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Rationale and Enrollment Results for a Partially Randomized Patient Preference Trial to Compare Continuation Rates of Short-Acting and Long-Acting Reversible Contraception

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Abstract

Objectives—Most published contraceptive continuation rates have scientific limitations and cannot be compared; this is particularly true for dissimilar contraceptives. This study uses a new approach to determine if high continuation rates of long-acting reversible contraception (LARC) and protection from unintended pregnancy are observable in a population not self-selecting to use LARC.

Study Design—We are conducting a partially randomized patient preference trial to compare continuation rates of short-acting reversible contraception (SARC) and LARC. Only women seeking SARC were invited to participate. Participants chose to be in the preference cohort (self-selected method use) or opted to be randomized to SARC or LARC; only those in the randomized cohort received free product. We compared participant characteristics, reasons for not trying LARC previously, and the contraceptive choices that were made.

Results—We enrolled 917 eligible women; 57% chose to be in the preference cohort and 43% opted for the randomized trial. The preference and randomized cohorts were similar on most factors. However, the randomized cohort was more likely than the preference cohort to be uninsured (48% versus 36%, respectively) and to cite cost as a reason for not trying LARC previously (50% versus 10%) ($p<0.01$ for both comparisons). In the preference cohort, fear of pain/injury/side effects/health risks were the predominant reasons (cited by over 25%) for not trying LARC previously ($p<0.01$ in comparison to randomized cohort).

Conclusions—Enrollment was successful and the process created different cohorts to compare contraceptive continuation rates and unintended pregnancy in this ongoing trial. The choices

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participants made were associated with numerous factors; lack of insurance was associated with participation in the randomized trial.

Implications—This partially randomized patient preference trial will provide new estimates of contraceptive continuation rates, such that any benefits of LARC will be more easily attributable to the technology and not the user. Combined with measuring level of satisfaction with LARC, the results will help project the potential role and benefits of expanding voluntary use of LARC.

Keywords

IUD; subdermal contraceptive implant; oral contraceptives; DMPA; LARC

1. Introduction

Long-acting reversible contraception (LARC) consists of intrauterine devices (IUDs) and subdermal implants; all other reversible methods provide shorter-term protection and can be categorized as short-acting reversible contraception (SARC). LARC methods have higher continuation rates than SARC methods [1]. Because of these differences and incorrect use of SARC, LARC is also lauded as the most effective reversible family planning option [2]. In the United States, SARC prevalence dominates eight to one over LARC [3]; thus, on the surface, there appears to be substantial growth for voluntary uptake of LARC and resulting reduction in unintended pregnancy.

Published contraceptive continuation rates from decades of observational research probably reflect more about the users and their needs than the technologies themselves; thus, the measures are biased. The biases may be related to intended duration of use, changing risks of unintended pregnancy over time, implications of an unintended pregnancy, ambivalence toward contraception and pregnancy, and other immeasurable factors. The motivations to use LARC instead of SARC may be very different; thus attributing differences in observed continuation rates to the technologies is speculative. The most widely-cited continuation rates attempt to make comparisons more valid, by focusing on method-related reasons for discontinuation and limiting analyses to women who do not want to get pregnant [1]. However, these analytic adjustments do not prevent biases from influencing method choice and discontinuation events.

Randomized trials may provide the best data for comparing continuation rates, since any differences that emerge between products can more easily be attributed to the contraceptive rather than the user. Two randomized trials conducted outside the United States comparing SARC and LARC groups on different clinical endpoints were hampered by poor continuation rates [4, 5]; a systematic review of randomized trials in other fields of medicine found that patient preferences for a particular therapy impacts adherence [6]. Observational studies reflect choice of therapy and provide a real-world picture of typical use patterns. In the largest contemporary prospective cohort study on contraception in the U.S., the 12-month continuation rate for LARC was 86% versus 55% for SARC [7]; secondary analyses confirmed the relative superiority of LARC [8]. If LARC benefits are truly attributable to the technologies, then a population not normally interested in trying LARC should also benefit from its use.

