Current Trends in STDs Among Youth

Kankakee Community College

February 27, 2014
Topics

- STD Background Information
- Youth Risk Behavioral Survey
- Chlamydia, Gonorrhea, Syphilis, HIV, HPV
- Strategies to Address Issues
- SBHC Chlamydia Screening Initiative
Approximately 19 million new STI infections reported annually - almost half are among youth aged 15-24

Adolescents and young adults may be at higher risk for STI acquisition: behavioral and biological reasons including:

- limited access to healthcare and information regarding STIs (12 yrs and older may consent for STD testing and treatment)

- participation in high risk activities: drug use, unprotected sex, multiple sex partners/serial monogamous relationships

- cervical epithelial cells that are susceptible to STIs are more prominent in females during puberty (cervical ectopy)
STDs are Sexist

- Transmission efficiency greater male to female than the reverse
- More women asymptomatic or with atypical, nonspecific symptoms; delayed care
- Diagnosis more difficult in women
- Complications more frequent in women, often severe or permanent
Complications

- 10-20% females with Chlamydia and/or gonorrhea may develop PID
- Among females with PID:
  - 20% infertile
  - 9% ectopic pregnancy
  - 18% chronic pelvic pain
- Symptoms associated with PID vague
  - 85% of females delay seeking medical care
  - Study showed Chlamydia screening reduced PID by as much as 60%
Barriers to Medical Care

- Financial
- Confidentiality (47% of females would no longer attend family planning clinic if parents knew)
- Asymptomatic nature of diseases inhibits adolescents from seeking medical care and adhering to treatment regimens
- Fear and embarrassment about medical exam (pelvic)
- Fear of discovery of sexual activity
- Clinician belief that their patients are not sexually active; reluctance to conduct a sexual history
- Transportation
### How Common are STDs in the U.S.

<table>
<thead>
<tr>
<th>STD</th>
<th>Incidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlamydia</td>
<td>2.8 million</td>
</tr>
<tr>
<td>Gonorrhea</td>
<td>718,000</td>
</tr>
<tr>
<td>Syphilis</td>
<td>37,000</td>
</tr>
<tr>
<td>Hepatitis B</td>
<td>81,000</td>
</tr>
<tr>
<td>HIV</td>
<td>30,000</td>
</tr>
<tr>
<td>Trichomoniasis</td>
<td>7.4 million</td>
</tr>
<tr>
<td>HSV-2</td>
<td>1.6 million</td>
</tr>
<tr>
<td>HPV</td>
<td>6.2 million</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>~19 million</strong></td>
</tr>
</tbody>
</table>

*Weinstock et al., CDC*
Estimated Prevalence of STDs in U.S.*

- HIV: 560,000
- Hepatitis B: 1,250,000
- Chlamydia: 2 Million
- Human Papillomavirus: 20 Million
- Herpes: 45 Million

*Trends in Reportable Sexually Transmitted Diseases in the United States, 2004, CDC.
# U.S. County Rankings, 2012

## Cases of Reportable STDs

<table>
<thead>
<tr>
<th></th>
<th>Chlamydia</th>
<th>Gonorrhea</th>
<th>P&amp;S Syphilis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Los Angeles Co., CA&lt;br&gt;51,589 cases&lt;br&gt;521.7/100,000</td>
<td><strong>Cook County, IL</strong>&lt;br&gt;12,042 cases&lt;br&gt;230.8/100,000</td>
<td>Los Angeles Co., CA&lt;br&gt;943 cases&lt;br&gt;9.5/100,000</td>
</tr>
<tr>
<td>2</td>
<td><strong>Cook County, IL</strong>&lt;br&gt;37,946 cases&lt;br&gt;727.3/100,000</td>
<td>Los Angeles Co., CA&lt;br&gt;11,933 cases&lt;br&gt;120.7/100,000</td>
<td><strong>Cook County, IL</strong>&lt;br&gt;649 cases&lt;br&gt;13/100,000</td>
</tr>
<tr>
<td>3</td>
<td>Harris County, TX&lt;br&gt;21,933 cases&lt;br&gt;524.6/100,000</td>
<td>Philadelphia Co., PA&lt;br&gt;7,293 cases&lt;br&gt;474.7/100,000</td>
<td>San Francisco, CA&lt;br&gt;496 cases&lt;br&gt;61/100,000</td>
</tr>
</tbody>
</table>

9 CDC Surveillance Report, 2011
# Reported STDs in Illinois in 2012

<table>
<thead>
<tr>
<th></th>
<th>Illinois</th>
<th>Excluding Chicago</th>
<th>Chicago</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gonorrhea</td>
<td>18,149</td>
<td>8,434</td>
<td>9,715</td>
</tr>
<tr>
<td>Chlamydia</td>
<td>67,701</td>
<td>39,695</td>
<td>28,006</td>
</tr>
<tr>
<td>Early Syphilis</td>
<td>1,500</td>
<td>402</td>
<td>1,098</td>
</tr>
<tr>
<td>Congenital Syphilis</td>
<td>27</td>
<td>5</td>
<td>22</td>
</tr>
</tbody>
</table>
Economic Burden of STDs In U.S.

