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Contraceptive Use over Five Years After Receipt Or Denial of Abortion Services

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Abstract

CONTEXT: Nonuse and inconsistent use of contraceptives contribute to a high incidence of unintended pregnancy and abortion among U.S. women. Little is known, however, about how these outcomes shape women's subsequent contraceptive use and unintended pregnancy risk.

METHODS: Contraceptive use was examined among 880 participants in the Turnaway Study, a five-year longitudinal study of women who sought abortions at 30 U.S. facilities in 2008–2010. Multivariable mixed-effects logistic and multinomial regression models assessed differences in use by whether women received the abortion; results were used to calculate predicted percentages of women using each method. The main groups of interest were 415 women who had an abortion at a gestation near their facility's limit and 160 who were denied abortion because they were beyond the limit, and who consequently gave birth.

RESULTS: During each of the approximately five years of follow-up, the predicted percentage using any contraceptive method was 86% among women who had the abortion and 81% among those denied it. Over the entire period, the former women were more likely than the latter to use any method (odds ratio, 1.8). However, they were less likely to rely on female sterilization, rather

than no method (risk ratio, 0.5), and more likely to use barrier methods (1.7) or short-acting reversible contraceptives (2.6).

CONCLUSION: Women's elevated risk of unintended pregnancy after abortion is likely due at least partly to reliance on methods with relatively low effectiveness. Factors affecting contraceptive access postabortion, as well as individual characteristics such as fecundability, require research attention.

Contraceptive nonuse and inconsistent use account for 54% and 41% of unintended pregnancies in the United States, respectively.¹ Nearly half (42%) of unintended pregnancies, in turn, end in abortion.² Yet, little is known about how unintended pregnancy and abortion shape women's subsequent contraceptive use and, by extension, their risk of another unintended pregnancy. Women who have abortions face an elevated risk of subsequent unintended pregnancy: Nearly half of all women having an abortion have had a prior one,³ and longitudinal research has found that the unintended pregnancy rate within one year after abortion is 35% higher than the one-year rate for contraceptive clients in general⁴ and 60% higher than that for women who have never had an abortion.⁵

Given that some U.S. women who have abortions go on to have another unintended pregnancy, research has focused on comparing the contraceptive use of women who have had an abortion with that of other groups of women.⁴⁻⁷ Findings have been mixed. A retrospective analysis found that among women undergoing first-trimester abortion, those with a history of abortion had 20% higher odds of selecting a highly effective method of contraception postabortion than women with no such history.⁷ In contrast, a study that followed a group of hormonal contraceptive initiators who did not desire pregnancy found that women who had recently had an abortion were 20% more likely to discontinue use over 12 months than were women who had never had an abortion.⁵ Furthermore, a 40-site trial of provider training on contraceptive counseling found that over three months, women who received counseling at the time of an abortion were more than twice as likely to use no method as were women who had been counseled when seeking other reproductive health care.⁸ Findings from the Contraceptive CHOICE project were mixed:⁶ Compared with women not having an abortion, those with a recent history of abortion were more than three times as likely to choose an IUD and 50% more likely to choose an implant, but only when offered immediate postabortion placement of the device.

Myriad obstacles impede use of contraceptives—particularly long-acting methods—after an abortion. For women who give birth, Medicaid covers all contraceptive methods through the month in which the 60-day postpartum period ends,⁹ and many states have extended coverage beyond this period.¹⁰ For women who have abortions, however, reimbursement for contraceptives is much more difficult because of a requirement that contraceptive services be billed separately from abortion, even with the contraceptive mandate of the Affordable Care Act.^{11,12} Billing for multiple services on the same day can lead to reduced reimbursements for providers, hindering their ability to provide contraceptives immediately postabortion.¹¹⁻¹³ Additional limitations, such as time, space and logistical barriers in busy abortion care settings, further reduce the likelihood that women can get postabortion contraceptives.¹²

And many abortion facilities are not equipped to offer IUD, implant or sterilization procedures—making these services difficult to obtain on the same day as an abortion.^{13,14}

Despite ample inquiry, important gaps remain in our understanding of contraceptive use after abortion and the role it might play in elevated unintended pregnancy rates postabortion. First, studies have compared contraceptive use among women who have had an abortion with use among women who have not sought abortions or who have sought other reproductive health care services. These comparison groups differ inherently from abortion clients in terms of both fecundability and sociodemographic characteristics that place some women at higher risk of unintended pregnancy^{5,6,15} Second, studies have focused on contraceptive use during the first year postabortion;^{3,6,7,16} patterns of use over longer periods postabortion have been largely unexamined. Finally, some studies have taken place outside of the United States,¹⁷⁻¹⁹ and their findings may not be applicable to the United States, where family planning care is often stigmatized and subject to restrictive regulations.

