

Trends in Sexually Transmitted Diseases

Erie County, PA

2000-2006

Gonorrhea



**ERIE COUNTY
DEPARTMENT OF HEALTH**

Mark A. DiVecchio, County Executive
Andrew J. Glass, M. S., FACHE, Director



**PUBLIC HEALTH
PREPAREDNESS**

*Trends in Sexually Transmitted Diseases
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Valerie Bukowski, MSHyg
Epidemiologist

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Erie County Department of Health
606 West Second Street
Erie, PA 16507
Tel: 814-451-6700
Fax: 814-451-6767
Website: <http://www.ecdh.org>

*"Our mission is to preserve, promote, and protect
the health, safety and well being of the people and the environment in Erie County"*

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DATA SOURCES

- Erie County Department of Health at <http://www.ecdh.org>
- PA Department of Health, Bureau of Communicable Diseases, Sexually Transmitted Diseases at <http://www.health.state.pa.us>
- PA Department of Health, Bureau of Health Statistics and Research, EpiQMS at <http://www.dsf.health.state.pa.us>
- PA Department of Health, Bureau of Health Statistics and Research, Technical Assistance, “Tools of the Trade” at <http://www.dsf.health.state.pa.us>
- National Electronic Disease Surveillance System (NEDSS)
- Centers for Disease Control and Prevention, Sexually Transmitted Diseases at <http://www.cdc.gov/std/default.htm>
- United State Census Bureau, Population Division, Population Estimates at <http://www.census.gov>
- MedlinePlus – Medical Encyclopedia
- The above organizations provided data included in this report. These organizations specifically disclaim responsibility for any analyses, interpretations, or conclusions.
- Links to non-ECDH sites are provided as a service to our users. ECDH is not responsible for the web page content found at these links.

TECHNICAL NOTES

- Crude incidence rates are the number of cases per 100,000 population for a specific area or group.
- Annual population numbers used to calculate crude rates for Erie County and the U.S. are from the U.S. Census Bureau, Population Division, Population Estimates.
- Erie County population profile for 2006: 49.1% male; 50.9% female; 91.1% white; 6.6% black or African-American; 2.5% Hispanic; 19.0% <15 yrs; 7.6% 15-19 yrs; 7.9% 20-24 yrs; 6.1% 25-29 yrs; 5.6% 30-34 yrs; 53.8% 35+ yrs.
- Annual population numbers used to calculate crude rates for PA are from EpiQMS.
- Rates for Erie County as reported by the PA DOH may differ from the Erie County rates in this report due to the use of different population estimates for Erie County.
- Previous year population estimates are used to calculate Erie County rates; Current year population estimates are used to calculate PA rates; From 2000-2005, current year population estimates are used to calculate U.S. rates; Previous year population estimates are used to calculate 2006 U.S. rates.
- Reported rates may differ depending on the population estimate used for calculation.
- Rates based on <10 events are not reported. Rates based on 10 to 19 events are reported but statistically unreliable.
- Three and five year crude incidence rates are the sum of the number of cases for the targeted years divided by the sum of the population estimates for the targeted years multiplied by 100,000.
- Age reporting for some cases was not complete before 2003.
- Hispanic origin may be of any race.
- 95% confidence limits for crude rates are: $CL = \text{Rate } (r) \pm \text{Confidence Interval } (CI)$
where $CI = 1.96 \times r/\sqrt{n}$ and $n = \text{the number of cases}$
- 95% significance tests used to compare independent annual rates within the same population group or between non-overlapping three and five year average annual rates within the same population groups are:
 - 10-99 events Rate Difference Equation $CI = (r_1 - r_2) \pm \sqrt{(CL_1 + CL_2)}$ where $CL = 1.96 \times (r/\sqrt{n})$
 - ≥ 100 events Rate Ratio Equation $CI = r_1/r_2 \pm 1.96 \times r_1/r_2 \sqrt{((1/n_1) + (1/n_2))}$
- 95% significance test used to compare overlapping, dependent three and five year rates within the same population groups are:
 - 10-99 events Expected and Observed $\mu = (o-e)/\sqrt{e}$ where $o = \text{observed cases}$
 $e = \text{expected cases}$
 - ≥ 100 events Rate Difference Equation $\mu = (r_1 - r_2) \times \sqrt{(n/(r_1 - r_2)^2)}$

HIGHLIGHTS

- From 2000 to 2006, Erie County has seen a 99% increase in the total number of chlamydia, gonorrhea, and primary/secondary syphilis cases.
- Erie County experienced a sharp increase in gonorrhea incidence rate from 2000 to 2001 followed by a plateau until 2004. From 2004 to 2005 there was another sharp increase followed by a significant rate increase from 2005 to 2006.
- From 2000 to 2006, the total number of gonorrhea cases in Erie County increased from 133 to 435.
- From 2000 to 2006, the total number of gonorrhea cases in PA decreased from 13,400 to 11,466.
- From 2000 to 2006, the incidence rate for gonorrhea in Erie County increased significantly from 47.4 per 100,000 to 155.1 (↑227.2%).
- From 2000 to 2006, the incidence rate for gonorrhea in PA decreased significantly from 109.1 to 90.5 per 100,000 (↓17.0%). Rates for the U.S. also decreased from 127.6 to 120.0 during this period (↓6.0%).
- The most significant increases in gonorrhea rates for Erie County occurred from 2000 to 2001 and 2004 to 2005. Another significant increase was seen in 2006.
- Trends indicate that the burden of gonorrhea is increasing equally among both males and females.
- From 2000 to 2006, annual gonorrhea rates among males increased significantly from 33.6 per 100,000 males to 114.3 (↑172.8%).
- From 2000 to 2006, annual gonorrhea rates among females increased significantly from 60.5 to 194.3 per 100,000 females (↑222.1%).
- From 2000 to 2006, annual gonorrhea rates among whites increased significantly from 16.5 to 43.7 per 100,000 (↑64.8%). The most noticeable increases occurred from 2000 to 2001 and 2004 to 2005. There was a significant decrease from 2005 to 2006.
- From 2000 to 2006, annual gonorrhea rates among African-Americans increased significantly from 430.2 to 1,212.3 per 100,000 (↑181.8%), with the greatest increase occurring between 2000 and 2001 and 2004-2006.
- In 2006, the gonorrhea incidence rate of 1,212.3 among African-Americans in Erie County was twenty-eight times higher than the rate for whites and eight times higher than the rate for the total population. In 2006, the gonorrhea rate of 1,212.3 among Erie County African-Americans was almost three times higher than the PA rate of 439.1 per 100,000 African-American population.
- Comparing five year average annual incidence rates, gonorrhea rates among the Hispanic population increased by 10.6% from 2001-2005 to 2002-2006.
- In 2006, the gonorrhea rate of 260.1 for the Erie County Hispanic population was three times higher than the rate of 89.8 per 100,000 for the PA Hispanic population.
- In 2006, 62% of all gonorrhea cases occurred among individuals aged 15-24 years.
- From 2000 to 2006, annual gonorrhea rates increased significantly for ages 15-19 (↑305.7%), 20-24 (↑156.9%), 25-29 (↑278.0%), 30-34 (↑59.0%), and for ages 35+ (↑179.2%).
- In 2006, gonorrhea rates among age groups were: 633.7 for ages 15-19; 603.9 for ages 20-24; 486.9 for ages 25-29; and 227.8 for ages 30-34.

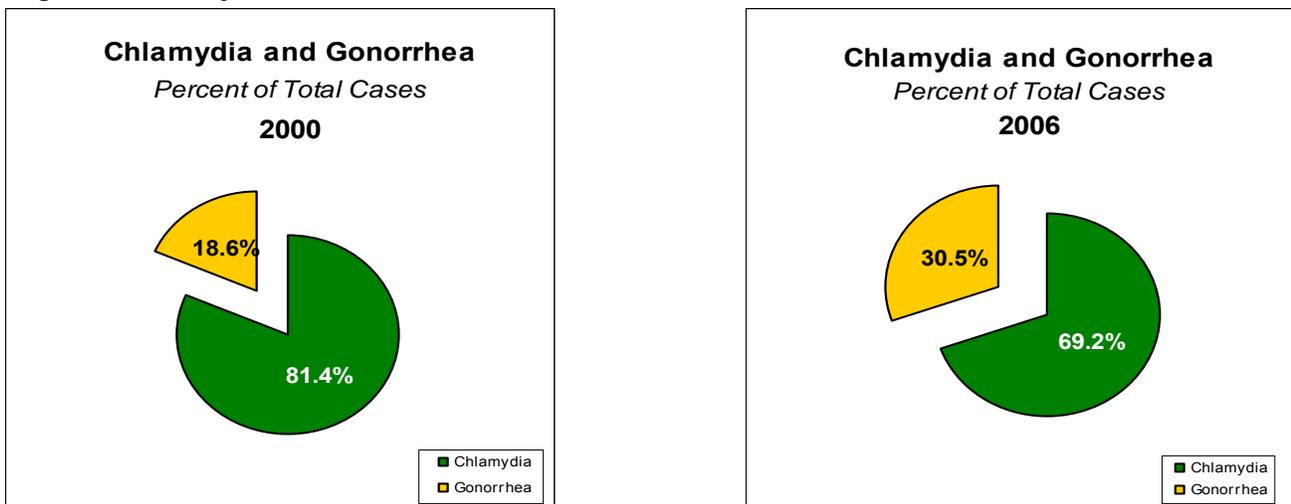
OVERVIEW

Chlamydia, gonorrhea, and primary/secondary syphilis are the three most commonly reported sexually transmitted diseases (STDs) in Erie County. In 2006, 1,423 total cases of these three notifiable STDs were reported - a 99% increase over the 716 cases reported in 2000.

Even more alarming is that many infected individuals never experience symptoms, never seek health care, are not diagnosed, and are not treated. They become silent carriers who continue to spread diseases that are known to have serious health complications. If this population is considered, the true burden of chlamydia, gonorrhea, and syphilis within our community may be even higher.

From 2000 to 2006, chlamydia cases have increased 69% from 583 to 986 and gonorrhea cases have increased 227% from 133 to 435 while primary/secondary syphilis has increased from 0 to 3 cases. Since 2000 there has been a noticeable shift in the percent of total for each STD type. From 2000 to 2006, chlamydia has decreased from 81.4% to 69.2% of all reported STD cases while gonorrhea has increased from 18.6% to 30.5%. (Figure 1) Syphilis cases are close to 0%.

Figure 1: Chlamydia and Gonorrhea: Percent of Total STD Cases



The Erie County Department of Health operates clinics for STD diagnosis and has dedicated staff for follow-up of partners. However, the increasing STD burden has prompted exploration of programs aimed at identification of asymptomatic or silent carriers within the community.

This report provides an overview of STD trends in Erie County from 2000 to 2006.

GONORRHEA

Neisseria gonorrhoea is the second most common STD reported in Erie County. Symptoms in males include penile and/or rectal discharge, increased urinary frequency, burning during evacuation, and sore throat. Symptoms in females include vaginal discharge, burning on urination, increased urination, abdominal pain, and sore throat. Gonorrhoea can be treated with antibiotics once an individual is diagnosed. Humans do not develop immunity to gonorrhoea. Reinfection can occur. Infection is spread through the mouth, vagina, penis, or anus.