A partially randomized patient preference trial (PRPPT) is a methodology well-suited for comparing contraceptive continuation rates and outcomes such as unintended pregnancy. In a PRPPT, participants with strong preferences for a particular therapy can use the preferred product and be observed as usual for study outcomes [9]. Those without a strong preference can agree to be randomized to different therapies. PRPPT has been used in a variety of applications, when preference for a therapy is inextricably linked to adherence and then eventual outcomes [10–12]. To our knowledge the PRPPT approach has never been applied to the field of contraception.

This paper describes the approach and enrollment results of a PRPPT comparing SARC and LARC. The primary objective of this ongoing trial is to understand if trying LARC will provide better protection from unintended pregnancy, relative to using SARC. Will women who self-select for SARC, but are randomly assigned to LARC, find that LARC is acceptable? A second objective is to generate new estimates of contraceptive continuation rates that can help reveal whether past estimates from observational research are generalizable and attributable to the technologies themselves.

In this paper, we explore factors associated with the contraceptive choices that participants made and reasons for not trying LARC previously. Contraceptive continuation rates and incidence of unintended pregnancy will be reported in future manuscripts.

2. Materials and methods

From December 2011 to December 2013, we enrolled participants in a partially randomized patient preference trial to compare continuation rates of SARC and LARC. The ongoing study is being conducted at three health centers owned and operated by Planned Parenthood of Central North Carolina (PPCNC). The study was approved the federally-registered institutional review board of FHI 360, the Protection of Human Subjects Committee.

Only women seeking oral contraceptives (OCs) or the injectable DMPA (depot medroxyprogesterone acetate) were invited to participate (both new and continuing users). We specifically excluded women who were seeking LARC. In addition, women had to meet these eligibility criteria: 18–29 years of age, sexually active, no previous use of an intrauterine device (IUD), no previous use of a subdermal implant, not currently pregnant or seeking a pregnancy termination on this day, and good follow-up potential (defined by providing an email address, cell phone number, currently working cell phone, and willingness to be contacted). Women who met these criteria and agreed to participate by signing the informed consent document were enrolled. We did not require any minimum duration of contraceptive use.

In the informed consent process, PPCNC study staff explained to participants the two ways they could take part in the study. Firstly, if a participant wanted to use the method she initially desired (oral contraceptives or DMPA) she could simply join the “preference” side of the study and pay for her contraceptives in the usual way (either through insurance coverage, direct out-of-pocket, or through government-subsidized programs if eligible). PPCNC staff explained potential out-of-pocket costs associated with receiving contraceptive services. While we excluded women who were initially seeking LARC, if a participant

changed her mind at the time of enrollment and wanted a LARC method, she could remain in the preference side of the cohort study.

The second option for study participation involved random assignment to SARC or LARC. If women chose this option, they received free contraceptives directly from the project. If randomly assigned to SARC, participants chose either oral contraceptives or DMPA and received the product gratis for a full year. If a participant was assigned to LARC, she received her choice of a long-acting method for free and was informed that she could have it removed without a fee at any time for any reason. We prepared opaque, sealed, and sequentially ordered randomization envelopes for each health center. Randomly chosen block sizes of two, four, and six were used; within each block, equal numbers of SARC and LARC assignments were generated in random order. The envelope was only opened after the participant fully understood the different ways to participate, agreed to be randomized, and then as a final check, instructed the PPCNC staff member to open it.

Women in both the preference and randomized arms of the study received a $50 gift card after receiving the contraceptive method and completing other enrollment requirements. We recorded sociodemographic information and asked about future pregnancy plans and contraception (e.g., history of use, knowledge and opinions of methods, and method preference). Also, we asked participants an open-ended question on why they had not tried LARC previously (participants did not see possible pre-coded responses). For those who chose randomization and after revealing the assignment, we asked if they had hoped for SARC, LARC, or assignment didn't matter as long as the product were free. Admission data were entered directly into an electronic database on a secure, encrypted computer system developed and maintained by FHI 360; no paper forms were used to record this information. Separate paper forms were used to determine eligibility, collect contact information, and report self-identified race/ethnicity (per the National Institutes of Health mandate).