In this study, we compared trajectories of contraceptive use and type of method used over approximately five years among women who received abortions at 30 facilities in the United States and a similar group of women who sought but did not have abortions. By doing so, we aimed to isolate the relationship between abortion and subsequent contraceptive use, better understand reasons for elevated unintended pregnancy rates among women who have had abortions and capture relatively long-term patterns of postabortion contraceptive use in the current U.S. sociocultural environment.

METHODS

Study Population

We analyzed data from the Turnaway Study, a longitudinal study examining the health and socioeconomic consequences of receiving or being denied an abortion in the United States. Women seeking abortions were recruited between 2008 and 2010 from 30 geographically diverse facilities. Facilities were selected because they had the highest gestational limit for abortion within 150 miles; limits ranged from 10 weeks to the end of the second trimester. Further details about facility selection can be found elsewhere.²⁰

Three groups of women were recruited: women who received abortions within two weeks prior to the facility's gestational limit (near-limit abortion group); women who received procedures during the first trimester, when more than 90% of abortions occur²¹ (first-trimester abortion group); and women who presented within three weeks beyond the facility's gestational age limit and were therefore denied abortions (turnaway group). This recruitment strategy was designed to identify a group that would best represent the experiences of women in the near-limit abortion group had those women not received the abortion. Women in the turnaway group had also experienced an unwanted pregnancy, and they had a high likelihood of being sociodemographically similar to those in the near-limit abortion group; turnaway women were therefore an appropriate group with which to compare the near-limit group. The turnaway group was later split into women who went on to give birth (turnaway/birth group) and those who obtained an abortion elsewhere or reported a miscarriage or stillbirth (turnaway/no birth group). Our primary interest was in

the comparison of the near-limit and turnaway/birth groups, which enables us to identify the unbiased association between abortion and subsequent contraceptive use.

To be eligible for the study, women had to be English- or Spanish-speaking, aged 15 or older, and seeking to terminate a pregnancy in which the fetus had no known abnormalities. Of all potentially eligible women approached, 38% agreed to participate; 956 completed a baseline interview. Participants were followed for five years between 2008 and 2016, completing semiannual phone interviews that asked about their sociodemographic characteristics, pregnancy intentions, new pregnancies and contraceptive use. The University of California, San Francisco, Committee on Human Research approved this study. Further details of study design and recruitment can be found elsewhere.²²

Measures

The primary outcome is use of any contraceptive (barrier, ring, patch, pill, injectable, implant, IUD or female sterilization), as opposed to use of no method. Six women reported using withdrawal or natural family planning; we classified them as using no method because of the low effectiveness of these methods in typical use.^{23,24} Our secondary outcome is type of method used, an ordinal categorical variable based on the most effective method reported: ^{23,24} no method; barrier method only; short-acting reversible contraceptive, or SARC, method (pill, patch, ring or injectable); long-acting reversible contraceptive, or LARC, method (IUD or implant); or female sterilization. At each semiannual interview beginning 12 months after they sought an abortion, participants reported their contraceptive use over the last six months. (We did not have comparable data from the six-month follow-up interview, which asked about contraceptive use only at last sex.)

The main independent variable is study group: near-limit, turnaway/birth, first-trimester or turnaway/no birth. Time is measured in years, beginning one year following the birth (for turnaway/births) or the abortion or miscarriage (all other groups).

Finally, we included potential confounding variables, selected a priori, that we hypothesized could confound the relationship between study group and contraceptive method use because of an association with both timing of pregnancy discovery or abortion-seeking and contraceptive use. These included baseline measures of age; race or ethnicity (white, black, Latina or other); insurance type (none, Medicaid, or private or other); and school enrollment or employment, which may affect both access to contraception and motivation to prevent pregnancy. We also included contraceptive method used at the time of the index pregnancy, categorized as none, barrier method (including nonhormonal female-controlled methods) or effective method (SARC, LARC or female sterilization). And we included whether the participant had children in the home at the beginning of follow-up for contraceptive use (approximately six months after seeking abortion).

