

DOCUMENT RESUME

ED 232 083

CG 016 777

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 TITLE Teenagers Who Use Organized Family Planning Services: United States, 1978. Data on Health Resources Utilization Series 13, No. 57.
 INSTITUTION National Center for Health Statistics (DHHS/PHS), Hyattsville, MD.
 REPORT NO DHHS-PHS-81-1718
 PUB DATE Aug 81
 NOTE 25p.; For related document, see CG 016 778.
 AVAILABLE FROM Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.
 PUB TYPE Statistical Data (110) -- Reports - Research/Technical (143)

EDRS PRICE MF01/PC01 Plus Postage.
 DESCRIPTORS *Adolescents; Clinics; *Contraception; Early Parenthood; *Family Planning; *Females; Gynecology; Human Services; Medical Services; Obstetrics; *Pregnancy; Secondary Education; Sexuality; Statistical Data

ABSTRACT

Adolescent childbearing is a major concern because of the associated negative health, social, and economic consequences. To determine whether teenagers are using organized family services to prevent unwanted pregnancies, the National Reporting System for Family Planning Services began in 1972 to collect information on family planning clinic patients in the United States, Guam, Puerto Rico, and the Virgin Islands. Family planning visits to private physicians were excluded from the survey. Since 1977 the survey has included only those visits made for medical services associated with family planning; visits made for replenishing contraceptive supplies, counseling, pregnancy, or venereal disease tests were excluded. The 1978 survey consisted of a sampling of 1,195 randomly selected sites and a systematic selection of visits based on a proportion of each site's reported annual number of visits, and its geographical location. This report of the 1978 survey provides a descriptive analysis, with tables and graphs, of the teenagers under study. The following areas are presented: social and demographic characteristics; pregnancy history; contraceptive utilization and sources of method; contraceptive method switching; and teenagers compared with older women. The appendices provide technical notes discussing survey methodology, data collection and processing, and the reliability of estimates; definitions of terms used in this report; and a copy of the Clinical Visit Record which was used to collect survey data. (WAS)

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VITAL & HEALTH STATISTICS

Teenagers Who Use Organized Family Planning Services: United States, 1978

Statistics obtained from a national sample of visits to organized family planning clinics are presented for women under age 20 years. Patients are described in terms of social and demographic characteristics in relation to pregnancy history, contraceptive use before and after the visit, and types of medical services received. A comparison of the pregnancy history and contraceptive use of teenage women with that of women age 20 years and over is also presented.

Data on Health Resources Utilization Series 13, No. 57

Eugenia Eckard
Division of Health Care Statistics

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DHHS Publication No. (PHS) 81-1718

U.S. Department of Health
and Human Services
Public Health Service
Office of Health Research, Statistics,
and Technology
National Center for Health Statistics
Hyattsville, Md.
August 1981

Library of Congress Cataloging in Publication Data

Eckard, Eugenia.

Teenagers who use organized family planning services, United States, 1978.

(Vital and health statistics. Series 13 ; no. 57) ((PHS) 81-1718)

1. Birth control clinics—United States—Utilization—Statistics.
2. Birth control—United States—Statistics. 3. Adolescent girls-- Medical care—United States—Statistics. I. Title. II. Series: Vital and health statistics. Series 13, Data from the national health survey ; no. 57.
III. Series: DHEW publication ; no. (PHS) 81-1718.

RA407.3 A349 no. 57 362.1 '1 0973s 81-11113
[HQ766.5.U5] [362.1 2] AACR2

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Library of Congress Catalog Card Number 81-11113

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Symbols

- Data not available
 - ... Category not applicable
 - Quantity zero
 - 0.0 Quantity more than zero but less than 0.05
 - Z Quantity more than zero but less than 500
 - * Figure does not meet standards of reliability or precision
 - # Figure suppressed to comply with confidentiality requirements
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Teenagers Who Use Organized Family Planning Services

by Eugenia Eckard, Division of Health Care Statistics

Introduction

Background

According to data from the National Reporting System for Family Planning Services conducted by the Division of Health Care Statistics of the National Center for Health Statistics, 33 percent of the 3.8 million women who visited organized family planning clinics in 1978 were teenagers. The Alan Guttmacher Institute estimates that 4 million females ages 15-19 years in 1975 were sexually active.¹ This means that approximately 3 out of 10 sexually active teenagers in the United States used organized family planning services in 1978.

Along with an increase in teenage pregnancies in recent years, there is growing interest in teenagers' knowledge and utilization of contraception. Adolescent childbearing is a major concern because of the associated negative health, social, and economic consequences. A variety of research evidence indicates that adolescent childbearing is associated with higher risks of ill health and social disadvantage for both mother and child. Accordingly, it becomes increasingly important to determine whether teenagers are using services designed to prevent unwanted pregnancies. There is a paucity of information about adolescents' knowledge, attitudes, and behavior with regard to family planning methods. The limited data available do indicate a trend toward increased contraceptive use by teenagers,^{2,3} as well as increased use of sources from which medical methods of contraception (i.e., the oral contraceptive pill, intra-uterine devices, and the diaphragm) are obtained.^{4,5} The data presented here reveal that teenagers are using the services provided by organized family planning clinics, and, for most of them, this means being introduced to more effective methods of contraception.

Scope of the survey

The National Reporting System for Family Planning Services was begun in 1972 to collect information on family planning clinic patients in the United States, Guam, Puerto Rico, and the Virgin Islands. The sources of organized family planning clinics consist of hospitals, health departments, Planned Parenthood affiliates, and other agencies, including community action programs, neighborhood health centers, and freestanding clinics. Family planning visits to private physicians' offices are excluded from the survey. Since mid-1977 the survey has included only those visits made specifically for medical services associated with family planning. Visits for replenishing contraceptive supplies, counseling, and pregnancy or venereal disease tests are excluded.

The survey employs a two-stage sampling design. Of a universe of 5,619 known family planning service sites, 1,195 were randomly selected as sample sites. This represents about 1 in 4 sites nationally. Survey participation is required for all facilities selected for the sample that are supported by Public Health Service grants for family planning services; however, participation is voluntary for nonfederally funded service sites selected for the sample. The proportion of the sample site's visits systematically selected for inclusion in the survey varies according to the site's reported annual number of visits and its geographic location; this averages to about 1 in 25 visits nationally.

