39 states—received formula allocations in 2004.

The purpose of the Housing Opportunities for Persons with AIDS (HOPWA) Program is to devise long-term comprehensive strategies for meeting the housing needs of persons and their families, living with acquired immunodeficiency syndrome (AIDS) or related diseases. The AIDS Care Unit, HIV/STD Prevention & Care Branch, North Carolina Department of Health and Human Services, Division of Public Health administers HOPWA on a statewide level. Originally, HOPWA funds were used solely for emergency rent, mortgage and utility payments. Currently, the program provides funds to family care homes, adult day care/day health service centers, HIV care consortia, housing authorities and other nonprofit agencies that provide housing and related services to persons living with HIV/AIDS. In order for someone to be eligible for HOPWA, the individual must be HIV positive and have an individual or family income that does not exceed 80 percent of the median income for the state of North Carolina and the county of residence.

In FY 03-04, approximately 1,859 clients and families received HOPWA services. The services provided include, but are not limited to, short-term rent, mortgage and utility payments, tenant-based rental assistance and supportive services (i.e., case management, nutrition).

The HOPWA program continues to collaborate with the Consolidated Plan Partners, Department of Community Assistance (CDBG Program), Office of Economic Opportunity (ESG Program) and the North Carolina Housing Finance Agency (HOME Investment Program), to assess the housing and community development needs and priorities of low- to moderate-income individuals throughout the state.

SECTION III: SEXUALLY TRANSMITTED DISEASES OTHER THAN HIV/AIDS IN NORTH CAROLINA

Question: What is the impact of sexually transmitted diseases other than HIV/AIDS in North Carolina?

Question: What is the impact of STDs other than HIV/AIDS in North Carolina – 2003 ?

Highlights/Summary

- Gonorrhea rates have decreased 29% among males and 22% among females from 1999 to 2003. Large decreases among black and Hispanic males and black females account for the major part of the decline.
- Severe racial disparities in gonorrhea incidence rates are on the decline among males. In 1999, rates among black males were 30 times the rates for white males. The disparity decreased to 26 times higher in 2003. Disparities among females have remained relatively steady, with black female gonorrhea rates approximately 14 times higher than rates for white females during the five-year period.
- Chlamydia reported cases and rates have increased among 20-29 year old females from 1999 to 2003, reflecting changes in recommended screening protocols that have added more screened women in this age group.
- Racial disparities in female chlamydia reports have remained stable over the past five years (1999-2003), with 7-8 times more cases reported among black females than whites and 3-5 times more cases among American Indian/Alaska Native and Hispanic females.
- Chlamydia prevalence among women tested in publicly funded clinics has declined 29%, from 8.0% prevalence in 1999 to 5.7% prevalence in 2003. This reflects changing screening protocols that have added older women who are at lower risk for chlamydial infection than younger women.
- All reportable syphilis stages are on the decline, with primary/secondary syphilis down 63%, early latent syphilis down 66%, and late syphilis down 10% from 1999 to 2003. Congenital syphilis cases have remained stable at about 20 cases per year, by year of report.
- Durham, Guilford, Mecklenburg, Robeson and Wake counties accounted for 58.3% of early syphilis reports (primary, secondary, early latent) and ranked as the top five counties in number of syphilis reports for 2003.
- Racial disparities in syphilis rates are larger among males than females. Relative rates among males have declined from 1999 to 2003 because minority rates are dropping faster than white male rates. The opposite trend is true for females, where minority rates are dropping more slowly than white rates, widening the disparity between the two groups.

Reportable STDs in North Carolina

In addition to HIV and AIDS, 18 other sexually transmitted conditions are reportable to the North Carolina Department of Health and Human Services (N.C. DHHS). Cases of syphilis (8 possible stages), gonorrhea (genito-urinary/non-PID or ophthalmia neonatorum), chancroid, and granuloma inguinale must be reported to the local health department within 24 hours of diagnosis. Lab-confirmed chlamydia, lymphogranuloma venereum (LGV), nongonococcal urethritis (NGU – usually assumed to be non-lab confirmed chlamydia; in females this is referred to as mucopurulent cervicitis or MPC), and pelvic inflammatory disease (PID – due to any cause, usually gonorrhea or chlamydia, females only) must be reported within seven days. Hepatitis A and B can be transmitted through sexual contact, but the HIV/STD Prevention & Care Branch does not provide surveillance for those reports. Acute cases are reportable within 24 hours to the local health department and statewide surveillance is directed by the Communicable Disease Branch at N.C. DHHS.

Table 39 describes all STD cases reported to the HIV/STD Prevention & Care Branch in 2003. The remainder of this report will focus on the three most commonly reported conditions: lab-confirmed chlamydial infection, gonorrhea and syphilis. Although NGU and MPC are reported in relatively high numbers, they will not be discussed in detail because they are difficult to interpret. Each is a diagnosis of exclusion, with given physical characteristics and the documented absence of *Neisseria gonorrhoeae*. Though they can be caused by several different organisms, most cases of NGU and MPC are assumed to be *Chlamydia trachomatis*, but since they are not laboratory confirmed it would not be accurate to group these diagnoses with the chlamydia cases. Similarly, PID is a syndromic diagnosis with multiple possible causes, the most common being gonorrhea and chlamydia. In 2003, there were only 300 cases of PID reported to N.C. DHHS. Since the CDC estimates that a minimum of 10 percent of female gonorrhea and chlamydia cases will lead to PID, this represents a drastic underreporting of PID cases. Other reportable STDs are almost non-existent in the state of North Carolina. In 2003 there were two cases of chancroid reported (none in 2002, 3 in 2001) and two cases of lymphogranuloma venereum (also none in 2002, 4 in 2001). There were no cases of granuloma inguinale reported, though there had been one in each of the previous two years, and no cases of cases of ophthalmia neonatorum (ophthalmic infection with *N. gonorrhoeae* in infants) for the past three years (2001-2003).

Table 39. North Carolina Reportable Sexually Transmitted Diseases, 2003

	Sex			Total
	Male	Female	Unknown	
Chlamydia (lab-confirmed)	4343	21721	2	26065
Gonorrhea	7719	7366	4	15085
Syphilis				
Primary Syphilis	36	8	0	44
Secondary Syphilis	68	38	0	106
Early Latent Syphilis	132	114	0	246
Late Syphilis	68	71	0	139
Late Latent Syphilis	166	79	0	245
Late Syphilis w. symptoms	1	1	0	2
Neurosyphilis	22	5	0	27
Congenital Syphilis	6	13	0	19
Syndromic Diagnoses				
Nongonococcal Urethritis (NGU)	5136	n/a	1	5137
Mucopurulent Cervicitis (MPC)	n/a	49	0	49
Pelvic Inflammatory Disease (PID)	n/a	300	0	300
Other STDs				
Chancroid	1	1	0	2
Granuloma Inguinale	0	0	0	0
Lymphogranuloma Venereum (LGV)	0	2	0	2
Ophthalmia Neonatorum (gonorrhea)	0	0	0	0

Hepatitis A virus (HAV) is spread from person to person by the fecal-oral route. Many outbreaks are due to food or waterborne transmission, but others can be traced to sexual contact. Increases in the male-to-female ratio of cases may indicate sexual transmission among men who have sex with men (MSM). Hepatitis B (HBV) is a bloodborne virus, spread from person to person through sharing injection equipment, accidental needle sticks, and sexual activity. Transmission via donated blood products is also possible but rare, due to careful screening of the blood supply. As with hepatitis A, changes in the male-to-female ratio may indicate MSM transmission. However, it should be noted that a greater percentage of injection drug users may also be male, making this interpretation less clear than that for HAV. Both HAV and HBV infection can be prevented through vaccination.

Hepatitis C (HCV) is also a bloodborne infection but, unlike HBV, there is no available vaccine. It also differs from HBV in that transmission is most commonly associated with sharing needles, syringes or other injection equipment, or sharing other personal items that may have blood on them (e.g., razors, toothbrushes). The efficiency of sexual transmission of HCV appears to be low compared to HBV but, nonetheless, the CDC estimates that 20-30 percent of cases nationwide may have been acquired through sexual transmission.

Table 40 shows Hepatitis A, B, and C cases and male-to-female ratios for 1999-2003. For the most part, the pattern remains consistent with more male HAV and HBV cases than female, and the trend appears to be increasing. The number of HCV cases reported is quite small, making interpretation difficult, but for most years the ratio is near 1.0.

Table 40. Hepatitis A , B, and C Male : Female ratios and cases, 1999-2003

	1999	2000	2001	2002	2003
Hepatitis A	2.9 (124/43)	1.0 (76/77)	2.1 (164/78)	3.3 (160/48)	1.9 (81/43)
Hepatitis B acute	1.7 (142/82)	1.9 (169/87)	1.7 (139/82)	1.7 (145/87)	2.0 (109/54)
Hepatitis B chronic	1.2 (404/328)	1.3 (360/268)	1.5 (388/255)	1.3 (500/379)	1.3 (568/448)
Hepatitis C	0.9 (16/17)	0.8 (9/11)	1.8 (14/8)	1.1 (15/14)	0.1 (1/12)

Non-Reportable STDs in North Carolina

It is worth noting that there are a number of important sources of sexually transmitted illnesses that are not reportable in the state of North Carolina. There are approximately 30 strains of human papillomavirus (HPV) that can be sexually transmitted. Most strains produce no symptoms in infected individuals, but there are a few strains associated with genital warts and others associated with the development of cervical cancer in females. Because most infected people are asymptomatic, extensive screening would be required to diagnose most infections. Screening is costly and most infected people have no serious health outcomes associated with HPV infection. Therefore, the available screening efforts focus on the detection of cervical cancer rather than HPV infection. On average, over 500 cases of cervical cancer are reported in North Carolina each year. Infection with HPV is not reportable, but the CDC estimates that 50-75 percent of sexually active adults will acquire HPV at some point during their lives (approximately 5.5 million new infections per year in the U.S.).

Most cases of genital herpes are caused by type 2 herpes virus (HSV-2), though some are also caused by type 1 virus (HSV-1) which also causes oral cold sores. Symptoms are worst immediately following infection; subsequent outbreaks decrease in severity. The most severe consequence of genital herpes is transmission to newborns during birth, a rare event. Herpes is not reportable for a number of reasons. Historically, there have not been good diagnostic tests available. Also, many incident cases are likely to be missed and reporting therefore would largely represent prevalent cases of unknown duration. This may change in the future, given that testing procedures have improved and new evidence indicates that HSV-2 infection may increase susceptibility to HIV infection.

Trichomoniasis is an STD caused by infection with the parasite *Trichomonas vaginalis*. Most males and some females are asymptomatic. Identified cases (primarily females) can be treated with antibiotics. The CDC estimates approximately 2 million new infections per year in the U.S. Like herpes, diagnostic testing issues and underestimation of the seriousness of the disease kept *T. vaginalis* infection off the reportable disease lists.

Bacterial vaginosis (BV) is the most common vaginal infection in women of childbearing age. It can be caused by a number of different bacteria. The role of sexual transmission is not well understood and no single causal organism has been isolated. Women can be treated for the infection but there is no evidence that treatment of partners prevents it. However, women who have not had sexual intercourse rarely have BV. The condition is not reportable largely because it is syndromically diagnosed and it is unclear how reporting will aid in case reduction.

Chlamydia

Chlamydia Disease

Chlamydia is the most frequently reported bacterial STD, and it is easily treated with antibiotics. When symptoms occur, they include discharge and painful urination. However, the majority of people infected with *Chlamydia trachomatis* have no symptoms at all (approximately three-quarters of infected females and half of infected males). Nevertheless, the infection can cause severe damage to the female reproductive tract, including infertility and PID. For this reason, the CDC and the N.C. HIV/STD Prevention & Care Branch currently recommend that all sexually active females age 24 and under be screened for asymptomatic chlamydia, as well as all pregnant women. There are no comparable screening programs for young men.

Chlamydia Reporting

North Carolina law states that all cases of chlamydial infection must be reported to the local health department within 7 days. Laboratory confirmation of chlamydia cases takes place at a number of private labs; most public clinics send their samples to the State Laboratory of Public Health. Results are returned to the provider, who reports them to the local health department. Infected patients are treated and encouraged to bring their partners in for treatment but there is no formal partner notification procedure. When a new case is diagnosed, the provider sends a morbidity report to the HIV/STD Prevention & Care Branch at the State Division of Public Health where information on patient demographics and disease diagnosis is compiled for analysis.

Chlamydia cases for males are severely underreported and are of little use in estimating prevalence or incidence of disease. The data for females is better, although cases are still underreported and may be biased toward public clinics that are more likely to both screen and report cases found. Case information is collected in aggregate so it is possible for accidental duplicates to occur.

Chlamydia Trend Analysis

Chlamydia is predominantly found in younger age groups. For males, the highest rates are consistently found in the 20 to 29 age group followed by 13 to 19. For females the trend is reversed, with 13 to 19 year olds having the highest rates, followed by 20 to 29 year olds (Table Z-1, pg. 155). Both the number of cases reported and the age-specific rates for female 13 to 19 year olds have remained quite stable over the past five years, while the number of cases and rates for 20 to 29 year olds have been on the rise, with case reports increasing 31 percent from 1999 to 2003. This is most likely due to changing standards for screening. Prior to January 1, 2002, chlamydia screening of all asymptomatic women age 19 and under receiving care at publicly funded clinics was recommended. On that date the age was raised to 22 and then on July 1, 2002 it was raised again to women aged 24 and under. Correspondingly, both the number of women screened and the number of cases identified has increased in the 20 to 29 age group.

Chlamydia case reports reflect severe racial disparities that have remained relatively consistent over the past five years. The rates among black, non-Hispanic males are 9-10 times the rates for whites, and the rates for Hispanics are 4-5 times the rates for whites (Table Z-2, pg. 156).

The data for females, which are slightly more reliable, is nearly as severe, with black chlamydia rates 7-8 times higher than white rates, and American Indian/Alaska Native and Hispanic rates each 3-5 times higher. It is very likely that these disparities are due, at least in part, to screening and reporting bias.

Prevalence Data

Most county health departments do not have adequate laboratory facilities to process chlamydia tests and therefore must use the State Laboratory of Public Health in Raleigh. Information is collected on both positive and negative tests for estimating prevalence and for program evaluation. This data is subject to a certain degree of bias because it reflects testing that occurred only in publicly funded clinics and does not include the five counties with the largest health departments. Most of the women tested came to the clinic for family planning, prenatal, or other regular services and met the age criteria for screening. Around a fourth of the women tested came to the clinic for a medical problem (which could include STDs) or to request testing. Over 70 percent of the women screened were in the recommended age group of age 24 and under.

The overall prevalence of chlamydial infection among women tested under this program has declined over the past five years, from 8.0 percent to 5.7 percent (Table 41). The decline has occurred essentially across all age and racial groups. Each year, positivity remains highest among the 10 to 14 age group (11.2% in 1999 vs. 9.7% in 2003), then 15 to 19 (11.1% in 1999 vs. 9.0% in 2003), then 20 to 24 (8.3% in 1999 vs. 5.2% in 2003), and continues to drop with each older age group.

Racial disparities exist in the screening data but are not as severe as those posed in the data for reported cases. Over the past five years, the annual positivity rates for white and black females has declined steadily to 3.6 percent for whites and 9.6 percent for blacks in 2003. Despite these declines, the positivity rate for black females is consistently 2.6-2.7 times higher than the white positivity rate. To some extent this may be due to the fact that more black women use the publicly funded sites. As an example, in the census year of 2000, 70.6 percent of the females in North Carolina were white but only 53.4 percent of those screened for chlamydia at these public clinics were white, while 36.5 percent of tested patients were black even though they represented only 22.6 percent of the state female population. A more thorough study would be needed to determine if there could also be a genuine difference in prevalence among these different racial groups.

Table 41: Women tested for chlamydia in publicly funded clinics, 1999-2003

	1999	2000	2001	2002	2003
Women tested (N)	83,364	95,570	97,930	99,026	102,225
Positive (N)	6,572	6,963	6,433	5,991	5,764
Positive (%)	8.0	7.4	6.7	6.1	5.7

NGU and MPC

Nongonococcal urethritis (NGU) in males and mucopurulent cervicitis (MPC) in females are both clinical diagnoses of exclusion. Although the CDC does have a specific case definition for

MPC, in North Carolina it is not listed as a reportable disease. Rather, female NGU cases are recoded and listed as MPC in Table 39. The NGU case definition requires a certain set of physical symptoms to be present along with documented absence of infection with *N. gonorrhoeae*. This leaves the most likely cause of such infections as *C. trachomatis*. This diagnosis is often made locally without having to send samples to an outside lab for *C. trachomatis* testing. Antibiotics appropriate for chlamydia infection are most often used to treat the patient. However, there are other possible causes for NGU and MPC, making it inappropriate to group them with laboratory-confirmed cases of *C. trachomatis*.

There were 5,136 male cases of NGU reported in 2003 (Table 39). It is likely that a large number of these are actually unconfirmed chlamydia cases. In fact, the age and race distributions of male chlamydia and NGU cases are virtually identical. There were only 49 MPC cases reported, which may reflect the widespread use of chlamydia testing in females.

Gonorrhea

Gonorrhea Disease

Gonorrhea is the second-most commonly reported STD, behind chlamydia. Nearly all (approximately 95%) infected males experience symptoms, including discharge and burning on urination. Many women also experience symptoms, though they may be mild. Like chlamydia, untreated gonorrhea can cause severe damage to the female reproductive tract, including PID and infertility.

Gonorrhea Reporting

North Carolina law states that all cases of gonorrhea must be reported to the local health department within 24 hours. Laboratory confirmation of cases generally takes place at the local level and is reported directly to the local health department. Infected patients are treated and encouraged to bring their partners in for treatment, but there is no formal partner notification procedure. When a new case is diagnosed, a morbidity report is sent to the HIV/STD Prevention & Care Branch at the State Division of Public Health, where information on patient demographics and disease diagnosis is compiled for analysis.

Gonorrhea is often symptomatic in males and slightly less so in females. Females entering publicly-funded prenatal care, family planning, and STD clinics are screened for asymptomatic gonorrhea. Males are screened at STD clinics only. Since males are more likely to have symptoms that would bring them to the STD clinic, the gender bias in gonorrhea reporting is not as severe as that for chlamydia reporting. Required laboratory reporting may also reduce some private vs. public provider bias in reporting.

Public clinics and local health departments are more likely to screen for asymptomatic infection and may do a better job of reporting gonorrhea cases than private doctors. This may contribute to racial bias in the data because larger proportions of public patients than private clinic patients are minorities. Case information is collected in aggregate, so it is possible for accidental duplicates to occur.

Gonorrhea Trend Analysis

For most age, race, and gender groups, gonorrhea reports are on a steady decline (Table Z-3, pg. 157; Table Z-4, pg. 158). Among males, rates dropped 29 percent from 1999 to 2003; females experienced a similar decline of 22 percent. Decreasing rates among black males, Hispanic males and black females accounted for the largest decreases. Rates among white males and females were comparatively low in 1999 and did not change greatly over the five-year period. Because gonorrhea reporting is of reasonable quality (at least, compared to chlamydia reporting), it is safe to assume that, at least in part, this represents a true decline in incidence.

Gonorrhea is predominantly found in younger age groups, and the relative rates mirror the chlamydia trends with respect to age. For males, the highest rates are consistently found in the 20 to 29 age group, followed by 13 to 19; for females the trend is reversed, with 13 to 19 year olds having the highest rates followed, by 20 to 29 year olds (Table Z-3).

Overall rates for males are consistently a bit higher than the rates for females, and the male-to-female case ratio has remained stable at 1.1 to 1.0 for the last five years. In general, this would indicate a lack of large amounts of MSM transmission. However, examination of male and female trends by race and gender indicates that while the black male-to-female ratio of cases is around 1.2 each year, among whites and Native Americans there are actually more cases among females. This may indicate some MSM transmission of gonorrhea among black males or it may simply reflect some aspect of case detection or reporting. Detailed surveillance of rectal gonorrhea would assist in understanding this type of trend.

Gonorrhea case reports reflect severe racial disparities. The differences are most dramatic among males, where gonorrhea rates among blacks are 27-36 times higher than whites, rates for Native Americans (AI/AN) are about four to five times higher, and for Hispanics three to five times higher than whites (Figure 41). Among females, the trends are similar but less severe (note the scale on the two charts), with black rates 13-14 times higher than whites and Native American rates 4-6 times higher (Figure 42). Notably, the gonorrhea rates for Hispanic females are only slightly higher than white rates (Table Z-4, pg. 158). Rate ratios for Asian/Pacific Islanders (A/PI) are lowest of all for most years.

Figure 41: Gonorrhea Race Rate Ratios - Males, 1999-2003

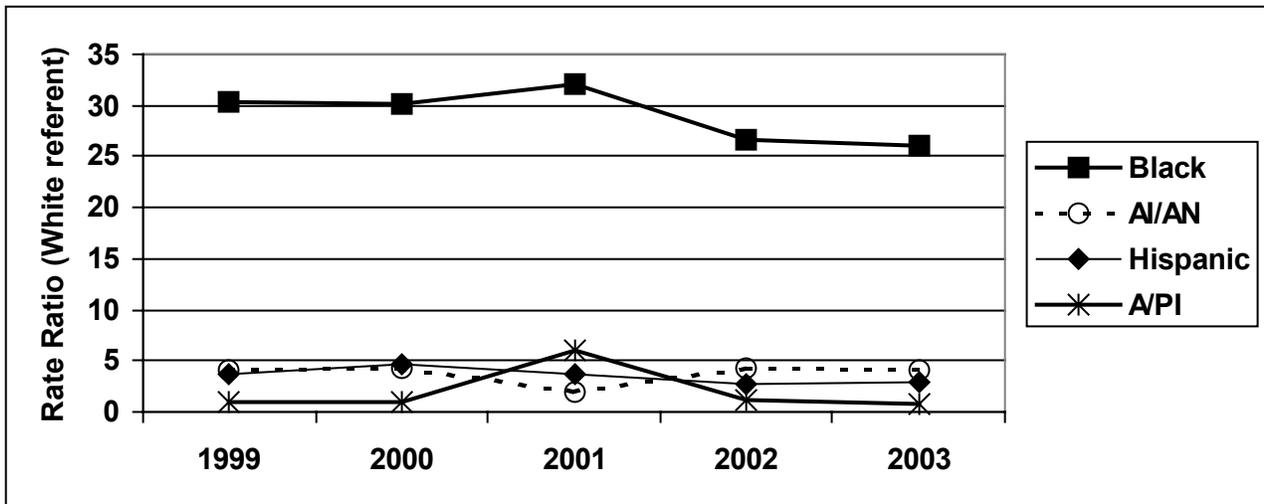
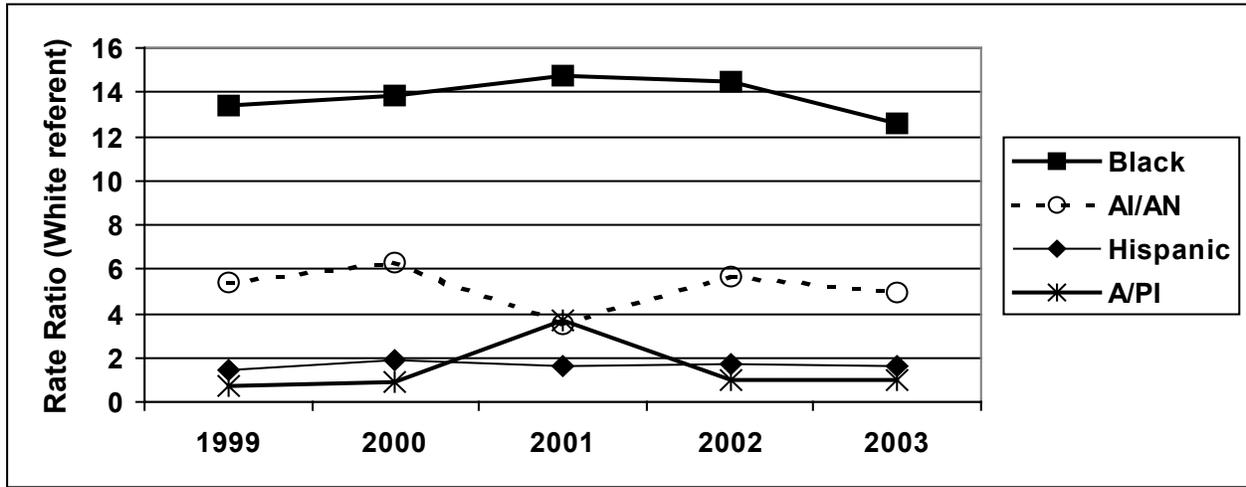


Figure 42: Gonorrhea Race Rate Ratios - Females, 1999-2003



Gonococcal Isolate Surveillance Project - GISP

GISP is a collaborative project between selected STD clinics, five regional laboratories, and the CDC. The project was established in 1986 to monitor trends in antimicrobial susceptibilities of strains of *N. gonorrhoeae* in the United States in order to establish a rational basis for the selection of gonococcal therapies. *N. gonorrhoeae* isolates are collected from the first 25 men with urethral gonorrhea attending STD clinics each month in 26 cities in the United States. The men are asked a number of behavioral questions, and the samples are tested for resistance to a variety of antibiotics. The project includes one site in North Carolina. From 1998-2001 the North Carolina site was located at Fort Bragg. Partway through 2002, the participating clinic was changed to Greensboro. The samples are collected from men who were going to have a gonorrhea test anyway, so the project does not artificially inflate gonorrhea reports from the site.

Over the five-year period from 1998-2002, GISP participants (n=513) have been primarily black (about 80% annually) and about 50 percent have been age 20 to 24. Approximately one quarter of the isolates tested exhibit resistance to penicillin and/or tetracycline.

Syphilis

Syphilis Disease

Syphilis is a complex disease with a natural history encompassing a number of different stages. When a syphilis case is identified, the stage must be determined and reported because the different stages have different implications for continued spread of the disease. Patients in the primary or secondary stages are the most likely to have noticeable symptoms and may present for treatment. They are also of the greatest concern for sexual transmission because they are the most infectious. Cases in the asymptomatic early latent stage may also be infectious to their sexual partners, although less so than primary or secondary cases. Such cases are generally found through screening or partner notification since the patient does not have symptoms. Primary, secondary and early latent stages all occur within the first year of infection and can be transmitted to sexual partners. Hence, they are often grouped together when discussing infectious syphilis and called ‘early syphilis.’

If a case progresses past the early latent stage, the person will move into late syphilis. There are several different ways to report late syphilis cases but, again, they may be grouped if the important distinction is that the cases were infected more than a year prior to diagnosis. Some patients with late syphilis will develop symptoms, while others will be detected through screening or partner notification. Patients of either sex are not likely to be infectious to their sexual partners beyond the early latent stage, but finding them is still important in terms of morbidity and care. In addition, females can pass the infection to their infants well past the early latent stage (congenital syphilis). In this report, patients reported with late syphilis of unknown duration, late latent syphilis, late syphilis with symptoms, or neurosyphilis are grouped together as 'late syphilis.' Congenital syphilis is reported separately.

Syphilis Reporting

North Carolina law states that all cases of syphilis must be reported to the local health department within 24 hours. However, syphilis testing and case diagnosis require multiple stages and can take several weeks. Each individual with a reactive syphilis test must be investigated thoroughly to determine (a) if the person is genuinely infected and, if so, (b) if the infection is new or failed treatment of an old infection, and, if new, (c) the stage of the disease. This investigation, conducted by local or regional health department personnel, can take days or weeks, and in some cases the patient is treated for a probable infection before the investigation is complete. Contact tracing and partner notification are also initiated for probable syphilis cases and often partner information can aid in diagnosing the stage of the infection. Laboratories are required to report certain positive test results to local health departments within 24 hours, speeding up this process by initiating investigations earlier. When a new case is diagnosed, a morbidity report is sent in to the HIV/STD Prevention & Care Branch at the state Division of Public Health, where information on patient names, demographics, and disease diagnoses are compiled for analysis.

