Original Research

Contraception After Delivery Among Publicly Insured Women in Texas
Use Compared With Preference

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OBJECTIVE: To assess women’s preferences for contraception after delivery and to compare use with preferences.

METHODS: In a prospective cohort study of women aged 18–44 years who wanted to delay childbearing for at least 2 years, we interviewed 1,700 participants from eight hospitals in Texas immediately postpartum and at 3 and 6 months after delivery. At 3 months, we assessed contraceptive preferences by asking what method women would like to be using at 6 months. We modeled preference for highly effective contraception and use given preference according to childbearing intentions using mixed-effects logistic regression testing for variability across hospitals and differences between those with and without immediate postpartum long-acting reversible contraception (LARC) provision.

RESULTS: Approximately 80% completed both the 3- and 6-month interviews (1,367/1,700). Overall, preferences exceeded use for both—LARC: 40.8% (n=547) compared with 21.9% (n=293) and sterilization: 36.1% (n=484) compared with 17.5% (n=235). In the mixed-effects logistic regression models, several demographic variables were associated with a preference for LARC among women who wanted more children, but there was no significant variability across hospitals. For women who wanted more children and had a LARC preference, use of LARC was higher in the hospital that offered immediate postpartum provision (P=.035) as it was for U.S.-born women (odds ratio [OR] 2.08, 95% CI 1.17–3.69) and women with public prenatal care providers (OR 2.04, 95% CI 1.13–3.69). In the models for those who wanted no more children, there was no significant variability in preferences for long-acting or permanent methods across hospitals. However, use given preference varied across hospitals (P<.001) and was lower for black women (OR 0.26, 95% CI 0.12–0.55) and higher for U.S.-born women (OR 2.32, 95% CI 1.36–3.96), those 30 years of age and older (OR 1.82, 95% CI 1.07–3.09), and those with public prenatal care providers (OR 2.04, 95% CI 1.18–3.51).

CONCLUSION: Limited use of long-acting and permanent contraceptive methods after delivery is associated with indicators of health care provider and system-level barriers. Expansion of immediate postpartum LARC provision as well as contraceptive coverage for undocumented women could reduce the gap between preference and use.

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Each author has indicated that he or she has met the journal’s requirements for authorship.

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In the United States, approximately half of postpartum women use the least effective methods of contraception, including condoms and withdrawal, or no method at all. This frequently results in interpregnancy intervals less than 18 months and high
rates of unintended pregnancy, which are associated with adverse birth outcomes. In contrast, little use is made of long-acting reversible contraception (LARC) in the postpartum period. Not only are there few implants and intrauterine devices (IUDs) placed immediately postpartum, but use of these methods remains limited in the 6 months after delivery. This limited use of LARC may be the result of health care provider and health system-level barriers rather than lack of demand. If so, immediate postpartum provision of LARC could increase use.

Although there is substantial use of female sterilization after delivery, with most procedures occurring immediately postpartum, there are indications of barriers even for this widely used permanent method. Among the barriers for women with public insurance coverage during pregnancy, such as Medicaid and CHIP, are the Medicaid consent form and the requirement that it be completed 30 days before the procedure, insufficient reimbursement for hospitals and health care providers, arbitrary assumptions about who is an appropriate candidate for sterilization, availability of an operating room, and lack of insurance coverage for contraception.

In this study, we assess the types of contraception women would prefer to be using after delivery as well as the factors associated with use of LARC or sterilization among women with a preference for these methods. We focus on publicly insured women in Texas, a state in which funding for family planning services is limited in the 6 months after delivery.

In this study, we assess the types of contraception women would prefer to be using after delivery as well as the factors associated with use of LARC or sterilization among women with a preference for these methods. We focus on publicly insured women in Texas, a state in which funding for family planning services is limited in the 6 months after delivery.

MATERIALS AND METHODS

For this prospective study, participants were recruited after delivery from eight hospitals across six cities. We aimed to enroll 100 participants from a hospital in Odessa; 300 from each hospital selected in Austin, Edinburg, and Dallas; 400 from two hospitals in Houston; and 300 from two hospitals in El Paso for a total sample of 1,700 women. The hospitals were chosen to reflect the experiences of women delivering with public insurance at larger hospitals in Texas’ urban centers. Two hospitals that we initially approached declined to participate and were replaced with hospitals from the same city. The three hospitals in Austin and El Paso were included in a precursor to this study. Five of the eight hospitals were formally connected with an academic department. One hospital, hospital 8, was the only facility in our study that had implemented immediate postpartum placement of IUDs and implants at the time we recruited participants. The initial sample size was chosen so as to have 90% power (α=0.05, two-sided) to test for differences of 0.20 or more in the proportion of women obtaining their preferred method across sites.