Other data sources from the National Center for Health Statistics provide related statistics on utilization of family planning services. For example, data from the National Ambulatory Medical Care Survey, which is also conducted by the Division of Health Care Statistics, concern visits to office-based physicians' practices that include family planning services. The National Survey of Family Growth, conducted by the Division of Vital Statistics in 1973 and 1976, provides more detailed statistics on women who made

family planning visits to their physicians or to organized family planning clinics in the 3 years prior to the survey. Unlike the other two surveys, data for the National Survey of Family Growth were collected by means of personal interviews with a national sample of women age 15-44 years who were ever married or never married and who had offspring living in the household.

Source and limitations of data

The data in this report are based on information obtained from observation, from the medical record, or from the patient interview. This information is entered onto the Clinic Visit Record, or, in those service sites that collected survey data through participation in a computerized record system, on locally developed forms that contain the same 14 items as on the Clinic Visit Record. The items cover basic sociodemographic information about the

patient and other information pertaining to family planning (see appendix III for facsimile).

Because the 1978 National Reporting System for Family Planning Services was based on a sample, the data differ somewhat from data that would have been obtained had it been based on a full count survey, using the same data collection procedures, materials, and the like. Therefore, estimates of small magnitudes, as well as percentage estimates based on small numbers, may lack the precision needed for some applications (see appendix I).

It should be emphasized that this report focuses on the number of teenagers who used organized family planning services, while another report⁶ discusses the number of visits made by teenagers to family planning service sites. Both reports use data from the 1978 National Reporting System for Family Planning Services.

The following is a descriptive analysis of the teenagers under study and includes a look at important sociodemographic characteristics in addition to the types of services the teenagers received.

Highlights

Social and demographic characteristics

Table A presents data on selected characteristics of teenage family planning patients according to race. Most of the patients, both black and white, were 17-19 years of age. However, over twice as many black teenagers as white teenagers were under 16 years of age (16.3 percent and 7.9 percent, respectively). As might be expected, most of the teenagers had not yet completed high school, and the majority (55.7 percent) were students at the time of their clinic visit. Most of the patients were from families who did not receive public assistance. However, the racial difference is striking: A larger proportion of black teenagers were from families who received public assistance (29.8 percent) than was true for white teenagers (7.9 percent).

A look at the four geographic regions shows that most of the teenagers were served in the South (36.3 percent). The proportion of teenagers who visited a family planning clinic in the West (27.8 percent) was larger than that for the Northeast (19.9 percent) and North Central (16.0 percent) regions. This differs somewhat when looking at the racial groups separately. The largest proportion of white teenagers received family planning services in the West (34.5 percent), while more than half of the black teenagers received family planning services in the South (62.1 percent). Table A also reveals that most of the teenagers who visited the clinics were new patients (54.5 percent). This is also true for white teenagers, while the reverse is evident for black teenagers.

Pregnancy history

Table B shows the percent distribution of teenagers by number of pregnancies, live births, and fetal deaths. More than half of the teenagers had never been pregnant, while more than three-quarters of them had never had a live birth. More black teenagers than white teenagers had experienced at least one

Table A. Number of female family planning patients under age 20 years and percent distribution by selected characteristics, according to race: United States, 1978

Selected characteristics	Race		
	Total ¹	White	Black
Number in thousands			
All patients	1,268	892	355
Percent distribution			
Total	100.0	100.0	100.0
Age			
13 years or under	1.0	*0.5	*2.2
14 years	2.5	1.7	4.7
15 years	6.8	5.7	9.4
16 years	14.0	13.6	15.1
17 years	21.5	22.1	20.3
18 years	27.1	28.4	23.7
19 years	27.1	28.0	24.7
Education			
Less than 7 years	1.2	1.0	*1.7
7-11 years	60.0	57.2	67.6
12 years	30.8	32.7	25.6
13 years or more	8.0	9.0	5.1
Student status			
Student	55.7	53.8	60.6
Nonstudent	44.3	46.2	39.7
Public assistance income			
Income includes public assistance	14.1	7.9	29.8
Income does not include public assistance	85.9	92.1	70.2
Geographic region			
Northeast	19.9	21.0	18.0
North Central	16.0	18.1	11.4
South	36.3	26.4	62.1
West	27.8	34.5	8.4
Visit status			
Initial	54.5	57.7	45.9
Return	45.5	42.3	54.1

¹ Includes races other than white and black.

NOTE: Numbers may not add to totals due to rounding.

Table 8. Number of female family planning patients under age 20 years and percent distribution by pregnancy history, according to race: United States, 1978

Pregnancy history	Race		
	Total ¹	White	Black
Number in thousands			
All patients	1,268	892	355
Percent distribution			
Total	100.0	100.0	100.0
Number of pregnancies			
None	65.8	69.9	54.6
One	26.3	23.3	33.5
Two or more	8.1	6.7	11.5
Number of live births			
None	78.5	83.4	65.3
One	18.0	13.9	28.7
Two or more	3.5	2.7	5.9
Number of fetal deaths			
None	84.9	84.7	85.1
One	13.3	13.4	13.2
Two or more	2.0	1.9	*0.2

¹Includes races other than white and black.

NOTE: Numbers may not add to totals due to rounding.

pregnancy, and over twice as many black teenagers than white teenagers had had at least one live birth. Since cause of fetal mortality is not ascertained within the scope of the survey, data on the number of fetal deaths may reflect induced as well as spontaneous abortions. About 15 percent of the teenagers had experienced at least one fetal death. There is no difference in the number of fetal deaths between the two racial groups.

Contraceptive utilization and source of method

Table C shows the percent distribution of teenagers by the contraceptive method they were using prior to their visit and the source from which the method was obtained. About 40 percent of the teenagers had never used a method regularly prior to the visit. The proportion who had never used a method regularly was similar for black and white teenagers (39.4 percent and 40.0 percent, respectively). For those who had ever used a method, the largest proportion, 48.8 percent, had used the oral contraceptive pill. A smaller proportion of the teenagers used other methods, which include the intrauterine device (IUD), diaphragm, foam/jelly/cream, and natural (e.g., rhythm), among others. Such a high proportion of teenagers having used the pill indicates that the source of the method for most of the teenagers was either family planning clinics or private physicians, as table C indicates.