Thorough contact tracing and partner notification activities greatly reduce bias in reporting by locating and reporting partners with asymptomatic infections that may not have been found otherwise. Due to the severity and comparative rarity of syphilis compared to other sexually transmitted diseases, it is believed that syphilis reporting, even from private providers, is quite good. Data on primary and secondary syphilis cases is particularly good because diagnosis of these stages of syphilis requires documentation of specific physical symptoms. Because syphilis cases are reported to the Division of Public Health by name, accidental duplicates in the database are unlikely.

Many latent cases of syphilis are asymptomatic and hence are found only through screening. This may bias latent syphilis case reporting toward groups that receive syphilis screening (pregnant women, jail inmates, others). It is also slightly more difficult to distinguish between the various latent stages of syphilis (early latent, late latent, latent of unknown duration) than primary and secondary, so the stage may be misdiagnosed in some cases.

Syphilis Elimination

The CDC examined 1998 data and determined that over 50 percent of all U.S. primary and secondary (P&S) syphilis cases were reported from just 28 counties. This concentration of disease and the fact that rates were at all-time lows provided an opportunity for the possible elimination of U.S. syphilis transmission. In 1999, CDC announced the beginning of The Syphilis Elimination Project (SEP), which provides funding to the 28 high-morbidity areas (HMAs) for enhancements in surveillance, outbreak response, clinical and laboratory services, health promotion and community involvement.

Nearly all of the 28 counties mentioned above include major cities and in most cases, a state has just one SEP county. North Carolina is the only state with more than two counties (we have five: Forsyth, Guilford, Mecklenburg, Robeson, and Wake). The State of North Carolina receives extra funding to prevent syphilis in these counties. The HIV/STD Prevention & Care Branch in the Division of Public Health coordinates many of the SEP activities and has several CDC assignees designated to the project. The team determined that a sixth county (Durham) should be included in the SEP work because syphilis is a significant problem there, even though it did not make the CDC list of 28.

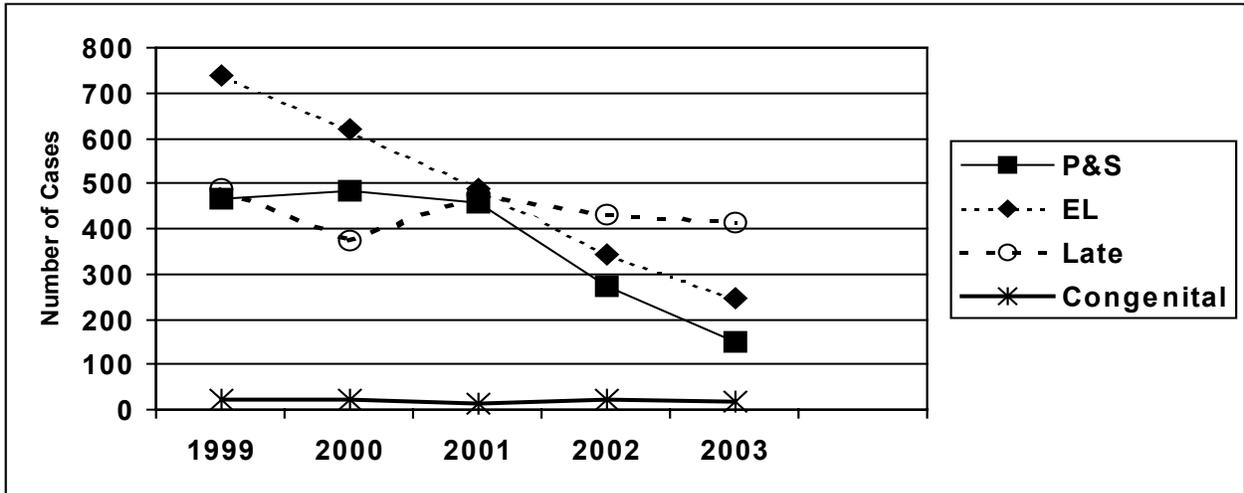
Syphilis Trend Analysis

Most reportable syphilis stages have seen a steady decline over the past five years (Figure 43). Specifically, primary/secondary syphilis rates declined 62.7 percent from 1999 to 2003. Early latent rates declined 65.6 percent and late syphilis rates declined 10.0 percent over the same period. Congenital syphilis rates remained essentially the same at about 20 cases per year.

In large part, the decline noted is likely due to the enhanced efforts of the Syphilis Elimination Project. The SEP focuses primarily on infectious syphilis, which may explain the fact that primary/secondary and early latent cases are dropping rapidly, while cases of late syphilis are declining only slowly. In addition, cases of congenital syphilis remain extremely stable. Again, this may be due to the fact that prevention efforts are focused on early syphilis, which can be transmitted via sexual contact. However, women with syphilis can transmit the infection to their newborns well after the early latent stage (potentially for up to 8 years). Syphilis testing is recommended for all pregnant women, so the continued presence of congenital syphilis in North Carolina reflects inadequacies in prenatal care. Continued declines in syphilis rates are expected as the SEP efforts continue for 2004-2005.

Syphilis cases in North Carolina are generally found in a much older population than that affected by gonorrhea and chlamydia. For the past five years (1999-2003), the highest rates of early syphilis (primary, secondary, and early latent syphilis) have been primarily found in the 30 to 39 age group (Table Z-5, pg. 159) for both males and females. The trend remains essentially the same when P & S syphilis and early latent syphilis are examined separately. Late syphilis cases also predominate in this age group.

Figure 43: Reported Syphilis Cases 1998-2002



Syphilis disproportionately affects minority communities. Syphilis rates for blacks, American Indians/Alaska natives, and Hispanics are up to 40 times higher than for corresponding white groups (Table Z-6, pg. 160). Syphilis reporting is generally very good, so it is unlikely that this is due to reporting or testing bias. Rather, a complex combination of health care access, poverty, racism, and the composition of sexual networks produces these differences in syphilis rates.

Figure 44 shows the relative early syphilis (PSEL) rates for males; Figure 45 shows the corresponding rate ratios for females. For males, the racial disparity in rates is much larger than for females (note the scale on the two charts), but the disparity for black and Hispanic men appears to be narrowing; the rates for black and Hispanic males are dropping faster than the rates for white males. The trend for American Indians/Alaska natives is less clear. There was a spike in 2001 due to an increase in cases from Robeson and Columbus counties, which have large Native American populations. However, even after the 2001 surge, the rate ratio for AI/AN males compared to white males still reflects an increase in disparity over 2000 and prior years.

The trend is the opposite for females. While syphilis rates for all of these groups have been on the decline, the racial disparity reflected in the rate ratios is on the rise for black, Hispanic, and most notably American Indian women. This is due to the fact that the rates among white females are dropping faster than rates among other groups. For example, the rate among white females dropped 84 percent from 1999 to 2003, while the rate for AI/AN dropped only 78 percent, widening the disparity between them.

Please note that some of the rate ratios in Figures 44 and 45 are based on very small numbers and may be unstable. Please see Table Z-6 for the actual rates.

All of the six Syphilis Elimination Project counties were among the top 10 counties in the number of cases reported in 2003 (Table Z-7, p.163). Five (all but Forsyth) accounted for 58.3 percent of the early syphilis cases reported in the state for 2003.

Figure 44: PSEL Syphilis Race Rate Ratios - Males, 1999-2003

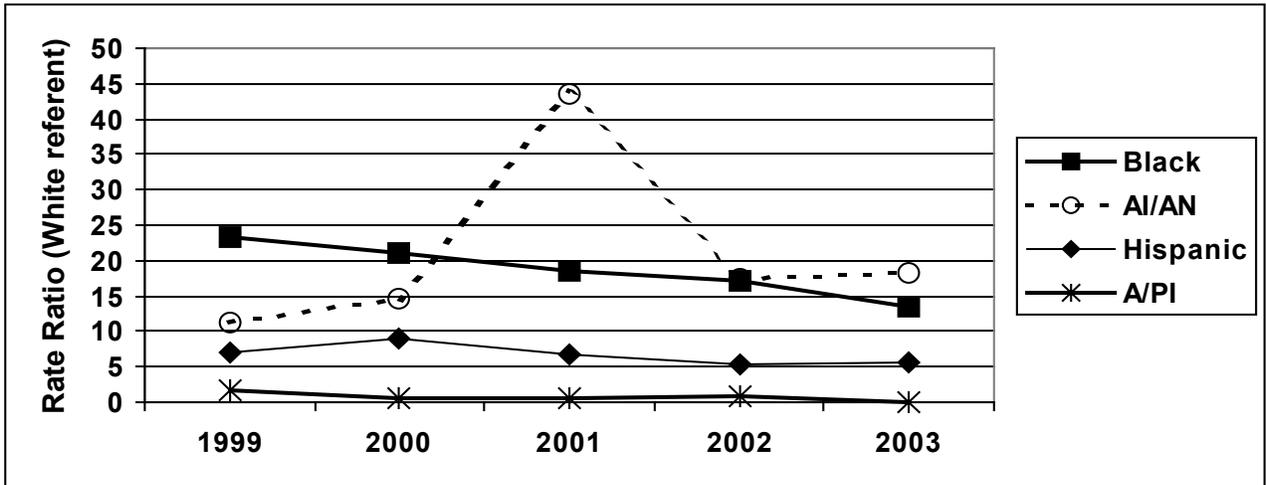
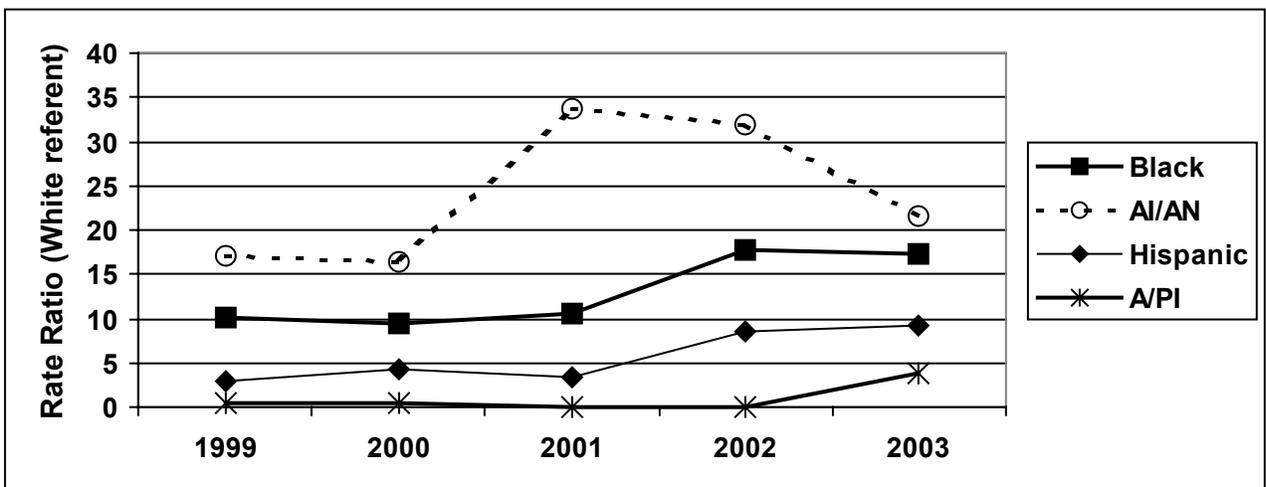


Figure 45: PSEL Syphilis Race Rate Ratios - Females, 1999-2003



Jail Syphilis Screening

As part of the Syphilis Elimination Project, syphilis screening was initiated in the seven county jails in the six SEP counties. Inmates are given counseling on syphilis and other STDs and blood is collected for screening by a nurse or trained phlebotomist. Data collection began in 2002. Preliminary analysis shows that screening is effective in locating cases. During 2003, the program screened 7,144 inmates (16% female). There were 275 seropositives which yielded 42 new cases of syphilis (the remainder were largely old cases and a small number of false positives). Male inmates have a PSEL syphilis rate 35 times the state rate and female inmates have a rate over 200 times the state rate (Table 42). Screening female inmates seems to have particular value, because females are more likely to be new cases, and even late syphilis cases pose a risk for congenital syphilis.

Table 42: Inmates Screened for Syphilis in SEP County Jails 1/1/03 – 12/31/03

	Male	Female	Total
Screened	5986	1158	7144
Seropositive	175 (2.9%)	100 (8.7%)	275 (3.9%)
New Cases			
PSEL	12	9	21
Late	19	2	21
Total	31	11	42
Jail PSEL (cumulative)			
Rate/100,000 screened	200.5	777.2	294.0
State PSEL (2003) rate*			
	5.8	3.8	4.8

*per 100,000 population

APPENDIX A: DATA SOURCES

Core HIV/AIDS surveillance

•HIV/AIDS surveillance

Overview: Diagnosis of AIDS became reportable in North Carolina in 1984 and diagnosis of HIV infection (name-based) was made reportable in 1990. By state law, morbidity reports of HIV and AIDS from health providers are submitted to local health departments on confidential case report forms and communicable disease report cards. Surveillance reports include demographic and clinical information for the patient as well as mode of exposure and vital status. These surveillance reports are forwarded to the state's HIV/STD Prevention & Care Branch, which maintains the data from the 100 counties in the electronic HARS (HIV/AIDS Reporting System) surveillance system. In addition to provider diagnoses of HIV and AIDS, laboratories that provide diagnostic services must also report HIV-positive results directly to the state.

Population: All persons who meet the CDC surveillance case definition for HIV infection or AIDS and who are reported to the North Carolina Division of Public Health.

Strengths: Morbidity surveillance data represent the most complete and comprehensive single source of information available about HIV infection and AIDS in the state. AIDS reporting is likely more complete than HIV reporting because of state-mandated laboratory reporting, which identifies AIDS cases that may not have been reported earlier as HIV cases.

Limitations: The data can only provide estimates of HIV infection because not all persons who are infected are tested and reported. Further, surveillance data alone may not provide reliable information about newly acquired infections because there may be significant delay between infection and testing.

•Enhanced perinatal surveillance

Overview: In 1999, the CDC received \$10 million from the U.S. Congress to fund perinatal HIV elimination efforts. These funds were distributed to various state and local health departments to fund prevention efforts, Enhanced Perinatal Surveillance, and professional education/training. North Carolina is funded as an Enhanced Perinatal Surveillance site.

Enhanced Perinatal Surveillance is a collection of information on HIV positive women and their perinatally exposed infants for babies born 1999-2003. For each mother-baby pair, demographic, as well as clinical, information is obtained from medical records, prenatal records, mother's HIV clinic records, labor and delivery records, the child's birth record, and the child's HIV clinic records. Enhanced Perinatal Surveillance also collects information on illicit drug use during pregnancy, antiretroviral use, reason for discontinuing antiretrovirals, mother's disease status, and type of delivery. Exposed children are followed until adequate laboratory information is available to classify them as infected or uninfected. Lab information for HIV-exposed infants in North Carolina is obtained from a central laboratory which processes most of the blood work for HIV-exposed infants.

Population: HIV-exposed children and their mothers in North Carolina

Strengths: Previous comparisons of the number of tests performed by this laboratory and the number of exposed infants derived from the SCBW data indicated a greater than 90 percent capture by this laboratory. Data collected by the Enhanced Perinatal Surveillance Project could be used to characterize recent trends in perinatal HIV/AIDS transmission and to identify maternal risk factors.

Limitations: Because some women may not know that they are HIV-positive, perinatal data may underestimate the number of HIV-exposed infants that are born each year. Women with little or no prenatal care may also not be recorded.

Behavioral Surveys

•BRFSS – Behavioral Risk Factor Surveillance System

Overview: BRFSS is a collaborative project of the Centers for Disease Control and Prevention (CDC) and U.S. states and territories. The BRFSS, administered and supported by CDC's Behavioral Surveillance Branch, is an ongoing data collection program designed to measure behavioral risk factors in the adult population 18 years of age or older living in households. The BRFSS was initiated in 1984, with 15 states collecting surveillance data on risk behaviors through monthly telephone interviews. The number of states participating in the survey increased so that by 2001, 50 states, the District of Columbia, Puerto Rico, Guam, and the Virgin Islands were participating in the BRFSS.

The survey is designed to include core sections (data collected by all participants), CDC-designed optional modules, and state-added questions. In 1999, North Carolina added its own questions to collect information on sexual assault and continued them through the 2002 survey. The proportion of adults reporting sexual assault within the last 12 months may represent a population at risk for HIV or STD infection as a result of these sexual exposures. In the 2001 survey only, a sexual behavior module was added that included questions on number of sexual partners and condom use. Data reported here can be found on the website for the State Center for Health Statistics at <http://www.schs.state.nc.us/SCHS/about/programs/brfss/index.htm>.

Population: Adults (age 18 and over) who are members of households with telephones (n = 6,748 for 2002, n=6,205 for 2001).

Strengths: The survey is well designed to attain a representative sample of North Carolina adults.

Limitations: The survey is generalizable only to North Carolinians with telephones. For the purpose of estimating populations at risk for HIV or STD infection, there are limitations to using the sexual assault data. The type of sexual assault is not described and information on condom use is not provided. Therefore not all reports may actually represent possible HIV/STD exposures. Likewise, the information on sexual partners does not indicate the gender of the partners or whether or not condoms were used. The condom-use questions should be interpreted with caution due to the inherent problem that those who report condom use are often a mixture of those at the very lowest risk (because they consistently use the condoms and are protected) and

those at the very highest risk (using condoms due to their high-risk behavior and possibly inconsistent condom use).

STD Surveillance

•Chlamydia case reporting

Overview: North Carolina law states that all cases of chlamydial infection must be reported to the local health department within 7 days. Laboratory confirmation of chlamydia cases takes place at a number of private labs; most public clinics send their samples to the State Laboratory of Public Health. Results are returned to the provider, who reports them to the local health department. Infected patients are treated and encouraged to bring their partners in for treatment, but there is no formal partner notification procedure. When a new case is diagnosed, the provider sends a morbidity report to the HIV/STD Prevention & Care Branch at the State Division of Public Health where information on patient demographics and disease diagnosis is compiled for analysis.

Population: All persons who meet the CDC surveillance case definition for chlamydial infection and who are reported to the North Carolina Division of Public Health.

Strengths: Well-established screening programs for young women attending public clinics do provide relatively good data about the prevalence of disease in this subpopulation.

Limitations: Chlamydia is often asymptomatic in both males and females. It is also a major cause of pelvic inflammatory disease (PID) in females and, for this reason, the N.C. Division of Public Health recommends that all sexually active young women (age 22 and under until July 2002; hereafter age 24 and under) should be screened for chlamydia during any pelvic exam. It is also recommended that all pregnant women should be tested for chlamydia as part of standard prenatal care. There are no comparable screening programs for young men. For this reason, chlamydia case reports are always highly biased with respect to gender. Public clinics and health departments may do a better job of conducting such screening programs and reporting cases, causing the reported cases to be biased toward young women attending public clinics.

•Gonorrhea case reporting

Overview: North Carolina law states that all cases of gonorrhea must be reported to the local health department within 24 hours. Laboratory confirmation of cases generally takes place at the local level and is reported directly to the local health department. Infected patients are treated and encouraged to bring their partners in for treatment, but there is no formal partner notification procedure. When a new case is diagnosed, a morbidity report is sent in to the HIV/STD Prevention & Care Branch at the state Division of Public Health, where information on patient demographics and disease diagnosis is compiled for analysis.

Population: All persons who meet the CDC surveillance case definition for gonorrhea infection and who are reported to the North Carolina Division of Public Health.

Strengths: Gonorrhea is often symptomatic in males and slightly less so in females. Females entering publicly-funded prenatal care, family planning, and STD clinics are screened for asymptomatic gonorrhea. Males are screened at STD clinics only. Since males are more likely to have symptoms that would bring them to the STD clinic, the gender bias in gonorrhea reporting is not as severe as that for chlamydia reporting. Required laboratory reporting may also reduce some private vs. public provider bias in reporting.

Limitations: Public clinics and local health departments are more likely to screen for asymptomatic infection and may do a better job of reporting gonorrhea cases than private doctors. This may contribute to racial bias in the data because larger proportions of public patients are minorities compared to private clinic patients. Case information is collected in aggregate, so it is possible for accidental duplicates to occur.

▪Syphilis case reporting

Overview: North Carolina law states that all cases of syphilis must be reported to the local health department within 24 hours. However, syphilis testing and case diagnosis require multiple stages and can take several weeks. Each individual with a reactive syphilis test must be investigated thoroughly to determine (a) if the person is genuinely infected and, if so, (b) if the infection is new or failed treatment of an old infection, and, if new, (c) the stage of the disease. This investigation, conducted by local or regional health department personnel, can take days or weeks. In some cases, the patient is treated for a probable infection before the investigation is complete. Contact tracing and partner notification are also initiated for all probable syphilis cases because often partner information can aid in diagnosing the stage of the infection. Laboratories are required to report certain positive test results to local health departments within 24 hours, speeding up this process by initiating investigations earlier. When a new case is diagnosed, a morbidity report is sent in to the HIV/STD Prevention & Care Branch at the state Division of Public Health where information on patient names, demographics, and disease diagnoses are compiled for analysis.

Population: All persons who meet the CDC surveillance case definition for syphilis infection and who are reported to the North Carolina Division of Public Health.

Strengths: Thorough contact tracing and partner notification activities greatly reduce bias in reporting by locating and reporting partners with asymptomatic infections that may not have been found otherwise. Due to the severity and comparative rarity of syphilis compared to other STDs, it is believed that syphilis reporting, even from private providers, is quite good. Data on primary and secondary syphilis cases is particularly good because diagnosis of these stages of syphilis requires documentation of specific physical symptoms. Because syphilis cases are reported to the Division of Public Health by name, accidental duplicates in the database are unlikely.

Limitations: Many latent cases of syphilis are asymptomatic and hence are found only through screening. This may bias latent syphilis case reporting toward groups that receive syphilis screening (pregnant women, jail inmates, others). It is also slightly more difficult to distinguish between the various latent stages of syphilis (early latent, late latent, latent of unknown duration) than primary and secondary, so the stage may be misdiagnosed in some cases.

Supplemental HIV/STD surveillance

•GISP – Gonococcal Isolate Surveillance Project

Overview: GISP is a collaborative project between selected STD clinics, five regional laboratories, and the CDC. It was established in 1986 to monitor trends in antimicrobial susceptibilities of strains of *N. gonorrhoeae* in the United States in order to establish a rational basis for the selection of gonococcal therapies. *N. gonorrhoeae* isolates are collected from the first 25 men with urethral gonorrhea attending STD clinics each month in 26 cities in the United States. The men are asked a number of behavioral questions and the samples are tested for resistance to a variety of antibiotics. The project includes one site in North Carolina. From 1998-2001 the North Carolina site was located at Fort Bragg. Partway through 2002, the participating clinic was changed to Greensboro.

Population: Ongoing sample of up to 25 men per month from the STD clinic at Fort Bragg, N.C., later Greensboro, N.C. (n=513 from 1998-2002).

Strengths: Random sampling design allows for good estimates of target population. The samples are collected from men who were going to have a gonorrhea test anyway, so the project does not artificially inflate gonorrhea reports from the site.

Limitations: The survey covers a relatively small sample of men from one specific clinic on a military base. Behavioral survey results likely can not be generalized to other populations in the state.

•PCRS - Partner Counseling & Referral Services

Overview: The HIV/STD Prevention & Care Branch's Field Services Unit has responsibility for conducting patient interviews of persons newly diagnosed with HIV or syphilis. The interviews are conducted to counsel patients on prevention of subsequent risk, to assist with referrals for treatment and services, and to help with partner notification. Information is collected on clinical status and treatment, patient demographics, and detailed mode of exposure risk. The information is maintained in local STD-MIS. Information is limited to interviewed patients. It is estimated that 98 percent of syphilis cases and 85-90 percent HIV cases are interviewed.

Population: Persons interviewed by Field Services staff as part of HIV or syphilis case follow-up or partner notification

Strengths: A high proportion of new cases are interviewed, so it is likely that the data accurately represent the infected population as a whole.

Limitations: Does not represent all newly infected individuals, as not every person infected is tested and reported. The level of risk information available varies from case to case, so there are limitations in comparing risk among the cases.

HIV Counseling & Testing Data

•CTS - Counseling and Testing System

Overview: The North Carolina Division of Public Health provides funds for HIV counseling and testing (CTS) at 149 sites across the state. These include 135 traditional test sites (TTS) in local health departments and CBOs and 13 nontraditional test sites (NTS). NTS sites were added to the program in response to community concerns in order to remove barriers to HIV testing when anonymous testing was removed in North Carolina in 1997. NTS sites, most often located in CBOs and sometimes through extended health department hours, have a goal of reaching different populations than those served by traditional testing sites (TTS). The CTS collects information on counseling and testing services delivered, client demographics, insurance, risk factor information, and reasons for testing. No personal identifying information is collected.

Population: All clients who receive confidential HIV testing services at a publicly funded counseling and testing site in North Carolina. (In 2003, 107,630 tests were performed in publicly funded sites.)

Strengths: CTS covers all publicly funded clinics in the state and is the only population-level source of information on negative HIV tests. Data on test results is particularly good in North Carolina because the State Laboratory receives the data sheet with each specimen and enters results directly into the database. In other states, results must be sent back to the original HIV counselor before the data sheet is sent in, which can lead to errors and underreporting.

Limitations: CTS covers only publicly funded clinics and therefore does not reflect all the HIV tests done in the state. In fact, only about 40 percent of new HIV cases reported to the state come from the CTS. Estimation of statewide seroprevalence is not possible because clients are either self-selected for HIV testing or agree to testing after presentation to a counselor at a CTS site. Data are collected without names, making it difficult to check for duplicates in the database. Although clients are asked whether or not they have been tested before, the validity of these responses and other self-reported data is questionable.

Substance Abuse Data

•NHSDA – National Household Survey of Drug Abuse

Overview: This annual survey has been conducted by the Federal Government since 1971 to provide information on trends in illicit drug use among the general U.S. population. The survey is administered by SAMHSA (the Substance Abuse and Mental Health Services Administration). Non-institutionalized persons over age 12 are interviewed using CAPI (Computer Assisted Personal Interview) technology, in which survey responses are recorded directly into the computer. A trained interviewer is present to assist with the computer but does not know the responses given. The survey is designed to be large enough to provide estimates for each of the 50 states and the District of Columbia. Youth and young adults are over-sampled.

Population: Non-institutionalized U.S. population age 12 and older. The 2002 survey interviewed 68,126 people in 50 states. The survey includes persons living in households, dormitories, shelters, civilians on military bases, and other group quarters. The survey excludes

persons institutionalized in jails, prisons, and hospitals; active military personnel; and homeless persons who do not use shelters.

Strengths: This is a large survey specifically designed to provide state-level estimates for all 50 states. The use of CAPI technology reduces bias by decreasing the chance that subjects will provide socially desirable responses to please the interviewer.

Limitations: Many of the excluded populations are also those populations at risk for HIV infection.

Vital Statistics Data

▪Birth and Death Data

Overview: All births, deaths, fetal deaths, marriages, and divorces that occur in North Carolina are reported to the state. The process involves a statewide system of hospitals, funeral directors, registers of deeds, local health department staff, and others who register vital events. Statewide vital events are registered and maintained by the Vital Records Unit of the Division of Public Health. Vital Records staff code information according to specific guidelines in order to produce statistical data that subsequently are used to characterize specific areas such as infant mortality and communicable disease. Reporting of deaths is nearly 100 percent complete. Death information includes the cause and underlying causes of death, but some causes of deaths, including HIV/AIDS, may be under-reported.

Population: All births and deaths reported to the North Carolina DHHS.

Strengths: Reporting of deaths is nearly 100 percent complete.

Limitations: Some causes of death, including those associated with HIV/AIDS, may be under-reported.

▪Abortion Data

Overview: Beginning in 1978, abortion providers in the state of North Carolina began voluntarily reporting abortion data to the State Center for Health Statistics. Reports include demographics and basic medical information on the mothers, but no identifying information. Many sites report 100 percent of the procedures they perform. For those sites unable to report 100 percent, data are extrapolated from the cases they do report. Abortions provided for North Carolina residents are also reported by providers in other states, the largest number coming from those states directly bordering North Carolina.

