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## Does the Timing of the First Family Planning Visit Still Matter?

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**Context:** The timing of a first family planning visit relative to first intercourse can affect the likelihood of an early unintended pregnancy.

**Methods:** Nationally representative data from the 1982, 1988 and 1995 cycles of the National Survey of Family Growth were used to examine changes in the timing of first family planning visits and to explore the degree to which young women are now more likely than in the past to practice contraception independently of making a visit to a provider. Cox proportional hazards models were used to estimate how background variables, visit status and the initiation of contraceptive use affected risks of unintended pregnancy in the four years preceding each survey.

**Results:** The proportion of women who waited a month or more after their first intercourse to see a provider grew slightly between 1978 and 1995, from 76% to 79%; women waited a median of 22 months after first intercourse in 1991-1995. Any contraceptive use at first intercourse increased among both women who delayed a first visit (from 51% to 75%) and among those whose first visit occurred before their first intercourse or within the same month (from 61% to 91%). Cox proportional hazards analysis suggests that the protective effect of a first family planning visit decreased over the period studied, due in part to the increase in early contraceptive use.

**Conclusions:** The importance of the first family planning visit appears to be declining, as sexually active young women who delay their first visit increasingly do so because they are already using a provider-independent method (primarily the condom). Thus, a multifaceted approach to providing family planning may now be needed, in which independent method use and visits to providers both play a role.

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During the 1980s, the context of sexual and contraceptive decision-making among young men and women underwent significant changes. The arrival of the AIDS epidemic brought an increased awareness of the role condoms play in the prevention of sexually transmitted diseases (STDs), and governments and schools increased efforts to promote both sex education and condom [use](#).<sup>1</sup>

Partly as a result of these [changes](#),<sup>2</sup> early contraceptive use among young women, including use at first intercourse, increased substantially between 1980 and 1995. An increase in condom use at first intercourse was mainly responsible for this overall rise,

since levels of early pill use remained comparatively stable. According to data from various cycles of the National Survey of Family Growth (NSFG), 25% of women who became sexually active between 1980 and 1984 used a condom at first intercourse, compared with 54% among those who initiated sex between 1990 and 1995. The proportions who used the pill at first intercourse were 22% in 1980-1984 and 16% in 1990-1995, respectively. Overall, 76% of women used some method of contraception at first intercourse during the 1990-1995 period, whereas only 59% had done so in 1980-1984.<sup>3</sup>

Since the condom is widely available and does not require a visit to a provider, the rapid increase in its use at first intercourse suggests that young women and men may be relying less on family planning providers as their first source of protection against pregnancy. An analysis of 1982 NSFG data determined that 17% of sexually active women aged 15-24 in 1982 had visited a family planning provider before their first intercourse, and that an additional 10% had made their first visit within the same month.<sup>4</sup> Among the remaining 73% (who waited at least a month), the median time to the first visit was 23 months. Thus, at the beginning of the 1980s, the vast majority of women who initiated sex did so before visiting a family planning provider, and the typical woman waited approximately two years to make her first visit.

Traditional thinking has held that a long interval between first intercourse and first visit to a provider has negative implications for young people, since the months immediately after initiation of intercourse are a prime period for pregnancy to occur, due in part to low levels of contraceptive use.<sup>5</sup> Past research has indicated that the main reason for long delays may be simple procrastination or anxiety about seeing a provider.<sup>6</sup>

However, the relationship between first intercourse and first visit may now be changing. Specifically, increased use of provider-independent methods may mean that recent cohorts of women who delayed a visit were better protected during that interval than were earlier cohorts. Indeed, longer delays might result if women are *already* practicing contraception, and thus do not need to see a provider.

Moreover, the first visit has been seen not only as an opportunity to initiate contraceptive use in general, but also to receive more effective medical methods, such as the pill. However, young women and their partners may now be using the condom more effectively as well as more frequently than in the past, so provider visits to obtain more effective methods may not be as critical for pregnancy prevention as they once were.

