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Use of Intrauterine Contraceptive Devices in the United States[1]

INTRODUCTION

About 6 percent of the married women and about 9 percent of the widowed, divorced, and separated women were using an intrauterine contraceptive device (IUD) as of 1976. The Lippes Loop was the most popular IUD, followed by the Copper 7.

The data presented in this report are the first national estimates of the use of intrauterine contraceptive devices, by type of device, from the 1973 and 1976 National Surveys of Family Growth conducted by the National Center for Health Statistics. The data were collected by means of personal interviews with a multistage probability sample of women 15-44 years of age in the household population of the conterminous United States. Women were eligible for inclusion in the sample if they were currently or previously married or were never married but had offspring presently living in the household. In this report the data refer only to women who were currently married, widowed, divorced, or separated at the time of interview.

The interview was focused on the respondents' marital and pregnancy histories, their use of contraception and the planning status of each pregnancy, their intentions regarding number and spacing of future births, their maternal and family planning services, and on a broad range of social and economic characteristics. Between June 1973 and February 1974, 3,856 black women and 5,941 women of other races were interviewed for Cycle I of the National Survey of Family Growth (NSFG). Between January and September of 1976, 3,009 black women and 5,602 women of other races were interviewed for Cycle II.[2] Further discussion of the survey design, definition of terms, and sampling variability is in the Technical Notes.

EXTENT OF IUD USE IN THE UNITED STATES

Among married women in the United States, the use of the intrauterine device (IUD) increased from less than 1 percent in 1965 to about 6 percent during the 1970's (table 1).[3] As of 1976, similar percents (6.1) of both white and black married women were using the IUD.

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[1]This report was prepared by Kathleen Ford, Ph.D., formerly with the Division of Vital Statistics.

[2]The numbers of black and white women interviewed in Cycle II were revised for this report and differ slightly from those numbers reported in *Advance Data,* Nos. 36 and 40. The revisions do not affect any other statistics reported here or previously.

[3]Data for 1965 and 1970 are from the first and second National Fertility Studies (NSF-I and NFS-II) and are reported, respectively, in *Reproduction in the United States*, 1965 by Ryder, N.B., and Westoff, C.F., Princeton, N.J. Princeton University Press, 1971; and in *The Contraceptive Revolution*, by Westoff, C.F., and Ryder, N.B., Princeton, N.J., Princeton University Press, 1977. The figures in table 1 were computed from the computer tapes obtained from the Data and Program Library Service at the University of Wisconsin at Madison.

Table 1. Percent of ever-married women 15-44 years of age and of contraceptive method users who were using the IUD at the survey date, by marital status and race: United States, 1965, 1970, 1973, and 1976

Race and year	Currently married		Widowed, divorced and separated	
	Percent of women	Percent of method users[1]	Percent of women	Percent of method users[1]
All races[2]				
1976	6.1	12.5	9.1	20.0
1973	6.7	12.5	7.2	23.7
1970[3]	5.0	9.3	*3.9	16.9
1965[3]	*0.7	*1.3	---	---
White				
1976	6.1	12.4	9.4	19.4
1973	6.6	12.3	7.0	23.2
1970[3]	4.9	8.9	*3.6	15.9
1965[3]	*0.7	*1.2	---	---
Black				
1976	6.1	13.4	8.8	22.3
1973	7.6	16.9	7.9	24.7
1970[3]	5.0	11.1	5.3	22.2
1965[3]	*1.5	*3.3	---	---

[1]Method use excludes surgical sterilization in this table.
[2]All races includes white, black, and other races.
[3]Data for 1965 and 1970 are from the first and second National Fertility Studies.

Among widowed, divorced, and separated women the proportion was higher (about 9 percent) than among married women.

Although the use of the IUD has increased in the last 10 years, it still represents a small part of American contraceptive practice. In 1976 the IUD was used by 12.5 percent of married users of nonsurgical contraceptive methods and by 20.0 percent of those who were widowed, divorced, or separated.

Type of IUD Used

In the 1976 NSFG, women whose current or most recent method was the IUD were shown a card displaying pictures of IUD's and were asked which type they had used most recently. About 9 percent of the married women and 8 percent of the widowed, divorced, and separated women did not know which type had been inserted.

