Sexually Transmitted Infections

Office of Epidemiology
Center for Epidemiology, Preparedness, and Response
STIs in the US

### Annual New Infections (incidence)
- **20 million**

### Total Infections (prevalence)
- **110 million**

### Total Medical Costs
- **$16 billion**

- Young people (ages 15-24) are particularly affected, accounting for half of all new STIs, although they represent just 25% of the sexually experienced population.

- Both young men and young women are heavily affected by STIs – but young women face the most serious long-term health consequences.

- Trend data available for the first time show that men who have sex with men (MSM) now account for nearly three quarters of all primary and secondary syphilis cases.
## STIs in the US

### Health Disparities in 2011

| AGE          | • Young people (15 – 24) had 4 times the reported chlamydia rate of the total population (10-65+).  
|              | • Young people (15 – 24) had 4 times the reported gonorrhea rate of the total population (10-65+).  
|              | • Adults (20-44) had 2 times the reported syphilis rate of the young people (15 – 24). |
| RACE         | • African Americans had 7.5 times reported chlamydia rates than Whites.  
|              | • African Americans had 17 times reported gonorrhea rates than Whites.  
|              | • African Americans had 6.7 times reported syphilis rates than Whites. |
| SEX          | • Women had 2.5 times the reported chlamydia rate of Men.  
|              | • There was no significant difference in reported gonorrhea rate between women and men.  
|              | • Men had 8.2 times the reported syphilis rate of women. |
In 2012, there were 7,331 cases reported.
621.9 cases reported per 100,000

**AGE**
- Young people (15 – 19) had the highest reported chlamydia rate of any age group.

**RACE**
- African Americans had chlamydia rates 6.6 times higher than Whites.

**SEX**
- Women had chlamydia rates 2.1 times higher than Men.

In Franklin County, similar to the U. S., chlamydia disproportionately affects African Americans, and young black women are especially hard hit.
Chlamydia – Franklin County

Number of Cases by Year
Chlamydia – Franklin County, Ohio, U.S.

Disease Rates by Year

![Bar chart showing disease rates per 100,000 people by year from 2007 to 2012 for Franklin County, Ohio, and the U.S.](chart)

- **Franklin County**: Disease rates for Franklin County are shown in red bars. The rates range from 562.5 in 2007 to 621.9 in 2012.
- **Ohio**: Disease rates for Ohio are shown in maroon bars. The rates range from 642.5 in 2007 to 638.1 in 2011.
- **U.S.**: Disease rates for the U.S. are shown in pink bars. The rates range from 367.5 in 2007 to 457.6 in 2011.

The chart indicates a trend of increasing disease rates from 2007 to 2012 for all three regions.
Most Reported Chlamydia Infections Occur among 15-24 Year Olds

Disease Rates by Age

- 0-14: 40.6
- 15-19: 3099.4
- 20-24: 2731.9
- 25-29: 1086.9
- 30-34: 529.5
- 35-44: 208.8
- 45-54: 53.3
- 55+: 11.7

Age

- 0.14
- 15 - 19
- 20 - 24
- 25 - 29
- 30 - 34
- 35 - 44
- 45 - 54
- 55+

- 1.3%
- 32.6%
- 37.8%
- 15.4%
- 6.7%
- 4.5%

- 1.2%
- 0.4%
Chlamydia – Franklin County (2012)

Disease Rates by Sex and Race

<table>
<thead>
<tr>
<th></th>
<th>Females</th>
<th>Males</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>1284.3</td>
<td>822.6</td>
</tr>
<tr>
<td></td>
<td>5.6:1</td>
<td>9.1:1</td>
</tr>
<tr>
<td>White</td>
<td>228.1</td>
<td>90.6</td>
</tr>
</tbody>
</table>

5.6:1

9.1:1
Gonorrhea – Franklin County

In 2012, there were 2,638 cases reported.
223.8 cases reported per 100,000

**AGE**
- Young people (15 – 24) had the highest reported gonorrhea rate of any age group.

**RACE**
- African Americans had gonorrhea rates 11.2 times higher than Whites.

**SEX**
- There was no significant difference in gonorrhea rates between women and men.

In Franklin County, similar to the U. S., the highest reported rates of infection are among teenagers, young adults, and African Americans.
Gonorrhea – Franklin County

Number of Cases by Year

![Graph showing the number of gonorrhea cases by year from 2004 to 2012. The graph indicates a peak in 2007 and a general decline thereafter.]
Gonorrhea – Franklin County, Ohio, U.S.