Previous analyses of this crucial interval of exposure to pregnancy have been limited to explorations of the individual and institutional factors that affect first family planning visits<sup>7</sup> and to characterizations of the interval's length<sup>8</sup> and of the risks of pregnancy associated with it.<sup>9</sup> Moreover, such analyses were all done before national data from the 1988 and 1995 NSFGs became available.

This article examines the interval between first intercourse and first visit to a family planning provider for services or counseling, and how this interval has changed over time. We use data from the three most recent NSFG cycles to examine the typical interval length and trends in that length, as well as indicators of contraceptive use and

pregnancy risk during that interval. Specifically, we address the following questions: What proportion of women wait until after first intercourse to make a family planning visit, and for how long do they wait? Has the proportion using a method at first intercourse increased both among those who visited a provider early and among those who waited? Has the risk of pregnancy in that previsit interval changed over time? And, finally, how does the relative risk of pregnancy among women who put off a visit compare with that among women who did not, and how has this relative risk changed over time?

These last two points are key. If early contraceptive use among women who delayed a visit increased, then the risk of unintended pregnancy during that interval may have decreased, regardless of the duration of the interval (that is, women who delayed might have been "catching up" to those who did not in terms of protection against pregnancy). If the difference in early pregnancy risk between those who visited a provider before first intercourse and those who delayed declined over time, this would imply that the timing of the first visit became less crucial than it was in the past, since more recent cohorts would have been better protected during the previsit interval than their predecessors.

## DATA AND METHODS

Our analyses are based on data from the 1982, 1988 and 1995 NSFG rounds (Cycles 3-5). These nationally representative surveys were conducted among women aged 15-44 at the time of the interview. Due to concerns about women's ability to accurately recall the timing of distant events, those aged 25 and older were not asked about the date of their first family planning visit in the 1995 NSFG; therefore, we limited the data from all three surveys to women who were younger than age 25 at the interview.

In another effort to limit recall bias, we restricted our sample to women who had had sex for the first time within the four years preceding the interview; the periods examined are, therefore, 1978-1982, 1984-1988 and 1991-1995. The resulting data set contained a total of 3,252 women, approximately 1,000 from each survey round; the following analyses were based on this subgroup of young women.

The level of precision for the date of sexual debut was limited to calendar month. Therefore, among women for whom first coitus and first visit occurred in the same month, some visited a provider before their first experience, while others waited, albeit briefly, until afterwards. Because we could not separate out these two groups and since the delay would have been short at most, we grouped together all women whose first visit occurred before first intercourse and those whose first coitus and first visit occurred in the same month. The remaining women either made their first visit in the month following first intercourse or later, or had not yet gone to a provider by the time of the interview.

Assessing the risk of a first pregnancy would ideally take into account each woman's level of sexual activity, starting with the month in which she initiated sex.

Unfortunately, data on frequency of early sexual intercourse were unavailable for some women in our sample. For example, in the 1988 NSFG, when women were asked about periods in which they did not have intercourse, they were asked to provide this information only for the time since their "most recent pregnancy, first intercourse or

January 1982," whichever was most recent.

Moreover, while the 1988 and 1995 surveys included a month-by-month calendar for reporting contraceptive use, the 1982 survey did not. Thus, in the following analyses, we designated the method used at first intercourse as a proxy for all early method use. When a woman relied on more than one method at her first coitus, she was counted as a user of the more effective method (e.g., a woman who used both a condom and the pill at first intercourse was considered a pill user).

We used an event history model to examine the predictors of the length of time from first intercourse to an unintended conception. The outcome (or event) variable was the woman's first unintended conception, and the unit of analysis was woman-months. Each woman was observed for the duration between first intercourse and first unintended conception (or between first intercourse and interview, if she had not experienced such a conception). Cox proportional hazards techniques were used to estimate the significance of a series of independent variables.

