

# Health Concern

## Sexually Transmitted Infections

Chlamydia is the most common bacterial STI in North America [1] and in Guilford County, and is one of the major causes of tubal infertility, ectopic pregnancy, pelvic inflammatory disease and chronic pelvic pain. [2] STIs in general are associated with significantly increased risk of morbidity and mortality, including increased risk of cervical cancer, pelvic inflammatory disease, involuntary infertility and premature death. [1] One review found that close to one-third of pregnant teens were infected with at least one STI [2]. Both STIs and unintended pregnancies can result from the improper use of, inconsistent use of or lack of use of condoms, factors exacerbated by the fact that 4 out of 5 pregnancies are unintended. [3]

STIs present significant issues for the health of residents of Guilford County. Rates of chlamydia, gonorrhea, syphilis and HIV disease are consistently higher in Guilford County than in the state as a whole and the nation. Large racial disparities exist for STIs, with African Americans experiencing rates as much as ten times that among whites. Higher rates of HIV disease are concentrated in census tracts in southeast Greensboro. Syphilis rates are higher in tracts in southeast and west Greensboro and areas of central High Point. The problem of STIs is also concentrated among teens and young adults.

### HEALTHY NORTH CAROLINA 2020 SEXUALLY TRANSMITTED DISEASES

**Objective:** Reduce the rate of new HIV infection diagnoses (per 100,000 population).

**Rationale for selection:** An estimated 35,000 North Carolinians have HIV/AIDS (including those who are unaware of their status). Furthermore, HIV/AIDS was the seventh leading cause of death among 25 to 44 year-olds in 2007.

**NC BASELINE (2009):** 24.7

**2020 TARGET:** 22.3

**GUILFORD (NC DHHS 2012):** 20.4

<http://publichealth.nc.gov/hnc2020/docs/HNC2020-FINAL-March-revised.pdf>

### Highlights

- The most commonly occurring communicable diseases in Guilford County are sexually transmitted infections (STIs), with chlamydia contributing the largest number of cases (3,919 cases in 2012), followed by gonorrhea (1,433 cases in 2012) and non-gonococcal urethritis (NGU) (146 cases in 2012).
- Cases of HIV disease decreased from 128 cases in 2011 to 102 cases in 2012; Guilford County's HIV disease rate is higher than that of NC as a whole.
- Cases of primary and secondary syphilis decreased from 57 cases in 2011 to 45 new cases in 2012.
- Young adult men are most at risk for contracting syphilis and HIV disease.
- Substantial racial disparities are seen in incidence rates for chlamydia, gonorrhea, syphilis and HIV disease, with Blacks/African Americans experiencing higher rates than Whites.

### Inside this Chapter

- Syphilis Cases in Guilford County, by Race, Age and Gender
- Trends in Syphilis Incidence
- HIV Disease in Guilford County, by Race, Age and Gender
- Trends in HIV Disease
- Peer County Comparisons
- Trends in Chlamydia Incidence
- Trends in Gonorrhea Incidence

