

# Expanded State-Funded Family Planning Services: Estimating Pregnancies Averted by the Family PACT Program in California, 1997–1998

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During the next 3 decades, California's population is expected to grow by 55% (from 33 million to more than 51 million), a rate of growth higher than that of any other state.<sup>1</sup> Although some of this population increase will result from immigration, most of it will be the result of the more than 22 million births that are projected by the year 2025. The California State Assembly established the Family Planning, Access, Care, and Treatment (Family PACT) Program in 1996 to increase access to family planning services. One of the primary goals of the Family PACT Program is to reduce the number of unintended pregnancies among women in the state. The Family PACT Program was created through the 1996/1997 State Assembly Bill 3483, which added provisions to the Welfare and Institutions Code to provide additional state funding to expand the clinical family planning program. The program was originally named the State-Only Family Planning Program.

California's family planning program has several innovative features: both public-sector providers and private, for-profit, providers are eligible to offer program services; client eligibility determination and enrollment occur onsite; providers are reimbursed on a fee-for-service basis; and clinics as well as pharmacies are distribution sites for over-the-counter and prescription drugs. Individuals in need of family planning services who have incomes at or below 200% of the federal poverty level and no other source of reproductive health care coverage are eligible for Family PACT services. These services include all US Food and Drug Administration–approved methods of contraception, male and female sterilization, human immunodeficiency virus testing, screening and treatment for sexually transmitted diseases, and limited cancer screening and infertility services.

**Objectives.** The California Family Planning, Access, Care, and Treatment Program was implemented in 1997 to provide family planning services for uninsured, low-income women and men. We estimated the impact on fertility of providing 500 000 women with contraceptives.

**Methods.** Paid claims and medical record review data were used to estimate pregnancies averted. Pregnancies women experienced while enrolled in the program and pregnancies they would have experienced given methods used before enrollment were modeled as a Markov process.

**Results.** One year of Family Planning, Access, Care, and Treatment services averted an estimated 108 000 unintended pregnancies that would have resulted in 50 000 unintended births and 41 000 induced abortions.

**Conclusions.** Providing contraceptives to low income, medically indigent women significantly reduced the number of unintended pregnancies in California. (*Am J Public Health.* 2004;94:1341–1346)

During Family PACT's first year (fiscal year 1997–1998), 749 572 women and men received services, a 50% increase over the previous state program in fiscal year 1995–1996. Approximately two thirds of Family PACT clients are Hispanic, 1 in 5 is younger than 20 years, and nearly 1 in 10 is male. Women in the Family PACT Program are at high risk for pregnancy. Approximately 85% of first year–enrolled adult women (20 years of age or older) had had at least 1 prior pregnancy; three fourths had had at least 1 birth, and one fourth had had at least 1 abortion. Nearly half of the adolescent women (younger than 20 years) had already had a pregnancy; one third had had at least 1 birth, and 11% had had at least 1 abortion.

## METHODS

The number of pregnancies averted by use of family planning services was calculated by estimating the number of pregnancies expected in the absence of the program (on the basis of preprogram contraceptive use) and subtracting the number of pregnancies ex-

pected among women using contraceptives dispensed through the Family PACT Program.

We estimated the reduction in unintended pregnancy attributable to the Family PACT Program by comparing contraception methods used by clients before and after their enrollment in the program. Pregnancies averted were calculated only for women whose contraceptive providers were reimbursed by Family PACT and only for the months those women were actually covered by those contraceptives.

We modeled the probability that a woman would become pregnant in each month, from the month the contraceptive was dispensed to the last month of contraceptive coverage, on the basis of 3 factors: the failure rate of the method used, the woman's age-specific fecundity, and the estimated probability of pregnancy in previous months.

To estimate pregnancies averted, we needed to estimate the number of spontaneous abortions, induced abortions, ectopic pregnancies, and births that would follow from an unintended pregnancy, because the outcome of each pregnancy influences the total number of pregnancies a woman can

experience in a 12-month period. If all pregnancies ended in abortion, a woman could become pregnant several times in a year, whereas if all pregnancies were carried to term, the woman's chance of becoming pregnant twice in the same year would be small. The time during which each pregnancy outcome removes a woman from the risk of an additional pregnancy affects the total number of pregnancies the woman could experience. For this analysis, we assumed that all births would occur at 9 months and would be followed by 2 months of postpartum amenorrhea. We assumed that induced abortions would have occurred at month 3, followed by a 1-month period of amenorrhea, and that spontaneous abortions would have occurred at month 3, followed by 1 month of infecundity. Ectopic pregnancies would remove women from the risk of pregnancy for 11 months.