The information reported here can be found at the State Center for Health Statistics website in the publication “Reported Pregnancies 2002” at <http://www.schs.state.nc.us/SCHS/data/pregnancies/2002/>.

Population: Abortions performed on North Carolina state residents, 2002.

Strengths: Because no patient-identifying information is reported, providers do not need to worry about confidentiality and therefore may be more inclined to report all of their cases accurately.

Limitations: Data are reported voluntarily and sometimes at less than 100 percent. Therefore, it is safe to assume that the numbers reported are an underestimate of the true number of abortions. There are limitations to using this data for the purpose of estimating a heterosexual population at risk for HIV and other STDs. The data does not include information on the number of sexual partners, condom use, or other risk factors.

▪PRAMS – Pregnancy Risk Assessment Monitoring System

Overview: The North Carolina PRAMS survey is a random sample (n = 7,935) of live births for the period 1997-2001. Women were contacted by mail 2-6 months after delivery. If there was no response to the initial mailing, two more mailings and ultimately phone interviews were attempted (overall survey response rate = 75%). The women were asked questions about their behavior during and after pregnancy, the intention and timing of their pregnancy, and demographic information.

Some of the data referenced in this report was reported in the publication “Unintended Pregnancies in North Carolina: Results from the North Carolina PRAMS Study” by Kevin H. Gross, Ph.D. at the North Carolina State Center For Health Statistics. The report covers 1997-2000 data and can be found at the website for the State Center for Health Statistics:

<http://www.schs.state.nc.us/SCHS/pubs/topic.cfm>

Other data come directly from the 2001 tables recently published at the State Center at:

<http://www.schs.state.nc.us/SCHS/prams/2001/>

Population: Mothers who had given birth to a live infant in North Carolina during 1997-2001 (random sample n=7,935).

Strengths: This is a well-designed survey with questions specifically designed to estimate the proportion of pregnancies that were mistimed or unwanted. All pregnancies represent unprotected heterosexual sex. However, not all such sexual activities are among high-risk partners. Mistimed or unwanted pregnancies are a reasonable proxy for unprotected, heterosexual sex that was not intended to produce a pregnancy, which may represent a population at risk for HIV and other STDs.

Limitations: There are limitations to using this data for the purpose of estimating a heterosexual population at risk for HIV and other STDs. The data does not include information on the number of sexual partners, condom use, or other risk factors.

Population Data

▪U.S. Census Bureau

Overview: For the purpose of allocating congressional seats, the U.S. Census Bureau completes an official enumeration of the national population every 10 years. The most recent census (used for denominator data in this report) was conducted in April, 2000. Questionnaires were sent to all U.S. households, most often by mail but in some cases in person by Census personnel. One in six households was sampled to receive the Census 'Long Form' which has social, economic, and housing questions in addition to seven basic questions including gender, age, race and ethnicity of all household members. The remaining five to six of households receive the 'Short Form' with just the seven basic questions. Making questionnaires available in different languages, advertising campaigns, and canvassing door-to-door are employed to increase the census count. The final response rate for the entire U.S. population was 67 percent. Tables and information can be obtained from the Census Bureau's Web site (www.census.gov), the N.C. Lookup web site (<http://census.osbm.state.nc.us/lookup/>), NC LINC (<http://linc.state.nc.us>) and from the N.C. State Data Center <http://sdc.state.nc.us/>.

Population: U.S. population as of April, 2000

Strengths: Denominator data on gender, age, race and ethnicity data are highly reliable because the Census attempts to collect this information on every person in the U.S. The 2000 census marked the first time that the mail-in response rate had improved over the previous census.

Limitations: Because the response rate is not 100 percent, the data from the non-responders will have to be estimated using data from those who did respond. Certain groups may be more likely not to respond and, therefore, may be under-represented in the final counts. Such groups include those who speak and read languages other than English, those with unstable or no housing, and illegal immigrants who may avoid contact with Census personnel.

▪N.C. State Data Center Demographics Unit

Overview: The North Carolina State Data Center is a network of state and local agencies that provide information and data about the state and its component geographic areas. Besides maintaining all the decennial and economic census products, the State Data Center receives many other data products from various federal, state, and private agencies. The State Demographics unit is primarily responsible for producing population estimates and projections. County and state population projections, available by age, race (white/other) and sex, are used for long-range planning. To produce these estimates and projections, the unit develops and enhances complex mathematical computer models and collects and reviews a variety of data from federal, state, and local government sources. It annually surveys North Carolina municipalities for annexation data, municipalities and counties for selected institutional data, and military bases for barracks population data. As a member of the Federal State Cooperative Program for Population Estimates (FSCPE), the unit collects and examines data for the Census Bureau and reviews Census Bureau estimates and methods. Data are available at <http://demog.state.nc.us/>.

Population: North Carolina State population, all years.

Strengths: Population growth estimates are calculated for age, gender and racial groups based on a wide variety of data sources.

Limitations: Projections for racial groups are made available only for whites and non-whites. Projections become less and less reliable the farther they are away from the last census year; denominator data early in the decade is generally more accurate than data towards the end of the decade.

▪Kaiser Family Foundation: State Health Facts Online

Overview: The Henry J. Kaiser Family Foundation (KFF) is an independent philanthropy focusing on the major health care issues facing the nation. The KFF provides information and analysis on a broad range of policy issues, emphasizing those that most affect low-income and vulnerable populations. Data presented on State Health Facts Online are a selection of key health and health policy issues collected from a variety of public and private sources, including original Kaiser Family Foundation reports, data from public websites, and information purchased from private organizations. Information is available at <http://www.statehealthfacts.kff.org/>.

Population: Various.

Strengths: Data are synthesized from a number of different sources and made available in easy-to-use format.

Limitations: Specifics on each data source are sometimes difficult to obtain.

Ryan White Care Act Data

Overview: In 1990, Congress enacted the Ryan White CARE Act to provide funding for states, territories and eligible metropolitan areas (EMAs) to offer primary medical care and support services for persons living with HIV disease who lack health insurance and financial resources for their care. Congress reauthorized the Ryan White CARE Act in 1996 and in 2000 to support Titles I-IV, Special Projects of National Significance (SPNS), the HIV/AIDS Education Training Centers and the Dental Reimbursement Program, all of which are part of the CARE Act. Title program support varies from state to state depending on program requirements and mandates. Data are available about services provided.

Population: All persons who received Ryan White Care Act funded services.

Strengths: One of the few aggregate sources of care and service information for HIV-infected persons and persons affected by HIV (i.e., family members) that covers the entire state.

Limitations: Current information is based on the summation of annual Care Act Data Reports (CADR) that each consortia or provider receiving funding is required to complete. Because persons can be served by more than one provider or service organization, there is duplication within the summary data. Currently only Title II funded agencies are required to report service

provided to the state; others (Titles III, IV, etc.) report directly to HRSA. Thus, the care and service information is incomplete at the state level. In order to better monitor access to Ryan White services and assist projects with required reporting, a computer software program, CAREWare, has been recently provided to each consortium by HRSA. At its core, CAREWare collects and stores data for completion of the annual Care Act Data Report (CADR). Moreover, CAREWare is a tool used to move programs beyond mere data reporting and into information management and continuous quality improvement (CQI). Using the various components of CAREWare allows programs to monitor a number of clinical and psychosocial indicators in a way that satisfies both CQI initiatives as well as CADR requirements.

APPENDIX B: SPECIAL NOTES

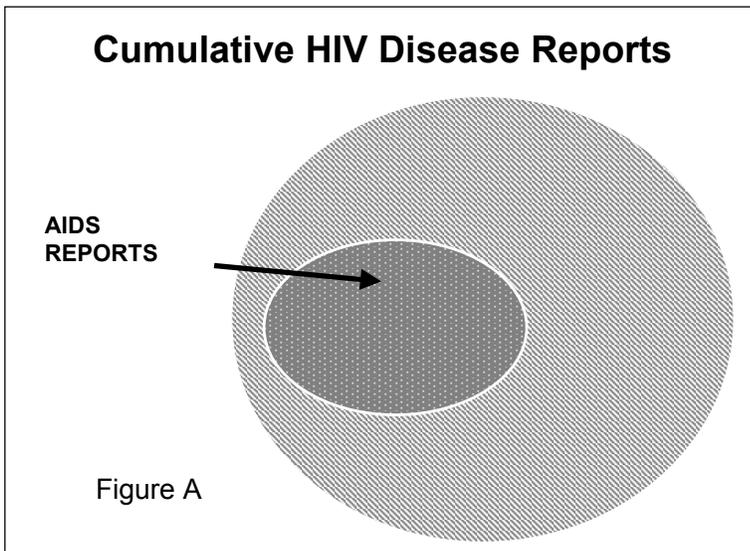
- **HIV Disease**
- **HIV Risk Categories and Distribution**
- **Rate Calculation and Denominator Determination**

HIV DISEASE

“HIV disease” is a term that includes all persons infected with HIV regardless of their stage of disease. Infected persons are counted by the date on which this infection was first diagnosed and reported. Most persons are first diagnosed with just an HIV infection and are reported again later with AIDS. However, some persons are diagnosed with HIV and AIDS at the same time. All of these persons are counted in the description of the HIV epidemic by that date of first report and referred to as “HIV disease” cases. Using the “HIV disease” definition to describe the epidemic over time in North Carolina enables the most comprehensive look at the epidemic because all infected individuals are counted. AIDS cases, on the other hand, include only HIV

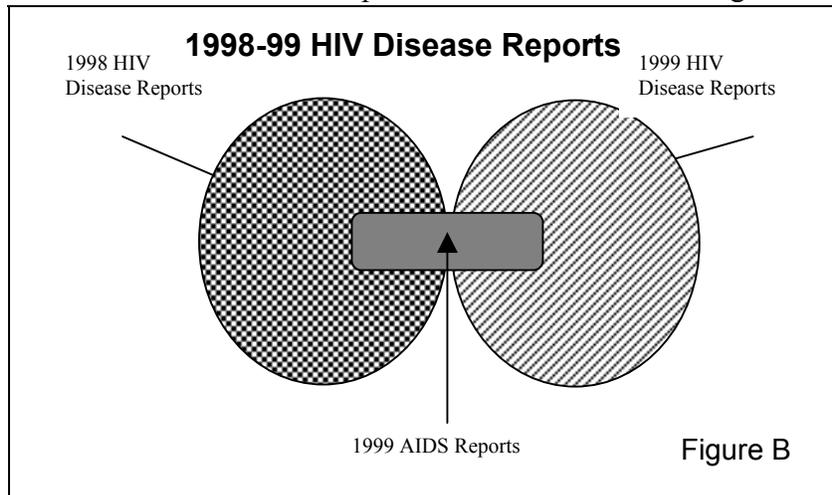
disease cases that also have an AIDS diagnosis; they are counted by the date of report for an AIDS diagnosis. As a general rule, AIDS case descriptions are used to define treatment and care needs, while HIV disease is used to describe the epidemic.

Thus, for our discussion in this profile, “HIV disease” references all reports by date of *first report for the individual*. For most “HIV disease” reports, this new report date is determined from the date of an HIV infection report, but for some reports



it is based on the date of report for an AIDS diagnosis because the infected individual was never reported with an HIV infection without an AIDS-defining condition present. The first report for that person was an AIDS diagnosis and represented a new incidence case of an HIV-infected individual at that time. “HIV disease” also includes early surveillance reports of individuals when AIDS surveillance was the only reporting of infected individuals (all reports before 1990); these reference the AIDS report date. The reference of age for “HIV disease” is based upon the

age at the diagnosis of first report. The discussion of AIDS cases is essentially a subset of HIV disease reports since by definition all AIDS reports are included, but the report date is different for the two. See Figures A and B for a visual representation of HIV disease and AIDS reports categories. For AIDS reports, the date of report is based upon when the person was reported *with an AIDS*



diagnosis (usually a later date than date of first report). The reference of age will also be different, based on the age when the AIDS diagnosis was made. AIDS cases are presented in the

same way as they have been presented in earlier surveillance publications. Some AIDS information may be presented by the date of diagnosis rather than by the date of report. When this occurs, it will be labeled as such.

HIV RISK CATEGORIES AND DISTRIBUTION

The assignment to individual cases of HIV risk or mode of transmission is hierarchical. This hierarchy was developed by the CDC and others based on information about the epidemic during early investigations. All possible risk information is collected for each case and a single risk for the case is assigned. This does not mean that the HIV transmission is known to have occurred via the risk assigned for a single case, but implies a likely mode of transmission based on the hierarchical risk. It is important for readers to understand that this assigned risk or mode of transmission is not absolute. Additionally, some problems with the risk assignment have been noted. First, the hierarchy was developed using methodologies formed early in the epidemic and may under- or over-represent certain groups because the epidemic has evolved since the early years. Second, not all cases are reported with adequate information to assign risk. In this profile, we have attempted to deal with both of these issues.

Many HIV disease cases are classified as non-identified risk (NIR) cases not because of missing or incomplete information, but because reported risks do not meet one of the CDC-defined (hierarchical) risk classifications. In North Carolina, this occurs frequently with female cases (and some male cases) whose only known exposure is through heterosexual contact. The CDC hierarchical definition for “heterosexual contact” requires that the index cases know their partners’ HIV status or risk for HIV. Without knowing their partners’ HIV status, these cases are categorized as NIR cases. We have reevaluated and reassigned some of these cases to a “presumed heterosexual” risk category based on information from field services follow-up interviews with newly diagnosed individuals such as the exchange of sex for drugs or money, previous diagnoses with other STDs, or multiple sexual partners. Including these reassigned NIR cases as likely heterosexual transmission cases gives a more accurate picture of HIV disease in the state.

Even with this reassignment of cases to “presumed heterosexual contact” we have a group of cases with insufficient information to assign risk. These remaining NIR cases do not appear to differ substantially from the overall risk profile of all HIV disease cases. To simplify the discussion and better describe the overall changes over time, these remaining NIR cases have been assigned to a risk category based on the proportionate representation of the various risk groups within the surveillance data. This reassignment is done separately for males and females because risk differs for each sex.

For example, if 20 of 100 male cases do not have risk information (NIR), proportions are calculated for the remaining HIV disease cases and the proportions are applied to those with unknown risk. Of the 80 males cases with risk, 60 percent (48/80) were MSM, 5 percent (4/80) were IDU, 2.5 percent (2/80) were MSM/IDU, and 32.5 percent (26/80) were heterosexual contact. These fractions are then applied to the 20 NIR cases. For MSM, $20 * (.60) = 12$. Thus, 12 of the 20 NIR cases are reassigned to MSM. For heterosexual contact, $20 * (.325) = 6.5$ or 7 (rounded). Thus, 7 of 20 NIR cases are assigned to heterosexual contact. This process is complete for each risk group. This example is

fairly simple and only an illustration of how the risk is reassigned for NIR cases. Actual reassignment takes into account the differences of racial/ethnic distributions for each risk group as well.

RATE CALCULATION AND DENOMINATOR DETERMINATION

Rates are presented throughout the *Profile* for several categories of race/ethnicity, age groups and gender. Rates are also presented for counties and regions across the state. Rates are expressed as cases per 100,000 population. Unless noted, all rate denominators were derived for the referenced year using bridged-race category estimates for North Carolina available from the National Center for Health Statistics. Estimates for 2003 were not available at press time; thus rates for 2003 were calculated using 2002 estimates. The bridged-race estimates of the resident population are based on Census 2000 counts. These estimates result from bridging the 31 race categories used in Census 2000, as specified in the 1997 Office of Management and Budget (OMB) standards for the collection of data on race and ethnicity, to the four race categories specified under the 1977 standards. More information about bridged-race categories is available at their website, <http://www.cdc.gov/nchs/about/major/dvs/popbridge/popbridge.htm>.

In general, rates should be viewed with caution. This is especially true of rates that are based on small numbers of cases (generally fewer than 20) because these rates have large standard errors and confidence intervals that can be wider than the rates themselves. Thus, it is important to keep in mind that rates based on small numbers of cases should be considered unreliable. For a more complete discussion of rates based on small numbers, please see the North Carolina Center for Statistics' publication, Statistical Primer No.12 : "Problems with Rates Based on Small Numbers" by Paul Buescher. This publication is available at the website, <http://www.schs.state.nc.us/SCHS/>. In order to better describe county rates for HIV disease, the county rankings for HIV disease, pages 116 and 117, are based on three-year averages. This helps improve the reliability of rates for counties with small numbers of cases and provides a better comparison.

TABLES

**Table A: North Carolina HIV Disease Reports
Gender and Age, 1999-2003**

Age	Year														
	1999			2000			2001			2002			2003		
	Cases	Pct	Rate*												
Male															
00-12 Years	2	0%	n/a	4	0%	n/a	1	0%	n/a	4	0%	n/a	4	0%	n/a
13-19 Years	13	1%	3.4	24	2%	6.2	12	1%	3.1	32	2%	8.0	23	1%	5.8
20-29 Years	188	12%	30.9	190	13%	31.2	236	15%	38.7	243	14%	39.7	253	12%	41.3
30-39 Years	435	28%	68.9	355	24%	56.0	389	24%	60.7	419	25%	65.1	480	23%	74.6
40-49 Years	283	18%	48.9	264	18%	44.8	325	20%	53.8	334	20%	54.4	458	22%	74.6
50+ Years	114	7%	11.8	121	8%	12.3	132	8%	13.0	142	8%	13.6	229	11%	22.0
Total	1035	68%	26.6	958	66%	24.2	1095	69%	27.2	1174	69%	28.8	1447	69%	35.5
Female															
00-12 Years	2	0%	n/a	5	0%	0.7	0	0%	0.0	5	0%	0.7	4	0%	n/a
13-19 Years	27	2%	7.5	17	1%	4.6	23	1%	6.2	18	1%	4.8	34	2%	9.0
20-29 Years	120	8%	21.0	127	9%	22.5	123	8%	21.8	126	7%	22.3	149	7%	26.4
30-39 Years	180	12%	28.6	179	12%	28.4	200	13%	31.5	183	11%	28.8	201	10%	31.6
40-49 Years	124	8%	20.5	110	8%	17.9	100	6%	15.9	133	8%	20.8	189	9%	29.6
50+ Years	45	3%	3.7	58	4%	4.7	53	3%	4.2	66	4%	5.1	76	4%	5.9
Total	498	32%	12.3	496	34%	12.0	499	31%	11.9	531	31%	12.5	653	31%	15.4
Total															
1999	Cases	Pct	Rate*												
2000	4	0%	n/a	9	1%	0.6	1	0%	n/a	9	1%	0.6	8	0%	0.5
2001	40	3%	5.4	41	3%	5.4	35	2%	4.6	50	3%	6.4	57	3%	7.3
2002	308	20%	26.1	317	22%	27.0	359	23%	30.6	369	22%	31.3	402	19%	34.1
2003	615	40%	48.8	534	37%	42.3	589	37%	46.1	602	35%	47.0	681	32%	53.2
1999	407	27%	34.4	374	26%	31.1	425	27%	34.4	467	27%	37.3	647	31%	51.7
2000	159	10%	7.3	179	12%	8.1	185	12%	8.1	208	12%	8.9	305	15%	13.1
2001	1533	100%	19.3	1454	100%	18.0	1594	100%	19.4	1705	100%	20.5	2100	100%	25.2

*per 100,000 population

**Table B: North Carolina HIV Disease Reports
Gender and Race/Ethnicity, 1999-2003**

Race/ Ethnicity	Year														
	1999			2000			2001			2002			2003		
	Cases	Pct	Rate*												
Male															
White**	292	19%	10.5	246	17%	8.8	272	17%	9.6	334	20%	11.7	448	21%	15.7
Black**	691	45%	84.8	660	45%	79.7	755	47%	89.7	759	45%	88.8	892	42%	104.3
Am. Ind./AN**	10	1%	20.9	9	1%	18.2	11	1%	21.9	10	1%	19.7	11	1%	21.6
Asian/PI**	5	0%	9.0	3	0%	n/a	6	0%	9.2	8	0%	11.5	13	1%	18.7
Hispanic	37	2%	18.9	40	3%	17.4	50	3%	20.5	60	4%	23.2	79	4%	30.5
Unknown	0	0%	-	0	0%	-	1	0%	-	3	0%	-	4	0%	-
Total	1035	68%	26.6	958	66%	24.2	1095	69%	27.2	1174	69%	28.8	1447	69%	35.5
Female															
White**	84	5%	2.9	83	6%	2.8	82	5%	2.8	75	4%	2.5	108	5%	3.6
Black**	398	26%	43.2	400	28%	42.8	394	25%	41.5	418	25%	43.5	499	24%	51.9
Am. Ind./AN**	7	0%	13.9	3	0%	n/a	6	0%	11.4	4	0%	n/a	5	0%	9.4
Asian/PI**	1	0%	n/a	1	0%	n/a	4	0%	n/a	4	0%	n/a	7	0%	9.5
Hispanic	8	1%	6.1	9	1%	5.8	13	1%	7.7	30	2%	16.2	34	2%	18.3
Unknown	0	0%	-	0	0%	-	0	0%	-	0	0%	-	0	0%	-
Total	498	32%	12.3	496	34%	12.0	499	31%	11.9	531	31%	12.5	653	31%	15.4
Total															
Total															
White**	376	25%	6.6	329	23%	5.8	354	22%	6.1	409	24%	7.0	556	26%	9.6
Black**	1089	71%	62.7	1060	73%	60.2	1149	72%	64.2	1177	69%	64.8	1391	66%	76.6
Am. Ind./AN**	17	1%	17.3	12	1%	11.9	17	1%	16.6	14	1%	13.5	16	1%	15.4
Asian/PI**	6	0%	5.2	4	0%	n/a	10	1%	7.4	12	1%	8.4	20	1%	14.0
Hispanic	45	3%	13.8	49	3%	12.8	63	4%	15.2	90	5%	20.2	113	5%	25.4
Unknown	0	0%	-	0	0%	-	1	0%	-	3	0%	-	4	0%	-
Total	1533	100%	19.3	1454	100%	18.0	1594	100%	19.4	1705	100%	20.5	2100	100%	25.2

*per 100,000 population

**White= White, non Hispanic; Black= Black or African American, non Hispanic; Am. Ind./AN= American Indian/Alaskan Native, non Hispanic; Asian/PI= Asian/Pacific Islander, non Hispanic

**Table C: North Carolina HIV Disease Reports
Mode of Transmission by Gender, 1999-2003**

Mode of transmission	Year															
	1999			2000			2001			2002			2003			
	Cases	Pct.		Cases	Pct.		Cases	Pct.		Cases	Pct.		Cases	Pct.		
Male																
MSM*	381	36.8%		363	37.9%		404	36.9%		498	42.4%		615	42.5%		
IDU*	132	12.8%		99	10.3%		88	8.0%		99	8.4%		90	6.2%		
MSM/IDU*	60	5.8%		26	2.7%		33	3.0%		21	1.8%		34	2.3%		
Blood Products*	17	1.6%		18	1.9%		10	0.9%		17	1.4%		22	1.5%		
Heterosexual- CDC	117	11.3%		134	14.0%		171	15.6%		113	9.6%		136	9.4%		
Heterosexual- NIR*	74	7.1%		81	8.5%		147	13.4%		153	13.0%		144	10.0%		
Pediatric	2	0.2%		4	0.4%		1	0.1%		4	0.3%		4	0.3%		
NIR*	252	24.3%		233	24.3%		241	22.0%		269	22.9%		402	27.8%		
Total	1,035	100%		958	100%		1,095	100%		1,174	100%		1,447	100%		
Female																
IDU*	64	12.9%		59	11.9%		43	8.6%		28	5.3%		45	6.9%		
Blood Products*	16	3.2%		16	3.2%		21	4.2%		13	2.4%		23	3.5%		
Heterosexual- CDC	208	41.8%		205	41.3%		198	39.7%		196	36.9%		200	30.6%		
Heterosexual- NIR*	45	9.0%		84	16.9%		104	20.8%		119	22.4%		129	19.8%		
Pediatric	3	0.6%		5	1.0%		0	0.0%		5	0.9%		4	0.6%		
NIR*	162	32.5%		127	25.6%		133	26.7%		170	32.0%		252	38.6%		
Total	498	100%		496	100%		499	100%		531	100%		653	100%		
Total																
MSM*	381	24.9%		363	25%		404	25.3%		498	29.2%		615	29.3%		
IDU*	196	12.8%		158	10.9%		131	8.2%		127	7.4%		135	6.4%		
MSM/IDU*	60	3.9%		26	1.8%		33	2.1%		21	1.2%		34	1.6%		
Blood Products*	33	2.2%		34	2.3%		31	1.9%		30	1.8%		45	2.1%		
Heterosexual- CDC	325	21.2%		339	23.3%		369	23.1%		309	18.1%		336	16.0%		
Heterosexual- NIR*	119	7.8%		165	11.3%		251	15.7%		272	16.0%		273	13.0%		
Pediatric	5	0.3%		9	0.6%		1	0.1%		9	0.5%		8	0.4%		
NIR*	414	27.0%		360	24.8%		374	23.5%		439	25.7%		654	31.1%		
Total	1,533	100%		1,454	100%		1,594	100%		1,705	100%		2,100	100%		

*MSM= Men who have sex with men; IDU= Injection drug use; Blood Products includes adult hemophilia; Heterosexual-NIR= Presumed Heterosexual (See Appendix B pg. 100.); NIR= No identified risk reported

**Table D: North Carolina HIV Disease Reports
Mode of Transmission by Gender (NIRs* Redistributed), 1999-2003**

Mode of transmission	Year														
	1999			2000			2001			2002			2003		
	Cases	Pct.		Cases	Pct.		Cases	Pct.		Cases	Pct.		Cases	Pct.	
Male															
MSM*	504	48.7%		480	50.1%		518	47.3%		647	55.1%		853	58.9%	
IDU*	175	16.9%		131	13.7%		113	10.3%		129	11.0%		125	8.6%	
MSM/IDU*	79	7.7%		34	3.6%		42	3.9%		27	2.3%		47	3.3%	
Blood Products*	23	2.2%		24	2.5%		13	1.2%		22	1.9%		30	2.1%	
Heterosexual- All	253	24.4%		284	29.7%		408	37.3%		345	29.4%		388	26.8%	
Pediatric	2	0.2%		4	0.4%		1	0.1%		4	0.3%		4	0.3%	
Total†	1036	100%		957	100%		1095	100%		1174	100%		1447	100%	
Female															
IDU*	95	19.1%		80	16.0%		59	11.7%		41	7.8%		73	11.3%	
Blood Products*	24	4.8%		22	4.4%		29	5.7%		19	3.6%		38	5.8%	
Heterosexual- All	376	75.5%		390	78.6%		412	82.5%		465	87.7%		538	82.4%	
Pediatric	3	0.6%		5	1.0%		0	0.0%		5	0.9%		4	0.6%	
Total†	498	100%		497	100%		500	100%		530	100%		653	100%	
Total															
MSM*	504	32.9%		480	33.0%		518	32.5%		647	37.9%		853	40.6%	
IDU*	270	17.6%		210	14.5%		171	10.8%		170	10.0%		198	9.4%	
MSM/IDU*	79	5.2%		34	2.4%		42	2.7%		27	1.6%		47	2.3%	
Blood Products*	46	3.0%		45	3.1%		41	2.6%		41	2.4%		68	3.2%	
Heterosexual- All	629	41.0%		674	46.4%		820	51.4%		811	47.6%		926	44.1%	
Pediatric	5	0.3%		9	0.6%		1	0.1%		9	0.5%		8	0.4%	
Total†	1,533	100%		1,454	100%		1,594	100%		1,705	100%		2,100	100%	

*NIR= No identified risk reported; *MSM= Men who have sex with men; IDU= Injection drug use; Blood Products includes adult hemophilia
†includes NIR cases that have been reassigned and do not represent true cases (See Appendix B pg. 100.)