Fixed independent variables included age at first intercourse, mother's education, race and ethnicity, and religious affiliation. Age at first intercourse has been shown to be inversely related to the risk of pregnancy soon after intercourse.<sup>10</sup> Mother's education can be seen as a rough proxy for socioeconomic status, and affects both age at first intercourse and the likelihood of contraceptive initiation at first intercourse.<sup>11</sup> Since method use at first intercourse varies by race and ethnicity,<sup>12</sup> and minority women are more likely than white women to experience unintended pregnancies,<sup>13</sup> we included race and ethnicity as a predictor. Contraceptive use patterns also vary by religious affiliation.<sup>14</sup>

The key predictor of interest, whether the woman had made a family planning visit, was included as a time-varying covariate. Family planning visit status was coded as zero for each woman-month in which a visit had not yet been made and as one for each woman-month after a provider had been seen. If a woman made her first visit before she first had intercourse, this variable was coded as one for every month in which she was observed. The hazard ratio for the first-visit variable can therefore be interpreted as the protective effect of having made a first family planning visit (compared with not having made one) for two women with similar demographic characteristics who initiated intercourse at the same age. To examine changes in the significance of the family planning visit variable over time, we included the year of the survey as an indicator variable, setting 1982 as the reference category, and also included an interaction between each survey year and family planning visit status.

We theorized that a visit to a family planning provider could have a protective effect in at least two ways—first, by inducing women who had never practiced contraception to begin doing so, and second, through improving contraceptive effectiveness by encouraging better use of a current method or a switch to a more effective one. To decompose these effects, we also estimated a model that included a second time-varying covariate, this one for contraceptive initiation. This variable was coded as zero until a woman used any contraceptive for the first time and as one thereafter.

We ran three separate Cox models—one that controlled for all demographic variables and family planning visit status, a second that omitted the visit controls but added one

for contraceptive initiation, and a third that included all three sets of variables.

In the Cox models, a woman who ceased to be at risk of the event in question—an unintended conception by the time of the interview—was "censored," or removed from the analysis, at the time she was no longer at risk. Women who experienced an *intended* conception were also censored at that time. Clearly, these women had stopped being at risk of an unintended conception some months beforehand; such women effectively censored themselves when they began trying to conceive. However, it was impossible to determine the specific month in which any woman began trying to conceive. Therefore, we repeated our analysis in this way: We censored pregnancies to women who reported that the conception was "timed right" at seven months before conception (the average amount of time until conception among couples having unprotected intercourse<sup>15</sup>); those who indicated that their first conception did not occur soon enough were censored 14 months before conception. The results of this analysis did not differ substantially from the original models (in which women were censored at the time of an intended conception); thus, only the results from the original models are presented.

## RESULTS

### Descriptive Analyses

The percentage of women who made their first visit to a family planning provider before their first intercourse or in the same month decreased slightly over time, first falling sharply from 24% in 1978-1982 to nearly 18% in 1984-1988, and then rising slightly, to 21% in 1991-1995.

Life-table analysis indicated that for the remaining 76-83%, depending on the survey, who waited a month or more after their first intercourse to visit a provider, the length of this delay rose somewhat during the 1980s and early 1990s: The median time between first intercourse and seeing a provider in the four years preceding the survey was 21.9 months for women interviewed in 1995, an increase from the median of 16.7 months reported by women interviewed in 1982.\* Most of the increase in the median time between first intercourse and first trip to a provider occurred between the 1982 and 1988 surveys; the interval length was essentially unchanged between 1988 and 1995 (i.e., 22-23 months).