We modeled risk of pregnancy as a Markov process because in each month, the risk of pregnancy depends on the probability of being infertile as the result of a pregnancy in a previous month. A Markov process is an algorithm that produces estimates for discrete time periods by assigning probability on the basis of previous values. We assumed that the probability of pregnancy in a given month depended on the probability of pregnancy in previous months. We estimated a woman's chance of conception in a given month as the monthly method failure rate multiplied by the probability that she did not become pregnant in the previous 4 months and did not carry to term a pregnancy that began 5–11 months before. Thus, the probability of pregnancy in a given month is

$$(1) \quad p_n = f(1 - (1 - b) [1 - \prod_{j=1}^a (1 - p_{n-j})] - b [1 - \prod_{k=1}^i (1 - p_{n-k})]),$$

where  $p_n$  is the probability of pregnancy in month  $n$ ,  $b$  is the probability that a pregnancy will be brought to term,  $f$  is the monthly contraception method failure rate,  $a$  is the gestational age at the time of induced or spontaneous abortion, and  $i$  is 9 months plus the duration of postpartum infecundity.

To model pregnancies under the hypothetical situation of the absence of Family PACT, we predicted the number of pregnancies that

would be expected if women continued to use the array of methods that they were using before their first visit under Family PACT.

For this analysis, we used paid claims data to identify contraceptive services provided by the Family PACT Program. Pregnancies averted were estimated for 491 569 female clients who received contraception methods through the Family PACT Program from July 1997 to June 1998. These women included women for whom the pharmacy billed for prescription or over-the-counter contraception methods or for whom a clinician billed for contraceptive supplies or medications or for a medical procedure (e.g., female sterilization, intrauterine contraceptive, and Norplant insertion [Wyeth Pharmaceuticals, Madison, NJ]). Pregnancies among women who received natural family planning methods under Family PACT were not included, because we could not determine from our data who received this information. The effect of excluding natural family planning methods is negligible, given that the failure rate of these methods is very close to what we assume women would experience in the absence of Family PACT.

A review of client medical records, abstracted from providers in 11 out of 58 Cali-

fornia counties, provided data on pregnancy risk and contraceptive methods used before program enrollment. Client data from abstracted medical records were similar to client data from the overall Family PACT population; however, the medical record review contained slightly more Hispanic adults and fewer White teenagers. To predict what contraception methods women would have used in the absence of Family PACT, we examined a subset of charts from a medical record review of new Family PACT clients who were neither pregnant nor seeking pregnancy. Women who were established clients were excluded because they may have been seen by providers under the previous state program that was replaced by Family PACT. For the 1429 women who were neither pregnant nor seeking pregnancy, we identified the primary contraception method used before their first Family PACT visit.

**Probability of Pregnancy by Contraception Method Used**

The probabilities of pregnancy by method were based on reported first-year pregnancy rate estimates from Hatcher et al.<sup>2</sup> and Trussell et al.<sup>3</sup> (Table 1). The monthly proba-

**TABLE 1—Contraceptive Failure Rate and Pregnancy Outcome Values Used for Model of Pregnancies Averted**

	Adults (Aged ≥ 20 Years), %	Adolescents (Aged < 20 Years), %
<b>Contraceptive failure rates<sup>a</sup></b>		
Tubal ligation	0.40	0.40
Intrauterine contraceptives	0.80	0.80
Implants (Norplant)	0.30	0.30
Injectables (Depo Provera)	0.28	0.40
Oral contraceptives	4.78	5.90
Diaphragm/cervical cap	19.00	23.70
Condoms	14.00	16.60
Spermicide	25.00	30.70
<b>Pregnancy outcomes<sup>b</sup></b>		
Spontaneous abortion	15	14
Induced abortion	39	36
Ectopic pregnancy	1	1
Birth	45	49
Total	100	100

<sup>a</sup>Percentage pregnant at 1 year (Hatcher et al.<sup>2</sup>).