**Table E: North Carolina HIV Disease Reports
Recent Infections by Mode of Transmission and Gender (NIRs* Redistributed), 1999-2003**

Mode of transmission	Year														
	1999			2000			2001			2002			2003		
	Cases	Pct.		Cases	Pct.		Cases	Pct.		Cases	Pct.		Cases	Pct.	
Male															
MSM*	295	49.8%		296	50.7%		316	51.5%		391	56.8%		516	60.9%	
IDU*	87	14.6%		77	13.3%		44	7.1%		74	10.8%		56	6.7%	
MSM/IDU*	40	6.8%		22	3.9%		23	3.7%		14	2.0%		20	2.4%	
Blood Products*	10	1.8%		15	2.6%		11	1.7%		10	1.5%		13	1.6%	
Heterosexual- All	158	26.7%		170	29.1%		220	35.8%		195	28.4%		239	28.2%	
Pediatric	2	0.3%		3	0.5%		1	0.2%		3	0.4%		3	0.4%	
Total†	592	100%		583	100%		615	100%		687	100%		847	100%	
Female															
IDU*	66	18.6%		53	14.4%		35	10.2%		27	7.6%		40	8.7%	
Blood Products*	12	3.3%		13	3.5%		12	3.5%		11	3.2%		29	6.2%	
Heterosexual- All	276	77.8%		297	81.2%		299	86.2%		319	88.4%		386	84.2%	
Pediatric	1	0.3%		3	0.8%		0	0.0%		3	0.8%		4	0.9%	
Total†	355	100%		366	100%		346	100%		360	100%		459	100%	
Total															
MSM*	308	32.6%		299	31.5%		320	33.3%		408	38.9%		555	42.5%	
IDU*	152	16.0%		130	13.7%		79	8.2%		103	9.8%		95	7.3%	
MSM/IDU*	42	4.4%		23	2.4%		23	2.4%		15	1.4%		22	1.7%	
Blood Products*	22	2.3%		28	2.9%		23	2.4%		21	2.0%		39	3.0%	
Heterosexual- All	419	44.3%		463	48.8%		515	53.6%		496	47.3%		589	45.1%	
Pediatric	3	0.3%		6	0.6%		1	0.1%		6	0.6%		7	0.5%	
Total†	946	100%		949	100		961	100%		1049	100%		1307	100%	

*NIR= No identified risk reported; *MSM= Men who have sex with men; IDU= Injection drug use; Blood Products includes adult hemophilia
 †includes NIR cases that have been reassigned and do not represent true cases (See Appendix B pg. 100.)
 Recent infections, see pg. 23

N.C. Epidemiologic Profile for 2005 HIV/STD Prev. & Care Planning
Table F: North Carolina HIV Disease Reports
Recent Infections by Gender and Age, 1999-2003

Age	Year																	
	1999			2000			2001			2002			2003					
	Cases	Pct	Rate*															
Male																		
00-12 Years	2	0%	n/a	3	0%	n/a	1	0%	n/a	3	0%	n/a	3	0%	n/a	3	0%	n/a
13-19 Years	11	1%	2.9	22	2%	5.6	11	1%	2.8	30	3%	7.5	23	2%	5.8	23	2%	5.8
20-29 Years	142	15%	23.3	144	15%	23.7	166	17%	27.2	178	17%	29.1	202	16%	33.0	202	16%	33.0
30-39 Years	245	26%	38.8	212	22%	33.4	217	23%	33.9	243	23%	37.8	276	21%	42.9	276	21%	42.9
40-49 Years	140	15%	24.2	141	15%	23.9	158	16%	26.2	168	16%	27.4	238	18%	38.8	238	18%	38.8
50+ Years	51	5%	5.3	61	6%	6.2	61	6%	6.0	66	6%	6.3	105	8%	10.1	105	8%	10.1
Total	591	63%	15.2	583	61%	14.7	614	64%	15.3	688	66%	16.9	847	65%	20.8	847	65%	20.8
Female																		
00-12 Years	1	0%	n/a	3	0%	n/a	0	0%	0.0	3	0%	n/a	4	0%	n/a	4	0%	n/a
13-19 Years	25	3%	6.9	17	2%	4.6	20	2%	5.4	17	2%	4.5	33	3%	8.7	33	3%	8.7
20-29 Years	94	10%	16.5	111	12%	19.7	100	10%	17.7	110	11%	19.5	119	9%	21.1	119	9%	21.1
30-39 Years	130	14%	20.6	122	13%	19.4	139	15%	21.9	110	11%	17.3	139	11%	21.8	139	11%	21.8
40-49 Years	81	9%	13.4	80	8%	13.0	59	6%	9.4	79	8%	12.4	121	9%	19.0	121	9%	19.0
50+ Years	24	3%	2.0	33	4%	2.7	29	3%	2.3	42	4%	3.3	43	3%	3.3	43	3%	3.3
Total	355	38%	8.7	366	39%	8.9	347	36%	8.3	361	34%	8.5	459	35%	10.8	459	35%	10.8
Total																		
00-12 Years	3	0%	n/a	6	1%	0.4	1	0%	n/a	6	1%	0.4	7	1%	0.5	7	1%	0.5
13-19 Years	36	4%	4.9	39	4%	5.1	31	3%	4.1	47	5%	6.1	56	4%	7.2	56	4%	7.2
20-29 Years	236	25%	20.0	255	27%	21.7	266	28%	22.6	288	28%	24.5	321	25%	27.3	321	25%	27.3
30-39 Years	375	40%	29.7	334	35%	26.4	356	37%	27.9	353	34%	27.6	415	32%	32.4	415	32%	32.4
40-49 Years	221	23%	18.7	221	23%	18.4	217	23%	17.6	247	24%	19.7	359	28%	28.7	359	28%	28.7
50+ Years	75	8%	3.5	94	10%	4.2	90	9%	4.0	108	10%	4.6	148	11%	6.4	148	11%	6.4
Total	946	100%	11.9	949	100%	11.7	961	100%	11.7	1,049	100%	12.6	1,306	100%	15.7	1,306	100%	15.7

*per 100,000 population
Recent infections, see pg. 23

**Table G: North Carolina HIV Disease Reports
Recent Infections by Gender and Race/Ethnicity, 1999-2003**

Race/ Ethnicity	Year														
	1999			2000			2001			2002			2003		
	Cases	Pct	Rate*												
Male															
White**	157	17%	5.7	149	16%	5.3	149	16%	5.3	178	17%	6.3	237	18%	8.3
Black**	413	44%	50.7	410	43%	49.5	426	44%	50.6	464	44%	54.3	550	42%	64.3
Am. Ind./AN**	6	1%	12.5	7	1%	14.2	6	1%	12.0	5	1%	9.8	5	0%	9.8
Asian/PI**	5	1%	9.0	2	0%	n/a	6	1%	9.2	5	1%	7.2	11	1%	15.8
Hispanic	10	1%	5.1	15	2%	6.5	27	3%	11.1	36	3%	13.9	44	3%	17.0
Total	591	63%	15.2	583	61%	14.7	614	64%	15.3	688	66%	16.9	847	65%	20.8
Female															
White**	71	8%	2.4	64	7%	2.2	50	5%	1.7	54	5%	1.8	71	5%	2.4
Black**	274	29%	29.7	296	31%	31.7	279	29%	29.4	278	27%	28.9	355	27%	36.9
Am. Ind./AN**	5	1%	10.0	3	0%	n/a	4	0%	n/a	2	0%	n/a	4	0%	n/a
Asian/PI**	1	0%	n/a	0	0%	0.0	4	0%	n/a	4	0%	n/a	5	0%	6.8
Hispanic	4	0%	n/a	3	0%	n/a	10	1%	5.9	23	2%	12.4	24	2%	12.9
Total	355	38%	8.7	366	39%	8.9	347	36%	8.3	361	34%	8.5	459	35%	10.8
Total															
Total															
White**	228	24%	4.0	213	22%	3.7	199	21%	3.5	232	22%	4.0	308	24%	5.3
Black**	687	73%	39.6	706	74%	40.1	705	73%	39.4	742	71%	40.8	905	69%	49.8
Am. Ind./AN**	11	1%	11.2	10	1%	9.9	10	1%	9.8	7	1%	6.7	9	1%	8.7
Asian/PI**	6	1%	5.2	2	0%	n/a	10	1%	7.4	9	1%	6.3	16	1%	11.2
Hispanic	14	2%	4.3	18	2%	4.7	37	4%	8.9	59	6%	13.3	68	5%	15.3
Total	946	100%	11.9	949	100%	11.7	961	100%	11.7	1,049	100%	12.6	1,306	100%	15.7

*per 100,000 population

**White= White, non Hispanic; Black= Black or African American, non Hispanic; Am. Ind./AN= American Indian/Alaskan Native, non Hispanic;

Asian/PI= Asian/Pacific Islander, non Hispanic

Recent infections, see pg. 23

**Table H: North Carolina Female HIV Disease Reports
Mode of Transmission by Race/Ethnicity (NIRs* Redistributed), 1999-2003**

Mode of transmission	Year											
	1999		2000		2001		2002		2003			
	Cases	Pct.										
White, non Hispanic												
IDU*	22	26.4%	21	25.8%	18	22.4%	10	12.6%	26	24.3%		
Blood Products*	4	4.9%	3	3.0%	4	5.2%	3	3.6%	5	4.3%		
Heterosexual- All	57	67.5%	59	71.2%	59	72.4%	63	82.5%	77	71.4%		
Pediatric	1	1.2%	0	0.0%	0	0.0%	1	1.3%	0	0.0%		
Total†	84	100%	83	100%	82	100%	77	100%	108	100%		
Black, non Hispanic												
IDU*	69	17.3%	57	14.2%	36	9.2%	30	7.1%	42	8.4%		
Blood Products*	17	4.2%	18	4.4%	23	5.8%	15	3.5%	31	6.1%		
Heterosexual- All	310	78.0%	322	80.6%	335	85.0%	371	88.7%	426	84.9%		
Pediatric	2	0.5%	3	0.8%	0	0.0%	3	0.7%	3	0.6%		
Total†	398	100%	400	100%	394	100%	418	100%	502	100%		
All Other												
IDU*	3	21.4%	0	0.0%	5	23.1%	2	4.7%	6	13.3%		
Blood Products*	2	14.3%	2	14.1%	2	7.7%	2	4.7%	0	0.0%		
Heterosexual- All	10	64.3%	9	70.5%	16	69.2%	33	88.1%	39	84.5%		
Pediatric	0	0.0%	2	15.4%	0	0.0%	1	2.6%	1	2.2%		
Total†	15	100%	13	100%	23	100%	38	100%	46	100%		
Total												
IDU*	94	19.0%	78	15.8%	60	12.0%	41	7.7%	74	11.3%		
Blood Products*	23	4.7%	22	4.4%	29	5.8%	19	3.6%	35	5.4%		
Heterosexual- All	377	75.8%	391	78.8%	410	82.2%	467	87.8%	542	82.7%		
Pediatric	3	0.6%	5	1.0%	0	0.0%	5	0.9%	4	0.6%		
Total†	498	100%	496	100%	499	100%	532	100%	656	100%		

*NIR= No identified risk reported; IDU= Injection drug use; Blood Products includes adult hemophilia

†includes NIR cases that have been reassigned and do not represent true cases (See Appendix B pg. 100.)

**Table I: North Carolina Male HIV Disease Reports
Mode of Transmission by Race/Ethnicity (NIRs* Redistributed), 1999-2003**

Mode of transmission	Year											
	1999		2000		2001		2002		2003		2003	
	Cases	Pct.										
White, non Hispanic												
MSM*	203	69.4%	176	71.4%	193	70.9%	258	77.3%	338	75.8%	338	75.8%
IDU*	22	7.7%	24	9.9%	16	5.8%	26	7.8%	23	5.2%	23	5.2%
MSM/IDU*	26	8.9%	13	5.4%	15	5.4%	9	2.6%	20	4.4%	20	4.4%
Blood Products*	7	2.6%	5	2.0%	4	1.3%	7	2.2%	8	1.7%	8	1.7%
Heterosexual- All	34	11.5%	28	11.3%	45	16.6%	34	10.0%	57	12.8%	57	12.8%
Pediatric	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	0.2%	1	0.2%
Total†	292	100%	246	100%	273	100%	334	100%	447	100%	447	100%
Black, non Hispanic												
MSM*	269	39.0%	274	41.7%	295	39.1%	339	44.8%	455	51.3%	455	51.3%
IDU*	147	21.3%	101	15.4%	88	11.7%	96	12.7%	86	9.7%	86	9.7%
MSM/IDU*	50	7.3%	19	2.9%	27	3.6%	18	2.4%	20	2.2%	20	2.2%
Blood Products*	15	2.1%	19	2.9%	8	1.0%	11	1.4%	22	2.5%	22	2.5%
Heterosexual- All	208	30.2%	244	37.2%	335	44.5%	293	38.7%	304	34.2%	304	34.2%
Pediatric	2	0.3%	3	0.5%	1	0.1%	3	0.4%	2	0.2%	2	0.2%
Total†	691	100%	660	100%	754	100%	760	100%	889	100%	889	100%
All Other												
MSM*	30	57.7%	26	50.0%	27	39.2%	47	59.0%	52	49.3%	52	49.3%
IDU*	6	11.5%	6	12.5%	9	13.7%	7	8.2%	14	13.0%	14	13.0%
MSM/IDU*	2	3.8%	2	3.1%	0	0.0%	0	0.0%	5	4.3%	5	4.3%
Blood Products*	0	0.0%	0	0.0%	0	0.0%	4	4.9%	2	1.4%	2	1.4%
Heterosexual- All	14	26.9%	18	34.4%	32	47.1%	22	27.9%	33	31.9%	33	31.9%
Pediatric	0	0.0%	1	2.0%	0	0.0%	1	1.3%	1	1.0%	1	1.0%
Total†	52	100%	53	100%	68	100%	81	100%	107	100%	107	100%
Total												
MSM*	504	48.8%	481	50.4%	519	47.4%	649	55.4%	851	59.2%	851	59.2%
IDU*	175	16.9%	131	13.7%	113	10.3%	128	11.0%	122	8.5%	122	8.5%
MSM/IDU*	79	7.7%	34	3.6%	42	3.9%	27	2.3%	44	3.1%	44	3.1%
Blood Products*	23	2.2%	24	2.5%	12	1.1%	22	1.9%	32	2.2%	32	2.2%
Heterosexual- All	253	24.5%	284	29.8%	409	37.4%	345	29.4%	389	27.1%	389	27.1%
Pediatric	2	0.2%	4	0.4%	1	0.1%	4	0.3%	4	0.3%	4	0.3%
Total†	1033	100%	954	100%	1094	100%	1172	100%	1438	100%	1438	100%

*NIR= No identified risk reported; *MSM= Men who have sex with men; IDU= Injection drug use; Blood Products includes adult hemophilia
†includes NIR cases that have been reassigned and do not represent true cases (See Appendix B pg. 100.)

**Table J: North Carolina HIV Disease Reports Age 13-24 Years
Mode of Transmission by Gender (NIRs* Redistributed), 1999-2003**

Mode of transmission	Year											
	1999		2000		2001		2002		2003			
	Cases	Pct.										
Male												
MSM*	61	70.4%	79	73.0%	86	74.2%	112	82.1%	118	81.6%		
IDU*	1	1.4%	2	2.2%	1	1.0%	0	0.0%	0	0.0%		
MSM/IDU*	6	7.0%	2	2.2%	0	0.0%	3	1.9%	1	0.8%		
Blood Products*	2	2.8%	0	0.0%	1	1.0%	1	0.9%	0	0.0%		
Heterosexual- All	16	18.3%	24	22.5%	28	23.7%	21	15.1%	26	17.6%		
Pediatric	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%		
Total†	86	100%	107	100%	116	100%	137	100%	145	100%		
Female												
IDU*	9	11.1%	4	5.9%	1	1.8%	1	1.9%	6	6.1%		
Blood Products*	1	1.9%	3	3.9%	0	0.0%	0	0.0%	1	1.5%		
Heterosexual- All	66	85.2%	65	90.2%	80	98.2%	74	98.1%	89	92.4%		
Pediatric	1	1.9%	0	0.0%	0	0.0%	0	0.0%	0	0.0%		
Total†	77	100%	72	100%	81	100%	75	100%	96	100%		
Total												
MSM*	61	37.2%	79	43.8%	86	43.7%	112	53.0%	118	49.1%		
IDU*	10	6.0%	7	3.7%	3	1.3%	1	0.7%	6	2.4%		
MSM/IDU*	6	3.7%	2	1.3%	0	0.0%	3	1.2%	1	0.5%		
Blood Products*	4	2.4%	3	1.6%	1	0.6%	1	0.6%	1	0.6%		
Heterosexual- All	81	49.9%	89	49.6%	107	54.3%	94	44.5%	114	47.4%		
Pediatric	1	0.9%	0	0.0%	0	0.0%	0	0.0%	0	0.0%		
Total†	163	100%	180	100%	197	100%	212	100%	241	100%		

*NIR= No identified risk reported; *MSM= Men who have sex with men; IDU= Injection drug use; Blood Products includes adult hemophilia
†includes NIR cases that have been reassigned and do not represent true cases (See Appendix B pg. 100.)

**Table K: North Carolina HIV Disease Reports Age 13-24 Years
Gender and Race/Ethnicity, 1999-2003**

Race/ Ethnicity	Year														
	1999			2000			2001			2002			2003		
	Cases	Pct	Rate*												
Male															
White**	21	12.9%	4.9	20	11.1%	4.6	22	11.2%	5.0	29	13.7%	6.4	23	9.5%	5.1
Black**	58	35.6%	35.5	77	42.8%	46.5	88	44.7%	51.7	98	46.2%	55.7	108	44.8%	61.4
All Other†	7	4.3%	-	11	6.1%	-	6	3.0%	-	10	4.7%	-	14	5.8%	-
Total	86	52.8%	12.7	108	60.0%	15.6	116	58.9%	16.5	137	64.6%	19.2	145	60.2%	20.3
Female															
White**	16	9.8%	3.9	15	8.3%	3.6	11	5.6%	2.6	15	7.1%	3.6	16	6.6%	3.8
Black**	57	35.0%	34.1	56	31.1%	33.0	62	31.5%	35.9	51	24.1%	28.8	69	28.6%	38.9
All Other†	4	2.5%	-	1	0.6%	-	8	4.1%	-	9	4.2%	-	11	4.6%	-
Total	77	47.2%	12.2	72	40.0%	11.2	81	41.1%	12.4	75	35.4%	11.3	96	39.8%	14.5
Total															
White**	37	22.7%	4.4	35	19.4%	4.1	33	16.8%	3.8	44	20.8%	5.0	39	16.2%	4.5
Black**	115	70.6%	34.8	133	73.9%	39.7	150	76.1%	43.7	149	70.3%	42.2	177	73.4%	50.1
All Other†	11	6.7%	-	12	6.7%	-	14	7.1%	-	19	9.0%	-	25	10.4%	-
Total	163	100%	12.5	180	100%	13.5	197	100%	14.5	212	100%	15.4	241	100%	17.5

*per 100,000 population

**non Hispanic

† Other includes Hispanic, Asian/Pacific Islander, American Indian/Alaskan Native

Table L: HIV Disease Cumulative Reports by County of Residence, 1983-2003

COUNTY	83-89	90-94	95-00	2001	2002	2003	CUMULATIVE
ALAMANCE	11	97	112	16	18	27	281
ALEXANDER	1	11	7	0	5	1	25
ALLEGHANY	0	0	0	0	0	0	0
ANSON	1	42	40	6	4	4	97
ASHE	0	0	4	0	0	0	4
AVERY	2	2	6	0	1	0	11
BEAUFORT	9	53	57	15	5	6	145
BERTIE	3	21	46	12	7	2	91
BLADEN	5	26	33	6	4	13	87
BRUNSWICK	5	45	44	19	10	19	142
BUNCOMBE	17	235	263	23	26	26	590
BURKE	5	29	31	3	4	5	77
CABARRUS	12	80	80	5	18	19	214
CALDWELL	3	33	20	3	3	3	65
CAMDEN	0	3	9	1	3	1	17
CARTERET	7	33	20	0	2	8	70
CASWELL	0	9	11	1	2	5	28
CATAWBA	9	67	84	6	20	22	208
CHATHAM	5	26	25	6	3	6	71
CHEROKEE	1	5	6	2	1	1	16
CHOWAN	2	14	16	1	2	2	37
CLAY	0	1	0	1	1	0	3
CLEVELAND	10	87	89	11	9	14	220
COLUMBUS	10	63	80	17	8	24	202
CRAVEN	14	121	89	21	25	26	296
CUMBERLAND	63	472	451	61	61	96	1204
CURRITUCK	1	8	6	0	2	2	19
DARE	5	13	16	0	2	3	39
DAVIDSON	14	73	95	6	16	17	221
DAVIE	1	15	16	3	2	0	37
DUPLIN	9	57	69	11	13	24	183
DURHAM	77	671	568	108	119	96	1639
EDGECOMBE	9	108	118	14	22	43	314
FORSYTH	72	358	602	79	93	140	1344
FRANKLIN	6	35	36	12	6	9	104
GASTON	18	282	241	27	35	44	647
GATES	0	2	2	2	2	1	9
GRAHAM	0	0	2	1	0	0	3
GRANVILLE	8	62	71	13	11	23	188
GREENE	2	21	47	4	4	2	80
GUILFORD	73	588	905	128	149	116	1959
HALIFAX	12	93	102	13	6	10	236
HARNETT	10	66	64	11	12	13	176
HAYWOOD	5	21	24	1	4	0	55
HENDERSON	3	38	54	4	7	3	109
HERTFORD	8	30	37	7	10	21	113
HOKE	3	26	55	15	2	9	110
HYDE	0	1	4	0	0	3	8
IREDELL	9	54	51	9	18	13	154
JACKSON	1	5	11	0	0	0	17
JOHNSTON	16	107	122	30	28	24	327

Table L (continued): HIV Disease Cumulative Reports by County of Residence, 1983-2003

COUNTY	83-89	90-94	95-00	2001	2002	2003	CUMULATIVE
JONES	0	7	8	0	5	1	21
LEE	2	43	67	9	11	9	141
LENOIR	6	133	154	21	18	23	355
LINCOLN	3	17	29	3	5	8	65
MACON	0	10	13	1	0	1	25
MADISON	0	4	10	2	0	1	17
MARTIN	2	27	37	10	9	12	97
MCDOWELL	4	8	17	1	2	1	33
MECKLENBURG	179	1719	1537	258	308	437	4438
MITCHELL	1	3	7	0	1	1	13
MONTGOMERY	1	14	26	1	0	1	43
MOORE	7	47	50	14	18	12	148
NASH	13	116	126	26	17	20	318
NEW HANOVER	29	237	240	62	49	58	675
NORTHAMPTON	6	31	30	7	2	6	82
ONslow	21	72	92	17	20	23	245
ORANGE	29	103	95	13	12	17	269
PAMLICO	3	12	8	1	1	4	29
PASQUOTANK	4	27	41	1	6	10	89
PENDER	5	34	23	5	5	7	79
PERQUIMANS	1	5	19	3	4	4	36
PERSON	1	24	30	5	8	6	74
PITT	24	235	256	36	50	37	638
POLK	1	7	15	1	1	3	28
RANDOLPH	9	33	53	9	16	19	139
RICHMOND	2	58	64	4	2	10	140
ROBESON	10	147	161	27	17	32	394
ROCKINGHAM	5	56	71	8	11	4	155
ROWAN	13	117	98	15	13	20	276
RUTHERFORD	3	30	38	7	2	1	81
SAMPSON	6	74	73	16	8	9	186
SCOTLAND	4	52	67	0	4	8	135
STANLY	1	31	36	6	6	1	81
STOKES	1	6	8	4	1	2	22
SURRY	3	13	22	8	6	4	56
SWAIN	3	9	7	1	1	4	25
TRANSYLVANIA	2	14	16	2	2	5	41
TYRRELL	0	4	3	1	0	0	8
UNION	9	58	66	14	11	13	171
VANCE	5	74	84	17	9	23	212
WAKE	153	854	853	153	166	229	2408
WARREN	0	12	14	7	4	7	44
WASHINGTON	2	29	34	2	3	4	74
WATAUGA	3	4	4	0	0	5	16
WAYNE	25	136	143	23	37	23	387
WILKES	2	10	13	1	2	3	31
WILSON	21	152	165	36	26	21	421
YADKIN	3	3	15	0	1	4	26
YANCEY	1	2	7	1	0	1	12
MISSING	0	0	21	1	0	0	22
NC TOTAL	1185	9222	10007	1594	1705	2100	25813

**Table M: HIV Disease Cases by County Rank Order
(Three-Year Average Rate*), 2001-2003**

COUNTY	CASES			RATES			AVG RATE*	RANK
	2001	2002	2003	2001	2002	2003		
HERTFORD	7	10	21	31.5	45.4	95.3	57.4	1
EDGECOMBE	14	22	43	25.4	40.0	78.2	47.8	2
DURHAM	108	119	96	47.0	50.8	41.0	46.3	3
MECKLENBURG	258	308	437	35.8	41.7	59.2	45.6	4
MARTIN	10	9	12	39.7	35.9	47.9	41.2	5
WILSON	36	26	21	48.5	34.7	28.0	37.1	6
VANCE	17	9	23	38.8	20.3	51.9	37.0	7
BERTIE	12	7	2	60.7	35.5	10.2	35.5	8
LENOIR	21	18	23	35.4	30.5	38.9	34.9	9
NEW HANOVER	62	49	58	38.0	29.6	35.0	34.2	10
FORSYTH	79	93	140	25.4	29.5	44.5	33.1	11
PERQUIMANS	3	4	4	26.2	34.8	34.8	31.9	12
DUPLIN	11	13	24	22.0	25.6	47.2	31.6	13
GRANVILLE	13	11	23	26.1	21.6	45.1	31.0	14
GUILFORD	128	149	116	29.9	34.6	26.9	30.5	15
WARREN	7	4	7	35.1	20.1	35.2	30.1	16
PITT	36	50	37	26.6	36.4	27.0	30.0	17
COLUMBUS	17	8	24	31.0	14.6	43.7	29.8	18
WAKE	153	166	229	23.3	24.6	33.9	27.3	19
CRAVEN	21	25	26	22.7	27.2	28.3	26.1	20
WAYNE	23	37	23	20.3	32.8	20.4	24.5	21
HOKE	15	2	9	42.9	5.6	25.0	24.5	22
CUMBERLAND	61	61	96	20.2	20.1	31.6	24.0	23
NASH	26	17	20	29.4	19.0	22.4	23.6	24
BLADEN	6	4	13	18.4	12.3	40.0	23.6	25
NORTHAMPTON	7	2	6	31.9	9.2	27.5	22.9	26
CAMDEN	1	3	1	14.0	40.2	13.4	22.5	27
WASHINGTON	2	3	4	14.7	22.2	29.6	22.1	28
NC TOTAL	1594	1705	2100	19.4	20.5	25.2	21.7	
JOHNSTON	30	28	24	23.4	21.0	18.0	20.8	29
BRUNSWICK	19	10	19	24.9	12.7	24.2	20.6	30
ROBESON	27	17	32	21.7	13.6	25.5	20.3	31
JONES	0	5	1	0.0	48.7	9.7	19.5	32
LEE	9	11	9	18.1	22.2	18.2	19.5	33
BEAUFORT	15	5	6	33.1	11.0	13.2	19.1	34
MOORE	14	18	12	18.3	23.0	15.3	18.9	35
ANSON	6	4	4	23.8	15.8	15.8	18.4	36
GASTON	27	35	44	14.0	18.1	22.7	18.3	37
FRANKLIN	12	6	9	24.5	11.9	17.8	18.1	38
SAMPSON	16	8	9	26.3	13.1	14.7	18.0	39
HYDE	0	0	3	0.0	0.0	52.6	17.5	40
PERSON	5	8	6	13.9	21.9	16.4	17.4	41
GREENE	4	4	2	20.8	20.6	10.3	17.2	42
HALIFAX	13	6	10	22.9	10.6	17.7	17.0	43
PASQUOTANK	1	6	10	2.9	16.9	28.2	16.0	44
GATES	2	2	1	18.9	18.8	9.4	15.7	45
PAMLICO	1	1	4	7.8	7.8	31.1	15.5	46
SWAIN	1	1	4	7.7	7.6	30.4	15.2	47
ALAMANCE	16	18	27	12.0	13.2	19.9	15.0	48
ONSLow	17	20	23	11.4	13.4	15.4	13.4	49

