

| 2016 | Communicable Diseases Data Brief |



Highlights

- In 2014, the most commonly-occurring communicable diseases in Guilford County were sexually transmitted infections (STIs), with chlamydia contributing the largest number of cases, followed by gonorrhea (3,090 and 1,154 cases respectively).
- Guilford County's HIV infection rate remains higher than that of North Carolina as a whole. Rates are highest for African-Americans, Hispanics, males and young adults.
- After declining from a high of 115 cases in 2011 to 50 cases in 2013, cases of primary, secondary and early latent syphilis increased to 183 cases in 2015. Syphilis rate increases in Guilford are part of rate increases across the state of North Carolina.
- Incidence rates for chlamydia and gonorrhea declined substantially from 2011 to 2014 but significant racial disparities persist.

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Selected Communicable Disease Cases, Guilford County 2004-2014

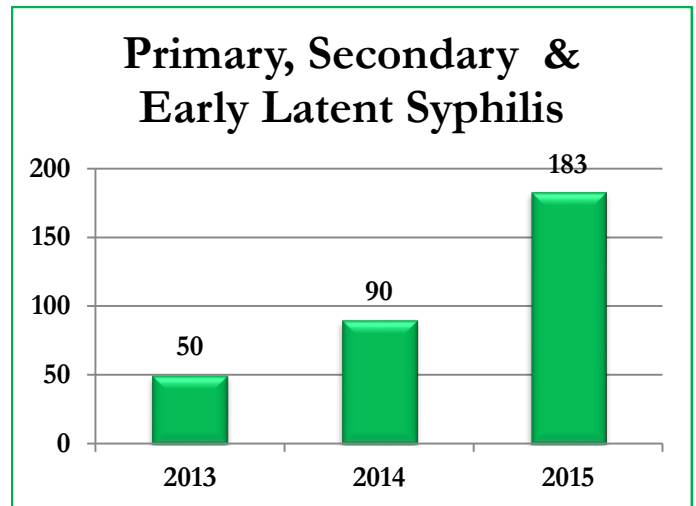
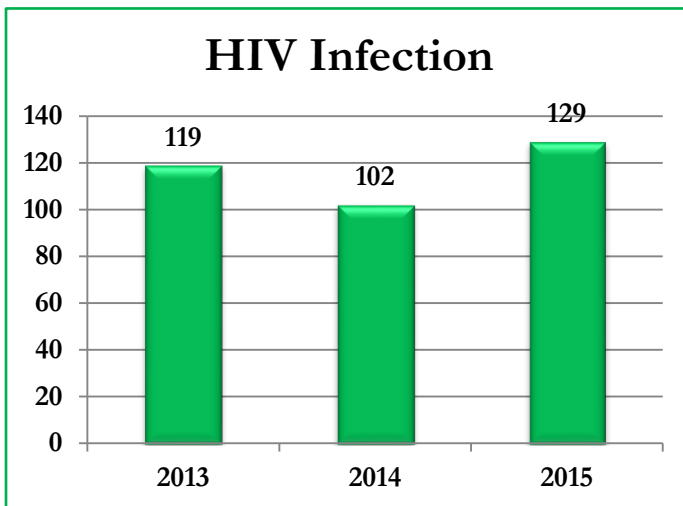
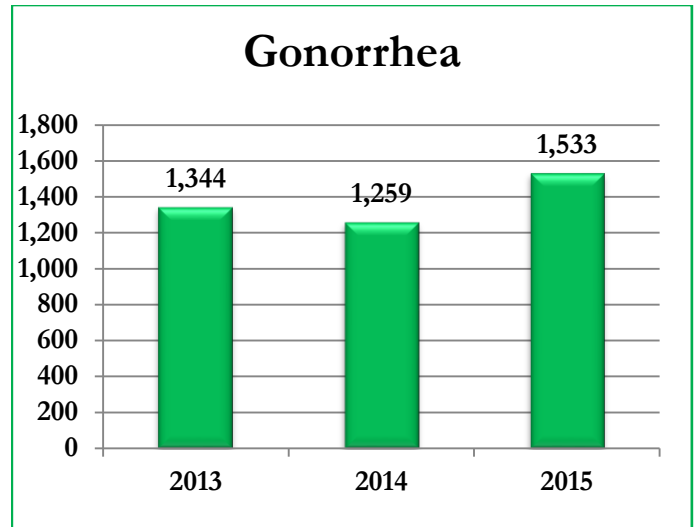
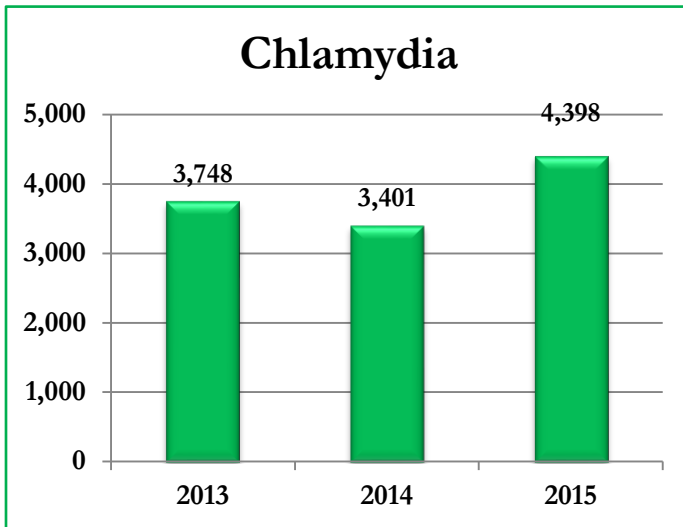
Diseases	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Campylobacter	50	43	62	23	20	28	25	28	27	32	17
Chlamydia	1,833	1,867	1,877	2,282	2,333	2,994	2,398	5,010	3,919	3,934	3,090
Gonorrhea	965	858	1,083	1,702	1,034	1,110	871	1,981	1,433	1,386	1,154
Hepatitis A	7	5	5	3	1	3	1	0	0	0	4
Hepatitis B (Acute)	14	13	16	16	6	0	12	7	6	8	8
HIV Infection (includes HIV & AIDS)	122	118	154	166	148	129	114	128	102	124	103
Salmonella	53	59	53	45	52	46	88	71	66	57	60
Shigellosis	70	11	18	7	5	3	2	3	2	0	11
Syphilis (Primary & Secondary – P & S)	38	33	28	23	34	46	39	57	35	29	39
Syphilis (P & S & Early Latent)	91	68	74	45	50	68	75	115	66	51	87
Tuberculosis	31	27	38	27	21	21	31	22	17	19	20