This trial offered products that are currently approved by the U.S. Food and Drug Administration and are routinely available at PPCNC:

- Intrauterine device marketed in the US as ParaGard® (a T-shaped plastic device containing 380mm^2 of copper surface)
- Subdermal contraceptive implant, marketed in the US as Implanon® or Nexplanon® (containing 68 mg of etonogestrel)
- Intrauterine system, marketed in the US as Mirena® (containing 52 mg of levonorgestrel)
- Oral contraceptives (a variety of formulations were available)
- Injectable contraceptive, containing depot medroxyprogesterone acetate (DMPA)

Study Size

This study was designed to measure and compare discontinuation rates of LARC and SARC participants in the different arms of the PRPPT. We assumed that 38% of SARC users and 19% of LARC users would stop using their product within a year. Based on a two-sided log rank test ($\alpha = .05$), 90% power to detect a two-fold difference, and an estimated 10% loss to

follow-up, we calculated that 150 participants were needed in each of the following arms: preference-SARC, preference-LARC, randomized-SARC, randomized-LARC. Given the uncertainty over how participants would fall into the different groups, we budgeted for 900 participants.

Analysis

We applied the CONSORT guidelines [13] to report the enrollment results. We compared women in the preference cohort to women who opted for the randomized trial by examining background characteristics (sociodemographic, reproductive health, previous contraceptive use, and reasons for never trying LARC previously). For race/ethnicity, we used categories from the National Institutes of Health and reported the results consistent with analyses by the U.S. Centers for Disease Control and Prevention [3]. We used Wilcoxon-Mann-Whitney tests, Fisher's exact tests or chi square tests of association to identify any significant differences of subjects' characteristics between the cohorts. We also examined factors associated with specific contraceptive choices.

3. Results

Staff at PPCNC screened 1,092 women for eligibility (Figure 1). A total of 168 were ineligible for enrollment due to poor follow-up potential (46), initial stated preferences for a method other than oral contraceptives or DMPA (35), previous LARC user (24), not sexually active (20), and miscellaneous reasons (43). (The above total includes 13 enrolled women who were later discovered to be ineligible.) Seven women declined to participate shortly after consenting. Of the 917 participants who remained eligible, 57% (n=525) chose to be in the preference cohort of the study and 43% (n=392) asked to be randomized. We achieved our goal of recruiting at least 150 participants in three of the four study groups; only two participants were recruited in the preference-LARC group.

Participants in the preference cohort were similar to the randomized cohort in age, marital status, education, race/ethnicity, education, and other sociodemographic/reproductive health variables (Table 1). In terms of major differences, 48% of participants in the randomized cohort did not have any health insurance to pay for services, compared to only 36% in the preference cohort ($p < 0.01$). Twenty-six percent of the preference cohort had a previous unintended pregnancy, compared to 32% in the randomized cohort ($p<0.05$).

Eighty-one percent of participants in both the preference and randomized cohorts were seeking oral contraceptives when they were informed of the study (Table 2). The randomized cohort was far more likely to have considered using LARC previously compared to the preference cohort (68% versus 36%, respectively). For the preference cohort, fear of pain/injury and side effects/health risks were the predominant reasons for not trying LARC previously. Fifty percent of the randomized cohort cited cost as a previous barrier to use, compared to 10% in the preference cohort ($p <0.01$). Among the participants who agreed to be randomized, 60% had no preference for SARC or LARC.

Sixteen out of 194 women randomized to LARC (8.2%) changed their minds about using LARC and were excluded from further participation (Fig. 1). Compared to participants who

accepted their randomized assignment, the women who refused were slightly older, more likely to be employed and without health insurance coverage (data not shown).

Users of oral contraceptives had the lowest prevalence of previous unintended pregnancy, the highest prevalence of nulligravid women, and the least experience with DMPA (Table 3). DMPA users were more likely than other groups to be non-Hispanic black, report previous unintended pregnancy, and to have had previous pregnancies.