Table 2 shows the number and percent distribution of ever-married women whose current or most recent method of contraception was the IUD by type of IUD, according to race and marital status. Among married women, the Lippes Loop was the most popular method mentioned (37.7 percent of IUD users), followed by the Copper 7 (27.8 percent), the Dalkon Shield (16.9 percent), and the Safe-T-Coil (12.5 percent). The relative popularity of the different types of IUD's among white and black women was similar except that more black women used the Safe-T-Coil than used either the Copper 7 or the Dalkon Shield. Among widowed, divorced, or separated women, the Lippes Loop was also the most commonly used IUD, followed by the Copper 7, the Safe-T-Coil, and the Dalkon Shield. As may be seen in table 3 and figure I, the distribution of women who were currently using the IUD at the survey date, by type of IUD, is similar to that of women whose most recent method was the IUD (table 2).

Figure 1. PERCENT DISTRIBUTION OF CURRENTLY MARRIED WOMEN 15-44 YEARS OF AGE USING THE IUD AT SURVEY DATE, BY TYPE OF IUD USED: UNITED STATES, 1976

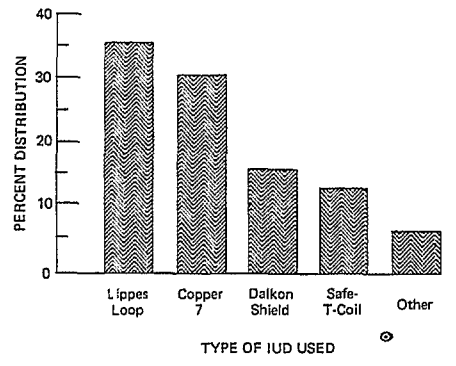

Table 2. Number of ever-married women 15-44 years of age whose most recent method of contraception was the IUD and percent distribution by type of IUD, according to marital status and race: United States, 1976

Marital status and race	Number of women in thousands	Type of IUD used					
		Total	Lippes Loop	Safe-T-Coil	Copper 7	Dalkon Shield	Other
Currently married							
All races[1]	1,990	100.0	37.7	12.5	27.8	16.9	*5.0
White	1,802	100.0	36.1	12.4	29.2	17.8	*4.5
Black	159	100.0	52.7	*17.4	*12.2	*9.5	*8.3
Widowed, divorced, or separated							
All races[1]	423	100.0	46.5	16.6	23.8	*8.5	*4.5
White	305	100.0	39.8	*17.3	27.4	*10.9	*4.5
Black	112	100.0	62.3	*15.4	*15.0	*2.4	*4.7

[1]All races includes white, black, and other races..

Parity of IUD Users

Among currently married women, IUD users are more likely to have had at least one child (87.5 percent) compared with users of other nonsurgical contraceptive methods (79.0 percent).

The proportion of currently married women using the various types of IUD's differed by parity or the number of live births they have had (table 4). For women with no live births, the Copper 7 was the most popular type IUD, but for women with two or more children the Lippes Loop was the type most often used.

Table 3. Number of ever-married women 15-44 years of age using the IUD at survey date and percent distribution by type of IUD, according to marital status and race: United States, 1976

Marital status and race	Number of women in thousands	Type of IUD used					
		Total	Lippes Loop	Safe-T-Coil	Copper 7	Dalkon Shield	Other
Currently married							
All races[1]	1,582	100.0	35.2	13.1	30.2	15.3	*6.2
White	1,436	100.0	33.7	13.1	31.5	15.9	*5.7
Black	124	100.0	51.3	*15.8	*14.8	*10.2	*7.8
Widowed, divorced, or separated							
All races[1]	311	100.0	48.5	*15.8	24.6	*8.8	*2.2
White	230	100.0	41.9	*17.7	27.3	*11.6	*1.5
Black	81	100.0	67.8	*10.3	*16.7	*0.9	*4.3

[1]All races includes white, black, and other races.

Table 4. Number of currently married women 15-44 years of age using the IUD at survey date and percent distribution by type of IUD used, according to parity: United States, 1976

Parity	Number of women in thousands	Type of IUD used					
		Total	Lippes Loop	Safe-T-Coil	Copper 7	Dalkon Shield	Other
All	1,582	100.0	35.2	13.1	30.2	15.3	*6.2
Zero	205	100.0	*20.5	*2.6	50.6	*23.6	*2.8
First	351	100.0	24.8	*12.3	36.3	*15.6	*10.9
Second or more	1,026	100.0	42.3	15.8	23.4	13.3	*5.2

TECHNICAL NOTES

The Survey Design

The National Survey of Family Growth (NSFG) is designed to provide data on fertility, family planning, and related aspects of maternal and child health. Field work for Cycle I was carried out by the National Opinion Research Center between June 1973 and February 1974. Field work for Cycle II was carried out by Westat, Inc., between January and September 1976.