- Direct medical costs for STD treatment in the U.S. are estimated at $8.4 billion (1997).*
- Total estimated burden for 9 million new cases for 8 major STDs among youth aged 15-24 was $6.2 billion (2000).**
- Direct medical costs of Chlamydia, gonorrhea, and P&S syphilis in Illinois in adolescents 15-24 were estimated at $71,727,328. (2006)***

*Source: American Social Health Association/Kaiser Family Foundation

**Source: Chesson et.al., Perspectives on Sexual and Reproductive Health, 2004

***Source: Pultorak, Wong, Rabins, Mehta, 2008
Youth Risk Behavior Surveillance System (YRBS)
The national YRBS is conducted every two years during the spring semester and provides data representative of 9th- through 12th grade students in public and private schools in the United States.

http://www.cdc.gov/HealthyYouth/yrbs/index.htm

National and State specific behavioral data
# 2011 YRBS Findings

<table>
<thead>
<tr>
<th>QUESTIONS</th>
<th>US (%)</th>
<th>ILLINOIS (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ever Had Sexual Intercourse</td>
<td>47.4</td>
<td>44.8</td>
</tr>
<tr>
<td>Sexual Intercourse before age 13 years</td>
<td>6.2</td>
<td>6.3</td>
</tr>
<tr>
<td>Had Sexual Intercourse with 4 or more persons in lifetime</td>
<td>15.3</td>
<td>12.4</td>
</tr>
<tr>
<td>Has Sexual Intercourse with at least 1 person last 3 months</td>
<td>33.7</td>
<td>32.8</td>
</tr>
<tr>
<td>Drank alcohol or used drugs before last intercourse</td>
<td>22.1</td>
<td>19.6</td>
</tr>
<tr>
<td>Reported used condoms last sexual intercourse</td>
<td>60.2</td>
<td>61.5</td>
</tr>
<tr>
<td>Did not use any method to prevent pregnancy during last intercourse</td>
<td>12.9</td>
<td>14.3</td>
</tr>
<tr>
<td>(among sexually active students)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Were taught in school about AIDS or HIV</td>
<td>84.0</td>
<td>86.1</td>
</tr>
<tr>
<td>QUESTIONS</td>
<td>Female (%)</td>
<td>Male (%)</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>------------</td>
<td>----------</td>
</tr>
<tr>
<td>Ever Had Sexual Intercourse</td>
<td>45.3</td>
<td>44.4</td>
</tr>
<tr>
<td>Sexual Intercourse before age 13 years</td>
<td>3.4</td>
<td>9.1</td>
</tr>
<tr>
<td>Had Sexual Intercourse with 4 or more persons in lifetime</td>
<td>10.4</td>
<td>14.4</td>
</tr>
<tr>
<td>Has Sexual Intercourse with at least 1 person last 3 months</td>
<td>35.2</td>
<td>30.3</td>
</tr>
<tr>
<td>Drank alcohol or used drugs before last intercourse</td>
<td>14.4</td>
<td>26.0</td>
</tr>
<tr>
<td>Reported used condoms last sexual intercourse</td>
<td>58.1</td>
<td>68.1</td>
</tr>
<tr>
<td>Did not use any method to prevent pregnancy during last intercourse (among sexually active students)</td>
<td>16.6</td>
<td>11.5</td>
</tr>
<tr>
<td>Were taught in school about AIDS/HIV</td>
<td>87.4</td>
<td>84.9</td>
</tr>
</tbody>
</table>

Data also available by Race by Sex and Grade level
<table>
<thead>
<tr>
<th>QUESTIONS</th>
<th>1991(%)</th>
<th>2011 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ever Had Sexual Intercourse</td>
<td>54.1</td>
<td>47.4</td>
</tr>
<tr>
<td>Sexual Intercourse before age 13 years</td>
<td>10.2</td>
<td>6.2</td>
</tr>
<tr>
<td>Had Sexual Intercourse with 4 or more persons in lifetime</td>
<td>18.7</td>
<td>15.3</td>
</tr>
<tr>
<td>Has Sexual Intercourse with at least 1 person last 3 months</td>
<td>37.5</td>
<td>33.7</td>
</tr>
<tr>
<td>Drank alcohol or used drugs before last intercourse</td>
<td>21.6</td>
<td>22.1</td>
</tr>
<tr>
<td>Reported used condoms last sexual intercourse</td>
<td>46.2</td>
<td>60.2</td>
</tr>
<tr>
<td>Did not use any method to prevent pregnancy during last intercourse (among sexually active students)</td>
<td>16.5</td>
<td>12.9</td>
</tr>
<tr>
<td>Were taught in school about AIDS or HIV infection</td>
<td>83.3</td>
<td>84.0</td>
</tr>
</tbody>
</table>
### Reasons Teenagers Cite for Engaging in Oral Sex