Analysis

For all analyses, we excluded all women from sites at which more than two-thirds of participants who were denied abortions went on to receive abortions elsewhere. We thus excluded all 76 participants from one site. We also excluded observations at which the participant was currently trying to become pregnant (2% of observations) or was pregnant

(5%); once a woman was no longer pregnant or trying to become pregnant, she was reentered into the analysis set. Although we are interested primarily in the near-limit and turnaway/ birth groups, we included the first-trimester and turnaway/no birth groups in all models to capture the experiences of different groups of women who seek abortion. Our analytic sample consisted of 880 women—415 in the near-limit group, 160 in the turnaway/ birth group, 255 in the first-trimester abortion group and 50 in the turnaway/no birth group.

We assessed baseline sociodemographic characteristics of the study population, both overall and by study group, and tested for group differences using unadjusted linear regression for continuous outcomes, logistic regression for binary outcomes and multinomial logistic regression for categorical outcomes; all analyses accounted for clustering by site.

In this analysis, we compared trends in contraceptive use between one and five years after an abortion, and one and 4.5 years after a birth. In all models, the turnaway/birth group was the reference group, and the near-limit abortion group was the exposed group. To test for study group differences in use of any contraceptive method and trajectories over time, we used mixed-effects logistic models with random effects to account for clustering of responses by woman and site. In two nested models, we first included study group only, then added the potential confounders. Using the full model, we estimated the marginal mean predicted percentage of women using any method at each year of follow-up, by study group.

To assess group differences in type of method used, we estimated adjusted relative risk ratios from a multivariable multinomial logistic regression model. Given the computational limitations of accommodating two levels of clustering for a multinomial model, we used an established alternative approach: We fitted the model accounting for clustering at the site level, with robust standard errors, which has been demonstrated to yield more reliable inferences than specification with clustering by woman.²⁵ Because the number of clusters was somewhat small (29), we used the t distribution with robust standard errors to calculate confidence intervals and p values, rather than the standard normal distribution ordinarily used.²⁶ Using this model, we estimated the marginal predicted mean percentage of women using each method at each follow-up, from which we then estimated the trajectory of use of each method type.

In models for both any contraceptive use and method type, we checked for nonlinearities in age and time, and examined whether including an interaction term for study group by time improved model fit. We did not detect nonlinearities or significant interaction. As a result, simple additive models with log-linear trends were adequate.

Observations with missing data were dropped from models. (Most variables were missing data for fewer than 1% of observations; the exception was children in the home, which was missing data for 7% of observations.) All analyses were conducted in Stata version 15.0.

RESULTS

Sample Characteristics

On average, participants were 25 years of age (Table 1). Thirty-three percent of the sample identified as white, 32% as black and 22% as Latina; 13% reported another race or ethnicity. Forty-five percent of women had had a prior abortion, and 69% were employed or in school. Thirty percent had no health insurance at baseline, 36% had not been using a contraceptive method at the time they conceived and 71% had children in the home at the beginning of follow-up for contraceptive use.

Compared with women in the turnaway/birth group, those in the near-limit abortion group were slightly older, less likely to have been using a barrier method at the time of conception and less likely to have children in the home at the start of follow-up for contraceptive use. Women in the first-trimester abortion group were older and more likely to be in school or employed than those in the turnaway/birth group; these two groups also differed in racial or ethnic background, as well as insurance type. There were no significant differences between turnaways who gave birth and those who did not.

Among women in the near-limit group, 88% were still under observation at one year after enrollment, 80% at two years, 72% at three years, 68% at four years and 60% at five years. Among women in the turnaway/birth group, 86% were under observation at one year, 80% at two years, 70% at three years, 62% at four years and 50% at five years.