### Guilford County Syphilis Cases, by Race, 2012

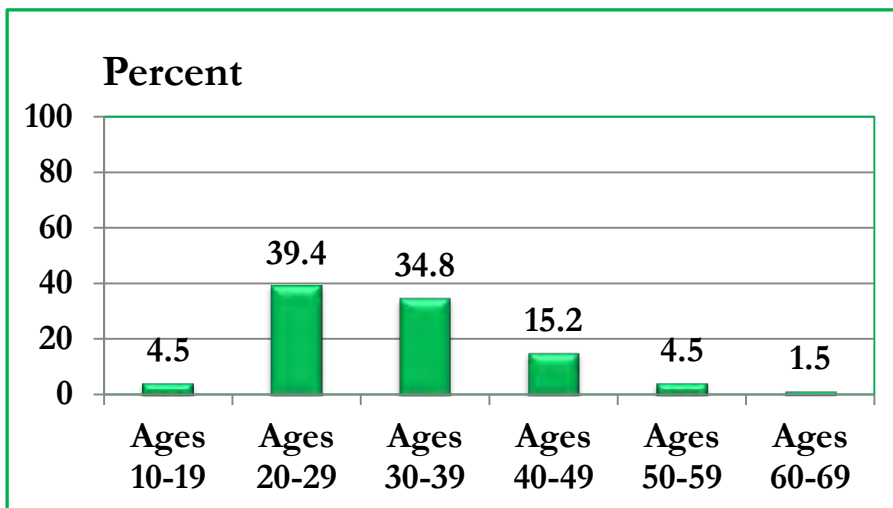
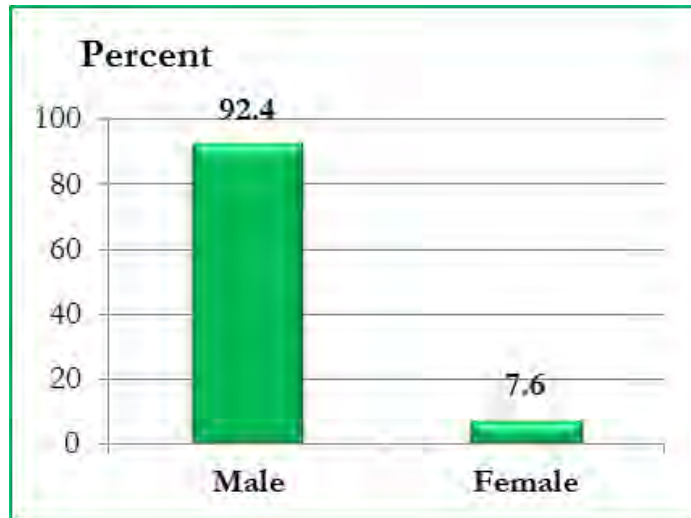
Diseases	African- American	White
Syphilis (Primary & Secondary)	31	3
Syphilis (Primary, Secondary & Early Latent)	58	7

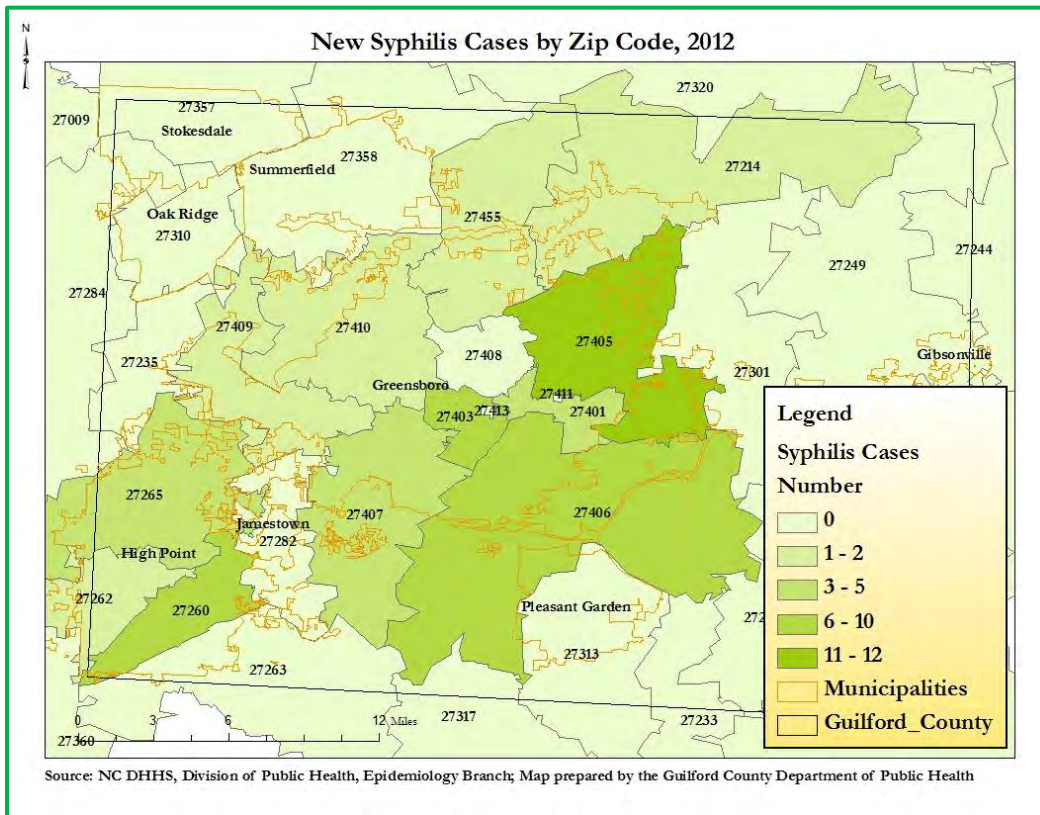
### Guilford County Syphilis Rate per 100,000, by Race, 2012