<table>
<thead>
<tr>
<th>Reason</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>“The other person wanted to”</td>
<td>76%</td>
</tr>
<tr>
<td>Oral sex is &quot;not as big a deal as intercourse&quot;</td>
<td>75%</td>
</tr>
<tr>
<td>“I met the right person”</td>
<td>71%</td>
</tr>
<tr>
<td>“You are still a virgin if you have oral sex,”</td>
<td>69%</td>
</tr>
<tr>
<td>You do not have to worry about pregnancy</td>
<td>68%</td>
</tr>
<tr>
<td>Curiosity</td>
<td>64%</td>
</tr>
<tr>
<td>To avoid sexual intercourse</td>
<td>40%</td>
</tr>
<tr>
<td>“You can't get an STD”</td>
<td>35%</td>
</tr>
<tr>
<td>To avoid being touched or undress</td>
<td>24%</td>
</tr>
<tr>
<td>To be more popular and accepted</td>
<td>21%</td>
</tr>
</tbody>
</table>
Chlamydia

Gonorrhea

Syphilis

HIV

HPV
Reported Chlamydia & Gonorrhea Cases by Age Group
Illinois 2012

Chlamydia

- 15-19: 34%
- 0-14: 1%
- 45+: 2%
- 40-44: 1%
- 35-39: 6%
- 30-34: 15%
- 25-29: 38%

Gonorrhea

- 15-19: 31%
- 0-14: 1%
- 45+: 3%
- 40-44: 2%
- 35-39: 4%
- 30-34: 8%
- 25-29: 16%
- 20-24: 35%
Reported Chlamydia & Gonorrhea Cases by Race
Illinois 2012

Chlamydia
- African American: 48%
- White: 28%
- Other/Unknown: 20%
- Native American: 0%
- Asian/Pacific Islander: 1%

Gonorrhea
- African American: 68%
- White: 15%
- Other/Unknown: 16%
- Native American: 0%
- Asian/Pacific Islander: 0%
### Illinois Reported STD Case Rates Disparity Between Racial/Ethnic Groups, 2013*

<table>
<thead>
<tr>
<th></th>
<th>African Americans</th>
<th>Whites</th>
<th>Hispanics</th>
<th>Disparity: African Americans vs. Whites</th>
<th>Disparity: Hispanics vs. Whites</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Chlamydia</strong></td>
<td>1,408</td>
<td>177</td>
<td>318</td>
<td>8 X</td>
<td>1.8 X</td>
</tr>
<tr>
<td><strong>Gonorrhea</strong></td>
<td>487</td>
<td>24</td>
<td>29</td>
<td>20 X</td>
<td>1.2 X</td>
</tr>
<tr>
<td><strong>P/S</strong>**</td>
<td>4</td>
<td>0.4</td>
<td>0.7</td>
<td>10 X</td>
<td>1.8 X</td>
</tr>
</tbody>
</table>

*Provisional data

**Primary and Secondary
Women, especially young and minority women, are hardest hit by Chlamydia & gonorrhea

• Gonorrhea (rates*)
  □ Black women: 15-19: rate 2,032 & 20-24: rate 2,173
  □ White women: 15-19: rate 135 & 20-24: rate 195

• Chlamydia (rates)
  □ White women: 15-19: rate 1,458 & 20-24: rate 1,778

Why?

Rates derived from 2012 CDC STD Surveillance Data per 100,000 population
STDs and Racial/Ethnic Minorities

- For Blacks, American Indians/Alaskan Natives higher:
  - Poverty rates
  - Unemployment rates
  - High school drop out rates
- Hispanics: immigration & undocumented citizenship status
- Recent data shows one fifth of blacks do not have health insurance
- Fear and distrust of health care institutions
- Provider bias
- Communities where STD prevalence is high:
  - With each sexual encounter, greater chance of encountering someone with an STD than lower prevalence settings
Most commonly reported infectious disease in the US

Health impact severe – Pelvic Inflammatory Disease (PID), infertility, ectopic pregnancy
  • Inflammation facilitates HIV transmission

High Prevalence and Incidence in Adolescents and Young Adults

Rate in women 3 times higher than men
Chlamydia—Rates by Sex, United States, 1991–2011

Rate (per 100,000 population)

