Source of Service and Visit Rate of Family Planning Services: United States, 1982

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Synopsis ....

The factors that affect how women choose their source of family planning care and how often they go for such care were investigated in the National Survey of Family Growth. The survey is based on a national sample of women 15–44 years of age interviewed in 1982, 4,318 of whom had family planning visits in the last 3 years. In contrast, previous research has (a) been based on small, nonrepresentative samples, usually in one or a few locations or limited to visits to either private doctors or clinics, but not both; (b) been limited to teenagers; or (c) had no multivariate analysis. This study overcomes those limitations.

When other variables were controlled, race, income, and insurance coverage had important effects on provider choice; marital status was important for white women, but not for black women. Contraceptive method, insurance coverage, and race were important determinants of the frequency of family planning visits, independent of other variables. It is suggested that relative costs or ability to pay, confidentiality, knowledge of alternative sources, and convenience of location affect choice of provider and visit rates.

FERTILITY CONTROL AMONG MARRIED COUPLES in the United States improved dramatically in the last two decades. The proportion of recent births to married women that were unplanned dropped from 65 to 29 percent between 1965 and 1982 (*1a*). This dramatic reduction was accompanied by equally sweeping changes in contraceptive use among American women, especially the shift toward sterilization, the pill, and the intrauterine device (IUD) (*1b*). All of these methods require at least one visit to a physician or a clinic to begin use. Furthermore, use of the pill requires frequent followup visits to renew the prescription and check for side effects. Because of this close connection between the most effective methods of contraception and the need to get them from a physician, a complete understanding of contraceptive practice and fertility patterns in the United States requires knowledge about the patterns of use of family planning services.

Despite the progress in fertility control among married couples, a rising level of exposure to the risk of pregnancy increased the need for family planning services to unmarried women. During the last two decades, the proportion of women who had premarital intercourse rose dramatically—from 52 percent in the early 1960s to 79 percent in the late 1970s. At the same time, the proportion who had their first intercourse 3 years or more before their first marriage increased from 8 to 40 percent (*2,3*). Thus, the proportions of women exposed to the risk of premarital pregnancy and childbearing, and the length of that exposure, both increased sharply. Reported legal abortion rates of unmarried women increased during the 1970s (*4*), and birth rates to unmarried women have increased somewhat since 1970 (*5*).

In the 1960s and early 1970s, as the pill, sterilization, and the IUD were making effective and convenient contraception possible, research revealed that bearing large numbers of children at short intervals, or at very old or young ages, posed adverse health and economic consequences for both mothers and children (*6,7*). Research also showed that low-income women wanted about the same number of children as other women, but had more unplanned pregnancies (*6-8*). These findings suggested that publicly supported family planning programs would be welcome by many low-income families. At that time, Campbell estimated that a program to enable poor women to avoid unwanted births would yield economic benefits much greater than program costs (*9*).

In response to these findings and other events, a number of family planning programs were established by the Federal Government, including Titles

V (Maternal and Child Health), X (Family Planning), XIX (Medicaid), and XX (Social Services) (10). The major purpose of these programs was to provide family planning services to women who wanted them, particularly low-income women and adolescents (11,12).

Although 5 million patients are served each year by subsidized family planning programs (13), little is known at a national level about why some women choose clinics and others choose private physicians for family planning services (provider choice) or how often women receive such services (visit rate).

Three types of studies on provider choice are useful as background although none of them have all of the strengths of the present study. First, several descriptive reports from the National Survey of Family Growth show national estimates of percentages of women using clinics and those using private physicians for family planning services. The earlier studies, however, were based only on currently married women and only on the most recent visit (14,15). Further, these studies were based on an inadequate measure of family planning services (16). More recent studies using better measures (1c,16) have confirmed some of the previous findings: black women, teenagers, never-married and low-income women are more likely to use clinics for their family planning services than other women, and those same groups have higher visit rates to clinics. However, none of these studies include multivariate analyses to determine which characteristics cause the patterns, and none had data on the reasons why these groups were more likely to use clinics than other women. The National Reporting System for Family Planning Services (17) provided information on visits to nonmilitary clinics from 1972 to 1980, but was discontinued in 1981. However, it specifically excluded visits to private physicians' offices, so it could not offer insight into the issue of provider choice. The same point is true of the National Ambulatory Medical Care Survey (18), which was limited to visits to private physicians, so it does not shed light on the issue of provider choice.

The second type of study was based on interviews with private physicians in a few local areas (19,20). Silver found that most of the 226 physicians in his sample were willing to provide family planning services if asked, but most were not willing to raise the matter themselves. Also significantly, about two out of three physicians said they would like to acquire more training in the family planning if it were available, suggesting that many were not comfortable with their knowledge of the subject. Although these studies yielded useful insights, they were conducted in the early 1970s, were based on local, nonrepresentative samples, contained no data on clinics (the other possible source of family planning care), and used no multivariate analysis.