Select Communicable Diseases, Rates per 100,000 Population, Guilford County 2004-2014

Diseases	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Campylobacter	11.3	9.8	13.8	5.0	4.3	5.9	5.1	5.7	5.4	6.3	3.3
Chlamydia	418.0	422.9	412.1	490.8	492.1	623.3	499.2	1,025.8	782.1	776.5	603.4
Gonorrhea	220.1	194.4	237.8	366.1	218.1	229.0	181.3	405.6	286.0	273.6	225.3
Hepatitis A	1.6	1.1	1.1	0.7	0.2	.63	0.2	0.0	0.0	0.0	0.8
Hepatitis B (Acute)	3.2	2.9	3.6	3.5	1.3	0	2.5	1.4	1.2	1.6	1.6
HIV Infection (includes HIV & AIDS)	27.1	26.9	34.3	36.0	31.6	26.2	23.3	26.2	20.4	24.5	20.1
Salmonella	12.0	13.5	11.8	9.8	11.1	9.7	18.0	14.3	13.2	11.3	11.7
Shigellosis	15.9	2.5	4.0	1.5	1.1	.63	.41	0.6	0.4	0.0	2.1
Syphilis (Primary & Secondary – P & S)	8.7	7.4	6.1	4.9	7.2	9.6	8.0	11.7	7.0	5.7	7.6
Syphilis (P & S & Early Latent)	20.8	7.9	16.2	9.7	10.5	14.2	15.3	23.5	13.2	10.1	17.0
Tuberculosis	7.0	6.2	8.5	5.9	4.5	4.4	6.3	4.4	3.4	3.8	3.9
Population	438,520	441,428	449,071	460,784	468,439	476,038	488,406	495,231	501,058	506,610	512,119

Source: NC Center for Health Informatics and Statistics; NC DHHS HIV/STD Prevention and Care Branch; NC DHHS Communicable Disease Branch; NC DHHS Tuberculosis Control Program; NC OSBM State Demographics Branch.

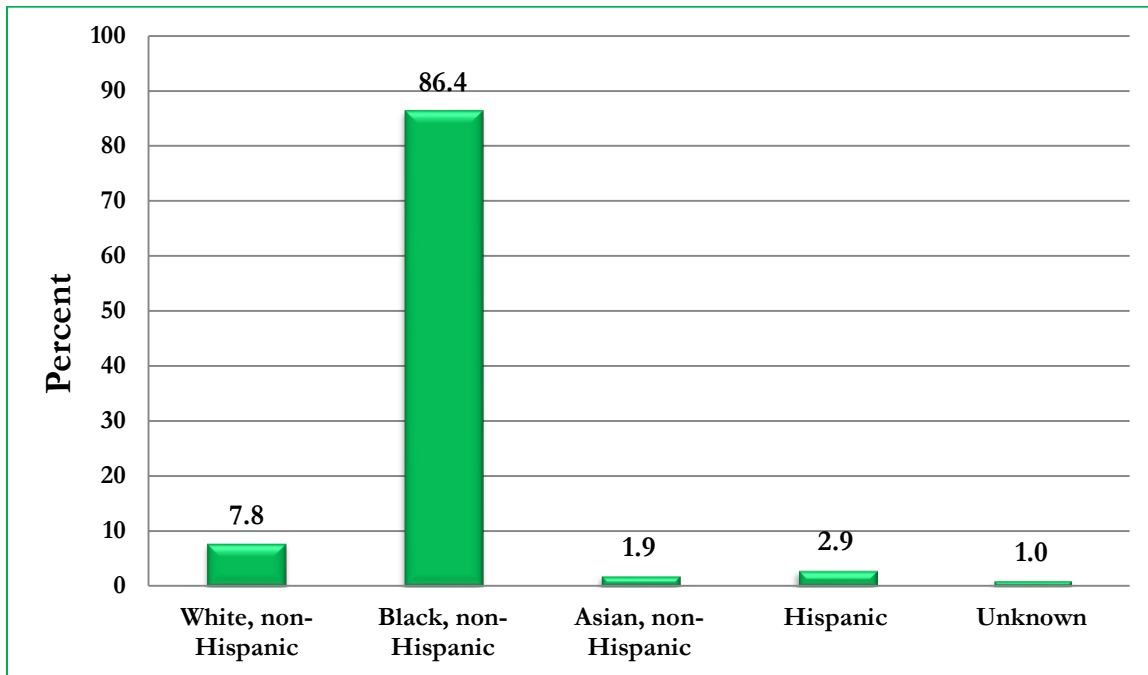
Case Comparisons of Select Sexually Transmitted Infections January - December, Guilford County, 2013-2015



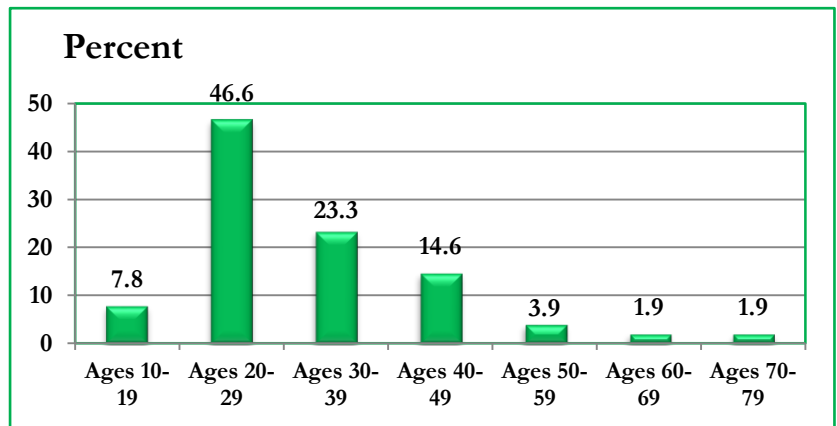
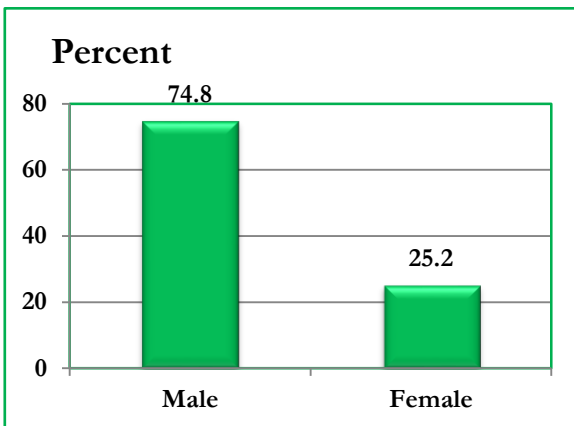
Source: North Carolina HIV/STD Surveillance Report, Communicable Disease Branch, NC DHHS, HIV/STD Surveillance Unit.