Thus, the total "delay time"—the interval in which women are sexually active without having visited a family planning provider—increased somewhat from the early 1980s through the mid-1990s. A larger proportion of women waited until after they had become sexually active to make a first family planning visit, and the typical woman waited a few months longer before seeing a provider. But even though the delay time increased, the fact that the median age at first intercourse declined somewhat during the 1980s (from 17.7 years for the cohort born in 1960 to 16.5 for those born in 1975<sup>16</sup>) suggests that the *age* at first visit remained stable over time. Life-table analysis of age at first visit for the women in our sample confirmed this finding (data not shown).

As 76-83% of young women who initiated sexual activity did not see a provider before or in the same month as when they first had intercourse, the growth in contraceptive use at first intercourse among women who delayed their first visit should mirror the

increase for the population as a whole, an increase that has been previously described. As Table 1 shows, this was indeed the case. The increase in method use at first coitus among women who had not seen a provider—from 51% to 75%—was almost entirely due to an increase in condom use, from 26% to 67%. However, a small proportion (2-4%) reported using the pill at first intercourse, even though these women had not yet visited a family planning provider. While some of these women may have obtained the pill from a friend, it is likely that some obtained it from a medical provider for purposes of menstrual regulation.

**Table 1. Percentage distribution of U.S. women younger than 25, by method used at first intercourse, according to timing of first family planning visit and year of National Survey of Family Growth (NSFG)**

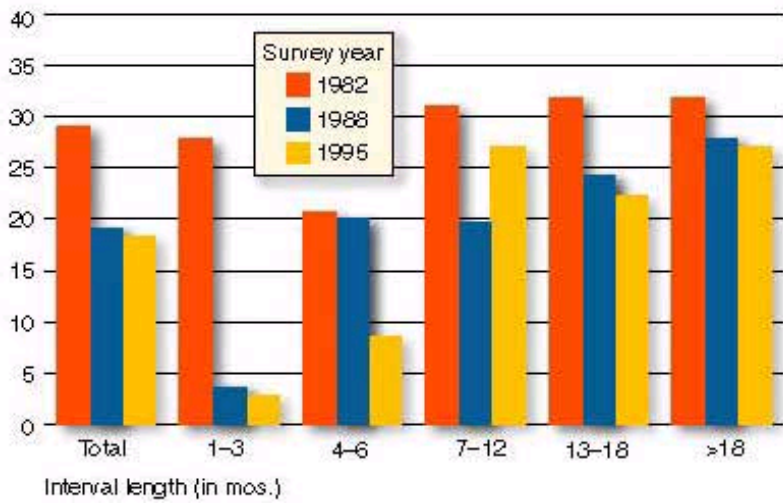
Method	Before or in same month as first coitus (N=756)			At least one month after first coitus (N=2,496)		
	1982	1988	1995	1982	1988	1995
Pill	40.0	54.3	56.9	2.9	3.5	2.1
Condom	12.5	15.7	30.4	25.8	49.9	67.3
Other*	9.0	4.4	3.4	22.7	12.2	6.0
None	38.5	25.6	9.3	48.7	34.4	24.5
Total	100.0	100.0	100.0	100.0	100.0	100.0

\*Other methods are primarily natural family planning, withdrawal and the sponge.

Notably, among the women who made a family planning visit before first intercourse or within the same month, the proportion who used any method also rose dramatically over the period, from 61% in 1978-1982 to 91% in 1991-1995. And the proportions using specific methods rose accordingly, from 12% to 30% for the condom, and from 40% to 57% for the pill. Most of this growth in pill use occurred during the 1980s, while the bulk of the increase in condom use took place between 1988 and 1995.

To assess the risk of pregnancy *before* a first family planning visit, we divided the women who delayed a first [visit](#)<sup>†</sup> into five groups by the duration of the interval between first coitus and first visit, and calculated the proportions experiencing an unintended conception in each duration category. As Figure 1 shows, regardless of the length of delay, the percentage having an unintended conception declined between 1982 and 1995, suggesting that pregnancy risk in the previsit interval fell steadily over time. As expected, the percentage experiencing an unintended pregnancy increased with the length of the interval.

