Correlates of Bacterial STDs

Table 3. Logistic regression results showing women's likelihood of having had a bacterial STD or having received treatment for PID, by selected demographic and behavioral risk factors

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Bacterial STD</th>
<th>PID</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Estimate</td>
<td>Standard error</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>0.54</td>
<td>0.11</td>
</tr>
<tr>
<td>White</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15–24</td>
<td>0.17</td>
<td>0.14</td>
</tr>
<tr>
<td>25–34</td>
<td>0.22</td>
<td>0.11</td>
</tr>
<tr>
<td>35–44</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;high school</td>
<td>0.03</td>
<td>0.16</td>
</tr>
<tr>
<td>High school</td>
<td>-0.13</td>
<td>0.14</td>
</tr>
<tr>
<td>Some college</td>
<td>-0.10</td>
<td>0.13</td>
</tr>
<tr>
<td>College graduate</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>Age at first intercourse†</td>
<td>-0.06</td>
<td>0.02</td>
</tr>
<tr>
<td>Lifetime number of sexual partners</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>2–3</td>
<td>0.68</td>
<td>0.23</td>
</tr>
<tr>
<td>4–5</td>
<td>1.27</td>
<td>0.22</td>
</tr>
<tr>
<td>&gt;5</td>
<td>2.21</td>
<td>0.19</td>
</tr>
<tr>
<td>IUD use</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>Yes</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>Douching</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>No</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>Bacterial STD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>No</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>Intercept</td>
<td>-3.20</td>
<td>-2.14</td>
</tr>
</tbody>
</table>

*p<.05. **p<.01. ***p<.001. †Entered as a continuous variable. Notes: IUD use, history of douching and history of a bacterial STD were not included as explanatory variables in the analyses of bacterial STD risk. na—not applicable.

Effects of PID

Women with a history of PID were more than twice as likely to have had an ectopic pregnancy as were all sexually active women (5% vs. 2%, not shown), and were slightly more likely than women with a history of a bacterial STD to report having had one (4%). Thus, there appears to be some association between ectopic pregnancy and PID, although the NSFG data do not permit us to establish a temporal or causal relationship.

Some correlates of PID are presented in Table 3. The odds of having had PID were twice as likely to have been treated for PID. Women with five partners or less were no more likely to have had PID than were those with only one partner. The odds of having had PID were twice as great for women who had used an IUD as for women who had not. Similarly, women who had ever douched were 60% more likely to have had PID than were those who had never douch. Finally, women who had had either gonorrhea or chlamydial infection were more than twice as likely to have been diagnosed with PID as those without such a history.

Table 4. Percentage distribution of sexually active women aged 15–44, by fecundity status, according to bacterial STD or PID history

<table>
<thead>
<tr>
<th>Fecundity status</th>
<th>All</th>
<th>Bacterial STD</th>
<th>PID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fecund</td>
<td>58.6</td>
<td>59.3</td>
<td>38.5</td>
</tr>
<tr>
<td>Contraceptively sterile</td>
<td>27.0</td>
<td>19.6</td>
<td>34.1</td>
</tr>
<tr>
<td>Surgically sterile</td>
<td>3.3</td>
<td>4.3</td>
<td>8.9</td>
</tr>
<tr>
<td>Nonsurgically sterile</td>
<td>1.8</td>
<td>3.8</td>
<td>5.1</td>
</tr>
<tr>
<td>Subfertile</td>
<td>8.3</td>
<td>12.1</td>
<td>12.8</td>
</tr>
<tr>
<td>Long-interval subfertile</td>
<td>1.0</td>
<td>0.8</td>
<td>0.6</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: Prevalence estimates are weighted.

Discussion

In this article, we describe the characteristics of women who report a history either of gonorrhea or chlamydia or of treatment for PID. Not all women who had an STD risk factor also had a history of a sexually transmitted infection. In 1995, a minority of sexually active women (only 6%) reported ever having been diagnosed with gonorrhea or chlamydia, while almost half had had four or more sexual partners, a significant predictor for these diseases. Clearly, the risk profile suggested by these data is not uniform, nor is it as startling as the profile documented in studies of high-risk populations.*26 Nevertheless, some groups of women are at high risk for both short- and long-term reproductive health problems.

Age at first intercourse and lifetime number of sexual partners are the most appropriate measures from the NSFG for studying lifetime prevalence of bacterial STDs. Indeed, both were significant predictors of infection. Moreover, number of sexual partners demonstrated a clear “dose effect”: As the number of sexual partners increased, so did the probability of reporting a bacterial STD.

Unfortunately, the measures of condom use included in the NSFG are not very suitable for studying bacterial STDs, and information on contextual factors associated with condom use was not collected. For example, it is not clear if women used condoms with new partners to prevent an STD or with steady partners to prevent pregnancy. Whether condoms were used before a woman contracted an STD or after she had been treated for one is equally unclear. Moreover, the vast majority of women (82% of all sexually active women and 92% of women reporting a history of a bacterial STD) had used a condom during their lifetime. The lack of information associated with use of condoms leaves us unable to explore the context in which risk-taking and preventive behaviors occur.

Consistent with other studies of STDs, race was a strong predictor of bacterial STDs: Black women were significantly more likely than white women to report a history of a bacterial STD. Although socioeconomic status (as measured by education) did not predict bacterial STDs in either univariate or multivariate analyses for the sample as a whole, education emerged as a significant, but not linear, predictor among black women. Surprisingly, black high school graduates had a lower risk for bacterial STDs than did black college graduates. It is possible that black women with increased education have access to different partner populations or health care resources than women with a high school diploma; distinct partner populations can confer different probabilities of infection, while differential access to health care may shift the likelihood of detection. The education measure could

those who had one lifetime partner to report having been treated for PID. Women with five partners or less were no more likely to have had PID than were those with only one partner. The odds of having had PID were twice as great for women who had used an IUD as for women who had not. Similarly, women who had ever douched were 60% more likely to have had PID than were those who had never douch. Finally, women who had had either gonorrhea or chlamydial infection were more than twice as likely to have been diagnosed with PID as those without such a history.

*Rates of gonorrhea, chlamydial infection and sexual risk-taking are higher among women attending STD clinics than among female participants in population-based surveys. For example, even after excluding women known to have been exposed to an infected partner, clinicians found that 35% of female patients were currently infected with gonorrhea, chlamydia, trichomonas or a combination of these STDs and that 77% reported a history of prior sexually transmitted infection; more than half (51%) reported six or more lifetime sexual partners (source: reference 26).