Current Epidemiology of Selected STDs

Prepared by Bradley Stoner, MD, PhD, Medical Director
and
Deloris Rother, MPH, Project Manager
St. Louis STD/HIV Prevention Training Center
for STD 101
March 12, 2012
What we’ll cover today

- **Diseases**
  - Chlamydia
  - Gonorrhea
  - Syphilis
  - Viral STDs
    - HSV-2, HPV
  - Other STDs
    - Chancroid, trich

- **Special Populations**
  - Adolescents
  - MSM
What is epidemiology?

- Distribution and determinants of disease within a population
  - Who, what, and where

- Part of the core function of public health
  - Assessment
  - Assurance
  - Policy development

- Why is this important?
  - Lets us know where disease is occurring, and who is getting it
  - Lets us plan for control and prevention activities
Epidemiology of Chlamydia

- **Incidence**
  - 1,307,893 cases reported in 2010
    - Largest no. of cases ever reported to CDC for any condition
    - Most frequently reported STD in US
  - Case rate = 426.0 per 100,000 population
    - 5.1% increase over the previous year

- **Rates 2.5x higher in females**
  - Higher screening rates in women
  - But male screening is increasing due to urine-based testing
Epidemiology of Chlamydia

- **High prevalence among**
  - Family planning clinics (8.0%)
  - Prenatal clinics (7.2%)
  - National job training program (11.4% women, 7.2% men)
  - Adolescent corrections (14.5% women, 6.5% men)
Chlamydia—Rates by Sex, United States, 1990–2010

NOTE: As of January 2000, all 50 states and the District of Columbia have regulations that require the reporting of chlamydia cases.
Chlamydia—Rates by Region, United States, 2001–2010

Rate (per 100,000 population)

Year

2001 2002 2003 2004 2005 2006 2007 2008 2009 2010

West
Midwest
Northeast
South
Chlamydia—Rates by State, United States and Outlying Areas, 2010

NOTE: The total rate of chlamydia for the United States and outlying areas (Guam, Puerto Rico, and Virgin Islands) was 422.6 per 100,000 population.
Chlamydia—Rates by County, United States, 2010

Rate per 100,000 population
- ≤300.0 (n = 1,962)
- 300.1–400.0 (n = 418)
- >400.0 (n = 762)
Chlamydia—Rates by Age and Sex, United States, 2010

<table>
<thead>
<tr>
<th>Age</th>
<th>Rate (per 100,000 population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>15–19</td>
<td>774.3</td>
</tr>
<tr>
<td>20–24</td>
<td>1,187.0</td>
</tr>
<tr>
<td>25–29</td>
<td>598.0</td>
</tr>
<tr>
<td>30–34</td>
<td>309.0</td>
</tr>
<tr>
<td>35–39</td>
<td>153.2</td>
</tr>
<tr>
<td>40–44</td>
<td>91.3</td>
</tr>
<tr>
<td>45–54</td>
<td>39.3</td>
</tr>
<tr>
<td>55–64</td>
<td>10.9</td>
</tr>
<tr>
<td>65+</td>
<td>2.8</td>
</tr>
<tr>
<td>Total</td>
<td>233.7</td>
</tr>
</tbody>
</table>

Men: 3,700, 2,960, 2,220, 1,480, 740, 0, 740, 1,480, 2,220, 2,960, 3,700

Women: 3,378.2, 3,407.9, 1,236.1, 530.9, 220.1, 94.7, 32.8, 9.3, 2.1, 610.6
Chlamydia—Rates by Race/Ethnicity, United States, 2001–2010
Chlamydia—Positivity Among Women Aged 15–24 Years Tested in Family Planning Clinics, by State, Infertility Prevention Project, United States and Outlying Areas, 2010

NOTE: Includes states and outlying areas that reported chlamydia positivity data on at least 500 women aged 15–24 years screened during 2010.