<sup>b</sup>Modified from Saraiya et al.<sup>3</sup> and Henshaw.<sup>4</sup>

bility of pregnancy can be formulated as  $1 - (1 - \text{percentage pregnant at 1 year})^{1/13}$ .

### Pregnancy Outcomes

Table 1 shows the pregnancy outcomes we assumed for adolescents and adults. We used estimates by Henshaw<sup>4</sup> for the percentage of unintended pregnancies that end in abortion or birth. To estimate the number ending in spontaneous abortion, we applied the technique specified in Henshaw's article, in which spontaneous abortions accounted for 20% of births and 10% of induced abortions. This technique did not include ectopic pregnancies, so we used 1% for ectopic pregnancies, as reported by Saraiya et al.<sup>5</sup> and Trussell et al.<sup>3</sup>

### Months of Contraceptive Coverage Under Family PACT

The number of months of contraceptive coverage provided under the Family PACT Program was derived from the type and quantity of contraceptives dispensed according to paid claims data. The contraceptive methods adopted during the first year of the Family PACT Program may prevent pregnancies for many years. The fertility effect for long-term methods was capped at 2 years to avoid predicting pregnancies more than 2 years ahead. Months of coverage for a long-term method were calculated to be the number of months between the provision date and June 30, 1999 (1 year after the end of the fiscal year). For example, a woman receiving a sterilization procedure on July 1, 1997, was assumed to have 24 months of coverage. A woman receiving that procedure on June 30, 1998, was assumed to have 12 months of coverage. Although the June 1999 cutoff date was arbitrary, it was useful for determining the short-term fertility effect of the Family PACT Program. The number of women receiving long-term contraceptive services was relatively small (<4% of all women receiving contraception), so excluding the full duration of contraceptive benefit did not have a major effect on our estimate of the program's effect on fertility.

For short-term methods such as condoms and oral contraceptives, we adjusted the months of contraceptive coverage to get a conservative estimate of pregnancies averted and to account for method discontinuation,

**TABLE 2—Primary Contraceptive Method Used Before First Visit by Women Who Were Neither Pregnant nor Seeking Pregnancy: California Family Planning, Access, Care, and Treatment Program Medical Record Review, 1997–1998**

	Adults (Aged ≥20 Years), No. (%)	Adolescents (Aged <20 Years), No. (%)
No method	351 (29)	71 (33)
Natural family planning	46 (4)	10 (5)
Condoms	304 (25)	68 (31)
Oral contraceptives	288 (24)	42 (19)
Injectables (Depo Provera)	142 (12)	23 (11)
Implants (Norplant)	20 (2)	1 (0)
Intrauterine contraceptives	61 (5)	2 (1)
Total	1212 (100)	217 (100)

because women do not necessarily use all of the supplies dispensed to them. For oral contraceptives, we assumed that a woman who did not return for refills used half of the supply of contraceptives, measured in months, that she was dispensed. For condoms and barrier method supplies, clinic dispensing was assumed to provide 2 months of contraceptive coverage, on the basis of findings of the medical record review. In the case of pharmacy dispensing, the exact quantity of supplies dispensed was available; we assumed a month of protection for every 12 condoms dispensed. Each Depo Provera injection (Upjohn, Kalamazoo, Mich) was assumed to provide 3 months of contraceptive coverage.

## RESULTS

### Contraceptive Use in the Absence of Family PACT

The medical record review found that nonuse of contraception before enrollment in Family PACT was quite common. Among 1429 new Family PACT clients, more than one third were using no method or a low-efficacy method before their first visit. Low-efficacy methods include natural family planning and use of spermicides without a barrier method. We used the method distribution for 1429 new clients in the medical record review who were neither pregnant nor seeking pregnancy as the basis for modeling the methods that clients would have used if Family PACT services had not been available (Table 2). For adults, the mix of

methods reported by women before enrollment corresponds to a 45.5% probability of pregnancy within 1 year. For adolescents, this mix of methods would correspond to a 57.7% probability of pregnancy within 1 year, assuming the contraceptive failure rates shown in Table 1.

### Adoption of Contraception Methods at First Visit

Women enrolling in Family PACT were likely to leave their first visit with a more effective contraception method than they used before the visit. Medical records for the 1429 visits by women who were new to Family PACT revealed that 39% of clients left with a more reliable method than the one they had been using before the visit. Nearly 23% of clients left their first Family PACT visit with a highly effective, long-acting method of contraception.

