High Chlamydia Prevalence Found in a Collaborative Health Department—University Student Health Services Sexually Transmitted Infection (STI) Screening Program
Heather A. Lindstrom PhD1,2, Gale Burstein MD MPH1,2,3, Susan Mancuso MSN FNP4, Scott Zimmerman1,2, DrPH, MPH
1. Erie County Department of Health, Buffalo, NY; 2. University at Buffalo School of Public Health and Health Professions; 3. University at Buffalo Pediatrics Associates; 4. University at Buffalo Student Health Services

**Abstract**

To reduce barriers to STI screening, diagnostic and treatment services and to collect epidemiologic STI data among a population of Erie County, New York college students for surveillance and program planning purposes.

**About the University**

UB is a large, urban, 3-campus university in Buffalo, NY.
- In 2009, UB enrollment is >29,000 students
- ~2/3 undergraduates
  - Ethnically diverse population from local community, NY State and national and international locations

**Health Services Available to Students**

UB’s student health clinic offers primary care, women’s health services, and HIV counseling and testing.
- UB’s student health services are available to all enrolled students
- 38,300 student visits with providers during 6/07 – 5/09

Students may incur expenses for sexual health services.
- STI testing and treatment
  - Most students covered on parents’ health plan where out of network fees apply or have no health insurance.

**Methods**

In June 2007, ECPHL offered gonorrhea and chlamydia tests (BD ProbeTec ET; Becton Dickinson, Sparks, MD) to students seeking STI services at UB’s student health clinic. A public health partnership identified infected students who may otherwise have foregone care without health department support. The collaborative program increased STI screening in the community without a need for increased health department staffing.

**Background**

Chlamydia trachomatis is the most commonly reported sexually transmitted infection (STI) in Erie County, New York and the United States.
- Persons ages 15 - 24 years account for ~70% of all diagnosed infections.
- Females are at increased risk of asymptomatic infection.
- Chlamydia in females can have serious sequelae, including pelvic inflammatory disease and infertility.
- Annual chlamydia screening for sexually active females ≥ 25 years is recommended.
- Chlamydia prevalence among college students ranges from ~2% - 10%.

College students may forego sexual health care for many reasons:
- Disclosure of confidential services to parents through health plan billing policies and “explanation of benefits” (EOBs)
- Expensive out-pocket fees
- Inconvenient clinic locations and hours of operation

The University at Buffalo (UB), the Erie County Department of Health (ECCDOH) and the Erie County Public Health Laboratory (ECPHL) initiated a collaborative program to expand health department STI services to students at a large, urban university.

**Results**

Between June 4, 2007 - May 31, 2009, STI testing occurred in 1,464 student visits.

**Conclusion**

- A substantial chlamydia burden exists among young adults, many asymptomatic, accessing a university health clinic.
- A public health partnership identified infected students who may otherwise have foregone care without Health Department support.
- A health department STI program increased screening without increasing staffing.

**Implications for Programs**

With shrinking public health resources, partnering with university clinicians for confidential STI testing can be a cost efficient outreach strategy to reach at-risk populations that may otherwise forego these services.

**References**


**Acknowledgements**

The authors gratefully acknowledge the contributions of staff at the Erie County Public Health Laboratory and Epidemiology and Surveillance Program, the staff of the Student Health Services at UB, and providers and staff of UB Student Health Services. We also thank Brian Archambault of the UB Wellness Education Program for graphics and design assistance.

**TABLE 1: Characteristics of Students Tested**

<table>
<thead>
<tr>
<th>Gender</th>
<th>Median Age in Years</th>
<th>Race</th>
<th>Ethnicity</th>
<th>Age</th>
<th>Reason for STI Testing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>21 (17-25)</td>
<td>White</td>
<td>Black</td>
<td>20</td>
<td>6.1% (96/1464)</td>
</tr>
<tr>
<td>Female</td>
<td>21 (17-25)</td>
<td>White</td>
<td>Hispanic</td>
<td>20</td>
<td>6.1% (96/1464)</td>
</tr>
<tr>
<td>Female</td>
<td>21 (17-25)</td>
<td>White</td>
<td>Other</td>
<td>20</td>
<td>6.1% (96/1464)</td>
</tr>
<tr>
<td>Female</td>
<td>21 (17-25)</td>
<td>White</td>
<td>Not Reported</td>
<td>20</td>
<td>6.1% (96/1464)</td>
</tr>
</tbody>
</table>

2.1% STI was diagnosed in 6.1% (96/1464) of STI testing visits.

1,386 gonorrhea and chlamydia tests performed
- 90 (6.5%) chlamydia positive
- 6 (0.4%) gonorrhea positive
- 3 students co-infected with chlamydia and gonorrhea
- 2 syphilis cases and 1 hepatitis C case diagnosed

**TABLE 2: Chlamydia Testing Results**

<table>
<thead>
<tr>
<th>Test</th>
<th>Positive</th>
<th>% Positive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlamydia</td>
<td>96/1386</td>
<td>0.7%</td>
</tr>
<tr>
<td>Syphilis</td>
<td>6/1386</td>
<td>0.4%</td>
</tr>
<tr>
<td>Hepatitis</td>
<td>6/1386</td>
<td>0.4%</td>
</tr>
<tr>
<td>HIV</td>
<td>6/1386</td>
<td>0.4%</td>
</tr>
<tr>
<td>Hepatitis A</td>
<td>6/1386</td>
<td>0.4%</td>
</tr>
</tbody>
</table>

Chlamydia positivity varied by gender, race, age, and reason for testing.