Adolescents and STIs: A Nationwide Perspective

Gail Bolan, M.D.
Director, Division of STD Prevention
National Center for HIV/AIDS, Viral Hepatitis, STD and TB Prevention
Centers for Disease Control and Prevention

NICHM Webinar
July 24, 2013
Overview

- STI burden among adolescents
- Why adolescents are at increased risk
- STD clinical preventive services for adolescents
  - Chlamydia screening
  - HIV screening
  - HPV vaccination
- Recommendations for Closing the Gaps
- Resources
STI BURDEN AMONG ADOLESCENTS
Estimated Youth STI Incidence, 2008

Sexually Experienced Population

15-24 Years
~25%

25-44 Years
~75%

Incident STIs*

Account for:
~50% New Infections

~50% New Infections

Weinstock et al., Persp Sex Reprod Health, 2004
Estimated number of new sexually transmitted infections
- United States, 2008

<table>
<thead>
<tr>
<th>Disease</th>
<th>Ages 15-24</th>
<th>Ages 25+</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hepatitis B</td>
<td>8%</td>
<td>8%</td>
<td>19,000</td>
</tr>
<tr>
<td>HIV*</td>
<td>20%</td>
<td>20%</td>
<td>41,400</td>
</tr>
<tr>
<td>Syphilis</td>
<td>45%</td>
<td>45%</td>
<td>55,400</td>
</tr>
<tr>
<td>HSV-2</td>
<td>70%</td>
<td>70%</td>
<td>776,000</td>
</tr>
<tr>
<td>Gonorrhea</td>
<td>13%</td>
<td>13%</td>
<td>820,000</td>
</tr>
<tr>
<td>Trichomoniasis</td>
<td>63%</td>
<td>63%</td>
<td>1,090,000</td>
</tr>
<tr>
<td>Chlamydia</td>
<td>49%</td>
<td>49%</td>
<td>2,860,000</td>
</tr>
<tr>
<td>HPV</td>
<td>49%</td>
<td>49%</td>
<td>14,100,000</td>
</tr>
</tbody>
</table>

Total: 19,738,800

Young people (15-24) represent 50% of all new STIs

*HIV incidence not calculated by age in this analysis

Bars are for illustration only; not to scale, due to wide range in numbers of infections
Chlamydia Prevalence in Sexually Active Females Aged 14-24 in the United States

Prevalence, %

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Overall</th>
<th>NH white</th>
<th>NH black</th>
</tr>
</thead>
<tbody>
<tr>
<td>14-19 years</td>
<td>6.8</td>
<td>4.4</td>
<td>16.2</td>
</tr>
<tr>
<td>20-24 years</td>
<td>3.2</td>
<td>1.3</td>
<td>12.1</td>
</tr>
</tbody>
</table>

NHANES, National Health and Nutrition Examination Survey, 1999-2008
Sexual activity = "yes" response to "Have you ever had sex?"
Sex = vaginal, anal, or oral sex
Chlamydia—Percentage of Reported Cases by Sex and Selected Reporting Sources, United States, 2011

NOTE: These categories represent 70.2% of cases with a known reporting source. Of all cases, 11.2% has a missing or unknown reporting source.

*HMO=health maintenance organization; HD=health department

Hariri S et al. JID 2011;204:566-72
NHANES: National Health and Nutrition Examination Survey
HIV Among Youth in the US

1 in 4

1 in 4 new HIV infections occurs in youth ages 13 to 24 years.

12,000

About 12,000 youth in 2010, or about 1,000 per month, were infected with HIV.

60%

About 60% of all youth, with HIV do not know they are infected, are not getting treated, and can unknowingly pass the virus on to others.

http://www.cdc.gov/vitalsigns/hivamongyouth/
HIV Among Youth in the US: Who's At Risk?

Number of new HIV infections among youths aged 13–24 years, by sex and race/ethnicity — United States, 2010

Abbreviation: HIV = human immunodeficiency virus.
* Hispanics/Latinos might be of any race.
STDs and their Consequences for Youth

- **Most STDs**
  - HIV transmission
  - Impaired fertility
  - Reproductive tract cancer
  - Adverse pregnancy outcomes

- **STDs**
  - e.g. Chlamydia
  - Gonorrhea
  - Syphilis
  - HSV-2
  - HPV

- **~ 9.8 million estimated annual new cases among youth**
- **$6.5 billion estimated annual direct costs**

*2010 estimates for all ages*
Untreated chlamydial infections

Risk for Sequelae in Women

Clinical PID

Tubal factor infertility

Subclinical tubal inflammation

10-15%

10-15%

? Risk

Oakeshott et al, BMJ 2010
Weström et al, Sex Transm Dis 1992
Land et al, Hum Reprod Update 2010
Persistent infection with oncogenic types highest risk for disease progression
HPV necessary but not sufficient for cervical cancer
Peak incidence of precancers in late 20’s; of cancers in late 30’s early 40’s
WHY ADOLESCENTS ARE AT INCREASED RISK
Risk Factors and Adolescents

Unique factors place youth at risk for STIs

Insufficient Screening
Many young women don’t receive the chlamydia screening CDC recommends

Confidentiality Concerns
Many are reluctant to disclose risk behaviors to doctors

Biology
Young women’s bodies are biologically more susceptible to STIs

Lack of Access to Healthcare
Youth often lack insurance or transportation needed to access prevention services

Multiple Sex Partners
Many young people have multiple partners, which increases STI risk
STD CLINICAL PREVENTIVE SERVICES FOR ADOLESCENTS
Provider and Health System Level Issues

- Provider knowledge and attitudes
  - Reasons for low screening
    - Lack of information about disease rates in their community
    - Belief that their patients are not at risk
    - Cannot offer confidential services to adolescents
    - Believe STDs are not an urgent medical condition; easily treated
    - Limited time to visit patients

- Factors that Limit Access to Screening
  - Insurance coverage/adequate reimbursement
  - High co-pays and deductibles
  - Confidentiality and EOBs
Confidentiality and STI*

- All 50 states and the District of Columbia allow minors to consent to STI services.
- 11 states require that a minor be a certain age (12 or 14) to consent.
- 31 states include HIV in package of STI services to which minors may consent.
- 18 states allow physicians to inform parents that a minor is seeking or receiving STI services.
- Exceptions:
  - Suspected physical, sexual or emotional abuse
  - At risk for harm to self or others
  - May confidentially report STIs to health department

*www.guttmacher.org/statecenter/adolescents.html