- Women
- Total
- Men

Year

1991 1993 1995 1997 1999 2001 2003 2005 2007 2009 2011

NOTE: As of January 2000, all 50 states and the District of Columbia have regulations that require the reporting of chlamydia cases.
NOTE: The total rate of chlamydia for the United States and outlying areas (Guam, Puerto Rico, and Virgin Islands) was 454.1 per 100,000 population.
Chlamydia—Rates by Age and Sex, United States, 2011

<table>
<thead>
<tr>
<th>Men</th>
<th>Rate (per 100,000 population)</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>4000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2400</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1600</td>
<td></td>
<td></td>
</tr>
<tr>
<td>800</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Age  | Rate (per 100,000 population) | Rate (per 100,000 population) |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>10-14</td>
<td>16.5</td>
<td>134.6</td>
</tr>
<tr>
<td>15-19</td>
<td>803.0</td>
<td>3416.5</td>
</tr>
<tr>
<td>20-24</td>
<td>1343.3</td>
<td>3722.5</td>
</tr>
<tr>
<td>25-29</td>
<td>689.7</td>
<td>1343.6</td>
</tr>
<tr>
<td>30-34</td>
<td>349.8</td>
<td>567.6</td>
</tr>
<tr>
<td>35-39</td>
<td>168.4</td>
<td>233.9</td>
</tr>
<tr>
<td>40-44</td>
<td>100.6</td>
<td>105.9</td>
</tr>
<tr>
<td>45-54</td>
<td>44.8</td>
<td>35.8</td>
</tr>
<tr>
<td>55-64</td>
<td>13.1</td>
<td>10.1</td>
</tr>
<tr>
<td>65+</td>
<td>3.3</td>
<td>2.1</td>
</tr>
<tr>
<td>Total</td>
<td>256.9</td>
<td>648.9</td>
</tr>
</tbody>
</table>
Chlamydia—Rates by Race/Ethnicity, United States, 2002–2011

Rate (per 100,000 population)

Year

2002 2003 2004 2005 2006 2007 2008 2009 2010 2011

Blacks

American Indians/Alaska Natives

Hispanics

Whites

Asians/Pacific Islanders
4% increase from 2011-2012

2012 - Every county reported at least 1 case

72% (approx. 3/4 th) of 2012 cases were ages 15-24 years

- Highest rate ages 15-19 (2,524.0) and 20-24 (2915.6) vs. total pop (527.7)

Minorities disproportionately affected

- Highest 2012 rate was among African Americans (1,763.8) vs. whites (188.9)
Chlamydia Rates by County, Illinois, 2012

2012 Chlamydia Rates*

- 0.1 - 99.9 (n=2)
- 100.0 - 199.9 (n=23)
- 200.0 - 399.9 (n=54)
- 400.0 - 1225.5 (n=24)

*Rate per 100,000 population.
Note: Illinois has 102 counties. City of Chicago is located in Cook County, but is mapped and counted separately in this map for visual distinction (therefore sum of n=103).
Source: IDPH STD Program
Illinois Chlamydia Cases By Sex
1990 - 2012

Cases

Females
Males
Total
<table>
<thead>
<tr>
<th>Provider Type</th>
<th>Females % Pos.</th>
<th>Males % Pos.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correctional Facilities</td>
<td>5.7</td>
<td>13.5</td>
</tr>
<tr>
<td>Family Planning</td>
<td>8.0</td>
<td>17.6</td>
</tr>
<tr>
<td>Juvenile Detention Center</td>
<td>16.2</td>
<td>10.8</td>
</tr>
<tr>
<td>Adolescent Teen Clinic</td>
<td>10.5</td>
<td>7.7</td>
</tr>
<tr>
<td>School-Based Clinic</td>
<td>12.1</td>
<td>7.7</td>
</tr>
<tr>
<td>STD Clinic</td>
<td>10.8</td>
<td>14.9</td>
</tr>
</tbody>
</table>

IDPH Laboratory CT/GC Testing Data
Gonorrhea – Why Should We Care?

- PID
- Infertility
- Ectopic Pregnancy
- Newborn infection
- Facilitates HIV transmission
- Antibiotic Resistance
- High incidence in Adolescents and Young Adults
Gonorrhea—Rates, United States, 1941–2011

Rate (per 100,000 population)
Gonorrhea—Rates by Sex, United States, 1991–2011
The total rate of gonorrhea for the United States and outlying area (Guam, Puerto Rico, and Virgin Islands) was 103.1 per 100,000 population.
Gonorrhea—Rates by Age and Sex, United States, 2011