A multistage probability sample of women in the household population of the conterminous United States was used in both cycles. Each time, approximately 33,000 households were screened to identify the sample of women who would be eligible for the NSFG, i.e., women aged 15 to 44 years, inclusive, who were currently married or previously married or who were never married but had offspring presently living in the household. In households with more than one eligible woman, a random procedure was used to select only one to be interviewed. Since the interviews were always conducted with the sample person, the term "respondent" is used as synonymous with sample person. A detailed description of the sample design for Cycle I is presented in "National Survey of Family Growth, Cycle I: Sample Design, Estimation Procedures, and Variance Estimation," Series 2, No. 76 in the *Vital and Health Statistics* series. A similar report is in preparation for Cycle II.

While the interviews varied greatly in the time required for their completion, they averaged about 70 minutes for Cycle I and about 58 minutes for Cycle II.

Quality control procedures were applied at all stages of the survey. These included a verification of listing completeness, with unlisted dwelling units being brought into the sample; a preliminary field review of completed questionnaires for possible missing data or inaccurate administration; a 10-percent sample recheck of all households to be screened during the survey; observation of interviews in the field; and an independent recoding of a 5-percent subsample of completed interviews.

Reliability of Estimates

Since the statistics presented in this report are based on a sample, they may differ somewhat from the figures that would have been obtained if a complete census had been taken using

the same questionnaires, instructions, interviewing personnel, and field procedures. This chance difference between sample results and a complete count is referred to as sampling error. In addition, the results are also subject to nonsampling error due to respondent misreporting, data processing mistakes, and nonresponse. It is very difficult, if not impossible, to obtain accurate measures of nonsampling errors. These types of errors were kept to a minimum by the quality control procedures and by other methods incorporated into the survey design and administration.

Sampling error, or the extent to which samples may differ by chance from a complete count, is measured by a statistic called the standard error of estimate. Approximate standard errors for estimated numbers and percentages from Cycle I are shown in tables I and II for the total and white populations and in tables III and IV for the black population. Provisional estimates for standard errors for Cycle II for total and white women can be obtained by multiplying the standard errors for these women from Cycle I by a factor of 1.1. Similarly, provisional estimates of standard errors for Cycle II for black women can be obtained by multiplying the standard errors for these women from Cycle I by a factor of 1.2.

Table I. Approximate standard errors for estimated numbers for white and total women: 1973 National Survey of Family Growth

Size of estimate	Relative standard error	Standard error
50,000	30.0	15,000
100,000	21.2	21,000
200,000	15.0	30,000
500,000	9.5	47,000
1,000,000	6.7	67,000
2,000,000	4.8	95,000
5,000,000	3.0	151,000
10,000,000	2.2	216,000
20,000,000	1.5	311,000

Table II. Approximate standard errors for estimated percentages expressed in percentage points for white and total women: 1973 National Survey of Family Growth.

Base of percentage	Estimated percentage						
	2 or 98	5 or 95	10 or 90	20 or 80	30 or 70	40 or 60	50
100,000	3.0	4.6	6.4	8.5	9.7	10.4	10.6
500,000	1.3	2.1	2.8	3.8	4.3	4.6	4.7
1,000,000	0.9	1.5	2.0	2.7	3.1	3.3	3.3
3,000,000	0.5	0.8	1.2	1.5	1.8	1.9	1.9
5,000,000	0.4	0.6	0.9	1.2	1.4	1.5	1.5
7,000,000	0.3	0.5	0.8	1.0	1.2	1.2	1.3
10,000,000	0.3	0.5	0.6	0.8	1.0	1.0	1.1

Table III. Approximate standard errors for estimated numbers for black women: 1973 National Survey of Family Growth

Size of estimate	Relative standard error	Standard error
25,000	25.3	6,000
50,000	17.9	9,000
100,000	12.7	13,000
150,000	10.3	16,000
250,000	8.0	20,000
350,000	6.8	24,000
500,000	5.7	28,000
750,000	4.7	35,000
1,000,000	4.0	40,000