Diseases	African- American	White
Syphilis (Primary & Secondary)	18.5	1.1
Syphilis (Primary, Secondary & Early Latent)	34.6	2.3
2012 Population	167,488	296,910

Source: Communicable Disease Branch, NC Division of Public Health, NCDHHS.

### Demographic Characteristics of Guilford County Syphilis Cases, 2012: Sex and Age





- Syphilis incidence rates in Guilford County are higher in census tracts with greater numbers of non-white and lower income residents.
- Guilford’s 2012 Primary and Secondary Syphilis new case rate of 7.1 represents a 42.0% increase in the 2007 5.0 rate observed as baseline during the 2009-2010 Community Health Assessment.

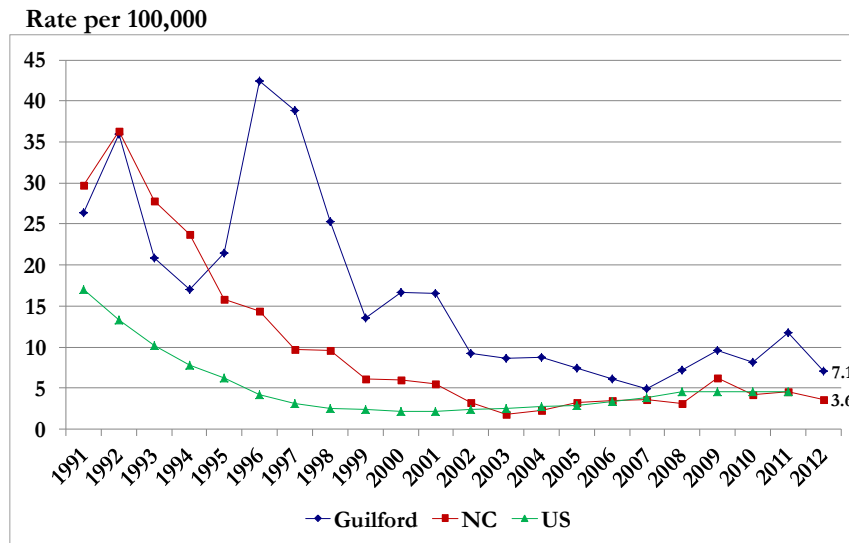
**Primary and Secondary Syphilis Rates in North Carolina, Guilford and Peer Counties per 100,000 Population, 2006-2010**

Residence	Total	White non-Hispanic	African-American non-Hispanic	Other non-Hispanic	Hispanic
Cumberland	4.4	1.4	13.6	0	0
Durham	8.5	4.7	16.1	3.1	1.3
Forsyth	13.6	3.3	43.2	0	4.9
Guilford	7.2	2.0	18.2	4.1	1.3
Mecklenburg	10.3	3.2	27.5	0.5	3.4
Wake	4.7	2.2	14.5	0	2.7
North Carolina	4.1	1.4	13.8	1.1	1.9

Source: County Health Databook, NC DHHS, State Center for Health Statistics.