Symptoms of gonorrhoea generally appear within two to five days after infection but in men symptoms may take up to one month to appear. Gonorrhoea is most common in people age 20-24 years. Not all individuals infected with gonorrhoea have symptoms.

If untreated, gonorrhoea in females can lead to vaginitis, pelvic inflammatory disease (PID), scarring of the fallopian tubes, and sterility. Untreated gonorrhoea in men can lead to urethral scarring, urination problems, urinary tract infections, and kidney failure. Further complications for both men and women include widespread infection including infections of the reproductive system, peritonitis, bacteremia, pharyngitis, conjunctivitis, and joint infections.

The Centers for Disease Control and Prevention (CDC) has established 19.0 cases of gonorrhoea per 100,000 population as a Healthy People 2010 Goal.

Gonorrhoea in the Total Population

Annual Trends: In 2006 there were a total of 435 gonorrhoea cases reported in Erie County compared to 133 in 2000. From 2000 to 2006, annual gonorrhoea incidence rates for Erie County increased significantly from 47.4 cases per 100,000 to 155.1 (↑227.2%). The most noticeable increases occurred from 2000 to 2001 with rates significantly increasing from 47.4 to 95.1 (↑100.6%) and from 2004 to 2005 with rates significantly increasing from 79.5 to 131.7 (↑65.7%). In 2006, gonorrhoea rates among Erie County residents again increased significantly. (Tables 1,2,3,4; Figure 2)

In contrast, from 2000 to 2005, annual gonorrhoea rates decreased significantly from 109.1 to 90.3 cases per 100,000 for PA and from 127.6 to 114.8 for the U.S. From 2005 to 2006, gonorrhoea rates for both PA and the U.S. increased significantly. (Tables 1,2,3,4)

In 2000, the gonorrhoea incidence rate for Erie County was lower than the rates for both PA and the U.S. In 2006, the gonorrhoea rate per 100,000 for Erie County was 155.1 compared to 92.2 for PA and 120.0 for the U.S. (Tables 3,4; Figure 3)

Figure 2: Erie County Gonorrhoea Rates

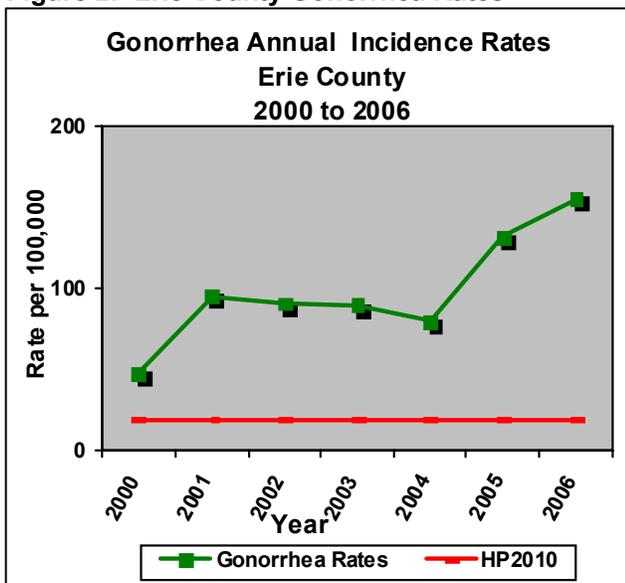
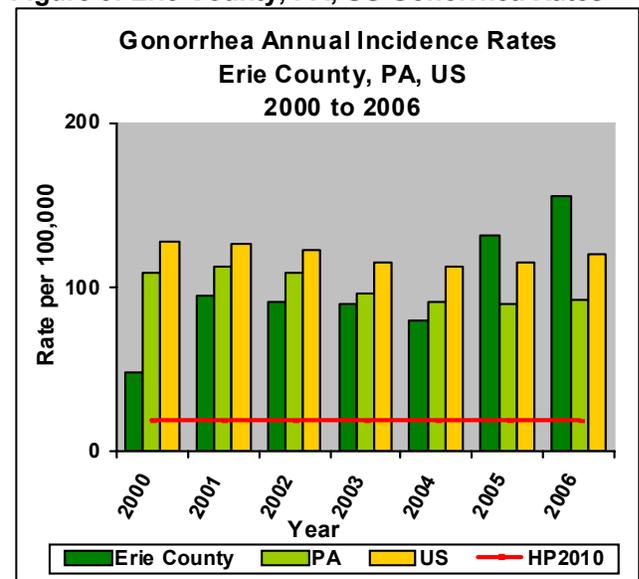


Figure 3: Erie County, PA, US Gonorrhoea Rates



Three Year Trends: Similar trends were seen when three year average annual rates were compared. From 2000-2002 to 2004-2006, gonorrhea rates for Erie County increased significantly from 77.7 to 122.0 cases per 100,000 (↑57.0%) with the most noticeable increases occurring from 2003-2005 to 2004-2006. (Table 6; Fig. 4)

In contrast, from 2000-2002 to 2004-2006, rates for PA decreased significantly from 110.0 to 91.0 cases per 100,000 and rates for the U.S. decreased significantly from 125.5 to 116.2. (Table 6; Figure 5)

In 2000-2002, the three year gonorrhea incidence rate for Erie County was lower than the rate for both PA and the U.S. In 2004-2006, the gonorrhea rate for Erie County was higher than the corresponding rates for both PA and U.S. (Table 6)

Figure 4: Erie County Gonorrhea Rates

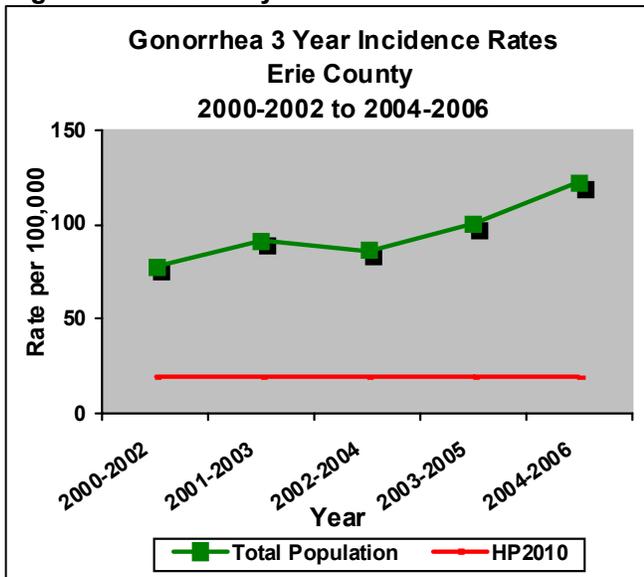
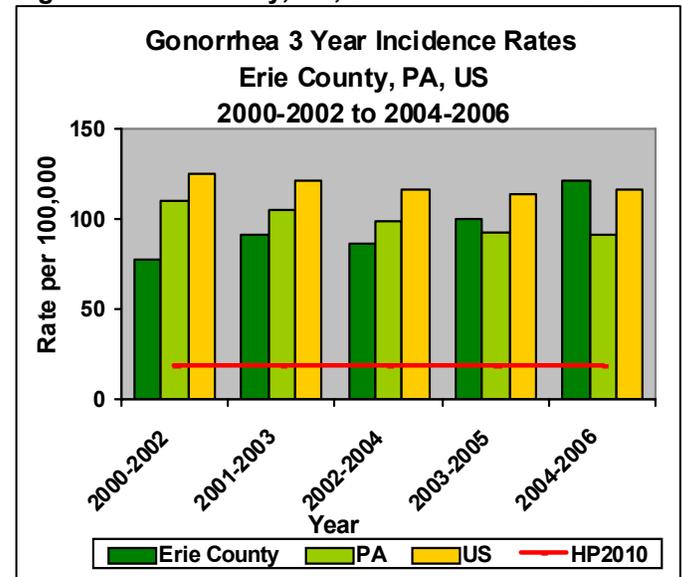


Figure 5: Erie County, PA, US Gonorrhea Rates



Five Year Trends: From 2000-2004 to 2002-2006, five year average annual gonorrhea rates for Erie County increased significantly from 80.4 to 109.1 cases per 100,000 (↑35.7%). (Table 7)

In contrast, from 2000-2004 to 2002-2006, rates decreased significantly from 103.3 to 95.5 cases per 100,000 for PA and from 150.7 to 117.2 for the U.S.. (Table 7)

In 2000-2004, the five year gonorrhea incidence rate for Erie County was lower than the rates for both PA and the U.S. In 2002-2006, the gonorrhea rate per 100,000 for Erie County was higher than the corresponding PA rate for PA but lower than the U.S. rate. (Table 7)

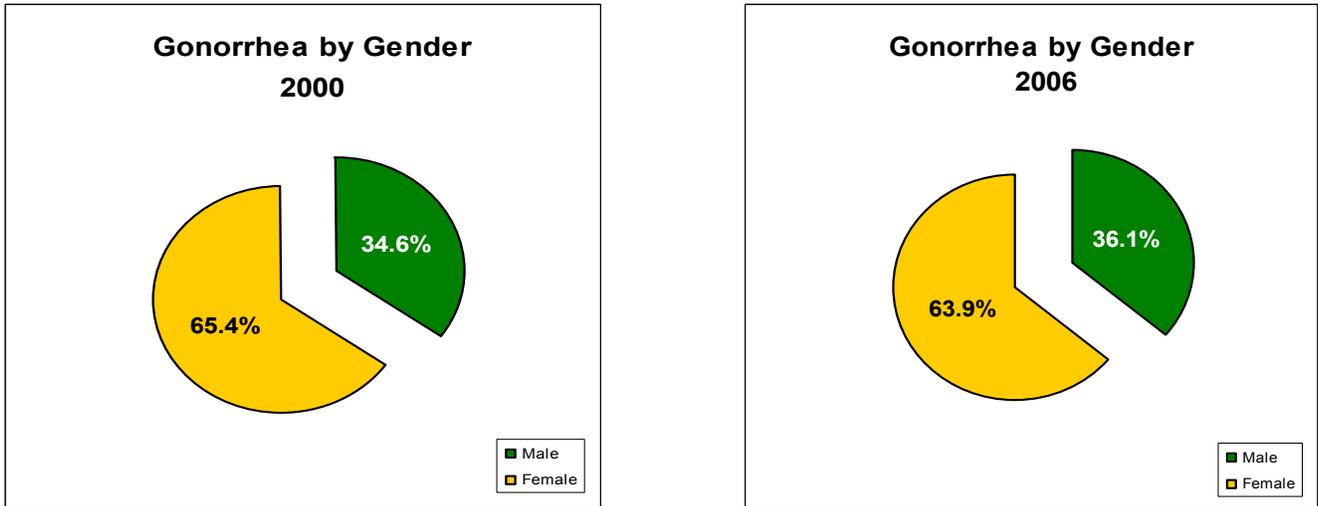
Gonorrhea by Gender

Overview

Annual Trends: In 2000, 133 total gonorrhea cases were reported for Erie County. Of these, 46 (34.6%) were male and 87 (65.4%) were female. In 2006, 435 total gonorrhea cases were reported for Erie County. Of these, 157 (36.1%) were male and 278 (63.9%) were female. The number of female gonorrhea cases remains higher than that for males by almost a 2:1 margin. For comparison, Erie County population estimates for 2006 are 49.1% male and 50.9% females. (Figure 6)

