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Reducing Unplanned Pregnancies through Medicaid Family Planning Services

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Abstract

This brief describes a recent analysis of the impacts of state policies that expanded eligibility for Medicaid family planning services to women who do not meet regular Medicaid eligibility criteria. The results of this research show that these expanded eligibility policies had a significant impact on reducing unplanned births. The effect on birth rates was largest for women ages 18 to 24. Data on individual behavior confirms that this reduction in births was achieved through increased use of contraception among sexually-active women. The authors estimate the policy cost of preventing an unwanted birth to be around $6,800. They conclude that this is a cost-effective policy intervention relative to other policies and programs targeted at reducing teen and unwanted births.

Introduction

There is widespread consensus among the American public that rates of teen pregnancy and unintended pregnancies to young, unmarried women are too high. Approximately 30 percent of teenage girls in the United States become pregnant and 20 percent give birth by age 20. Increasingly, policy makers and advocacy groups are recognizing that the high rate of unintended pregnancy among unmarried women in their twenties is also a major social issue. Half of all pregnancies in the United States are reported by the mother as being unintended. More than one-third of these (1.1 million pregnancies in 2001) are to unmarried women in their twenties. The National Campaign to Prevent Teen and Unplanned Pregnancy estimates that these pregnancies accounted for nearly half of the 1.3 million abortions in 2001. Rates of teen pregnancy and unplanned pregnancy are higher among young unmarried women, lower income women, women with lower levels of education, and minority women.

Advocates often call for increased access to contraception as a way to combat high rates of teen and unintended pregnancies. But it is not always clear what is meant when a woman says that her pregnancy or birth was unintended. About half of these women also report that they were not using contraception; one might reasonably wonder how committed they were to preventing a pregnancy. If teenagers or young, unmarried women who get pregnant are not committed to avoiding pregnancy, then a policy of increased access to contraception will not have much impact on pregnancy or birth outcomes. The recent headlines from Gloucester, Massachusetts provide a dramatic example. Eighteen teenagers in the high school in Gloucester became pregnant in one school year, four times more than in the previous year. The principal told reporters the girls made a pact to get pregnant and to raise their babies together. Although some of the details reported in the press have been challenged, this story nonetheless demonstrates the potential limitations of a policy focused solely on contraceptive access. Such a policy will be effective only to the extent that teenagers or other young women are committed to avoiding pregnancy.

This brief describes research we recently completed that speaks directly to the potential impacts of a policy of expanded access to publicly provided family planning services. Twenty-six states since 1993 have been granted waivers by the federal government to expand eligibility for Medicaid coverage of family planning services to women who would not otherwise qualify for the program. We examine the impact of this policy on service take-up, birth rates, sexual activity, and contraceptive use. Our results indicate that expanding eligibility to women at higher levels of income (above the traditional Medicaid eligibility level) reduced overall birth rates among women age 18-19 and 20-24 by 7 percent and 5 percent, respectively. The policy led to a 15 percent decline in births among just those 20-24 year old women made newly eligible for family planning coverage.

Medicaid Family Planning Services

Medicaid is currently the largest source of public funding for family planning services in the United States. It funded $1.3 billion in family planning expenditures in 2006, 70.6 percent of total public expenditures. Medicaid family planning expenditures have more than doubled since 1994, with the increase driven largely by the waiver expansion policies described in this brief. The Medicaid program has provided comprehensive access to family planning services to its clients since 1972. But the stringent eligibility requirements to receive Medicaid have meant that in general only mothers who received welfare had access to these services. A series of expansions in the 1980s extended Medicaid eligibility for pregnancy-related care to childless women who met state income eligibility requirements; these services include family planning services for 60 days post-partum.

Since the early 1990s, the federal government has granted states waivers to provide coverage of family planning services to women who do not otherwise qualify for Medicaid. All such waivers require states to offer the full range of family planning services it offers to its regular Medicaid recipients to the additional population targeted. States have implemented their waiver policies in different ways, but the expanded services have generally applied to the following groups of women: (1) women whose pregnancy-related care, including post-partum family planning, would otherwise expire; (2) women who would lose their Medicaid eligibility status for any reason; and (3) women whose income is below a specified income threshold (typically 185% or 200% of the federal poverty threshold), but above the eligibility threshold for the state's regular Medicaid program, regardless of whether they meet the categorical requirement of having a child or being pregnant. Waiver policies that extend eligibility to this third group are the most far-reaching in terms of potential population affected.