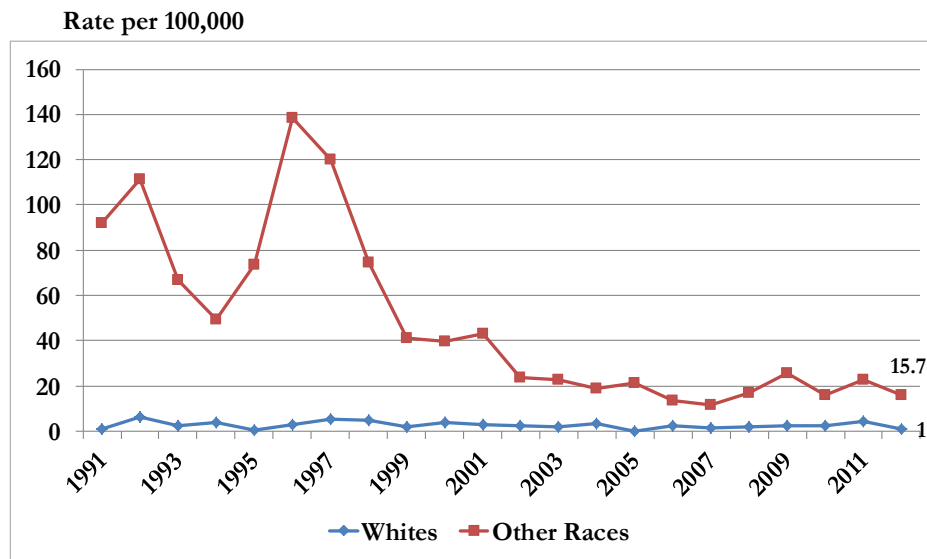
- Among Guilford peer counties, the highest rates of syphilis in 2006-2010 were found Forsyth, followed by Mecklenburg. As with other sexually transmitted conditions, there is a major racial disparity, with African-American having much higher incidence rates across all peer counties.

## Trends in Primary and Secondary Syphilis Rates Guilford County, NC and United States 1991-2012



Source: General Communicable Disease Control Branch; Division of Public Health, NC DHHS  
Chart prepared by the Guilford County Department of Public Health

## Trends in Primary and Secondary Syphilis Rates By Race, Guilford County 1991-2012



Source: General Communicable Disease Control Branch; Division of Public Health, NC DHHS;  
Chart prepared by the Guilford County Department of Public Health