The largest proportion of the teenagers returned to the family planning clinic from which they had

Table C. Number of female family planning patients under age 20 years and percent distribution by contraceptive history, according to race: United States, 1978

Contraceptive history	Race		
	Total ¹	White	Black
Number in thousands			
All patients	1,268	892	355
Percent distribution			
Total	100.0	100.0	100.0
Prior contraceptive method			
Pill	48.8	47.6	51.5
IUD	2.3	1.8	3.4
Diaphragm	1.3	1.6	*0.8
Foam/jelly/cream	2.4	2.6	*2.0
Natural	*0.5	*0.8	*0.3
Sterilization	*0.3	*0.3	*0.3
Other	4.3	5.3	*1.7
No regular method	39.9	40.0	39.4
Source of prior method			
Same service site	29.7	26.9	37.2
Other service site	6.1	6.3	5.9
Hospital	*1.1	*0.8	*2.0
Private physician	8.4	9.4	5.6
Drug store	4.1	5.2	*1.4
Other	2.8	3.0	*2.2
Unknown	7.9	8.5	5.9

¹Includes races other than white and black.

NOTE: Numbers may not add to totals due to rounding.

received their prior method (29.7 percent). About 7 percent received their prior method from another clinic or from a hospital. The private physician was the source of prior method for 8.4 percent of the teenagers. The drug store was the source for an additional 4 percent, while 2.8 percent received prior methods from other sources. The source of prior method for another 7.9 percent of the teenagers was unknown. As for racial differences, more black teenagers than white teenagers obtained their prior method from a family planning clinic or from a hospital, while more white teenagers than black teenagers obtained their prior method from a private physician.

Table D shows the percent distribution of teenagers by the contraceptive method they adopted or continued at the visit and the types of medical services they received. Nearly three-quarters of the teenagers chose or continued use of the pill. An additional 8 percent chose either the IUD or the diaphragm, which are other medical methods. There was a small increase in the proportion of teenagers who chose to use foam/jelly/cream after the visit, compared with before the visit (5.0 percent compared with 2.4 percent as shown in tables C and D). Almost 9 percent of the teenagers chose no method at the visit. This general pattern can be seen for both races separately.

It is also evident from table D that more than half of the teenagers received the core medical services provided in family planning clinics, that is, pap smear, pelvic exam, breast exam, blood pressure, and blood test. The pregnancy test was provided for about 10

percent of the teenagers, while nearly 58 percent received the venereal disease (V.D.) test.^a A majority of the patients also received a urinalysis (nearly 63 percent), and other medical services were provided for 48.0 percent of the teenagers. There is no significant difference in the types of medical services provided to black and white teenagers.

Table D. Number of female family planning patients under age 20 years and percent distribution by contraceptive method adopted or continued and medical services provided, according to race: United States, 1978

Contraceptive method adopted or continued and medical services received	Race		
	Total ¹	White	Black
	Number in thousands		
All patients	1,268	892	355
	Percent distribution		
Total	100.0	100.0	100.0
Contraceptive method adopted or continued			
Pill	74.7	74.3	75.8
IUD	3.7	3.2	5.1
Diaphragm	4.2	4.9	*2.0
Foam/jelly/cream	5.0	4.5	6.5
Natural	*0.2	*0.2	*0.3
Relying on partner	2.8	3.0	2.5
Sterilization	*0.2	*0.2	*0.3
Other	*0.5	*0.6	*0.3
No regular method	8.7	9.1	7.3
Medical services provided			
Pap smear	62.8	63.7	61.4
Pelvic exam	72.4	72.6	72.1
Breast exam	64.4	64.0	65.9
Blood pressure	89.8	89.0	92.4
Pregnancy test	10.1	10.9	8.2
V.D. test	57.5	57.1	59.4
Urinalysis	62.5	64.3	58.0
Blood test	57.1	57.6	56.6
Other	48.0	47.6	47.9

¹Total includes races other than white and black.

NOTE: Numbers may not add to totals due to rounding.

Method switching

In table E the percent distribution of teenage patients is shown by the contraceptive method they adopted or continued at the end of the visit, according to the method they had used prior to the visit. Before the visit, 2 out of 5 patients used no method regularly (see table C). During the visit, nearly 70 percent of that group chose the pill, over 6 percent adopted the diaphragm or IUD, about 12 percent chose less effective methods, and the remaining 12 percent did not adopt a method. Table E also shows that most of the teenagers whose prior method was the pill did not switch to another method (83.9 percent). Almost 5 percent of the teenagers who previously used the pill switched to the IUD or diaphragm, another 5 percent adopted less effective methods, and over 6 percent did not adopt a method at the visit.

The general pattern is that teenagers whose previous method was medical (i.e., pill, IUD, or diaphragm) continued that method or chose another medical method. Most teenagers who used less effective methods (i.e., foam/jelly/cream and others) switched to the most effective methods during the

^aIt is important to note that the figures reported here for the venereal disease and pregnancy tests do not include teenagers who visited clinics solely for these services because they were excluded from the survey sample.

Table E. Number of female family planning patients under age 20 years and percent distribution by contraceptive method adopted or continued, according to prior contraceptive method: United States, 1978

Contraceptive method adopted or continued	Prior contraceptive method					
	Pill	IUD	Diaphragm	Foam/jelly/cream	Other	No regular method
	Number in thousands					
All patients	618	29	17	31	67	506
	Percent distribution					
Total	100.0	100.0	100.0	100.0	100.0	100.0
Pill	83.9	*23.6	*29.7	56.7	66.6	69.9
IUD	2.2	59.0	*5.2	*5.8	*2.3	2.4
Diaphragm	2.5	*2.0	51.0	*8.5	*7.3	4.0
Foam/jelly/cream	3.1	*5.4	*1.6	*17.9	*5.4	6.6
Relying on partner	1.4	*2.6	*2.3	*2.7	*6.0	4.3
Other	*0.5	*0.4	*1.4	*0.8	*2.2	1.0
No regular method	6.3	*7.0	*8.9	*7.8	9.6	11.7

NOTE: Numbers may not add to totals due to rounding.

visit. Thus the clinic provided a method to a significant number of teenagers who had previously used no method, and it provided a more effective method to teenagers who had previously used a less effective method.