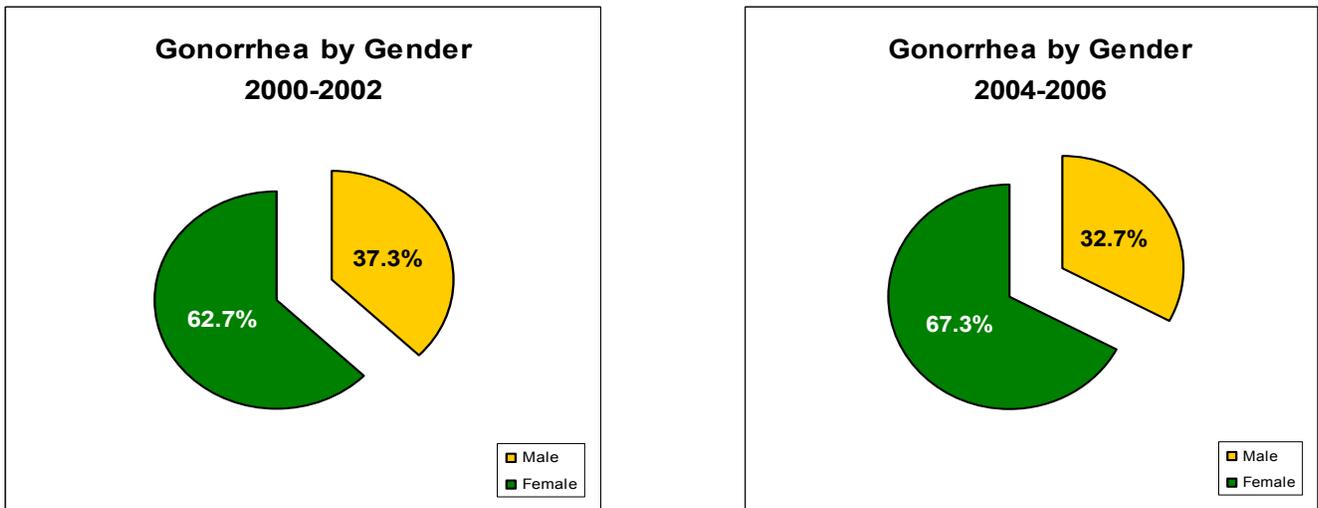
When incidence rates are compared, a similar trend is found. In 2000, rates per 100,000 were 60.5 for females compared to 33.6 for males while in 2006 rates were 194.3 for females compared to 114.3 for males. From 2000 to 2006, the rate of gonorrhea among males increased by 172.8% compared to 222.1% for females. Trends indicate that the burden of gonorrhea is increasing at an alarming rate among both males and females. (Table 3; Figure 8)

Figure 6: Erie County Gonorrhea Cases: Percent by Gender



Three Year Trends: A similar trend is seen when three year counts were compared. From 2000-2002 to 2004-2006, the percent of male gonorrhea cases compared to total cases has decreased from 37.3% to 32.7% while the percent of female gonorrhea cases compared to total cases has increased from 62.7% to 67.3%. The number of female cases remains higher than that for males by a margin of 2:1. (Figure 7)

Figure 7: Erie County Gonorrhea Cases: Percent by Gender



Five Year Trends: From 2000-2004 to 2002-2006, the percent of male gonorrhea cases compared to total cases has decreased slightly from 34.4% to 33.6% while the percent of female gonorrhea cases compared to total cases has increased from 65.6% to 66.4%. The number of female cases remains higher than that for males by a margin of 2:1.

Males

Annual Trends: From 2000 to 2006, annual gonorrhea incidence rates for Erie County males increased significantly from 33.6 cases per 100,000 males to 114.3 (↑240.2%). The most noticeable increases occurred from 2000 to 2001 (↑130.4%), followed by a plateau, and from 2004 to 2005 (↑111.9%). In 2006, rates increased by 28.7% from 88.8 to 114.3. (Tables 1,2,3,4; Figure 8)

Annual gonorrhea rates for PA males have been available since 2003. From 2003 to 2006, rates for PA males decreased slightly from 87.1 to 86.9 cases per 100,000 (↓0.2%). During the same time, gonorrhea rates for Erie County increased from 63.1 to 114.3 (↑81.1%). The gonorrhea rate per 100,000 males for Erie County in 2006 was significantly higher than the rate for PA. (Tables 1,2,3,4)

Three Year Trends: From 2000-2002 to 2004-2006, three year average annual gonorrhea incidence rates for Erie County males increased significantly from 59.3 cases per 100,000 males to 81.6 (↑37.6%). The most noticeable increases occurred from 2003-2005 to 2004-2006 with rates increasing significantly from 64.5 to 81.6 (↑26.5%). (Tables 5,6; Figure 9)

Five Year Trends: From 2000-2004 to 2002-2006, five year average gonorrhea rates for Erie County males increased significantly from 56.6 to 74.9 cases per 100,000 (↑32.3%). (Table 7)

Figure 8: Gonorrhea Incidence Rates: Gender

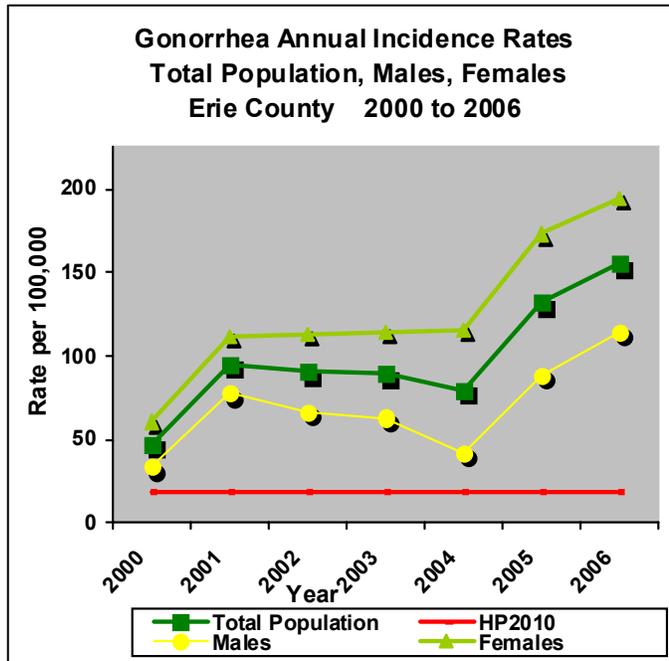
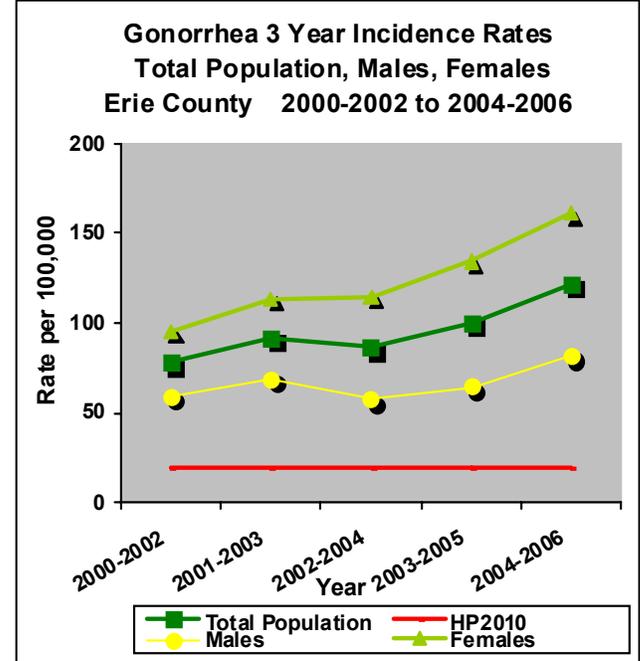


Figure 9: Gonorrhea Incidence Rates: Gender



Females

Annual Trends: From 2000 to 2006, annual gonorrhea incidence rates for Erie County females increased significantly from 60.5 cases per 100,000 females to 194.3 (↑221.1%). The most noticeable increases occurred from 2000 to 2001 (↑85.0%), followed by a plateau, and from 2004 to 2005 (↑49.8). In 2006, rates increased by 12.3% to 194.3. (Tables 1,2,3,4) (Figure 8)

Annual gonorrhea rates for PA females have been available since 2003. From 2003 to 2006, rates for PA females decreased significantly from 104.2 to 97.1 cases per 100,000 (↓7.3%). During the same time, gonorrhea rates for Erie County increased from 114.2 to 194.3 (↑70.1%). The gonorrhea rate per 100,000 females for Erie County in 2006 was significantly higher than the rate for PA. (Tables 1,2,3,4)

Three Year Trends: From 2000-2002 to 2004-2006, three year average annual gonorrhea incidence rates for Erie County females increased significantly from 95.1 cases per 100,000 females to 160.8 (↑69.1%). The most noticeable increases occurred from 2000-2002 to 2001-2003 (↑18.9%) and from 2002-2004 to 2004-2006 (↑40.7%). (Tables 5,6; Figure 9)

Five Year Trends: From 2000-2004 to 2002-2006, five year average annual gonorrhea rates for Erie County females increased significantly from 103.1 to 141.9 cases per 100,000 (↑37.6%). (Table 7)

Gonorrhea by Race and Ethnicity

Overview

Annual Trends: In 2000, 31.6% of all gonorrhea cases were white and 55.6% were African-American. Case reporting for the Hispanic population in Erie County did not begin until 2001. In 2006, these values were 25.7% for whites, 50.6% for the African-American population, and 4.1% for the Hispanic population. For comparison, Erie County population estimates for 2006 are 91.1% white, 6.6% black or African-American, and 2.5% Hispanic.