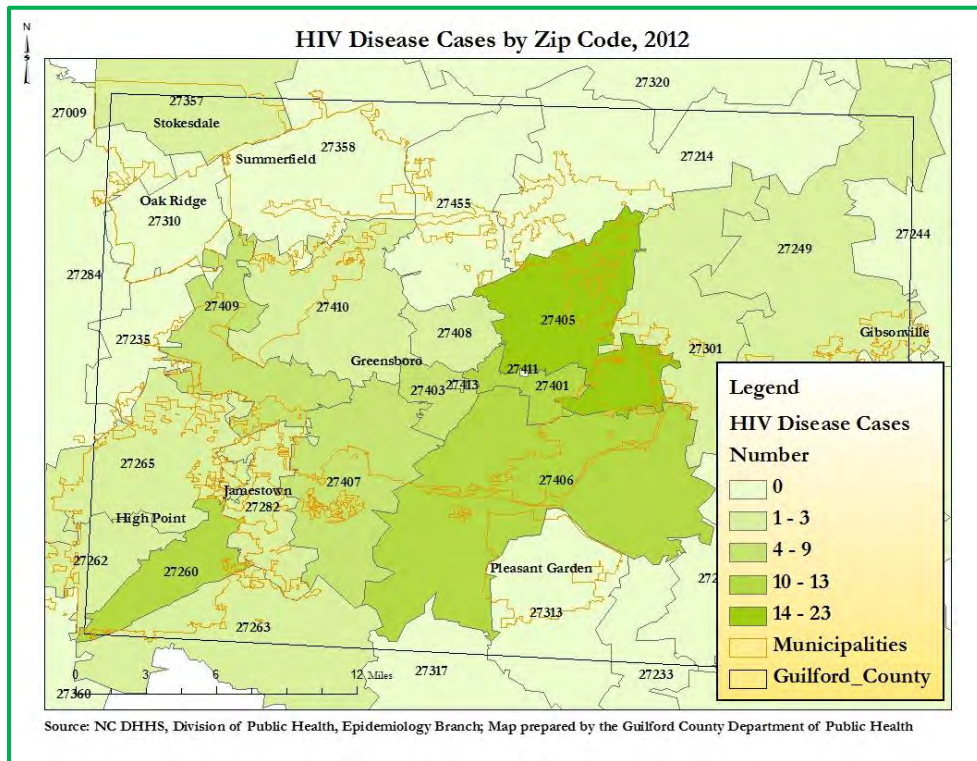
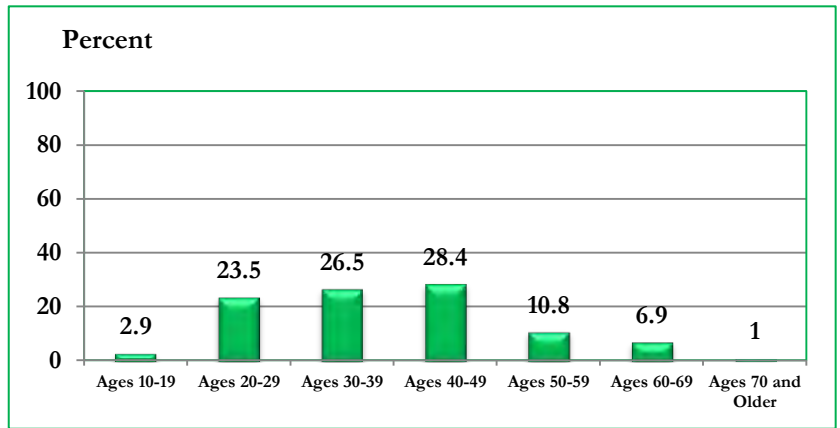
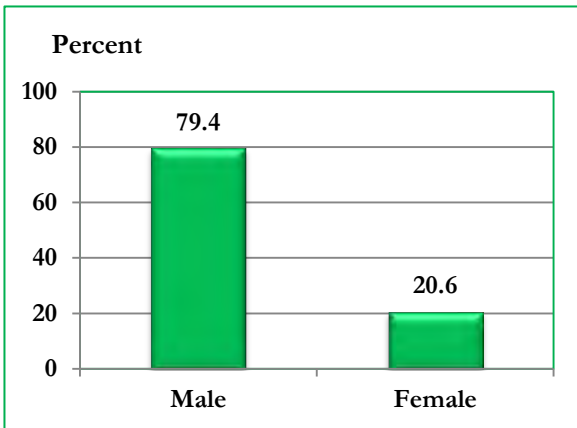
- Major disparities exist with respect to sexually transmitted diseases in Guilford County. Incidence rates for HIV Disease and syphilis are much higher for African-Americans than for whites.

## HIV Disease Cases and Rate per 100,000, by Race, 2012

Diseases	African-American	White
New Cases	71	22
Rate per 100,000 population	42.4	7.4
2012 population	167,488	296,910

Source: Communicable Disease Branch, NC Division of Public Health, NCDHHS.

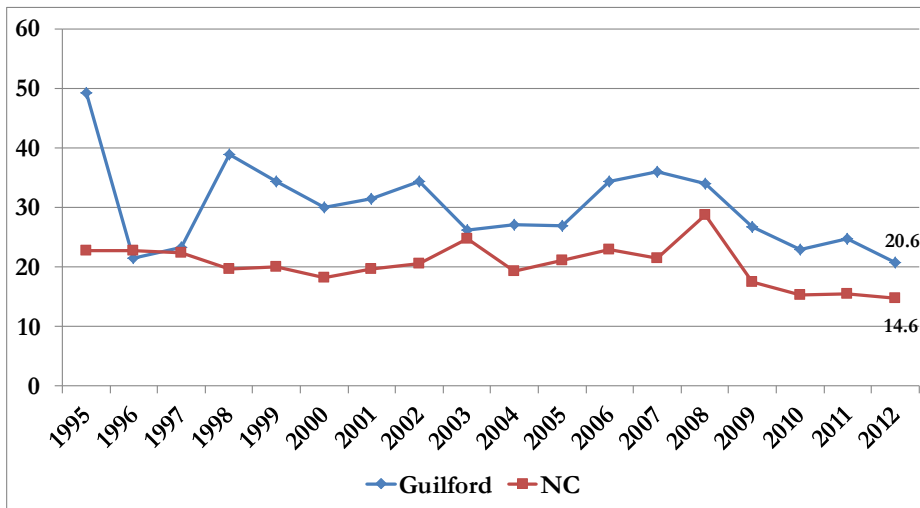
### Demographic Characteristics of Guilford County HIV Disease Cases, 2012: Sex and Age