4. Discussion

Enrollment in this partially randomized patient preference trial is complete. The majority of women wanted to start the contraceptive method they originally sought and consequently chose the preference group. But 43% agreed to be randomized, to receive free contraceptives; LARC assignment was acceptable to most in this subgroup. Future manuscripts from this study will reveal whether LARC delivers on the promise of highly acceptable contraception and resulting benefits among a population of typical SARC users.

Participants in our study gave many reasons for not trying LARC previously. Some traditional barriers to access, such as high cost (mentioned by 27%) may become less important in the U.S. with passage of the Affordable Care Act (ACA) [14, 15]. Other reasons for not trying LARC are more personal in nature, including fear of pain and health risks. Approximately 25% of participants mentioned these reasons, which of course are valid concerns. While better information can dispel exaggerated notions of health risks, all contraceptives introduce health risks, including the possibility of method failure. Accurate knowledge of the risks is essential in making informed choices. IUD insertion pain in the U.S. averages between 4 and 6 on a ten-point visual analog scale [16–19] and the risk of IUD perforation is approximately 1 per 1,000 insertions [20]. General disinterest in trying LARC reflects many elements; 64% of women in the preference cohort had never considered using LARC. A 2012 internet survey of 382 U.S. women aged 18–29 found varied interest in trying an IUD: 48% were unsure, 20% were interested, and 32% were not interested [21].

Forty-three percent of participants chose to be randomized to receive free contraception. This high percentage may be somewhat surprising given the ACA mandate that private insurance plans cover FDA-approved female contraception. However, during the enrollment period, only approximately 30% of PPCNC clients used insurance to pay for their office visit. Furthermore, certain private insurance plans with “grandfathered status” were (and still may be) allowed to impose cost-sharing, such as co-pays and deductibles, on their clients. Thus, even for some clients with insurance, free contraception from the study was attractive. The randomized trial with free contraception appeared to attract a higher percentage of uninsured participants compared to the preference side of the study. The decision to enroll in the randomized trial once again reflects the financial barriers to accessing reproductive health services in the U.S.

Lack of access to LARC services may be the biggest barrier to uptake in the general U.S. population. In a nationwide survey of family physicians, less than half offered IUD counseling or services, yet 95% of those interviewed believed that their patient population

would be receptive to learning about the IUD [22]. Two-thirds of federally qualified health centers in the U.S. offer IUD services [23]; however, it usually takes multiple visits to actually have a device inserted. For example, in Colorado and Iowa, same-day insertion is only available at 18% of federally qualified centers [24]. Previous research has shown that two-visit protocols for IUD provision inhibit uptake despite women's best intentions to return for insertion [22, 25, 26].

Improving access to LARC will enable more women to choose more effective contraception. We already know that increased use of LARC has favorable cost/benefit ratios [27–29] and evidence is mounting of a direct correlation at the population level between increased use of LARC and reductions in unintended pregnancy and abortion [30–32]. Thus increasing access to LARC should proceed expeditiously across the U.S.; half of all pregnancies are still unintended [33].

Unfortunately we did not recruit enough women in the preference-LARC group; this shortcoming in our work will prevent us from comparing contraceptive effectiveness with preference-SARC users. Thus we will not be able to see how our results compare with the commonly reported effectiveness data.

While future results from this study may also demonstrate the benefit of expanding access to LARC, the potential novel contributions are more at the individual and scientific levels, not the policy level. The cohorts in this PRPPT will provide unique data for measuring method discontinuation, satisfaction, and unintended pregnancy; total observation time will be two years. The preference cohort of SARC users will provide the natural comparison group. Will participants randomized to LARC be satisfied with the product, retain use, and be protected from unintended pregnancy for longer periods than the preference cohort? Within the randomized cohorts, will continuation rates and protection from unintended pregnancy be superior in the LARC group compared to the SARC group? These and other comparisons will shed new scientific light on the potential reproductive health benefits of increased voluntary uptake of LARC among a population of typical SARC users. If LARC satisfaction and benefits are confirmed scientifically, future populations of women holding SARC preferences may be encouraged to try something different.