Table 1 lists the states that implemented Medicaid family planning waiver policies and the dates of implementation. Eight states currently have waiver policies in place to extend coverage to women who would otherwise lose the 60-day postpartum coverage of family planning services. Two additional states extend coverage of family planning services for women who would lose Medicaid eligibility for any reason, not just post-partum; one state does this for up to two years and the other for up to five years. We refer to these time-extension policies as duration waivers. An additional 18 states have been granted waivers to extend Medicaid family planning services based solely on income, regardless of categorical eligibility requirements (such as having a dependent child); the income threshold is set between 133 and 200 percent of the poverty line in these states. We refer to these policies as income-based waivers. Two states (South Carolina and New York) have waivers that fall into both categories.

As part of the waiver application process, states are required to demonstrate that their waiver policy would be budget neutral. To do so, they need to show that the additional cost of family planning services is at least matched by reductions in Medicaid expenditures on pregnancy-related care attributable to the reduction in pregnancies and births. Though we do not claim to have carefully reviewed each state's evaluation, the evaluations we have examined have serious methodological limitations. An additional study commissioned by the federal government evaluating the program is also seriously flawed. These studies inadequately control for potentially confounding factors, such as different proclivities to use contraception or become pregnant among program participants and non-participants. By contrast, the methodological approaches we use are designed to isolate the causal impact of the waiver programs on the outcomes studied. Thus, our research provides compelling evidence in support of the claim that these Medicaid waiver policies have had an impact on contraceptive use and birth rates, though probably not as large as the impacts individual states have claimed.

Table 1: States with Medicaid Family Planning Waivers

State	Date Implemented	Basis for Eligibility: Losing Coverage Postpartum	Basis for Eligibility: Losing Coverage for Any Reason	Basis for Eligibility: Based Solely on Income as a percent of FPL
Alabama	10/1/2000	---	---	133%
Arizona	8/1/1995	2 years	---	---
Arkansas	9/1/1997	---	---	200%
California	1/1/1997	---	---	200%
Delaware	1/1/1996	---	2 years	---
Florida	9/1/1998	2 years	---	---
Illinois	4/1/2004	---	5 years	---
Iowa	2/1/2006	---	---	200%
Louisiana	7/1/2006	---	---	200%
Maryland	2/1/1995	5 years	---	---
Michigan	7/1/2006	---	---	185%
Minnesota	7/1/2006	---	---	200%
Mississippi	10/1/2003	---	---	185%
Missouri	2/1/1999	1 year	---	---
New Mexico	7/1/1998	---	---	185%
New York	10/1/2002	---	---	200%
New York	10/1/2002	2 years	---	---
North Carolina	11/5/2005	---	---	185%
Oklahoma	4/1/2005	---	---	185%
Oregon	1/1/1999	---	---	185%
Pennsylvania	6/1/2007	---	---	185%
Rhode Island	8/1/1994	2 years	---	---
South Carolina	7/1/1997	---	---	185%
South Carolina	7/1/1994	2 years	---	---
Texas	1/1/2007	---	---	185%
Virginia	10/1/2002	2 years	---	---
Washington	7/1/2001	---	---	200%
Wisconsin	1/1/2003	---	---	185%

Notes: For more details see Melissa S. Kearney and Phillip B. Levine, "Subsidized Contraception, Fertility, and Sexual Behavior," (Working Paper 13045, National Bureau of Economic Research, Cambridge, MA, 2007). FPL=Federal Poverty Level

Take-Up of Family Planning Services

We begin by investigating whether the waiver policies led to an increase in the number of women receiving Medicaid family planning services. If the program does not lead more people to walk through the front door of the service provider, then it is unlikely to affect contraceptive use and pregnancy rates.

Using publicly-available Medicaid data on the total number of Medicaid beneficiaries with family planning claims, we apply quasi-experimental methods to estimate the impact of income- and duration-based waivers on the proportion of women 15-44 who receive Medicaid family planning services. Our estimates indicate that income-based waivers dramatically increased the number of women receiving family planning services through the Medicaid program, on the order of two to

three times depending upon specification. By contrast, we find no evidence of effects for duration-based waivers. This lack of effect for duration-based waiver is a consistent finding throughout our analysis, so we will focus the remainder of the discussion on income-based waivers.

Although determining an increase in take-up of family planning services through the Medicaid program is a useful first step in our analysis, it is important to consider a limitation in interpreting its results. The term "crowd-out" refers to the possibility that some women who receive family planning services through the Medicaid waiver program would have used privately provided family planning services in the absence of a waiver, or even potentially another public source. The potential for crowd-out of alternatively funded contraception—for example, paid for out-of-pocket by an individual or by a private health insurance provider—means that the increase in the number of Medicaid family planning recipients need not have led to any change in contraceptive behavior or fertility outcomes. Looking ahead to our results, the fact that we do find a change in contraceptive use following a waiver policy implies that crowd-out was not complete.