When incidence rates are compared, a significant gap is seen between the two races. In 2000, gonorrhea rates per 100,000 were 430.2 for African-Americans compared to 16.5 for whites (26:1). In 2006, these rates were 1,212.3 for African-Americans compared to 43.7 for whites (28:1). Gonorrhea incidence rates have remained significantly higher in the African-American population compared to the white population. In 2006, the gonorrhea rate per 100,000 for the Hispanic population was 260.1. (Tables 1,2,3,4; Figures 10,11)

Figure 10: Gonorrhea Incidence Rates: Race

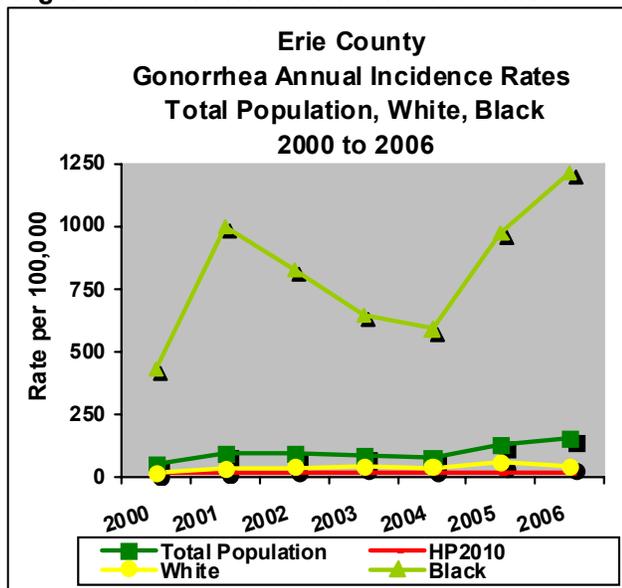
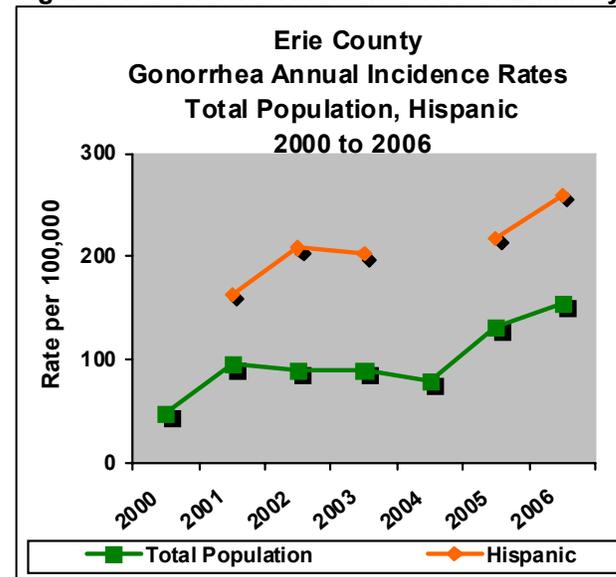


Figure 11: Gonorrhea Incidence Rates: Ethnicity



Three Year Trends: In 2000-2002, 33.7% of all gonorrhea cases were white while 59.8% were African-American. In 2004-2006, these values were 34.2% for whites and 48.9% for the African-American population.

When incidence rates are compared, a significant gap is seen between the two races. In 2000-2002, three year average annual gonorrhea rates per 100,000 were 752.5 for African-Americans compared to 28.7 for whites (26:1). In 2004-2006, these rates were 924.7 for African-Americans compared to 45.6 for whites (20:1). Gonorrhea incidence rates have remained significantly higher in the African-American population compared to the white population. In 2004-2006, the gonorrhea rate per 100,000 for the Hispanic population was 204.2. (Tables 1,2,3,4; Figure 12,13)

Five Year Trends: In 2000-2004, 38.6% of all gonorrhea cases were white while 54.3% were African-American. In 2002-2006, these values were 36.9% for whites and 49.8% for the African-American population.

When incidence rates are compared, a significant gap is seen between the two races. In 2000-2004, five year average annual gonorrhea rates per 100,000 were 697.1 for African-Americans compared to 33.9 for whites (21:1). In 2002-2006, these rates increased to 849.5 for African-Americans and 44.0 for whites with a ratio of 19:1. (Table 7)

Figure 12: Gonorrhea Incidence Rates: Race

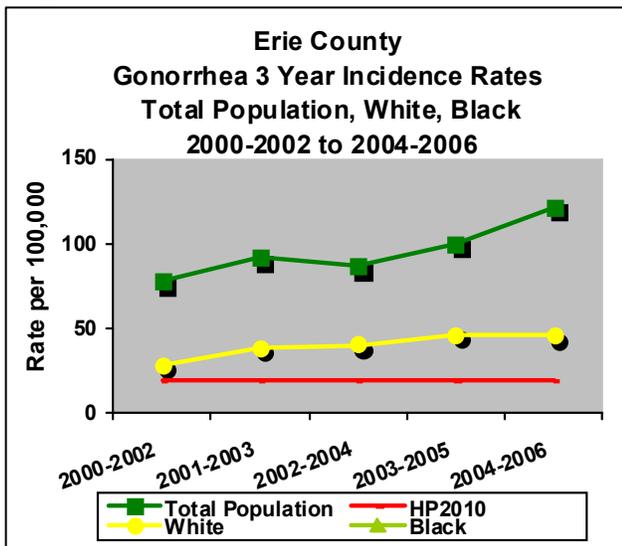
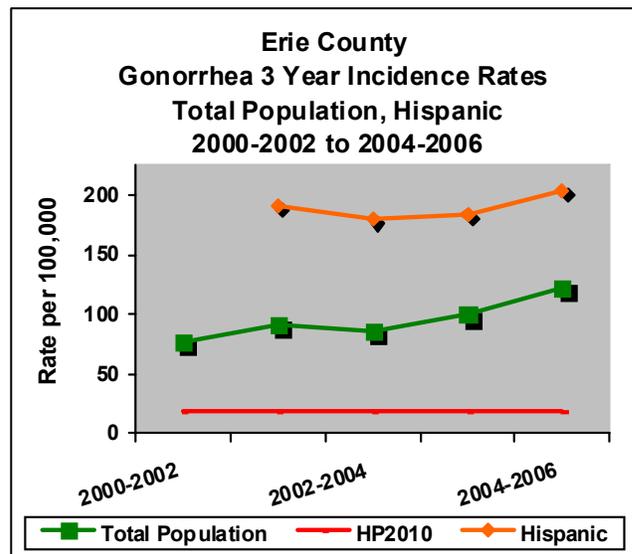


Figure 13: Gonorrhea Incidence Rates: Ethnicity



White Population

Annual Trends: From 2000 to 2006, annual gonorrhea incidence rates for the Erie County white population increased significantly from 16.5 cases per 100,000 to 43.7 (↑164.8%). The most noticeable increases occurred from 2000 to 2001 (↑94.5%) and 2004-2005 (↑44.8%). In 2006, rates decreased by 21.0% to 43.7. (Tables 1,2,3,4) (Figure 10)

Annual gonorrhea rates for the PA white population have been available since 2001. From 2001 to 2006, rates for whites in PA increased from 13.3 to 16.2 cases per 100,000 (↑21.8%). During the same time, gonorrhea rates among whites in Erie County increased significantly from 32.1 to 43.7 (↑36.1%). The 2006 gonorrhea rate per 100,000 whites in Erie County was more than double the corresponding PA rate. From 2005 to 2006, gonorrhea rates among Erie County whites decreased significantly from 55.3 to 43.7 (↓21.0%). (Tables 1,2,3,4)

Three Year Trends: From 2000-2002 to 2004-2006, three year average annual gonorrhea incidence rates for Erie County whites increased significantly from 28.7 cases per 100,000 whites to 45.6 (↑58.9%). The most noticeable increase occurred from 2000-2002 to 2001-2003 with rates increasing significantly from 28.7 to 38.4 (↑33.8%). Rates continued to increase until 2004-2006 when the white population saw a small decrease (↓1.3%). (Tables 5,6; Figure 12)

Five Year Trends: From 2000-2004 to 2002-2006, five year average annual gonorrhea incidence rates for Erie County whites increased from 33.9 cases per 100,000 whites to 44.0 (↑29.8%). (Table 7)

African-American Population

Annual Trends: From 2000 to 2006, annual gonorrhea incidence rates for the Erie County African-American population increased significantly from 430.2 cases per 100,000 to 1,212.3 (↑181.8%). The largest increase occurred from 2000 to 2001 with rates increasing significantly from 430.2 to 999.9 (↑132.4%). From 2001 to 2004, incidence rates decreased by 41.1% from 999.9 to 589.2 per 100,000 African-American population but increased from 2004 to 2006 by 105.8%. (Tables 1,2,3,4; Figure 10)

Annual gonorrhea rates for the PA African-American population have been available since 2001. From 2001 to 2006, rates for African-Americans in PA decreased significantly from 665.9 to 439.1 cases per 100,000 (↓34.1%). During the same time, gonorrhea rates among African-Americans in Erie County increased from 999.9 to 1,212.3 (↑21.2%). The 2006 gonorrhea rate of 1,212.3 per 100,000 African-Americans in Erie County was almost three times higher than the PA rate of 439.1. (Tables 1,2,3,4)

Three Year Trends: From 2000-2002 to 2004-2006, three year average annual gonorrhea incidence rates for Erie County African-Americans increased significantly from 752.5 cases per 100,000 African-Americans to 924.7 (↑22.9%). The most noticeable increase occurred from 2000-2002 to 2001-2003. This was followed by a significant decrease in 2002-2004 and subsequent increases until 2004-2006. (Tables 5,6; Figure 12)

Five Year Trends: From 2000-2004 to 2002-2006, five year average annual gonorrhea incidence rates for Erie County African-Americans increased significantly from 697.1 cases per 100,000 African-Americans to 849.5 (↑21.9%). (Table 7)

Hispanic Population

Annual Trends: Reported numbers of gonorrhea cases for the Erie County Hispanic population have been available since 2001. From 2001 to 2006, annual gonorrhea incidence rates for the Erie County Hispanic population increased from 163.2 cases per 100,000 to 260.1 (↑59.4%). When considering annual rates, the low number of cases among the Hispanic population must be considered. From 2001 to 2006, reported annual cases were below 20 per year. Rates based on case numbers below 20 can be statistically unreliable. The annual Hispanic rates presented in this report are useful for comparison within the Hispanic population only. (Tables 1,2,3,4; Figure 11)

Annual gonorrhea rates for the PA Hispanic population have been available since 2001. From 2001 to 2006, rates for Hispanics in PA decreased significantly from 125.5 to 89.8 cases per 100,000 (↓28.4%). During the same time, gonorrhea rates among Hispanics in Erie County increased from 163.2 to 260.1 (↑59.4%). The 2006 gonorrhea rate of 260.1 per 100,000 Hispanics in Erie County was higher than the PA rate of 89.8. From 2005 to 2006, gonorrhea rates among Erie County Hispanics increased by 19.3%. (Tables 1,2,3,4)

Three Year Trends: Reported numbers of gonorrhea cases for the Erie County Hispanic population have been available since 2001. From 2001-2003 to 2004-2006, three year average annual gonorrhea incidence rates for Erie County Hispanics increased from 191.4 per 100,000 Hispanics to 204.2 (↑6.7%). (Tables 5,6; Figure 13)

Five Year Trends: Reported numbers of gonorrhea cases for the Erie County Hispanic population have been available since 2001. From 2001-2005 to 2002-2006, five year average annual gonorrhea incidence rates for Erie County Hispanics increased from 184.9 per 100,000 Hispanics to 204.5 (↑10.6%). (Table 7)

Gonorrhea by Age Group

Overview

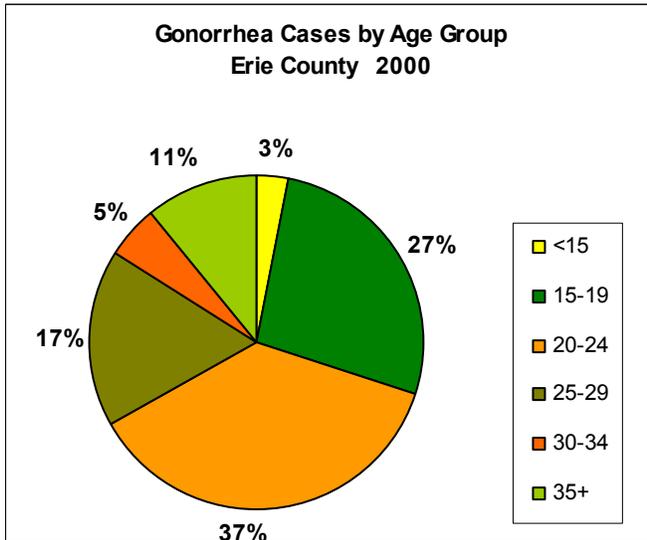
Annual Trends: In 2000, of the 130 gonorrhea cases that included a reported age, 3.1% were under age 15, 26.9% were aged 15-19, 36.9% were aged 20-24, 16.9% were aged 25-29, 5.4% were aged 30-34, and 10.8% were age 35 and above. In 2006, all 435 gonorrhea cases included a reported age. The percent of gonorrhea cases decreased to 0.7% for ages under 15, increased to 30.3% for ages 15-19, decreased to 32.0% for ages 20-24, increased to 19.5% for ages 25-29, increased to 8.3% for ages 30-34, and decreased to 9.2 for ages 35 and above. (Figures 14,15)

In both 2000 and 2006, the two age groups of 15-19 and 20-24 accounted for 62.3% of all age-reported gonorrhea cases in Erie County.