Teenagers compared with older women

For comparative purposes, figures 1-4 show pregnancy history and contraceptive information for teenagers and for women age 20 years and over. Figure 1 shows that more teenage patients than older patients had had no pregnancies (approximately 66 percent compared with 31 percent). The proportion who had had one pregnancy was about the same for both age groups. However, more older women than teenagers had had two or more pregnancies (over 43 percent compared with about 8 percent). Figure 2 reveals that a higher proportion of older women than of teenagers used some method of contraception and that more of the former group used the more effective methods.

Figure 3 shows that the proportion of teenagers who adopted or continued use of the pill is significantly

larger than that of women age 20 years and over (nearly 75 percent compared with almost 58 percent). Larger proportions of the older women than of the teenagers adopted the IUD and the diaphragm, as well as other methods. However, there is no significant difference in the proportions of teenagers and older women who adopted foam/jelly/cream as a method or who adopted no method. It appears, then, that the pill is the method that is supplied to most women who had never used a method regularly (most of whom are teenagers).

Figure 4 reveals the number of abortions the family planning patients had had since 1973. Most of the women, regardless of age, had not had an abortion during that period (nearly 86 percent for teenagers and over 79 percent for older women). However, a higher proportion of the older women than of the teenagers had had at least one abortion since 1973 (over 15 percent compared with nearly 12 percent). The proportion of teenagers who had had at least one abortion since 1973 (almost 12 percent) represents 34 percent of the teenagers who had had at least one pregnancy.

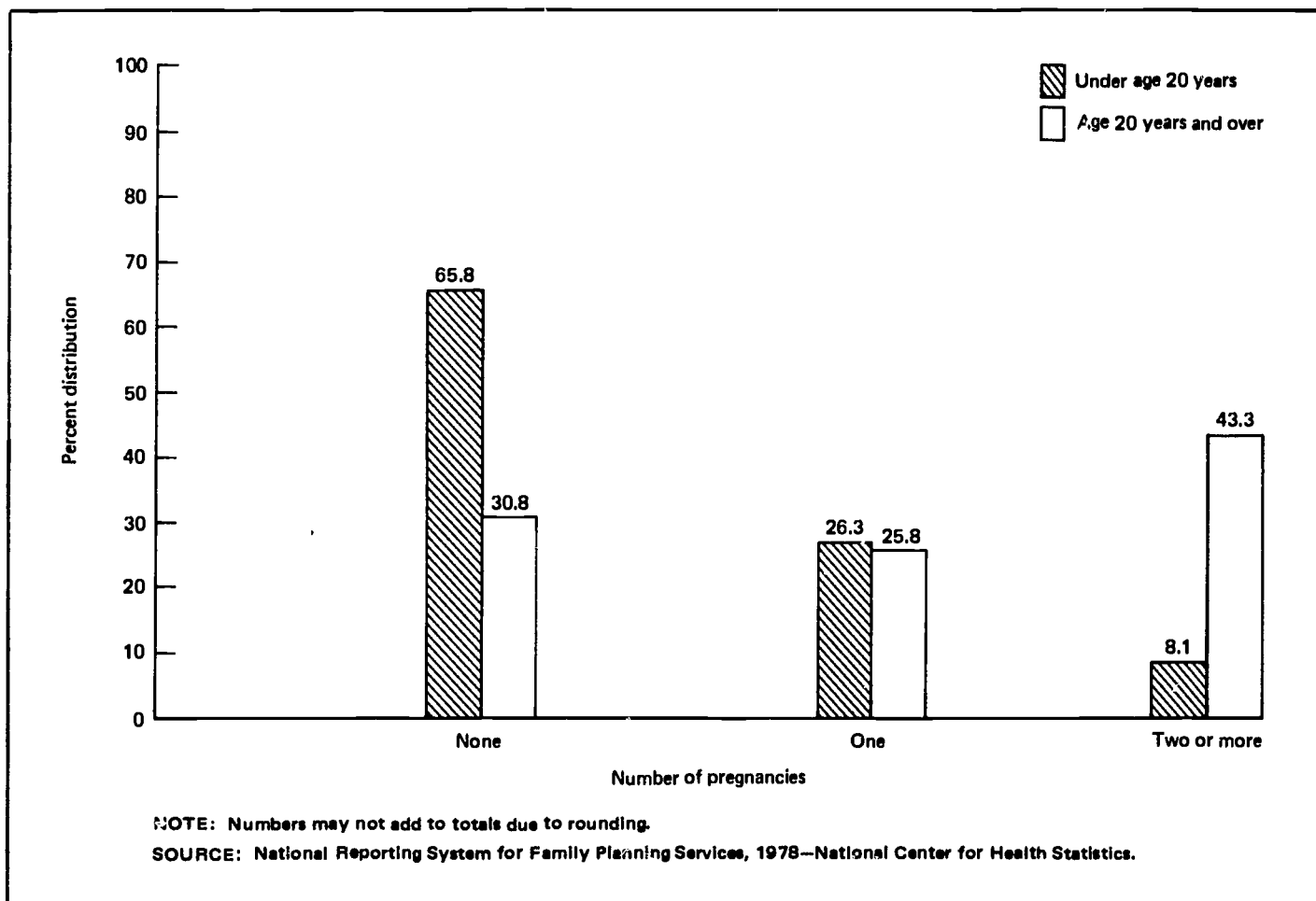


Figure 1. Percent distribution of female family planning patients under age 20 years and age 20 years and over by number of pregnancies, according to age: United States, 1978