*three-year average of rates per 100,000 population. Note: rates based on case numbers <20 should be considered with caution. **See Appendix B pg. 101.**

**Table M (continued): HIV Disease Cases by County Rank Order
(Three-Year Average Rate*), 2001-2003**

COUNTY	CASES			RATES			AVG RATE*	RANK
	2001	2002	2003	2001	2002	2003		
PENDER	5	5	7	12.0	11.7	16.4	13.3	50
HARNETT	11	12	13	11.7	12.4	13.4	12.5	51
ROWAN	15	13	20	11.3	9.7	15.0	12.0	52
BUNCOMBE	23	26	26	11.0	12.3	12.3	11.9	53
ORANGE	13	12	17	10.8	10.0	14.1	11.6	54
CLEVELAND	11	9	14	11.3	9.2	14.3	11.6	55
CHOWAN	1	2	2	6.9	13.8	13.8	11.5	56
RICHMOND	4	2	10	8.6	4.3	21.3	11.4	57
CASWELL	1	2	5	4.3	8.5	21.2	11.3	58
SCOTLAND	0	4	8	0.0	11.1	22.2	11.1	59
RANDOLPH	9	16	19	6.8	11.9	14.2	11.0	60
CATAWBA	6	20	22	4.1	13.6	15.0	10.9	61
IREDELL	9	18	13	7.1	13.8	10.0	10.3	62
TRANSYLVANIA	2	2	5	6.8	6.8	16.9	10.2	63
CABARRUS	5	18	19	3.7	12.8	13.6	10.0	64
CHATHAM	6	3	6	11.6	5.6	11.1	9.4	65
UNION	14	11	13	10.6	7.9	9.3	9.3	66
POLK	1	1	3	5.4	5.3	15.9	8.9	67
DAVIDSON	6	16	17	4.0	10.6	11.2	8.6	68
SURRY	8	6	4	11.2	8.3	5.5	8.3	69
ROCKINGHAM	8	11	4	8.7	11.9	4.3	8.3	70
LINCOLN	3	5	8	4.6	7.5	12.0	8.0	71
TYRRELL	1	0	0	24.0	0.0	0.0	8.0	72
STANLY	6	6	1	10.2	10.2	1.7	7.4	73
CLAY	1	1	0	11.1	10.9	0.0	7.3	74
CURRITUCK	0	2	2	0.0	10.2	10.2	6.8	75
ALEXANDER	0	5	1	0.0	14.5	2.9	5.8	76
CARTERET	0	2	8	0.0	3.3	13.3	5.5	77
CHEROKEE	2	1	1	8.1	4.0	4.0	5.4	78
RUTHERFORD	7	2	1	11.1	3.2	1.6	5.3	79
DARE	0	2	3	0.0	6.2	9.3	5.2	80
STOKES	4	1	2	8.9	2.2	4.4	5.2	81
HENDERSON	4	7	3	4.4	7.6	3.2	5.1	82
MADISON	2	0	1	10.1	0.0	5.0	5.0	83
DAVIE	3	2	0	8.3	5.4	0.0	4.6	84
YADKIN	0	1	4	0.0	2.7	10.7	4.5	85
BURKE	3	4	5	3.3	4.5	5.6	4.5	86
MITCHELL	0	1	1	0.0	6.3	6.3	4.2	87
GRAHAM	1	0	0	12.5	0.0	0.0	4.2	88
WATAUGA	0	0	5	0.0	0.0	11.7	3.9	89
CALDWELL	3	3	3	3.8	3.8	3.8	3.8	90
YANCEY	1	0	1	5.6	0.0	5.6	3.7	91
MCDOWELL	1	2	1	2.3	4.7	2.3	3.1	92
HAYWOOD	1	4	0	1.8	7.3	0.0	3.0	93
WILKES	1	2	3	1.5	3.0	4.5	3.0	94
MONTGOMERY	1	0	1	3.7	0.0	3.7	2.5	95
MACON	1	0	1	3.3	0.0	3.3	2.2	96
AVERY	0	1	0	0.0	5.7	0.0	1.9	97
ALLEGHANY	0	0	0	0.0	0.0	0.0	0.0	98
ASHE	0	0	0	0.0	0.0	0.0	0.0	99
JACKSON	0	0	0	0.0	0.0	0.0	0.0	100

*three-year average of rates per 100,000 population. Note: rates based on case numbers <20 should be considered with caution. See Appendix B pg. 101.

Table N: North Carolina HIV Disease Cases Living as of 12/31/03 by County of Residence and Consortia

NC Consortia	County of Residence	Report Category		Total
		HIV (non AIDS)	AIDS	
COASTAL	BRUNSWICK	53	41	94
	CARTERET	21	15	36
	JONES	11	4	15
	NEW HANOVER	273	203	476
	ONSLow	97	74	171
	PENDER	22	29	51
	TOTAL	477	366	843
	DOGWOOD	BLADEN	34	18
COLUMBUS		85	52	137
CUMBERLAND		562	254	816
DUPLIN		59	66	125
HARNETT		72	50	122
HOKE		42	41	83
MONTGOMERY		20	14	34
MOORE		71	35	106
RICHMOND		66	19	85
ROBESON		157	132	289
SAMPSON		75	43	118
SCOTLAND		63	30	93
TOTAL		1306	754	2060
DOWNEAST		HYDE	3	4
	MARTIN	42	31	73
	TYRRELL	3	1	4
	WASHINGTON	20	23	43
	TOTAL	68	59	127
EASTERN TRIAD	ALAMANCE	133	55	188
	CASWELL	13	6	19
	GUILFORD	828	440	1268
	RANDOLPH	73	21	94
	ROCKINGHAM	67	36	103
	TOTAL	1114	558	1672
ENCHAC	BEAUFORT	46	39	85
	CRAVEN	118	84	202
	GREENE	29	34	63
	JOHNSTON	146	84	230
	LENOIR	132	98	230
	PAMLICO	9	6	15
	PITT	225	204	429
	WAKE	933	737	1670
	WAYNE	132	103	235
	TOTAL	1770	1389	3159

Table N (continued): North Carolina HIV Disease Cases Living as of 12/31/03 by County of Residence and Consortia

NC Consortia	County of Residence	Report Category		Total
		HIV (non AIDS)	AIDS	
JEFF JONES	CAMDEN	2	11	13
	CHOWAN	15	10	25
	CURRITUCK	7	5	12
	DARE	13	11	24
	PASQUOTANK	38	29	67
	PERQUIMANS	20	9	29
	TOTAL	95	75	170
	NORTHWEST	ALEXANDER	12	5
	ASHE	1	3	4
	BURKE	31	19	50
	CALDWELL	24	13	37
	CATAWBA	79	53	132
	DAVIDSON	87	53	140
	DAVIE	13	12	25
	FORSYTH	605	301	906
	STOKES	8	9	17
	SURRY	21	19	40
	WATAUGA	3	6	9
	WILKES	8	14	22
	YADKIN	9	11	20
	TOTAL	901	518	1419
PARTNERS IN ACTION	BERTIE	21	37	58
	EDGECOMBE	131	95	226
	GATES	3	3	6
	HALIFAX	80	61	141
	HERTFORD	38	37	75
	NASH	117	81	198
	NORTHAMPTON	22	25	47
	WILSON	160	100	260
	TOTAL	572	439	1011
PIEDMONT	CHATHAM	35	12	47
	DURHAM	677	341	1018
	FRANKLIN	38	29	67
	GRANVILLE	94	42	136
	LEE	81	32	113
	ORANGE	118	50	168
	PERSON	36	14	50
	VANCE	76	58	134
	WARREN	18	14	32
TOTAL	1173	592	1765	

Table N (continued): North Carolina HIV Disease Cases Living as of 12/31/03 by County of Residence and Consortia

NC Consortia	County of Residence	Report Category		Total	
		HIV (NON AIDS)	AIDS		
REGIONAL	ANSON	32	32	64	
	CABARRUS	89	55	144	
	CLEVELAND	98	31	129	
	GASTON	280	116	396	
	IREDELL	59	30	89	
	LINCOLN	32	19	51	
	MECKLENBURG	2100	815	2915	
	ROWAN	107	68	175	
	STANLY	44	11	55	
	UNION	76	34	110	
	TOTAL	2917	1211	4128	
	WNCHAC	AVERY	4	4	8
		BUNCOMBE	205	191	396
CHEROKEE		4	6	10	
CLAY		1	1	2	
GRAHAM		2	0	2	
HAYWOOD		15	21	36	
HENDERSON		24	46	70	
JACKSON		5	8	13	
MACON		7	7	14	
MADISON		8	5	13	
MCDOWELL		10	17	27	
MITCHELL		6	3	9	
POLK		6	12	18	
RUTHERFORD		26	25	51	
SWAIN		5	12	17	
TRANSYLVANIA		14	12	26	
YANCEY		4	4	8	
TOTAL	346	374	720		
MISSING	TOTAL	17	46	63	
TOTAL		10756	6381	17137	

Table O: AIDS Reporting Trends, 1983-2003

Reporting Category	Year of AIDS Report														
	83-89			90-92			93-94			95-96			97-98		
	Cases	Pct.		Cases	Pct.		Cases	Pct.		Cases	Pct.		Cases	Pct.	
AIDS Only	1174	99.9%		1716	98.8%		2017	83.3%		1109	58.7%		912	56.1%	
HIV, then AIDS	1	0.1%		20	1.2%		404	16.7%		780	41.3%		715	43.9%	
Total	1175	100%		1736	100%		2421	100%		1889	100%		1627	100%	

Reporting Category	Year of AIDS Report														
	1999			2000			2001			2002			2003		
	Cases	Pct.		Cases	Pct.		Cases	Pct.		Cases	Pct.		Cases	Pct.	
AIDS Only	476	62.0%		378	55.5%		460	52.8%		493	48.6%		714	65.7%	
HIV, then AIDS	292	38.0%		303	44.5%		412	47.2%		522	51.4%		372	34.3%	
Total	768	100%		681	100%		872	100%		1015	100%		1086	100%	

**Table Q: North Carolina AIDS Demographic Rates
Gender and Race/Ethnicity, 1999-2003**

Race/ Ethnicity	Year														
	1999			2000			2001			2002			2003		
	Cases	Pct	Rate*												
Male															
White**	148	19.3%	5.3	121	17.8%	4.3	149	17.1%	5.3	197	19.4%	6.9	239	22%	8.4
Black**	387	50.4%	47.5	339	49.8%	41.0	456	52.3%	54.2	480	47.3%	56.1	492	45.3%	57.5
Am. Ind./AN**	4	0.5%	n/a	4	0.6%	n/a	8	0.9%	16.0	7	0.7%	13.8	9	0.8%	17.7
Asian/PI**	0	0%	0.0	1	0.1%	n/a	1	0.1%	n/a	3	0.3%	n/a	2	0.2%	n/a
Hispanic	25	3.3%	12.8	28	4.1%	12.2	20	2.3%	8.2	27	2.7%	10.4	43	4%	16.6
Unknown	0	0%	-	0	0%	-	1	0.1%	-	3	0.3%	-	5	0.5%	-
Total	564	73.4%	14.5	493	72.4%	12.4	635	72.8%	15.8	717	70.6%	17.6	790	72.7%	19.4
Female															
White**	19	2.5%	0.7	32	4.7%	1.1	41	4.7%	1.4	40	3.9%	1.3	45	4.1%	1.5
Black**	176	22.9%	19.1	147	21.6%	15.7	187	21.4%	19.7	246	24.2%	25.6	236	21.7%	24.5
Am. Ind./AN**	3	0.4%	n/a	2	0.3%	n/a	4	0.5%	n/a	5	0.5%	9.4	2	0.2%	n/a
Asian/PI**	1	0.1%	n/a	1	0.1%	n/a	0	0%	0.0	0	0%	0.0	2	0.2%	n/a
Hispanic	5	0.7%	3.8	6	0.9%	3.9	5	0.6%	2.9	7	0.7%	3.8	11	1%	5.9
Unknown	0	0%	-	0	0%	-	0	0%	-	0	0%	-	0	0%	-
Total	204	26.6%	5.0	188	27.6%	4.6	237	27.2%	5.7	298	29.4%	7.0	296	27.3%	7.0
Total															
Total															
White**	167	21.7%	2.9	153	22.5%	2.7	190	21.8%	3.3	237	23.3%	4.1	284	26.2%	4.9
Black**	563	73.3%	32.4	486	71.4%	27.6	643	73.7%	35.9	726	71.5%	40.0	728	67%	40.1
Am. Ind./AN**	7	0.9%	7.1	6	0.9%	5.9	12	1.4%	11.7	12	1.2%	11.5	11	1%	10.6
Asian/PI**	1	0.1%	n/a	2	0.3%	n/a	1	0.1%	n/a	3	0.3%	n/a	4	0.4%	n/a
Hispanic	30	3.9%	9.2	34	5%	8.8	25	2.9%	6.0	34	3.3%	7.6	54	5%	12.1
Unknown	0	0%	-	0	0%	-	1	0.1%	-	3	0.3%	-	5	0.5%	-
Total	768	100%	9.7	681	100%	8.4	872	100%	10.6	1015	100%	12.2	1086	100%	13.1

*per 100,000 population

**White= White, non Hispanic; Black= Black or African American, non Hispanic; Am. Ind./AN= American Indian/Alaskan Native, non Hispanic; Asian/PI= Asian/Pacific Islander, non Hispanic

Table R: AIDS Cumulative Reports by County of Residence, 1983-2003

County of Residence	83-89	90-94	95-00	2001	2002	2003	Total
ALAMANCE	11	51	41	7	5	13	128
ALEXANDER	1	5	3	0	2	0	11
ALLEGHANY	0	0	0	0	0	0	0
ANSON	1	15	27	4	5	1	53
ASHE	0	0	3	0	0	0	3
AVERY	2	1	4	0	0	0	7
BEAUFORT	7	35	34	9	4	5	94
BERTIE	3	15	33	5	6	3	65
BLADEN	5	14	13	3	4	7	46
BRUNSWICK	5	26	26	12	5	8	82
BUNCOMBE	17	122	173	24	16	18	370
BURKE	5	20	14	1	2	3	45
CABARRUS	12	35	41	4	9	9	110
CALDWELL	3	11	11	3	2	3	33
CAMDEN	0	2	5	1	3	1	12
CARTERET	7	20	11	1	0	6	45
CASWELL	0	7	6	0	0	0	13
CATAWBA	9	42	41	5	12	12	121
CHATHAM	5	8	13	1	1	2	30
CHEROKEE	1	3	4	1	1	1	11
CHOWAN	1	8	7	1	3	0	20
CLAY	0	0	0	1	0	0	1
CLEVELAND	10	26	24	6	12	7	85
COLUMBUS	10	25	39	10	6	16	106
CRAVEN	14	53	52	9	20	13	161
CUMBERLAND	63	180	178	32	46	51	550
CURRITUCK	1	4	6	0	0	1	12
DARE	5	7	10	0	2	1	25
DAVIDSON	14	48	39	4	8	11	124
DAVIE	1	5	11	1	1	0	19
DUPLIN	9	32	55	5	8	16	125
DURHAM	77	369	236	38	76	41	837
EDGECOMBE	9	51	71	11	23	17	182
FORSYTH	72	210	263	36	44	54	679
FRANKLIN	6	16	15	5	3	6	51
GASTON	18	95	133	15	16	25	302
GATES	0	0	3	1	2	0	6
GRAHAM	0	0	1	0	0	0	1
GRANVILLE	8	28	26	6	6	7	81
GREENE	2	7	35	5	3	1	53
GUILFORD	73	367	392	65	54	62	1013
HALIFAX	11	42	56	8	4	14	135
HARNETT	10	34	32	8	7	10	101
HAYWOOD	5	13	13	3	5	0	39
HENDERSON	3	21	40	5	5	4	78
HERTFORD	8	12	29	5	3	10	67
HOKE	3	8	35	7	7	6	66
HYDE	0	1	4	0	0	1	6

Table R (continued): AIDS Cumulative Reports by County of Residence, 1983-2003

County of Residence	83-89	90-94	95-00	2001	2002	2003	Total
IREDELL	9	25	35	2	4	8	83
JACKSON	1	4	7	0	0	0	12
JOHNSTON	16	44	52	7	18	20	157
JONES	0	2	5	0	0	1	8
LEE	2	18	19	3	4	5	51
LENOIR	6	52	109	20	12	5	204
LINCOLN	3	9	10	1	5	2	30
MACON	0	7	5	2	1	1	16
MADISON	0	2	7	0	0	0	9
MARTIN	2	9	24	6	8	5	54
MCDOWELL	4	2	16	2	2	1	27
MECKLENBURG	174	512	648	106	151	191	1782
MITCHELL	1	2	1	2	1	0	7
MONTGOMERY	1	5	15	2	0	1	24
MOORE	7	19	19	7	6	8	66
NASH	13	62	67	14	8	10	174
NEW HANOVER	28	98	122	51	39	37	375
NORTHAMPTON	6	19	23	6	2	4	60
ONSLow	21	44	37	15	13	13	143
ORANGE	29	47	32	8	3	1	120
PAMLICO	3	7	4	0	1	3	18
PASQUOTANK	4	12	20	1	4	7	48
PENDER	5	21	15	6	2	6	55
PERQUIMANS	1	2	9	0	0	2	14
PERSON	1	11	8	2	6	4	32
PITT	24	138	161	21	29	26	399
POLK	1	6	11	0	0	3	21
RANDOLPH	9	23	18	1	4	6	61
RICHMOND	2	25	21	0	2	4	54
ROBESON	10	59	83	27	22	22	223
ROCKINGHAM	5	29	34	4	7	2	81
ROWAN	13	65	59	8	8	7	160
RUTHERFORD	3	20	25	3	2	1	54
SAMPSON	6	24	33	13	8	3	87
SCOTLAND	4	28	22	2	6	4	66
STANLY	1	10	11	4	1	1	28
STOKES	1	3	8	2	0	1	15
SURRY	3	6	11	3	6	1	30
SWAIN	3	7	7	1	1	2	21
TRANSYLVANIA	2	11	7	1	2	2	25
TYRRELL	0	2	2	0	0	0	4
UNION	9	17	38	5	6	7	82
VANCE	5	34	46	11	11	13	120
WAKE	153	355	529	92	108	137	1374
WARREN	0	5	7	3	3	5	23
WASHINGTON	2	18	20	2	4	3	49
WATAUGA	3	3	3	0	0	3	12
WAYNE	25	73	88	14	25	11	236

Table R (continued): AIDS Cumulative Reports by County of Residence, 1983-2003

	83-89	90-94	95-00	2001	2002	2003	Total
County of Residence							
WILKES	2	6	10	2	0	3	23
WILSON	21	58	78	20	27	12	216
YADKIN	3	0	11	0	1	3	18
YANCEY	1	2	3	1	0	1	8
MISSING	0	1	2	1	1	2	7
NC TOTAL	1175	4157	4965	872	1015	1086	13270

Highlights/Summary for Region 1

- In Region 1, the 2003 rate of new HIV disease reports was 6.4 per 100,000 persons, substantially lower than the state rate of 25.2 per 100,000 persons.
- The distribution of HIV disease by gender and race in Region 1 differed from the state as a whole.
- In Region 1, males represented 91% of new HIV disease reports in 2003. White males represented about 59% of all new cases and black males about 20%. This was different from new reports for the state overall, where males represented about 69% of new HIV disease reports- white males about 21%, and black males about 42%.
- In Region 1, the 2003 case rate per 100,000 population for white males was 8.7, as compared to 15.7 for the state overall. The new case rate per 100,000 population for black males was 49.1, compared to 104.3 for the state overall.
- In Region 1, the overall race/ethnicity distribution of new HIV disease reports in 2003 was reversed as compared to the state's distribution. New HIV disease reports (2003) were 63% white and 25% black, whereas new HIV disease reports for the state were 25% white and 66% black.
- In Region 1, about 45% of new HIV disease reports (2003) listed MSM as the mode of transmission, 9% listed IDU, and over 21% listed heterosexual contact. 18% of reports however, did not list mode of transmission or risk information.

REGION 1 COUNTIES:

AVERY, BUNCOMBE, BURKE, CALDWELL, CHEROKEE, CLAY, GRAHAM, HAYWOOD, HENDERSON, JACKSON, MACON, MADISON, MCDOWELL, MITCHELL, POLK, RUTHERFORD, SWAIN, TRANSYLVANIA, YANCEY

**Table S1: Region 1 HIV Disease Reports
Gender and Mode of Transmission, 1999-2003**

Mode of transmission	Year															
	1999			2000			2001			2002			2003			
	Cases	Pct.		Cases	Pct.		Cases	Pct.		Cases	Pct.		Cases	Pct.		
Male																
MSM*	27	52.9%		32	64.0%		29	63.0%		20	45.5%		25	49.0%		
IDU*	8	15.7%		7	14.0%		4	8.7%		1	2.3%		4	7.8%		
MSM/IDU*	6	11.8%		3	6.0%		2	4.3%		2	4.5%		3	5.9%		
HETEROSEXUAL-CDC	2	3.9%		0	0.0%		2	4.3%		1	2.3%		3	5.9%		
HETEROSEXUAL-NIR*	2	3.9%		2	4.0%		2	4.3%		7	15.9%		6	11.8%		
BLOOD PRODUCTS*	0	0.0%		0	0.0%		1	2.2%		1	2.3%		0	0.0%		
PEDIATRIC	0	0.0%		0	0.0%		0	0.0%		0	0.0%		1	2.0%		
NIR*	6	11.8%		6	12.0%		6	13.0%		12	27.3%		9	17.6%		
TOTAL	51	100%		50	100%		46	100%		44	100%		51	100%		
Female																
IDU*	3	20.0%		1	4.5%		2	25.0%		4	33.3%		1	20.0%		
HETEROSEXUAL-CDC	3	20.0%		8	36.4%		3	37.5%		2	16.7%		1	20.0%		
HETEROSEXUAL-NIR*	2	13.3%		4	18.2%		0	0.0%		1	8.3%		2	40.0%		
BLOOD PRODUCTS*	2	13.3%		0	0.0%		0	0.0%		0	0.0%		0	0.0%		
PEDIATRIC	1	6.7%		0	0.0%		0	0.0%		0	0.0%		0	0.0%		
NIR*	4	26.7%		9	40.9%		3	37.5%		5	41.7%		1	20.0%		
TOTAL	15	100%		22	100%		8	100%		12	100%		5	100%		
Total																
MSM*	27	40.9%		32	44.4%		29	53.7%		20	35.7%		25	44.6%		
IDU*	11	16.7%		8	11.1%		6	11.1%		5	8.9%		5	8.9%		
MSM/IDU*	6	9.1%		3	4.2%		2	3.7%		2	3.6%		3	5.4%		
HETEROSEXUAL-CDC	5	7.6%		8	11.1%		5	9.3%		3	5.4%		4	7.1%		
HETEROSEXUAL-NIR*	4	6.1%		6	8.3%		2	3.7%		8	14.3%		8	14.3%		
BLOOD PRODUCTS*	2	3.0%		0	0.0%		1	1.9%		1	1.8%		0	0.0%		
PEDIATRIC	1	1.5%		0	0.0%		0	0.0%		0	0.0%		1	1.8%		
NIR*	10	15.2%		15	20.8%		9	16.7%		17	30.4%		10	17.9%		
TOTAL	66	100%		72	100%		54	100%		56	100%		56	100%		

*MSM= Men who have sex with men; IDU= Injection drug use; Blood Products includes adult hemophilia; Heterosexual-NIR= Presumed Heterosexual (See Appendix B pg. 100.); NIR= No identified risk reported

**Table S2: Region 1 HIV Disease Reports
Gender and Age, 1999-2003**

Age	Year														
	1999			2000			2001			2002			2003		
	Cases	Pct	Rate*												
Male															
0-12 Years	0	0%	0.0	0	0%	0.0	0	0%	0.0	0	0%	0.0	1	2%	n/a
13-19 Years	0	0%	0.0	2	3%	n/a	1	2%	n/a	2	4%	n/a	1	2%	n/a
20-29 Years	8	12%	15.2	7	10%	13.4	11	20%	20.7	5	9%	9.2	10	18%	18.4
30-39 Years	28	42%	46.3	20	28%	33.1	16	30%	26.5	22	39%	36.7	16	29%	26.7
40-49 Years	10	15%	16.4	14	19%	22.7	12	22%	19.3	9	16%	14.5	19	34%	30.7
50 and over	5	8%	3.8	7	10%	5.2	6	11%	4.4	6	11%	4.3	4	7%	n/a
TOTAL	51	77%	12.4	50	69%	12.0	46	85%	10.9	44	79%	10.3	51	91%	12.0
Female															
0-12 Years	1	2%	n/a	0	0%	0.0	0	0%	0.0	0	0%	0.0	0	0%	0.0
13-19 Years	2	3%	n/a	2	3%	n/a	0	0%	0.0	0	0%	0.0	0	0%	0.0
20-29 Years	3	5%	n/a	6	8%	12.2	2	4%	n/a	3	5%	n/a	2	4%	n/a
30-39 Years	5	8%	8.4	7	10%	11.9	2	4%	n/a	4	7%	n/a	1	2%	n/a
40-49 Years	3	5%	n/a	5	7%	7.8	3	6%	n/a	3	5%	n/a	1	2%	n/a
50 and over	1	2%	n/a	2	3%	n/a	1	2%	n/a	2	4%	n/a	1	2%	n/a
TOTAL	15	23%	3.4	22	31%	5.0	8	15%	1.8	12	21%	2.7	5	9%	1.1
Total															
0-12 Years	1	2%	n/a	0	0%	0.0	0	0%	0.0	0	0%	0.0	0	0%	0.0
13-19 Years	2	3%	n/a	4	6%	n/a	1	2%	n/a	2	4%	n/a	1	2%	n/a
20-29 Years	11	17%	10.7	13	18%	12.8	13	24%	12.6	8	14%	7.7	12	21%	11.5
30-39 Years	33	50%	27.5	27	38%	22.6	18	33%	15.1	26	46%	22.0	17	30%	14.4
40-49 Years	13	20%	10.4	19	26%	15.1	15	28%	11.8	12	21%	9.5	20	36%	15.8
50 and over	6	9%	2.0	9	13%	3.0	7	13%	2.3	8	14%	2.6	5	9%	1.6
TOTAL	66	100%	7.8	72	100%	8.4	54	100%	6.2	56	100%	6.4	56	100%	6.4

*per 100,000 population

**Table S3: Region 1 HIV Disease Reports
Gender and Race/Ethnicity, 1999-2003**

Race/ Ethnicity	Year														
	1999			2000			2001			2002			2003		
	Cases	Pct	Rate*												
Male															
White**	34	52%	9.2	33	46%	8.8	35	65%	9.3	28	50%	7.4	33	59%	8.7
Black**	14	21%	63.5	15	21%	67.1	8	15%	35.6	10	18%	44.6	11	20%	49.1
Other**	3	5%	n/a	2	3%	n/a	3	6%	n/a	6	11%	23.9	7	13%	27.9
Total	51	77%	12.4	50	69%	12.0	46	85%	10.9	44	79%	10.3	51	91%	12.0
Female															
White**	7	11%	1.8	11	15%	2.7	4	7%	n/a	7	13%	1.7	2	4%	n/a
Black**	7	11%	32.9	11	15%	51.1	4	7%	n/a	4	7%	n/a	3	5%	n/a
Other**	1	2%	n/a	0	0%	0.0	0	0%	0.0	1	2%	n/a	0	0%	0.0
Total	15	23%	3.4	22	31%	5.0	8	15%	1.8	12	21%	2.7	5	9%	1.1
Total															
1999															
2000															
2001															
2002															
2003															
Total															
White**	41	62%	5.3	44	61%	5.7	39	72%	5.0	35	63%	4.5	35	63%	4.5
Black**	21	32%	48.5	26	36%	59.3	12	22%	27.3	14	25%	31.9	14	25%	31.9
Other**	4	6%	n/a	2	3%	n/a	3	6%	n/a	7	13%	15.4	7	13%	15.4
Total	66	100%	7.8	72	100%	8.4	54	100%	6.2	56	100%	6.4	56	100%	6.4

*per 100,000 population

**White= White, non Hispanic; Black= Black or African American, non Hispanic; Other= Hispanic, American Indian/Alaskan Native, non Hispanic, Asian/Pacific Islander, non Hispanic

Highlights/Summary for Region 2:

- In Region 2, the rate of new HIV disease reports was 31.5 per 100,000 persons in 2003. The rate of new HIV disease reports for the state was 25.2 per 100,000 persons.
- In Region 2, males represented 69% of new HIV disease reports in 2003 and females about 31%. This was similar to new reports for the state overall.
- In Region 2, the 2003 new case rate per 100,000 population for males was 44.1, compared to 35.5 for the state overall. The new case rate per 100,000 population for females was 19.3, compared to 15.4 for the state overall.
- In Region 2, the overall race/ethnicity distribution of new HIV disease reports in 2003 was similar to the state's distribution overall. New HIV disease reports (2003) were 64% white and 30% black.
- In Region 2, 46% of male HIV disease reports in 2003 listed MSM as the mode of transmission; however, 30% of reports did not specify mode of transmission. 52% of female HIV disease reports in 2003 listed heterosexual contact as the mode of transmission; however, almost 41% of reports did not specify mode of transmission.