For comparison, Erie County population estimates for 2006 are: 19.0% ages <15; 7.6% ages 15-19; 7.9% ages 20-24; 6.1% ages 25-29; 5.6% ages 30-34; and 53.8% ages 35 and above.

Comparing incidence rates annually, the largest increases are seen in age groups 15-19 and 25-29 followed by 35+ and 20-24. From 2000 to 2006, annual gonorrhea rates per 100,000 increased significantly for ages 15-19 from 156.2 to 633.7 (↑305.7%), increased significantly for ages 20-24 from 235.1 to 603.9 (↑156.9%), increased significantly for ages 25-29 from 128.8 to 486.9 (↑278.0%), increased significantly for ages 30-34 from 143.3 (in 2001) to 227.8 (↑59.0%), and increased significantly from 9.6 to 26.8 for ages 35 and above (↑179.2%). For age group under 15 years, the number of reported annual cases of gonorrhea were below 10 for each year from 2000 to 2006. Rates were not calculated. (Tables 1,2,3,4; Figure 16)

Figure 14: Gonorrhea Cases: Percent Reported by Age Group



Note: Totals may not equal 100% due to rounding.

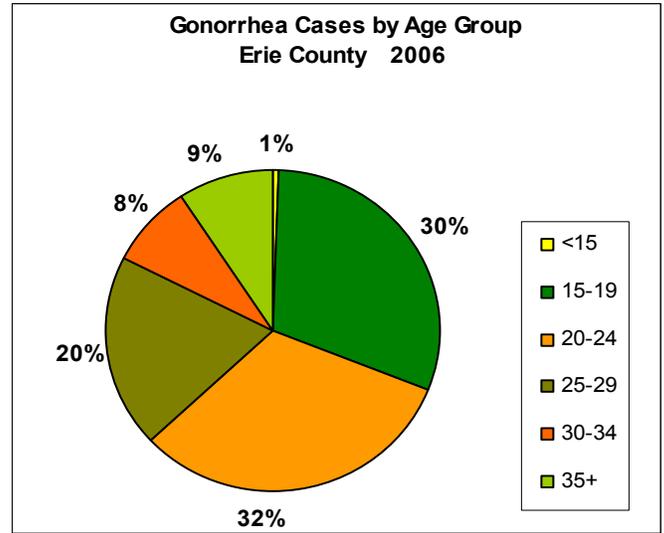


Figure 15: Gonorrhea Cases by Age Group (Erie County)

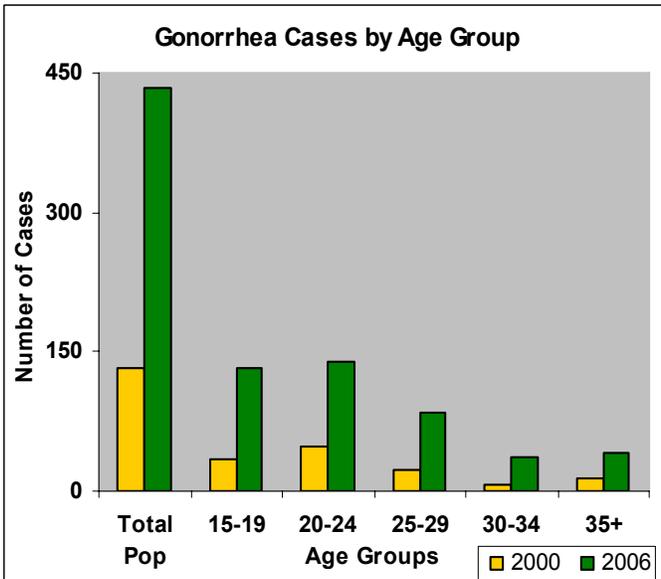
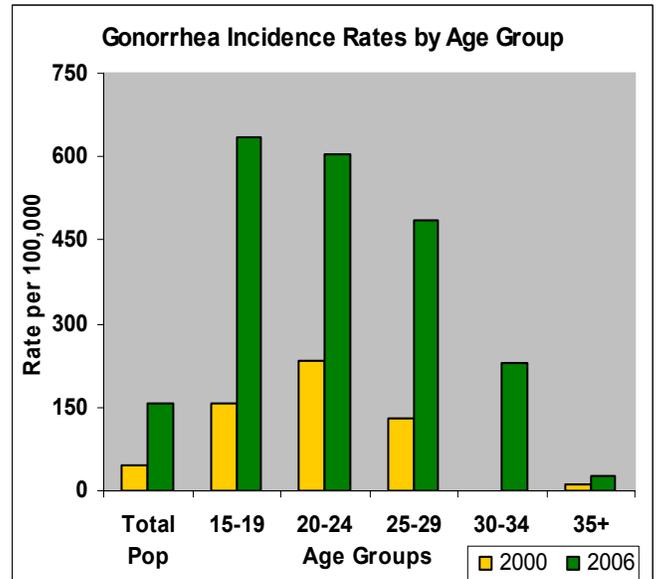


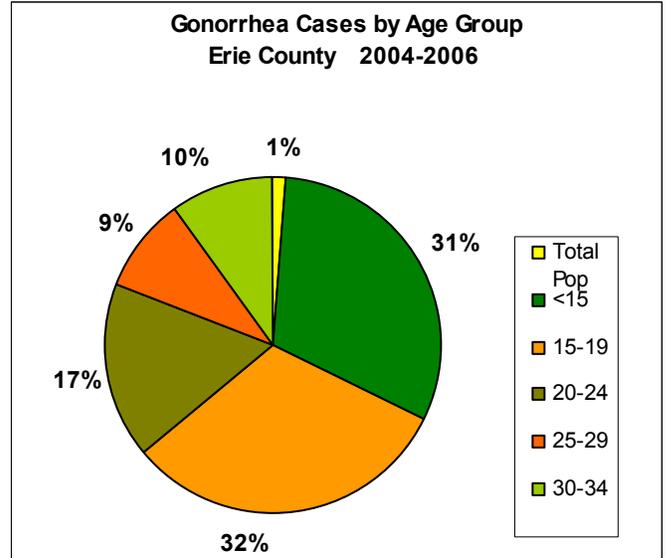
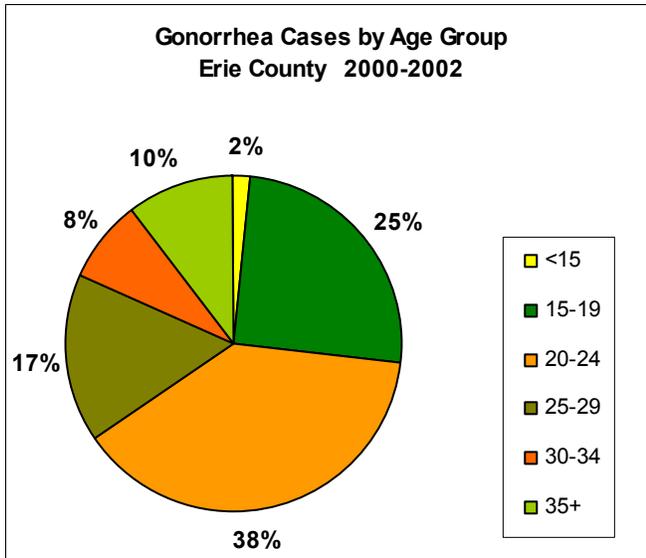
Figure 16: Gonorrhea Rates by Age Group (Erie County)



Three Year Trends: In 2000-2002, of the 634 gonorrhea cases that included a reported age, 1.6% were under age 15, 25.4% were aged 15-19, 38.2% were aged 20-24, 16.6% were aged 25-29, 7.9% were aged 30-34, and 10.4% were aged 35 and above. In 2004-2006, 1,027 gonorrhea cases included a reported age. Of these, the percent of gonorrhea cases decreased slightly to 1.4% for ages under 15, increased to 30.8% for ages 15-19, decreased to 31.5% for ages 20-24, increased to 17.1% for ages 25-29, increased to 9.2% for ages 30-34, and was 9.9% for ages 35 and above. In 2004-2006, the two age groups of 15-19 and 20-24 accounted for 62.4% of all age-reported gonorrhea cases in Erie County. (Figures 17,18)

Comparing incidence rates for three year periods, the largest increases are seen in age groups 15-19 and 30-34 followed by 35+, 25-29, and 20-24. From 2000-2002 to 2004-2006, three year average annual gonorrhea rates per 100,000 increased significantly for age group 15-19 from 240.4 to 502.6 (↑109.1%), increased significantly for age group 20-24 from 383.5 to 463.1 (↑20.8%), increased significantly for age group 25-29 from 209.1 to 351.4 (↑68.0%), increased significantly for age group 30-34 from 92.1 to 189.2 (↑105.4%), and increased significantly from 15.1 to 22.8 for ages 35 and above (↑51.0%). (Tables 5,6; Figure 19)

Figure 17: Age Groups: Percent Gonorrhea Cases Reported by Age



Note: Totals may not equal 100% due to rounding

Figure 18: Gonorrhea Cases by Age Group (Erie County)