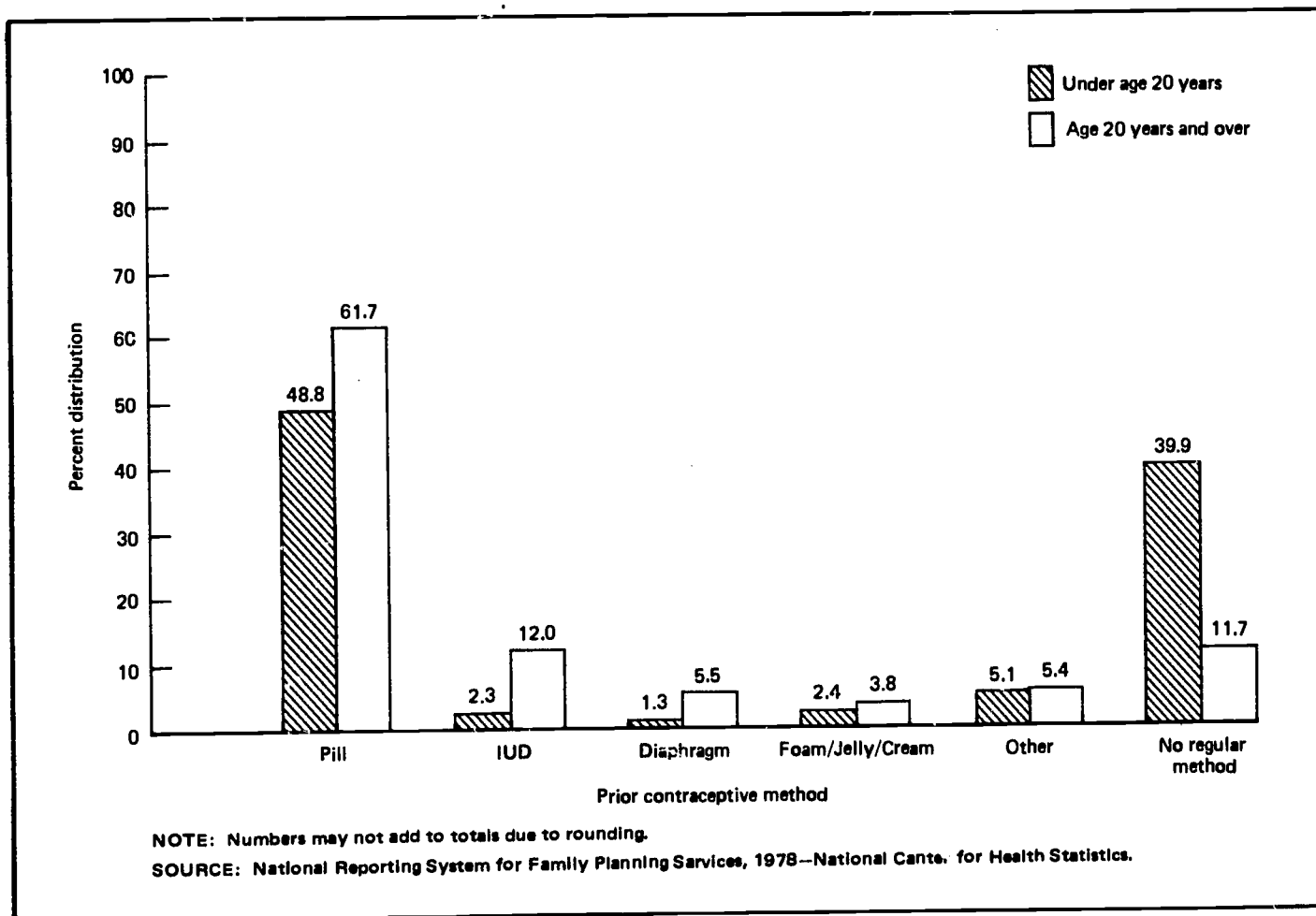
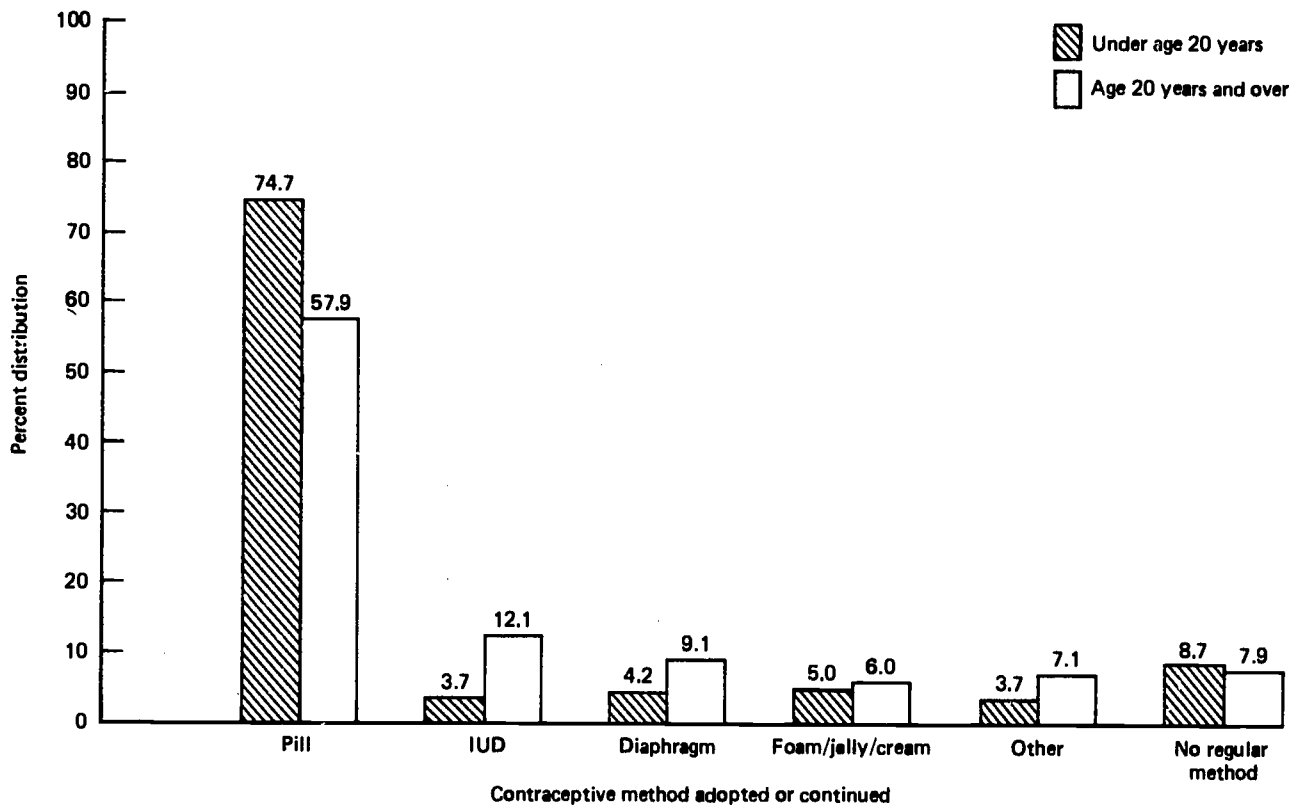


Figure 2. Percent distribution of female family planning patients under age 20 years and age 20 years and over by prior contraceptive method, according to age: United States, 1978



NOTE: Numbers may not add to totals due to rounding.