Disease Rates by Year

<table>
<thead>
<tr>
<th>Year</th>
<th>Rate per 100,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>341.5</td>
</tr>
<tr>
<td>2008</td>
<td>307.8</td>
</tr>
<tr>
<td>2009</td>
<td>255.6</td>
</tr>
<tr>
<td>2010</td>
<td>271.2</td>
</tr>
<tr>
<td>2011</td>
<td>243.9</td>
</tr>
<tr>
<td>2012</td>
<td>223.8</td>
</tr>
</tbody>
</table>

- Franklin County
- Ohio
- U.S.
Gonorrhea – Franklin County (2012)

Age

Most Reported Gonorrhea Infections Occur among 15-24 Year Olds

Disease Rates by Age
Gonorrhea – Franklin County (2012)

Disease Rates by Sex and Race

Males

468.8

41.2

542.9

41.2

11.7:1

13.2:1
Syphilis (Primary and Secondary)

Franklin County

In 2012, there were 144 confirmed cases reported.  
12.2 cases reported per 100,000

AGE  
• People age 30 to 34 had the highest reported syphilis rate of any age group.

RACE  
• African Americans had syphilis rates 3.4 times higher than Whites.

SEX  
• Males had 11.6 times the reported syphilis rate of females.
In 2011, out of 112 cases of primary and secondary syphilis...

- 55 reported having sex with an anonymous partner in the past 12 months.

- 64 reported having sex while intoxicated in the past 12 months.

- 76 were males who reported having sex with men.
Syphilis (primary and Secondary) – Franklin County

Number of Cases by Year

![Line graph showing the number of confirmed cases of syphilis from 2007 to 2012. The number of cases increases steadily from 2007 to 2011, with a slight decline in 2012.](image-url)
Syphilis (primary and Secondary) – Franklin County, Ohio, U.S.

Disease Rates by Year

<table>
<thead>
<tr>
<th>Year</th>
<th>Franklin County</th>
<th>Ohio</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>6.1</td>
<td>1.7</td>
<td>3.8</td>
</tr>
<tr>
<td>2008</td>
<td>11.2</td>
<td>3.1</td>
<td>4.4</td>
</tr>
<tr>
<td>2009</td>
<td>9.6</td>
<td>3.2</td>
<td>4.6</td>
</tr>
<tr>
<td>2010</td>
<td>9.4</td>
<td>4.6</td>
<td>4.5</td>
</tr>
<tr>
<td>2011</td>
<td>10.0</td>
<td>3.8</td>
<td>4.5</td>
</tr>
<tr>
<td>2012</td>
<td>12.2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Syphilis (Primary and Secondary) – Franklin County (2012)

Age

Most Reported Syphilis Infections Occur among 35-44 Year Olds

Disease Rates by Age

- 15 - 19: 6.3
- 20 - 24: 21.7
- 25 - 29: 24.0
- 30 - 34: 29.1
- 35 - 44: 19.6
- 45 - 54: 18.8
- 55+: 1.6

The rates per 100,000 population are shown in the graph.
Syphilis (Primary and Secondary) – Franklin County (2012)
Disease Rates by Sex

11.6:1

23.2

2.0

11.6:1
HIV/AIDS
Franklin County (2011)

New Diagnoses
There were 204 newly diagnosed cases of HIV infection. (rate of 23.2 per 100,000)
- Those age 35 to 39 had the highest rate of HIV (50.0).
- 64% were adult or adolescent males who reported having male-to-male sexual contact.
- African Americans had reported incidence rates 3.0 times higher than Whites.