Contraceptive Use

The predicted percentages suggest that the vast majority of women in each study group were using a method of contraception one year following abortion or birth: 86% in the near-limit group and 81% in the turnaway/birth group (Table 2), and 84% in the first-trimester group and 87% in the turnaway/no birth group (not shown). These percentages remained stable over the duration of follow-up. One year following the abortion, the most commonly used contraceptives among women in the near-limit group were SARC methods (33%), followed by LARC methods (30%), barrier methods (22%) and female sterilization (2%); 13% of women in this group were using no method. One year after a birth, the most commonly used methods among women in the turnaway/birth group were LARC methods (34%), followed by barriers (20%), SARC methods (19%) and sterilization (7%); nonuse among turnaway/birth women was estimated at 20%. In both groups, over subsequent years of follow-up, the estimated percentages using SARC methods declined, while the estimated percentages using barrier methods or no method remained more or less stable. For women who received an abortion, estimated LARC use increased over time.

Over the approximately five years following an abortion or birth, women in the near-limit group had higher odds than women in the turnaway/birth group of using any method of contraception (adjusted odds ratio, 1.8—Table 3). Odds of any contraceptive use did not differ significantly between women in the first-trimester or the turnaway/no birth group and those in the turnaway/birth group.

According to the longitudinal model examining contraceptive method type (Table 4), near-limit women were more likely than women in the turnaway/birth group to be using a barrier or SARC method (risk ratios, 1.7 and 2.6, respectively), rather than no method. The former were less likely than the latter to rely on sterilization, rather than no method (0.5); the two groups did not differ with respect to LARC method use. Women in the first-trimester and turnaway/no birth groups also had an increased likelihood of using a SARC method (2.0 and 3.1, respectively), rather than no method, but otherwise did not differ in their method use from the turnaway/birth group.

Over time, use of SARC methods declined relative to use of no method (0.8 per year), and use of female sterilization increased (1.4). Thus, the predicted percentage using a SARC method declined from 34% one year after abortion to 22% at four years among women in the near-limit group, and from 19% one year after birth to 10% at four years in the turnaway/birth group (Figure 1). The predicted percentage using female sterilization increased from 2% at one year to 6% at four years for women in the near-limit group, and from 9% to 14% among women in the turnaway/birth group.

DISCUSSION

In this study of women who sought an abortion, the large majority of those not seeking pregnancy over the next 1–5 years used a contraceptive method, regardless of whether they received or were denied the abortion. Women who had abortions had slightly higher odds of using any method than women who gave birth, but they were more likely to rely on less effective methods—barrier or short-acting hormonal contraceptives—and were less likely to rely on sterilization.

The provision of contraceptives, particularly long-acting methods, is subject to unique barriers in the abortion setting, including insurance and billing restrictions, as well as logistical challenges to providing contraceptive care in already burdened clinics.¹¹⁻¹⁴ Our finding that women who have abortions are more likely than those who give birth to rely on relatively ineffective methods is consistent with those barriers, but we do not know whether it reflects that these groups differ in their ability to access contraceptives or in their method preferences. Either way, the fact that women who had abortions were more likely than those denied care to use contraceptives overall suggests that lack of motivation to practice contraception does not explain the increased risk of unintended pregnancy among women who have had an abortion. Findings also suggest that understanding the elevated risk of subsequent unintended pregnancy among women having an abortion may require exploration of contextual factors that place some women at higher risk of pregnancy than others, such as social or relationship situations, as well as the role that higher fecundability among some women might play.

Often, when women who have had an abortion have an unintended pregnancy, it occurs shortly after they began using a new contraceptive method or during a gap in use.²⁷ However, the majority of women who have abortions use effective methods immediately afterward.^{6,17,19,28,29} Our results extend these findings, providing empirical evidence that

the vast majority of women not trying to become pregnant after seeking an abortion use a contraceptive method over the next several years.

Limitations and Strengths

This study has limitations. As noted earlier, we were not able to examine contraceptive use immediately after women sought an abortion; thus, we examined contraceptive use 1–5 years after women had an abortion or 1–4.5 years after they gave birth. Further, although we excluded women from analyses during periods in which they were pregnant or trying to become pregnant, our measure likely did not capture subtleties in women’s pregnancy intentions—for instance, situations in which women welcomed a pregnancy although they had not been actively trying to conceive.³⁰⁻³² We thus cannot account for subtle differences in pregnancy intention between study groups.