Impact on Birth Rates

To investigate the impact of expanded eligibility for Medicaid family planning services on births, we use quasi-experimental methods exploiting the variation across states in the timing of program implementation. Our estimation strategy is designed to isolate the causal impact of waiver policies, net of any other factors that might lead to changes in women's behavior and outcomes. The methods we use and the way that they accomplish this goal are described at the end of this brief in the section, "Note on Statistical Analysis." Our primary data source is Vital Statistics natality data, which contains a record of virtually every birth that occurs in the United States We aggregate these data to the state level for the years 1990 through 2002 (the most recent year available at the time we began this study).

Table 2: Estimated Impact of Income-Based Medicaid Family Planning Expansions on Birth Rates, by Demographic Group

	Overall Percent Change in Birth Rates	Estimated Percent of Women Made Eligible for Services	Percent Change in Birth Rates to Newly Eligible Women
Age Group			
age 15-17	-1.2	---	---
age 18-19	-6.8	---	---
age 20-24	-5.1	34.4	-14.8
age 25-34	-0.9	21.9	-4.1
age 35-44	-0.7	18.1	-3.9
Race/Ethnicity			
White, non-Hispanic	-1.0	19.3	-4.1
Black, non-Hispanic	-1.3	32.1	-4.0
Hispanic	-2.9	31.2	-9.3
Educational Attainment			
Less than high school	-3.8	36.8	-10.3
High school graduates	-2.8	27.0	-10.4
Some college	-0.3	20.3	-1.5
College graduates	-0.7	10.1	-6.9

Note: For more details see Melissa S. Kearney and Phillip B. Levine, "Subsidized Contraception, Fertility, and Sexual Behavior," (Working Paper 13045, National Bureau of Economic Research, Cambridge, MA, 2007).

The results provide strong evidence that income-based family planning waivers reduce births, particularly for younger women. The first column of Table 2 summarizes the estimated impact of these income-based waivers. They have the largest impact on women 18-19 and 20-24 years of age. Our estimates indicate that birth rates for women in these two age groups fell by 6.8 percent and 5.1 percent, respectively. The estimated impact on birth rates for younger teens and women age 25 and over are small and not statistically significant. Looking at women by race/ethnicity, we estimate the largest impacts for Hispanic women, but these differences by racial/ethnic group are not statistically significant. Finally, looking separately by education groups, we find that the policy has its greatest impact on women with a high school degree or less. Since the policy is targeted at lower-income women, and since women with lower levels of education are more likely to be low-income, this finding provides additional support for the claim that our empirical estimates are identifying a causal effect of the policy.

These estimates reflect the impact on overall birth rates, not just for those women who became newly eligible for the program. We use microdata from the 2000 Census to approximate the fraction of a state's female population in various population subgroups who would be made eligible under the waiver policy. These calculated eligibility rates are used to scale our earlier estimates of the impact of these waivers and arrive at a simulated impact on the eligible population. Teens are excluded from these calculations because it is not clear how to assign eligibility to a teen based on recorded household income. Column 2 of Table 2 reports the percentage of women in each population subgroup estimated to be newly eligible under income-based waivers. Column 3 reports estimates of the impact of the waiver on the eligible population. This estimate implies that births fell by up to 15 percent for women age 20-24 who were made eligible for family planning services.

Sexual Activity and Contraceptives

We also estimate the impact of income-based family planning waivers on three individual-level outcomes: (1) sexual intercourse in the past three months, (2) failure to use contraception at last intercourse in the past three months (among sexually-active women), and (3) unprotected sex in the past three months. Data from the 1988, 1995, and 2002 cycles of the National Survey of Family Growth (NSFG), which interviewed women between the ages of 14 and 45, were used in this analysis. We use similar quasi-experimental methods to the methods used in our analysis of Vital Statistics birth data. With the individual-level data from the NSFG, we can also predict a woman's eligibility for income-based waivers, allowing us to estimate the policy impact separately for just those women made eligible. Because we were concerned about imputing eligibility for teens based on the difficulty of measuring their income, we use this approach for non-teens only.