Third, the reasons for teenagers' visits to clinics were explored in three studies (21-23). In the study by Chamie and coworkers, based on a purposive, nonrepresentative sample of clinics, a sample of teenage patients was asked why they went to the clinic rather than a private physician. The leading reason, cited by two out of three of the teenagers, was that a private physician was too expensive; the average private doctor's fee for a family planning visit in those areas was $40, while many clinic patients paid no charge and, for those who did pay, the average clinic charge was only $11. Other important reasons for choosing a clinic, cited by one in four teenage women, included fear that a private physician would tell their parents and not knowing of a private physician to see. Many teenagers were living with their parents and would not have had their own medical insurance or enough income of their own to pay the fees of a private physician. Thus, low fees (or free care) and confidentiality were paramount issues for this sample of teenagers.

Zabin and Clark (21) interviewed teenage patients in clinics in eight cities. These patients reported that the most important reasons for choosing a particular clinic over any other source of family planning care were (a) confidentiality (the staff did not tell their parents); (b) the staff "cared about" teenagers, (c) a close, convenient location, (d) their friends used that clinic, and (e) it was the only clinic the patients knew about. These studies yielded valuable insights into the reasons why teenagers make family planning visits to clinics: cost, confidentiality, proximity, and knowledge of alternatives are important factors. Yet the studies had important limitations: they were not based on national samples, they included no multivariate analyses, they sampled only teenagers, and they excluded women who went to private physicians.

An ideal study to determine why women choose a physician or clinic would be based on a national sample of all women—those going to private physicians and to clinics. Because personal characteristics are correlated, it would include multivariate analysis in order to isolate the most important determinants of behavior, and it would

ask direct questions on the reasons for provider choice and the frequency of visits. This analysis meets most of these criteria: it is based on a national sample, it includes visits to both physicians and clinics, and it includes multivariate controls. We also have data on both the first and most recent visit, and on the number of visits in the last year. Although the data do not include direct questions on reasons why women chose their provider, these can be inferred from the multivariate analysis and from the available literature.

Data and Methods

The data in this paper are based on the 1982 National Survey of Family Growth, conducted by the National Center for Health Statistics. Data were collected in personal interviews with a national probability sample of women 15–44 years of age in the noninstitutional population of the conterminous United States, including 4,318 women who had made a family planning visit in the last 3 years. For the first time, in a U.S. national fertility survey, women of all marital statuses aged 15–44 were interviewed. Black women were sampled at a higher rate than other women so that reliable statistics could be calculated for them. The interview focused on the woman's pregnancy history, her past and current use of contraception and, for the first time, a detailed series of questions on use of family planning services.

The data on family planning services are based on a series of questions asked of women who had ever had intercourse. Specifically, women were shown a card that listed a wide range of family planning services and asked to report whether they had used any of them in the past 3 years. The services included counseling about birth control and sterilization, checkups or tests for correct use, fit, or position of a birth control method, and visits to get a new method or renew a method. Respondents also were asked which of these services, if any, they had received at the first family planning visit, during a visit in the past 12 months, and at their most recent family planning visit. For each period, women were shown a card that listed the various types of clinics and private medical services and asked, "at which of the places on this card have you received these family planning services?" Those who had one or more family planning visits during the 12 months before the survey were asked how many times they visited

a clinic, and how many times they visited a private physician, for family planning services in those 12 months. Visit rates were calculated by adding the total number of visits and dividing that sum by the number of nonsterile sexually active women. This gives a measure of the total volume of demand for family planning services that is not revealed by the percentage of women using a clinic.

Because of the many different sampling rates used in the survey, weighted data were used; the responses were multiplied by the number of women in the population that each sampled woman represented, corrected for nonresponse, and adjusted to independent control totals from the U.S. Bureau of the Census. Therefore the data we show are national estimates. Differences between percentages and visit rates in this paper were tested with two-tailed t-tests using standard errors derived especially for the 1982 survey by the balanced half-sample replication technique, an accurate method for estimating sampling errors from complex samples (24).

The sampling errors are estimated by (a) dividing the sample into parts, or subsamples (called pseudostrata), (b) calculating variances in each of the 40 subsamples for a wide range of selected statistics, (c) fitting regression equations to the estimates of sampling errors for the 40 subsamples, and (d) using the equations to calculate the sampling errors for this and other analyses of the 1982 data. The estimates are affected by the number of sample cases on which a given weighted percent or number is based and by the sample design of the survey. Thus, the standard errors and t-tests used in this paper are appropriate for use with these weighted data (24).

The variables chosen for analysis were based on the studies discussed previously. Subsidized family planning programs are intended for women who need and want such services but cannot afford them or have limited access for other reasons. Groups that meet these criteria often include black women, the poor, unmarried women, and minors. The education of the respondent's mother is an indicator of socioeconomic status during the respondent's youth. Logically and theoretically, it is a better indicator of socioeconomic status at first visit than the respondent's education, which may postdate the first family planning visit. Therefore, we have used education of mother for the first visit and education of respondent for the last visit.