<table>
<thead>
<tr>
<th>Region</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Region I</td>
<td>4.7</td>
<td>4.8</td>
<td>5.2</td>
<td>5.1</td>
<td>5.8</td>
</tr>
<tr>
<td>Region II</td>
<td>5.6</td>
<td>5.9</td>
<td>6.2</td>
<td>6.5</td>
<td>7.0</td>
</tr>
<tr>
<td>Region III</td>
<td>5.4</td>
<td>5.5</td>
<td>6.3</td>
<td>6.4</td>
<td>7.4</td>
</tr>
<tr>
<td>Region IV</td>
<td>9.0</td>
<td>9.6</td>
<td>9.6</td>
<td>9.4</td>
<td>9.4</td>
</tr>
<tr>
<td>Region V</td>
<td>7.6</td>
<td>7.6</td>
<td>7.6</td>
<td>7.9</td>
<td>8.9</td>
</tr>
<tr>
<td>Region VI*</td>
<td>7.9</td>
<td>8.8</td>
<td>10.2</td>
<td>10.6</td>
<td>11.3</td>
</tr>
<tr>
<td>Region VII</td>
<td>6.5</td>
<td>6.5</td>
<td>6.8</td>
<td>7.6</td>
<td>7.7</td>
</tr>
<tr>
<td>Region VIII</td>
<td>7.2</td>
<td>7.3</td>
<td>7.8</td>
<td>7.6</td>
<td>8.3</td>
</tr>
<tr>
<td>Region IX</td>
<td>6.8</td>
<td>7.3</td>
<td>7.5</td>
<td>8.3</td>
<td>5.5</td>
</tr>
<tr>
<td>Region X</td>
<td>5.7</td>
<td>5.8</td>
<td>6.0</td>
<td>6.0</td>
<td>6.6</td>
</tr>
</tbody>
</table>

* 2009 percent positivity for Region VI previously published in the 2009 Surveillance report has been corrected.
GONORRHEA

Sexually Transmitted Disease Surveillance 2010
Division of STD Prevention
Epidemiology of Gonorrhea

- **Incidence**
  - 309,341 cases reported in 2010
    - Downward trend between 1975-1996, then plateau until 2006
    - 2009 rate was lowest since national reporting began
  - Case rate = 100.8 per 100,000 population
    - 2.8% increase over the previous year

- **Slightly higher rates in females**
  - Women highest rates age 15-24 year olds
  - Men highest rates 20-24
Epidemiology of Gonorrhea

- Proportion of gonococcal infections caused by resistant organisms is increasing

- Incidence remains high in some groups defined by geography, age and race/ethnicity, or sexual orientation
Gonorrhea—Rates, United States, 1941–2010

Rate (per 100,000 population)

Year

Gonorrhea—Rates by Sex, United States, 1990–2010

Rate (per 100,000 population)

Year

Men
Women
Total
Gonorrhea—Rates by Region, United States, 2001–2010

Rate (per 100,000 population)

Year

West
Midwest
Northeast
South

2001 2002 2003 2004 2005 2006 2007 2008 2009 2010
NOTE: The total rate of gonorrhea for the United States and outlying areas (Guam, Puerto Rico, and Virgin Islands) was 99.6 per 100,000 population.
Gonorrhea—Rates by County, United States, 2010

Rate per 100,000 population

- ≤19.0 (n = 1,408)
- 19.1–100.0 (n = 1,107)
- >100.0 (n = 627)
Gonorrhea—Rates by Age and Sex, United States, 2010

<table>
<thead>
<tr>
<th>Age</th>
<th>Rate (per 100,000 population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>15–19</td>
<td>253.4</td>
</tr>
<tr>
<td>20–24</td>
<td>421.0</td>
</tr>
<tr>
<td>25–29</td>
<td>241.3</td>
</tr>
<tr>
<td>30–34</td>
<td>146.5</td>
</tr>
<tr>
<td>35–39</td>
<td>85.1</td>
</tr>
<tr>
<td>40–44</td>
<td>64.2</td>
</tr>
<tr>
<td>45–54</td>
<td>34.1</td>
</tr>
<tr>
<td>55–64</td>
<td>11.0</td>
</tr>
<tr>
<td>65+</td>
<td>2.4</td>
</tr>
<tr>
<td>Total</td>
<td>94.1</td>
</tr>
</tbody>
</table>

Men:
- 15–19: 253.4
- 20–24: 421.0
- 25–29: 241.3
- 30–34: 146.5
- 35–39: 85.1
- 40–44: 64.2
- 45–54: 34.1
- 55–64: 11.0
- 65+: 2.4
- Total: 94.1

Women:
- 15–19: 570.9
- 20–24: 560.7
- 25–29: 226.3
- 30–34: 107.5
- 35–39: 48.2
- 40–44: 23.8
- 45–54: 9.0
- 55–64: 1.9
- 65+: 0.5
- Total: 106.5
Gonorrhea—Rates by Race/Ethnicity, United States, 2001–2010

Rate (per 100,000 population)

Year

American Indians/Alaska Natives
Asians/Pacific Islanders
Blacks
Hispanics
Whites
Gonorrhea—Positivity Among Women Aged 15–24 Years Tested in Family Planning Clinics, by State, Infertility Prevention Project, United States and Outlying Areas, 2010

* States/areas not meeting minimum inclusion criteria.