Sexually Transmitted Infections: HIV Infection

Guilford County HIV Infection Cases by Race and Ethnicity, 2014
N = 103



Demographic Characteristics of Guilford County HIV Infection Cases, 2014: Sex and Age
N = 103

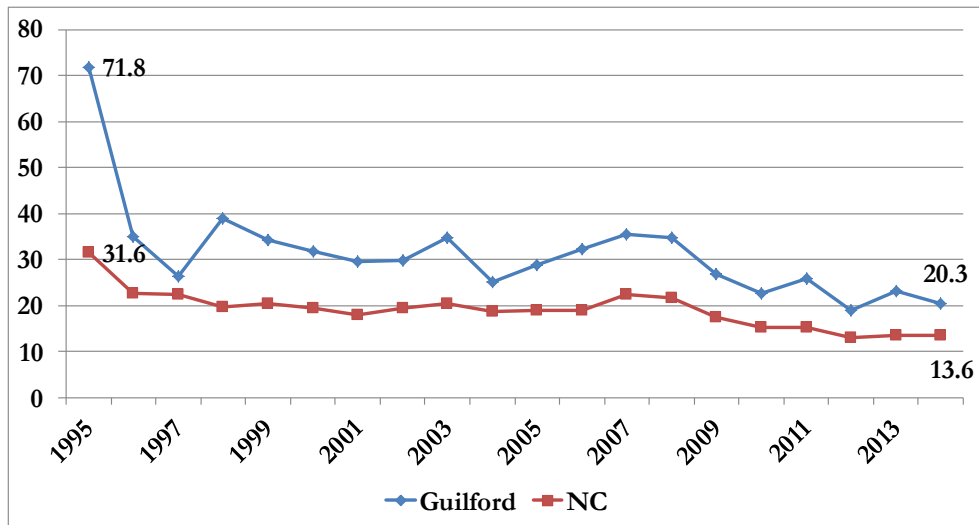


Source: Communicable Disease Branch, NC Division of Public Health, NCDHHS.

- Guilford County's HIV infection rate remains higher than that of North Carolina as a whole. Rates are highest for Black non-Hispanics, males and young adults between the ages of 20 to 29.
- HIV mortality rates declined dramatically between 1995 and 1997 and have remained low since that time. The difference between the new case rate and the mortality rate means that the number of residents living with HIV infection continues to grow.

Trends in HIV Infection Incidence Rates Guilford County and North Carolina 1995-2014*

Rate per 100,000



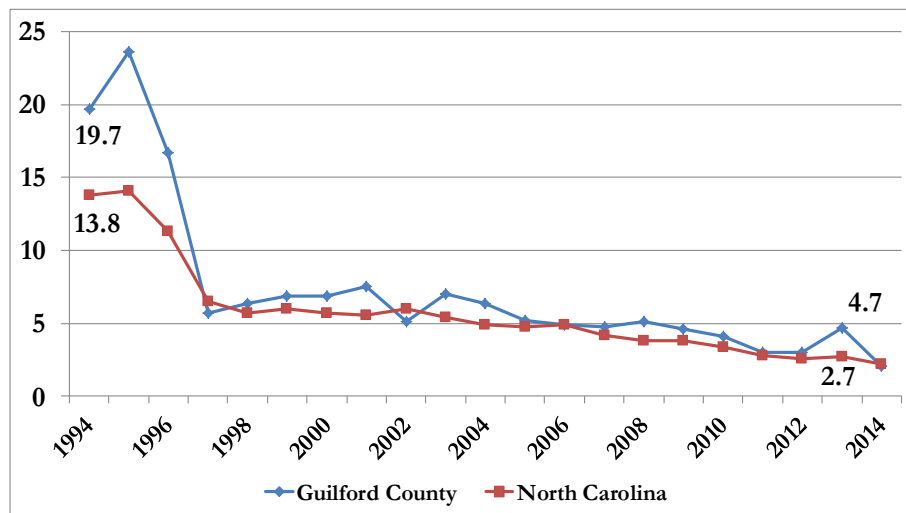
Source: HIV/STD Prevention & Care Branch, Division of Public Health, NC DHHS.

*Note: HIV Infection includes both new cases of HIV or AIDS. US data not yet available for 2014.

Chart prepared by the GCDHHS, Division of Public Health.

Trends in HIV Disease Mortality Rates Guilford County and NC 1994-2014

Rate per 100,000



Source: NC Center for Health Statistics.

