Family Planning Perspectives
Volume 28, Number 5, September/October 1996

Impact of Publicly Funded Contraceptive Services On Unintended Pregnancies and Implications For Medicaid Expenditures

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Of U.S. women who use a reversible method of contraception, 24% each year obtain family planning services from a publicly funded clinic or a private doctor reimbursed by Medicaid. If these subsidized contraceptive services were not available, women who currently use them would have an estimated 1.3 million additional unplanned pregnancies annually, of which 29% would involve women aged 15-19, 67% would involve never-married women and 61% would involve women with a household income below 200% of the federal poverty level. An estimated 632,300 of these pregnancies would end in induced abortion, an increase of 40% over the current national level. Another 533,800 pregnancies would result in unintended births. Some 76,400 of these would be births to families already receiving public assistance, and 64,100 would be to families that would become eligible for public assistance because of the birth; another 197,000 would be to women whose families would not receive public assistance, but would be eligible for Medicaid coverage of pregnancy, delivery and newborn care. In FY 1987, public-sector expenditures for contraceptive services totaled an estimated $412 million. If subsidized services had not been available, the federal and state governments would have spent an additional $1.2 billion through their Medicaid programs for expenses associated with unplanned births and abortions. Thus, for every dollar spent to provide publicly funded contraceptive services, an average of $3.00 was saved in Medicaid costs for pregnancy-related health care and medical care for newborns.

(Family Planning Perspectives, **28:**188-195, 1996)

Subsidized contraceptive services are available to U.S. women through family planning clinics funded with federal, state and local monies and through physicians reimbursed by Medicaid. Many of the women who utilize these services would otherwise encounter difficulty obtaining family planning care because of their low income or other circumstances, such as a need for confidentiality. For example, while family practitioners and obstetrician-gynecologists provide 90% of office-based contraceptive services for women in private settings,[1] 35% of them do not provide contraceptives to minors without parental consent, 50% will not accept Medicaid reimbursements for contraceptive visits[2] and 64% do not reduce their fees for women who cannot afford the cost of family planning services.[3] Consequently, women relying on publicly funded contraceptive services are precisely those whose youth or precarious economic circumstances place them at considerable risk both of

unintentionally becoming pregnant and of experiencing health complications and socioeconomic hardships as a result.

For three decades, federal and state programs have sought to redress such inequalities in access to family planning services. In FY 1994, federal and state funding for contraceptive services reached $715 million.[4] Federally funded programs (Title X of the Public Health Service Act and the maternal and child health and social services block grants) contributed 31% of the total; Medicaid (which is jointly funded by the federal and state governments) accounted for 46%; and states directly provided the remaining 23%.

Both Title X and Medicaid* contain provisions to reduce socioeconomic obstacles to contraceptive use. For example, Title X guidelines state that clinics must offer their services free to clients with incomes below the federal poverty level and on a sliding fee scale to those with incomes falling between 100% and 250% of the poverty level. Title X legislation also makes family planning services accessible to all women regardless of their marital status or their age.[5] The Medicaid program requires that states pay for family planning services and supplies provided to recipients, and the program reimburses states at a preferential rate, covering 90% of their family planning costs.[6]

During the early 1980s, public-sector support for family planning services in the United States averted about 1.2 million unplanned pregnancies annually, of which an estimated 516,000 each year would have ended in abortion.[7] Moreover, for every dollar the public spent to provide contraceptive services, an average of $4.40 was saved in public costs for medical care, welfare and supplementary nutritional programs during the first two years after a birth and for publicly funded abortions. State-level evaluations have confirmed the significant role played by publicly funded family planning services in reducing the number of unplanned pregnancies and their associated costs.[8] And an analysis of private- and public-sector costs and economic savings associated with contraceptive use shows that regardless of the payment mechanisms or contraceptive method, contraception is highly cost-effective.[9]

In this article, we use updated national-level data to estimate the annual numbers of unplanned pregnancies, births and abortions averted by use of publicly funded family planning services in the United States. Since states fund a considerable portion of family planning services and assume much of the responsibility for clinic administration, we also estimate the number of unplanned pregnancies averted in each state. Additionally, we assess the public-sector benefits of averting unplanned pregnancies in terms of two measures: the number of women who would become eligible for Aid to Families with Dependent Children (AFDC) or Medicaid if they experienced an unplanned pregnancy; and a cost-benefit ratio capturing savings to Medicaid, the program that absorbs the largest share of short-term public costs for unplanned pregnancies.[10]

ESTIMATING CONTRACEPTIVE USE

Our methodology closely follows the approach Forrest and Singh developed to estimate the reproductive impact of publicly funded contraceptive services in the United States during the early 1980s.[11] The availability of new data has enabled us to

refine the estimation procedure; however, these methodological modifications mean we cannot directly compare our estimates to the earlier ones.

Users Relying on Subsidized Services

We use data from Cycle 4 of the National Survey of Family Growth (NSFG) to identify the number and characteristics of women using reversible contraceptives who had recently visited a publicly funded family planning service provider. The NSFG, conducted from January through August 1988, surveyed a representative sample of 8,450 U.S. women aged 15-44.

