Evaluating the Use of Syphilis Partner Services for HIV Case Finding in Mississippi
Tigran Avoundjian,1 James Stewart,2 David Peyton,2 Christie Lewis,3 Kendra Johnson,1 Sara N. Glick,1 Matthew R. Golden,1 Christine M. Khosropour1
1University of Washington, Seattle, WA, USA, 2Mississippi State Department of Health STD/HIV Program, Jackson, MS, USA

BACKGROUND

- In Mississippi from 2012–2015, HIV prevalence increased from 1.3 to 2.6 cases per 100,000, despite rates remaining stable in the United States overall
- Diagnosis with syphilis has been shown to be a consistent risk factor of HIV acquisition
- US health departments routinely provide partner services to persons with early syphilis and many integrate HIV testing among partners into those efforts
- OBJECTIVE: To evaluate the HIV case-finding effectiveness of syphilis partner services in Mississippi

METHODS

DATA SOURCES
- STD Surveillance (PRISM): Partner services data on index cases of early syphilis and partners, including sociodemographic characteristics and HIV/syphilis testing and treatment
- HIV Surveillance (eHARS): HIV status of index cases and partners
- Electronic lab reporting (Apollo): HIV testing data on partners
- Data sources were matched using a deterministic matching algorithm on first name, last name, and date of birth

DEFINITIONS
- Index case: case reported to STD surveillance between July 1, 2014 and December 31, 2015 with a final disposition code for primary, secondary, or early latent syphilis (710, 210, 720) who did not test HIV positive at the time of their syphilis diagnosis
- Partner services: MSDH routinely contacts sexual partners of early syphilis cases to conduct interviews, provide HIV and syphilis testing, and link to treatment
- Partners’ syphilis status: final disposition for primary, secondary, or early latent among partners
- Partners’ HIV status: partners considered a new case of HIV if:
  - They had a final disposition code for a new HIV diagnosis or
  - A positive HIV lab within 30 days of being named as a partner and no evidence of a previous HIV diagnosis in eHARS
- Previous positive HIV lab: partners with a final disposition code for a previous HIV diagnosis in eHARS prior to being named as a partner

RESULTS

TABLE 1: EARLY SYPHILIS INDEX CASE CHARACTERISTICS, BY SYPHILIS STAGE

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Primary &amp; Secondary</th>
<th>Early Latent</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>665</td>
<td>1040</td>
</tr>
<tr>
<td>%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

- Gender & sex of gender partners
  - MSM: 373 (56%)
  - MSW: 130 (20%)
  - Other: 122 (18%)

- MSM: 312 (276) 119 (44)
  - MSW: 130 (237) 22 (19)
  - Other: 122 (236) 30 (26)

- Negative: 388 (64%)
  - Positive: 208 (35%)
    - Previous Positive: 326 (52%)

- Race
  - White: 98 (16%)
  - Black/African American: 476 (79%)
  - Other: 31 (5%)

- HIV Status
  - Negative: 1040
  - Previous Positive: 495
    - Positive: 151
  - Race
    - Black/African American: 1211
    - White: 241
  - Other: 93

- HIV NNTI was 247 among Black/African American MSW, 244 among Black/African American women. No cases of HIV were found among partners of White MSW and women.

RESULTS (con.)

TABLE 3: SYPHILIS AND HIV CASE FINDING, BY INDEX CASE CHARACTERISTICS

<table>
<thead>
<tr>
<th>Index Case Characteristics</th>
<th>Total</th>
<th>Gender &amp; sex of gender partners</th>
<th>HIV Status</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MSM</td>
<td>MSW</td>
<td>Other</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>NNTI</td>
<td>HIV Status</td>
</tr>
<tr>
<td>Gender &amp; sex of gender partners</td>
<td>15.55</td>
<td>19.08</td>
<td>6.96 (46)</td>
</tr>
<tr>
<td>HIV Status</td>
<td>15.55</td>
<td>19.08</td>
<td>6.96 (46)</td>
</tr>
<tr>
<td>Negative</td>
<td>850</td>
<td>15.55</td>
<td>19.08</td>
</tr>
<tr>
<td>Previous Positive</td>
<td>317</td>
<td>19.08</td>
<td>16.95 (46)</td>
</tr>
<tr>
<td>Positive</td>
<td>379</td>
<td>14.77</td>
<td>14.9</td>
</tr>
<tr>
<td>Race</td>
<td>1040</td>
<td>14.77</td>
<td>14.9</td>
</tr>
<tr>
<td>Black/African American</td>
<td>1211</td>
<td>14.77</td>
<td>14.9</td>
</tr>
<tr>
<td>White</td>
<td>241</td>
<td>14.77</td>
<td>14.9</td>
</tr>
<tr>
<td>Other</td>
<td>93</td>
<td>14.77</td>
<td>14.9</td>
</tr>
</tbody>
</table>

- Among partners tested for HIV

DISCUSSION

- Syphilis PS in MS identified 86 new cases of syphilis and 24 new cases of HIV over a 3 month period
- MSXH interacted with 718 HIV cases from 2012–2015, with 48% of these HIV cases are at high risk of HIV over a 3 month study period
- HIV testing among partners

ACKNOWLEDGEMENTS/FUNDING

- CDC/DESP/003035

SUMMARY

- Syphilis PS in MS identified 86 new cases of syphilis and 24 new cases of HIV over a 3 month period
- MSXH interacted with 718 HIV cases from 2012–2015, with 48% of these HIV cases are at high risk of HIV over a 3 month study period
- HIV testing among partners

CONCLUSIONS

- Negative HIV tests are not routinely collected as part of STD surveillance; fuzzy matching between STD surveillance, HIV surveillance and electronic lab reporting may have missed HIV tests reported to HIV surveillance

- Partner services in MS allows the MSDH to interact with a large population of MSM at high risk of HIV

ACKNOWLEDGEMENTS/FUNDING

- CDC/DESP/003035

- Tigran Avoundjian, tavoun@uw.edu