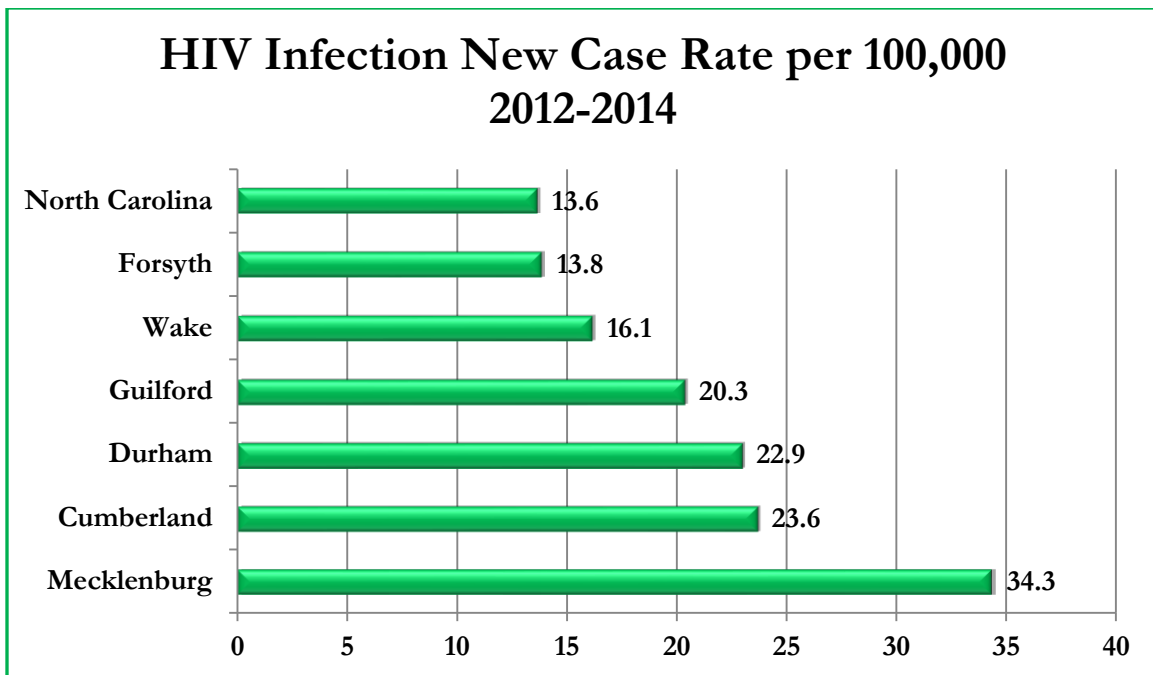
Chart prepared by GCDHHS, Division of Public Health.

Note: HIV Disease includes all cases of HIV and AIDS.

HIV Infection New Case Rates per 100,000 by Selected County and NC, 2012 - 2014

Geographic Area	2012	2013	2014
Cumberland	19.5	22.7	23.6
Durham	23.7	24.3	22.9
Forsyth	14.8	18.0	13.8
Guilford	19.0	23.1	20.1
Mecklenburg	26.3	26.3	34.3
Wake	14.4	17.9	16.1
North Carolina	13.0	13.6	13.6

Source: North Carolina HIV/STD Quarterly Surveillance Report, Annual Surveillance Report, HIV/STD Surveillance Unit.

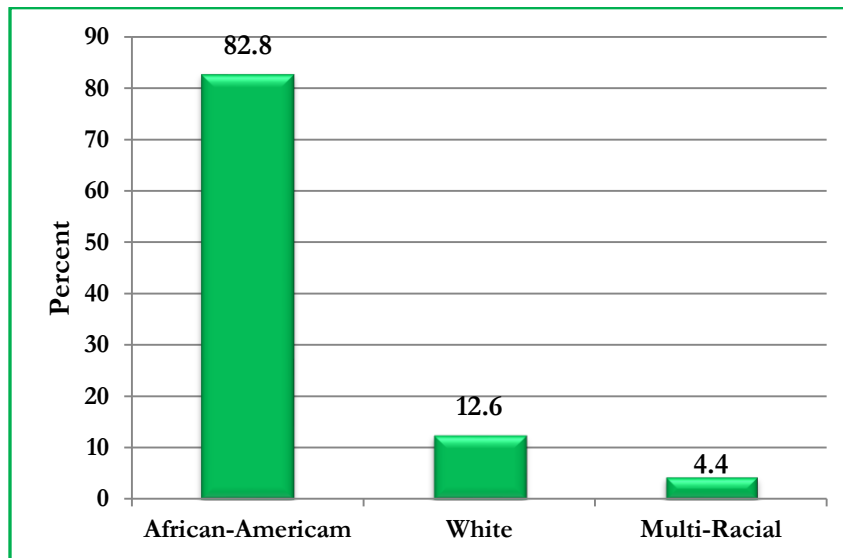


Source: North Carolina HIV/STD Quarterly Surveillance Report, Annual Surveillance Report, HIV/STD Surveillance Unit.

- Across the state as a whole, HIV rates remained stable between 2012 and 2014.
- HIV Infection incidence rates in some urban counties including Cumberland and Mecklenburg increased from 2012-2014.
- Guilford County's HIV infection rate was higher than the state rate during this period but was lower than the rates experienced in Durham, Cumberland and Mecklenburg counties.

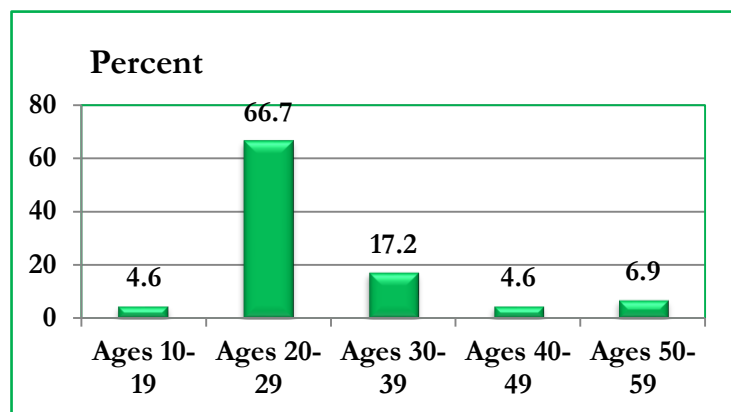
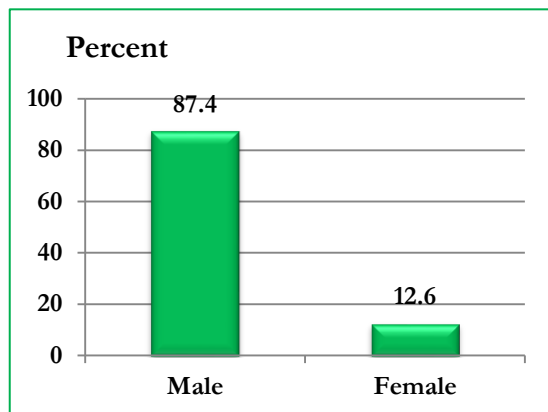
Sexually Transmitted Infections: Syphilis