**NOTE:** Includes states and outlying areas that reported positivity data on at least 500 women aged 15–24 years who were screened during 2010.
Gonococcal Isolate Surveillance Project (GISP)—Location of Participating Sentinel Sites and Regional Laboratories, United States, 2010
Gonococcal Isolate Surveillance Project (GISP)—Penicillin, Tetracycline, and Ciprofloxacin Resistance Among GISP Isolates, 2010

NOTE: PenR = penicillinase producing Neisseria gonorrhoeae and chromosomally mediated penicillin-resistant N. gonorrhoeae; TetR = chromosomally and plasmid mediated tetracycline-resistant N. gonorrhoeae; and QRNG = quinolone-resistant N. gonorrhoeae.
NOTE: For 2010, “Other” includes no therapy (1.2%), azithromycin 2 g (1.7%), and other less frequently used drugs.
Gonococcal Isolate Surveillance Project (GISP)—Percentage of *Neisseria gonorrhoeae* Isolates with Resistance or Intermediate Resistance to Ciprofloxacin, 1990–2010

**NOTE:** Resistant isolates have ciprofloxacin minimum inhibitory concentrations (MICs) ≥1 µg/ml. Isolates with intermediate resistance have ciprofloxacin MICs of 0.125–0.5 µg/ml. Susceptibility to ciprofloxacin was first measured in GISP in 1990.
SYPHILIS

Sexually Transmitted Disease Surveillance 2010
Division of STD Prevention
Epidemiology of Syphilis

- **Incidence**
  - 13,774 cases (primary and secondary) reported in 2010
    - Annual increase from 2001-2009
    - 2010 represents first decrease in 10 years (1.6%)
  - Case rate = 4.5 per 100,000 population
    - 2.2% lower than 2009 rate
      - 21% decrease in women
      - 1.3% increase in men

- **Congenital syphilis rates decreased 15% since 2008**
Epidemiology of Syphilis (cont’d)

- Rates remain high in:
  - Some urban areas throughout the U.S.
  - Rural areas in the South

- Common co-occurrence of syphilis and HIV in men who have sex with men (MSM)
Syphilis—Reported Cases by Stage of Infection, United States, 1941–2010

Cases (in thousands)

Year


Primary and Secondary
Early Latent
Total Syphilis
Primary and Secondary Syphilis—Rates by State, United States and Outlying Areas, 2010

NOTE: The total rate of primary and secondary syphilis for the United States and outlying areas (Guam, Puerto Rico, and Virgin Islands) was 4.5 per 100,000 population.
Primary and Secondary Syphilis—Rates by County, United States, 2010

NOTE: In 2010, 2,167 (69.0%) of 3,141 counties in the United States reported no cases of primary and secondary syphilis.
Primary and Secondary Syphilis—Rates by Region, United States, 2001–2010

Rate (per 100,000 population)

Year

Primary and Secondary Syphilis—Rates by Age and Sex, United States, 2010

<table>
<thead>
<tr>
<th>Age</th>
<th>Men Rate (per 100,000 population)</th>
<th>Women Rate (per 100,000 population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>15–19</td>
<td>5.6</td>
<td>3.0</td>
</tr>
<tr>
<td>20–24</td>
<td>21.9</td>
<td>4.5</td>
</tr>
<tr>
<td>25–29</td>
<td>19.2</td>
<td>3.0</td>
</tr>
<tr>
<td>30–34</td>
<td>15.8</td>
<td>2.0</td>
</tr>
<tr>
<td>35–39</td>
<td>13.8</td>
<td>1.4</td>
</tr>
<tr>
<td>40–44</td>
<td>13.8</td>
<td>1.0</td>
</tr>
<tr>
<td>45–54</td>
<td>8.5</td>
<td>0.8</td>
</tr>
<tr>
<td>55–64</td>
<td>2.7</td>
<td>0.2</td>
</tr>
<tr>
<td>65+</td>
<td>7.9</td>
<td>0.0</td>
</tr>
<tr>
<td>Total</td>
<td>7.9</td>
<td>1.1</td>
</tr>
</tbody>
</table>
Primary and Secondary Syphilis—Rates by Race/Ethnicity, United States, 2001–2010