SOURCE: National Reporting System for Family Planning Services, 1978—National Center for Health Statistics.

Figure 3. Percent distribution of female family planning patients under age 20 years and age 20 years and over by contraceptive method adopted or continued, according to age: United States, 1978

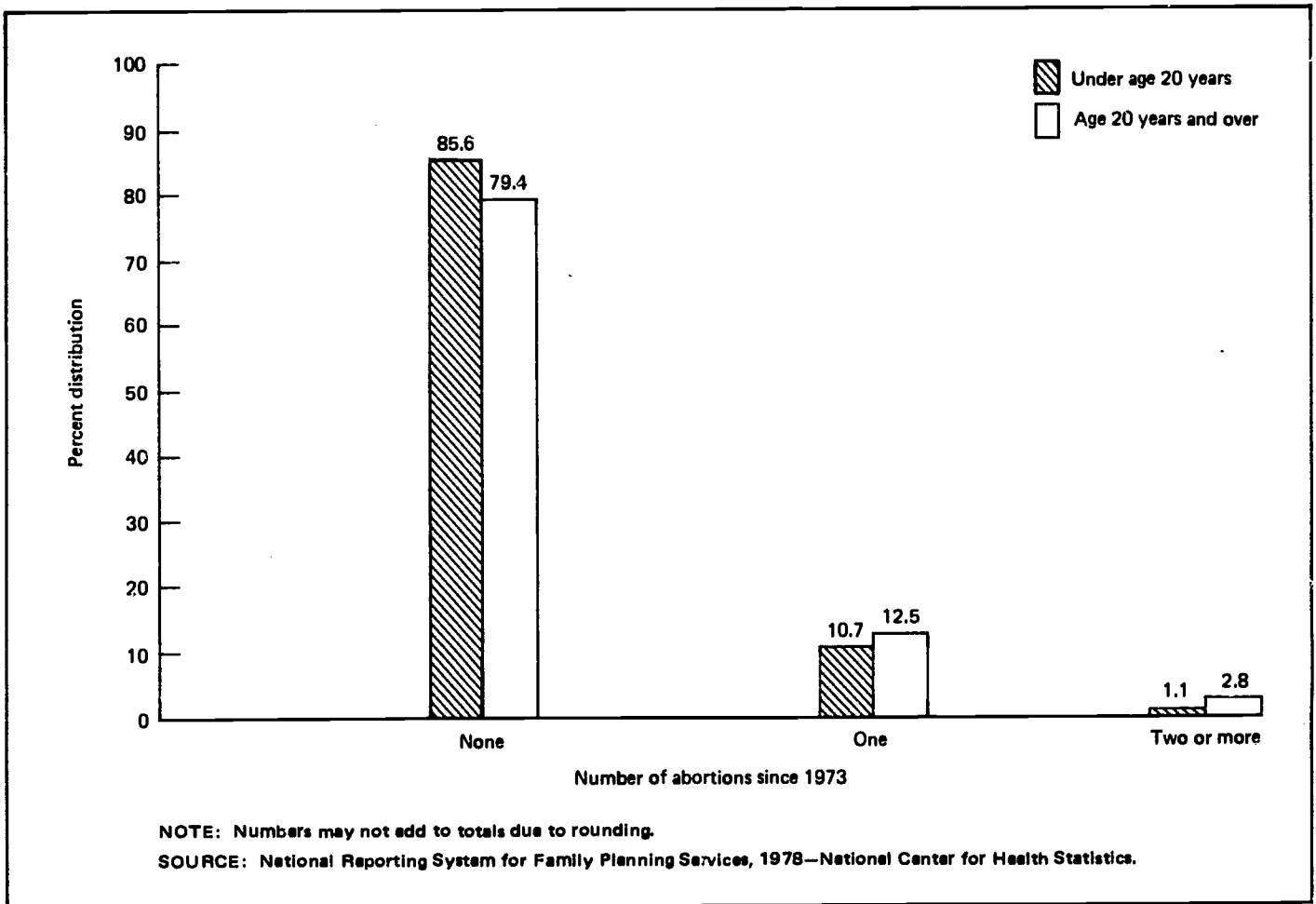


Figure 4. Percent distribution of female family planning patients under age 20 years and age 20 years and over by number of abortions since 1973, according to age: United States, 1978

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Appendixes

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Appendix I. Technical notes

Survey methodology

The National Reporting System for Family Planning Services covers all family planning visits to nonmilitary service sites in the United States, Guam, Puerto Rico, and the Virgin Islands that offer medical family planning services. The survey specifically excludes family planning visits to office-based private physicians' practices; these visits are included in the National Ambulatory Medical Care Survey, which is also conducted by the Division of Health Care Statistics of the National Center for Health Statistics (NCHS). A family planning patient is an individual making one or more family planning visits to a family planning service site.

family planning visits to a family planning service site.

Sampling design.—The data presented in this report are based on a two-stage stratified sample survey. The first-stage sampling frame was completed during the summer of 1976. The frame consisted of a list of family planning service sites enrolled in the full-count survey (the mode in which the survey operated prior to the adoption of the sampling approach on July 1, 1977) augmented by lists of family planning service sites compiled by the Bureau of Community Health Services of the U.S. Department of Health and Human Services and by the Alan Guttmacher Institute, which, at that time, was the research and development division of the Planned Parenthood Federation of America, Inc. Family planning service sites that were identified on more than one list were deleted from the frame prior to sample selection.

Prior to selection of the sample service sites, the sampling frame was arranged into six State groups, which were formed by combining States with similar numbers of family planning service sites. Within each State group, each family planning service site was classified into one of the following three classes according to reported information for the facility's annual number of family planning visits: sites with

less than 1,000 visits, sites with 1,000-3,999 visits, and sites with 4,000 visits or more. Within each of the sampling strata defined by the six State groups and the three visit-size classes, the service sites were ordered by State, type of sponsorship (i.e., public health department, affiliate of the Planned Parenthood Federation of America, Inc., hospital, and other), and county. The sample service sites were systematically selected from these strata after a random start, with the probability of selection ranging from certainty to 1 in 18. The 1978 U.S. sample comprised 1,195 sites, with 85.1 percent of the sites participating in the survey.