Results were similar, however, using either measure. Region was chosen to see if gross geographic differences in provider choice exist. Questions on

Characteristic	All races [2]		White		Black	
	Observed [3]	Adjusted [4]	Observed	Adjusted [4]	Observed	Adjusted [4]
Total............................	50	...	45	...	72	...
Marital status[5]:						
Ever married........................	41	44	38	38	76	79
Never married	58	55	53	52	71	70
Income as percent of poverty level:						
0–99 percent........................	65	59	56	54	81	80
100–199 percent	49	49	45	44	67	66
200 or more percent................	44	46	41	42	64	66
Education of mother:						
0–11 years	58	56	52	51	78	77
12 years............................	43	45	38	39	72	72
13 years or more...................	52	52	51	49	56	60
Race:						
White	45	47	...	...	...	...
Black	72	65	...	...	...	...

the source of service for the first visit were asked only of women aged 15–24 at the time of the interview, because women 25–44 could not be expected to recall accurately all of the details of their first family planning visit.

Findings

First visit. Our detailed discussion of provider choice will focus on the most recent visit. First, however, we will briefly summarize provider choice at the first family planning visit. The percentage who chose a clinic rather than a private physician for their first family planning visit varied substantially by characteristics of the women. Overall, of women aged 15–24 who had ever had a family planning visit, 50 percent went to a clinic at their first visit (table 1). The other 50 percent went to a private physician, private group practice, or private health maintenance organization.

The largest, most persistent differences were those by race. Black women were far more likely to use a clinic at their first visit than white women (72 percent compared with 45 percent, a difference of 27 percentage points). The percentage using a clinic was significantly higher for black than for white women in every subgroup in table 1. Because of these very large differences by race, all subsequent analyses are presented separately for white and black women.

We also performed a multiple classification analysis to adjust each percentage for the effects

of the other variables in table 1. Multiple classification analysis is a convenient way of presenting our results because it allows us to adjust the percentages and visit rates for several variables at a time, and to display the findings as observed percentages (before controls) and adjusted percentages (after multivariate controls).

In addition to race, provider choice at first visit is significantly affected by income, marital status at interview, and education of mother. For white women and the total, the percentage using a clinic at first visit was highest for women with incomes below the poverty level (0–99 percent of poverty), never-married women, and those in the highest and lowest education groups.

For black women, the percentage using a clinic was highest for women with incomes below the poverty level, and those in the lowest education group. There was no significant difference by marital status for black women.

In summary, a typical woman who used a clinic rather than a private physician at her first family planning visit was likely to be black, poor, never married, under age 17 at first visit (not shown in table 1), and have a mother with less than a high school education.

Never-married white women were younger and more likely to be living with their parents; they were thus more likely to be concerned with cost and confidentiality and more likely to use clinics (22,23). Black women and low-income women may have been less mobile and less likely to have their

own insurance and their own incomes, and these factors undoubtedly affect provider choice. We can measure some of these factors at the last visit, but not at the first. Of those variables tested (table 1), the most important determinant of provider choice at first visit was race, independent of income and mother's education.

Most recent visit. Our examination of the data for first visit shows the important role of clinics—half of all first visits are to clinics. However, we now turn our attention from the first visit to the most recent visit. This shift has several advantages. First, the number of cases more than doubles, from 1,855 to 4,318, because the question on the source of service for the most recent visit was asked of women in the entire reproductive age range (15-44). Second, using the last visit shows a more current snapshot of provider choice, and it has an analytical advantage because the independent and dependent variables are closer together in time. Third, some variables not available for the first visit were collected for the last visit.

Some women had had only one family planning visit in their lives, so that their first visit was also their most recent. Undoubtedly this was rare except among teenagers, whose first visit often was made quite recently. However, it was not possible to determine how many women had had only one visit for family planning in their lives from the questions asked in the survey in 1982. In the 1987 survey, it will be possible to determine this.

Overall, about 30 percent used a clinic at their last visit (table 2), and 70 percent used a private physician. But these percentages varied sharply by characteristics of the women. As at first visit, black women, regardless of their other characteristics, were much more likely than white women to use a clinic at their last visit. About 53 percent of black women and 26 percent of white women used a clinic at their last visit; this difference was 27 percentage points and was significant well beyond the .001 level. The difference by race was found in every subgroup in table 2 and was significant at the .001 level in most of the comparisons.