Rate (per 100,000 population)

Year

2001 2002 2003 2004 2005 2006 2007 2008 2009 2010
Primary and Secondary Syphilis—Reported Cases by Reporting Source and Sex, United States, 2001–2010

Cases (in thousands)

<table>
<thead>
<tr>
<th>Year</th>
<th>STD Clinic, Women</th>
<th>STD Clinic, Men</th>
<th>Non-STD Clinic, Women</th>
<th>Non-STD Clinic, Men</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Primary and Secondary Syphilis—Rates by Age Among Men Aged 15–44 Years, United States, 2001–2010
Primary and Secondary Syphilis—Rates by Age Among Women Aged 15–44 Years, United States, 2001–2010

Rate (per 100,000 population)

Year
2001 2002 2003 2004 2005 2006 2007 2008 2009 2010

Age Group
15–19
20–24
25–29
30–34
35–39
40–44
STD Surveillance Network (SSuN)—Primary and Secondary Syphilis and HIV—Proportion of MSM* with Primary and Secondary Syphilis Who Are Co-infected with HIV, 2010

* MSM = men who have sex with men.

NOTE: Includes sites that reported data on at least 5 MSM with P&S syphilis in 2010.
Primary and Secondary Syphilis—Reported Cases* by Stage, Sex, and Sexual Behavior, United States, 2010

* Of the reported male cases of primary and secondary syphilis, 18.3% were missing sex of sex partner information.
† MSW = men who have sex with women only; MSM = men who have sex with men.
Primary and Secondary Syphilis—Reported Cases* by Sex, Sexual Behavior, and Race/Ethnicity,† United States, 2010

* Of the reported male cases of primary and secondary syphilis, 18.3% were missing sex of sex partner information; 2.0% of reported male cases with sex of sex partner data were missing race/ethnicity data.
† No imputation was done for race/ethnicity.
‡ MSW = men who have sex with women only; MSM = men who have sex with men.
Primary and Secondary Syphilis—Percentage of Reported Cases* by Sex, Sexual Behavior, and Selected Reporting Sources, 2010

* Of the reported male cases of primary and secondary syphilis, 18.3% were missing sex of sex partner information, and 2.7% of reported male cases with sex of sex partner data were missing source of information data.

† HMO = health maintenance organization; MSW = men who have sex with women only; MSM = men who have sex with men.
Congenital Syphilis—Reported Cases Among Infants by Year of Birth and Rates of Primary and Secondary Syphilis Among Women, United States, 2001–2010

* CS = congenital syphilis; P&S = primary and secondary syphilis.
GENITAL HERPES

Sexually Transmitted Disease Surveillance 2010
Division of STD Prevention
Epidemiology of Genital Herpes

- The majority of genital and perirectal herpetic outbreaks in the U.S. are caused by HSV-2
- Case reporting data are not available
  - Trend data based on estimates of initial visits to physicians’ offices
- Seroprevalence of HSV-2 (NHANES data – 14-49 yr. olds)
  - 1988-1994: 21.0%
  - 1999-2004: 17.0%
  - 2005-2008 16.2%
- Most persons with HSV-2 have not received a diagnosis of genital herpes
Genital Herpes—Initial Visits to Physicians’ Offices, United States, 1966–2010

NOTE: The relative standard errors for genital herpes estimates of more than 100,000 range from 18% to 30%.


* Age-adjusted by using the 2000 U.S. Census civilian, non-institutionalized population aged 14–49 years as the standard.

NOTE: Error bars indicate 95% confidence intervals.
HUMAN PAPILLOMAVIRUS

Sexually Transmitted Disease Surveillance 2010
Division of STD Prevention
Epidemiology of HPV

- Low-risk types (6 and 11) are responsible for about 90% of anogenital warts
- High-risk oncogenic types (16, 18, and others) are associated with anogenital cancers
- Overall HPV prevalence among women 42.5%
  - NHANES 2003-2006
- 5.6% of sexually active adults 18-59 years have self-reported history of genital warts

* HPV = human papillomavirus.