Guilford County Syphilis Cases by Race, 2014 Primary, Secondary and Early Latent Syphilis Cases N = 87



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

Demographic Characteristics of Guilford County Syphilis Cases, 2014: Sex and Age Primary, Secondary and Early Latent Syphilis N = 87

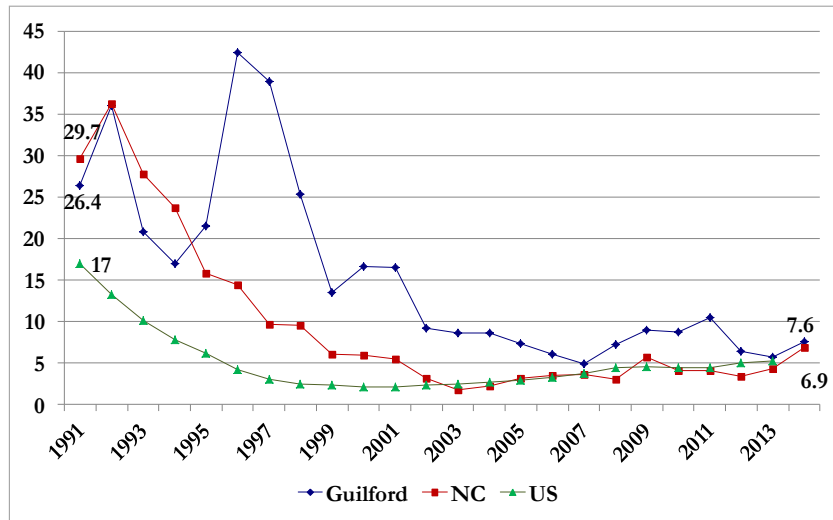


Source: Communicable Disease Branch, NC Division of Public Health, NCDHHS.

- Cases of primary and secondary syphilis decreased from 57 cases in 2011 to 35 new cases in 2012 and 29 in 2013. Rates are highest among African-American residents, males and young adults.
- After declining from a high of 115 cases in 2011 to 50 cases in 2013, cases of primary, secondary and early latent syphilis increased to 183 cases in 2015. Syphilis rate increases in Guilford are part of rate increases across the state of North Carolina.

Trends in Primary and Secondary Syphilis Rates Guilford County, NC and United States 1991-2014

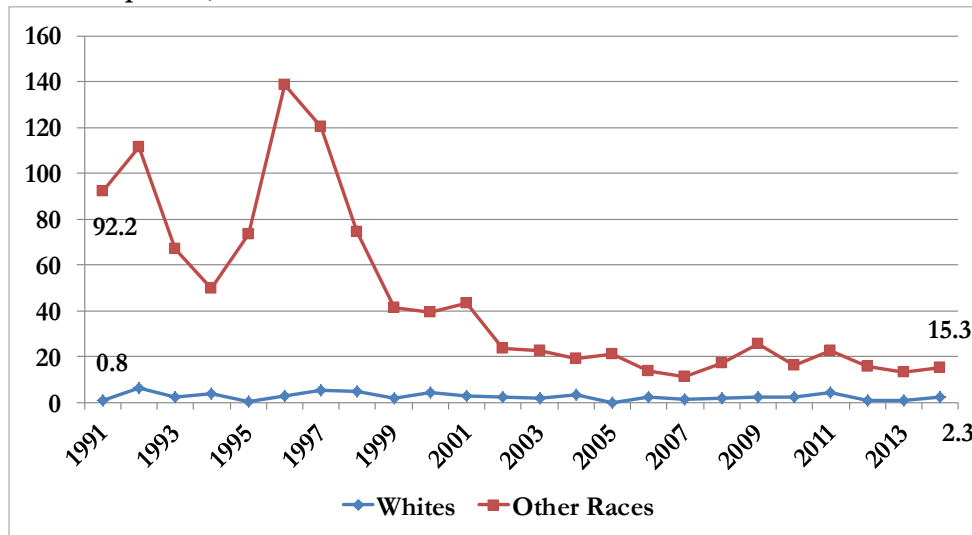
Rate per 100,000



Source: General Communicable Disease Control Branch; Division of Public Health, NC DHHS.
Chart prepared by the GCDHHS, Division of Public Health.
*Note: US data not yet available for 2014.

Trends in Primary and Secondary Syphilis Rates By Race, Guilford County 1991-2014

Rate per 100,000



Source: General Communicable Disease Control Branch; Division of Public Health, NC DHHS.
Chart prepared by the GCDHHS, Division of Public Health.

Primary, Secondary and Early Latent Syphilis Cases, By Selected Counties and NC, January - June Only, 2013-2015

Please note that the table below provides case comparisons for primary, secondary and early latent syphilis for only the first six months of 2013, 2014 and 2015, respectively. For annual case numbers and incidence rates, see page 2.

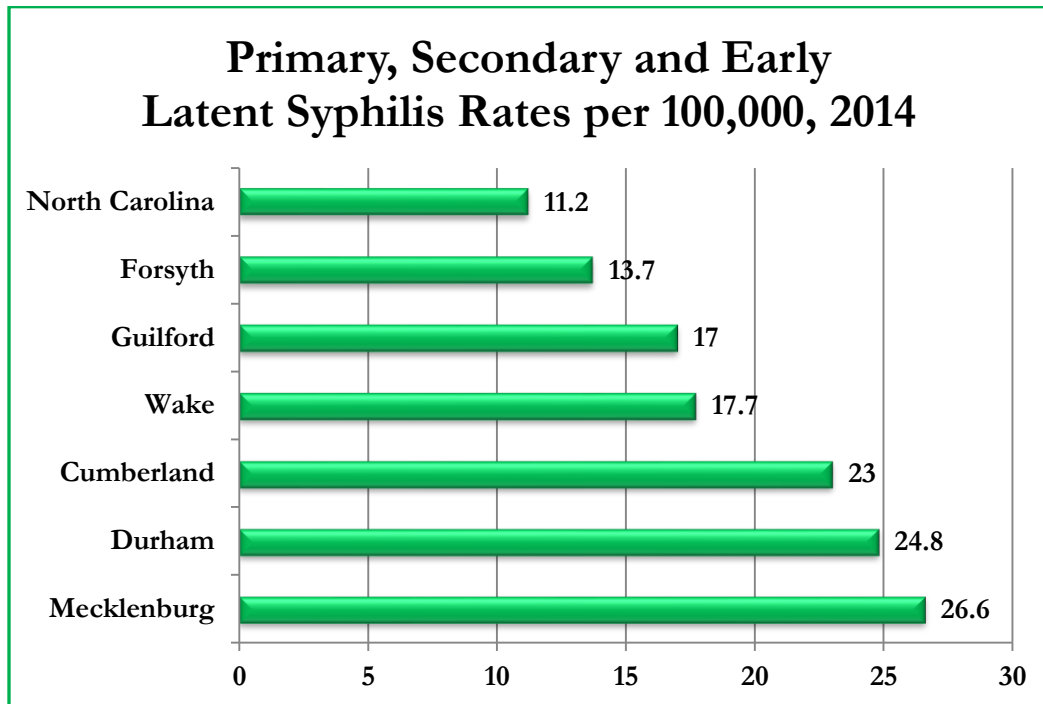
Geographic Area	2013	2014	2015
Cumberland	2	45	70
Durham	12	27	53
Forsyth	7	34	34
Guilford	17	36	73
Mecklenburg	47	81	110
Wake	49	76	94
North Carolina	193	497	688