REGION 2 COUNTIES:

ALEXANDER, CABARRUS, CATAWBA, CLEVELAND, GASTON, IREDELL, LINCOLN, MECKLENBURG, ROWAN, STANLY, UNION

**Table T1: Region 2 HIV Disease Reports
Gender and Mode of Transmission, 1999-2003**

Mode of transmission	Year											
	1999		2000		2001		2002		2003			
	Cases	Pct.										
Male												
MSM*	93	37.8%	79	37.1%	84	37.7%	141	44.5%	188	46.1%		
IDU*	31	12.6%	18	8.5%	16	7.2%	26	8.2%	15	3.7%		
MSM/IDU*	12	4.9%	7	3.3%	4	1.8%	6	1.9%	7	1.7%		
HETEROSEXUAL-CDC	28	11.4%	38	17.8%	31	13.9%	37	11.7%	32	7.8%		
HETEROSEXUAL-NIR*	22	8.9%	16	7.5%	34	15.2%	35	11.0%	34	8.3%		
BLOOD PRODUCTS*	3	1.2%	5	2.3%	2	0.9%	4	1.3%	9	2.2%		
PEDIATRIC	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	0.2%		
NIR*	57	23.2%	50	23.5%	52	23.3%	68	21.5%	122	29.9%		
TOTAL	246	100%	213	100%	223	100%	317	100%	408	100%		
Female												
IDU*	16	13.0%	8	6.7%	8	6.1%	5	3.8%	10	5.4%		
HETEROSEXUAL-CDC	43	35.0%	51	42.5%	62	47.3%	57	43.5%	65	35.3%		
HETEROSEXUAL-NIR*	13	10.6%	26	21.7%	30	22.9%	23	17.6%	30	16.3%		
BLOOD PRODUCTS*	0	0.0%	2	1.7%	5	3.8%	3	2.3%	4	2.2%		
PEDIATRIC	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%		
NIR*	51	41.5%	33	27.5%	26	19.8%	43	32.8%	75	40.8%		
TOTAL	123	100%	120	100%	131	100%	131	100%	184	100%		
Total												
MSM*	93	25.2%	79	23.7%	84	23.7%	141	31.5%	188	31.8%		
IDU*	47	12.7%	26	7.8%	24	6.8%	31	6.9%	25	4.2%		
MSM/IDU*	12	3.3%	7	2.1%	4	1.1%	6	1.3%	7	1.2%		
HETEROSEXUAL-CDC	71	19.2%	89	26.7%	93	26.3%	94	21.0%	97	16.4%		
HETEROSEXUAL-NIR*	35	9.5%	42	12.6%	64	18.1%	58	12.9%	64	10.8%		
BLOOD PRODUCTS*	3	0.8%	7	2.1%	7	2.0%	7	1.6%	13	2.2%		
PEDIATRIC	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	0.2%		
NIR*	108	29.3%	83	24.9%	78	22.0%	111	24.8%	197	33.3%		
TOTAL	369	100%	333	100%	354	100%	448	100%	592	100%		

*MSM= Men who have sex with men; IDU= Injection drug use; Blood Products includes adult hemophilia; Heterosexual-NIR= Presumed Heterosexual (See Appendix B pg. 100.); NIR= No identified risk reported

**Table T3: Region 2 HIV Disease Reports
Gender and Race/Ethnicity, 1999-2003**

Race/ Ethnicity	Year														
	1999			2000			2001			2002			2003		
	Cases	Pct	Rate*												
Male															
White**	76	21%	11.9	67	20%	10.3	51	14%	7.8	97	22%	14.6	143	24%	21.5
Black**	164	44%	106.7	144	43%	91.2	163	46%	99.9	198	44%	117.5	239	40%	141.8
Asian,PI**	1	0%	n/a	0	0%	0.0	2	1%	n/a	1	0%	n/a	6	1%	27.5
Hispanic	3	1%	n/a	2	1%	n/a	5	1%	8.3	18	4%	27.4	19	3%	28.9
Other/ Unknown	2	1%	n/a	0	0%	n/a	2	1%	n/a	3	1%	n/a	1	0%	n/a
TOTAL	246	67%	28.6	213	64%	24.1	223	63%	24.6	317	71%	34.3	408	69%	44.1
Female															
White**	24	7%	3.6	18	5%	2.7	21	6%	3.1	18	4%	2.6	35	6%	5.1
Black**	98	27%	55.6	102	31%	56.5	109	31%	58.5	99	22%	51.7	140	24%	73.1
Asian,PI**	0	0%	0.0	0	0%	0.0	0	0%	0.0	2	0%	n/a	1	0%	n/a
Hispanic	1	0%	n/a	0	0%	0.0	1	0%	n/a	11	2%	23.6	8	1%	17.2
Other/ Unknown	0	0%	n/a	0	0%	n/a	0	0%	n/a	1	0%	n/a	0	0%	n/a
TOTAL	123	33%	13.7	120	36%	13.1	131	37%	14.0	131	29%	13.7	184	31%	19.3
Total															
White**	100	27%	7.6	85	26%	6.4	72	20%	5.4	115	26%	8.5	178	30%	13.1
Black**	262	71%	79.4	246	74%	72.7	272	77%	77.8	297	66%	82.5	379	64%	105.2
Asian,PI**	1	0%	n/a	0	0%	0.0	2	1%	n/a	3	1%	n/a	7	1%	16.1
Hispanic	4	1%	n/a	2	1%	n/a	6	2%	5.9	29	6%	25.8	27	5%	24.0
Other/ Unknown	2	1%	n/a	0	0%	n/a	2	1%	n/a	4	1%	n/a	1	0%	n/a
TOTAL	369	100%	21.0	333	100%	18.5	354	100%	19.2	448	100%	23.8	592	100%	31.5

*per 100,000 population

**White= White, non Hispanic; Black= Black or African American, non Hispanic; Asian, PI= Asian/Pacific Islander, non Hispanic

Highlights/Summary for Region 3

- In Region 3, the 2003 rate of new HIV disease reports was 21.4 per 100,000 persons, slightly lower than the state rate of 25.2 per 100,000 persons.
- In Region 3, males represented 68% of new HIV disease reports in 2003. White males represented about 26% of all new cases and black males about 36%. This was similar to new reports for the state overall, where males represented about 69% of new HIV disease reports—white males about 21%, and black males about 42%.
- In Region 3, the new case rate per 100,000 population for males was 29.9, compared to 35.5 for the state overall. The new case rate per 100,000 population for females was 13.3, compared to 15.4 for the state overall.
- In Region 3, 41% of male HIV disease reports in 2003 listed MSM as the mode of transmission; however, 32% of reports did not specify mode of transmission. 50% of female HIV disease reports in 2003 listed heterosexual contact as the mode of transmission; however, almost 41% of reports did not specify mode of transmission.

REGION 3 COUNTIES:

ALAMANCE, ALLEGHANY, ASHE, CASWELL, DAVIDSON, DAVIE, FORSYTH, GUILFORD, RANDOLPH, ROCKINGHAM, STOKES, SURRY, WATAUGA, WILKES, YADKIN

**Table U1: Region 3 HIV Disease Reports
Gender and Mode of Transmission, 1999-2003**

Mode of transmission	Year											
	1999		2000		2001		2002		2003			
	Cases	Pct.										
Male												
MSM*	93	43.9%	82	43.4%	67	35.6%	126	53.6%	97	41.3%		
IDU*	25	11.8%	17	9.0%	21	11.2%	10	4.3%	10	4.3%		
MSM/IDU*	9	4.2%	3	1.6%	7	3.7%	1	0.4%	8	3.4%		
HETEROSEXUAL-CDC	20	9.4%	17	9.0%	26	13.8%	19	8.1%	12	5.1%		
HETEROSEXUAL-NIR*	11	5.2%	19	10.1%	28	14.9%	32	13.6%	28	11.9%		
BLOOD PRODUCTS*	5	2.4%	4	2.1%	1	0.5%	3	1.3%	5	2.1%		
PEDIATRIC	0	0.0%	1	0.5%	0	0.0%	0	0.0%	0	0.0%		
NIR*	49	23.1%	46	24.3%	38	20.2%	44	18.7%	75	31.9%		
TOTAL	212	100%	189	100%	188	100%	235	100%	235	100%		
Female												
IDU*	12	11.0%	10	11.5%	5	6.7%	2	2.4%	6	5.4%		
HETEROSEXUAL-CDC	44	40.4%	27	31.0%	23	30.7%	29	35.4%	29	26.1%		
HETEROSEXUAL-NIR*	11	10.1%	23	26.4%	21	28.0%	26	31.7%	27	24.3%		
BLOOD PRODUCTS*	4	3.7%	2	2.3%	2	2.7%	1	1.2%	2	1.8%		
PEDIATRIC	0	0.0%	2	2.3%	0	0.0%	0	0.0%	2	1.8%		
NIR*	38	34.9%	23	26.4%	24	32.0%	24	29.3%	45	40.5%		
TOTAL	109	100%	87	100%	75	100%	82	100%	111	100%		
Total												
MSM*	93	29.0%	82	29.7%	67	25.5%	126	39.7%	97	28.0%		
IDU*	37	11.5%	27	9.8%	26	9.9%	12	3.8%	16	4.6%		
MSM/IDU*	9	2.8%	3	1.1%	7	2.7%	1	0.3%	8	2.3%		
HETEROSEXUAL-CDC	64	19.9%	44	15.9%	49	18.6%	48	15.1%	41	11.8%		
HETEROSEXUAL-NIR*	22	6.9%	42	15.2%	49	18.6%	58	18.3%	55	15.9%		
BLOOD PRODUCTS*	9	2.8%	6	2.2%	3	1.1%	4	1.3%	7	2.0%		
PEDIATRIC	0	0.0%	3	1.1%	0	0.0%	0	0.0%	2	0.6%		
NIR*	87	27.1%	69	25.0%	62	23.6%	68	21.5%	120	34.7%		
TOTAL	321	100%	276	100%	263	100%	317	100%	346	100%		

*MSM= Men who have sex with men; IDU= Injection drug use; Blood Products includes adult hemophilia; Heterosexual-NIR= Presumed Heterosexual (See Appendix B pg. 100.); NIR= No identified risk reported

**Table U3: Region 3 HIV Disease Reports
Gender and Race/Ethnicity, 1999-2003**

Race/ Ethnicity	Year																	
	1999			2000			2001			2002			2003					
	Cases	Pct	Rate*															
Male																		
White**	65	20%	11.3	57	21%	9.9	52	20%	8.9	82	26%	14.1	91	26%	15.6			
Black**	137	43%	103.9	121	44%	90.2	120	46%	88.3	136	43%	98.9	125	36%	90.9			
Hispanic	9	3%	24.4	9	3%	20.5	14	5%	29.1	15	5%	29.1	14	4%	27.1			
Other**	1	0%	8.7	2	0%	15.8	1	0%	7.7	2	0%	14.7	5	1%	36.8			
Unknown	0	0%	-	0	0%	-	1	0%	-	0	0%	-	0	0%	-			
Total	212	66%	28.0	189	68%	24.6	188	71%	24.2	235	74%	29.9	235	68%	29.9			
Female																		
White**	16	5%	2.6	18	7%	2.9	12	5%	1.9	16	5%	2.6	20	6%	3.2			
Black**	91	28%	59.3	66	24%	42.4	60	23%	38.0	62	20%	38.9	86	25%	53.9			
Hispanic	1	0%	3.9	2	1%	6.5	1	0%	2.9	4	1%	10.3	5	1%	12.9			
Other**	1	0%	8.5	1	0%	7.7	2	0%	14.9	0	0%	0.0	0	0%	0.0			
Unknown	0	0%	-	0	0%	-	0	0%	-	0	0%	-	0	0%	-			
Total	109	34%	13.5	87	32%	10.6	75	29%	9.1	82	26%	9.8	111	32%	13.3			
Total																		
1999																		
Cases	81	25%	6.8	75	27%	6.3	64	24%	5.3	98	31%	8.1	111	32%	9.2			
White**	228	71%	79.9	187	68%	64.5	180	68%	61.3	198	62%	66.7	211	61%	71.0			
Black**	10	3%	15.9	11	4%	14.7	15	6%	18.0	19	6%	21.0	19	5%	21.0			
Hispanic	2	0%	8.6	3	1%	11.7	3	1%	11.3	2	0%	7.2	5	1%	18.1			
Other**	0	0%	-	0	0%	-	1	0%	-	0	0%	-	0	0%	-			
Unknown	321	100%	20.5	276	100%	17.4	263	100%	16.4	317	100%	19.6	346	100%	21.4			

*per 100,000 population

**White= White, non Hispanic; Black= Black or African American, non Hispanic; Other= American Indian/Alaskan Native, non Hispanic, Asian/Pacific Islander, non Hispanic

Highlights/Summary for Region 4

- In Region 4, the 2003 rate of new HIV disease reports was 30.4 per 100,000 persons. The rate of new HIV disease reports for the state was 25.2 per 100,000 persons.
- In Region 4, males represented 72% of new HIV disease reports in 2003. White males represented about 21% of all new cases and black males about 46%. This was similar to reports for the state overall, where males represented about 69% of new HIV disease reports—white males about 21% and black males about 42%.
- In Region 4, the new 2003 case rate per 100,000 population for white males was 19.9, compared to 15.7 for the state overall. The new case rate per 100,000 population for black males was 118.7, compared to 104.3 for the state overall.
- In Region 4, the overall race/ethnicity distribution of new HIV disease reports in 2003 was similar to the state's distribution overall. New HIV disease reports (2003) were 66% white and 26% black.
- In Region 4 for 2003, new HIV disease reports for females decreased compared to 2002 and decreased as a proportion of all reports for the last five years.

REGION 4 COUNTIES:

CHATHAM, DURHAM, FRANKLIN, GRANVILLE, JOHNSTON, LEE, ORANGE, PERSON, VANCE, WAKE, WARREN, WILSON

**Table V1: Region 4 HIV Disease Reports
Gender and Mode of Transmission, 1999-2003**

Mode of transmission	Year											
	1999		2000		2001		2002		2003		2003	
	Cases	Pct.										
Male												
MSM*	67	29.6%	86	36.6%	103	36.4%	98	39.2%	142	42.0%	142	42.0%
IDU*	31	13.7%	21	8.9%	22	7.8%	23	9.2%	18	5.3%	18	5.3%
MSM/IDU*	13	5.8%	5	2.1%	8	2.8%	5	2.0%	6	1.8%	6	1.8%
HETEROSEXUAL-CDC	23	10.2%	36	15.3%	47	16.6%	30	12.0%	38	11.2%	38	11.2%
HETEROSEXUAL-NIR*	14	6.2%	19	8.1%	30	10.6%	18	7.2%	29	8.6%	29	8.6%
BLOOD PRODUCTS*	2	0.9%	3	1.3%	2	0.7%	5	2.0%	4	1.2%	4	1.2%
PEDIATRIC	0	0.0%	2	0.9%	0	0.0%	3	1.2%	2	0.6%	2	0.6%
NIR*	76	33.6%	63	26.8%	71	25.1%	68	27.2%	99	29.3%	99	29.3%
TOTAL	226	100%	235	100%	283	100%	250	100%	338	100%	338	100%
Female												
IDU*	13	14.0%	21	19.6%	15	11.9%	8	5.2%	8	6.1%	8	6.1%
HETEROSEXUAL-CDC	39	41.9%	50	46.7%	45	35.7%	54	35.3%	42	31.8%	42	31.8%
HETEROSEXUAL-NIR*	3	3.2%	10	9.3%	27	21.4%	34	22.2%	20	15.2%	20	15.2%
BLOOD PRODUCTS*	1	1.1%	3	2.8%	2	1.6%	5	3.3%	6	4.5%	6	4.5%
PEDIATRIC	1	1.1%	0	0.0%	0	0.0%	2	1.3%	2	1.5%	2	1.5%
NIR*	36	38.7%	23	21.5%	37	29.4%	50	32.7%	54	40.9%	54	40.9%
TOTAL	93	100%	107	100%	126	100%	153	100%	132	100%	132	100%
Total												
MSM*	67	21.0%	86	25.1%	103	25.2%	98	24.3%	142	30.2%	142	30.2%
IDU*	44	13.8%	42	12.3%	37	9.0%	31	7.7%	26	5.5%	26	5.5%
MSM/IDU*	13	4.1%	5	1.5%	8	2.0%	5	1.2%	6	1.3%	6	1.3%
HETEROSEXUAL-CDC	62	19.4%	86	25.1%	92	22.5%	84	20.8%	80	17.0%	80	17.0%
HETEROSEXUAL-NIR*	17	5.3%	29	8.5%	57	13.9%	52	12.9%	49	10.4%	49	10.4%
BLOOD PRODUCTS*	3	0.9%	6	1.8%	4	1.0%	10	2.5%	10	2.1%	10	2.1%
PEDIATRIC	1	0.3%	2	0.6%	0	0.0%	5	1.2%	4	0.9%	4	0.9%
NIR*	112	35.1%	86	25.1%	108	26.4%	118	29.3%	153	32.6%	153	32.6%
TOTAL	319	100%	342	100%	409	100%	403	100%	470	100%	470	100%

*MSM= Men who have sex with men; IDU= Injection drug use; Blood Products includes adult hemophilia; Heterosexual-NIR= Presumed Heterosexual (See Appendix B pg. 100.); NIR= No identified risk reported

**Table V3: Region 4 HIV Disease Reports
Gender and Race/Ethnicity, 1999-2003**

Race/ Ethnicity	Year														
	1999			2000			2001			2002			2003		
	Cases	Pct	Rate*												
Male															
White**	59	18%	12.8	41	12%	8.7	60	15%	12.5	59	15%	12.1	97	21%	19.9
Black**	153	48%	89.6	176	51%	100.8	203	50%	113.9	177	44%	97.3	216	46%	118.7
Hispanic	13	4%	28.0	17	5%	31.1	17	4%	28.3	10	2%	15.4	20	4%	30.8
Other**	1	0%	n/a	1	0%	n/a	3	0%	n/a	4	1%	n/a	2	0%	n/a
Unknown	0	0%	-	0	0%	-	0	0%	-	0	0%	-	3	1%	-
Total	226	71%	32.3	235	69%	32.6	283	69%	38.2	250	62%	32.9	338	72%	44.5
Female															
White**	11	3%	2.3	16	5%	3.3	16	4%	3.2	14	3%	2.8	16	3%	3.2
Black**	81	25%	41.4	90	26%	45.1	103	25%	50.5	127	32%	61.1	106	23%	51.0
Hispanic	1	0%	n/a	1	0%	n/a	6	1%	15.3	10	2%	22.8	8	2%	18.2
Other**	0	0%	0.0	0	0%	0.0	1	0%	n/a	2	0%	n/a	2	0%	n/a
Total	93	29%	12.7	107	31%	14.3	126	31%	16.4	153	38%	19.5	132	28%	16.8
Total															
1999															
2000															
2001															
2002															
2003															

*per 100,000 population

**White= White, non Hispanic; Black= Black or African American, non Hispanic; Other= American Indian/Alaskan Native, non Hispanic, Asian/Pacific Islander, non Hispanic

Highlights/Summary for Region 5

- In Region 5, the 2003 rate of new HIV disease reports was 23.9 per 100,000 persons. The rate of new HIV disease reports for the state is 25.2 per 100,000 persons.
- In Region 5, males represented 63% of all new HIV disease reports in 2003: white males represent about 12% of all new cases, while black males represent 46% of new cases. This is slightly different from the new reports for the state overall, where males overall represented about 69% of new HIV disease reports—white males about 21% and black males about 42%.
- In Region 5, the new HIV disease case rate for white males is 10.5 per 100,000 population as compared to the state's rate for white males of 15.7. The 2003 HIV disease case rate for black males in Region 5 was 73.8, compared to the state rate for black males of 104.3 per 100,000 persons.
- Region 5's race/ethnicity distribution for new HIV disease reports was slightly different from the state's. In Region 5, 2003 HIV disease reports for blacks accounted for 72% of reports and reports for whites accounted for 18%; for the state the proportions were 66% black and 26% white.
- Region 5 followed the state's overall pattern with respect to the distribution of HIV disease reports among age categories.
- Region 5 did not differ from the state with regard to the distribution of mode of transmission among HIV disease reports. The proportion of HIV disease reports for MSM increased over the past five years (1999-2003).

REGION 5 COUNTIES:

ANSON, CUMBERLAND, HARNETT, HOKE, MONTGOMERY, MOORE, RICHMOND, ROBESON, SCOTLAND

**Table W1: Region 5 HIV Disease Reports
Gender and Mode of Transmission, 1999-2003**

Mode of transmission	Year											
	1999		2000		2001		2002		2003			
	Cases	Pct.										
Male												
MSM*	33	37.1%	24	29.3%	32	31.4%	24	27.3%	49	41.9%		
IDU*	14	15.7%	9	11.0%	10	9.8%	7	8.0%	11	9.4%		
MSM/IDU*	4	4.5%	2	2.4%	1	1.0%	1	1.1%	3	2.6%		
HETEROSEXUAL-CDC	7	7.9%	21	25.6%	13	12.7%	8	9.1%	9	7.7%		
HETEROSEXUAL-NIR*	1	1.1%	7	8.5%	19	18.6%	17	19.3%	16	13.7%		
BLOOD PRODUCTS*	1	1.1%	0	0.0%	1	1.0%	2	2.3%	1	0.9%		
PEDIATRIC	0	0.0%	0	0.0%	1	1.0%	0	0.0%	0	0.0%		
NIR*	29	32.6%	19	23.2%	25	24.5%	29	33.0%	28	23.9%		
TOTAL	89	100%	82	100%	102	100%	88	100%	117	100%		
Female												
IDU*	4	8.9%	4	8.5%	5	13.5%	0	0.0%	5	7.4%		
HETEROSEXUAL-CDC	17	37.8%	20	42.6%	14	37.8%	14	43.8%	19	27.9%		
HETEROSEXUAL-NIR*	6	13.3%	6	12.8%	6	16.2%	5	15.6%	19	27.9%		
BLOOD PRODUCTS*	4	8.9%	4	8.5%	4	10.8%	0	0.0%	1	1.5%		
PEDIATRIC	1	2.2%	0	0.0%	0	0.0%	0	0.0%	0	0.0%		
NIR*	13	28.9%	13	27.7%	8	21.6%	13	40.6%	24	35.3%		
TOTAL	45	100%	47	100%	37	100%	32	100%	68	100%		
Total												
MSM*	33	24.6%	24	18.6%	32	23.0%	24	20.0%	49	26.5%		
IDU*	18	13.4%	13	10.1%	15	10.8%	7	5.8%	16	8.6%		
MSM/IDU*	4	3.0%	2	1.6%	1	0.7%	1	0.8%	3	1.6%		
HETEROSEXUAL-CDC	24	17.9%	41	31.8%	27	19.4%	22	18.3%	28	15.1%		
HETEROSEXUAL-NIR*	7	5.2%	13	10.1%	25	18.0%	22	18.3%	35	18.9%		
BLOOD PRODUCTS*	5	3.7%	4	3.1%	5	3.6%	2	1.7%	2	1.1%		
PEDIATRIC	1	0.7%	0	0.0%	1	0.7%	0	0.0%	0	0.0%		
NIR*	42	31.3%	32	24.8%	33	23.7%	42	35.0%	52	28.1%		
TOTAL	134	100%	129	100%	139	100%	120	100%	185	100%		

*MSM= Men who have sex with men; IDU= Injection drug use; Blood Products includes adult hemophilia; Heterosexual-NIR= Presumed Heterosexual (See Appendix B pg. 100.); NIR= No identified risk reported

**Table W2: Region 5 HIV Disease Reports
Gender and Age, 1999-2003**

Age	Year														
	1999			2000			2001			2002			2003		
	Cases	Pct	Rate*												
Male															
00-12 Years	0	0%	0.0	0	0%	0.0	1	1%	n/a	0	0%	0.0	0	0%	0.0
13-19 Years	0	0%	0.0	3	2%	n/a	1	1%	n/a	4	3%	n/a	3	2%	n/a
20-29 Years	16	12%	23.8	17	13%	25.6	19	14%	29.2	10	8%	15.3	24	13%	36.7
30-39 Years	39	29%	66.3	36	28%	61.3	35	25%	59.4	37	31%	62.8	31	17%	52.6
40-49 Years	23	17%	46.0	16	12%	31.6	34	24%	65.6	28	23%	53.1	42	23%	79.7
50+ Years	11	8%	13.7	10	8%	12.1	12	9%	14.2	9	8%	10.4	17	9%	19.7
Total	89	66%	23.8	82	64%	21.7	102	73%	26.8	88	73%	22.9	117	63%	30.4
Female															
00-12 Years	1	1%	n/a	0	0%	0.0	0	0%	0.0	0	0%	0.0	0	0%	0.0
13-19 Years	2	1%	n/a	1	1%	n/a	0	0%	0.0	1	1%	n/a	9	5%	23.8
20-29 Years	12	9%	21.2	11	9%	19.7	10	7%	18.4	10	8%	18.5	16	9%	29.6
30-39 Years	11	8%	19.0	16	12%	27.8	16	12%	27.7	10	8%	17.4	16	9%	27.8
40-49 Years	15	11%	28.4	14	11%	26.2	9	6%	16.4	5	4%	9.0	22	12%	39.7
50+ Years	4	3%	n/a	5	4%	4.8	2	1%	n/a	6	5%	5.5	5	3%	4.6
Total	45	34%	11.8	47	36%	12.2	37	27%	9.6	32	27%	8.2	68	37%	17.4
Total															
1999	Cases	Pct	Rate*												
2000	Cases	Pct	Rate*												
2001	Cases	Pct	Rate*												
2002	Cases	Pct	Rate*												
2003	Cases	Pct	Rate*												
1999	1	1%	n/a	0	0%	0.0	1	1%	n/a	0	0%	0.0	0	0%	0.0
2000	2	1%	n/a	4	3%	n/a	1	1%	n/a	5	4%	6.3	12	6%	15.2
2001	28	21%	22.6	28	22%	22.9	29	21%	24.3	20	17%	16.8	40	22%	33.5
2002	50	37%	42.9	52	40%	44.7	51	37%	43.7	47	39%	40.3	47	25%	40.3
2003	38	28%	36.9	30	23%	28.8	43	31%	40.3	33	28%	30.5	64	35%	59.2
1999	15	11%	8.2	15	12%	8.1	14	10%	7.3	15	13%	7.7	22	12%	11.3
2000	134	100%	17.8	129	100%	16.9	139	100%	18.1	120	100%	15.5	185	100%	23.9

*per 100,000 population

**Table W3: Region 5 HIV Disease Reports
Gender and Race/Ethnicity, 1999-2003**

Race/ Ethnicity	Year														
	1999			2000			2001			2002			2003		
	Cases	Pct	Rate*												
Male															
White**	18	13%	8.6	6	5%	2.9	16	12%	7.7	15	13%	7.1	22	12%	10.5
Black**	62	46%	56.7	66	51%	59.5	72	52%	63.7	63	53%	54.7	85	46%	73.8
Am. Ind./AN**	7	5%	23.5	7	5%	23.5	6	4%	19.8	4	3%	n/a	5	3%	16.3
Other/ Unknown	0	0%	-	0	0%	-	1	1%	-	2	2%	-	0	0%	-
Hispanic	2	1%	n/a	3	2%	n/a	7	5%	29.8	4	3%	16.8	5	3%	21.0
Total	89	66%	23.8	82	64%	21.7	102	73%	26.8	88	73%	22.9	117	63%	30.4
Female															
White**	13	10%	6.2	10	8%	4.8	7	5%	3.4	5	4%	2.4	11	6%	5.3
Black**	27	20%	22.9	32	25%	26.8	27	19%	22.2	24	20%	19.4	49	26%	39.7
Am. Ind./AN**	5	4%	15.7	1	1%	n/a	2	1%	n/a	2	2%	n/a	5	3%	15.3
Other/ Unknown	0	0%	-	0	0%	-	1	1%	-	0	0%	-	1	1%	-
Hispanic	0	0%	0.0	4	3%	n/a	0	0%	0.0	1	1%	n/a	2	1%	n/a
Total	45	34%	11.8	47	36%	12.2	37	27%	9.6	32	27%	8.2	68	37%	17.4
Total															
1999	Cases	Pct	Rate*												
White**	31	23%	7.4	16	12%	3.8	23	17%	5.5	20	17%	4.8	33	18%	7.9
Black**	89	66%	39.1	98	76%	42.5	99	71%	42.1	87	73%	36.5	134	72%	56.2
Am. Ind./AN**	12	9%	19.5	8	6%	13.0	8	6%	12.8	6	5%	9.5	10	5%	15.8
Other/ Unknown	0	0%	-	0	0%	-	2	1%	-	2	2%	-	1	1%	-
Hispanic	2	1%	n/a	7	5%	16.1	7	5%	16.8	5	4%	11.8	7	4%	16.5
Total	134	100%	17.8	129	100%	16.9	139	100%	18.1	120	100%	15.5	185	100%	23.9

*per 100,000 population

**White= White, non Hispanic; Black= Black or African American, non Hispanic; Am. Ind./AN= American Indian/Alaskan Native, non Hispanic

Highlights/Summary for Region 6

- In Region 6, the 2003 rate of new HIV disease reports was 28.5 per 100,000 persons, slightly higher than the state rate of 25.2 per 100,000 persons.
- In Region 6, males represented 67% of new cases for 2003. White males represented only 8% of new cases, whereas black males represented 55% of new cases for 2003. This differed from the state overall, where 21% of new HIV disease cases were white males and 42% were black. The state rates per 100,000 persons for both black and white males were higher than for those in Region 6.
- HIV disease reports for Hispanic males and females increased in the past five years (1999-2003) in Region 6.
- The 2003 HIV disease rate for Hispanics in Region 6 is more than double the state rate (64.1 per 100,000 versus 25.4 per 100,000); however, this rate maybe unreliable as it is based on fewer than 20 cases.
- The overall distribution for HIV disease among age groups was similar between the state and Region 6. HIV disease reports for men and women ages 50 and above increased over the past five years (1999-2003) in Region 6.
- MSM activity made up a lower proportion of 2003 HIV disease reports for males in Region 6 than for the state (29% versus 42.5%). Conversely, the proportion of HIV disease reports among males in Region 6 attributed to heterosexual transmission and IDU were higher than for the state. The distribution of reports for females by modes of transmission was very similar in Region 6 and the state.

