EPIC: ASSESSMENT OF RISK FACTORS FOR SEXUALLY TRANSMITTED INFECTIONS IN HIGH RISK COMMUNITIES IN SANTO DOMINGO AND LA ROMANA, DOMINICAN REPUBLIC

C. Nicholas, L. Soriano, D. Berroa, S. Stonbraker, M. Halpern, S. Amesty

Columbia University, College of Physicians and Surgeons, Mailman School of Public Health

Clínica de Familia La Romana, Dominican Republic
OBJECTIVES

• Evaluate the prevalence of sexually transmitted infections (STIs) in La Romana and Santo Domingo

• Explore risk factors associated with STIs in these populations:
  • People living with HIV/AIDS
  • Transactional sex workers
  • Pregnant adolescents
  • Trans women
  • **Batey residents**
  • Men who have Sex with Men (MSM)
JUSTIFICATION

• There are 38 million cases of curable STIs per year in Latin America and the Caribbean (WHO) [1]

• Information on STI prevalence in DR is essential to
  • Disseminate information about the impact of STIs in key populations
  • Design appropriate interventions to address the problem
METHODS: BATEY SELECTION
METHODS: STUDY PROCEDURE

- Time-location sampling (TLS) [2]
- Questionnaire
- STI testing
  - Gonorrhea, chlamydia, trichomonas, HPV, HIV, syphilis, hepatitis B & C, mycoplasma, ureaplasma
- Results/treatment visit
## Positive Results: HIV

| HIV |  
|-----|---
| N (203) | %  
| 1 | .49% |
# Positive Results: Hepatitis B

<table>
<thead>
<tr>
<th>Total: Hepatitis B Surface Antigen</th>
<th>Breakdown by Batey</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>N (203)</strong></td>
<td><strong>%</strong></td>
</tr>
<tr>
<td>19</td>
<td>9.3%</td>
</tr>
<tr>
<td>9</td>
<td>33%</td>
</tr>
</tbody>
</table>
### POSITIVE RESULTS: ABNORMAL PAP AND HPV

#### Abnormal Pap Results

<table>
<thead>
<tr>
<th>N (116)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td>18</td>
</tr>
</tbody>
</table>

#### Total HPV Positive

<table>
<thead>
<tr>
<th>N (116)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>36</td>
<td>31</td>
</tr>
</tbody>
</table>

#### Breakdown by HPV Serotype

<table>
<thead>
<tr>
<th>HPV 16 (%)</th>
<th>HPV 18/45 (%)</th>
<th>Indeterminate High Risk (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>8.3</td>
<td>67</td>
</tr>
</tbody>
</table>

Abnormal Pap Results: 21 out of 116 (18%) had abnormal results.

Total HPV Positive: 36 out of 116 (31%) had HPV positive results.

Breakdown by HPV Serotype:
- HPV 16: 25 cases (8.3%)
- HPV 18/45: 3 cases (8.3%)
- Indeterminate High Risk: 67 cases (67%)
**POSITIVE RESULTS: CHLAMYDIA, TRICHOMEONAS VAGINALIS, UREAPLASMA SPP.**

<table>
<thead>
<tr>
<th><strong>Chlamydia (urine/cervical/vaginal)</strong></th>
<th><strong>Chlamydia (anal)</strong></th>
<th><strong>Trichomonas vaginalis</strong></th>
<th><strong>Ureaplasma spp.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>N (203)</td>
<td>%</td>
<td>N (203)</td>
<td>%</td>
</tr>
<tr>
<td>32</td>
<td>15.7</td>
<td>18</td>
<td>9.0</td>
</tr>
<tr>
<td>60</td>
<td>30</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Chlamydia (urine/cervical/vaginal): 32 (15.7%) of the samples were positive for Chlamydia, 18 (9.0%) of the samples were positive for Chlamydia (anal).

Trichomonas vaginalis: 27 (13%) of the samples were positive for Trichomonas vaginalis.

Ureaplasma spp.: 60 (30%) of the samples were positive for Ureaplasma spp.
DISCUSSION: HIV RESULTS

• In 2007, HIV prevalence in the bateyes was 3.2%, four times higher than the national average of 0.8% [2, 3]

• HIV testing and prevention programs conducted by CFLR and other local health organizations in the bateyes over the past decade may have helped curbed prevalence of HIV infection.

• Analysis of study questionnaire data may help to establish potential correlations between the low rates of HIV and role that education and testing has had on the batey population.
• In a 2012 study looking at rates of HBsAg world-wide, less than 2% of individuals were reported to be HBsAg positive in Tropical and Central Latin America [4]. In a 2016 study looking at pregnant women in Haiti, 2.5% were HBsAg positive [5].

• In response to the study rates, Batey I (33%) and Batey II (32%), CFLR and the Ministry of Health established a Hepatitis B vaccination program for the bateyes.

• We are currently conducting testing to explore cases of acute and chronic Hepatitis B.
DISCUSSION: ABNORMAL PAP, HPV, CHLAMYDIA, TRICHOMONAS VAGINALIS, UREAPLASMA SPP.

- Little is known about the prevalence of STIs in this population, as no comprehensive STI screening available (in the general population)

- High rates of HPV, CT, *trichomonas vaginalis*, and *ureaplasma* spp. highlight the need for STI education and targeted prevention initiatives

- Particularly important is providing access to pap smear testing for prevention purposes, as the prevalence of abnormal pap smears is high.
ACKNOWLEDGEMENTS

• Silvia Cunto-Amesty, M.D., M.P.H., M.S.Ed.
• David E. Rogers Fellowship, NY Academy of Medicine
• Program for Global and Population Health, Columbia University College of Physicians and Surgeons
• Clínica de Familia La Romana
• Instituto Dermatológico y Cirugía de Piel, Santo Domingo
• BioReference Laboratories
• Columbia University, CALM Laboratories
REFERENCES