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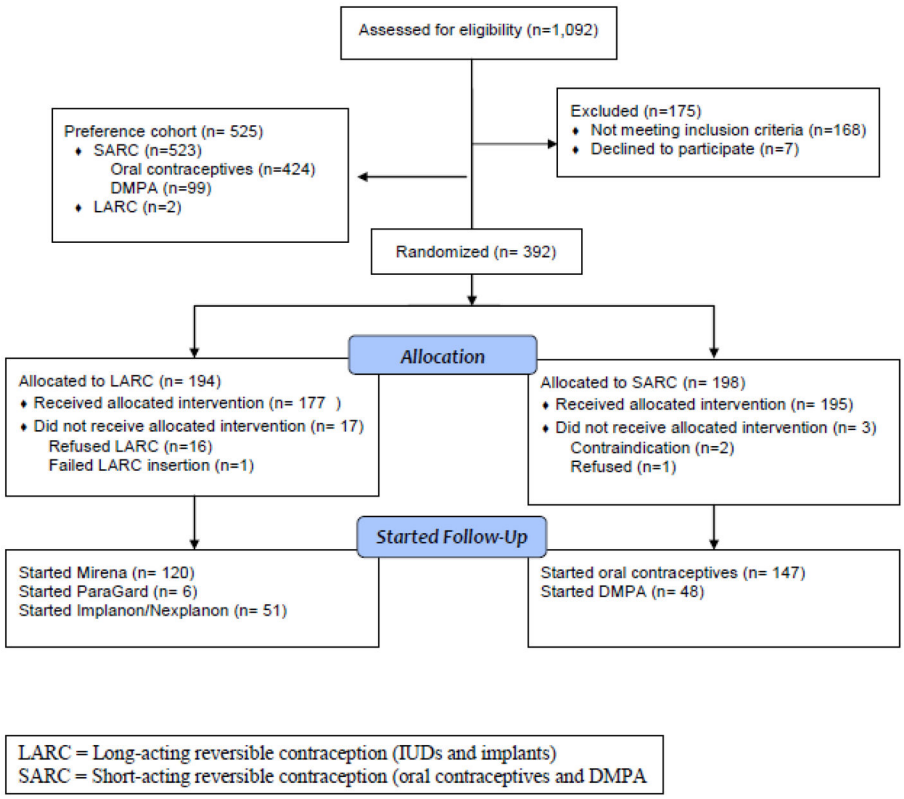

Figure 1.
Enrollment and Allocation

Table 1

Sociodemographic and reproductive health characteristics by cohort

Characteristic	Preference (n= 525) n (%) or median (quartile range)	Randomized (n= 392) n (%) or median (quartile range)	Total (n= 917) n (%) or median (quartile range)	p-value[1]
Median age (quartile range)	23 (21–26)	23 (21–26)	23 (21–26)	0.19
Marital status:				
Single	446 (85.0)	337 (86.0)	783 (85.4)	0.17
Married	63 (12.0)	36 (9.2)	99 (10.8)	
Divorced/separated	16 (3.0)	19 (4.8)	35 (3.8)	
Race/Ethnicity*				
Hispanic	69 (13.1)	46 (11.7)	115 (12.5)	0.39
Non-Hispanic, white	270 (51.4)	226 (57.7)	496 (54.1)	
Non-Hispanic, black	125 (23.8)	85 (21.7)	210 (22.9)	
All other single and multiple race (non-Hispanic only)	58 (11.0)	34 (8.7)	92 (10.0)	
Educational attainment				
Incomplete high school	20 (3.8)	16 (4.1)	36 (3.9)	0.64
High school or equivalent	200 (38.1)	160 (40.8)	360 (39.3)	
Post-high school vocational/technical degree	104 (19.8)	59 (15.1)	163 (17.8)	
College degree	157 (29.9)	132 (33.7)	289 (31.5)	
Graduate school degree	44 (8.4)	25 (6.4)	69 (7.5)	
Currently working for pay	363 (69.1)	301 (76.8)	664 (72.4)	0.01
Health insurance				
None	191 (36.4)	188 (48.0)	379 (41.3)	<.01
Private	287 (54.7)	186 (47.4)	473 (51.6)	
Medicaid	46 (8.8)	15 (3.8)	61 (6.7)	
Other	1 (0.2)	3 (0.8)	4 (0.4)	
Reproductive health				
Previous unintended pregnancy	135 (25.7)	126 (32.1)	261 (28.5)	0.03
Number of previous pregnancies				
0	368 (70.1)	245 (62.5)	613 (66.8)	0.02
1	96 (18.3)	89 (22.7)	185 (20.2)	
2	33 (6.3)	34 (8.7)	67 (7.3)	
3+	28 (5.3)	24 (6.1)	52 (5.7)	
Among those previously pregnant:				
Ever had abortion	122 (77.7)	113 (76.9)	235 (77.3)	0.86
Median months since last pregnancy ended	15 (3–36)	10 (1–28)	13 (1–34)	0.03
Currently menstruating	98 (18.7)	74 (18.9)	172 (18.8)	0.94
Wants more children	443 (84.4)	324 (82.7)	767 (83.6)	0.48
Median months from today when pregnancy is desired	60 (36–72)	60 (48–72)	60 (36–72)	0.11
Median months with current partner	15 (6–36)	12 (4–30)	13 (5–36)	0.01