- As with syphilis, HIV incidence rates are higher in non-white, lower income census tracts, particularly in southeast Greensboro.
- The HIV Disease new case rate of 42.4 in 2012 represents a 41.3% increase in the rate of 36.0 recorded in 2007 at baseline from the 2009-2010 Community Health Assessment.

## Trends in HIV Disease Incidence Rates Guilford County and North Carolina 1995-2012

Rate per 100,000



Source: HIV/STD Prevention & Care Branch, Division of Public Health, NC DHHS.

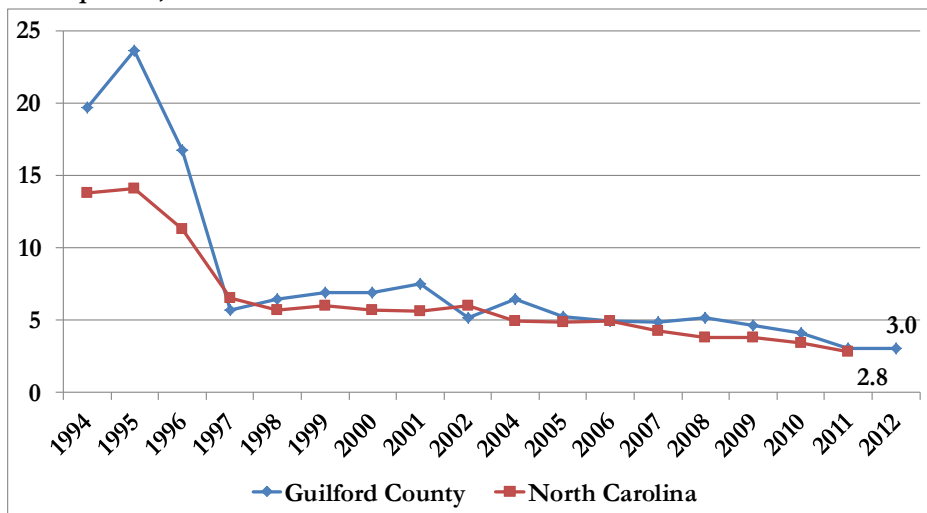
Note: HIV Disease includes both new cases of HIV or AIDS

Chart prepared by the Guilford County Department of Public Health

- Guilford County HIV incidence rates still exceed North Carolina's rates.

## Trends in HIV Disease Mortality Rates Guilford County and NC 1994-2012

Rate per 100,000

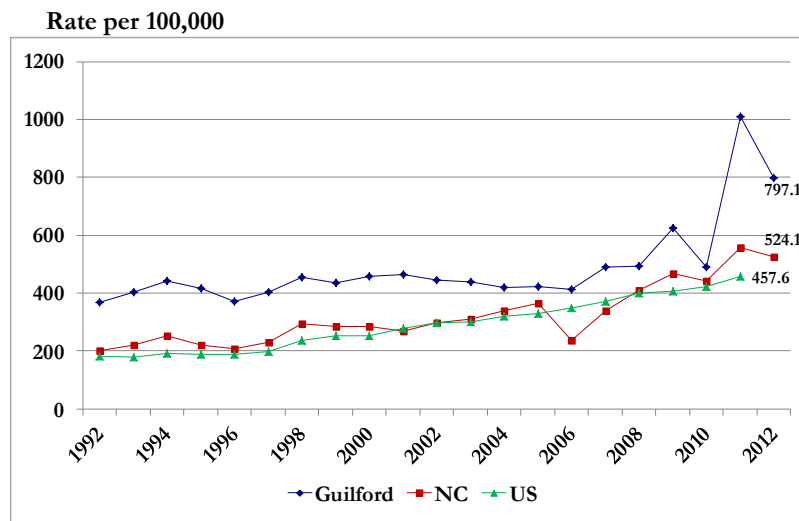


Source: NC Center for Health Statistics; Chart prepared by the Guilford County Department of Public Health

Note: HIV Disease includes all cases of HIV and AIDS

- There has been a substantial decline in HIV mortality rates in both Guilford County and North Carolina over time, but the decline in HIV incidence has not been as significant.