Among the nearly one third of clients (29%) who were using no method when they first visited a Family PACT provider, 95% had adopted a method by the end of their visit. Among previous nonusers, 39% adopted barrier methods (male or female condom, diaphragm, cervical cap), or spermicide; 32% adopted oral contraceptives; and 16% adopted a long-acting method, such as contraceptive injections, intrauterine contraceptives, contraceptive implants, or sterilization.

### Contraceptives Dispensed and Months of Contraceptive Coverage

Program claims included payment for oral contraceptives for more than 285 000 clients, barrier methods for 147 000, inject-

**TABLE 3—Dispensing of Contraceptives During First Year of Family Planning, Access, Care, and Treatment Program: Fiscal Year 1997–1998**

	No. of Women Adopting Method <sup>a</sup>			Average Woman-Months of Protection <sup>b</sup>		
	Adults	Adolescents	Total	Adults	Adolescents	Total
Tubal ligation	3640	13	3653	18.13	17.77	18.13
Intrauterine contraceptives	9995	516	10 511	16.94	16.89	16.94
Implants (Norplant)	2619	498	3117	16.72	16.57	16.7
Injectables (Depo Provera)	79 651	21 917	101 568	6.22	5.63	6.09
Oral contraceptives	229 077	56 235	285 312	8.25	7.05	8.01
Diaphragm/cervical cap	1302	85	1387	2.08	2.09	2.09
Condoms	115 817	31 571	147 388	2.64	2.53	2.61
Foam/gel	18 528	2783	21 311	2.42	2.29	2.4
Intrauterine contraceptive/implant removal <sup>c</sup>	5083	199	5282	0.38	0.41	0.38
Total clients	393 665	97 904	491 569	7.67	6.37	7.41

<sup>a</sup>Total number of clients is less than the column totals because women were counted once for each type of contraceptive they were dispensed.

<sup>b</sup>Duration of protection was capped at 2 years for tubal ligations, intrauterine contraceptives, and Norplant.

<sup>c</sup>For the removal of intrauterine contraceptives and implants, months of contraceptive coverage began at first visit and continued until removal of the device.

able contraceptives for more than 100 000, and long-term methods (tubal ligations, intrauterine contraceptives, and implants) for 17 000 clients. Claims data indicated that many women received more than 1 type of contraception either for dual use or because they switched methods during the year (Table 3).

During fiscal year 1997–1998, the contraceptives claimed for female clients would have provided each woman with an average of 7.4 months of coverage. According to claims data, adolescents received 1.3 fewer months of contraceptive coverage than did adults. Part of the difference between adolescents and adults can be attributed to adolescents' greater reliance on short-acting contraception methods. However, even among clients receiving short-acting methods, adolescents still received fewer months of contraceptive coverage. Compared with adult women, adolescent women received 1.2 fewer months of oral and injectable contraceptives and 0.11 fewer months of barrier-method supplies.

More than 3.6 million woman-months of contraception were dispensed through Family PACT during the year, according to paid claims data. Oral contraception accounted for 63% of the woman-months dispensed,

injectable contraception for 17%, barrier methods 10%, and long-term methods 10%. The months of coverage from long-term methods was underestimated because of the 2-year cap.

### Pregnancies Averted

On the basis of the quantity and type of methods dispensed according to the claims data, we estimated that women participating in Family PACT had almost 11 000 pregnancies during the time they were "covered" by contraception owing to method failure and noncompliance. If these women had continued with the same method array used by women new to the Family PACT program, they would have had 119 000 pregnancies. The difference, 108 000 pregnancies, is an estimate of the pregnancies averted through Family PACT services during the first year of the program. Among adolescents, more than 24 000 pregnancies—which would have resulted in 12 000 teen births, 9000 abortions, 3000 spontaneous abortions, and 200 ectopic pregnancies—were averted. Among adults, 84 000 pregnancies—which would have resulted in 38 000 unintended births, 32 000 abortions, 13 000 spontaneous abortions, and 800 ectopic pregnancies—were averted (Table 4).