This study may be limited by selection bias because of the participation rate of less than 40%.^{33,34} Without data on nonparticipants, we cannot assess how those included in the study differ from those who declined to participate. However, earlier work has indicated that women in the Turnaway Study are similar demographically to the overall population of U.S. women seeking abortions,^{33,35} with the one exception of being poorer. Furthermore, participation rates of around 40% are not uncommon in national health studies and do not necessarily introduce bias;³⁶ we therefore consider our 38% participation rate reasonable for an intensive, multiyear study among women seeking a stigmatized health service.

Another limitation is that women were not randomly allocated to study group, so it is possible that women in the near-limit and turnaway/birth groups differed on characteristics that we did not measure. Comparisons of the two groups, however, indicated that they were very similar, except that women in the turnaway/birth group were slightly younger and more likely to be nulliparous at the time of abortion-seeking; these differences are consistent with the literature on what causes delays in pregnancy recognition.³⁷ By controlling for these characteristics in all models, we aimed to account for differences due to the nonrandom allocation of women to study group. Selection bias could also have been introduced to the study via attrition over time. However, attrition did not differ by baseline contraceptive use, and our modeling approach accounted for differential attrition by variables in the model.

This study has multiple strengths. While prior studies have assessed postabortion contraceptive use in the months following abortion,⁵⁻⁷ we are not aware of other research that has examined patterns of such use with multiple observations over a longer period in the United States. In addition, by comparing use among women who had an abortion and women who sought but were denied one, we are able to isolate the association between abortion and women’s contraceptive use over time from other characteristics associated with unwanted pregnancy, including sociodemographic characteristics and fecundability. The size and geographic diversity of the sample strengthen the study’s findings by improving its generalizability.

Conclusion

Our findings suggest that the elevated risk of unintended pregnancy observed in women postabortion is likely due not to a lower desire to avoid pregnancy or to decreased

motivation to practice contraception, but at least in part to lack of reliance on the most effective methods. Future work aimed at understanding this risk should focus on modifiable sociodemographic characteristics, such as intimate partner conflict and disruptive life events, that may affect consistency of contraceptive use or may directly impact risk of unintended pregnancy after abortion.³⁸⁻⁴⁰

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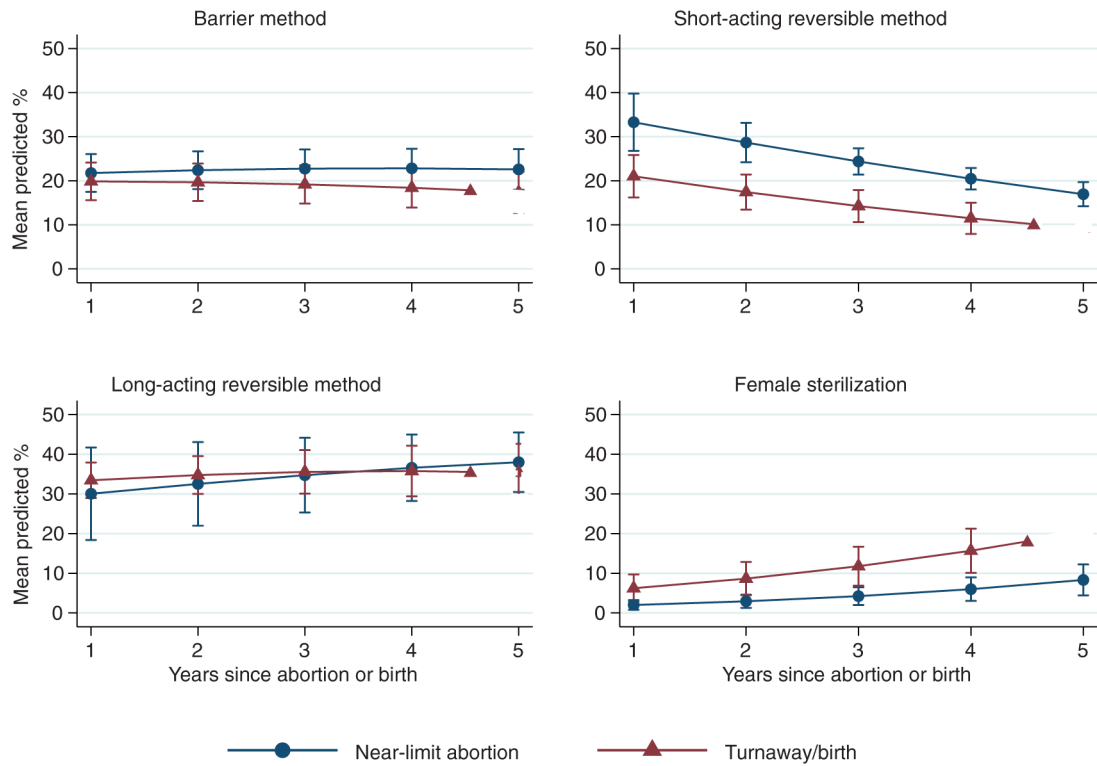