*Four participants did not report their race/ethnicity

1For categorical variables, Exact test was used for any cell number < 5 and Chi-square tests were used for all cells >=5; For continuous variables, Wilcoxon-Mann-Whitney test was used

Table 2

Contraceptive history, knowledge of LARC, and reasons for never trying LARC* by cohort

Concept	Preference (n= 525) n (%) or median (quartile range)	Randomized (n= 392) n (%) or median (quartile range)	Total (n= 917) n (%) or median (quartile range)	p-value[1]
Method initially sought on day of enrollment				
OCs	425 (81.0)	316 (80.6)	741 (80.8)	0.90
DMPA	100 (19.0)	76 (19.4)	176 (19.2)	
Prior methods used				
Condoms	510 (97.1)	381 (97.2)	891 (97.2)	0.96
Pills	418 (79.6)	308 (78.6)	726 (79.2)	0.70
Injection	120 (22.9)	87 (22.2)	207 (22.6)	0.81
Patch	33 (6.3)	32 (8.2)	65 (7.1)	0.27
Vaginal ring	43 (8.2)	48 (12.2)	91 (9.9)	0.04
Currently using a contraceptive	401 (76.4)	294 (75.0)	695 (75.8)	0.63
Last or current method used:				
None	75 (14.3)	51 (13.0)	126 (13.7)	0.25
OC	240 (45.7)	174 (44.4)	414 (45.1)	
DMPA	68 (13.0)	37 (9.4)	105 (11.5)	
Condoms only	132 (25.1)	123 (31.4)	255 (27.8)	
Patch	2 (0.4)	1 (0.3)	3 (0.3)	
Vaginal ring	6 (1.1)	6 (1.5)	12 (1.3)	
Emergency contraceptive pills	0 (0.0)	0 (0.0)	0 (0.0)	
Other	2 (0.4)	0 (0.0)	2 (0.2)	
Previous knowledge about:				
Any IUD**	454 (86.5)	355 (90.6)	809 (88.2)	0.06
Subdermal implant	358 (68.2)	265 (67.6)	623 (67.9)	0.85
Any IUD or the subdermal implant	473 (90.1)	367 (93.6)	840 (91.6)	0.06
Previously considered using LARC***	172 (36.4)	250 (68.1)	422 (50.2)	<.01
Why never tried LARC***				
Fear of pain/injury from insertion and/or removal	146 (30.9)	70 (19.1)	216 (25.7)	<.01
Too expensive	46 (9.7)	182 (49.6)	228 (27.1)	<.01
Fear of side effects/health risks	127 (26.8)	52 (14.2)	179 (21.3)	<.01
No long-term needs	42 (8.9)	18 (4.9)	60 (7.1)	0.03
Never in consistent relationship	10 (2.1)	7 (1.9)	17 (2.0)	0.83
Didn’t know where to get method	5 (1.1)	3 (0.8)	8 (1.0)	0.70
Modesty issues regarding insertion	19 (4.0)	5 (1.4)	24 (2.9)	0.02
Not sure if she would like it	66 (14.0)	31 (8.4)	97 (11.5)	0.01
Inconvenience of another visit for removal	12 (2.5)	4 (1.1)	16 (1.9)	0.13
Prefers to be in control of stopping contraception	67 (14.2)	13 (3.5)	80 (9.5)	<.01
Averse to having a device inside the body	30 (6.3)	8 (2.2)	38 (4.5)	<.01