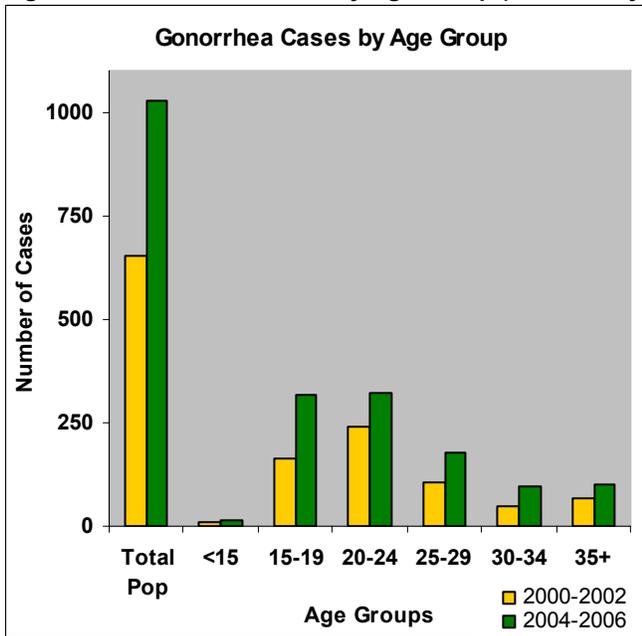
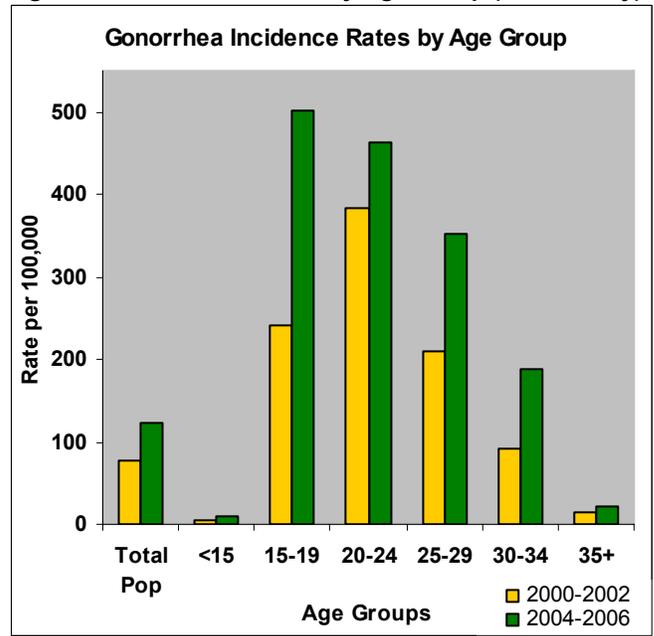


Figure 19: Gonorrhea Rates by Age Group (Erie County)



Five Year Trends: In 2000-2004, 1,107 gonorrhea cases included a reported age. Of these, 1.4% were under age 15, 26.9% were aged 15-19, 38.4% were aged 20-24, 16.9% were aged 25-29, 7.5% were aged 30-34, and 8.9% were aged 35 and above. In 2002-2006, there were 1,521 gonorrhea cases that included a reported age. The percent of gonorrhea cases remained steady at 1.2% for ages under 15, increased to 28.7% for ages 15-19, decreased to 34.4% for ages 20-24, increased to 18.3% for ages 25-29, increased to 8.2% for ages 30-34, and increased slightly to 9.2% for ages 35 and above. In 2002-2006, the two age groups of 15-19 and 20-24 accounted for 63.1% of all age-reported gonorrhea cases in Erie County.

When comparing incidence rates for five year periods, the largest increases are seen in age groups 30-34 and 15-19 followed 25-29, 35+, and 20-24. From 2000-2004 to 2002-2006, five year average annual gonorrhea rates per 100,000 increased significantly from 270.3 to 408.3 (↑51.0%) for age group 15-19, increased significantly from 385.8 to 452.8 (↑17.4%) for age group 20-24, increased significantly from 227.6 to 338.7 (↑48.8%) for age

group 25-29, increased significantly from 92.7 to 145.0 (↑56.4%) for age group 30-34, and increased from 13.5 to 18.9 (↑40.0%) for ages 35 and above. (Table 7)

Ages Under 15

The number of reported annual gonorrhea cases for ages below 15 were less than 10 for each year from 2000 to 2006. Similarly, the number of reported three and five year gonorrhea cases were less than 20 per each time period. When the number of cases are below 20, data is statistically unreliable and comparisons can be misleading. (Tables 1,2,3,4; Figure 16)

Ages 15-19

Annual Trends: From 2000 to 2006, annual gonorrhea incidence rates for Erie County residents age 15-19 increased significantly from 156.2 cases per 100,000 to 633.7 (↑305.7%). The most notable increase occurred from 2000 to 2001 when rates increased significantly from 156.2 in 2000 to 321.4 in 2001 (↑105.8%). From 2001 to 2004 there was a slight decrease in incidence rates. From 2004 to 2005 rates increased significantly from 330.9 in 2004 to 633.7 per 100,000 population in 2005 (↑91.5%). Rates again increased by 15.5% from 2005-2006. (Tables 1,2,3,4)

Three Year Trends: From 2000-2002 to 2004-2006, three year average annual gonorrhea incidence rates for Erie County residents aged 15-19 increased significantly from 240.4 cases per 100,000 to 502.6 (↑109.1%). The most noticeable increase occurred from 2002-2004 to 2003-2005 when rates increased significantly from 291.9 to 392.0 (↑34.3%) and 2003-2005 to 2004-2006 when rates increased from 392.0 to 502.6 (↑28.2). (Tables 5,6)

Five Year Trends: From 2000-2004 to 2002-2006, five year average annual gonorrhea incidence rates for Erie County residents age 15-19 increased significantly from 270.3 cases per 100,000 to 408.3 (↑51.0%). (Table 7)

Ages 20-24

Annual Trends: From 2000 to 2006, annual gonorrhea incidence rates for Erie County residents age 20-24 increased significantly from 235.1 cases per 100,000 to 603.9 (↑156.9%). The most notable increase occurred from 2000 to 2001 when rates increased significantly from 235.1 in 2000 to 475.0 in 2001 (↑102.0%). From 2001 to 2004, there was a significant decrease in rates followed by an increase of 31.9% from 2004 to 2005 and a significant increase of 34.5% from 2005 to 2006. (Table 1,2,3,4)

Three Year Trends: From 2000-2002 to 2004-2006, three year average annual gonorrhea incidence rates for Erie County residents aged 20-24 increased significantly from 383.5 cases per 100,000 to 463.1 (↑20.8%). The most noticeable increase occurred from 2000-2002 to 2001-2003 when rates increased significantly from 383.5 to 448.8 (↑17.0%). This age group experienced a rate decrease from 2001-2003 to 2003-2005 followed by a 13.3% increase from 2003-2005 to 2004-2006. (Tables 5,6)

Five Year Trends: From 2000-2004 to 2002-2006, five year average annual gonorrhea incidence rates for Erie County residents age 20-24 increased significantly from 385.8 cases per 100,000 to 452.8 (↑17.4%). The most notable increase occurred from 2000-2004 to 2001-2005 when rates increased significantly from 385.8 to 426.0 (↑10.4%). (Table 7)

Ages 25-29

Annual Trends: From 2000 to 2006, annual gonorrhea incidence rates for Erie County residents age 25-29 increased significantly from 128.8 cases per 100,000 to 486.9 (↑278.0%). The most notable increases occurred from 2001 to 2002 when rates increased significantly from 193.2 in 2001 to 311.3 in 2002 (↑61.1%) and from 2004 to 2005 when rates increased significantly from 187.5 in 2004 to 366.7 in 2005 (↑95.6%). This age group saw a significant decrease in annual rates from 2003 to 2004. Rates increased by 32.8% from 2005 to 2006. (Tables 1,2,3,4)

Three Year Trends: From 2000-2002 to 2004-2006, three year average annual gonorrhea incidence rates for Erie County residents aged 25-29 increased significantly from 209.1 cases per 100,000 to 351.4 (↑68.0%). The most noticeable increases occurred from 2000-2002 to 2001-2003 when rates increased significantly from 209.1 to 275.1 (↑31.6%) and from 2003-2005 to 2004-2006 when rates increased significantly from 294.5 to 351.4 (↑19.3%). (Tables 5,6)

Five Year Trends: From 2000-2004 to 2002-2006, five year average annual gonorrhea incidence rates for Erie County residents age 25-29 increased significantly from 227.6 cases per 100,000 to 338.7 (↑48.8%). (Table 7)

Ages 30-34

Annual Trends: Prior to 2004, there were less than 20 cases reported annually for this age group. Because of the statistical unreliability associated with this low number, rates for these years will not be compared. From 2004 to 2006, annual gonorrhea incidence rates for Erie County residents age 30-34 increased significantly from 114.8 cases per 100,000 to 227.8 (↑98.4%). From 2004 to 2005 rates increased significantly from 114.8 to 230.9 (↑101.1%). From 2005 to 2006, rates decreased by 1.3% among this age group. (Tables 1,2,3,4)

Three Year Trends: From 2000-2002 to 2004-2006, three year average annual gonorrhea incidence rates for Erie County residents aged 30-34 increased significantly from 92.1 cases per 100,000 to 189.2 (↑105.4%). The most notable increases occurred from 2002-2004 to 2003-2005 (↑46.3%) and from 2003-2005 to 2004-2006 (↑37.7%) when rates increased significantly for each time frame. (Tables 5,6)

Five Year Trends: From 2000-2004 to 2002-2006, five year average annual gonorrhea incidence rates for Erie County residents age 30-34 increased significantly from 92.7 cases per 100,000 to 145.0 (↑56.4%). The most notable increase occurred from 2000-2004 to 2001-2005 when rates increased from 92.7 to 129.8 (↑40.0%). (Table 7)

Ages 35 and Above

Annual Trends: In 2000, 2003, and 2004 there were less than 20 cases reported annually for this age group and only 22 cases reported in 2002. However, in 2001 there were 30 reported cases, 45 cases in 2005, and 40 cases in 2006.

From 2001 to 2006, annual gonorrhea incidence rates for Erie County residents age 35 and above increased from 20.7 cases per 100,000 to 26.8 (↑29.5%). The most notable increase occurred from 2004 to 2005 when rates increased significantly from 11.4 in 2004 to 30.2 in 2005 (↑164.9%). This increase was followed by an 11.3% decrease in rates from 2005 to 2006. (Tables 1,2,3,4)

Three Year Trends: From 2000-2002 to 2004-2006, three year average annual gonorrhea incidence rates for Erie County residents aged 35 and above increased significantly from 15.1 cases per 100,000 to 22.8 (↑51.0%). Significant increases occurred from 2002-2004 to 2003-2005 (↑17.5%) and from 2003-2005 to 2004-2006 (↑30.3%). (Tables 5,6)

Five Year Trends: From 2000-2004 to 2002-2006, five year average annual gonorrhea incidence rates for Erie County residents age 35 and above increased significantly from 13.5 cases per 100,000 to 18.9 (↑40.0%). (Table 7)

Table 1: Gonorrhea Annual Crude Incidence Rates: 2000 to 2003

Gonorrhea		2000				2001			
		Cases	Rate	Lower CL	Upper CL	Cases	Rate	Lower CL	Upper CL
Erie County	Total	133	47.4	39.3	55.5	267	95.1	83.7	106.5
	Male	46	33.6	23.9	43.3	106	77.4	62.7	92.1
	Female	87	60.5	47.8	73.2	161	111.9	94.6	129.2
	White	42	16.5	11.5	21.5	82	32.1	25.2	39.0
	Black	74	430.2	332.2	528.2	172	999.9	850.5	1,149.3
	Hispanic	N/A				10*	163.2	62.0	264.4
	<15 yrs	4*	ND*			3*	ND*		
	15-19 yrs	35	156.2	104.5	207.9	72	321.4	247.2	395.6
	20-24 yrs	48	235.1	168.6	301.6	97	475.0	380.5	569.5
	25-29 yrs	22	128.8	75.0	182.6	33	193.2	127.3	259.1
	30-34 yrs	7*	ND*			26	143.3	88.2	198.4
35+ yrs	14*	9.6	4.6	14.6	30	20.7	13.3	28.1	
Pennsylvania	Total	13,400	109.1	107.3	111.0	13,830	112.6	110.7	114.4
	Male	N/A				N/A			
	Female	N/A				N/A			
	White	N/A				1,391	13.3	12.6	14.0
	Black	N/A				8,172	665.9	651.4	680.3
	Hispanic	N/A				515	125.5	114.7	136.4
United States	Total	358,995	127.6	127.1	128.0	361,705	126.9	126.5	127.3

