parents about aspects of sex education—including how pregnancy occurs, contraceptive methods and STDs—levels substantially higher than those in Cohort 1 (35–59%).

The percentage of all teenagers who had had sex by age 15 increased between Cohorts 1 and 2 (from 25% to 31%) and then remained stable in Cohort 3. Among sexually experienced adolescents (Table 2), the proportion who had had sex by age 15 increased from 40% in Cohort 1 to 50% in Cohort 3, and age at first sex declined. This pattern suggests that the more recent cohorts of sexually experienced teenagers are at even greater risk of giving birth before age 20.

Age at menarche declined across cohorts in the overall sample, but not among teenage mothers (Table 1), while contraceptive use at first sex increased dramatically in both groups (Table 2). The proportion of sexually experienced teenagers who had used a contraceptive method at first sex increased from 59% in Cohort 1 to 76% in Cohort 3; that proportion rose among teenage mothers as well, but was lower in all three cohorts than the levels for the overall sample.

Adolescent women in recent cohorts were no more likely to report having had a nonvoluntary or unwanted first sexual experience than were those in earlier cohorts, although the proportion of teenage mothers who reported nonvoluntary first sex declined across cohorts (Table 2). Some 9–11% of all teenagers reported that their first sexual experience had been nonvoluntary. The average age of the respondents’ first sexual partners declined from 19.9 years in Cohort 1 to 18.4 years in Cohort 3, but the average age difference between the teenagers and their first partner remained stable at 2.3–2.6 years. Further, the proportion of teenagers whose first sexual partner was only a friend or someone they had just met did not change. There were no significant changes over time in partner characteristics for teenage mothers.

### Multivariate Event-History Analyses

Table 3 shows the results of three multivariate event-history models for each cohort in the overall sample. These results reflect patterns of stability and change in family, individual and partner characteristics that are associated with the risk of a teenage birth. The use of multiple models allows us to test the main effects of variables for each of our hypotheses. For example, we may expect that family background will have a strong overall effect on the risk of a teenage birth, but that this effect will operate through other variables such as educational attainment and the timing of first intercourse. Thus, the first model in Table 3 examines only the effects of family background and race and ethnicity. Model 2 controls for family background characteristics to test the effects of dropout status and sex education. Likewise, Model 3 controls for family background, dropout status and sex education to test the effects of timing of first intercourse.

### Hypothesis 6

**Contraceptive use**

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td></td>
<td>58.8</td>
<td>65.0</td>
<td>76.1***</td>
<td>38.4</td>
<td>44.7</td>
<td>63.4***</td>
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</tbody>
</table>

*Time trend across all three cohorts is significant at p<.05. **Time trend across all three cohorts is significant at p<.001.

### Hypothesis 7

**Nonvoluntary sex**

<table>
<thead>
<tr>
<th>First sex was nonvoluntary</th>
<th>Cohort 1 (N=610)</th>
<th>Cohort 2 (N=633)</th>
<th>Cohort 3 (N=542)</th>
<th>Cohort 1 (N=580)</th>
<th>Cohort 2 (N=387)</th>
<th>Cohort 3 (N=234)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>9.3</td>
<td>10.7</td>
<td>8.5</td>
<td>12.5</td>
<td>13.0</td>
<td>6.9***</td>
</tr>
</tbody>
</table>

*Family background. In Model 1, several family characteristics show significant effects on the risk of a first teenage birth. In each cohort, for example, black adolescents had a greater risk of a teenage birth than did whites after the effects of other background factors were accounted for, although the size of the effects differed across cohorts. U.S.-born Hispanic teenagers in Cohort 1 and Cohort 2 had a greater risk of a birth than did non-Hispanic whites, but foreign-born Hispanics did not. An additional analysis among Hispanic respondents (not shown) found that, in Cohort 1 only, being U.S.-born had a stronger effect than being foreign-born on the risk of a first teenage birth.

Some family characteristics had a consistent effect across cohorts. In each cohort, daughters of teenage mothers had a greater risk of giving birth before age 20, and higher maternal education and regular church attendance lowered that risk. Other factors lost significance across the cohorts. A greater number of children was associated with an increased risk of a birth in Cohort 1, possibly reflecting fewer financial and social and emotional resources available for each child, that effect was no longer significant in Cohorts 2 or 3. The effects of Hispanic origin and family type also lost significance across the three cohorts. After controlling for family type and stability, the timing of divorce had a minimal effect, except for an unexpected buffering effect of divorce after age 10 in Cohort 2.

### Individual and school characteristics.

Model 2 includes measures of dropout status and sex education, net of family background characteristics. In each cohort, adolescents who had dropped out of school had a risk of teenage birth more than twice that among teenagers who remained in school. In Cohorts 2 and 3, respondents who reported having discussed with their parents how pregnancy occurs had a significantly reduced risk of giving birth before age 20. In addition, while the odds associated with receiving two or more forms of sex education were less than 1.0 in each cohort, having done so significantly lowered the risk of a teenage birth only in Cohort 2.

Model 3, which was limited to women aged 16 or older at the end of each cohort period, controlled for all of the background variables included in Model 2. The results show that having had sex at a