## DISCUSSION

### Policy Implications

The Family PACT program had a significant effect on fertility in California. The California Department of Finance estimated that 519 000 births occurred among all California women in fiscal year 1998–1999.<sup>6</sup> Therefore, Family PACT contraceptive services provided in fiscal year 1997–1998 are estimated to have reduced the total number of births in California by 7% to 8% in the fiscal year 1998–1999 (Note that not all births averted would have occurred during fiscal year 1998–1999. This estimate includes only the 81% to 83% that are projected to have occurred in fiscal year 1998–1999.) The reduction in births also reduced public expenditures for health care, social services, and education for these women and for their children. A cost-benefit analysis by Jasik et al. (unpublished data, 2000) estimated that averting 108 000 pregnancies saved the federal, state, and local governments more than \$500 million at a ratio of \$4.48 saved to every dollar expended on family planning services.

Unintended pregnancy is costly in terms of publicly funded health care and social service expenditures and family and personal costs. The reduction of unintended pregnancy that results from extending family planning services to low-income women and men is likely to be of interest to other states as well as to national policymakers. Provision of contraceptive services to women and men who do not have health care coverage has the potential to significantly reduce the adverse effects of unintended pregnancy.

Preventing births to adolescents involves its own challenges. Adolescents generally are more fertile than adults and experience higher rates of contraceptive failure. During a year of family planning services, we have found that adolescents receive fewer months worth of contraceptive protection than do adults—perhaps because they do not fill or refill prescriptions. Yet because adolescents are less likely than adults to be using an effective contraception method, or any method, at their initial family planning visits, they are especially likely to benefit from provision of contraception. We estimate that 1 pregnancy was averted for every 4 adolescents receiving

**TABLE 4—Impact of Family Planning, Access, Care, and Treatment Program (Family PACT Program) Contraceptive Services on Unintended Pregnancies, by Age Group: Fiscal Year 1997–1998**

	Without Family PACT Program Contraceptive Services	With Family PACT Program Contraceptive Services	Pregnancies Averted
<b>Adolescents (aged &lt;20 years)</b>			
Pregnancies	26 193	2160	24 033
Births	12 835	1059	11 776
Induced abortions	9430	778	8652
Spontaneous abortions	3667	302	3365
Ectopic pregnancies	262	22	240
<b>Adults (aged ≥20 years)</b>			
Pregnancies	92 799	8687	84 112
Births	41 759	3909	37 850
Induced abortions	36 192	3388	32 804
Spontaneous abortions	13 920	1303	12 617
Ectopic pregnancies	928	87	841
<b>Total clients</b>			
Pregnancies	118 992	10 848	108 144
Births	54 594	4968	49 626
Induced abortions	45 621	4166	41 455
Spontaneous abortions	17 587	1606	15 981
Ectopic pregnancies	1190	108	1081

contraceptives, compared with 1 pregnancy for every 5 adult women.

### Methodology

The detailed claims information about the contraceptives that were provided at initial and return visits in the Family PACT Program made it possible for us to refine our methodology for estimating the number of pregnancies expected for women participating in a family planning program. Having only less-detailed information available, previous approaches to estimating the fertility effect of family planning services assumed a year of contraceptive benefit to all women participating and have applied annual contraceptive failure rates to estimate pregnancies.<sup>7–11</sup> Cost-effectiveness comparisons of contraception methods also have been based on this annual rate methodology.<sup>12</sup>

There are 3 advantages in calculating pregnancy risk by month for the duration of contraceptive coverage. First, not all women participating in a family planning program are seeking to avoid pregnancy. By basing our estimates only on paid claims for women

who adopted contraception methods and including only those months for which they received contraceptive protection, we avoid overestimating the fertility effect. Two thirds of the 722 000 female clients served during the first full year of Family PACT adopted contraception methods, according to paid claims data. The remaining one third may have been pregnant or seeking pregnancy, may have been using a long-acting method or a method not requiring supplies or free samples, or may have been seeking other reproductive health services. In this analysis, we assumed that women whose care included a claim for contraception methods did not intend to become pregnant and, hence, that any pregnancies they experienced were unintended. For women who received contraception, an average of 7.4 months of contraceptive protection was billed and paid. Assuming 1 year of program benefit for all women participating in the program would have overstated the magnitude and duration of the program effect.