The survey data indicate that 21.2 million women were using reversible contraceptives in 1988. We classify respondents as users of publicly funded services if their most recent family planning visit within the 12 months preceding the interview was to a clinic (assuming that all clinics received public funds[12]) or to a physician who received Medicaid reimbursement for the visit. On the basis of this definition, 24% of all users of reversible contraceptives in 1988 relied on publicly funded family planning services.

We identify the following categories of contraceptive method use: pill, IUD, diaphragm, condom, spermicides (including the sponge), periodic abstinence or natural family planning, and all other reversible methods. Whenever possible, we classify women by five-year age-groups from 15-19 to 40-44; however, in some stages of the analysis, data constraints force us to combine the age-groups 35-39 and 40-44. We distinguish between women who have ever been married and women who have never been married. Finally, we classify women depending on whether their family income as reported in the NSFG was 200% or more of the federal poverty level or below 200%.

Other Scenarios

Without introducing a true experimental design in which we purposefully withhold services from women who obtain reversible contraceptives from publicly funded sources, we have no direct way of determinin g such women's contraceptive behavior in the absence of subsidized family planning services. Consequently, we estimate probable changes in their behavior under four scenarios, each of which assumes a different contraceptive status mix[‡] and therefore impli es different numbers of unplanned pregnancies, births and abortions.

Briefly, Scenario I assumes that in the absence of publicly funded services, the contraceptive status mix of women who currently use these services would shift to that of similar wo men who do not use them. Scenario II assumes that the mix would be the same as that among women who discontinue pill use. Scenario III assumes that women would return to the contraceptive behavior that they practiced before using publicly funded services. Scenario IV assumes that women would no longer use any method of contraception.

•*Scenario I: The contraceptive status mix would resemble that of similar women who do not use subsidized services.* For women obtaining nonsubsidized care, we use NSFG data to calculate the proportion in each contraceptive status category who are at risk of unintended pregnancy and are not relying on contraceptive sterilization, by age-

group, marital status and poverty status. We apply the subgroup-specific proportions to the number of women in each subgroup who use subsidized services.

Under this scenario, the proportion of women using prescription methods (the pill, IUD or diaphragm) would decline from 84% to 47%; more than half of women who currently obtai n the pill from publicly funded providers would stop using that method (Table 1). Condom use would double (from 11% to 23%), and reliance on other nonprescription methods would nearly triple (from 5% to 13%). Most important, 17% of women currently obtaining a method from a subsidized provider would discontinue contraceptive use.

Table 1. Percentage distribution of U.S. women using reversible contraceptives who rely on publicly funded providers, by actual method use and projected scenarios in the absence of public funding, 1988

Method	Actual	I	II	III	IV
Pill	76	35	0	31	0
IUD*	2	3	0	9	0
Diaphragm	6	9	0	<1	0
Codnom	11	23	44	25	0
Spermicides†	2	5	12	<1	0
Periodic Abstinence	1	4	7	4	0
Other	2	4	7	3	0
None	0	17	30	28	100
Total	100	100	100	100	100

*For ScenarioIII, includes use of hormonal implants and injectables. † Includes the sponge*Note:* Each scenario assumes that in the absence of publicly funded services, the contraceptive status mix of women who use those services would change in a given way. Scenario I assumes it would resemble the mix among similar women who do not use subsidized services. Scenario II assumes it would resemble the mix among women who discontinue pill use. Scenario III assumes women would return to the contraceptive behavior they practiced before visiting a subsidized provider. Scenario IV assumes that women would discontinue contraceptive use.

•*Scenario II: The contraceptive status mix would resemble that of women who discontinue pill use.* We have included this scenario because 76% of women who use a reversible method of contraception and obtain family planning services from public providers rely on the pill. Women using this method require at least one visit and, typically, periodic follow-up visits to a medical provider. However, in the absence of publicly funded family planning services, the cost of such visits could prove prohibitive for many economically disadvantaged women. In addition, young women may experience difficulty in locating practitioners who will prescribe pills without parental consent.

Using NSFG data on women who used the pill sometime between January 1984 and December 1987 and stopped using it between February 1984 and January 1988, we calculate the contraceptive status mix in the month following the women's most recent episode of pill use. We consider women's age and marital status at the time they discontinued using the pill; however, because we lack information about their poverty status at that time, we classify women according to their poverty status at the time of the survey.

Among all women who quit using the pill, 40% reported using another method in the next month, 17% did not have sex during the next month, 15% were pregnant, fewer than 1% reported that they were sterile (or their partner was) and 28% used no

method. The survey did not ascertain whether women using no method were seeking to become pregnant; however, at the time of the NSFG, 63% of women aged 15-44 who were sexually active, fecund, not pregnant or postpartum and not using a contraceptive method were not trying to become pregnant. Assuming this proportion applies to women who stopped using the pill, 17% of women who discontinued pill use without adopting another method (63% of 28%) were not seeking to become pregnant. Thus, 57% of women who discontinued pill use (17% who used no method plus 40% who used another method) were at risk of unintended pregnancy during the next month.