Gonorrhea		2002				2003			
		Cases	Rate	Lower CL	Upper CL	Cases	Rate	Lower CL	Upper CL
Erie County	Total	255	90.5	79.4	101.6	252	89.2	78.2	100.2
	Male	92	66.9	53.2	80.6	87	63.1	49.8	76.4
	Female	163	113.0	95.7	130.3	165	114.2	96.8	131.6
	White	97	37.5	30.0	45.0	118	45.6	37.4	53.8
	Black	146	825.5	691.6	959.4	116	645.3	527.9	762.7
	Hispanic	13*	208.0	94.9	321.1	13*	202.1	92.2	312.0
	<15 yrs	3*	ND*			2*	ND*		
	15-19 yrs	54	243.5	178.6	308.4	66	302.8	229.7	375.9
	20-24 yrs	97	435.7	349.0	522.4	102	438.4	353.3	523.5
	25-29 yrs	50	311.3	225.0	397.6	52	326.4	237.7	415.1
	30-34 yrs	17*	94.3	49.5	139.1	13*	73.1	33.4	112.8
35+ yrs	22	15.0	8.7	21.3	16*	10.8	5.5	16.1	
Pennsylvania	Total	13,378	108.5	106.6	110.3	11,866	96.0	94.3	97.7
	Male	N/A				5,214	87.1	84.7	89.5
	Female	N/A				6,644	104.2	101.7	106.7
	White	1,622	15.2	14.4	15.9	1,560	14.6	13.9	15.3
	Black	7,793	612.2	598.6	625.8	6,227	484.2	472.2	496.2
	Hispanic	441	106.1	96.2	116.0	438	103.4	93.7	113.1
United States	Total	351,852	122.2	121.8	122.6	335,104	115.4	115.0	115.8

*Numbers less than 20 are statistically unreliable; ND=Not displayed if count <10

Crude rate equals number of cases per 100,000 population; 95% Confidence Interval; CL=Confidence Limit

Before 2003 some reported cases did not include age

Total includes unknown gender, race, and age; Hispanic origin can be of any race; There may be multiple diseases in one person; Some individuals may become infected more than once

U.S Census Bureau, Intercensal Population Estimates used for Erie County and U.S.; PA DOH Intercensal Population Estimates used for PA

Previous year pop. used for Erie County calculations; Current year pop. used for PA calculations; Current year pop. used for 2000-2006 U.S. calculations; Previous year pop. used for 2006 to present U.S. calculations

Source of Data: CDC STD Surveillance and Statistics; PA DOH EpiQMS; PA DOH STD Statistics; NEDSS; Erie County Dept of Health

Table 2: Gonorrhea Annual Crude Incidence Rates: 2004 to 2006

Gonorrhea		2004				2005			
		Cases	Rate	Lower CL	Upper CL	Cases	Rate	Lower CL	Upper CL
Erie County	Total	225	79.5	69.1	89.9	370	131.7	118.3	145.1
	Male	58	41.9	31.1	52.7	122	88.8	73.0	104.6
	Female	167	115.5	98.0	133.0	248	173.0	151.5	194.5
	White	98	38.2	30.6	45.8	142	55.3	46.2	64.4
	Black	107	589.2	477.6	700.8	177	972.6	829.3	1,115.9
	Hispanic	9*	ND*			15*	218.1	107.7	328.5
	<15 yrs	3*	ND*			8*	ND*		
	15-19 yrs	71	330.9	253.9	407.9	114	548.5	447.8	649.2
	20-24 yrs	81	340.5	266.3	414.7	104	449.1	362.8	535.4
	25-29 yrs	30	187.5	120.4	254.6	61	366.7	274.7	458.7
	30-34 yrs	20	114.8	64.5	165.1	38	230.9	157.5	304.3
35+ yrs	17	11.4	6.0	16.8	45	30.2	21.4	39.0	
Pennsylvania	Total	11,236	90.6	88.9	92.2	11,222	90.3	88.6	92.0
	Male	4,941	82.1	79.8	84.4	4,950	82.2	79.9	84.5
	Female	6,295	98.5	96.1	100.9	6,271	97.8	95.4	100.2
	White	1,534	14.3	13.6	15.0	1,640	15.3	14.5	16.0
	Black	5,758	442.4	431.0	453.8	5,854	447.2	435.8	458.7
	Hispanic	446	93.8	85.1	102.5	405	80.0	72.2	87.8
United States	Total	330,132	112.6	112.2	113.0	339,593	114.8	114.4	115.2

Gonorrhea		2006			
		Cases	Rate	Lower CL	Upper CL
Erie County	Total	435	155.1	140.5	169.7
	Male	157	114.3	96.4	132.2
	Female	278	194.3	171.5	217.1
	White	112	43.7	35.6	51.8
	Black	220	1,212.3	1,052.1	1,372.5
	Hispanic	18*	260.1	139.9	380.3
	<15 yrs	3*	ND*		
	15-19 yrs	132	633.7	525.6	741.8
	20-24 yrs	139	603.9	503.5	704.3
	25-29 yrs	85	486.9	383.4	590.4
	30-34 yrs	36	227.8	153.4	302.2
35+ yrs	40	26.8	18.5	35.1	
Pennsylvania	Total	11,466	92.2	90.5	93.9
	Male	5,247	86.9	84.6	89.3
	Female	6,219	97.1	94.7	99.5
	White	1,728	16.2	15.4	16.9
	Black	5,810	439.1	427.8	450.4
	Hispanic	473	89.8	81.7	97.8
United States	Total	358,366	120.0	119.6	120.3

*Numbers less than 20 are statistically unreliable; ND=Not displayed if count <10

Crude rate equals number of cases per 100,000 population; 95% Confidence Interval; CL=Confidence Limit

Before 2003 some reported cases did not include age

Total includes unknown gender, race, and age; Hispanic origin can be of any race; There may be multiple diseases in one person; Some individuals may become infected more than once

U.S Census Bureau, Intercensal Population Estimates used for Erie County and U.S.; PA DOH Intercensal Population Estimates used for PA

Previous year pop. used for Erie County calculations; Current year pop. used for PA calculations; Current year pop. used for 2000-2006 U.S. calculations; Previous year pop. used for 2006 to present U.S. calculations

Source of Data: CDC STD Surveillance and Statistics; PA DOH EpiQMS; PA DOH STD Statistics; NEDSS; Erie County Dept of Health

Table 3: Gonorrhea Annual Crude Incidence Rate Comparisons: 2000 to 2004

Gonorrhea		Rate	Rate	% Change	Rate	Rate	% Change
		2000	2001		2001	2002	
Erie County	Total	47.4	95.1	100.6	95.1	90.5	-4.8
	Male	33.6	77.4	130.4	77.4	66.9	-13.6
	Female	60.5	111.9	85.0	111.9	113.0	1.0
	White	16.5	32.1	94.5	32.1	37.5	16.8
	Black	430.2	999.9	132.4	999.9	825.5	-17.4
	Hispanic	N/A	163.2		163.2	208.0	27.5
	<15 yrs*	ND*	ND*		ND*	ND*	
	15-19 yrs	156.2	321.4	105.8	321.4	243.5	-24.2
	20-24 yrs	235.1	475.0	102.0	475.0	435.7	-8.3
	25-29 yrs	128.8	193.2	50.0	193.2	311.3	61.1
	30-34 yrs*	ND*	143.3		143.3	94.3	-34.2
	35+ yrs*	9.6	20.7	115.6	20.7	15.0	-27.5
Pennsylvania	Total	109.1	112.6	3.2	112.6	108.5	-3.6
	Male	N/A	N/A		N/A		
	Female	N/A	N/A		N/A		
	White	N/A	13.3		13.3	15.2	14.3
	Black	N/A	665.9		665.9	612.2	-8.1
	Hispanic	N/A	125.5		125.5	106.1	-15.5
United States	Total	127.6	126.9	-0.5	126.9	122.2	-3.7

Gonorrhea		Rate	Rate	% Change	Rate	Rate	% Change
		2002	2003		2003	2004	
Erie County	Total	90.5	89.2	-1.4	89.2	79.5	-10.9
	Male	66.9	63.1	-5.7	63.1	41.9	-33.6
	Female	113.0	114.2	1.1	114.2	115.5	1.1
	White	37.5	45.6	21.6	45.6	38.2	-16.2
	Black	825.5	645.3	-21.8	645.3	589.2	-8.7
	Hispanic	208.0	202.1	-2.8	202.1	0.0	-100.0
	<15 yrs	ND*	ND*		ND*	ND*	
	15-19 yrs	243.5	302.8	24.4	302.8	330.9	9.3
	20-24 yrs	435.7	438.4	0.6	438.4	340.5	-22.3
	25-29 yrs	311.3	326.4	4.9	326.4	187.5	-42.6
	30-34 yrs*	94.3	73.1	-22.5	73.1	114.8	57.0
	35+ yrs	15.0	10.8	-28.0	10.8	11.4	5.6
Pennsylvania	Total	108.5	96.0	-11.5	96.0	90.6	-5.6
	Male	N/A	87.1		87.1	82.1	-5.7
	Female	N/A	104.2		104.2	98.5	-5.5
	White	15.2	14.6	-3.8	14.6	14.3	-2.2
	Black	612.2	484.2	-20.9	484.2	442.4	-8.6
	Hispanic	106.1	103.4	-2.5	103.4	93.8	-9.3
United States	Total	122.2	115.4	-5.6	115.4	112.6	-2.4

Red indicates significant difference

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Crude rate equals number of cases per 100,000 population; 95% Confidence Interval

Before 2003 some reported cases did not include age

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Source of Data: CDC STD Surveillance and Statistics; PA DOH EpiQMS; PA DOH STD Statistics; NEDSS; Erie County Dept of Health