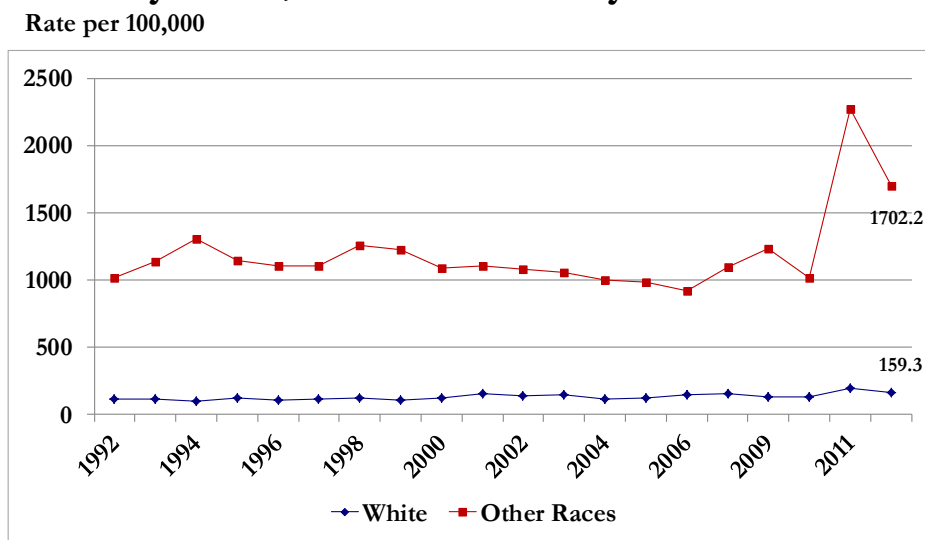
## Trends in Chlamydia Incidence Rates Guilford County, NC and United States 1992-2012



Source: General Communicable Disease Control Branch; Division of Public Health, NC DHHS  
Chart prepared by the Guilford County Department of Public Health

- Chlamydia rates declined in 2012 after a significant increase in 2011.

## Trends in Chlamydia Incidence Rates By Race, Guilford County 1992-2012



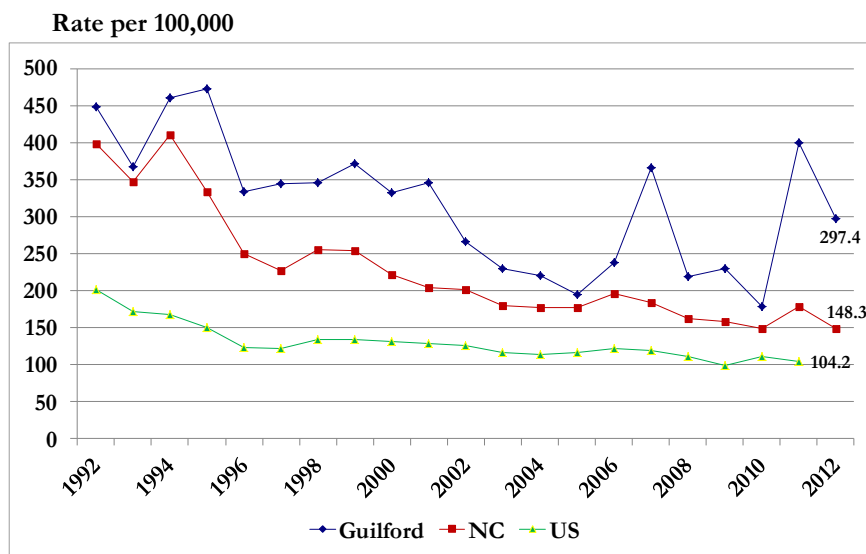
Source: General Communicable Disease Control Branch; Division of Public Health, NC DHHS; North Carolina Electronic Disease Surveillance System (NCEDSS).  
Chart prepared by the Guilford County Department of Public Health.