Table IV. Approximate standard errors for estimated percentages expressed in percentage points for black women: 1973 National Survey of Family Growth

Base of percentage	Estimated percentage						
	2 or 98	5 or 95	10 or 90	20 or 80	30 or 70	40 or 60	50
5,000	7.9	12.3	17.0	22.6	25.9	27.7	28.3
10,000	5.6	8.7	12.0	16.0	18.3	19.6	20.0
50,000	2.5	3.9	5.4	7.1	8.2	8.8	8.9
100,000	1.8	2.7	3.8	5.1	5.8	6.2	6.3
300,000	1.0	1.6	2.2	2.9	3.3	3.6	3.6
500,000	0.8	1.2	1.7	2.3	2.6	2.8	2.8
700,000	0.7	1.0	1.4	1.9	2.2	2.3	2.4
1,000,000	0.6	0.9	1.2	1.6	1.8	2.0	2.0

The chances are about 68 out of 100 that an estimate from the sample would differ from a complete census by less than the standard error. The chances are about 95 out of 100 that the differences between the sample estimate and a complete count would be less than twice the standard error. The relative standard error is the ratio of the standard error to the statistic being estimated. In this report, numbers and percentages which have a standard error that is more than 25 percent of the estimate itself are considered "unreliable." They are marked with an asterisk to caution the user but may be combined to make other types of comparisons of greater precision.

In this report, terms such as "similar" and "the same" mean that any observed difference between two estimates being compared is not statistically significant. Similarly, terms such as "greater," "less," "larger," and "smaller" indicate that the observed differences are statistically significant. The normal deviate test with a 0.5 level of significance was used to test all comparisons which are discussed in the text. A statistically significant difference is one large enough that in repeated samples of the same size and type as this one, such a large difference would be expected to be found in less than 5 percent of the samples. Lack of comment in the text between any two statistics does *not* mean the difference was tested and found not to be significant.

Adjustment for nonsampling error due to nonresponse was made in two ways. Nonrespondent cases, as distinct from missing data items, were imputed by weighting for nonresponse within each primary sampling unit, stratum, and age-race category. In the 1973 survey, codes for missing items were imputed using a "hot deck" procedure. In the 1976 survey, imputation for missing data items has not been performed and the distributions shown in the tables are based only on those interviews where enough information was obtained from the respondent to determine contraceptive status.

Cases for which the value of a given distribution is missing are shown in the totals. As a result, in the 1976 figures, about 1,061,000 women out of an estimated 31,847,000 total ever-married women are not represented in the distribution by contraceptive status.

Definition of Terms

Method Users.—A woman (or couple) who reported use of a contraceptive method at the date of interview was classified according to the specific method used.

Most Recent Method.—A woman (or couple) who reported use of a method at the time of interview was classified according to the specific method used. A woman (or couple) not using a method at the time of interview was classified according to the specific method used most recently.

Type of Intrauterine Device.—Type of intrauterine device was determined by showing the woman being interviewed a card with pictures and names of IUD's and asking her to identify the type she was using or had used.

Age.—In this report, age is classified by the age of the respondent at her last birthday before the date of interview.

Race.—Classification by race, based on interviewer observation, was reported as black, white, or other. Race refers to the race of the woman interviewed.

Marital status.—Persons are classified by marital status as married, widowed, divorced, separated, or never married. Married persons include those who report themselves as married or as informally married, such as living with a partner or common-law spouse. Persons who are temporarily separated for reasons other than marital discord, such as vacation, illness, or Armed Forces, are classified as married. Divorced persons are those whose most recent marriage was legally dissolved and who are free to remarry. Women with an annulled marriage, while having the legal status of never having been married, are classified together with the divorced. The category "separated" includes those

who are legally or informally separated from their most recent spouse due to marital discord. The "never married" include those who have never had a formal marriage and do not consider themselves in any of the preceding categories. However, in the NSFG, only single women with offspring living in the household are included and separately classified.

Parity.—Parity refers to the number of live births the respondent has had.

SYMBOLS

Data not available	---
Category not applicable	...
Quantity zero	-
Quantity more than 0 but less than 0.05	0.0
Figure does not meet standards of reliability or precision	*

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