Eligible participants were between 18 and 44 years old, spoke English or Spanish, had delivered a single, healthy neonate whom they expected to go home with them on discharge, wanted to delay childbearing for at least 2 years, lived in Texas within the hospital’s catchment area, and planned to live in the area for at least 1 year. All participants had their births covered by public insurance or had no insurance. After obtaining signed informed consent from participants, we administered a 20-minute face-to-face baseline interview in either English or Spanish.

Baseline interviews took place between October 2014 and April 2016. Follow-up interviews were conducted by phone at 3 and 6 months after delivery. Three-month interviews were completed in August 2016, and 6-month interviews were completed in November 2016. Twelve-, 18-, and 24-month follow-up interviews are in progress. Participants were offered $30 compensation for the baseline interview at recruitment and $15 for each subsequent interview by phone for a total of $105 for all completed interviews. One hospital limited compensation for the baseline interview to $15.

The baseline questionnaire collected information on demographic and socioeconomic variables including age, parity, relationship status, race or ethnicity, education, insurance status (public or none), and nativity (U.S.-born or foreign-born). We classified the location of women’s prenatal care into private practice compared with publicly funded clinics; we included women who received prenatal care in Mexico or who had no prenatal care with women obtaining care at public clinics as a result of the small sample (less than 3%) in these groups.

Insurance status, future childbearing intentions, and contraceptive use were assessed at baseline and in each of the follow-up interviews. Women’s childbearing intentions were assessed using the question, “Do you plan to have more children in the future?” To capture actual use at each interview, we asked women what method of contraception they were currently using. To capture methods that women may not have considered as birth control, we also asked women if they were using less effective methods such as condoms or withdrawal, whether they were abstinent, or whether their partners were using any methods. The very small number of women who...
stated that they were using two methods together was classified as using the more effective method.

To assess participants’ contraceptive preferences during the 3-month interview, we asked women their preferred method directly and then asked a series of prompts (Fig. 1). We began by asking all nonsterilized participants what method they would like to be using by the time their infant turned 6 months old. We chose 6 months because by that time most women have resumed sexual relations and will no longer be relying on exclusive breastfeeding as contraception. Next, we asked women what method they would like to be using at 6 months if they could get any method for free. We paid specific attention to preferences for LARC, vasectomy, or female sterilization because prior research has demonstrated many women prefer to be using these methods postpartum but are not using them as a result of a range of barriers not associated with other methods such as a high upfront cost and method availability at hospitals and health care practices. Among women who attended a postpartum visit, we asked whether there was a method they wanted to get at their postpartum visits that they were unable to get. Then, following a previous study, we asked women who had not previously mentioned an interest in LARC whether they would consider using an IUD or implant if it were free. Finally, to ensure a preference for sterilization was fully captured, women who had not previously expressed a desire for tubal ligation and who did not want any more children or did not know whether they wanted more children in the future were asked, “Would you like to have had a tubal ligation in the hospital right after you had your new baby?”

We distinguished between a participant’s preferred contraceptive method measured directly (“unprompted”) and a method mentioned in response to any of the method preference prompts, terming the latter an “elicited preference.” We then classified both the unprompted preference and the elicited preference according to method efficacy and reversibility. The lowest method category, which we term less effective methods, includes condoms, withdrawal, spermicides, sponges, fertility-based awareness methods (including the rhythm method), and abstinence. The next category, which we term “hormonal methods,” includes combined and progestin-only contraceptive pills, injectables, the vaginal ring, and the patch. The third group, LARC, includes the implant, copper IUD, and the levonorgestrel-releasing intrauterine system. We also distinguished a fourth group for permanent methods: female sterilization and vasectomy. If a participant answered different methods to the series of

Fig. 1. Survey questions used to measure contraceptive preferences. IUD, intrauterine device.

preference prompts, her elicited preference was
categorized based on the most effective or permanent
method mentioned. Women who had obtained
a tubal ligation or whose partners or spouses had
obtained a vasectomy were classified as having a pref-
ERENCE for a permanent method.