Living With HIV
There were 3,787 people living with HIV infection. (rate of 325.5 per 100,000)
- Those age 45-49 had the highest rate of HIV (900.8).
- 69% were adult or adolescent males who reported having male-to-male sexual contact.
- African Americans had prevalence rates 2.3 times higher than Whites.
Reported Persons Living with HIV - Franklin County

Number of Cases by Year
Reported Persons Living with HIV - Franklin County (2011)

Number of Cases by Age

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Number of Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 - 19</td>
<td>20</td>
</tr>
<tr>
<td>20 - 24</td>
<td>180</td>
</tr>
<tr>
<td>25 - 29</td>
<td>303</td>
</tr>
<tr>
<td>30 - 34</td>
<td>364</td>
</tr>
<tr>
<td>35 - 44</td>
<td>989</td>
</tr>
<tr>
<td>45 - 54</td>
<td>1,277</td>
</tr>
<tr>
<td>55+</td>
<td>642</td>
</tr>
</tbody>
</table>
AMONG THOSE 15 TO 24 YEARS
Sexual Risk Behavior

Among U.S. high school students surveyed in 2011...

- 47% had ever had sexual intercourse.
  - Among Ohio high school students 54.4% had ever had sexual intercourse.
- Almost 34% reported they had sexual intercourse during the previous 3 months, and of these,
  - 40% did not use a condom the last time they had sex
  - 77% did not use birth control pills or Depo-Provera to prevent pregnancy the last time they had sex
- 15% had sex with four or more people during their life.

Among Franklin County 15 to 19 year old females in 2010...

- There were 1,494 births.
  - This birth rate of 37.6 is slightly higher than the state’s rate of 33.5 per 1,000 females.
Adolescent Sexual Health
Healthy People 2020 Goals

STD-1  Reduce the proportion of adolescents and young adults with *Chlamydia trachomatis* infections

STD-3  Increase the proportion of sexually active females aged 24 years and under enrolled in Medicaid plans who are screened for genital Chlamydia infections during the measurement year

STD-4  Increase the proportion of sexually active females aged 24 years and under enrolled in commercial health insurance plans who are screened for genital Chlamydia infections during the measurement year

STD-9  (Developmental) Reduce the proportion of females with human papillomavirus (HPV) infection

STD-10 Reduce the proportion of young adults with genital herpes infection due to herpes simplex type 2
STIs in the US
Health Disparities in 2011

**AGE**
- Young people (15 – 24) had 4 times the reported chlamydia rate of the total population (10-65+).
- Young people (15 – 24) had 4 times the reported gonorrhea rate of the total population (10-65+).
- Adults (20-44) had 2 times the reported syphilis rate of the young people (15 – 24).

**RACE**
- African Americans had chlamydia rates 7.5 times higher than Whites.
- African Americans had gonorrhea rates 17 times higher than Whites.
- African Americans had syphilis rates 6.7 times higher than Whites.

**SEX**
- Females had 2.5 times the reported chlamydia rate of males.
- There was no significant difference in reported gonorrhea rate between females and males.
- Males had 8.2 times the reported syphilis rate of females.
In 2012, there were 7,331 cases reported.

621.9 cases reported per 100,000

**AGE**
- Young people (15 – 19) had the highest reported chlamydia rate of any age group.

**RACE**
- African Americans had chlamydia rates 6.6 times higher than Whites.

**SEX**
- Females had 2.1 times the reported chlamydia rate of males.

In Franklin County, similar to the U. S., chlamydia disproportionately affects African Americans, especially young African-American females.
Chlamydia – Franklin County
Number of Cases by Year (all ages)
Chlamydia – Franklin County, Ohio, U.S.
Incidence Rates by Year (all ages)
In 2012, there were 5,158 cases reported between the ages of 15 and 24.

- 2853.7 cases reported per 100,000

**AGE**
- Young people (15 – 24) account for over 70% of the total chlamydia cases reported.

**RACE**
- African Americans had 6.6 times reported chlamydia rates than Whites.

**SEX**
- Females had 2.7 times the reported chlamydia rate of males.
Most Reported Chlamydia Infections Occur among 15-24 Year Olds

Disease Rates by Age
Chlamydia – Franklin County (2012)
Disease Rates by Sex and Race
Ages 15 to 24 Years

Females
- Black: 6295.4
  - Male: 3243.8
  - Female: 323.5
  - Ratio: 10.0:1
- White: 1113.7
  - Male: 3243.8
  - Female: 6295.4
  - Ratio: 5.6:1

Males
- Black: 3243.8
  - Male: 3243.8
  - Female: 6295.4
  - Ratio: 10.0:1
- White: 323.5
  - Male: 323.5
  - Female: 1113.7
  - Ratio: 2.9:1
In 2012, there were 2,638 cases reported.