Source: North Carolina HIV/STD Quarterly Surveillance Report, Annual Surveillance Report, HIV/STD Surveillance Unit.

Primary, Secondary and Early Latent Syphilis Rates per 100,000 By Selected Counties and NC, 2012-2014

Geographic Area	2012	2013	2014
Cumberland	9.3	14.4	23.0
Durham	8.5	16.0	24.8
Forsyth	11.7	14.1	13.7
Guilford	11.6	10.0	17.0
Mecklenburg	13.1	15.0	26.6
Wake	8.6	11.3	17.7
North Carolina	5.8	7.0	11.2

Source: North Carolina HIV/STD Quarterly Surveillance Report, Annual Surveillance Report, HIV/STD Surveillance Unit.



Source: North Carolina HIV/STD Quarterly Surveillance Report, Annual Surveillance Report, HIV/STD Surveillance Unit.

Sexually Transmitted Infections: Chlamydia

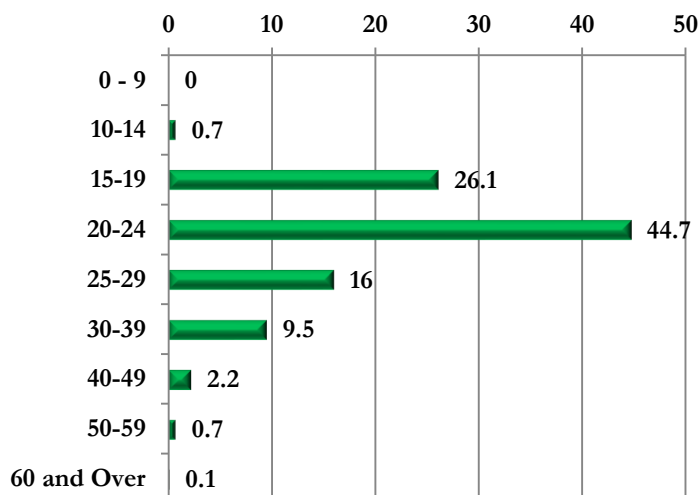
Chlamydia Cases and Rates by Race and Hispanic Status, 2014

Race or Ethnicity Classification	Number of Cases	Percent of Cases	Rate per 100,000
American Indian	4	0.1%	---
Asian	34	1.1%	149.1
African-American	1989	64.4%	1,161.6
Hawaiian/Pacific Islander	3	0.10	---
White	389	12.6%	130.6
Other	116	3.8%	---
Unknown	549	17.8%	---
Multi-Racial	2	0.1%	---
Missing	4	0.1%	---
Race Total	3090	100%	---
Hispanic	107	3.5%	282.8

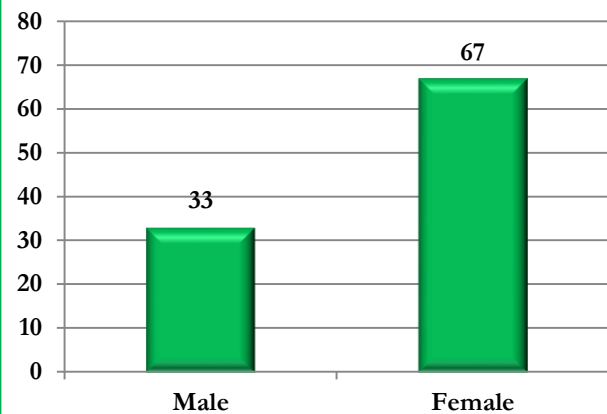
Source: NC Electronic Disease Surveillance System (NCEDSS).

- The highest chlamydia incidence rates are among African-American residents, with very large disparities compared to Whites and other race/ethnic groups.
- The age groups with the highest rates of chlamydia are ages 20-24, followed by ages 15-19 and ages 25-29.
- Two-thirds of chlamydia cases are to females. Chlamydia cases are diagnosed largely as a result of screening, and women are more likely to have screening tests.

Percent of Cases by Age Group

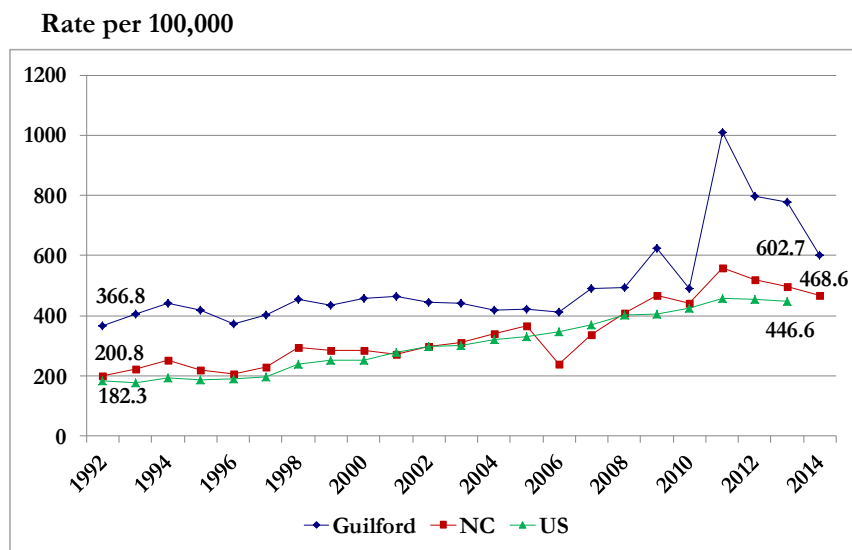


Percent of Cases by Sex



Source: NC Electronic Disease Surveillance System (NCEDSS).