<table>
<thead>
<tr>
<th>Age</th>
<th>Rate (per 100,000 population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-14</td>
<td>26.2</td>
</tr>
<tr>
<td>15-19</td>
<td>556.5</td>
</tr>
<tr>
<td>20-24</td>
<td>584.2</td>
</tr>
<tr>
<td>25-29</td>
<td>237.2</td>
</tr>
<tr>
<td>30-34</td>
<td>110.8</td>
</tr>
<tr>
<td>35-39</td>
<td>50.3</td>
</tr>
<tr>
<td>40-44</td>
<td>25.8</td>
</tr>
<tr>
<td>45-54</td>
<td>9.7</td>
</tr>
<tr>
<td>55-64</td>
<td>2.5</td>
</tr>
<tr>
<td>65+</td>
<td>0.4</td>
</tr>
<tr>
<td>Total</td>
<td>108.9</td>
</tr>
</tbody>
</table>
Gonorrhea—Rates by Race/Ethnicity, United States, 2002–2011

Rate (per 100,000 population)

Year

2002 2003 2004 2005 2006 2007 2008 2009 2010 2011

Blacks

American Indians/Alaska Natives

Hispanics

Whites

Asians/Pacific Islanders
Gonorrhea-Illinois

- 7% increase in cases 2011 – 2012
- Not all counties reported cases in 2011
- 65% (2/3rd) of all cases were ages 15-24 years
- Minorities still disproportionately affected, but rates have decreased
  - Highest 2012 rate was among African Americans (670) vs. total pop. (141.5)
  - African American rate decreased 20% since 2008 (839.0)
Gonorrhea Rates by County, Illinois, 2012

2012 Gonorrhea Rates*

- 0 (n=8)
- 0.1 - 99.9 (n=78)
- 100.0 - 299.9 (n=15)
- 300.0 - 360.4 (n=2)

*Rate per 100,000 population.
Note: Illinois has 102 counties. City of Chicago is located in Cook County but is mapped and counted separately in this map for visual distinction (therefore sum of n=103).

Source: IDPH STD Program
Syphilis – Why Should We Care?

- Congenital infection
- Facilitates HIV transmission
- Late complications
Syphilis

- Continuing outbreak in US among men who have sex with men (MSM)
- HIV co-infection
  - High among MSM
  - Rapid progression to neurosyphilis
- Internet “hook-ups”
  - Anonymous
  - New challenge for disease intervention
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 Age and Sex, United States, 2011

<table>
<thead>
<tr>
<th>Men</th>
<th>Rate (per 100,000 population)</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10-14</td>
<td>0.1</td>
<td>0.1</td>
</tr>
<tr>
<td>15-19</td>
<td>2.4</td>
<td>2.4</td>
</tr>
<tr>
<td>20-24</td>
<td>3.8</td>
<td>3.8</td>
</tr>
<tr>
<td>25-29</td>
<td>2.6</td>
<td>2.6</td>
</tr>
<tr>
<td>30-34</td>
<td>1.9</td>
<td>1.9</td>
</tr>
<tr>
<td>35-39</td>
<td>1.1</td>
<td>1.1</td>
</tr>
<tr>
<td>40-44</td>
<td>0.9</td>
<td>0.9</td>
</tr>
<tr>
<td>45-54</td>
<td>0.5</td>
<td>0.5</td>
</tr>
<tr>
<td>55-64</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>65+</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Total</td>
<td>8.2</td>
<td>1.0</td>
</tr>
</tbody>
</table>
Of the reported male cases of primary and secondary syphilis, 17.0% were missing sex of sex partner information.

†MSM = men who have sex with men; MSW = men who have sex with women only.
Primary and Secondary Syphilis—Reported Cases* by Sex, Sexual Behavior, and Race/Ethnicity, United States, 2011

*Of the reported male cases of primary and secondary syphilis, 17.0% were missing sex of sex partner information; 2.4% of sex partner data were missing race/ethnicity data.

†MSW=men who have sex with women only; MSM=men who have sex with men;
3% increase in early cases 1,462 (2011) and 1,500 (2012)
87 % of the cases are male
53% cases are African American vs 36% white
Cases are evenly distributed by age (Pie Chart)
Illinois Reported Early Syphilis Cases By Sex, 1990 – 2012

Cases

Source: IDPH STD Section
Reported Early Syphilis Cases By Age Group
Illinois 2012

- 15-19: 6%
- 20-24: 22%
- 25-29: 21%
- 30-34: 14%
- 35-39: 10%
- 40-44: 9%
- 45+: 18%

Source: IDPH STD Section
Primary and Secondary Syphilis Rates by County, Illinois, 2012

2012 P/S Syphilis Rates
- 0 (n=69)
- 0.1 - 3.9 (n=24)
- 4.0 - 9.9 (n=5)
- 10.0 - 25.0 (n=5)

*Rate per 100,000 population.
Note: Illinois has 102 counties. City of Chicago is located in Cook County, but is mapped and counted separately in this map for visual distinction (therefore sum of n=103).
Source: IDPH STD Program
HIV – Why Should We Care?