Of the pill discontinuers estimated to be at risk of unintended pregnancy, 70% moved directly from the pill to another method (23% to a prescription method and 46% to a nonprescription method), and 30% were using no method of contraception. Among those who adopted a nonprescription method, 63% began using condoms, 17% switched to spermicides, 10% relied on periodic abstinence and 10% used other nonprescription methods.

We assume that in the absence of subsidized services, women who had obtained the pill from publicly funded providers would be unable to afford methods that require medical visits. Thus, we apply the distribution of methods chosen by those adopting nonprescription methods to all women who moved to another method and find that under Scenario II, 44% of women would rely on the condom, 26% would rely on other nonprescription methods and 30% would use no method (Table 1). This summary distribution differs substantially from the actual contraceptive status mix. Most important, it suggests that the probability of unplanned pregnancy would be high, because sexually active women are either using no method of contraception or relying on less-effective, nonprescription methods.

•Scenario III: Women would return to the contraceptive behavior that preceded their first clinic visit. Because we lack recent national information about women's contracepti ve use before their first visit to a publicly funded provider, we utilize data from the Missouri Family Health Council on the contraceptive status of women who were sexually active, not pregnant and not relying on contraceptive sterilization before their first clinic visit in 1995.[13] The data do not include the contraceptive status mix for each subgroup, so we assume for this scenario that the mix does not vary by women's characteristics.

Under this scenario, 40% of women would use prescr iption methods, 25% would use condoms, 7% would use other nonprescription methods and 28% would use no method (Table 1). In many ways, this contraceptive status mix is similar to that implied by Scenario I, except that a substantially higher proportion of women would not be practicing contraception.

•*Scenario IV: Women would use no method.* Admittedly, the assumption that women who had recently used publicly funded family planning sources would remain sexually active and at risk of unintended p regnancy but would no longer use a contraceptive method if subsidized services became unavailable is rather untenable. Nonetheless, this scenario indicates the total contribution of method use to averting unintended pregnancies among women obtaining services from publicly funded providers.

ESTIMATING EFFECTS OF SERVICES

National-Level Impact

We estimate the number of unplanned pregnancies by linking information about women's contraceptive behavior to data on one-year method-specific failure rates (i.e., the probability that a woman using a particular method will unintentionally become pregnant during a 12-month period). In general, such rates are highest among women who are young, unmarried and poor.[14]

For users of all methods except the IUD, we employ failure rates specific to age, marital status, and poverty status.[15] For IUD users, we assign a higher failure rate to women with a household income below 200% of the poverty level than to women whose household income is at least 200% of the poverty level. Pregnancy rates among sexually active women using no method are specific only to age.[16]

Available estimates of unintended pregnancy rates during the first 12 months of contraceptive use overstate failure rates among all users, largely because women who use their method inconsistently or incorrectly discontinue use early as a result of pregnancy, leaving more effective users to continue for longer periods. Therefore, Forrest and Singh adjusted first-year failure rates downward on the basis of assumptions about the proportion of women who had used their method for more than one year and about the relationship between failure rates in the first 12 months and subsequent periods of use.[17] We use data from the 1988 NSFG and a 1987 abortion patient survey conducted by the Alan Guttmacher Institute to calculate an adjustment factor.

The NSFG respondents who had given birth in 1984-1988 reported that 40% of their conceptions had been unintended and that 44% of these (representing 17% of all births) had occurred during a period of contraceptive use.[18] The abortion patients reported that 51% of their conceptions had occurred while they were using contraceptives.[19] We apply these proportions to the total numbers of births and abortions (3.9 million and 1.6 million, respectively) in 1988 to estimate the numbers that occurred among contraceptive users (681,700 births and 811,300 abortions).[20] We assume that the number of miscarriages among contraceptive users was equivalent to 20% of the number of births plus 10% of the number of abortions (217,500).[‡]

Thus, we estimate that 1.7 million unintended pregnancies occurred among contraceptive users in 1988. However, this total is only 73% of the number we get by applying first-year contraceptive failure rates to the 21.2 million users reported in the NSFG (2.4 million). Consequently, we assume that the failure rates among all reversible method users are 73% of first-year failure rates. In estimating levels of unintended pregnancy, we adjust the first-year failure rate for each contraceptive method for each subgroup (i.e., each combination of age-group, marital status and poverty level); we make no adjustment in the expected pregnancy rate among women using no method.

The one available study that examined pregnancy rates with regard to young women's source of prescription contraceptives found that when women's characteristics were controlled for, pregnancy rates did not differ between those who went to a family planning clinic and those who went to a private physician.[21] We therefore multiply the

number of women in each subgroup who rely on publicly funded contraceptive services by the appropriate overall failure rate. The sum of these products is the estimated number of unplanned pregnancies among users of publicly funded contraceptive services.

Approximately 40% of unintended pregnancies among contraceptive users are carried to term, 48% are terminated by induced abortion and 12% end in spontaneous abortion.[§] (The breakdown of this distribution by subgroup is not available.) Applying these proportions to the numbers of unplanned pregnancies yields estimates of the numbers of births, abortions and miscarriages occurring among women who currently use publicly funded contraceptive sources. These data become our baseline estimates, against which we compare the outcomes that might occur if public funding were not available.