The second methodological advantage is that calculating pregnancy risk on a monthly

rather than yearly basis is a more realistic approach, because women can become pregnant more than once in a year, especially if they are using no method of contraception and have pregnancies that end in abortion. Calculating pregnancy risk on a monthly basis avoids underestimating the fertility effect by including repeat pregnancies. Among 100 women who use no method of contraception for a year (associated with an 85% probability of pregnancy), 15 will not become pregnant, 67 will experience 1 pregnancy, 17 will experience 2 pregnancies, and 1 will experience 3 pregnancies. Together, these women will have more than 104 pregnancies during the year (if 62% of pregnancies end in births, and abortions remove women from risk for 4 months), a figure substantially higher than the 85 pregnancies predicted with a standard methodology that calculates pregnancy risk on an annual basis. Use of annual rates of pregnancy yields fairly accurate estimates of pregnancy rates when contraceptive failure rates are low, such as is the case with the use of highly effective contraception methods. The standard methodology, however, significantly underestimates the number of pregnancies that would occur with the use of less-effective contraceptives. The fertility effect of family planning services would, therefore, be underestimated with the standard methodology if the “before program” method array were to include many women using less-effective methods.

The third advantage in calculating the probability of pregnancy only for the months for the duration of contraceptive coverage is that it allows us to use all available data on the type and quantity of contraceptives dispensed, the duration of contraceptive coverage, and the likelihood of contraceptive failure. The superior effect of a program that offers women more effective methods, achieves high continuation rates, and dispenses a sufficient quantity of supplies will be captured by this methodology.

### Assumptions and Limitations

It was our intention to provide a conservative estimate of pregnancies averted. Because the Family PACT Program does not cover abortion services or prenatal care, Family PACT claims information does not provide

precise information about the outcomes of pregnancies actually experienced by program participants. In the absence of pregnancy data for Family PACT clients, we relied on a calculation of pregnancies expected according to contraceptive dispensing.

Low-income women often experience contraceptive failure rates that are higher than average.<sup>13</sup> We may have underestimated pregnancies because of contraceptive failure both in the presence and the absence of Family PACT services by using national average contraceptive failure rates. Because contraceptive use was higher in the presence of the program, use of higher contraceptive failure rates might have resulted in a lower estimate of pregnancies averted. Contraception method failure rates specific to low-income California women were not available.

In all other ways, our estimate of pregnancies averted has been conservative. Our model of pregnancy risk relied on months of contraceptive coverage. We assumed that women used the contraceptives they were given if claims data indicated that they returned for a refill before running out of supplies. For women who did not return for a refill, we assumed that half of the supplies received were used. (Although national discontinuation rates are available, we did not have estimates of months used out of months of supplies dispensed.) Our assumptions of use were conservative because a month dispensed was not assumed to be a month used.

For long-acting methods of contraception, the fertility effect is probably underestimated for 2 reasons. First, we capped the duration of long-term method effect so that the fertility effect was limited in time. A cap of 2 years was placed on the duration of pregnancy protection from tubal ligation, intrauterine contraceptives, and implants. Second, we included only women who received long-acting contraception during the year and not those who entered the program with a long-term contraceptive method already in place and received maintenance services under Family PACT.

We modeled the hypothetical situation of what would happen in the absence of Family PACT on what we know about method use before a first visit among a sample of medical records from new Family PACT clients. We

chose this scenario because it is more conservative, and more realistic, than assuming that women would use no method of contraception in the absence of a family planning program.

One would expect that providing contraceptives to sexually active women who do not wish to become pregnant would result in pregnancies averted, given the low levels of contraceptive use before program enrollment and the clients' history of pregnancy (85% of the adults and nearly half of the adolescents had already experienced a pregnancy). However, estimating the number of pregnancies averted relies on assumptions about contraceptive use and failure rates. To obtain these estimates, we have accessed data on methods of contraception used before program enrollment and quantities of contraceptive supplies provided through the program. We believe that our estimate of pregnancies averted is conservative. More detailed data about method continuation and long-term method use, had such been available, would likely have shown a greater effect of contraceptive services on pregnancies averted. ■

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#### Contributors

D.G. Foster designed the model, carried out the analysis, and drafted the article. C.M. Klaisle aided with clinical interpretation of medical record data. M. Blum and M.E. Bradsberry aided with data collection and interpretation. C.D. Brindis and F.H. Stewart oversaw the project and provided key advice and editing. All authors reviewed and assisted with the article.

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#### Human Participant Protection

The medical record review and analysis of Family PACT claims data were approved by the University of California, San Francisco, institutional review board.

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