Concept	Preference (n= 525) n (%) or median (quartile range)	Randomized (n= 392) n (%) or median (quartile range)	Total (n= 917) n (%) or median (quartile range)	p-value[1]
Likes current method	51 (10.8)	23 (6.3)	74 (8.8)	0.02
Not sufficiently informed about LARC	11 (2.3)	21 (5.7)	32 (3.8)	0.01
Has misinformation or misperception on LARC methods	12 (2.5)	14 (3.8)	26 (3.1)	0.29
Previous provider bias against LARC	1 (0.2)	7 (1.9)	8 (1.0)	0.01
Other	36 (7.6)	29 (7.9)	65 (7.7)	0.88
Motivation to opt for randomization				
To receive free OCs/DMPA	--	44 (11.2)	--	--
To receive free LARC	--	111 (28.2)	--	
To receive any free method	--	237 (60.5)	--	

* LARC=Long-acting reversible contraception (defined as IUDs and implants)

** Among those who knew of only one type of IUD, 94% described Mirena and 6% described ParaGard

*** Among those with previous knowledge of at least one LARC method

[1] Exact test was used for any cell number < 5 and Chi-square tests were used for all cells >=5

Table 3

Factors associated with chosen contraceptive

Characteristic	OCs (n= 571) n (%) or median (quartile range)	DMPA (n= 147) n (%) or median (quartile range)	IUD* (n= 127) n (%) or median (quartile range)	Subdermal implant (n= 52) n (%) or median (quartile range)	Total (n= 897) n (%) or median (quartile range)	p-value[1]
Median age (quartile range)	23 (21–26)	22 (20–26)	23 (21–26)	22 (20–25)	23 (21–26)	0.05
Race/Ethnicity**						
Hispanic	79 (13.8)	19 (12.9)	13 (10.2)	2 (3.8)	113 (12.6)	<.01
Non-Hispanic, white	333 (58.3)	41 (27.9)	79 (62.2)	33 (63.5)	486 (54.2)	
Non-Hispanic, black	98 (17.2)	71 (48.3)	20 (15.7)	14 (26.9)	203 (22.6)	
All other single and multiple race (non-Hispanic only)	58 (10.2)	16 (10.9)	15 (11.8)	3 (5.8)	92 (10.3)	
Educational attainment						
Incomplete high school	17 (3.0)	10 (6.8)	6 (4.7)	3 (5.8)	36 (4.0)	<.01
High school or equivalent	208 (36.4)	74 (50.3)	44 (34.6)	29 (55.8)	355 (39.6)	
Post-high school vocational/technical degree	99 (17.3)	29 (19.7)	22 (17.3)	10 (19.2)	160 (17.8)	
College degree	191 (33.5)	32 (21.8)	49 (38.6)	8 (15.4)	280 (31.2)	
Graduate school degree	56 (9.8)	2 (1.4)	6 (4.7)	2 (3.8)	66 (7.4)	
Health insurance:						
None	230 (40.3)	53 (36.1)	63 (49.6)	22 (42.3)	368 (41.0)	<.01
Private	313 (54.8)	67 (45.6)	58 (45.7)	26 (50.0)	464 (51.7)	
Medicaid	25 (4.4)	27 (18.4)	5 (3.9)	4 (7.7)	61 (6.8)	
Other	3 (0.5)	0 (0.0)	1 (0.8)	0 (0.0)	4 (0.4)	
Previous unintended pregnancy	133 (23.3)	60 (40.8)	42 (33.1)	18 (34.6)	253 (28.2)	<.01
Number of previous pregnancies						
0	417 (73.0)	73 (49.7)	80 (63.0)	31 (59.6)	601 (67.0)	<.01
1	102 (17.9)	40 (27.2)	26 (20.5)	13 (25.0)	181 (20.2)	
2	31 (5.4)	16 (10.9)	14 (11.0)	4 (7.7)	65 (7.2)	
3+	21 (3.7)	18 (12.2)	7 (5.5)	4 (7.7)	50 (5.6)	
Wants more children	489 (85.6)	122 (83.0)	100 (78.7)	38 (73.1)	749 (83.5)	0.04
Median months with current partner	14 (5–36)	13 (6–36)	16 (4–36)	9 (5–24)	13 (5–36)	0.05
Method initially sought on day of enrollment:						