**Figure 1. Percentage of women who unintentionally became pregnant between first coitus and first family planning visit, by length of that interval, according to survey year**



## HAZARDS ANALYSES

The findings imply that contraceptive use in the interval after sexual initiation but before a visit increased over time, while pregnancy risk decreased. We now turn to the question of whether young women who delayed a first visit until after their first intercourse lowered their risk of pregnancy to the same level as young women who visited a provider promptly—in other words, whether the difference in the relative risk of pregnancy for the two groups has decreased.

Table 2 shows the results of the Cox proportional hazards models. The hazard ratios, which were calculated by exponentiating the coefficients produced by the models, indicate the change in the risk of unintended pregnancy associated with a unit change in continuous variables or, for the categorical variables, the risk of pregnancy among a particular group compared with a reference group. (All coefficients were significant at  $p < .001$ .)

Characteristic	Background variables plus visit status	Background variables plus initiation of use	All variables
<b>Race/ethnicity</b>			
White	1.00	1.00	1.00
Black	1.74	1.48	1.50
Other race/ethnicity	1.14	1.25	1.23
Mother's education	0.97	0.99	0.99
Age at first intercourse	0.93	0.96	0.96
<b>Religion</b>			
Protestant	1.00	1.00	1.00
Roman Catholic	0.88	0.86	0.86
Other	0.49	0.49	0.49
None	1.10	1.09	1.09
<b>Survey year</b>			
1982	1.00	1.00	1.00
988	0.74	1.41	1.40
1995	0.54	1.26	1.22
Made a visit			

Yes	0.57	na	0.88
No	1.00	na	1.00
Interactions			
1982 x visit status	1.00	na	1.00
1988 x visit status	0.92	na	0.94
1995 x visit status	1.13	na	1.04
Initiated contraceptive use			
Yes	na	0.19	0.20
No	na	1.00	1.00
Notes: All hazard ratios are significant at $p < .001$ . na=not applicable.			

Looking first at the analysis that adjusted for all demographic variables and for the first family planning visit, the hazard ratio for black women (1.7) suggests that their risk of unintended pregnancy was 70% higher than that of white women. The ratio for women of other racial and ethnic groups was also higher than 1.0 (1.1), so these women were at a slightly higher risk of early unintended pregnancy than white women.

The hazard ratio for age at first intercourse was slightly less than 1.0; thus, increasing age at first intercourse had a protective effect, albeit a small one, on young women's risk of a first unintended pregnancy.

The hazard ratio for making a first family planning visit was also less than one (0.57). This indicates that women who made a visit were 43% less likely than those who had not yet made one (i.e., those who remained in the previsit interval) to have an unintended conception.

The hazard ratio for the interaction between the first family planning visit and the 1988 survey relative to the 1982 survey—0.92—means that respondents in the 1988 survey who made a visit were less likely to have become pregnant relative to 1982 respondents, so the first visit had a slightly more protective effect in the 1988 survey than in 1982 survey (i.e., the level of protective effect increased slightly between 1982 and 1988). However, the hazard ratio for the interaction between a first visit and 1995 (1.1) means that women in the 1995 survey who saw a provider were more likely than those in the 1982 survey to have become pregnant unintentionally, and thus the overall protective effect decreased significantly between 1982 and 1995. By implication, the decrease in the protective effect of a first visit occurred between 1988 and 1995. [†](#)

According to the analysis that did not factor in the family planning visit variable (middle column of table), the effect of initiating contraceptive use on the risk of an unintended pregnancy was dramatic—a reduction in risk by 81%, or a hazard ratio of 0.19.