Table 4: Gonorrhea Annual Crude Incidence Rate Comparisons: 2004 to 2006

Gonorrhea		Rate	Rate	% Change	Rate	Rate	% Change
		2004	2005		2005	2006	
Erie County	<i>Total</i>	79.5	131.7	65.7	131.7	155.1	17.8
	<i>Male</i>	41.9	88.8	111.9	88.8	114.3	28.7
	<i>Female</i>	115.5	173.0	49.8	173.0	194.3	12.3
	<i>White</i>	38.2	55.3	44.8	55.3	43.7	-21.0
	<i>Black</i>	589.2	972.6	65.1	972.6	1,212.3	24.6
	<i>Hispanic</i>	ND*	218.1		218.1	260.1	19.3
	<i><15 yrs</i>	ND*	ND*		ND*	ND*	
	<i>15-19 yrs</i>	330.9	548.5	65.8	548.5	633.7	15.5
	<i>20-24 yrs</i>	340.5	449.1	31.9	449.1	603.9	34.5
	<i>25-29 yrs</i>	187.5	366.7	95.6	366.7	486.9	32.8
	<i>30-34 yrs</i>	114.8	230.9	101.1	230.9	227.8	-1.3
	<i>35+ yrs</i>	11.4	30.2	164.9	30.2	26.8	-11.3
Pennsylvania	<i>Total</i>	90.6	90.3	-0.3	90.3	92.2	2.1
	<i>Male</i>	82.1	82.2	0.1	82.2	86.9	5.7
	<i>Female</i>	98.5	97.8	-0.7	97.8	97.1	-0.7
	<i>White</i>	14.3	15.3	6.8	15.3	16.2	6.0
	<i>Black</i>	442.4	447.2	1.1	447.2	439.1	-1.8
	<i>Hispanic</i>	93.8	80.0	-14.7	80.0	89.8	12.2
United States	<i>Total</i>	112.6	114.8	1.9	114.8	120.0	4.5

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Source of Data: CDC STD Surveillance and Statistics; PA DOH EpiQMS; PA DOH STD Statistics; NEDSS; Erie County Dept of Health

Table 5: Gonorrhea Three Year Crude Incidence Rates: 2000-2002 to 2004-2006

Gonorrhea		2000-2002				2001-2003			
		Cases	Rate	Lower CL	Upper CL	Cases	Rate	Lower CL	Upper CL
Erie County	Total	655	77.7	71.7	83.7	774	91.6	85.1	98.1
	Male	244	59.3	51.9	66.7	285	69.1	61.1	77.1
	Female	411	95.1	85.9	104.3	489	113.1	103.1	123.1
	White	221	28.7	24.9	32.5	297	38.4	34.0	42.8
	Black	392	752.5	678.0	827.0	434	821.0	743.8	898.2
	Hispanic	N/A				36	191.4	128.9	253.9
	<15 yrs	10*	5.8*	2.2	9.4	8*	ND*	ND*	ND*
	15-19 yrs	161	240.4	203.3	277.5	192	289.3	248.4	330.2
	20-24 yrs	242	383.5	335.2	431.8	296	448.8	397.7	499.9
	25-29 yrs	105	209.1	169.1	249.1	135	275.1	228.7	321.5
	30-34 yrs	50	92.1	66.6	117.6	56	103.8	76.6	131.0
35+ yrs	66	15.1	11.5	18.7	68	15.5	11.8	19.2	
Pennsylvania	Total	40,608	110.0	108.9	111.1	39,074	105.6	104.6	106.6
United States	Total	1,072,552	125.5	125.3	125.7	1,048,661	121.5	121.3	121.7

Goorrhea		2002-2004				2003-2005			
		Cases	Rate	Lower CL	Upper CL	Cases	Rate	Lower CL	Upper CL
Erie County	Total	732	86.4	80.1	92.7	847	100.1	93.4	106.8
	Male	237	57.3	50.0	64.6	267	64.5	56.8	72.2
	Female	495	114.3	104.2	124.4	580	134.1	123.2	145.0
	White	313	40.3	35.8	44.8	358	46.2	41.4	51.0
	Black	369	685.6	615.6	755.6	400	736.2	664.1	808.3
	Hispanic	35	179.9	120.3	239.5	37	184.3	124.9	243.7
	<15 yrs	8*	ND*			13*	7.8*	3.6	12.0
	15-19 yrs	191	291.9	250.5	333.3	251	392.0	343.5	440.5
	20-24 yrs	280	403.9	356.6	451.2	287	408.7	361.4	456.0
	25-29 yrs	132	275.0	228.1	321.9	143	294.5	246.2	342.8
	30-34 yrs	50	93.9	67.9	119.9	71	137.4	105.4	169.4
35+ yrs	55	12.4	9.1	15.7	78	17.5	13.6	21.4	
Pennsylvania	Total	36,480	98.3	97.3	99.3	34,325	92.3	91.3	93.3
United States	Total	1,017,088	116.7	116.5	116.9	1,004,829	114.2	114.0	114.4

Gonorrhea		2004-2006			
		Cases	Rate	Lower CL	Upper CL
Erie County	Total	1,030	122.0	114.5	129.5
	Male	337	81.6	72.9	90.3
	Female	693	160.8	148.8	172.8
	White	352	45.6	40.8	50.4
	Black	504	924.7	844.0	1005.4
	Hispanic	42	204.2	142.4	266.0
	<15 yrs	14*	8.5*	4.0	13.0
	15-19 yrs	317	502.6	447.3	557.9
	20-24 yrs	324	463.1	412.7	513.5
	25-29 yrs	176	351.4	299.5	403.3
	30-34 yrs	94	189.2	151.0	227.4
35+ yrs	102	22.8	18.4	27.2	
Pennsylvania	Total	33925	91.0	90.0	92.0
United States	Total	1028091	116.2	116.0	116.4

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Source of Data: CDC STD Surveillance and Statistics; PA DOH EpiQMS; PA DOH STD Statistics; NEDSS; Erie County Dept of Health

Table 6: Gonorrhea Three Year Crude Incidence Rate Comparisons: 2000-2002 to 2004-2006

Gonorrhea		3 Year Rate	3 Year Rate	% Change	3 Year Rate	3 Year Rate	% Change
		2000-2002	2001-2003		2001-2003	2002-2004	
Erie County	Total	77.7	91.6	17.9	91.6	86.4	-5.7
	Male	59.3	69.1	16.5	69.1	57.3	-17.1
	Female	95.1	113.1	18.9	113.1	114.3	1.1
	White	28.7	38.4	33.8	38.4	40.3	4.9
	Black	752.5	821.0	9.1	821.0	685.6	-16.5
	Hispanic	N/A	191.4		191.4	179.9	-6.0
	<15 yrs*	5.8	ND*		ND*	ND*	
	15-19 yrs	240.4	289.3	20.3	289.3	291.9	0.9
	20-24 yrs	383.5	448.8	17.0	448.8	403.9	-10.0
	25-29 yrs	209.1	275.1	31.6	275.1	275.0	0.0
	30-34 yrs	92.1	103.8	12.7	103.8	93.9	-9.5
	35+ yrs	15.1	15.5	2.6	15.5	12.4	-20.0
	Pennsylvania	Total	110.0	105.6	-4.0	105.6	98.3
United States	Total	125.5	121.5	-3.2	121.5	116.7	-4.0

Gonorrhea		3 Year Rate	3 Year Rate	% Change	3 Year Rate	3 Year Rate	% Change
		2002-2004	2003-2005		2003-2005	2004-2006	
Erie County	Total	86.4	100.1	15.9	100.1	122.0	21.9
	Male	57.3	64.5	12.6	64.5	81.6	26.5
	Female	114.3	134.1	17.3	134.1	160.8	19.9
	White	40.3	46.2	14.6	46.2	45.6	-1.3
	Black	685.6	736.2	7.4	736.2	924.7	25.6
	Hispanic	179.9	184.3	2.4	184.3	204.2	10.8
	<15 yrs*	ND*	7.8		7.8	8.5	9.0
	15-19 yrs	291.9	392.0	34.3	392.0	502.6	28.2
	20-24 yrs	403.9	408.7	1.2	408.7	463.1	13.3
	25-29 yrs	275.0	294.5	7.1	294.5	351.4	19.3
	30-34 yrs	93.9	137.4	46.3	137.4	189.2	37.7
	35+ yrs	12.4	17.5	41.1	17.5	22.8	30.3
	Pennsylvania	Total	98.3	92.3	-6.1	92.3	91.0
United States	Total	116.7	114.2	-2.1	114.2	116.2	1.8

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Table 7: Gonorrhea Five Year Crude Incidence Rate and Comparisons: 2000-2004 to 2002-2006

Gonorrhea		2000-2004				2001-2005			
		Cases	Rate	Lower CL	Upper CL	Cases	Rate	Lower CL	Upper CL
Erie County	Total	1,132	80.4	75.7	85.1	1,369	97.2	92.1	102.3
	Male	389	56.6	51.0	62.2	465	67.6	61.5	73.7
	Female	743	103.1	95.7	110.5	904	125.5	117.3	133.7
	White	437	33.9	30.7	37.1	537	41.7	38.2	45.2
	Black	615	697.1	642.0	752.2	718	804.7	745.8	863.6
	Hispanic	N/A				60	184.9	138.1	231.7
	<15 yrs	15*	5.3	2.6	8.0	19*	6.8	3.7	9.9
	15-19 yrs	298	270.3	239.6	301.0	377	347.1	312.1	382.1
	20-24 yrs	425	385.8	349.1	422.5	481	426.0	387.9	464.1
	25-29 yrs	187	227.6	195.0	260.2	226	276.6	240.5	312.7
	30-34 yrs	83	92.7	72.8	112.6	114	129.8	106.0	153.6
35+ yrs	99	13.5	10.8	16.2	130	17.6	14.6	20.6	
Pennsylvania	Total	63,710	103.3	102.5	104.1	61,533	99.5	98.7	100.3
United States	Total	1,737,788	150.7	150.5	150.9	1,718,386	147.5	147.3	147.7

Gonorrhea		2002-2006			
		Cases	Rate	Lower CL	Upper CL
Erie County	Total	1,537	109.1	103.6	114.6
	Male	516	74.9	68.4	81.4
	Female	1,021	141.9	133.2	150.6
	White	567	44.0	40.4	47.6
	Black	766	849.5	789.3	909.7
	Hispanic	68	204.5	155.9	253.1
	<15 yrs	19*	6.9	3.8	10.0
	15-19 yrs	437	408.3	370.0	446.6
	20-24 yrs	523	452.8	414.0	491.6
	25-29 yrs	278	338.7	298.9	378.5
	30-34 yrs	124	145.0	119.5	170.5
35+ yrs	140	18.9	15.8	22.0	
Pennsylvania	Total	59,169	95.5	94.7	96.3
United States	Total	1,715,047	117.2	117.0	117.4

Gonorrhea		5 Year Rate	5 Year Rate	% Change		5 Year Rate	5 Year Rate	% Change
		2000-2004	2001-2005			2001-2005	2002-2006	
Erie County	Total	80.4	97.2	20.9		97.2	109.1	12.2
	Male	56.6	67.6	19.4		67.6	74.9	10.8
	Female	103.1	125.5	21.7		125.5	141.9	13.1
	White	33.9	41.7	23.0		41.7	44.0	5.5
	Black	697.1	804.7	15.4		804.7	849.5	5.6
	Hispanic	N/A	184.9			184.9	204.5	10.6
	<15 yrs	5.3	6.8	28.3		6.8	6.9	1.5
	15-19 yrs	270.3	347.1	28.4		347.1	408.3	17.6
	20-24 yrs	385.8	426.0	10.4		426.0	452.8	6.3
	25-29 yrs	227.6	276.6	21.5		276.6	338.7	22.5
	30-34 yrs	92.7	129.8	40.0		129.8	145.0	11.7
35+ yrs	13.5	17.6	30.4		17.6	18.9	7.4	
Pennsylvania	Total	103.3	99.5	-3.7		99.5	95.5	-4.0
United States	Total	150.7	147.5	-2.1		147.7	117.2	-20.6

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