- High Prevalence and Incidence in Men Who Have Sex with Men (MSM)
- Newborn Infections
- Minorities still disproportionately affected
- Life long infection
HIV Incident Cases Diagnosed since 2005

- 13,276 cases of HIV infections
  - 78% male
  - 22% female
- Risk Factors associated with HIV transmission
  - Males – MSM (59.8%), IDU (6.1%), MSM/IDU (3.0%), Heterosexual (5.9%), Other/undetermined (25%)
  - Females – IDU (12.2%), Heterosexual (39.7%), Other/undetermined (47%)
Minorities disproportionately affected

- Males:
  - White males 10.5 case rate (among 100,000)
  - Black males 78.2 case rate
  - Hispanic 23.9 case rate

- Females
  - White females 1.4 case rate
  - Black females 28.8 case rate
  - Hispanic 5.1 case rate
HIV among 13-19 year olds
### 2011 HIV Incidence: By Gender, Age, and Race

<table>
<thead>
<tr>
<th>HIV Disease</th>
<th>Black</th>
<th>White</th>
<th>Hispanic</th>
<th>Other</th>
<th>Unk /Missing</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(3) 13-19</td>
<td>20</td>
<td>&lt;5</td>
<td>&lt;5</td>
<td>&lt;5</td>
<td>&lt;5</td>
<td>23</td>
</tr>
<tr>
<td>Total Female</td>
<td>227</td>
<td>55</td>
<td>37</td>
<td>12</td>
<td>17</td>
<td>348</td>
</tr>
<tr>
<td>Male</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(3) 13-19</td>
<td>57</td>
<td>&lt;5</td>
<td>&lt;5</td>
<td>5</td>
<td>&lt;5</td>
<td>71</td>
</tr>
<tr>
<td>Total Male</td>
<td>648</td>
<td>357</td>
<td>256</td>
<td>113</td>
<td>38</td>
<td>1412</td>
</tr>
<tr>
<td>Female + Male</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(3) 13-19</td>
<td>77</td>
<td>5</td>
<td>&lt;5</td>
<td>5</td>
<td>&lt;5</td>
<td>94</td>
</tr>
<tr>
<td>Total Female + Male</td>
<td>875</td>
<td>412</td>
<td>293</td>
<td>125</td>
<td>55</td>
<td>1760</td>
</tr>
</tbody>
</table>

13-19 Y/O account for 5.3% (94 of 1,760) of 2011 HIV infections

13-19 Y/O: Black Males 80% of males cases; Black females 87% of females cases

75% of 13-19 y/o cases are among males

## STD Clinic Clients Tested for HIV Demographic Characteristics, Illinois 2011

<table>
<thead>
<tr>
<th>Demographic Characteristic</th>
<th># Tests</th>
<th># Positive</th>
<th>% Positivity</th>
<th>% Total Tests</th>
<th>% Total Positives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>15,622</td>
<td>199</td>
<td>1.3%</td>
<td>59%</td>
<td>84%</td>
</tr>
<tr>
<td>Female</td>
<td>10,630</td>
<td>35</td>
<td>0.3%</td>
<td>40%</td>
<td>15%</td>
</tr>
<tr>
<td>Black</td>
<td>17,952</td>
<td>168</td>
<td>0.9%</td>
<td>68%</td>
<td>71%</td>
</tr>
<tr>
<td>White</td>
<td>6,228</td>
<td>47</td>
<td>0.8%</td>
<td>24%</td>
<td>19%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>2,328</td>
<td>23</td>
<td>1.0%</td>
<td>9%</td>
<td>10%</td>
</tr>
<tr>
<td>Non-Hispanic</td>
<td>23,502</td>
<td>206</td>
<td>0.9%</td>
<td>89%</td>
<td>88%</td>
</tr>
<tr>
<td>15-19</td>
<td>3,149</td>
<td>15</td>
<td>0.5%</td>
<td>12%</td>
<td>6%</td>
</tr>
<tr>
<td>20-24</td>
<td>7,617</td>
<td>62</td>
<td>0.8%</td>
<td>29%</td>
<td>26%</td>
</tr>
<tr>
<td>25-29</td>
<td>5,425</td>
<td>54</td>
<td>1.0%</td>
<td>21%</td>
<td>23%</td>
</tr>
<tr>
<td>30-34</td>
<td>3,345</td>
<td>34</td>
<td>1.0%</td>
<td>13%</td>
<td>14%</td>
</tr>
<tr>
<td>35-39</td>
<td>2,090</td>
<td>22</td>
<td>1.1%</td>
<td>8%</td>
<td>9%</td>
</tr>
</tbody>
</table>