We examined the distribution of the sample by
hospital and sociodemographic characteristics (age
group, parity, educational attainment, race–ethnicity,
and nativity), type of prenatal care provider, insurance
status, and relationship status. We also reviewed
retention rates by hospital and sociodemographic
characteristics. Then, using the same four-tier catego-
rization used for method preferences, we examined
use of contraception by method at each interview up
to 6 months after delivery, contrasting the experience
of participants recruited at hospital 8 that offered
immediate postpartum LARC with all other hospitals.
Then, at 6 months after delivery, we compared the
percentages of participants using methods in each
category with the percentage stating an unprompted
preference for a method in that category as well as the
percentage stating an elicited preference for a method
in that category. Next, we examined the methods
actually being used by women who had expressed
a preference for a highly effective method, distinguishing
between women who wanted more children and
those who did not plan to have another child.

The remaining analysis focused on the factors
associated with preference for highly effective
methods and with the likelihood of actually using
these methods among women who expressed a pref-
ERENCE for them. We were interested in how both
preferences and use among those with a preference
might vary according to social and demographic
factors as well as by the hospital at which the
participant was recruited. We conducted separate
analyses for women who did and did not want more
children because the former might be less interested
in using a highly effective method after delivery.

For women who wanted more children or
were unsure of their intentions, we modeled two
dichotomous outcomes. The first was a preference
(either elicited or unprompted) for LARC at the 3-
month interview, whereas the second was use of
LARC at the 6-month interview among women who
expressed a preference for LARC. For women who
wanted no more children, the two corresponding
outcomes were a preference for either a long-acting
or a permanent method at the 3-month interview
and use of LARC or sterilization at the 6-month interview
among women who expressed a preference for either
type of method.

In all four regressions, we used mixed-effects logit
models to estimate fixed effects (odds ratios) associated
with sociodemographic characteristics, type of
prenatal care provider, and insurance and relationship
status as well as random effects for each hospital.
Mixed-effects models can account for the potential
association of outcomes of women in the same
hospital through the hospital-level random effects.
The extent to which this variation is statistically
greater than zero was tested using likelihood ratio χ²
tests comparing the mixed model with a standard logit
model with a threshold P value of .05. Empirical
Bayes estimates of hospital random effects were used
to quantify the expected log odds of hospital-specific
outcomes. To assess the role of immediate postpartum
provision of LARC, we carried out tests of differences
that contrasted the average of the empirical Bayes
estimates from hospitals 1 through 7 with those of
hospital 8. Stata 14’s melogit mixed-effects logit
model routine was used for estimation and nlcom
was used for testing contrasts.

Human subjects approval for this study was
obtained from the institutional review boards of the
University of Texas at Austin, Texas Tech University
Health Sciences Center El Paso, Texas Tech Univer-
sity Health Sciences Center Houston, and Las
Palmas Del Sol Healthcare.

RESULTS
A total of 1,700 participants met the inclusion criteria
and were enrolled in the study. There were 125
women who were eligible but did not consent to
participate. A large proportion of this sample is
Hispanic (81%), and nearly half of women are
foreign-born (46%) (Table 1). Less than half (39%)
received prenatal care at a private practice, and many
(77%) had no insurance by 6 months after delivery. A
similar percentage of women reported that they
wanted more children after their delivery (44%) and
reported that they did not want more (48%).

Overall, retention at 6 months after delivery was
80% with 1,367 participants completing both the 3-
and 6-month follow-up interviews. Retention varied
across hospitals from 67% to 88%. Retention was also
higher among older, higher parity, and foreign-born
participants.

There is a large and significant difference
(P<.001) in the distribution of method use between
hospital 8 and all other hospitals at baseline and 3 and
6 months after delivery (Fig. 2). In hospital 8, that
provided immediate postpartum LARC, 36% of
participants took advantage of this option, and LARC use remained near that level during the next 6 months after delivery. Use of sterilization and hormonal methods also varied little across the three interviews. Among women recruited at the other hospitals, contraceptive use increased from 17% at baseline to nearly 100% at the 3-month interview, but changed little between the 3-month and the 6-month interviews. Additionally, a much smaller percentage was using LARC at 3 months and 6 months compared with hospital 8, and a higher percentage was using hormonal and less effective methods.