- 223.8 cases reported per 100,000

**AGE**
- Young people (15 – 24) had the highest reported gonorrhea rate of the all age groups.

**RACE**
- African Americans had 11.2 times reported gonorrhea rates than Whites.

**SEX**
- There was no significant difference in gonorrhea rates between females and males.

In Franklin County, similar to the U. S., the highest reported rates of infection are among teenagers, young adults, and African Americans.
Gonorrhea – Franklin County

Number of Cases by Year
Gonorrhea – Franklin County, Ohio, U.S.

Incidence Rates by Year

<table>
<thead>
<tr>
<th>Year</th>
<th>Franklin County</th>
<th>Ohio</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>341.5</td>
<td>174.5</td>
<td>118</td>
</tr>
<tr>
<td>2008</td>
<td>307.8</td>
<td>143.6</td>
<td>110.7</td>
</tr>
<tr>
<td>2009</td>
<td>255.6</td>
<td>139.3</td>
<td>98.1</td>
</tr>
<tr>
<td>2010</td>
<td>271.2</td>
<td>143.2</td>
<td>100.2</td>
</tr>
<tr>
<td>2011</td>
<td>243.9</td>
<td>145.1</td>
<td>104.2</td>
</tr>
<tr>
<td>2012</td>
<td>223.8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Gonorrhea - Franklin County
Health Disparities in 2012 (Ages 15 – 24)

In 2012, there were 954 cases reported.
- 527.8 cases reported per 100,000

**AGE**
- Young people (15 – 24) account for over half of the total chlamydia cases reported.

**RACE**
- African Americans had 13.6 times reported gonorrhea rates than Whites.

**SEX**
- There was no significant difference in gonorrhea rates between females and males.
Gonorrhea – Franklin County (2012)

Age

Most Reported Gonorrhea Infections Occur among 15-24 Year Olds

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-14</td>
<td>1.0%</td>
</tr>
<tr>
<td>15-19</td>
<td>25.4%</td>
</tr>
<tr>
<td>20-24</td>
<td>32.7%</td>
</tr>
<tr>
<td>25-29</td>
<td>16.7%</td>
</tr>
<tr>
<td>30-34</td>
<td>10.5%</td>
</tr>
<tr>
<td>35-44</td>
<td>8.4%</td>
</tr>
<tr>
<td>45-54</td>
<td>3.8%</td>
</tr>
<tr>
<td>55+</td>
<td>1.5%</td>
</tr>
</tbody>
</table>

Disease Rates by Age

- Rates per 100,000:
  - 0-14: 11.4
  - 15-19: 843.1
  - 20-24: 849.2
  - 25-29: 424.2
  - 30-34: 298.7
  - 35-44: 139.4
  - 45-54: 62.8
  - 55+: 16.2
Gonorrhea – Franklin County (2012)

Disease Rates by Sex and Race (Age 15-24)

**Females**
- Black: 2164.4
- White: 190.2
- Ratio: 11.4:1

**Males**
- Black: 1704.6
- White: 95.4
- Ratio: 17.9:1
Sources

Local Statistics:
Chlamydia, gonorrhea, and syphilis: Ohio Disease Reporting System, Analysis by Office of Epidemiology, Columbus Public Health (as of 03/10/13)


National Statistics for Gonorrhea, Chlamydia, and Syphilis:
Incidence, Prevalence, and Cost of Sexually Transmitted Infections in the US
Centers for Disease Control and Prevention, February 2013
www.cdc.gov

STD Trends in the United States:
2011 National Data for Gonorrhea, Chlamydia, and Syphilis;
www.cdc.gov/std/stats

Table 1. Cases of Sexually Transmitted Disease Reported by State health Departments an Rates per 100,000 Population, United States 1941-2011; Page last updated: November 12, 2013;
Content source: Centers for Disease Control and Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention, Division of STD Prevention

CDC. Youth risk behavior surveillance, United States, 2011. MMWR 2012; 61 (ss-4)

For information:
Michelle L. Groux, MPH, Epidemiologist
mgroux@columbus.gov