Use of a clinic at last visit varied sharply by other characteristics as well. The proportion using a clinic was 56 percent among poor women, only 32 percent for those with marginal incomes (100–199 percent of poverty) and 22 percent in the highest income group. For both first and last visit, then, the largest difference was found between those in the two lowest income groups, for all races and for white; among black women, the

Table 2. Percent of women 15–44 years of age in 1982 who used a clinic[1] at their most recent family planning visit, by race and selected characteristics: United States, 1982[2]

Characteristic	All races[3] (N = 4,318)	White (N = 2,316)	Black (N = 1,897)
Total	29.9	25.9	52.8
Income as percent of poverty level:			
0–99 percent	55.9	50.8	68.7
100–199 percent	32.4	27.9	51.7
200 or more percent.......	22.1	20.5	38.5
Marital status:			
Never married	48.2	44.0	60.8
Currently married	20.7	18.6	41.6
Formerly married.........	29.8	26.2	48.1
Region:			
Northeast................	27.8	24.2	54.5
North central.............	26.5	24.2	46.4
South	35.7	29.3	57.5
West....................	27.1	25.3	40.6
Education:			
0–11 years	50.3	46.2	66.2
12 years.................	26.1	20.6	57.1
13 years or more.........	23.7	21.9	37.6
Residence:			
Central city	35.1	28.7	52.5
Suburb..................	25.0	23.2	48.0
Nonmetropolitan	33.1	28.8	59.5
Age at first family planning visit:			
Under 17 years	43.1	36.0	66.8
17–18 years	33.2	30.0	52.7
19 years or older.........	23.8	21.0	43.4
Source of payment:			
Insurance................	14.1	12.3	29.6
No insurance	37.7	33.1	59.8
Medicaid	67.4	62.5	75.0
No Medicaid	27.3	24.4	46.9
Age:			
15–19 years	52.2	45.9	75.1
20–24 years	36.5	32.0	59.9
25–29 years	28.4	25.3	48.3
30–34 years	19.9	17.2	39.2
35–39 years	14.4	11.9	30.9
40–44 years	19.6	[4]17.4	[4]35.3

[1] The complement of the percent using a clinic (for example, 49.7) is the percentage using a private physician, private group practice, or health maintenance organization (for example, 50.3).
[2] All percentages in this paper are national estimates based on weighted data.
[3] Includes white, black, and other races.
[4] Has a large relative standard error.

differences between income categories were more equal. For both white and black women, the percentage using a clinic differed by about 30 percentage points between the lowest and highest income groups.

Differences by marital status were strong and significant: 48 percent of never-married women, 30 percent of formerly married women, and 21 percent of currently married women used a clinic at their last visit. This pattern—with never married the highest, currently married the lowest, and formerly married between the two—was present

Table 3. Multiple classification analysis: observed and adjusted percent of women 15–44 in 1982 who used a clinic at their most recent family planning visit, United States, 1982

Characteristic	All races		White		Black	
	Observed	Adjusted[1]	Observed	Adjusted	Observed	Adjusted
Total..................	30	...	26	...	53	...
Race:						
White	26	28	...	...	...	...
Black	53	43	...	...	...	...
Marital status:						
Currently married..........	21	26	19	21	42	54
Formerly married..........	30	29	26	26	48	52
Never married	48	39	44	37	61	53
Income as percent of poverty level:						
0–99 percent..............	56	42	51	40	69	63
100–199 percent	33	30	28	26	52	52
200 or more percent.......	22	27	21	23	39	44
Education:						
0–11 years	50	43	46	39	66	58
12 years..................	26	26	21	21	57	58
13 years or more..........	24	28	22	25	38	44
Source of payment:						
Insurance.................	14	21	12	18	30	38
No insurance	38	35	33	30	60	57

[1] Adjusted for all other variables in the table, plus age (in single years).

for both white and black women separately. These data by income and marital status suggest that cost and confidentiality are important factors in provider choice.

About 36 percent of women in the South used a clinic at their last visit, compared with about 27 percent in the other three regions. In further tabulations (not shown), we found that women living in the South were more likely than women in the other three regions to use clinics at their last visit, especially among black women and among white women living in nonmetropolitan areas.

Differences by education were very large; women with less than a high school education were most likely to use a clinic at last visit (50 percent), compared with 26 percent of those with 12 years of education and 24 percent of those with some college. For white women, the largest difference in the percentage using a clinic was between women with 0–11 and 12 years of education, but for black women, the largest difference was between 12 and 13 or more years. This is similar to the pattern found at first visit by education of mother.

Women whose first family planning visit was before age 17 were about 20 percentage points more likely to use a clinic at their last visit than women whose first visit was at age 19 or later. This inverse relationship was also found for both white and black women separately. By age at interview, the percentage using a clinic declined

from 52 pecent among teenagers to 14 percent at age 35–39 and rose nonsignificantly between ages 35–39 and 40–44 for all races and for white and black women separately.

Data also were collected on how the last family planning visit was paid for (table 2). Because clinics cost less than private physicians, women without insurance were much more likely to use clinics: for all races, white women, and black women, those who did not use insurance to pay for the last visit were more than twice as likely to use clinics as those who did use insurance (38 percent versus 14 percent). The differences by use of Medicaid were equally dramatic: 67 percent of those who used Medicaid to pay for the last visit used a clinic, compared with 27 percent of those who did not use Medicaid.

Multiple classification analyses of the most important variables in table 2 were done for all races, white women, and black women (table 3). For all races, the differences for each variable were substantially smaller after adjustment: the difference by race was reduced from 27 to 15 percentage points; the difference by marital status, from 27 to 13; by income, from 34 to 15; by education, from 26 to 15; and by source of payment, from 24 to 14. This means that, for all races combined, marital status, income, education, source of payment and race all had independent effects, and all were roughly equal in importance.