Table 1. Characteristics of the Study Population and Proportion of the Baseline Sample Completing 3- and 6-Month Interviews

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Distribution of Sample (n=1,700)</th>
<th>% Completing Both 3- and 6-Mo Interviews (n=1,367)</th>
<th>P*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>300 (17.7)</td>
<td>88.0</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>217 (12.8)</td>
<td>75.6</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>83 (4.9)</td>
<td>85.5</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>301 (17.7)</td>
<td>76.7</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>100 (5.9)</td>
<td>67.0</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>300 (17.7)</td>
<td>77.7</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>200 (11.8)</td>
<td>82.0</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>199 (11.7)</td>
<td>86.9</td>
<td></td>
</tr>
<tr>
<td>Age (y)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18–24</td>
<td>776 (45.7)</td>
<td>76.8</td>
<td>.002</td>
</tr>
<tr>
<td>25–29</td>
<td>454 (26.7)</td>
<td>82.4</td>
<td></td>
</tr>
<tr>
<td>30 or older</td>
<td>470 (27.7)</td>
<td>84.5</td>
<td></td>
</tr>
<tr>
<td>Parity</td>
<td></td>
<td></td>
<td>.047</td>
</tr>
<tr>
<td>1</td>
<td>445 (26.2)</td>
<td>76.9</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>541 (31.8)</td>
<td>80.2</td>
<td></td>
</tr>
<tr>
<td>3 or more</td>
<td>714 (42.0)</td>
<td>82.8</td>
<td></td>
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<tr>
<td>Education</td>
<td></td>
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<td>.505</td>
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<tr>
<td>Less than high school</td>
<td>599 (35.1)</td>
<td>79.5</td>
<td></td>
</tr>
<tr>
<td>High school</td>
<td>677 (39.8)</td>
<td>80.1</td>
<td></td>
</tr>
<tr>
<td>Greater than high school</td>
<td>424 (24.9)</td>
<td>82.3</td>
<td></td>
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<tr>
<td>Race or ethnicity</td>
<td></td>
<td></td>
<td>.615</td>
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<tr>
<td>Hispanic</td>
<td>1,374 (80.8)</td>
<td>80.1</td>
<td></td>
</tr>
<tr>
<td>Non-Hispanic black</td>
<td>226 (13.3)</td>
<td>81.0</td>
<td></td>
</tr>
<tr>
<td>White, other, or multirace</td>
<td>100 (5.9)</td>
<td>84.0</td>
<td></td>
</tr>
<tr>
<td>Nativity</td>
<td></td>
<td></td>
<td>.001</td>
</tr>
<tr>
<td>U.S.</td>
<td>914 (53.8)</td>
<td>77.5</td>
<td></td>
</tr>
<tr>
<td>Foreign</td>
<td>786 (46.2)</td>
<td>83.8</td>
<td></td>
</tr>
<tr>
<td>Prenatal care provider</td>
<td></td>
<td></td>
<td>.790</td>
</tr>
<tr>
<td>Private (U.S.)</td>
<td>663 (39.0)</td>
<td>80.1</td>
<td></td>
</tr>
<tr>
<td>Public (U.S.), private or public (Mexico), none</td>
<td>1,037 (61.0)</td>
<td>80.6</td>
<td></td>
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<tr>
<td>Insurance status at 6 mo†</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Insured</td>
<td>318 (23.3)</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>Uninsured</td>
<td>1,049 (76.7)</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>Relationship status at 6 mo†</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Married</td>
<td>461 (33.7)</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>Cohabitating</td>
<td>526 (38.5)</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>380 (27.8)</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>Childbearing intentions at 6 mo†</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Want more children</td>
<td>601 (44.0)</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>Want no more children</td>
<td>652 (47.7)</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>Do not know</td>
<td>114 (8.3)</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1,700</td>
<td>80.4</td>
<td></td>
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</table>

Data are n (%) unless otherwise specified.

* For difference in follow-up across categories.
† Includes 1,367 who completed the 3- and 6-month interviews.
The unprompted preference for both LARC and hormonal methods was substantially greater than actual use (Fig. 3). Including women’s responses to prompts regarding LARC and sterilization (elicited preference) resulted in nearly a doubling of preference for permanent methods and a widening of the discrepancy between preferences and use.

Among all women who had an elicited preference for a long-acting or permanent method at the 3-month interview, more than one third were using a less effective method at 6 months postpartum (Fig. 3). This indicates a gap between preference and use, highlighting the need for improving contraceptive access and counseling to bridge this gap.
effective method such as condoms or withdrawal at 6 months, and approximately one sixth were using hormonal methods (Fig. 4). The percentages using less effective or hormonal methods among women who wanted more children were even greater.