STATE-LEVEL IMPACT

To estimate the number of unintended pregnancies averted at the state level, we use data on the number of women who obtained contraceptive services only from family planning clinics in 1994.[22] On the basis of national data for clients served by clinics in Title X-funded agencies in 1991,[23] we assume that 89% of clients received a contraceptive method and were at risk of an unplanned pregnancy.

We average the results from our analyses of Scenarios I-III to estimate the number of unintended pregnancies averted among 1988 NSFG respondents who were contraceptive users relying on family planning clinics. Comparing this with the number of women using methods they obtained from clinics yields a ratio of pregnancies averted per 1,000 women obtaining contraceptives from family planning clinics. Likewise, we calculate the ratio of the gross number of pregnancies averted among clinic users based on data from the Scenario IV results. Applying these ratios to the number of women who obtained contraceptive methods from all clinics and from Title X-funded clinics in 1994 produces estimates of the impact of services in 1994 at the state level.

WELFARE ELIGIBILITY AND MEDICAID COSTS

To examine the effect of publicly funded family planning services on welfare and Medicaid eligibility and on Medicaid expenditures, we first estimate the number of women obtaining reversible contraceptives from publicly funded sources who would be eligibl e for AFDC or Medicaid if they experienced an unplanned pregnancy. We classify women according to four levels of eligibility: already receiving AFDC; would become eligible for AFDC; would become eligible for Medicaid coverage of pregnancy-related and newb orn medical care; and would remain above the eligibility levels for Medicaid and AFDC.

Using NSFG data on receipt of AFDC, we establish each woman's current welfare status and family size. We increase her family size by one and examine information about her family income to assess what her family's poverty status would be if she had another child. By comparing this result to state-specific eligibility levels for AFDC and Medicaid, we determine whether she would become eligible for either or both forms of assistance in her state if she became pregnant.[**]

In determining AFDC eligibility, we also take into account marital status. In the majority of states, AFDC is limited to unmarried economically needy mothers, although in some states, couples with children are eligible if one spouse is unemployed and the household income meets the program's criterion. However, we do not have data on husbands' employment status and thus are unable to take these special circumstances into account. Therefore, we restrict eligibility to unmarried economically needy women, whi ch produces conservative estimates of the number of families that would become eligible for AFDC if they had an additional, unplanned child.

Medicaid eligibility levels underwent major expansions from 1988 to 1990. The Omnibus Budget Reconciliation Act of 1989 raised the mandated eligibility level to 133% of poverty (regardless of marital or parental status), required that this change be imple mented by April 1990 and gave states the option of increasing eligibility to 185% of poverty.[24] Therefore, to make our analysis most relevant to the current Medicaid policy climate, we utilize Medicaid eligibility levels follo wing this period of expansion (July 1990).[25]

Because the NSFG respondents reported family planning visits made within the 12 months preceding their interview, we use expenditures during FY 1987 to measure the total amount of public funding for contraceptive services during the time the visits were made. We base our estimates of public-sector expenses for medical care related to childbirth on the costs of providing services for women who would be eligible for Medicaid coverage if they experienced an unplanned pregnancy (i.e., women already on AFDC and women who would become eligible for AFDC, Medicaid or both).

We begin these calculations by averaging each state's cost per Medicaid birth in 1986 and 1991 to approximate the cost in 1988. The cost per birth includes medical care for the woman (during pregnancy, delivery and the postpartum period) as well as the newborn (until hospital discharge).[26] Second, because of state-level variation in the amount of Medicaid reimbursement per birth, we multiply each state's reimbursement amount by the number of women in the state who visited a family planning clinic in 1994 for contraceptive services (expressed as a proportion of all women in the United States who visited a clinic in 1994).[27] The distribution of clinic users is a proxy for the distribution of women relying on either clinics or Medicaid-reimbursed physicians, for which state data are not available. The calculation yields a national average cost of $3,565 per Medicaid birth among women relying on publicly funded contraceptive services. We multiply this average cost by the number of unplanned births in each model to estimate Medicaid expenditures associated with unplanned births.

Additionally, we estimate the amount that would be spent on services for women who choose to terminate their unplanned pregnancies by abortion. In 1987, 14 states and the District of Columbia provided coverage for abortion to women eligible for Medicaid, and among them, expenditures for abortion varied.[28] As in our calculation of the average cost per birth, we take into account this state-level variation. Our calculations yield a national average expenditure of $130 per abortion among women using publicly funded contraceptive care. To estimate total abortion costs averted, we multiply the average cost per abortion by the estimated number of abortions averted among women who already receive AFDC and women whose families would become

eligible for AFDC if they had another child.

FINDINGS

WOMEN WHO USE SUBSIDIZED SERVICES

Of the 21.2 million U.S. women who were using a reversible method of contraception in 1988, 64% had gone to a medical provider for family planning services within the last year—23% to a clinic, 1% to a physician reimbursed by Medicaid for the visit and 41% to a physician who was paid privately (Table 2, page 192). Women using the pill were the most likely to visit a medical provider: Some 92% had done so, compared with 26-56% of those using other reversible methods, many of which do not require a medical visit to begin or continue use.