REGION 6 COUNTIES:

BEAUFORT, BERTIE, CAMDEN, CHOWAN, CRAVEN, CURRITUCK, DARE, EDGECOMBE, GATES, GREENE, HALIFAX, HERTFORD, HYDE, JONES, LENOIR, MARTIN, NASH, NORTHAMPTON, PAMLICO, PASQUOTANK, PERQUIMANS, PITT, TYRRELL, WASHINGTON, WAYNE

**Table X1: Region 6 HIV Disease Reports
Gender and Mode of Transmission, 1999-2003**

Mode of transmission	Year											
	1999		2000		2001		2002		2003			
	Cases	Pct.										
Male												
MSM*	42	29.8%	44	31.9%	55	34.8%	47	29.7%	52	29.1%		
IDU*	16	11.3%	18	13.0%	7	4.4%	21	13.3%	20	11.2%		
MSM/IDU*	11	7.8%	3	2.2%	9	5.7%	5	3.2%	6	3.4%		
HETEROSEXUAL-CDC	26	18.4%	20	14.5%	37	23.4%	14	8.9%	26	14.5%		
HETEROSEXUAL-NIR*	18	12.8%	17	12.3%	22	13.9%	35	22.2%	22	12.3%		
BLOOD PRODUCTS*	5	3.5%	5	3.6%	2	1.3%	2	1.3%	2	1.1%		
PEDIATRIC	1	0.7%	1	0.7%	0	0.0%	1	0.6%	0	0.0%		
NIR*	22	15.6%	30	21.7%	26	16.5%	33	20.9%	51	28.5%		
TOTAL	141	100%	138	100%	158	100%	158	100%	179	100%		
Female												
IDU*	10	12.8%	8	10.5%	4	6.3%	5	6.0%	6	6.9%		
HETEROSEXUAL-CDC	45	57.7%	36	47.4%	25	39.7%	29	34.5%	18	20.7%		
HETEROSEXUAL-NIR*	7	9.0%	10	13.2%	12	19.0%	23	27.4%	22	25.3%		
BLOOD PRODUCTS*	3	3.8%	5	6.6%	7	11.1%	4	4.8%	10	11.5%		
PEDIATRIC	0	0.0%	2	2.6%	0	0.0%	2	2.4%	0	0.0%		
NIR*	13	16.7%	15	19.7%	15	23.8%	21	25.0%	31	35.6%		
TOTAL	78	100%	76	100%	63	100%	84	100%	87	100%		
Total												
MSM*	42	19.2%	44	20.6%	55	24.9%	47	19.4%	52	19.5%		
IDU*	26	11.9%	26	12.1%	11	5.0%	26	10.7%	26	9.8%		
MSM/IDU*	11	5.0%	3	1.4%	9	4.1%	5	2.1%	6	2.3%		
HETEROSEXUAL-CDC	71	32.4%	56	26.2%	62	28.1%	43	17.8%	44	16.5%		
HETEROSEXUAL-NIR*	25	11.4%	27	12.6%	34	15.4%	58	24.0%	44	16.5%		
BLOOD PRODUCTS*	8	3.7%	10	4.7%	9	4.1%	6	2.5%	12	4.5%		
PEDIATRIC	1	0.5%	3	1.4%	0	0.0%	3	1.2%	0	0.0%		
NIR*	35	16.0%	45	21.0%	41	18.6%	54	22.3%	82	30.8%		
TOTAL	219	100%	214	100%	221	100%	242	100%	266	100%		

*MSM= Men who have sex with men; IDU= Injection drug use; Blood Products includes adult hemophilia; Heterosexual-NIR= Presumed Heterosexual (See Appendix B pg. 100.); NIR= No identified risk reported

Highlights/Summary for Region 7

- In Region 7, the rate of new HIV disease reports for 2003 was 26.6 per 100,000. The rate of new HIV disease reports for the state was 25.2 per 100,000.
- In Region 7, males represented 64% of all new HIV disease cases. In 2003, 22% of new cases were white males, 38% were black males. Both the rates per 100,000 and proportions were similar to those for males overall in the state.
- The 2003 rate for HIV disease among females was higher in Region 7 than for the state, especially for black females, with a rate of 60.9 per 100,000 compared the state rate of 51.9 for females.
- HIV disease reports for males MSM increased as a proportion of new reports in Region 7 during the past five years (1999-2003).
- The proportion of new 2003 HIV disease cases with IDU as the mode of transmission was higher for females in Region 7 versus the state (13.6% and 6.9% respectively).

REGION 7 COUNTIES: SAMPSON, DUPLIN, ONSLOW, PENDER, BLADEN, NEW HANOVER, BRUNSWICK, COLUMBUS

**Table Y1: Region 7 HIV Disease Reports
Gender and Mode of Transmission, 1999-2003**

Mode of transmission	Year											
	1999		2000		2001		2002		2003			
	Cases	Pct.										
Male												
MSM*	24	35.3%	15	30.6%	33	35.1%	42	51.2%	62	52.1%		
IDU*	7	10.3%	8	16.3%	8	8.5%	11	13.4%	12	10.1%		
MSM/IDU*	5	7.4%	3	6.1%	2	2.1%	1	1.2%	1	0.8%		
HETEROSEXUAL-CDC	11	16.2%	2	4.1%	15	16.0%	4	4.9%	16	13.4%		
HETEROSEXUAL-NIR*	6	8.8%	1	2.0%	12	12.8%	9	11.0%	9	7.6%		
BLOOD PRODUCTS*	1	1.5%	1	2.0%	1	1.1%	0	0.0%	1	0.8%		
PEDIATRIC	1	1.5%	0	0.0%	0	0.0%	0	0.0%	0	0.0%		
NIR*	13	19.1%	19	38.8%	23	24.5%	15	18.3%	18	15.1%		
TOTAL	68	100%	49	100%	94	100%	82	100%	119	100%		
Female												
IDU*	6	17.1%	7	18.9%	4	6.8%	4	10.8%	9	13.6%		
HETEROSEXUAL-CDC	17	48.6%	13	35.1%	26	44.1%	11	29.7%	26	39.4%		
HETEROSEXUAL-NIR*	3	8.6%	5	13.5%	8	13.6%	7	18.9%	9	13.6%		
BLOOD PRODUCTS*	2	5.7%	0	0.0%	1	1.7%	0	0.0%	0	0.0%		
PEDIATRIC	0	0.0%	1	2.7%	0	0.0%	1	2.7%	0	0.0%		
NIR*	7	20.0%	11	29.7%	20	33.9%	14	37.8%	22	33.3%		
TOTAL	35	100%	37	100%	59	100%	37	100%	66	100%		
Total												
MSM*	24	23.3%	15	17.4%	33	21.6%	42	35.3%	62	33.5%		
IDU*	13	12.6%	15	17.4%	12	7.8%	15	12.6%	21	11.4%		
MSM/IDU*	5	4.9%	3	3.5%	2	1.3%	1	0.8%	1	0.5%		
HETEROSEXUAL-CDC	28	27.2%	15	17.4%	41	26.8%	15	12.6%	42	22.7%		
HETEROSEXUAL-NIR*	9	8.7%	6	7.0%	20	13.1%	16	13.4%	18	9.7%		
BLOOD PRODUCTS*	3	2.9%	1	1.2%	2	1.3%	0	0.0%	1	0.5%		
PEDIATRIC	1	1.0%	1	1.2%	0	0.0%	1	0.8%	0	0.0%		
NIR*	20	19.4%	30	34.9%	43	28.1%	29	24.4%	40	21.6%		
TOTAL	103	100%	86	100%	153	100%	119	100%	185	100%		

*MSM= Men who have sex with men; IDU= Injection drug use; Blood Products includes adult hemophilia; Heterosexual-NIR= Presumed Heterosexual (See Appendix B pg. 100.); NIR= No identified risk reported

**Table Y2: Region 7 HIV Disease Reports
Gender and Age, 1999-2003**

Age	Year														
	1999			2000			2001			2002			2003		
	Cases	Pct	Rate*												
Male															
00-12 Years	1	1%	n/a	0	0%	0.0	0	0%	0.0	0	0%	0.0	0	0%	0.0
13-19 Years	0	0%	0.0	1	1%	n/a	0	0%	0.0	1	1%	n/a	0	0%	0.0
20-29 Years	15	15%	23.2	5	6%	7.8	19	12%	29.4	14	12%	21.5	16	9%	24.6
30-39 Years	20	19%	40.6	17	20%	35.1	34	22%	70.0	28	24%	57.3	47	25%	96.2
40-49 Years	23	22%	50.1	18	21%	38.8	27	18%	57.2	26	22%	54.4	40	22%	83.8
50+ Years	9	9%	10.5	8	9%	9.1	14	9%	15.6	13	11%	14.2	16	9%	17.5
Total	68	66%	20.1	49	57%	14.3	94	61%	27.2	82	69%	23.4	119	64%	33.9
Female															
00-12 Years	0	0%	0.0	1	1%	n/a	0	0%	0.0	1	1%	n/a	0	0%	0.0
13-19 Years	0	0%	0.0	1	1%	n/a	0	0%	0.0	0	0%	0.0	1	1%	n/a
20-29 Years	5	5%	10.5	9	10%	19.2	15	10%	31.4	8	7%	16.5	10	5%	20.7
30-39 Years	14	14%	28.9	16	19%	33.4	24	16%	50.5	14	12%	29.6	14	8%	29.6
40-49 Years	12	12%	24.9	7	8%	14.3	13	8%	26.2	9	8%	18.0	27	15%	54.0
50+ Years	4	4%	n/a	3	3%	n/a	7	5%	6.5	5	4%	4.6	14	8%	12.8
Total	35	34%	10.4	37	43%	10.9	59	39%	17.3	37	31%	10.7	66	36%	19.1
Total															
1999	Cases	Pct	Rate*												
2000	Cases	Pct	Rate*												
2001	Cases	Pct	Rate*												
2002	Cases	Pct	Rate*												
2003	Cases	Pct	Rate*												
00-12 Years	1	1%	n/a	1	1%	n/a	0	0%	0.0	1	1%	n/a	0	0%	0.0
13-19 Years	0	0%	0.0	2	2%	n/a	0	0%	0.0	1	1%	n/a	1	1%	n/a
20-29 Years	20	19%	17.8	14	16%	12.6	34	22%	30.3	22	18%	19.4	26	14%	22.9
30-39 Years	34	33%	34.8	33	38%	34.2	58	38%	60.4	42	35%	43.7	61	33%	63.5
40-49 Years	35	34%	37.2	25	29%	26.3	40	26%	41.4	35	29%	35.8	67	36%	68.6
50+ Years	13	13%	6.9	11	13%	5.7	21	14%	10.6	18	15%	9.0	30	16%	14.9
Total	103	100%	15.3	86	100%	12.6	153	100%	22.2	119	100%	17.1	185	100%	26.6

*per 100,000 population

**Table Z-1: North Carolina Chlamydia Reports (Lab-confirmed)
By Gender and Age, 1999-2003**

Age	Year																		
	1999			2000			2001			2002			2003						
	Cases	Pct	Rate*	Cases	Pct	Rate*	Cases	Pct	Rate*	Cases	Pct	Rate*	Cases	Pct	Rate*				
Male																			
00-12 Years	12	0%	1.7	17	0%	2.3	14	0%	1.8	35	0%	4.5	22	0%	2.9				
13-19 Years	720	3%	189.3	712	3%	182.6	742	3%	189.5	887	4%	222.0	907	3%	227.0				
20-29 Years	1967	9%	323.4	2074	9%	341.1	2136	10%	350.4	2666	11%	435.6	2582	10%	421.9				
30-39 Years	388	2%	61.5	441	2%	69.6	451	2%	70.4	557	2%	86.6	590	2%	91.7				
40-49 Years	116	1%	20.1	100	0%	17.0	106	0%	17.5	162	1%	26.4	181	1%	29.5				
50+ Years	42	0%	4.4	37	0%	3.7	38	0%	3.7	41	0%	3.9	61	0%	5.9				
Unknown	150	1%	-	0	0%	-	1	0%	-	0	0%	-	0	0%	-				
Total	3395	16%	87.4	3381	15%	85.4	3488	16%	86.7	4348	18%	106.5	4343	17%	106.4				
Female																			
00-12 Years	26	0%	3.8	89	0%	12.4	50	0%	6.9	139	1%	18.9	73	0%	9.9				
13-19 Years	8441	39%	2337.7	8395	38%	2273.6	8025	36%	2167.6	8915	36%	2363.4	9403	36%	2492.7				
20-29 Years	8102	37%	1420.7	8962	40%	1586.8	9328	42%	1649.8	9934	40%	1757.8	10608	41%	1877.0				
30-39 Years	965	4%	153.3	1130	5%	179.5	1080	5%	169.8	1179	5%	185.3	1391	5%	218.6				
40-49 Years	121	1%	20.0	171	1%	27.9	165	1%	26.2	181	1%	28.4	207	1%	32.4				
50+ Years	19	0%	1.6	52	0%	4.2	36	0%	2.9	40	0%	3.1	39	0%	3.0				
Unknown	742	3%	-	1	0%	-	5	0%	-	0	0%	-	1	0%	-				
Total	18416	84%	453.3	18800	85%	456.1	18689	84%	446.7	20388	82%	481.0	21722	83%	512.5				
Total																			
1999	Cases	Pct	Rate*	2000	Cases	Pct	Rate*	2001	Cases	Pct	Rate*	2002	Cases	Pct	Rate*	2003	Cases	Pct	Rate*
00-12 Years	38	0%	2.7	106	0%	7.2	64	0%	4.3	174	1%	11.5	95	0%	6.3				
13-19 Years	9161	42%	1235.7	9108	41%	1199.9	8767	40%	1150.9	9802	40%	1261.9	10310	40%	1327.3				
20-29 Years	10069	46%	854.4	11036	50%	941.0	11464	52%	975.7	12602	51%	1070.5	13191	51%	1120.5				
30-39 Years	1353	6%	107.3	1571	7%	124.3	1531	7%	119.9	1736	7%	135.7	1981	8%	154.8				
40-49 Years	237	1%	20.0	271	1%	22.5	271	1%	22.0	343	1%	27.4	388	1%	31.0				
50+ Years	61	0%	2.8	89	0%	4.0	74	0%	3.3	81	0%	3.5	100	0%	4.3				
Unknown	892	4%	-	1	0%	-	6	0%	-	0	0%	-	1	0%	-				
Total	21811	100%	274.4	22182	100%	274.5	22177	100%	270.3	24738	100%	297.3	26066	100	313.3				

*per 100,000 population

**Table Z-2: North Carolina Chlamydia Reports (Lab-Confirmed)
Gender and Race/Ethnicity, 1999-2003**

Race/ Ethnicity	Year														
	1999			2000			2001			2002			2003		
	Cases	Pct	Rate*												
Male															
White**	760	3%	27.4	738	3%	26.4	802	4%	28.4	1036	4%	36.4	1062	4%	37.3
Black**	2348	11%	288.2	2296	10%	277.4	2340	11%	278.1	2875	12%	336.2	2869	11%	335.5
Am. Ind./AN**	12	0%	25.1	31	0%	62.8	23	0%	45.9	41	0%	80.6	23	0%	45.2
Asian/PI**	21	0%	37.9	24	0%	39.1	26	0%	39.8	38	0%	54.6	20	0%	28.7
Hispanic	249	1%	127.5	291	1%	126.6	282	1%	115.7	350	1%	135.1	354	1%	136.6
Unknown	5	0%	-	1	0%	-	15	0%	-	8	0%	-	15	0%	-
Total	3395	16%	87.4	3381	15%	85.4	3488	16%	86.7	4348	18%	106.5	4343	17%	106.4
Female															
White**	4840	22%	166.9	4843	22%	166.0	4831	22%	164.1	5385	22%	181.6	5695	22%	192.1
Black**	12181	56%	1321.5	12315	56%	1318.3	12087	55%	1273.9	13209	53%	1373.3	14021	54%	1457.7
Am. Ind./AN**	295	1%	587.7	370	2%	715.5	226	1%	431.1	314	1%	591.0	332	1%	624.9
Asian/PI**	144	1%	240.8	151	1%	232.1	188	1%	271.7	167	1%	226.8	153	1%	207.8
Hispanic	906	4%	687.5	1110	5%	718.3	1285	6%	757.6	1274	5%	687.3	1473	6%	794.7
Unknown	50	0%	-	11	0%	-	72	0%	-	39	0%	-	48	0%	-
Total	18416	84%	453.3	18800	85%	456.1	18689	84%	446.7	20388	82%	481.0	21722	83%	512.5
Total															
1999															
2000															
2001															
2002															
2003															
Total															
White**	5600	26%	98.7	5581	25%	97.8	5633	25%	97.7	6421	26%	110.5	6757	26%	116.3
Black**	14529	67%	836.7	14611	66%	829.3	14427	65%	805.8	16085	65%	885.3	16891	65%	929.7
Am. Ind./AN**	307	1%	313.2	402	2%	397.8	249	1%	242.8	355	1%	341.4	355	1%	341.4
Asian/PI**	165	1%	143.2	175	1%	138.4	214	1%	159.0	205	1%	143.1	173	1%	120.7
Hispanic	1155	5%	353.2	1401	6%	364.6	1567	7%	379.0	1625	7%	365.6	1827	7%	411.1
Unknown	55	0%	-	12	0%	-	87	0%	-	47	0%	-	63	0%	-
Total	21811	100%	274.4	22182	100%	274.5	22177	100%	270.3	24738	100%	297.3	26066	100%	313.3

*per 100,000 population

**Table Z-3: North Carolina Gonorrhea Reports
By Gender and Age, 1999-2003**

Age	Year														
	1999			2000			2001			2002			2003		
	Cases	Pct	Rate*												
Male															
00-12 Years	9	0%	1.2	25	0%	3.3	11	0%	1.4	34	0%	4.4	22	0%	2.9
13-19 Years	1734	9%	455.9	1569	9%	402.5	1558	9%	397.9	1324	9%	331.4	1236	8%	309.3
20-29 Years	4752	24%	781.2	5004	28%	823.0	4637	28%	760.7	4091	27%	668.4	3991	26%	652.1
30-39 Years	1767	9%	279.9	1783	10%	281.2	1627	10%	253.9	1526	10%	237.2	1485	10%	230.8
40-49 Years	864	4%	149.4	757	4%	128.5	752	4%	124.5	612	4%	99.7	715	5%	116.5
50+ Years	319	2%	33.1	320	2%	32.4	268	2%	26.4	248	2%	23.8	270	2%	25.9
Unknown	894	5%	-	0	0%	-	4	0%	-	0	0%	-	0	0%	-
Total	10339	53%	266.0	9458	53%	238.8	8857	53%	220.2	7835	51%	192.0	7719	51%	189.1
Female															
00-12 Years	27	0%	3.9	42	0%	5.9	25	0%	3.4	36	0%	4.9	25	0%	3.4
13-19 Years	3436	18%	951.6	3240	18%	877.5	3101	19%	837.6	2886	19%	765.1	2760	18%	731.7
20-29 Years	4057	21%	711.4	4068	23%	720.3	3707	22%	655.6	3608	24%	638.4	3596	24%	636.3
30-39 Years	942	5%	149.6	939	5%	149.1	790	5%	124.2	779	5%	122.4	765	5%	120.2
40-49 Years	210	1%	34.8	206	1%	33.6	209	1%	33.2	168	1%	26.3	204	1%	32.0
50+ Years	30	0%	2.5	42	0%	3.4	38	0%	3.0	37	0%	2.9	16	0%	1.2
Unknown	387	2%	-	2	0%	-	5	0%	-	0	0%	-	0	0%	-
Total	9089	47%	223.7	8539	47%	207.1	7875	47%	188.2	7514	49%	177.3	7366	49%	173.8
Total															
1999	Cases	Pct	Rate*												
2000	36	0%	2.5	67	0%	4.6	36	0%	2.4	70	0%	4.6	47	0%	3.1
2001	5170	27%	697.3	4809	27%	633.5	4659	28%	611.6	4210	27%	542.0	3996	26%	514.4
2002	8809	45%	747.4	9072	50%	773.5	8345	50%	710.2	7702	50%	654.3	7587	50%	644.5
2003	2709	14%	214.8	2723	15%	215.5	2417	14%	189.3	2306	15%	180.2	2250	15%	175.8
Unknown	1074	6%	90.8	963	5%	80.1	961	6%	77.9	780	5%	62.3	919	6%	73.4
Total	349	2%	16.1	362	2%	16.3	306	2%	13.5	285	2%	12.2	286	2%	12.3
Unknown	1281	7%	-	2	0%	-	9	0%	-	0	0%	-	0	0%	-
Total	19428	100%	244.4	17998	100%	222.7	16733	100%	203.9	15353	100%	184.5	15085	100%	181.3

*per 100,000 population

**Table Z-4: North Carolina Gonorrhea Reports
Gender and Race/Ethnicity, 1999-2003**

Race/ Ethnicity	Year															
	1999			2000			2001			2002			2003			
	Cases	Pct	Rate*													
Male																
White**	1002	5%	36.1	911	5%	32.6	811	5%	28.7	851	6%	29.9	844	6%	29.6	
Black**	8936	46%	1096.8	8094	45%	977.9	7642	46%	908.1	6695	44%	783.0	6569	44%	768.3	
Am. Ind./AN**	69	0%	144.3	67	0%	135.8	28	0%	55.8	63	0%	123.9	61	0%	119.9	
Asian/PI**	22	0%	39.7	20	0%	32.6	114	1%	174.4	24	0%	34.5	14	0%	20.1	
Hispanic	296	2%	151.6	349	2%	151.9	241	1%	98.8	191	1%	73.7	223	1%	86.1	
Unknown	14	0%	-	17	0%	-	21	0%	-	11	0%	-	8	0%	-	
Total	10339	53%	266.0	9458	53%	238.8	8857	53%	220.2	7835	51%	192.0	7719	51%	189.1	
Female																
White**	1664	9%	57.4	1521	8%	52.1	1335	8%	45.3	1292	8%	43.6	1390	9%	46.9	
Black**	7104	37%	770.7	6670	37%	714.0	6226	37%	656.2	5944	39%	618.0	5673	38%	589.8	
Am. Ind./AN**	148	1%	294.8	158	1%	305.5	77	0%	146.9	122	1%	229.6	121	1%	227.8	
Asian/PI**	27	0%	45.1	30	0%	46.1	109	1%	157.5	28	0%	38.0	35	0%	47.5	
Hispanic	119	1%	90.3	148	1%	95.8	115	1%	67.8	115	1%	62.0	137	1%	73.9	
Unknown	27	0%	-	12	0%	-	13	0%	-	13	0%	-	10	0%	-	
Total	9089	47%	223.7	8539	47%	207.1	7875	47%	188.2	7514	49%	177.3	7366	49%	173.8	
Total																
1999	Cases	Pct	Rate*													
2000	Cases	Pct	Rate*													
2001	Cases	Pct	Rate*													
2002	Cases	Pct	Rate*													
2003	Cases	Pct	Rate*													
Total	19428	100%	244.4	17998	100%	222.7	16733	100%	203.9	15353	100%	184.5	15085	100%	181.3	

*per 100,000 population

**White= White, non Hispanic; Black= Black or African American, non Hispanic; Am. Ind./AN= American Indian/Alaskan Native, non Hispanic; Asian/PI= Asian/Pacific Islander, non Hispanic