In the multivariable model of elicited preference for LARC among women who wanted more children or were unsure, there were no significant differences across hospital of recruitment (Table 2). Women aged 30 years and older were less likely to prefer LARC than younger women, and non-Hispanic black women and white women were less likely to prefer LARC compared with Hispanic women. Also, participants who had a public prenatal care provider were more likely to prefer LARC than those with a private provider, whereas cohabiting women were more likely to prefer LARC than married women.

The multivariable model for use of LARC at 6 months among women with a preference for these methods demonstrated a significant difference across hospital of recruitment; women recruited at hospital 8 were significantly more likely to be using LARC than women recruited at the other hospitals. Also, women born in the United States and those who had a public prenatal care provider were more likely to be using LARC if they preferred one of these methods.

Among women who wanted no more children, there was no significant variability in preference across hospital of recruitment, and parity was the only variable significantly associated with preference for a long-acting or permanent method. In the model for use of a long-acting or permanent method among women with an elicited preference for one, there was significant variance across hospitals, but not between hospital 8 and the others. Additionally, use of a long-acting or permanent method was lower among non-Hispanic black women than among Hispanic women and higher among women 30 years of age and older compared with younger women and among U.S.-born participants compared with those foreign-born. Finally, participants who received their prenatal care from a public clinic were more likely to use LARC or a permanent method than those who obtained care from a provider in private practice.

DISCUSSION
Our findings demonstrate substantial differences between the contraceptive methods used 6 months after delivery and the methods Texas women said they would prefer to be using at that time. Many more had a preference for LARC or sterilization than were actually using these methods. Moreover, approximately one third of women who reported a preference for or interest in using a long-acting or permanent method were using less effective methods such as condoms or withdrawal 6 months after delivery. The multivariable mixed-effects models of preferences for...
long-acting and permanent methods did not show
significant variation across hospital of delivery, indicat-
ing that demand for highly effective contraception
was not a localized phenomenon. In contrast, the
models of using a long-acting or permanent method
among participants who expressed a preference for
such a method did show significant variation across
hospitals. We believe that this variation together with
the covariates identified in these models point to
policy improvements that could lead to more women
in Texas being able to access their preferred method
of contraception.

The experience of the women recruited at the one
hospital offering immediate postpartum LARC
provision highlights the potential of policies that
would permit hospitals and health care providers to
be reimbursed for LARC placement outside the
global delivery fee. More than one third of women
who did not want to get pregnant in the next 2 years
took advantage of this opportunity. Use of LARC

Table 2. Odds Ratios for Contraceptive Preferences and Use by Desire for Additional Children*

<table>
<thead>
<tr>
<th>Covariate</th>
<th>Models for Women Who Want More Children or Are Unsure</th>
<th>Models for Women Who Do Not Want More Children</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Preference for LARC at 3 mo (n=702)</td>
<td>LARC Use at 6 mo Given Preference at 3 mo (n=420)</td>
</tr>
<tr>
<td>Age (y)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18–24</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>25–29</td>
<td>1.03 (0.69–1.54)</td>
<td>0.89 (0.52–1.51)</td>
</tr>
<tr>
<td>30 or older</td>
<td><strong>0.46 (0.27–0.79)</strong></td>
<td>1.51 (0.69–3.31)</td>
</tr>
<tr>
<td>Parity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>2</td>
<td>1.22 (0.84–1.77)</td>
<td>1.19 (0.73–1.95)</td>
</tr>
<tr>
<td>3 or more</td>
<td>1.10 (0.68–1.77)</td>
<td>1.00 (0.51–1.95)</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than high school</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>High school</td>
<td>1.17 (0.78–1.74)</td>
<td>0.86 (0.51–1.44)</td>
</tr>
<tr>
<td>Greater than high school</td>
<td>1.31 (0.82–2.07)</td>
<td>1.21 (0.65–2.23)</td>
</tr>
<tr>
<td>Race or ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic Black or white</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Non-Hispanic black</td>
<td><strong>0.39 (0.23–0.66)</strong></td>
<td>0.97 (0.44–2.14)</td>
</tr>
<tr>
<td>White and other</td>
<td><strong>0.45 (0.23–0.89)</strong></td>
<td>0.59 (0.21–1.67)</td>
</tr>
<tr>
<td>Nativity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foreign</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>U.S.</td>
<td>1.10 (0.71–1.70)</td>
<td><strong>2.08 (1.17–3.69)</strong></td>
</tr>
<tr>
<td>Prenatal care provider</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Public (U.S.), Mexico, none</td>
<td><strong>1.76 (1.18–2.63)</strong></td>
<td><strong>2.04 (1.13–3.69)</strong></td>
</tr>
<tr>
<td>Insurance status at 6 mo</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Insured</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Uninsured</td>
<td>1.43 (0.98–2.10)</td>
<td>0.73 (0.43–1.24)</td>
</tr>
<tr>
<td>Relationship status at 6 mo</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Cohabiting</td>
<td><strong>1.70 (1.17–2.47)</strong></td>
<td>0.94 (0.56–1.56)</td>
</tr>
<tr>
<td>Single</td>
<td>1.54 (0.99–2.39)</td>
<td>0.77 (0.42–1.41)</td>
</tr>
<tr>
<td>Tests of random effects</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood ratio test of mixed effects model vs logistic model (P)</td>
<td>.484</td>
<td><strong>.005</strong></td>
</tr>
<tr>
<td>Hospital 8 vs all other hospitals (P)</td>
<td>—</td>
<td><strong>.033</strong></td>
</tr>
</tbody>
</table>