The results indicate that there was no statistically significant impact of the waivers on the likelihood of sex in the past three months, but that income-based waivers increased the likelihood of contraceptive use among sexually-active women by 6.4 percent. Overall, the likelihood of engaging in unprotected sexual activity fell by 4.3 percent in response to the introduction of income-based waivers. To examine the impact on women made newly eligible for Medicaid family planning services, we analyze the data separately for non-teens and make use of information indicating likely eligibility status. For these women, the data do not show evidence of an effect on sexual activity, but they do show evidence of increased contraceptive use among sexually active women. Among non-teens predicted to be newly eligible, over 5 percent fewer sexually-active women failed to use contraception at their last intercourse and 3.3 percent fewer women could be identified as having unprotected sex in the past three months. These results suggest that the reason that birth rates fell in response to income-based family planning waivers is because they increase the use of contraception among sexually-active women.

Estimate of Cost per Birth Avoided

Since waiver programs require federal expenditures to cover the cost of the family planning services, a reasonable question is how much these services cost per birth avoided. Our estimates can be integrated with other information regarding the estimated cost per program participant to

arrive at this figure. According to the Guttmacher Institute, public spending on family planning services totaled $1.26 billion in FY 2001. According to Jennifer Frost and her colleagues, 6.7 million women received services at publicly provided family planning clinics in 2001. Thus, the average cost per woman served is $188.

We can combine this figure with the results summarized above to provide a ballpark estimate of the cost of family planning services per birth avoided. The analysis found that income-based waiver policies increased the percentage of women receiving services by 5.4 percentage points. That implies that for every 1,000 women of childbearing age, 54 more obtained family planning through Medicaid as a result of the waiver. We also found that the birth rate for all women aged 15-44 fell by 2 percent in response to the waivers. In 1992, prior to the introduction of these policies, the birth rate stood at about 74 births per 1,000 women. A two percent reduction in the birth rate suggests that the policy prevented about 1.5 births per year per 1,000 women. Taking the ratio of 1.5 fewer births per 54 additional women served, we conclude that one birth was avoided for every 36 additional Medicaid family planning recipients (or between 82 to 164 women made eligible). At $188 per recipient, the cost of avoiding one additional birth through an income-based waiver is roughly $6,800. To determine whether this is a cost-effective policy investment, this number should be compared to the social cost of an unintended birth, including both the immediate medical costs and the long-term costs to the mother and child. Although we know of no credible estimate, our presumption is that such social costs are likely to exceed $6,800.

Conclusion

Our research shows that expanding Medicaid family planning coverage to women at higher levels of income has had a significant impact on reducing unplanned births. Increased use of contraception appears to explain the decline. We estimate that the cost of preventing an unwanted birth is around $6,800. Based on our reading of the evidence regarding the effectiveness of other interventions designed to reduce unwanted births, this seems like a relatively cost-effective policy intervention.

Beyond the cost-effectiveness of this policy, our results also raise the possibility that family planning waivers may have improved women's outcomes more broadly. If women are better able to control their fertility, new life options may present themselves. For instance, educational attainment and labor market outcomes might improve for women who delay childbearing or have fewer children. Future research should explore this issue.

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Note on Statistical Analysis

The impact of the waiver policies on birth rates is estimated using a quasi-experimental approach that exploits the variation across states in the timing of program implementation. Ordinary Least Squares regression models are estimated with the dependent variable defined as the log of the birth rate. The unit of analysis is a state/year. The explanatory variable of interest is an indicator for whether the state has a Medicaid family planning waiver policy in effect in that year. The regression model controls for other policies that may be thought to affect birth rates, including demographic factors as well as state policies, including abortion restrictions, welfare policies, other Medicaid policies, and state mandates requiring health insurance coverage of contraception. The model also controls for the state unemployment rate and a set of average demographic characteristics of state residence in each year. Importantly, the model controls for time-invariant differences across states (with state "fixed effects") and for national changes in outcomes over time (with year "fixed effects"). Where appropriate, the model also controls for state-specific linear or quadratic trends to control for the possibility of a spurious correlation between the introduction of waivers and trends in fertility outcomes across states. Finally, the model is estimated separately for population subgroups defined by race/ethnicity and educational attainment.

A similar empirical approach is taken to estimate the impact of family planning waivers on individual level outcomes observed in the NSFG data, including the likelihood that a woman engaged in sexual intercourse in the past three months, whether a sexually-active woman did not use birth control at last intercourse in the past three months, and whether she had unprotected sex in the past three months. The individual-level regression model controls for differences in the states, including the state-level policies listed above, as well as demographic characteristics of the observed women, including age, race/ethnicity, marital status, educational attainment, and whether the respondent has children.

Additional Reading

Melissa S. Kearney and Phillip B. Levine, "Subsidized Contraception, Fertility, and Sexual Behavior," *Review of Economics and Statistics*, (forthcoming).

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