Table 2. Number of women using reversible contraceptives and percentage distribution by type of provider visited in the past year, according to method used and selected characteristics, 1988

Characteristic	No. of users (millions)	% distribution of visits				
		Public clinic	MD paid by Medicaid	Privately funded	No visit	Total
Total	**21.2**	**22.5**	**1.1**	**40.6**	**35.8**	**100.0**
Method						
Pill	10.7	34.3	1.4	56.6	7.7	100.0
IUD	0.7	11.2	1.2	32.1	55.6	100.0
Diaphragm	2.0	14.6	0.4	41.0	44.0	100.0
Condom	5.1	10.4	0.7	17.7	71.2	100.0
Spermicide	1.0	7.1	2.1	23.0	67.8	100.0
Periodic abstinence	0.8	5.0	1.4	19.6	73.9	100.0
Other	0.9	9.6	0.0	22.4	68.0	100.0
Age-group						
15-19	2.9	43.0	1.7	25.8	29.6	100.0
20-24	5.2	32.7	1.6	45.2	20.4	100.0
25-29	5.4	20.6	0.9	48.8	29.7	100.0
30-34	4.0	12.7	1.1	45.1	41.0	100.0
35-39	2.4	7.6	0.0	34.8	57.5	100.0
40-44	1.4	3.7	0.0	19.0	77.3	100.0
Marital status						
Never-married	8.1	34.2	2.0	37.4	26.4	100.0
Ever-married	13.1	15.4	0.5	42.5	41.6	100.0
Poverty status*						
<200%	6.2	38.9	2.8	29.0	29.3	100.0
é200%	15.0	15.9	0.4	45.3	38.5	100.0
Eligibility for public assistance if had another child						
Currently receives AFDC	1.0	42.7	15.3	21.4	20.6	100.0
Would become eligible for AFDC	0.8	51.0	4.1	21.2	23.7	100.0
Would become eligible for Medicaid	4.8	34.9	0.4	32.3	32.4	100.0
Would remain above eligibility level	14.6	15.4	0.1	45.7	38.7	100.0

*In this table and in Table 4, poverty status represents the woman's family income as a percentage of the federal poverty level. Source: Tabulations from the 1988 NSFG.

Age and income play an important role in determining whether women receive family planning services from providers funded publicly or privately. Older and economically better-off respondents—women who have the greatest latitude in terms of selecting a provider—were more likely to obtain services from the private sector than from publicly funded providers. In contrast, the majority of teenagers and economically disadvantaged women who made a contraceptive visit relied upon public sources for contraceptive services. Among 15-19-year-olds, 63% of those who made a visit for contraceptive services had most recently visited a publicly funded source. This proportion declines with age, to 23% of 30-34 year-olds and 16% of women aged 40-44 (not shown).

Among all women who made a family planning visit, 59% of those with a family income below 200% of the poverty level went to a publicly funded source, compared with 26% of higher income women. Moreover, public-sector providers serve many women who receive AFDC or who would become recipients if they had an unplanned pregnancy. Again, focusing only on those women who made a family planning visit within the past year, 72-73% of women who received AFDC payments or who would have become eligible for AFDC if they had an unplanned child visited a subsidized provider; 52% of women who would have become eligible only for Medicaid in the event of an unplanned pregnancy used publicly funded family planning services.

The prominent role played by publicly funded services is apparent when we compare the contraceptive method mix of women who receive publicly funded family planning services with that of women who visit private providers. Interestingly, without controlling for the fact that women who obtain subsidized care tend to be young and economically disadvantaged, the method mixes of the two groups closely resemble one another. For example, 78% of women relying on public services and 73% of women obtaining private care were using either the pill or the IUD (not shown). This comparison suggests that publicly funded services constitute an important means for disadvantaged women to gain access to the most effective contraceptive methods.

PREGNANCIES, BIRTHS AND ABORTIONS

Calculations based on method-specific pregnancy rates by age, marital status and poverty status reveal that the five million users of reversible contraceptives who rely on publicly funded services would have about 429,000 unintended pregnancies annually if they continued using their current method. Some 172,000 of these pregnancies would end in births and 203,800 in abortions (see Table 3). Under the various alternative scenarios, in the absence of publicly funded services, these numbers would increase by 225-960%: The number of pregnancies would range from 1.4 million to 4.5 million; the number of births, from 559,700 to 1.8 million; and the number of abortions, from 663,000 to 2.2 million.

Table 3. Actual number of unintended pregnancies, births and abortions expected in one year among women using publicly funded contraceptive services, and estimated numbers based on four scenarios in the absence of public funding

Scenario	Pregnancies*	Births	Abortions
Actual	429,000	172,000	203,800
Scenario I	1,395,800	559,700	663,000
Scenario II	2,216,700	888,900	1,052,900

Scenario III	1,667,900	668,800	792,300
Scenario IV	4,545,700	1,822,800	2,159,200

*Miscarriages are included among all unintended pregnancies but are not shown separately. Note: Each scenario assumes that in the absence of publicly funded services, the contraceptive status mix of women who use those services would change in a given way. Scenario I assumes it would resemble the mix among similar women who do not use subsidized services. Scenario II assumes it would resemble the mix among women who discontinue pill use. Scenario III assumes women would return to the contraceptive behavior they practiced before visiting a subsidized provider. Scenario IV assumes that women would discontinue contraceptive use.