LARC, long-acting reversible contraception.
Data are odds ratio (95% CI).
Bold indicates significance at the 95% confidence level.
* Odds ratios were estimated for mixed-effects logistic regression models.
remained high during the 6 months after delivery, and women with a preference for LARC who wanted more children were significantly more likely to realize that preference in this hospital than in the rest of the sample. Although implementation of immediate postpartum LARC presents challenges and barriers that are not yet well understood, the uptake of immediate postpartum provision at this hospital in Texas is surprisingly large. This uptake may be related to long-standing use of immediate postpartum placement of IUDs in Mexican public health institutions coupled with the high proportion Mexican-origin foreign-born participants among women delivering at this hospital.

A second finding with policy implications is the disadvantage that foreign-born women have in both models of use given preference. The likely explanation is lack of insurance coverage for undocumented migrants for contraception after delivery. In Texas, undocumented women may be eligible to receive prenatal and postpartum care through the CHIP Perinatal program, which covers medical care related to the “unborn child.” CHIP Perinatal benefits include two postpartum visits, but contraception is not a covered benefit. Although the majority of the 15 states (including Texas) that provide undocumented women with coverage through the CHIP unborn child option do not cover contraception, Michigan recently expanded postpartum coverage to include contraceptive services. Texas and other states with the CHIP unborn child option should explore expanding the definition of postpartum services to include contraception.

A third finding worth noting are the differences associated with type of prenatal care provider. Not only are women who want more children more likely to have a preference for LARC if they received their prenatal care from a public clinic as compared with a private provider, but the likelihood of them actually using a highly effective method given preference is greater irrespective of childbearing intentions. This association may be the result of the greater familiarity of personnel at public clinics with contraceptive method medical eligibility criteria, experience with counseling about and placement of IUDs and implants, the greater likelihood of stocking these methods, and the ability to obtain them at reduced prices. It may be possible to narrow the gap in LARC provision by increasing communication between private providers and academic medical centers as well as through augmented outreach by the national and regional offices of the American College of Obstetricians and Gynecologists.

Another notable finding is that non-Hispanic black women who want no more children and who would like to be using a long-acting or permanent method are less likely than other groups to obtain their preferred method. This result is in line with one previous study of unmet sterilization requests as well as qualitative work reporting that black women encountered health care provider reluctance or refusal to perform a sterilization procedure after their decision had been made.

A limitation of this study is that the sample is not representative of the entire population of women who have Medicaid-paid deliveries in Texas. Compared with all Medicaid-paid deliveries statewide in 2013, our sample includes more Hispanic women (81% in the study compared with 49% statewide) and fewer white women (6% compared with 30%). The proportion of black women in our sample is also slightly less than among the statewide Medicaid deliveries (13% compared with 18%). These differences likely result from not including smaller hospitals serving rural areas where births are disproportionately to white women and possibly from differences by race or ethnicity in the willingness of new mothers to participate in the study.

This study suggests that the limited use of long-acting and permanent contraceptive methods in the postpartum period by public patients in Texas results more from health care provider and system-level barriers than preferences. Further implementation of immediate postpartum LARC provision and extension of CHIP to include postpartum family planning for undocumented mothers could both help to reduce the current discrepancy between preferences and use, thereby reducing the incidence of unintended pregnancy and induced abortion.

REFERENCES