NOTE: Error bars indicate 95% confidence intervals. Both high-risk and low-risk HPV types were detected in some females.

Genital Warts—Initial Visits to Physicians’ Offices, United States, 1966–2010

NOTE: The relative standard errors for genital warts estimates of more than 100,000 range from 18% to 30%.

STD Surveillance Network (SSuN)—Genital Warts—Prevalence Among Sexually Transmitted Disease (STD) Clinic Patients by Sex, Sex of Partners, and Site, 2010

* MSM = men who have sex with men; MSW = men who have sex with women only.
OTHER STDs

Sexually Transmitted Disease Surveillance 2010
Division of STD Prevention
NOTE: The relative standard errors for trichomoniasis estimates range from 16% to 27% and for other vaginitis estimates range from 8% to 13%.

Pelvic Inflammatory Disease—Hospitalizations of Women Aged 15–44 Years, United States, 2000–2009

NOTE: The relative standard errors for acute and unspecified pelvic inflammatory disease (PID) cases ranges from 8%–18%. The relative standard error for chronic PID cases ranges from 12%–28%. Data only available through 2009.

Pelvic Inflammatory Disease—Initial Visits to Physicians’ Offices by Women Aged 15–44 Years, United States, 2001–2010

NOTE: The relative standard errors for these estimates are 21.6%–30%.

Ectopic Pregnancy—Hospitalizations of Women Aged 15–44 Years, United States, 2000–2009

NOTE: The relative standard errors for these estimates are 10%–23%. Data only available through 2009.

STDs IN ADOLESCENTS AND YOUNG ADULTS

Sexually Transmitted Disease Surveillance 2010
Division of STD Prevention
Chlamydia—Positivity Among Women Aged 15–24 Years Tested in Family Planning Clinics, by State, Infertility Prevention Project, United States and Outlying Areas, 2010

NOTE: Includes states and outlying areas that reported chlamydia positivity data on at least 500 women aged 15–24 years screened during 2010.
Chlamydia—Prevalence Among Women Aged 16–24 Years Entering the National Job Training Program, by State of Residence, United States and Outlying Areas, 2010

* Fewer than 100 women who resided in these states/areas and entered the National Job Training Program were screened for chlamydia in 2010.
Chlamydia—Prevalence Among Men Aged 16–24 Years Entering the National Job Training Program, by State of Residence, United States and Outlying Areas, 2010

* Fewer than 100 men who resided in these states/areas and entered the National Job Training Program were screened for chlamydia in 2010.
Gonorrhea—Positivity Among Women Aged 15–24 Years Tested in Family Planning Clinics, by State, Infertility Prevention Project, United States and Outlying Areas, 2010

* States/areas not meeting minimum inclusion criteria.

NOTE: Includes states and outlying areas that reported positivity data on at least 500 women aged 15–24 years who were screened during 2010.
Gonorrhea—Prevalence Among Women Aged 16–24 Years Entering the National Job Training Program, by State of Residence, United States and Outlying Areas, 2010

* Fewer than 100 women who resided in these states/areas and entered the National Job Training Program were screened for gonorrhea in 2010.

**NOTE:** Many training centers use local laboratories to test female students for gonorrhea; these results are not available to CDC. For this map, gonorrhea test results for students at centers that submitted specimens to the national contract laboratory were included if the number of gonorrhea tests submitted was greater than 90% of the number of chlamydia tests submitted.
Gonorrhea—Prevalence Among Men Aged 16–24 Years Entering the National Job Training Program, by State of Residence, United States and Outlying Areas, 2010

* Fewer than 100 men who resided in these states/areas and entered the National Job Training Program were screened for gonorrhea in 2010.