Because the patterns in table 2 differed by race, however, we ran the equations separately for white and black women (table 3). For white women as well as for all women, the differences between the adjusted percentages—16 by marital status (fig. 1), 19 by income, and 16 by education, and 12 by source of payment (fig. 2)—show that all these variables had significant independent effects.

The picture was different for black women, however. The difference in the percentage using a clinic at last visit between never-married and currently married women (61 versus 42) was 19 percentage points before adjustment. After adjustment, however, that difference was only 1 percentage point (fig. 1), meaning that among black women, marital status had no significant, independent effect on provider choice. This observation appears to be consistent with the finding of earlier studies that confidentiality was the most important reason for the clinic choice of white teenagers under 17, but a relatively minor factor among black teenagers under 17 (21). For black women, income and source of payment were the most important determinants of provider choice. After adjustment, 63 percent of poor black women and only 44 percent of high-income black women used a clinic at last visit, a difference of 19 percentage points. By source of payment, the difference was 19 percentage points after adjustment (fig. 2), as large as the income difference and independent of income. By education, the adjusted difference was 14 percentage points.

Visit rates. The foregoing analysis of choice of provider at first and last family planning visit sheds light on the factors that affect the decision to use a clinic or private physician and the composition of the population using each source. Equally important, however, is the total volume of use of services in both subsidized clinics and private sources. As a measure of the volume of use, we calculated annual visit rates per 1,000 women in total and by source of service. The numerator of the visit rate is the number of visits reported during the 12 months before the survey. Questions on the number of visits were not asked of women who had never had intercourse, or who were sterile or had sterile husbands for 3 or more years before the survey. The denominator was therefore limited to women who were not sterile and had had intercourse.

Overall, women used family planning services at the rate of about 1 visit per woman per year (1,042 visits per 1,000 women, table 4), but there

Figure 1. Observed and adjusted percent using a clinic at last family planning visit, by race and marital status, women aged 15-44[1]
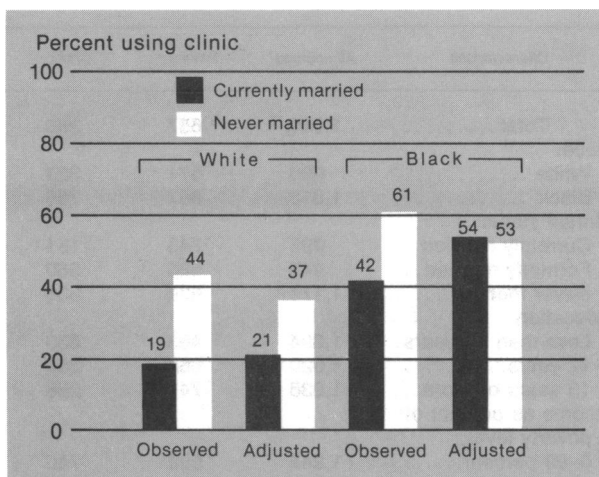
[1] Adjusted for all other variables in table 3, plus age.

Figure 2. Observed and adjusted percent using a clinic at last family planning visit, by race and insurance, women aged 15-44[1]
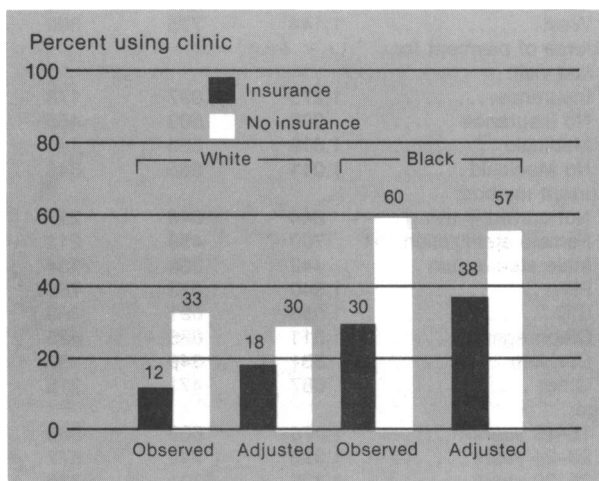
[1] Adjusted for all other variables in table 3, plus age.

were marked variations in visit rates by age, race, marital status, income, and source of payment. The visit rate declined sharply with age, from 1,475 among teenagers to 232 at ages 40-44. The annual visit rate for black women (1,313) was one-third higher than that for white women (995). Visit rates to all sources also were higher among never-married women and poor women than for ever-married and high-income women. Although data were not collected on how all visits during the past 12 months were paid for, it is reasonable to assume that most women who had medical insurance or Medicaid at their last family planning visit