Non-Rapid Testing | IDPH Laboratory CT/GC Testing Data
Human Papillomavirus: A Vaccine Opportunity!
# HPV and Cancer

<table>
<thead>
<tr>
<th>Cancer</th>
<th>% Associated With Certain HPV Types</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cervical*</td>
<td>100%&lt;sup&gt;1&lt;/sup&gt;</td>
</tr>
<tr>
<td>Vaginal*</td>
<td>64%&lt;sup&gt;1&lt;/sup&gt;</td>
</tr>
<tr>
<td>Vulvar*</td>
<td>51%&lt;sup&gt;1&lt;/sup&gt;</td>
</tr>
<tr>
<td>Penile</td>
<td>36%&lt;sup&gt;1&lt;/sup&gt;</td>
</tr>
<tr>
<td>Anal</td>
<td>93%&lt;sup&gt;1&lt;/sup&gt;</td>
</tr>
<tr>
<td>Oropharyngeal</td>
<td>63%&lt;sup&gt;1&lt;/sup&gt;</td>
</tr>
<tr>
<td>Nonmelanoma skin/cutaneous squamous cell</td>
<td></td>
</tr>
</tbody>
</table>

*Includes cancer and intraepithelial neoplasia
†Immunocompromised patients

By 50 years of age, at least 80% of women will have acquired genital HPV infection.\(^1\)

Estimated new infections per year: 6.2 million\(^1\)

Estimated active infections (prevalence): 20 million\(^2\)

In sexually active individuals 15–24 years of age, \(~9.2\) million are currently infected.\(^3\)

- An estimated 74% of new HPV infections occur in this age group.\(^3\)

- In studies of women <25 years of age, prevalence rates ranged from 28% to 46%.\(^4,5\)

---

### HPV Vaccine Recommendations

HPV vaccine recommendations for 19- to 26-year-old females.¹⁻⁴

<table>
<thead>
<tr>
<th>Recommendations</th>
<th>ACIP¹,²</th>
<th>ACOG³</th>
<th>AAFP¹,²</th>
<th>ACP¹,²</th>
<th>AAP¹,²</th>
<th>SAHM⁴</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catch-up vaccination in 13- to 26-year-olds</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Vaccinate regardless of previous HPV infection or abnormal Pap test results</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
</tbody>
</table>

AAFP = American Academy of Family Physicians; AAP = American Academy of Pediatrics; ACIP = Advisory Committee on Immunization Practices; ACOG = American College of Obstetricians and Gynecologists; ACP = American College of Physicians; SAHM = Society for Adolescent Health and Medicine.

³It is recommended that patients receive 3 doses of the HPV vaccine.

HPV Vaccine

- **Gardasil (Merck)** quadrivalent HPV types 6, 11 (90% of genital warts), 16, 18 (70% of cervical, anal, and genital cancers)
  - Three doses: 0, 2, and 6 months

- **Cervarix (GlaxoSmithKline)** bivalent
  - HPV 16 and 18
  - Females 10-25 years of age
  - Three doses: 0, 1, and 6 months
Estimated US HPV Vaccine Coverage in Females 13–17 Years (≥1 Dose)¹

National Coverage = 44.3%

Coverage

- 60%–69%
- 50%–59%
- 40%–49%
- 30%–39%
- 20%–29%

Recent study shows: HPV vaccinations do not make girls promiscuous
• Compared medical records of vaccinated and unvaccinated females
• Looked at sexual markers of sexual activity after vaccinations
  - Sought birth control advice
  - STD testing
  - Pregnancy testing
  - Became pregnant
• Study showed no difference in markers between the two groups

How do we market the HPV vaccine
  • ANTI CANCER VACCINE
Strategies to Address the Issues
RESCREENING
Gaydos et al: CT Reinfection Rates Among Female Adolescents Seeking Rescreening AT SBHCs
- 236 of 897 (26.3%) females students reinfected

Broussard et al: Screening Adolescents in a JDC for GC/CT: Prevalence and Reinfection Rates
- Reinfection rates: 10 % for GC and 28.9% for CT

IDPH STD Section: Jan – May 2009, 1,714 females tested positive for Chlamydia at a family planning or SBHCs.
- A total of 746 (43.5%) females returned for rescreening within two to 12 months
- CT re-infection rate was 22.3% (166 of 746)
Rescreening

- Reinfection increases risk of:
  - Pelvic Inflammatory disease
  - Ectopic pregnancy
  - Chronic pelvic pain

- Majority of post-treatment infections result from reinfection
  - Sex partners not treated (Use EPT!)
  - Patient resumes sex with a new partner infected with CT/GC