NOTE: Many training centers use local laboratories to test male students for gonorrhea; these results are not available to CDC. For this map, gonorrhea test results for students at centers that submitted specimens to the national contract laboratory were included if the number of gonorrhea tests submitted was greater than 90% of the number of chlamydia tests submitted.
Chlamydia—Positivity by Age and Sex, Juvenile Corrections Facilities, 2010

NOTE: Positivity percentage is presented from facilities reporting more than 100 test results.
Gonorrhea—Positivity by Age and Sex, Juvenile Corrections Facilities, 2010

NOTE: Positivity percentage is presented from facilities reporting more than 100 test results.
Diagnoses of HIV Infection and Population among Adolescents Aged 13–19 Years, by Race/Ethnicity, 2009—40 States

Diagnoses of HIV Infection
N=2,056

- 1% American Indian/Alaska Native
- 13% Asian
- 12% Black/African American
- 73% White
- <1% Multiple races

U.S. Population aged 13–19 years
N=23,287,078

- 3% Hispanic/Latino
d-
- 16% Native Hawaiian/Other Pacific Islander
- 62% White
- <1% Multiple races

Note. Data include persons with a diagnosis of HIV infection regardless of stage of disease at diagnosis. All displayed data have been statistically adjusted to account for reporting delays, but not for incomplete reporting.

* Hispanics/Latinos can be of any race.
Rates of Diagnoses of HIV Infection among Adolescents Aged 13–19 Years, 2009—40 States and 5 U.S. Dependent Areas

N=2,078

Total Rate = 8.7

Rates per 100,000 population

- < 5.0
- 5.0 – 9.9
- 10.0 – 14.9
- ≥15.0

American Samoa: 0.0
Guam: 0.0
Northern Mariana Islands: 0.0
Puerto Rico: 4.8
U.S. Virgin Islands: 11.3

Note: Data include persons with a diagnosis of HIV infection regardless of stage of disease at diagnosis. All displayed data have been statistically adjusted to account for reporting delays, but not for incomplete reporting. Rates are per 100,000 population.
Rates of Adolescents Aged 13–19 Years Living with a Diagnosis of HIV Infection, Year–end 2008—40 States and 5 U.S. Dependent Areas

N=8,103

Total Rate = 33.9

Rates per 100,000 population

- < 15.0
- 15.0 – 29.9
- 30.0 – 44.9
- ≥ 45.0

Note. Data include persons with a diagnosis of HIV infection regardless of stage of disease at diagnosis. All displayed data have been statistically adjusted to account for reporting delays, but not for incomplete reporting. Rates are per 100,000 population.
AIDS Diagnoses among Adolescents Aged 13–19 Years, by Sex, 1985–2009—United States and Dependent Areas

Note. All displayed data have been statistically adjusted to account for reporting delays, but not for incomplete reporting.
STDs IN MEN WHO HAVE SEX WITH MEN (MSM)

Sexually Transmitted Disease Surveillance 2010
Division of STD Prevention

* MSM = men who have sex with men.
Gonococcal Isolate Surveillance Project (GISP)—Percentage of Urethral *Neisseria gonorrhoeae* Isolates Obtained from MSM* Attending STD Clinics, 1990–2010

* MSM = men who have sex with men.
STD Surveillance Network (SSuN)—Proportion of MSM* Attending STD Clinics with Primary and Secondary Syphilis, Gonorrhea or Chlamydia by HIV Status, 2010

* MSM = men who have sex with men.
† HIV negative status includes persons of unknown status for this analysis.
‡ GC urethral and CT urethral include results from both urethral and urine specimens.
STD Surveillance Network (SSuN)—Primary and Secondary Syphilis and HIV—Proportion of MSM* with Primary and Secondary Syphilis Who Are Co-infected with HIV, 2010

* MSM = men who have sex with men.

NOTE: Includes sites that reported data on at least 5 MSM with P&S syphilis in 2010.
Diagnoses of HIV Infection among Men Who Have Sex with Men, by Race/Ethnicity, 2009—40 States and 5 U.S. Dependent Areas

N=24,132

- 42% Black/African American
- 36% White
- 19%
- <1%
- <1%
- <1%
- <1%
- American Indian/Alaska Native
- Asian
- Hispanic/Latino
- Native Hawaiian/Other Pacific Islander
- Multiple races

Note. Data include persons with a diagnosis of HIV infection regardless of stage of disease at diagnosis. All displayed data have been statistically adjusted to account for reporting delays and missing risk-factor information, but not for incomplete reporting. Data exclude men who reported sexual contact with other men and injection drug use.

*Hispanics/Latinos can be of any race.
AIDS Diagnoses among Men Who Have Sex with Men, 1985–2009—United States and Dependent Areas

Note. All displayed data have been statistically adjusted to account for reporting delays and missing risk-factor information, but not for incomplete reporting. Data exclude men who reported sexual contact with other men and injection drug use.