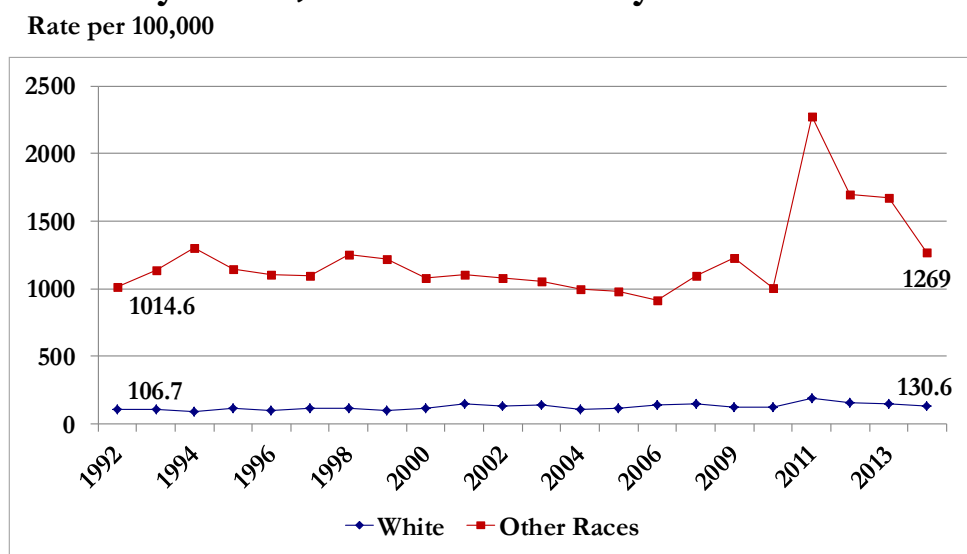
Trends in Chlamydia Incidence Rates Guilford County, NC and United States 1992-2014



Source: General Communicable Disease Control Branch; Division of Public Health, NC DHHS.
Chart prepared by the GCDHHS, Division of Public Health.
Note: 2014 data for US not yet available.

- Chlamydia incidence rates in Guilford County are consistently higher than rates in North Carolina and the United States as a whole.
- There is a ten-fold disparity in chlamydia incidence rates between White rates and those of other races, which are made up largely of Black/African-American.

Trends in Chlamydia Incidence Rates By Race, Guilford County 1992-2014



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

Sexually Transmitted Infections: Gonorrhea

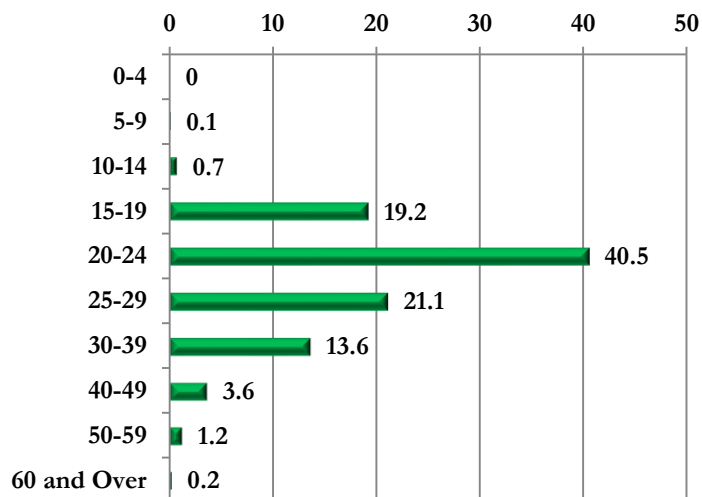
Gonorrhea Cases and Rates by Race and Hispanic Status, 2014

Race or Ethnicity Classification	Number of Cases	Percent of Cases	Rate per 100,000
American Indian	3	0.3%	84.6
Asian	5	0.4%	21.9
African-American	842	73.0%	491.7
White	89	7.7%	29.9
Other	35	3.0%	---
Unknown	178	15.4%	---
Multi-Racial	2	0.2%	---
Race Total	1,154	100%	---
Hispanic	22	1.9%	57.9

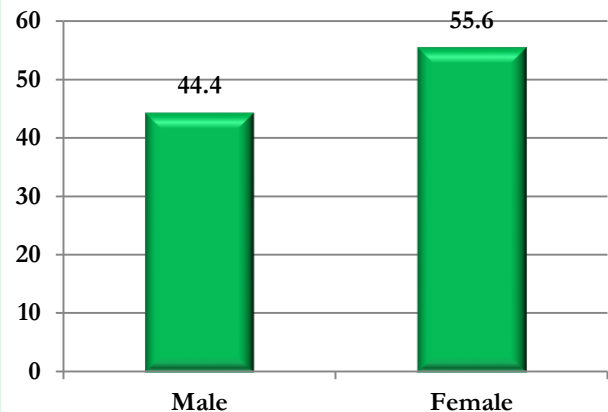
Source: NC Electronic Disease Surveillance System (NCEDSS).

- The highest gonorrhea incidence rates are among African-American residents, with very large disparities compared to Whites and other race/ethnic groups.
- The age groups with the highest rates of gonorrhea are ages 20-24, followed by ages 25-29 and ages 15-19.
- There is a higher percentage of new female gonorrhea cases than males gonorrhea cases. Female gonorrhea cases are diagnosed largely as a result of screening, while men often seek testing due to gonorrhea symptoms.