**Table Z-5: North Carolina Early Syphilis Reports (Primary, Secondary, Early Latent)
By Gender and Age, 1999-2003**

Age	Year																	
	1999			2000			2001			2002			2003					
	Cases	Pct	Rate*															
Male																		
00-12 Years	0	0%	0.0	2	0%	0.3	0	0%	0.0	1	0%	0.1	0	0%	0.0			
13-19 Years	29	2%	7.6	16	1%	4.1	16	2%	4.1	14	2%	3.5	9	2%	2.3			
20-29 Years	177	15%	29.1	153	14%	25.2	128	14%	21.0	93	15%	15.2	73	18%	11.9			
30-39 Years	198	16%	31.4	182	17%	28.7	166	18%	25.9	98	16%	15.2	67	17%	10.4			
40-49 Years	139	12%	24.0	132	12%	22.4	122	13%	20.2	91	15%	14.8	57	14%	9.3			
50+ Years	59	5%	6.1	66	6%	6.7	71	8%	7.0	45	7%	4.3	30	8%	2.9			
Unknown	21	2%	-	0	0%	-	0	0%	-	0	0%	-	0	0%	-			
Total	623	52%	16.0	551	50%	13.9	503	53%	12.5	342	56%	8.4	236	60%	5.8			
Female																		
00-12 Years	1	0%	0.1	0	0%	0.0	0	0%	0.0	0	0%	0.0	0	0%	0.0			
13-19 Years	62	5%	17.2	60	5%	16.2	45	5%	12.2	34	6%	9.0	14	4%	3.7			
20-29 Years	216	18%	37.9	182	17%	32.2	137	15%	24.2	80	13%	14.2	52	13%	9.2			
30-39 Years	188	16%	29.9	207	19%	32.9	166	18%	26.1	94	15%	14.8	56	14%	8.8			
40-49 Years	66	5%	10.9	84	8%	13.7	66	7%	10.5	54	9%	8.5	32	8%	5.0			
50+ Years	26	2%	2.2	17	2%	1.4	24	3%	1.9	12	2%	0.9	6	2%	0.5			
Unknown	22	2%	-	0	0%	-	0	0%	-	0	0%	-	0	0%	-			
Total	581	48%	14.3	550	50%	13.3	438	47%	10.5	274	44%	6.5	160	40%	3.8			
Total																		
1999	Cases	Pct	Rate*															
2000	Cases	Pct	Rate*															
2001	Cases	Pct	Rate*															
2002	Cases	Pct	Rate*															
2003	Cases	Pct	Rate*															
1999	1	0%	0.1	2	0%	0.1	0	0%	0.0	1	0%	0.1	1	0%	0.1	0	0%	0.0
2000	91	8%	12.3	76	7%	10.0	61	6%	8.0	48	8%	6.2	23	6%	3.0	23	6%	3.0
2001	393	33%	33.3	335	30%	28.6	265	28%	22.6	173	28%	14.7	125	32%	10.6	125	32%	10.6
2002	386	32%	30.6	389	35%	30.8	332	35%	26.0	192	31%	15.0	123	31%	9.6	123	31%	9.6
2003	205	17%	17.3	216	20%	18.0	188	20%	15.2	145	24%	11.6	89	22%	7.1	89	22%	7.1
Unknown	85	7%	3.9	83	8%	3.7	95	10%	4.2	57	9%	2.4	36	9%	1.5	36	9%	1.5
Total	43	4%	-	0	0%	-	0	0%	-	0	0%	-	0	0%	-	0	0%	-
Total	1204	100%	15.1	1101	100%	13.6	941	100%	11.5	616	100%	7.4	396	100%	4.8	396	100%	4.8

*per 100,000 population

Table Z-7: North Carolina Early Syphilis Reports (Primary, Secondary, Early Latent) by County Rank, 1999-2003

Rank*	County	Cases				
		1999	2000	2001	2002	2003
1	GUILFORD	98	112	118	63	80
2	MECKLENBURG	157	108	99	68	42
3	DURHAM	31	44	37	57	40
4	WAKE	105	89	51	43	37
5	ROBESON	109	133	144	67	32
6	CUMBERLAND	50	58	53	22	14
7	ALAMANCE	39	11	9	12	14
8	VANCE	16	9	7	8	11
9	FORSYTH	73	50	35	18	10
10	WILSON	22	11	16	15	10
11	NASH	10	12	14	7	7
12	RANDOLPH	31	17	3	7	7
13	COLUMBUS	12	6	54	30	5
14	HOKE	4	4	9	7	5
15	CABARRUS	4	3	8	1	5
16	CALDWELL	1	1	0	1	5
17	MOORE	12	24	17	36	4
18	NEW HANOVER	40	34	28	9	4
19	JOHNSTON	9	16	16	8	4
20	ROCKINGHAM	10	19	22	6	4
21	SAMPSON	1	2	3	6	4
22	HALIFAX	4	4	0	4	4
23	WAYNE	10	12	13	11	3
24	GASTON	22	22	15	4	3
25	PASQUOTANK	3	3	6	1	3
26	CATAWBA	19	10	2	1	3
27	ORANGE	14	3	20	13	2
28	MONTGOMERY	8	52	4	11	2
29	CASWELL	6	16	5	4	2
30	EDGECOMBE	9	7	6	2	2
31	BUNCOMBE	1	2	4	1	2
32	ONslow	11	3	1	1	2
33	WARREN	2	5	2	0	2
34	STOKES	2	2	1	0	2
35	CHATHAM	26	26	3	6	1
36	DAVIDSON	5	1	3	6	1
37	LENOIR	9	4	3	4	1
38	CLEVELAND	4	8	4	3	1
39	LEE	4	3	4	3	1
40	PITT	21	19	2	3	1

* Rank based on number of cases reported in 2003.

Table Z-7 cont.: North Carolina Early Syphilis Reports (Primary, Secondary, Early Latent) by County Rank, 1999-2003

Rank*	County	Cases				
		1999	2000	2001	2002	2003
41	BLADEN	6	7	1	3	1
42	GRANVILLE	24	13	4	2	1
43	FRANKLIN	1	3	4	2	1
44	GREENE	5	1	0	2	1
45	IREDELL	16	10	3	1	1
46	PERSON	0	1	3	1	1
47	CRAVEN	7	9	2	1	1
48	NORTHAMPTON	0	0	1	1	1
49	UNION	10	4	5	0	1
50	BEAUFORT	6	4	1	0	1
51	LINCOLN	2	0	1	0	1
52	CAMDEN	0	0	0	0	1
53	JACKSON	0	0	0	0	1
53	SURRY	0	0	0	0	1
54	BRUNSWICK	33	26	18	8	0
55	RICHMOND	3	15	11	4	0
56	BERTIE	1	0	2	4	0
57	SCOTLAND	3	6	1	4	0
58	PENDER	3	2	4	3	0
59	ROWAN	6	4	9	2	0
60	WASHINGTON	6	1	4	2	0
61	CARTERET	1	1	3	2	0
62	HARNETT	12	4	6	1	0
63	STANLY	19	6	3	1	0
64	DUPLIN	4	0	1	1	0
65	JONES	0	0	1	1	0
66	HERTFORD	2	0	0	1	0
67	BURKE	2	4	2	0	0
68	CHOWAN	0	1	2	0	0
69	MCDOWELL	0	0	2	0	0
70	ANSON	2	3	1	0	0
71	MARTIN	1	3	1	0	0
72	ALEXANDER	1	1	1	0	0
72	YADKIN	1	1	1	0	0
73	DARE	0	0	1	0	0
73	TRANSYLVANIA	0	0	1	0	0
74	RUTHERFORD	2	2	0	0	0
75	WILKES	1	2	0	0	0
76	GATES	4	1	0	0	0
77	YANCEY	0	1	0	0	0

*Rank based on number of cases reported in 2003.

Table Z-7 cont.: North Carolina Early Syphilis Reports (Primary, Secondary, Early Latent) by County Rank, 1999-2003

Rank*	County	Cases				
		1999	2000	2001	2002	2003
78	DAVIE	3	0	0	0	0
79	HENDERSON	1	0	0	0	0
80	PAMLICO	1	0	0	0	0
81	ALLEGHANY	0	0	0	0	0
81	ASHE	0	0	0	0	0
81	AVERY	0	0	0	0	0
81	CHEROKEE	0	0	0	0	0
81	CLAY	0	0	0	0	0
81	CURRITUCK	0	0	0	0	0
81	GRAHAM	0	0	0	0	0
81	HAYWOOD	0	0	0	0	0
81	HYDE	0	0	0	0	0
81	MACON	0	0	0	0	0
81	MADISON	0	0	0	0	0
81	MITCHELL	0	0	0	0	0
81	PERQUIMANS	0	0	0	0	0
81	POLK	0	0	0	0	0
81	SWAIN	0	0	0	0	0
81	TYRRELL	0	0	0	0	0
81	WATAUGA	0	0	0	0	0
	UNKNOWN	1	0	0	0	0
	TOTAL	1204	1101	941	616	396

* Rank based on number of cases reported in 2003.

GLOSSARY

ADAP	AIDS Drug Assistance Program - funding program through Title II of the Ryan White Care Act to provide for medications for the treatment of HIV disease. Program funds may also be used to purchase health insurance for eligible clients, and to pay for services that enhance access, adherence, and monitoring of drug treatments.
AIDS	Acquired Immune Deficiency Syndrome - late stage of HIV infection characterized by breakdown of the immune system. Individuals with documented HIV infection will be reported as AIDS cases if they meet certain immunologic criteria (CD4 T-lymphocyte count <200 or <14%) or if the patient becomes ill with one of 26 AIDS-defining conditions.
ART	Anti-Retroviral Therapy - indicates that a patient is on any antiretroviral drug or drugs for HIV infection.
average	see Mean
BRFSS	Behavioral Risk Factor Surveillance System - a collaborative project of the Centers for Disease Control and Prevention (CDC), and U.S. states and territories. Monthly telephone surveys collect a variety of information on health behaviors from adults age 18 and older.
BV	Bacterial Vaginosis - A common vaginal infection of women of childbearing age. Cause and transmission of the disease are poorly understood. It is not a reportable condition in North Carolina.
CADR	Care Act Data Report - aggregate service-level report (to HRSA) required of all Ryan White Title programs to track program services, populations, and expenditures.
CAPI	Computer-Assisted Personal Interviewing - computer programming used for telephone or in-person interviews in which the computer guides the interviewer to the correct questions by incorporating skip patterns and subject-specific questions. The interviewer enters the responses directly into the system, which then creates a database.
CAREWare	Computer software tool designed by HRSA to produce the CADR report for Ryan White programs. See HRSA, CADR.
CBO	Community-Based Organization

CD4 T-lymphocyte	Type of white blood cell that coordinates a number of important immunologic functions. These cells are the primary targets of HIV. Severe declines in the number of these cells indicate progression of an immunologic disease. When the count of these cells reaches <200/uL or 14%, the HIV-infected patient is classified as having progressed to AIDS.
CDC	U.S. Centers for Disease Control and Prevention - agency under the U.S. Department of Health and Human Services. Located in Atlanta, GA. Mission: to promote health and quality of life by preventing and controlling disease, injury, and disability.
chancroid	A sexually transmitted disease characterized by painful genital ulceration and inflammatory inguinal adenopathy, caused by infection with <i>Haemophilus ducreyi</i> . Chancroid is a reportable disease in North Carolina.
chlamydia	Chlamydial infection (infection with <i>Chlamydia trachomatis</i> bacteria). To meet the surveillance case definition, all reported cases must be confirmed by laboratory diagnosis: either isolation of <i>C. trachomatis</i> by culture or by detection of antigen or nucleic acid. Chlamydial infection is a reportable disease in North Carolina.
congenital	Of or relating to a condition that is present at birth (example: congenital syphilis).
Ct	Infection with <i>Chlamydia trachomatis</i> . See chlamydia.
CTS	Counseling and Testing System - a national CDC program administered in North Carolina by the Division of Public Health to provide HIV counseling and testing services at 149 local health departments and CBOs across the state. All patients are asked a series of questions on reasons for testing and risk behaviors. All samples are sent to the State Laboratory of Public Health for testing and data entry. State results are aggregated with national data. See NTS, TTS.
CY	Calendar Year (January 1 to December 31)
denominator	The divisor in a fraction. (In the fraction 3/4, 4 is the denominator). With respect to disease rates and proportions, it is generally the number of people in the population at-risk for having the disease (a smaller number, found in the numerator, actually will have the disease).
DIS	Disease Intervention Specialist - state or local government employee who interviews reported STD cases (primarily HIV and syphilis). DIS are trained to locate and counsel infected patients and their partners, draw blood for testing, and collect interview data on risk behaviors and partners.

early latent syphilis	Also 'EL'. Third stage of syphilis infection lasting from the end of secondary syphilis through one year after initial infection. The patient is free of symptoms but remains infectious to sexual partners during this phase. Early latent refers only to cases for whom likely transmission within the past year can be documented. Patients at this stage are often identified through screening or contact tracing of known cases. If left untreated, the disease will progress to late latent syphilis.
early syphilis	Primary, secondary, and early latent syphilis cases (also PSEL). These stages represent all of the phases during which the infection can be transmitted sexually, although infectiousness drops off considerably during the early latent phase. Often reported separately from later stages of syphilis because these stages represent infections acquired less than one year prior to diagnosis and are targeted by public health interventions.
EIA	See ELISA
EL	see Early Latent Syphilis
ELISA	Enzyme-linked immunoassay - initial screening test for HIV infection. Highly sensitive. If this test is positive, the sample will then be tested with the more specific confirmatory test the Western Blot. If this test is negative, the result is returned as negative. Alternative name: EIA.
epidemiology	The study of the distribution and determinants of health related events in specified populations, and the application of this study to the control of health problems. (Source: J. Last, 'A Dictionary of Epidemiology', 1995)
FDA	Food and Drug Administration
FFY	Federal Fiscal Year - October 1 through September 30
Gc	Infection with <i>Neisseria gonorrhoeae</i> . See gonorrhea.
Genital Herpes	A common sexually transmitted disease resulting from infection with HSV types 1 or 2 (see HSV) and characterized by painful genital ulcers. Genital herpes is not a reportable disease in North Carolina. See HSV.
GISP	Gonococcal Isolate Surveillance Project - collaborative project between selected STD clinics, five regional laboratories, and the CDC. Established in 1986 to monitor trends in antimicrobial susceptibilities of strains of <i>Neisseria gonorrhoeae</i> in the United States in order to establish a rational basis for the selection of gonococcal therapies. The project includes one site in North Carolina, located at Fort Bragg.

gonorrhea	Infection with <i>Neisseria gonorrhoeae</i> . To meet the surveillance case definition, laboratory diagnosis may occur by demonstrating the presence of gram-negative diplococci in a clinical sample or by detection of <i>N. gonorrhoeae</i> antigen or nucleic acid. Gonorrhea is a reportable disease in North Carolina.
Granuloma inguinale	A sexually transmitted disease characterized by ulceration of the skin and lymphatics of the genital and perianal area. Granuloma inguinale is a reportable disease in North Carolina.
HAART	Highly Active Anti-Retroviral Therapy - indicates that a patient is on a specific combination of 3 or more anti-retroviral drugs for HIV infection.
HARS	HIV/AIDS Reporting System - the computer data system developed by the CDC that houses information on HIV-infected persons at the N.C. HIV/STD Prevention & Care Branch.
HAV	Hepatitis A Virus - A vaccine-preventable viral infection transmitted by the fecal/oral route. HAV infection is a reportable condition in North Carolina.
HBV	Hepatitis B Virus - A vaccine-preventable viral infection transmitted by sex, blood products, or shared injection equipment. HBV infection is a reportable condition in North Carolina.
HCV	Hepatitis C Virus - A viral infection transmitted by sex, blood products, or shared injection equipment. There is currently no vaccine available. Acute HCV infection is a reportable condition in North Carolina.
HIV	Human Immunodeficiency Virus - the virus that causes AIDS. To meet the case definition, infection must be confirmed by specific HIV antibody tests (screening test followed by confirmatory test) or virologic tests. In children under 18 months of age, antibody tests may not be accurate so confirmation by virologic tests is required.
HIV Test	See ELISA, Western Blot
HPV	Human Papillomavirus - a group of viruses including over 100 different strains, 30 of which are sexually transmitted. Many strains cause no symptoms at all while others are associated with genital warts and others with cervical cancer in women. HPV infection is not a reportable condition in North Carolina.

HRSA	Health Resources & Services Administration - agency of the U.S. Department of Health and Human Services. Mission: to assure the availability of quality health care to low-income, uninsured, isolated, vulnerable and special needs populations and to meet their unique health care needs. HRSA administers the Ryan White Care Act programs.
HSV	Herpes Simplex Virus (Type 1 = HSV-1 and Type 2 = HSV-2). See genital herpes.
IDU	Injecting drug user. Alternative name IVDU - Intravenous drug user.
incidence	Measurement of the number of new cases of disease that develop in a specific population of individuals at risk over a specific period of time (often a year). With respect to HIV, the closest we can come to this is reporting of newly diagnosed cases which may or may not represent newly infected individuals. Incidence measures are most often used to assess the success of prevention efforts and the progress of epidemics. See HIV Disease.
IVDU	Intravenous drug user. Alternative name: IDU - injecting drug user.
KFF	Kaiser Family Foundation (www.kff.org)
late syphilis	Syphilis infections that have progressed beyond one year past the initial infection. Patients in late syphilis are not considered to be infectious to sexual partners, but women can pass the infection to their newborns well into the late stages. For the purposes of this report, 'late syphilis' includes late latent syphilis (asymptomatic, infection probably > 1 year prior), latent of unknown duration (asymptomatic, unable to document likely infection in last year), late with symptoms, and neurosyphilis.
LGV	Lymphogranuloma venereum - a sexually transmitted disease caused by infection with specific serovars of <i>Chlamydia trachomatis</i> that are distinct from the serovars that cause reportable chlamydial infections. LGV is a reportable disease in North Carolina.
MA	Metropolitan area - geographical designation defined by OMB for use Federal statistical activities. See OMB.
mean	Mathematical average. Example: the mean of 3 numbers is the sum of the three numbers divided by three: $(a+b+c)/3$.

Medicaid	A federally-aided, state-operated and administered program authorized by Title XIX of the Social Security Act which provides medical benefits for qualifying low-income persons in need of health and medical care. Subject to broad federal guidelines, states determine the benefits covered, program eligibility, rates of payment for providers, and methods of administering the program. (definition source: kff.org)
Medicare	A federal program that provides basic health care and limited long-term care for retirees and certain disabled individuals without regard to income level. Beneficiaries must pay premiums, deductibles, and coinsurance to receive hospital insurance (Part A) and supplementary medical insurance (Part B). Qualified low-income individuals, called Dual Eligibles, may receive assistance through Medicaid to pay for cost-sharing. (definition source: kff.org)
morbidity	The extent of illness, injury, or disability in a defined population. It is usually expressed in general or specific rates of incidence or prevalence. (source of definition: kff.org)
mortality	Death. The mortality rate (death rate) expresses the number of deaths in a unit of population within a prescribed time and may be expressed as crude death rates (e.g., total deaths in relation to total population during a year) or as death rates specific for diseases and, sometimes, for age, sex, or other attributes. (source of definition: kff.org)
MPC	Mucopurulent Cervicitis - a clinical diagnosis of exclusion involving cervical inflammation that is not the result of infection with <i>Neisseria gonorrhoeae</i> or <i>Trichomonas vaginalis</i> . MPC is not a reportable condition in North Carolina.
MSM	Men who have sex with men.
MSM/IDU	Men who have sex with men and also report injecting drug use.
n	Number - used to designate the number of people or number of cases.
neurosyphilis	Devastating stage of syphilis affecting some untreated patients. Outcomes include shooting pains in the extremities, blindness, deafness, paralysis, and death.
NGU	Nongonococcal urethritis - a clinical diagnosis of exclusion involving evidence of urethral infection or discharge and the documented absence of <i>N. Gonorrhoeae</i> infection. The syndrome may result from infection with a number of agents, though most cases are likely to be caused by <i>C. trachomatis</i> . NGU is a reportable condition in North Carolina.

NHSDA	National Household Survey of Drug Abuse - National survey of drug use behavior collected by in-person interviews. Conducted by SAMHSA. The 2001 survey interviewed 68,929 people.
NIR	No identified risk reported
NIDA	National Institute on Drug Abuse - one of the National Institutes of Health (NIH), under the U.S. Department of Health and Human Services. Mission: to lead the nation in bringing the power of science to bear on drug abuse and addiction.
NTS	Nontraditional Test Sites - part of the N.C. CTS HIV testing program. NTS sites were added to the CTS program in 1997 as a response to the end of anonymous testing with the goal of making HIV testing available in nontraditional settings. As of 2002, there are 13 NTS sites at CBOs and extended hours at local health departments. See CTS.
numerator	The dividend in a fraction. (In the fraction $3/4$, 3 is the numerator). With respect to disease rates and proportions, it is generally the number of people with the disease.
OMB	Office of Management & Budget - agency within the Executive Office of the President of the United States. Mission: to assist the President in overseeing the preparation of the federal budget and to supervise its administration in Executive Branch agencies. See MA.
ophthalmia neonatorum	<i>N. gonorrhoeae</i> infection of the eyes of an infant during birth when mother has gonorrhea. Ophthalmia neonatorum is a reportable condition in North Carolina.
P & S	Primary and secondary syphilis cases. These earliest stages of syphilis are the most highly infectious and also represent cases acquired within the last year. They are often reported separately from other stages of syphilis because they most accurately represent disease incidence and have the greatest impact on continued spread of the disease.
PCP	<i>Pneumocystis carinii</i> pneumonia. One of the 26 AIDS-defining opportunistic infections.
PCRS	Partner Counseling & Referral Services conducted by the HIV/STD Prevention & Care Branch's Field Services Unit for persons newly diagnosed with HIV or syphilis. Data collected are maintained in local STD-MIS. See Appendix A: Data Sources.

percentage	A type of proportion in which the denominator is set at 100. For example, if 2 people out of an at-risk population of 50 have a disease, the proportion can be converted to a percentage by setting the denominator at 100: $2/50 = 4/100 = 4\%$. Any proportion can be converted to a percentage.
perinatal	Of, relating to, or being the period around childbirth, especially the five months before and one month after birth.
PID	Pelvic inflammatory disease - a clinical syndrome in which microorganisms infect the fallopian tubes or other areas of the female upper reproductive tract. The condition can have serious consequences including infertility and ectopic pregnancy. The most common causes of PID are gonorrhea and chlamydia. PID is a reportable condition in North Carolina.
positivity	Percent of a screened population that test positive.
PRAMS	Pregnancy Risk and Monitoring System – an ongoing random survey of women who delivered a live infant in North Carolina. Conducted by the North Carolina State Center for Health Statistics.
presumed heterosexual	Refers to a “risk” or “mode of transmission” category for HIV and AIDS cases. This category is made up of NIR cases that have been determined to represent likely heterosexual transmissions, based on additional risk information collected during field services interviews. See “Appendix B: Special Notes” for more information.
prevalence	Measurement of the number of total cases of disease that exist in a specific population of individuals at risk at a specific instant in time (note that an 'instant in time' can be a single day or even a whole year). With respect to HIV, this is generally presented as the number of persons living with HIV. Prevalence measures are most often used to assess the need for care and support services for infected persons.
primary syphilis	Earliest stage of syphilis, characterized by the presence of one or more painless ulcers and lasting 10-90 days. At this stage the patient is highly infectious to sexual partners. If untreated, the infection will proceed to secondary syphilis.
proportion	A type of ratio in which the numerator is included in the denominator. For example, in an at-risk population of 50, if 3 people have a disease, this can be expressed as the proportion $3/50$.
PSEL	Primary, secondary, and early latent syphilis cases. See early syphilis.

rate	A proportion that specifies a time component. For example, the number of new cases of disease that developed over a certain period of time divided by the eligible at-risk population for that time period. Note, many diseases are rare enough that if they were expressed as percentages, the numbers would be very small and confusing. For this reason, the denominators for disease rates are often converted to 100,000 so that the numerators can be expressed in terms of whole numbers. Example: 20 cases out of 333,333 at-risk population per year = $20/333,333 = .006/100 = .006\%$. This is difficult to think about because it involves both decimals and percentages. Converted to a denominator of 100,000, this becomes $.006/100$ or $6/100,000$ per year.
ratio	The value obtained by dividing one quantity by another. Rates and proportions are types of ratios.
Ryan White CARE Act	The Ryan White Comprehensive AIDS Resources Emergency (CARE) Act of 1990 (Public Law 101-381) provides funding to cities, states, and other public or private nonprofit entities to develop, organize, coordinate and operate systems for the delivery of health care and support services to medically underserved individuals and families affected by HIV disease. The CARE Act was reauthorized in 1996 and 2000. (source of definition: kff.org)
Ryan White CARE Act: Title II	Federal grants to all 50 states, the District of Columbia, Puerto Rico, Guam, the U.S. Virgin Islands, and eligible U.S. Pacific Territories and Associated Jurisdictions to provide health care and support services for people living with HIV/AIDS. Title II funds may be used for a variety of services, including home and community-based services, continuation of health insurance coverage, and direct health and support services. Also see ADAP. (source of definition: kff.org)
SAMHSA	Substance Abuse and Mental Health Services Administration - agency within the U.S. Department of Health and Human Services. Mission: to strengthen the nation's health care capacity to provide prevention, diagnosis, and treatment services for substance abuse and mental illnesses.
SCBW	The Survey of Childbearing Women - conducted from 1988 through 1995 in collaboration with CDC, the National Institute of Child Health and Human Development, and state and territorial health departments. Residual dried blood specimens that are routinely collected on filter paper from newborn infants for metabolic screening programs were tested for HIV antibody after the removal of all personal identifiers. The survey measured the prevalence of HIV infection among women who gave birth to live infants in participating states and territories of the United States.

SDC	State Data Center - a consortium of state and local agencies established in cooperation with the U.S. Bureau of the Census to provide the public with data about North Carolina and its component geographic areas.
secondary syphilis	Second stage of syphilis, characterized by a rash that does not itch, swollen glands, fatigue, and other symptoms. Patients at this stage are highly infectious to sexual partners. Symptoms generally appear about 4-10 weeks after the appearance of primary syphilis lesions. If left untreated, the disease will progress to early latent syphilis after 3-12 weeks.
sensitivity	Refers to the ability of a screening test to detect disease if disease is truly present. A highly sensitive test is likely to have very few false negatives but probably will have some false positives. This is why positives found with a highly sensitive test will often be tested again using a highly specific test (see specificity). Example = ELISA test for HIV.
SEP	Syphilis Elimination Project - CDC-funded project that provides funding to the 28 U.S. counties that accounted for over 50% of all U.S. syphilis cases in 1997 for enhancements in surveillance, outbreak response, clinical and laboratory services, health promotion and community involvement. North Carolina has the distinction of being the only state with more than two counties in the list; we have five. SEP efforts in North Carolina have been expanded, bringing the total of SEP counties to six: Durham, Forsyth, Guilford, Mecklenburg, Robeson, and Wake.
SFY	State Fiscal Year. In North Carolina: July 1 through June 30.
specificity	Refers to the ability of a screening test to test negative if the patient is truly uninfected. A highly specific test will have very few false positives but may have some false negatives. Generally, a highly specific test is only used on positives found using a highly sensitive screening test first (see sensitivity). Example = Western Blot test for HIV.
STD	Sexually Transmitted Disease.
STD-MIS	Sexually Transmitted Disease - Management Information System , the computer data system developed by the CDC that houses information on patients infected with HIV, syphilis, and other STDs at the N.C. HIV/STD Prevention & Care Branch.
surveillance (public health)	The ongoing, systematic collection, analysis, and interpretation of health data essential to the planning, implementation, and evaluation of public health practice, closely integrated with timely dissemination of these data to those who need to know. Source: CDC

syphilis	Infection with <i>Treponema pallidum</i> . See: primary syphilis, secondary syphilis, early latent syphilis, early syphilis, latent syphilis.
Syphilis Elimination Project	see SEP
TB	Tuberculosis (infection with <i>Mycobacterium tuberculosis</i>).
Trichomoniasis	A common sexually transmitted disease resulting from infection with the parasite <i>Trichomonas vaginalis</i> . Trichomoniasis is not a reportable disease in North Carolina.
TTS	Traditional Test Sites - part of the N.C. CTS HIV testing program. The 135 TTS sites include local health departments and some CBOs. See CTS.
Western Blot	WB - Confirmatory test for HIV. This test is highly specific, so it is used only as a confirmatory test on all samples positive for the screening test, the ELISA. If both the ELISA and WB are positive, the patient is considered to be HIV-infected.
WIC	Women, Infants & Children - a Federal grant program to provide nutritional assistance to low-income pregnant and postpartum women, infants, and children up to age 5.

North Carolina HIV/STD Prevention & Care Branch Regions