When contraceptive initiation and family planning visit status are both included in the analysis (third column of Table 2), the hazard ratio of the risk of unintended pregnancy among those who initiated contraceptive use remains quite low (0.20); thus, such women were at a significantly lower risk of unintended conception, even when a family planning visit was taken into account. Notably, the hazard ratio for the effect of a family planning visit on the likelihood of an unintended pregnancy (0.88) while still less than 1.0, is nonetheless much closer to 1.0 than was the case when the analysis did



not control for initiating use (hazard ratio of 0.57). Adding this control significantly reduced the effect of a family planning visit; thus, a substantial part of a visit's protective effect appears to work through encouraging contraceptive initiation.

Overall, the protective effect of a first visit was lower in the 1995 survey than in the 1982 survey, which suggests that women who delayed a visit in 1991-1995 (compared with those in the same time period who made a visit promptly) did not lose as much by doing so as similar women who delayed a first visit in 1978-1982. This finding results largely from the fact that 1995 respondents who delayed a visit were more likely than 1982 respondents who delayed to have used a method independently of making a visit.

## DISCUSSION

American women have significantly improved their early contraceptive use. An increase in method use at first intercourse occurred both among those who visited family planning providers promptly and among those who did not. A shift toward condom use as a first method was apparent not only among women who put off a visit, but also among those who went for services before they became sexually active. This finding might be attributable to a greater awareness of AIDS and other STDs and to the desire of more women to protect themselves from diseases and from pregnancy.

The proportion of women who made a family planning visit before their first intercourse declined slightly over the period, while the interval between sexual initiation and a first visit increased among those who delayed. However, the proportion of women who unintentionally became pregnant before their first family planning visit declined regardless of the length of time until a first visit, implying that contraceptive protection during that interval improved overall. This decrease in risk occurred even as the median age at first intercourse declined over time. This finding is notable, given that research has shown that adolescents who begin having intercourse at the youngest ages run an especially high risk of unintended [pregnancy](#).<sup>17</sup>

The bivariate and multivariate analyses provide some support for the notion that women who delay a first visit are catching up to those who see a provider early in terms of protection against pregnancy. As mentioned earlier, increased education about AIDS and pregnancy have doubtless contributed to this change in contraceptive use, specifically in condom use. But it is also possible that the increase in early contraceptive use is associated with the fact that early initiation of sexual intercourse has become more normative, and is no longer restricted to a population of high-risk youth. Thus, current cohorts of adolescents who now begin sexual activity may be more inclined, on average, to use protection than were previous, more selected cohorts.

Our analysis was limited by our inability to measure sexual frequency or the regularity of contraceptive use during the interval between sexual debut and a first visit to a provider. Clearly, a more accurate measurement than our simple date-of-first-use proxy is needed. Moreover, our analysis did not examine use of new medical methods, such as the contraceptive implant and injectables; the effect of the introduction of these longer-acting methods on the possible additional protective effect of a visit needs to be ascertained. (However, at the time the data studied here were collected, the new methods might not have been available long enough to significantly affect our

analysis.)

The data suggest that while family planning visits continue to have a protective effect against pregnancy, women more frequently practice contraception independently of providers. This finding should encourage those who advocate increased education about contraception, since it suggests that public education works. It may be that effective family planning now requires a multifaceted approach. Independent contraceptive use and family planning providers' efforts both play an important role in protecting women against unintended pregnancy.

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\***This** median of nearly 17 months is not directly comparable to that of 23 months calculated by Mosher and Horn (see reference 4), since we limited our sample to women who had experienced their first intercourse in the four years preceding the interview.

†**By** definition, only women whose first visit followed first intercourse by at least one month could be categorized by length of the interval between first coitus and first family planning visit, since the interval length was zero (or negative) for women who saw a provider either before their first coitus or in the same month.

‡**The** hazard ratios for a first family planning visit at each time period can be calculated by multiplying the ratio for a visit by each family planning visit interaction term. Since 1982 is the reference category, the hazard ratio

for 1982 is simply 0.57. The hazard ratio for 1988 would be  $0.57 \times 0.92$ , or 0.53, and the hazard ratio for 1995 would be  $0.57 \times 1.13$ , or 0.65.