Characteristic	OCs (n= 571) n (%) or median (quartile range)	DMPA (n= 147) n (%) or median (quartile range)	IUD* (n= 127) n (%) or median (quartile range)	Subdermal implant (n= 52) n (%) or median (quartile range)	Total (n= 897) n (%) or median (quartile range)	p-value[1]
OC	566 (99.1)	15 (10.2)	106 (83.5)	36 (69.2)	723 (80.6)	<.01
DMPA	5 (0.9)	132 (89.8)	21 (16.5)	16 (30.8)	174 (19.4)	
Prior methods used						
Pills	479 (83.9)	85 (57.8)	109 (85.8)	37 (71.2)	710 (79.2)	<.01
Injection	49 (8.6)	107 (72.8)	30 (23.6)	17 (32.7)	203 (22.6)	<.01
Last or current method used:						
None	70 (12.3)	31 (21.1)	13 (10.2)	12 (23.1)	126 (14.0)	<.01
OC	317 (55.5)	8 (5.4)	59 (46.5)	19 (36.5)	403 (44.9)	
DMPA	6 (1.1)	79 (53.7)	10 (7.9)	9 (17.3)	104 (11.6)	
Condoms only	170 (29.8)	22 (15.0)	44 (34.6)	12 (23.1)	248 (27.6)	
Other	8 (1.4)	7 (4.8)	1 (0.1)	0 (0.0)	16 (1.8)	
Previous knowledge about:						
Any IUD*	498 (87.2)	135 (91.8)	114 (89.8)	43 (82.7)	790 (88.1)	0.25
Subdermal implant	378 (66.2)	112 (76.2)	86 (67.7)	33 (63.5)	609 (67.9)	0.12
Any IUD or the subdermal implant	512 (89.7)	142 (96.6)	121 (95.3)	46 (88.5)	821 (91.5)	0.02
Previously considered using LARC***	216 (42.2)	72 (50.7)	93 (76.9)	28 (60.9)	409 (49.8)	<.01
Why never tried LARC***						
Fear of pain/injury from insertion and/or removal	135 (26.4)	46 (32.4)	19 (15.7)	11 (23.9)	211 (25.7)	0.02
Too expensive	97 (18.9)	31 (21.8)	73 (60.3)	19 (41.3)	220 (26.8)	<.01
Fear of side effects/health risks	124 (24.2)	33 (23.2)	9 (7.4)	0.0 (0.0)	174 (21.2)	<.01
Not sure if she would like it	67 (13.1)	16 (11.3)	5 (4.1)	0.0 (0.0)	93 (11.3)	0.05
Prefers to be in control of stopping contraception	64 (12.5)	8 (5.6)	4 (3.3)	0 (0.0)	78 (9.5)	<.01
Averse to having a device inside the body	35 (6.8)	2 (1.4)	0.0 (0.0)	0.0 (0.0)	38 (4.6)	<.01

*Includes n=120 users of levonorgestrel intrauterine system and n=7 users of the copper IUD

**Three participants did not report their race/ethnicity

***Among those with previous knowledge of at least one LARC method

[1]For categorical variables, Exact test was used for any cell number < 5 and Chi-square tests were used for all cells >=5; For continuous variables, Wilcoxon-Mann-Whitney test was used