Characteristic	All sources	Private	Clinic
Total	1,042	657	385
Race:			
White	995	671	323
Black	1,313	557	756
Marital status:			
Currently married ..	995	743	151
Formerly married...	945	585	360
Never married	1,171	534	636
Education:			
Less than 12 years.	1,094	463	630
12 years...........	1,020	666	354
13 years or more...	1,036	747	288
Income as percent of poverty level:			
0–99 percent	1,242	502	740
100–199 percent ...	1,032	580	452
200–299 percent ...	998	683	315
300 or more percent............	990	747	242
Region:			
Northeast..........	852	540	312
Midwest	1,032	669	363
South	1,119	655	463
West	1,144	775	369
Source of payment for last visit:			
Insurance..........	1,275	1,097	178
No insurance	963	508	455
Medicaid	1,619	508	1,111
No Medicaid	1,011	665	346
Current method:			
Not currently using.	844	546	297
Female sterilization.	700	488	211
Male sterilization ...	442	308	134
Pill................	1,840	1,073	766
IUD	1,054	691	363
Diaphragm.........	1,311	885	425
Condom...........	531	349	182
Other	687	471	215
Age:			
15–19 years	1,475	609	866
20–24 years	1,326	749	577
25–29 years	1,126	791	335
30–34 years	888	680	208
35–39 years	635	517	118
40–44 years	232	171	61

had similar coverage during the rest of the year. Overall visit rates were one-third higher among women who had insurance or Medicaid, compared with those who did not (table 4).

The contraceptive method the woman is using may be the most important determinant of the demand for services. For example, the oral contraceptive pill, which is the leading method among young and never-married women (1), requires frequent visits to a clinic or physician to renew the prescription and check for side effects. In contrast, sterilization, the leading contraceptive method among married women, requires relatively few visits over a short period (1c). In 1982, women who used the pill made nearly 2 family planning visits per year (1,840 visits per 1,000, table 4). This visit rate exceeded that for any other method in table 4, and it exceeded the overall visit rate by 77 percent. Visit rates for the other two methods that require continued medical supervision, the diaphragm (1,311 per 1,000 women) and the IUD (1,054), also were significantly higher than the rates in nearly all of the remaining method categories. The lowest annual visit rates were reported by women whose current method was the condom (531 per 1,000) or male sterilization (442). Visits for sterilization were predominantly for pre- and postoperative counseling and followup.

Further, visit rates were lower in the Northeast than in the other three regions, possibly because of the lower proportion using the pill in the Northeast. The percentage using the pill in the Northeast was only about half what it was in the other three regions, and the Northeast was the only region in which the pill was not the leading nonsurgical method (25). The leading nonsurgical method in the Northeast was the condom, which has a low visit rate (table 4).

In summary, then, the demand for family planning services among women at risk of pregnancy was greatest for teenagers, black women, never-married, and poor women, those whose medical care was covered by insurance or Medicaid, and those using the pill, IUD, or diaphragm. These patterns differ, however, for visits to private physicians and to clinics (table 4). In general, visit rates to clinics were highest for black, never-married, less-educated, and low-income women; conversely, visit rates to private physicians were highest for white, currently married, better-educated, and higher income women.

In addition, there were distinct differences in the pattern of visit rates by payment source for private physicians and clinics. Women whose last visit was paid for by insurance made twice as many visits to private physicians on average as did women who had no insurance (1,097 and 508 per 1,000, respectively.) The visit rate to clinics for women whose last visit was paid for by Medicaid (1,111) was more than triple the rate of those who did not use Medicaid (346). At the same time, the visit rate to clinics was much lower for women with insurance (178) than for those with no insurance (455). As in the case of visit rates to all sources, visit rates to both clinics and private physicians were

highest for the pill, diaphragm, and IUD, and lowest for the condom and sterilization (table 4).

Social and economic characteristics probably have overlapping effects on visit rates, as they do on provider choice, so we used multiple classification analysis to adjust the visit rates for the effects of other variables. The observed total visit rates are shown in the first column of table 5 for comparison; visit rates adjusted for social and economic characteristics are shown in column 2, and rates that also are adjusted for contraceptive method are shown in the third column.

Adjustment for background characteristics alone, or for those factors and the contraceptive method, leaves the race differential nearly unchanged. In both cases, visit rates for black women remain nearly one-third higher than rates for white women (table 5, columns 2 and 3). After adjustment for social and economic characteristics, the visit rate for less educated women was 154 visits per 1,000 women lower than the rate for women with more education, but this difference was reduced to 60 visits per 1,000 when the contraceptive method was included in the model. However, there were larger differences by income when adjusting for the effects of contraceptive method in addition to the background characteristics. In column 2 of table 5, the difference in the adjusted visit rates between the lowest and highest income group was only 143; when the contraceptive method was taken into account (column 3), the difference was 228, with low-income women having the highest visit rates. The adjusted pattern of visit rates by marital status was similar whether or not the contraceptive method was taken into account: both sets of adjusted visit rates were higher for ever-married women than for never-married women, which was just the opposite of the observed rates. This reversal occurred because never-married women were younger, more likely to be black, less likely to have insurance, and more likely to be using the pill than ever-married women. In contrast, the effects of source of payment on visit rates were not greatly reduced by adjustment. For example, the difference by source of payment persisted after controls (table 5, column 3): those who paid for their last visit with insurance still had a visit rate more than one-third higher (1,344 per 1,000 women) than those who did not (939).