In the second stage, family planning visits at each sample site were systematically selected. NCHS assigned to each sample site a sampling rate dependent on the site's reported visit volume and the State in which the site was located. Overall, 14 visit sampling rates were used to determine the proportion of each site's family planning visits needed for the survey; the visit sampling rates ranged from certainty to 1 in 30.

Although the survey is based on a sample of family planning visits, estimates for family planning patients are derivable from survey data. Each patient (i.e., an individual making one or more family planning visits) can be uniquely associated with the first visit she made during the calendar year.

The date of the prior family planning visit, if any, for each individual making a sample family planning visit is recorded in item 8 of the Clinic Visit Record (see appendix III). With this information, sample family planning visits that correspond to an individual's first family planning visit during the calendar year can be identified. Of 276,619 sample family planning visits in the United States in 1978, some 138,129 reflect data for the individual's first family planning visit during that year. The patient estimates presented in this report are based on those 138,129 sample family planning visits (or, equivalently, sample family planning patients).

Visit data were either abstracted from the patient's medical file or obtained by interviewing the patient or by observation. The primary data collection form is the Clinic Visit Record, which consists of the survey's minimum basic data set (see appendix III).

Each sample service site had the option of collecting data for the survey by participating in a computerized record system, provided NCHS criteria for data collection were met. NCHS required that (1) the record system's data be based on a source document that included the survey minimum basic data set, and (2) the procedures and definitions used to collect such data be consistent with those specified for the survey. About 3 out of 4 sample service sites participating in the 1978 survey collected data by participating in a computerized record system. The remaining sites collected survey data on Clinic Visit Records, which were submitted to NCHS for processing.

The procedure for sampling visits was done in one of two ways. Sample service sites that collected visit data for the survey by participating in a computerized record system usually opted to have the sample visits selected by computer. The remaining sites selected sample visits through their staffs' maintenance of visit logs used to list every patient making a family planning visit. Individuals who answered "yes" to the screening question ("Are you here to see a health provider [physician, nurse, allied health personnel] about obtaining health services related to contraception, infertility treatment, or sterilization?") were listed consecutively on the visit log. Those individuals whose names appeared on the last line of each page in the visit log were selected and data for those visits were collected. Different versions of the family planning visit logs corresponded to each of the 14 sampling rates employed to select sample visits; the total number of lines used to list patients on the family planning visit log was equal to the reciprocal of the sampling fraction used by the site.

Data processing.—Data processing differed according to the mode of data submission. Visit data received on Clinic Visit Records had to be keyed to machine-readable form prior to computer processing. Keying for all data items was independently verified for 100 percent of the Clinic Visit Records. Visit data received on a computer tape or on punched cards from a computerized record system did not require precomputer processing.

All visit data, regardless of the form of data submission, were edited by NCHS for completeness and consistency. Visit records with errors, inconsistencies, or item nonresponse were corrected, if possible, through followup with the service site or the computerized record system. Imputation was used for specific data items when the overall level of nonresponse for an item was small.

The survey statistics are derived by a complex estimation procedure used to produce essentially unbiased data. The procedure's two principal components are inflation by the reciprocal of the probability of sample selection and adjustment for non-response.

Sampling error.—The statistics presented in this report are based on a sample survey and therefore differ from those that would be based on a full-count (100-percent) survey that used the same data collection definitions and procedures. The probability sampling design allows calculation of estimated standard errors from the sample data.

The standard error is primarily a measure of the variability that occurs by chance because a sample rather than the entire sampling frame is surveyed. While the standard errors calculated for this report reflect some of the random variation inherent in the measurement process, they do not measure any systematic error, or bias, that is present in the data. One is referred to the section titled "Nonsampling error" for additional information on measurement error.

The chances are about 0.68 that the interval specified by the estimate plus or minus one standard error contains the figure that would be obtained through a full-count survey of the sampling frame. The chances are about 0.95 that the interval specified by the estimate plus or minus two standard errors contains the figure that would be obtained through a full-count survey of the sampling frame.

In order to derive standard errors at moderate cost that would be applicable to a wide variety of statistics, several approximations were required. It is necessary to utilize the estimates of domain sizes, relative standard errors, and sample sizes shown in tables I-III.

The standard error of proportion estimates may be approximated by use of the design effect approach. For data from the National Reporting System for Family Planning Services, the design effect varies with the size of the base of the proportion (see table IV). With the selection of larger values in the range of recommended design effects, fewer comparisons of survey parameters will result in significant differences. The largest value in each range of recommended design effects was used to determine reliability for this report.

Accordingly, the standard error of an estimated proportion of patients is approximated by the following formula:

$$\text{Standard error } (p) = (\text{D.E.}) \sqrt{\frac{p(1-p)}{n}}$$

Table I. Estimated number of female family planning patients, by age and race: United States, 1978

Race	Total	Age			
		Under 20 years	20-24 years	25-29 years	30 years and over
Number of patients in thousands					
All races ¹	3,815	1,268	1,402	669	475
White	2,616	892	987	441	296
Black	1,118	355	386	210	167

¹Includes races other than white and black.

Table II. Relative standard error of estimated number of female family planning patients, by age and race: United States, 1978

Race	Total	Age			
		Under 20 years	20-24 years	25-29 years	30 years and over
Relative standard error in percent					
All races ¹	4.1	4.3	4.4	4.5	3.9
White	4.4	4.8	4.7	4.7	3.8
Black	5.2	4.9	4.8	6.6	6.9

¹Includes races other than white and black.

Table III. Number of sample (i.e., unweighted) family planning patient records, by age and race: United States, 1978

Race	Total	Age			
		Under 20 years	20-24 years	25-29 years	30 years and over
All races ¹	138,129	48,122	50,922	23,611	15,474
White	99,501	35,463	37,291	16,476	10,271
Black	33,872	11,312	11,838	6,155	4,567

¹Includes races other than white and black.

where

p = the estimated proportion.

n = the number of sample (i.e., unweighted) patients in the base of the proportion (see table III).

D.E. = the design effect corresponding to the size of the estimated base of the proportion p (see table IV).