FIGURE 1. Predicted percentage of women in the near-limit abortion and turnaway/birth groups using each type of contraceptive method, by number of years following abortion or birth
Notes: Predicted percentages and 95% confidence intervals (indicated by bars) were generated by a multinomial logistic model that adjusted for all characteristics shown in Table 4.

TABLE 1.

Selected characteristics of Turnaway Study participants included in analyses of contraceptive use after giving birth or having an abortion, by study group, 2008–2016

Characteristic	All (N=880)	Turnaway/ birth (N=160)	Near-limit abortion (N=415)	First-trimester abortion (N=255)	Turnaway/ no birth (N=50)
Mean age	25	23	25 ^{**}	26 ^{***}	24
Age				***	
15–17	5	9	4	4	0
18–19	14	22	12	11	22
20–24	36	34	39	30	42
25–29	25	21	24	30	18
30–34	13	11	12	17	10
35–46	8	4	8	9	8
Race/ethnicity				*	
White	33	25	32	39	42
Black	32	34	32	31	28
Latina	22	28	21	21	14
Other	13	13	15	8	16
Prior abortion	45	39	47	46	48
In school/employed	69	61	67	76 ^{**}	72
Insurance type				*	
None	30	26	31	30	34
Medicaid	42	51	42	37	36
Private/other	28	23	27	33	30
Method used in month before conception			*		
None	36	32	39	36	28
Barrier [†]	37	44	34	39	34
Effective [‡]	27	24	28	25	38
Had children in the home at start of follow-up	71	95	63 [*]	59	58

* Mean or distribution differs from that of turnaway/birth group at $p < .05$.

** Mean or distribution differs from that of turnaway/birth group at $p < .01$.

*** Mean or distribution differs from that of turnaway/birth group at $p < .001$.

[†] Includes nonhormonal female-controlled methods.

[‡] Ring, patch, pill, injectable, IUD, implant and female sterilization.

Notes: Unless otherwise noted, data are percentages, and variables were measured at the time of abortion-seeking. All statistical tests account for clustering.

TABLE 2.

Predicted percentage of women using various types of contraceptives, by year of follow-up and study group

Year and study group	Any method	Sterilization	Long-acting reversible	Short-acting reversible	Barrier	None
Year 1						
Near-limit	86	2	30	33	22	13
Turnaway/birth	81	7	34	19	20	20
Year 2						
Near-limit	86	3	32	29	22	14
Turnaway/birth	81	9	36	16	20	19
Year 3						
Near-limit	86	4	35	25	22	14
Turnaway/birth	81	13	36	13	19	19
Year 4						
Near-limit	86	6	37	21	22	14
Turnaway/birth	81	17	36	10	18	18
Year 5						
Near-limit	86	8	38	18	22	14
Turnaway/birth	u	u	u	u	u	u

Notes: Percentages were calculated from unadjusted mixed-effects regression models, accounting for clustering by site. Long-acting reversible methods are the IUD and implant; short-acting reversible methods are the pill, patch, ring and injectable; barrier methods include nonhormonal female-controlled methods. u=unavailable, because contraceptive use for this group was followed for only approximately 4.5 years.

TABLE 3.