The observed visit rates differed sharply by current contraceptive method, from 1,840 per 1,000 women for the pill to only 442 for male sterilization. None of these was altered signifi-

Table 5. Observed and adjusted mean number of family planning visits per 1,000 women in the last year: women 15–44 who had ever had intercourse and were not sterile 3 years before the date of interview, United States, 1982

Characteristic	Observed	Adjusted[1]	Adjusted[2]
Total	1,042	. . .	. . .
Race:			
White	995	996	997
Black	1,313	1,317	1,295
Marital status:			
Currently married . .	995	1,105	1,136
Formerly married . . .	945	1,156	1,083
Never married	1,171	878	854
Education:			
Less than 12 years .	1,094	960	1,033
12 years	1,020	1,009	990
13 years or more . . .	1,036	1,114	1,094
Income as percent of poverty level:			
0–99 percent	1,242	1,176	1,230
100–199 percent . . .	1,032	994	1,000
200–299 percent . . .	998	1,005	1,018
300 or more percent.	990	1,033	1,002
Region:			
Northeast.	852	922	962
Midwest	1,032	1,008	1,006
South	1,119	1,094	1,063
West	1,144	1,136	1,143
Source of payment:			
Insurance.	1,275	1,326	1,344
No insurance	963	946	939
Contraceptive method:			
Not using.	844	. . .	843
Female sterilization.	700	. . .	704
Male sterilization . . .	442	. . .	542
Pill.	1,840	. . .	1,738
IUD	1,054	. . .	1,112
Diaphragm.	1,311	. . .	1,320
Condom	531	. . .	589
Other	687	. . .	799

[1] Adjusted by all other variables in the table except contraceptive method and by single years of age.
[2] Adjusted by all other variables in the table and by single years of age.

cantly after adjusting for the effects of the other variables (table 5, column 3). The adjusted visit rates make clear that contraceptive method has a strong independent effect on visit rates.

In summary, the adjusted visit rates show that the demand for family planning services was highest among women who use a medical method of contraception—the pill, the IUD or the diaphragm—and among black, currently married, and poor women and those covered by medical insurance.

Because of the large differences in provider choice by these variables (tables 1–3) and the different patterns of visit rates by source of service (table 4), observed and adjusted visit rates for private sources and clinics are examined separately

Table 6. Observed and adjusted[1] mean number of family planning visits per 1,000 women in the last year by source of service: women 15–44 who had ever had intercourse and were not sterile 3 years before the date of interview, United States, 1982

Characteristic	Private		Clinic	
	Observed	Adjusted	Observed	Adjusted
Total	657	. . .	385	. . .
Race:				
White	671	654	323	339
Black	557	674	756	656
Marital status:				
Currently married	743	746	251	363
Formerly married	585	753	360	415
Never married	534	453	636	411
Education:				
Less than 12 years	463	492	630	477
12 years	666	653	354	355
13 years or more	747	744	288	366
Income as percent of poverty level:				
0–99 percent	502	623	740	549
100–199 percent	580	578	452	412
200–299 percent	683	664	315	350
300 or more percent . . .	747	710	243	323
Source of payment:				
Insurance	1,097	1,053	178	269
No insurance	508	523	455	425

[1] Adjusted by all other variables in the table and by single years of age.

in table 6. Although contraceptive method is the most important determinant of visit rates, it is not included in these multiple classification analyses because it affects visit rates similarly for both clinic and private patients (table 4). After adjustment, visit rates to private physicians for white and black women (654 and 674 per 1,000) were not significantly different, but visit rates to clinics remained much higher for black women after adjustment, 339 for white and 656 for black women. Race was the most important determinant of clinic visit rates after adjustment.

Differences by marital status in visit rates to private physicians were larger after adjustment than before. The adjusted visit rates for both currently married and formerly married women (746 and 753) were more than 60 percent higher than the rate for never-married women (453). In contrast, there were no significant differences in clinic visit rates by marital status after adjustment.

Visit rates to private physicians increased with education both before and after adjustment. However, for clinic visit rates, the large difference by education narrowed substantially after adjustment, and it was significant only at the 10 percent level. Apparently, the clinic visit rates by education and marital status converge after adjustment because

marital status and education groups differ in their composition by age, race, and use of insurance.

Differences by income in visit rates to private sources were dramatically reduced after adjustment, from 245 visits per 1,000 to 87. However, the effects of insurance were not significantly changed by controlling for other variables: adjusted visit rates to private physicians were still twice as high for women who had insurance (1,053) as for those who did not (523). Apparently, income per se was less important than the guarantee of payment in determining the volume of services used from private physicians.

In contrast, although adjustment reduced the difference by income in visit rates to clinics, poor women continued to have a significantly higher clinic visit rate than high-income women. Visit rates to clinics continued to be lower for women who paid for their last visit with insurance (269) than for those who did not (425) but the difference narrowed substantially after adjustment. These results suggest that low income women go to clinics to obtain services, while women who have insurance go to private physicians, regardless of their income level.