When we then calculate the number of pregnancies averted by publicly funded services and average the results from Scenarios I-III, we estimate that publicly funded contraceptive services avert 1.3 million un planned pregnancies annually (Table 4). Of these averted pregnancies, 385,800 (29%) would involve 15-19-year-old women, 888,200 (67%) would involve never-married women and 810,500 (61%) would involve women with a household income below 200% of the federal poverty level. We may attribute 95% of the pregnancies averted by publicly funded contraceptive services to women's use of family planning clinics and 5% to their use of private physicians who receive Medicaid reimbursement for the family planning services they provide. If these unplanned pregnancies were not averted, 841,800 women would be eligible for pregnancy-related Medicaid assistance, because they either are already receiving AFDC, would become eligible for it or would become eligible for Medicaid alone.

Table 4. Estimated average and gross numbers of unintended pregnancies, births and abortions averted during one year among women now using reversible contraceptives and relying on publicly funded providers, by selected characteristics

Characteristic	Average			Gross		
	Pregnancies	Births	Abortions	Pregnancies	Births	Abortions
Total	**1,331,100**	**533,800**	**632,300**	**4,116,700**	**1,650,800**	**1,955,400**
Age-group						
15-19	385,800	154,700	183,300	1,038,300	416,300	493,200
20-24	449,200	180,100	213,400	1,517,100	608,400	720,600
25-29	321,100	128,800	152,500	956,300	383,500	454,200
30-34	134,800	54,000	64,000	437,600	175,500	207,900
35-39	30,000	12,000	14,300	133,900	53,700	63,600
40-44	10,200	4,100	4,900	33,400	13,400	15,900
Marital status						
Never-married	888,200	356,200	421,900	2,418,900	970,000	1,149,000
Ever-married	442,900	177,600	210,400	1,697,800	680,800	806,400
Poverty status						
<200%	810,500	325,000	385,000	2,052,600	823,100	975,000
é200%	520,600	208,800	247,300	2,064,100	827,700	980,500
Source of services						
Clinic	1,260,300	505,400	598,700	3,930,300	1,576,100	1,866,900
MD paid by Medicaid	70,800	28,400	33,600	186,400	74,700	88,500
Welfare eligibility						
Currently receives AFDC	190,600	76,400	90,500	468,800	188,000	222,700
Would become eligible for AFDC	159,900	64,100	75,900	372,600	149,400	177,000
Would become eligible for Medicaid	491,300	197,000	233,400	1,357,500	544,400	644,800

Would remain above eligibility level	489,400	196,200	232,400	1,917,800	769,000	911,000

Notes: In this table and Table 5, average estimates are the averages of data from Scenarios I-III; gross estimates are from Scenario IV. Numbers may not always add to totals because of rounding. *These estimates are higher than those for 1988, probably because the census of clinics was more inclusive in 1994 than in earlier years. (See: reference 22.)

An estimated 533,800 unplanned pregnancies would end in births. As a result, 64,100 families would become eligible for AFDC payments, while 76,400 more children would be born into households already receiving AFDC.

Another 632,300 pregnancies annually would end in induced abortions, adding about 40% to the 1992 national abortion total of slightly more than 1.5 million.[29] Approximately 90,500 women undergoing abortions ould already be AFDC recipients, and an additional 75,900 would qualify for Medicaid payment for the abortion if their state provided coverage.

According to Scenario IV (the gross estimate of the number of additional pregnancies that would occur if women were to use no contraceptives in the absence of subsidized care), publicly funded contraceptive services avert an estimated 4.1 million unplanned pregnancies annually. If women relying on these services used no method of contraception, they would have 1.7 million births and 2.0 million abortions. Some 2.2 million women would be eligible for Medicaid coverage for pregnancy-related medical care, and approximately 149,400 additional households would become eligible for AFDC.

STATE-LEVEL ESTIMATES

From the average of Scenarios I-III, we calculate that nationwide, 263 unintended pregnancies are averted per 1,000 clinic clients each year; the gross figure from Scenario IV suggests that as many as 821 unintended pregnancies are averted per 1,000 clients. Since similar data are not available at the state and local level, this national analysis can be used to estimate the numbers of unintended pregnancies averted by family planning clinics in each state.

As shown in Table 5 (page 194), 6.5 million women received contraceptive services from family planning clinics in 1994, including 4.2 million who were served in Title X-funded clinics.[††] Given our assumption that 89% of contraceptive clients received a method and were at risk of unintended pregnancy, we estimate that 1.5 million unintended pregnancies were prevented over the next year among all clients receiving publicly funded services and that Title X-funded family planning clinics alone prevented 969,700 of these unintended pregnancies. The number of unintended pregnancies averted under the average model ranges from 3,000 in Wyoming, the state with the smallest number of family planning clinic contraceptive clients in 1994, to almost 188,000 in California, the state with the largest number of women relying on family planning clinics.