- Recommendation:
  - Clinicians should advise clients treated for CT/GC to be retested 3 months after treatment
TREATMENT ISSUES
Treatment Issues

- Expedited Partner Therapy
- GC Treatment Update
- Treatment Timeliness
EPT – prescribe, dispense, furnish or otherwise provide prescription drugs to the partner or partners of persons diagnosed with Chlamydia or gonorrhea (last 60 days) without physical examination of the partners.
High burden of CT/GC infections – limited resources at the local level to investigate, notify and treat partners

Effectiveness of partner referral limited
- Patient’s choice to notify partners
- Partner’s choice in seeking treatment

Partners have limited access to care or uninsured
Expeditied Partner Therapy (EPT)

- **Purpose:** to treat partners of clients with Chlamydia and gonorrhea who are *unable or unlikely* to seek care

- **Goals:**
  - Decrease new CT/GC infections in community
  - Reduce CT/GC re-infection rates
  - Decrease complications from untreated CT and GC
EPT

- EPT has been proven to be safe and effective
  - Adverse reactions to antibiotics are rare
  - No reports in California since implementing EPT in 2001
- EPT law protects prescribing clinicians from civil and professional liability, except for willful and wanton misconduct
  - Legal protection for not prescribing EPT also
- Currently, EPT is legal in over 26 states
EPT On-Line Resources

- IDPH Website (EPT HCP Guidance, Patient and Partner Written Materials)
  - www.idph.state.il.us

- Illinois EPT Law (SB 0212, PA 69-613):

- CDC
  - EPT website: http://www.cdc.gov/std/ept/
  - CDC white paper:
"Gonorrhea has now joined the list of other superbugs for which treatment options have become dangerously few," Henry Masur, president of the Infectious Diseases Society of America told the Associated Press.

"Choosing an effective antibiotic can be a challenge because the organism that causes gonorrhea is very versatile and develops resistance to antibiotics very quickly," researcher Catherine Ison, professor at the Health Protection Agency Centre for Infections in London.

Professor Ison reports that in Japan they have had patients who have failed GC therapy and a number of other countries have been affected.
Increased resistance to antibiotics

- 2006 – Fluoroquinolones (Cipro) no longer recommended for GC treatment
- Cefpodoxime is no longer available from IDPH due to increased resistance

2010 CDC STD Treatment Guidelines

- Updated recommendations-Dual Therapy
  - Ceftriaxone 125 mg to 250 mg
  - 1 gm Azithromycycin
## IIPP Treatment Timeliness Outcomes (Chlamydia) By Provider Type

### Treatment Rates of Female Clients with Reported CT (Excluding Chic.)

<table>
<thead>
<tr>
<th>Provider Type</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>STD Clinics</td>
<td>74%</td>
<td>78%</td>
<td>87%</td>
</tr>
<tr>
<td>Family Planning</td>
<td>71%</td>
<td>77%</td>
<td>83%</td>
</tr>
<tr>
<td>Other HD Clinic</td>
<td>70%</td>
<td>73%</td>
<td>91%</td>
</tr>
<tr>
<td>Priv Physician</td>
<td>89%</td>
<td>92%</td>
<td>91%</td>
</tr>
<tr>
<td>School Based</td>
<td>86%</td>
<td>87%</td>
<td>87%</td>
</tr>
<tr>
<td>University/College</td>
<td>99%</td>
<td>99%</td>
<td>99%</td>
</tr>
</tbody>
</table>
SBHC Chlamydia Screening Initiative
SBHC Chlamydia Screening Initiative

- **OBJECTIVE:** increase GC/CT screening at SBHCs

- **Collaboration**
  - IDPH STD Section
  - IDHS SBHC Program
  - IDHS Bureau of Community Nursing
  - Most importantly YOU – SBHCs

- **Prioritized:** SBHCs by largest with highest CT positivity rate
SBHC Chlamydia Screening Initiative

Outcome:
- 41 SBHCs participated between March 2009 thru May 2010

CT Testing: Six months of 2010 vs 2009
- 24 of 37 SBHCs (65%) increased CT testing (range: 2 to 191, average of 43 tests)
- 12 of 37 SBHCs (32%) decreased CT testing (range: 2 to 100, average of 28 tests)
- 1 of 37 SBHCs (3%) remained the same

Overall, for the six month period:
- CT screening increased 29% (additional 1,098 CT tests submitted Jan-Jun 2010)
- 131 (32%) additional CT positive tests identified
- 9 (9%) additional GC positive tests identified
Other activities

- Offer universal HIV testing for anyone sexually active over 13 years of age
- Offer or refer for HPV Vaccinations
- Anyone under 25 years of age who are sexually active should receive an annual STD screening
- Offer Partner Services to HIV positive persons on an ongoing basis
- Other ideas?
Questions

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