In summary, after adjusting for other variables, the most important determinants of visit rates to private physicians were source of payment, marital status, and education; race and income had the greatest impact on clinic visit rates. The association of low income with high clinic visit rates was expected in light of previous studies showing that teenage patients prefer clinics because private physicians are too expensive (23). However, the persistent difference in clinic visit rates by race is puzzling. Even after controls were introduced for the main effects of income, education, marital status, and source of payment, the clinic visit rate for black women remained nearly twice as high as the clinic visit rate for white women (656 versus 339 visits per 1,000 women).

Discussion

Provider choice. In an unpublished study of 454 women living in low-income areas of Los Angeles, Mendenhall and Radecki found that clinics delivered a high quality of care at low cost or no cost to the patient, but "the use of a subsidized clinic can involve a substantial amount of inconvenience compared to care from a private physician. For clinic patients, it takes more than twice as many days to get an appointment, the amount of time required once one arrives is more than twice as

long, the waiting time before being examined is three times as long (1 1/2 hours versus 1/2 hour), the waiting rooms are crowded, women are less likely to be allowed to bring their children (creating childcare problems), and the clinics are difficult to reach by telephone." (R. C. Mendenhall and S. E. Radecki: Family planning services for economically disadvantaged women: utilization, cost and patient satisfaction. Final report to the Office of Family Planning, U.S. Department of Health and Human Services, Washington, DC, July 1985.)

We were unable to measure such variables in this study, but it seems likely that clinic patients accept inconvenience (more waiting and less prompt attention) and the lack of a personal relationship with a private physician in order to get quality care within their personal budgets. Our findings suggest that, as income and insurance coverage increase, women are more likely to be able to purchase this convenience and the personal relationship with their own physician (table 3).

Our data suggest that for white teenagers the overriding concerns may be cost and confidentiality, and for black teenagers, cost alone, so the convenience dimensions listed previously may be secondary for teenagers choosing a family planning provider (21,23). In addition, for women who have low incomes or no insurance, these convenience items may be less important than having access to care at all. It is worth noting, however, that these convenience dimensions may prevent some women from using services at all or cause them to delay seeking services until they suspect they are pregnant (22).

It is possible that community-level variables, such as the number, type, and location of clinics and private physicians' offices have substantial effects on provider choice. The much higher adjusted percentage of black women than white women who use clinics may well be explained by such factors. Future research on provider choice would do well to focus on such convenience, cost, and community variables, preferably using national samples.

Visit rates. Regardless of any other characteristic, the type of contraceptive method used is the most important determinant of visit rates (table 5). This is true whether services are obtained from a private physician or from a clinic (table 4). However, other factors also affect visit rates.

In the introduction, we cited studies suggesting that teenagers choose clinics because (a) clinics are

'The adjusted visit rates show that the demand for family planning services was highest among women who use a medical method of contraception—the pill, the IUD, or the diaphragm—and among black, currently married, and poor women and those covered by medical insurance.'

free or less expensive, (b) clinic staff do not tell their parents that they are sexually active, (c) teenagers often do not know of any other source (21,23), and (d) clinics were in a close, convenient location. Our findings for all women 15–44 years of age are qualitatively similar, but require some qualifications.

• Relative cost, or ability to pay, is an important determinant of the visit rate to private physicians or to clinics. Women covered by insurance have substantially higher visit rates to private physicians than other women, even after controlling for income and other variables. Visit rates to clinics, however, were influenced more by income, with particularly high rates reported by poor women.
• Our findings also suggest that confidentiality is a determinant of visit rates. Visit rates to private physicians were significantly higher for ever-married women than for never-married women. Conversely, never-married women reported higher visit rates to clinics, although this relationship virtually disappeared when the clinic rates were adjusted for other variables. Age is clearly the main reason why the difference by marital status reverses, given the high clinic rates reported by teenagers (table 4). Young, never-married women, many of whom live with their parents, undoubtedly feel a greater need for confidentiality. Confidentiality is less an issue for married women.
• Not knowing another source for services also seems to affect visit rates. It is frequently assumed that better education provides improved knowledge of health care resources, and thus improves access to a wider range of services. It is not surprising to find that visit rates to private physicians increase with level of education.
• The difference by race in visit rates may reflect these three factors plus that of a close, convenient

location. Adjusting for other variables, the difference by race in visit rates to private physicians virtually disappeared (table 6). However, the adjusted visit rate to clinics for black women was nearly double that for white women. This finding may be related to the geographic location of clinics, but it is not possible to test this hypothesis with the present data set.

The results of this research do not provide final answers to the questions of why women choose particular sources of family planning care. However, they do serve to pose a number of more specific questions for further analysis, and they suggest that ability to pay, confidentiality, knowledge of alternative sources, and location are important factors in both choice of provider and frequency of visits. Further research along the lines suggested in this paper would provide information to improve the delivery of family planning services to women who need them.

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