Table 5. Number of contraceptive clients served and number of unintended pregnancies averted among clinic clients, all clinics and those funded by Title X, according to state, 1994

State	All clinics			Title X-funded clinics		
	Clients served	Pregnancies averted		Clients served	Pregnancies averted	
		Average	Gross		Average	Gross
Total	**6,498,070**	**1,515,900**	**4,732,100**	**4,156,850**	**969,700**	**3,027,100**

Ala.	118,410	27,600	86,200	89,430	20,900	65,100
Alaska	20,370	4,800	14,800	6,690	1,600	4,900
Ariz.	132,190	30,800	96,300	33,330	7,800	24,300
Ark.	82,670	19,300	60,200	73,510	17,100	53,500
Calif.	803,970	187,600	585,500	501,080	116,900	364,900
Colo.	105,590	24,600	76,900	50,630	11,800	36,900
Conn.	92,630	21,600	67,500	49,810	11,600	36,300
Del.	20,850	4,900	15,200	14,790	3,500	10,800
D.C.	25,660	6,000	18,700	14,540	3,400	10,600
Fla.	252,790	59,000	184,100	168,640	39,300	122,800
Ga.	202,610	47,300	147,500	169,880	39,600	123,700
Hawaii	19,490	4,500	14,200	17,480	4,100	12,700
Idaho	34,650	8,100	25,200	29,590	6,900	21,500
Ill.	211,660	49,400	154,100	162,670	37,900	118,500
Ind.	144,180	33,600	105,000	77,750	18,100	56,600
Iowa	91,570	21,400	66,700	74,160	17,300	54,000
Kans.	70,070	16,300	51,000	47,720	11,100	34,800
Ky.	124,080	28,900	90,400	114,470	26,700	83,400
La.	79,910	18,600	58,200	58,510	13,600	42,600
Maine	40,970	9,600	29,800	35,510	8,300	25,900
Md.	105,870	24,700	77,100	72,210	16,800	52,600
Mass.	131,620	30,700	95,800	70,530	16,500	51,400
Mich.	239,100	55,800	174,100	127,170	29,700	92,600
Minn.	101,300	23,600	73,800	36,520	8,500	26,600
Miss.	121,110	28,300	88,200	78,920	18,400	57,500
Mo.	164,030	38,300	119,500	93,500	21,800	68,100
Mont.	35,770	8,300	26,000	28,380	6,600	20,700
Nebr.	30,300	7,100	22,100	27,110	6,300	19,700
Nev.	33,960	7,900	24,700	17,400	4,100	12,700
N.H.	35,050	8,200	25,500	31,730	7,400	23,100
N.J.	141,010	32,900	102,700	102,010	23,800	74,300
N.Mex.	64,120	15,000	46,700	40,170	9,400	29,300
N.Y.	439,130	102,400	319,800	237,670	55,400	173,100
N.C.	171,010	39,900	124,500	112,680	26,300	82,100
N.Dak.	17,290	4,000	12,600	14,250	3,300	10,400
Ohio	212,630	49,600	154,800	141,290	33,000	102,900
Okla.	78,780	18,400	57,400	53,620	12,500	39,000
Ore.	72,550	16,900	52,800	35,130	8,200	25,600
Penn.	306,450	71,500	223,200	262,190	61,200	190,900
R.I.	21,120	4,900	15,400	13,150	3,100	9,600
S.C.	85,280	19,900	62,100	65,810	15,400	47,900
S.Dak.	22,770	5,300	16,600	17,070	4,000	12,400
Tenn.	131,930	30,800	96,100	101,810	23,800	74,100
Tex.	483,040	112,700	351,800	233,300	54,400	169,900
Utah	32,930	7,700	24,000	15,430	3,600	11,200
Vt.	21,110	4,900	15,400	9,240	2,200	6,700

Va.	135,480	31,600	98,700	79,130	18,500	57,600
Wash.	151,500	35,300	110,300	88,290	20,600	64,300
W.Va.	73,710	17,200	53,700	70,820	16,500	51,600
Wis.	150,860	35,200	109,900	79,050	18,400	57,600
Wyo.	12,940	3,000	9,400	11,080	2,600	8,100
Source: Numbers of women served-see: reference 22.						

The state distribution of pregnancies averted among contraceptive clients of Title X-funded clinics is slightly different from the distribution for all publicly funded services because the proportion of clients served by these sites varies across states. The range for the average model among Title X-funded clinics is from fewer than 3,000 in Alaska, Vermont and Wyoming to nearly 117,000 in California.

The gross estimates show that if women obtaining reversible cont raceptives from family planning clinics in 1994 instead used no method but remained sexually active, 4.7 million additional pregnancies would occur each year, three million of them among women who had relied on Title X-funded clinics for contraceptive care.