For example, 74.7 percent ($p = 0.747$) of the 1,268,000 teenage family planning patients continued or adopted use of the oral contraceptive pill. The fol-

lowing computation may be used to determine the standard error for this estimated proportion:

$$\text{Standard error} = 7 \sqrt{\frac{(0.747)(1-0.747)}{48,122}} = 0.014$$

where

$$\begin{aligned} p &= 0.747 \\ \text{D.E.} &= 7 \\ n &= 48,122 \end{aligned}$$

Table IV. Range of recommended design effects for proportion estimates

Estimated number of patients in base of proportion (domain size)	Range of recommended design effects	Design effect used in this report to determine reliability
Less than 1 million	1-5	5
1-3 million	1-7	7
More than 3 million	1-7	7

and

$$\text{relative standard} = \frac{0.014}{0.746} = 0.019.$$

One may also wish to compute the standard error associated with national aggregate estimates. To calculate the approximate standard error of an aggregate estimate X , first compute the relative standard error (RSE) of the proportion (X/Y), where Y is the aggregate estimate for the smallest category of patients listed in table I containing X population (e.g., if X is the estimated number of teenage family planning patients adopting or continuing use of the oral contraceptive pill, Y is the estimated number of teenage family planning patients).

Then

$$\text{RSE}(X) = \sqrt{(\text{RSE}(X/Y))^2 + (\text{RSE}(Y))^2}$$

and

$$\text{standard error}(X) = X \text{RSE}(X).$$

To continue with the example, one may calculate the standard error of the estimated 946,000 teenage family planning patients who continued or adopted use of the oral contraceptive pill.

First, the approximate relative standard error of the proportion estimate (the estimated proportion of teenage family planning patients who continued or adopted use of the pill) is calculated. This was determined to be 0.019. The relative standard error for

the base of the proportion (i.e., the estimated total number of teenage family planning patients) is provided in table II.

Therefore

$$\text{RSE}(946,000) = \sqrt{(0.019)^2 + (0.043)^2} = 0.047.$$

The standard error is the aggregate estimate multiplied by the RSE:

$$\text{Standard error}(946,000) = (0.047)(946,000) = 44,462$$

Nonsampling error.—The data presented in this report are also subject to nonsampling error, including that due to service site nonresponse, item nonresponse, information incompletely or inaccurately recorded, and processing error.

A major component of nonsampling error is associated with the gap between the survey sampling frame and the universe. The frame only partially covered those sites that had inaugurated the provision of family planning services since early 1976.

During early 1980 the National Center for Health Statistics conducted a study to identify and measure nonsampling error associated with 1980 data from the National Reporting System for Family Planning Services.⁷ The study included site visits to 174 family planning facilities in the 1980 sample. The study revealed that it was not generally possible to verify the number of medical family planning visits. For example, service sites frequently did not differentiate between medical and nonmedical family planning visits. The study indicated patient totals are probably underestimated. Other problems associated with adherence to survey definitions and procedures were identified, and evidence suggests that patient data were not always updated in the site's record system at every visit.

Rounding.—Aggregate estimates of family planning patients are rounded to the nearest thousand. The percentages were computed based on unrounded estimates; thus, the figures may not add to the totals.

NOTE: A list of references follows the text.

Appendix II. Definitions of terms used in this report

Clinic.—See family planning service site.

Clinic Visit Record.—The primary data collection form used by the National Center for Health Statistics for the National Reporting System for Family Planning Services. See appendix III for facsimile.

Contraception.—Conscious use of medication, devices, or practices that permit coitus with reduced likelihood of conception (commonly known as birth control).

Contraceptive method.—Any medication, device, or practice that permits coitus with reduced likelihood of conception.

Education.—The highest grade of “regular” school completed (not the highest grade entered). “Regular” school refers to any institution in which a person can earn credits toward an accredited elementary school certification, high school diploma, or college degree. Trade schools, beauty schools, business schools, and the like are excluded unless credits are granted toward an elementary school certificate, high school diploma, or college degree.

Family planning patient. A person who receives medical services related to contraception, sterilization, or infertility treatment in a family planning service site anywhere within the United States or its territories.

Family planning service site.—A location providing family planning services on a regular basis under the supervision of a physician. Private physicians’ offices and group medical practices are excluded unless they receive a U.S. Department of Health and Human Services grant for the provision of family planning services. Military service sites are also excluded from the survey.

Family planning services.—Medical services that are primarily related to regulation of conception; that is, they enable a person either to reduce the risk of conception (contraceptive services) or to induce conception (infertility services), as desired.

Fetal death.—Death of a product of conception prior to complete expulsion or extraction from its

mother. This includes miscarriages, stillbirths, and induced abortions.

Live birth.—A child born alive any time after conception. In the event of a multiple birth, each child is counted as one birth. For example, twins count as two live births, and triplets count as three live births.

Medical services.—These include the provision of contraceptive methods, general physical examinations, and other tests involved in maintaining the health of the patient. The following services are included:

Pap smear: Papanicolaou’s test to detect cervical cancer.

Pelvic exam: Speculum examination of the vagina and bimanual examination of internal pelvic organs.

Breast exam: Inspection and palpation of the breast and axillary glands.

Blood pressure: Routine measurement of a patient’s blood pressure.

Pregnancy testing: Any diagnostic test performed to determine pregnancy.

V.D. testing: Test to detect the presence of venereal disease.

Urinalysis (n.e.s.):^b Any test done on the patient’s urine sample other than for venereal disease detection or a pregnancy test.

Blood test (n.e.s.):^b Any test of a patient’s blood except for venereal disease detection or a pregnancy test.

Other medical services: Medical family planning services not specified on the Clinic Visit Record. Examples include X-rays and immunizations.

New patients.—All patients whose first visit (i.e., initial visit) to a family planning service site occurred

^bn.e.s. means not elsewhere specified.

during the survey year. This does not preclude the individual's having visited a private physician.

Public assistance income.—The patient's family income includes money from any Federal, State, or local public assistance program. Scholarships, education grants, unemployment benefits, and Social Security pensions are not considered public assistance income.

Region.—Each of the family planning service sites is classified by location in one of the four geographic regions of the United States, which correspond to those used by the U.S. Bureau of the Census. The following framework is used:

Northeast	Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, and Pennsylvania.
North Central . . .	Michigan, Ohio, Illinois, Indiana, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas.
South	Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida, Kentucky, Tennessee, Alabama, Mississippi, Arkansas, Louisiana, Oklahoma, and Texas.
West	Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Washington, Oregon, California, Hawaii, and Alaska.

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