County of Residence	Total	White non-Hispanic	African American, non-Hispanic	Other, non-Hispanic	Hispanic
Cumberland	168.9	52.9	581.6	96.7	54.2
Durham	272.0	80.0	601.0	51.6	59.7
Forsyth	226.0	68.9	686.3	79.7	57.3
Guilford	245.1	64.4	629.9	65.6	75.7
Mecklenburg	195.9	53.8	541.7	32.0	38.4
Wake	141.8	36.5	537.3	33.3	65.1
North Carolina	168.9	52.0	581.6	96.7	54.2

Source: County Health Databook, NC DHHS, State Center for Health Statistics.

- Among peer counties, the highest five-year rates of gonorrhea incidence occurred in Guilford County, followed by Forsyth counties. Guilford's rate was 45% higher than the state as a whole
- Major racial disparities are seen in all peer counties, with African-American rates as much as ten times the rates for whites. Hispanics tend to have similar rates as whites or lower.
- Guilford's 2012 Gonorrhea new case rate of 297.4 per 100,000 is a 19.5% improvement compared to the 369.6 rate at baseline in 2007 as observed during the 2009-2010 Community Health Assessment.

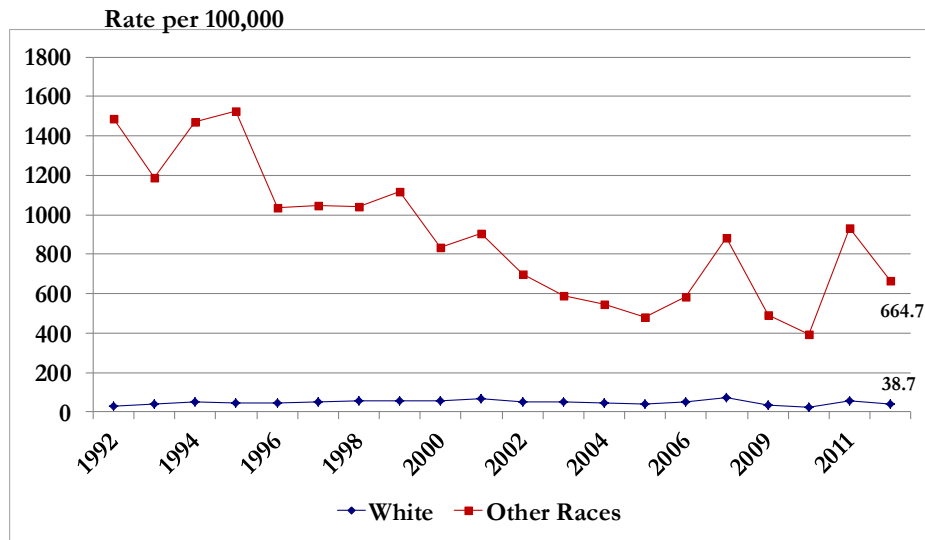
## Trends in Gonorrhea Incidence Rates Guilford County, NC and United States 1992-2012



Source: General Communicable Disease Control Branch; Division of Public Health, NC DHHS;  
Chart prepared by the Guilford County Department of Public Health



## Trends in Gonorrhea Incidence Rates By Race, Guilford County 1992-2012



Source: General Communicable Disease Control Branch; Division of Public Health, NC DHHS; North Carolina Electronic Disease Surveillance System (NCEDSS).  
Chart prepared by the Guilford County Department of Public Health.

### References:

- [1] Genuis, SJ, Genuis SK. Managing the sexually transmitted disease pandemic: A time for reevaluation. *Am J Obstet Gynaecol.* 2004; 191:117-122.
- [2] Centers for Disease Control and Prevention. *Sexually Transmitted Disease Surveillance 2010.* Atlanta: U.S. Department of Health and human Services; 2011.
- [3] Finer, LB, Zolna MR. Unintended pregnancy in the United States: Incidence and Disparities, 2006. *Contraception,* 2011 November; 84 (5) 478-485.