Unadjusted and adjusted odds ratios (and 95% confidence intervals) from mixed-effects logistic regression analyses assessing associations between selected characteristics of women and use of any contraceptive method over approximately five years after giving birth or having an abortion

Characteristic	Unadjusted	Adjusted
Study group		
Turnaway/birth	ref	ref
Near-limit abortion	1.74 (1.01–3.00)*	1.76 (1.00–3.08)*
First-trimester abortion	1.36 (0.76–2.43)	1.37 (0.74–2.55)
Turnaway/no birth	1.54 (0.58–4.09)	1.25 (0.46–3.38)
Time (years)	0.98 (0.91–1.06)	0.97 (0.90–1.05)
Age		0.95 (0.92–0.99)*
Race/ethnicity		
White		Ref
Black		0.70 (0.42–1.17)
Latina		0.66 (0.38–1.17)
Other		0.59 (0.30–1.17)
Insurance type		
None		ref
Medicaid		1.33 (0.83–2.16)
Private/other		1.91 (1.11–3.30)*
In school/employed		1.01 (0.64–1.60)
Method used in month before conception		
None		ref
Barrier [†]		1.58 (1.00–2.50)*
Effective [‡]		2.41 (1.41–4.11)**
Had children in the home at start of follow-up		0.72 (0.44–1.17)

* p<.05.

** p<.01.

[†] Includes nonhormonal female-controlled methods.

[‡] Ring, patch, pill, injectable, IUD, implant and female sterilization.

Notes: Unadjusted odds ratios are based on 764 women, who contributed 5,140 observations; adjusted odds ratios are based on 754 women, who contributed 5,072 observations. Unless otherwise noted, characteristics were assessed at the time of abortion-seeking. ref=reference group.

TABLE 4.

Adjusted relative risk ratios (and 95% confidence intervals) from multinomial logistic regression analysis assessing associations between selected characteristics of women and use of various types of contraceptives, rather than no method, over time

Characteristic	Barrier	Short-acting reversible	Long-acting reversible	Sterilization
Study group				
Tumaway/birth	ref	ref	ref	ref
Near-limit abortion	1.71 (1.18–2.48)**	2.64 (1.58–4.40)***	1.39 (0.68–2.86)	0.45 (0.27–0.76)**
First-trimester abortion	1.48 (0.85–2.59)	2.03 (1.03–3.99)*	1.11 (0.46–2.66)	0.92 (0.38–2.23)
Tumaway/no birth	1.46 (0.88–2.43)	3.10 (1.30–7.37)*	0.93 (0.51–1.70)	0.92 (0.25–3.38)
Time (years)	0.98 (0.90–1.05)	0.80 (0.72–0.89)***	1.03 (0.95–1.12)	1.43 (1.30–1.57)***
Age	0.98 (0.96–1.00)*	0.93 (0.90–0.96)***	0.96 (0.92–1.00)	1.07 (1.01–1.16)*
Race/ethnicity				
White	ref	ref	ref	ref
Black	1.08 (0.74–1.59)	0.50 (0.36–0.71)***	0.82 (0.59–1.12)	0.76 (0.34–1.70)
Latina	0.84 (0.62–1.12)	0.44 (0.28–0.68)***	0.87 (0.58–1.28)	1.12 (0.56–2.23)
Other	0.99 (0.69–1.40)	0.56 (0.37–0.87)*	0.92 (0.60–1.42)	0.44 (0.13–1.53)
Insurance type				
None	ref	ref	ref	ref
Medicaid	0.96 (0.63–1.48)	1.00 (0.71–1.41)	1.43 (0.93–2.19)	1.81 (0.90–3.65)
Private/other	1.39 (0.92–2.09)	2.40 (1.52–3.79)***	1.35 (0.89–2.07)	0.93 (0.31–2.78)
In school/employed	0.82 (0.54–1.26)	1.06 (0.72–1.55)	1.04 (0.74–1.47)	0.69 (0.42–1.13)
Method used in month before conception				
None	ref	ref	ref	ref
Barrier [†]	2.08 (1.36–3.17)***	1.67 (1.16–2.41)**	1.05 (0.79–1.41)	1.01 (0.47–2.17)
Effective [‡]	1.18 (0.69–2.02)	2.39 (1.57–3.65)***	1.98 (1.31–2.99)**	1.84 (0.87–3.89)
Had children in the home at start of follow-up	0.77 (0.44–1.34)	0.69 (0.39–1.21)	0.99 (0.65–1.52)	3.84 (0.87–16.97)

* p<.05.

** p<.01.

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p<.001.

† Includes nonhormonal female-controlled methods.

* Ring, patch, pill, injectable, IUD, implant and female sterilization.

Notes: Risk ratios are based on 754 women, who contributed 5,072 observations. Unless otherwise noted, characteristics were assessed at the time of abortion-seeking. ref=reference group.