EFFECTS ON MEDICAID

The public sector spent an estimated $412 million on publicly funded contraceptive services for FY 1987.[30] In contrast, according to the average estimates from Scenarios I-III, if publicly funded services were not available, the federal and state governments would spend an additional $1.2 billion annually in their Medicaid programs to cover costs associated with unplanned births ($1.2 billion) and abortions ($22 million). Thus, for every dollar spent to provide publicly funded contraceptive services, the public saved an average of $3.00 on Medicaid costs for pregnancy-related and newborn medical care. Using the gross numbers of pregnancies, births and abortions averted from Scenario IV, we arrive at savings of $7.80 per dollar spent.

Discussion

This analysis presents several indications that public funding for family planning services is both socially beneficial and fiscally prudent. In the late 1980s, roughly one-fourth of women using reversible contraceptives depended on a publicly funded provider—most of them on family planning clinics. More than a third of users who were younger than 25, had a low income or had never been married depended on subsidized sources for their contraceptive care. Access for these women is especially important because they are the least likely to use any method when at risk of unintended pregnancy and the most likely to experience failure when they use reversible contraceptives.[31]

For 1994, we estimate that 1.5 million unplanned pregnancies were averted among the 6.5 million women who obtained contraceptive services from family planning clinics; nearly one million of these women attended Title X-funded sites. Thus, because of the availability of subsidized services, many women did not have their lives interrupted by an unplanned pregnancy and did not face the decision about whether or not to have an abortion.

The majority of women using publicly funded contraceptive services would require public support for medical care if they were unable to avoid unintended pregnancy, and many would require continued public assistance. Some 12% of women relying on

publicly funded services for contraceptive care receive AFDC and therefore are covered by Medicaid. However, more than half have a family income that is less than 200% of the poverty level, and many of these women live on the brink of requiring public assistance. Nine percent of the women are poor enough that if they had another child, they would fall below their state's eligibility criteria for AFDC and Medicaid; 34% would qualify for Medicaid funding for pregnancy-related medical care and for their child's health care if they gave birth. Contraceptive use by these women averts 337,500 births that would otherwise require Medicaid funding and 166,400 abortions among women who would be eligible for Medicaid coverage if their state covers abortion under Medicaid. (In 1994, 38% of family planning clinic clients lived in states that generally pay for abortions among women eligible for Medicaid.[32])

Some 429,000 women who obtain reversible contraceptives from public-sector providers become pregnant in spite of their attempts at method use. Thus, while the currnt publicly funded family planning program clearly is of great value, its impact could grow further. Family planning clinics traditionally have tried to make their services easily accessible and to offer education, counseling and other services that are thought to support effective contraceptive use.Recently, however, funding has shrunk, and providers have had to concentrate on coping with increased demands on decreased resources.[33]

The available data show no difference in the effectiveness of contraceptive use depending on whether a woman obtains her method from a clinic or from a private physician, so we applied the same contraceptive failure rates (by method, age, marital status and poverty status) to women relying on both types of pro viders. Further research into use-effectiveness could help more accurately quantify the contribution of the ancillary services that family planning clinics offer. Even more important, it could help providers of all kinds to serve their clients better.

Since 1988, when the data for this analysis were collected, some new contraceptive methods have been approved in the United States—the female condom, implants and injections. We will not know how the addition of these methods has affected the contraceptive status mix until data from the 1995 NSFG become available in late 1996. Data from 1992 suggest that use of the female condom and implants is limited.[34] Information from the Planned Parenthood Federation of America affiliate database indicates that 2% of clients chose implants in 1994 and that very few others used female condoms; however, the proportion of clients obtaining contraceptives who selected injections rose from 4% in 1993 to 9% in 1994.[35] To the extent that women relying on publicly funded services are able to gain access to very effective methods that they otherwise could not afford, the impact of publicly funded providers may increase in the future.

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*Title X awards grants to state or local agencies that provide family planning services; Medicaid pays for medical care for those on welfare and other eligible low-income Americans.

†We use the term "contraceptive status mix" instead of "contraceptive method mix" because the distribution includes a category for nonusers who are at risk of an unplanned pregnancy. In contrast, the contraceptive m ethod mix takes into account only contraceptive users.

‡These proportions account for pregnancies that end in miscarriage after lasting long enough to be noted by the woman (6-7 weeks after the last menstrual period). (See: H. Leridon, *Human Fertility: The Basic Components,* University of Chicago Press, Chicago, 1977, Table 4.20, p. 81.)

§In the original source of these data (reference 16, Figure 5.2, p. 34), the distributions of pregnancy outcomes among contraceptive users and nonusers were presented incorrectly. These data were attributed to nonusers, and the distribution for nonusers was attributed to users.

The use of state-specific cutoffs is an important refinement over previous analyses because eligibility levels vary dramatically by state. For example, in 1988, the cutoff for AFDC eligibility ranged from 15% of the federal poverty level for a family of three in Alabama ($1,416 of $9,690) to 125% of the federal poverty level ($12,110) for a family of three in Alaska. Data for all states except Alaska and Hawaii are from the National Governors' Association, unpublished data, Washington, D.C., 1988. Eligibility thresholds for Alaska and Hawaii are from *Federal Register,* **53:4214, 1988.

††These estimates are higher than those for 1988, probably because the census of clinics was more inclusive in 1994 than in earlier years. (See: reference 22.)