Percent of Cases by Age Group



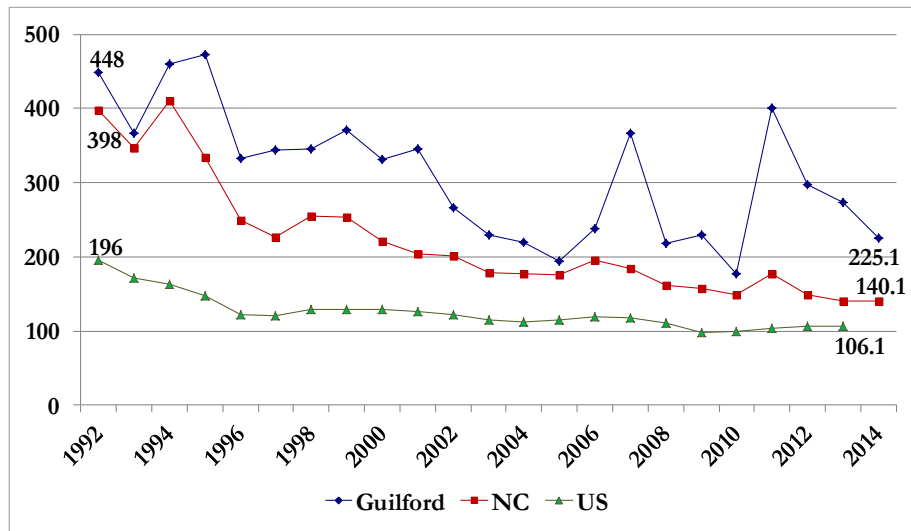
Percent of Cases by Sex



Source: NC Electronic Disease Surveillance System (NCEDSS).

Trends in Gonorrhea Incidence Rates Guilford County, NC and United States 1992-2014*

Rate per 100,000



Source: General Communicable Disease Control Branch; Division of Public Health, NC DHHS; North Carolina Electronic Disease Surveillance System (NCEDSS).

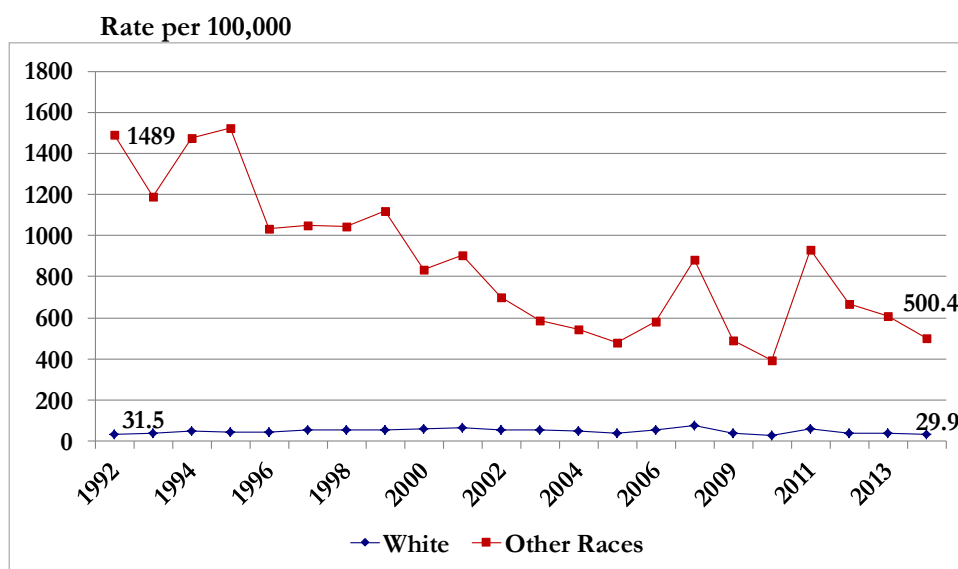
Chart prepared by the GCDPHHS, Division of Public Health.

*Note: 2014 data for US not yet available.

- Gonorrhea incidence rates in Guilford County are consistently higher than rates in North Carolina and the United States as a whole.
- A very large disparity in incidence rates exists between White rates and those of other races, which are made up largely of Black/African-American.

Trends in Gonorrhea Incidence Rates By Race, Guilford County 1992-2014

Rate per 100,000



Source: General Communicable Disease Control Branch; Division of Public Health, NC DHHS; North Carolina Electronic Disease Surveillance System (NCEDSS).

Chart prepared by the GCDPHHS, Division of Public Health.

Reportable Diseases

Reportable Diseases for Guilford County 2011-2015

Disease	2011	2012	2013	2014	2015
Campylobacter	28	27	32	17	29
Chikungunya	--	--	--	--	1
Chlamydia	4,382	3,919	3,767	3,090	4,398
Creutzfeld-Jakob Disease	1	0	0	0	0
Cryptosporidiosis	2	4	1	13	10
E Coli H7:157	1	0	4	4	6
Encephalitis-West Nile Virus	1	0	0	0	0
Ehrlichia, Human Monocytic Ehrlichiosis (HME)	--	--	--	--	1
Gonorrhea	1,743	1,433	1,346	1,154	1,533
Haemophilus Influenza	8	5	12	13	7
Hemolytic Uremic Syndrome	0	0	1	0	0
Hepatitis B Acute	7	6	8	8	2
Hepatitis B Chronic carrier	43	69	52	41	21
Hepatitis C Acute	3	1	0	8	3
HIV Infection	128	102	124	103	129
Legionellosis	5	3	10	8	1
Listeriosis	0	0	1	1	1
Lyme Disease	3	4	6	5	4
Malaria	4	4	1	6	2
Measles	1	0	0	0	0
Meningococcal Disease	1	1	0	0	0
Mumps	4	1	0	0	0
Non-Gonococcal Urethritis	459	146	120	5	0
Pertussis (Whooping Cough)	6	18	29	6	12
Pelvic Inflammatory Disease (PID)	28	26	9	2	0
Rocky Mountain Spotted Fever (RMSF)	1	1	0	0	1
Shigellosis	3	2	0	11	17
Syphilis (P&S)	57	35	29	39	110
Syphilis (P &S &EL)	115	66	51	87	183
Invasive Group A Streptococcal Disease	8	10	11	14	11
Salmonella	71	66	57	60	64
Tuberculosis	22	17	19	20	21
Typhoid, acute	--	--	--	--	1

Source: NC Electronic Disease Surveillance System (NCEDSS).

