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Source of care and variation in long acting reversible contraception use

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ABSTRACT

Objective:

To examine the variation in Long-Acting Reversible Contraceptive (LARC) method utilization by women's source of birth control services.

Design:

Data from the 2011-2013 National Survey of Family Growth was analyzed. The study included adult women who received contraceptive services in the past 12 months. Source of contraceptive services was categorized into a) private doctor's office or HMO facility, b) community or public health clinic, c) a family planning or Planned Parenthood clinic or d) other source. Method of contraception was based on women's reported contraceptive use when surveyed and categorized into LARC, high efficacy methods, and low efficacy methods, and non-use.

Three multinomial logistic regression models were created to assess the relationship between source of services and LARC use, controlling for covariates. The odds of LARC use was compared to LARC non-use, high efficacy use and low efficacy use; OR and 95% confidence intervals were generated.

Results:

There was no statistically significant difference in LARC utilization between women receiving services from community or public health clinics and private clinics. However, women receiving care at a family planning clinics had lower odds of LARC use versus non-use (OR=0.27, 95% CI=0.10-0.74), versus high efficacy method use (OR=0.32, 95% CI=0.11-0.88) and versus low efficacy method use (OR=0.13, 95% CI=0.02-0.87) compared to those receiving services at private clinics.

Conclusion:

Women receiving care from family planning clinics had lower odds of LARC use, compared to those receiving care from a private doctor's office or HMO facility. Barriers to LARC use should be further investigated.

INTRODUCTION

Despite advances in contraceptive technology, the rate of unintended pregnancies remains high in the United States. Over half (51%) of all pregnancies in the United States are unintentional (Finer and Zolna 2014). Unintended pregnancies are associated with adverse outcomes in both mothers and children (Logan et al. 2007). For example, women with unintended pregnancies initiate prenatal care at a later stage in their pregnancy and are less likely to breastfeed their children (D'Angelo et al. 2002). The total public expenditure for unintended pregnancies in the United States was estimated to be $21.0 billion in 2010 (Sonfield et al. 2011).

Many contraceptive methods are highly effective when couples use them as prescribed, both consistently and correctly, but are less effective during typical use (Trussell and Wynn 2008). Oral contraceptive pills (OCPs) are the most commonly used reversible contraceptive method in the US (Jones, Mosher, and Daniels 2012), but perfect use is dependent upon a strict daily medication regimen. As such, only 0.3% of women experience an unintended pregnancy within a year of perfect use, while 9% of women experience an unintended pregnancy within a year of typical use (Hatcher et al. 2011). Similarly, women who use contraception consistently account for only 5% of unintended pregnancies, even though they make up 68% of the population at risk of pregnancy (Sonfield, Hasstedt, and Gold 2014).

Long-acting reversible contraception (LARC) methods are among the most effective and dependable methods of contraception (Hatcher et al. 2011). LARC methods include both the copper and levonorgestrel intrauterine devices (IUDs), as well as the single-rod contraceptive implant. Not only do these devices have a failure rates of less

than 1% (Trussell 2011), but perfect use is not dependent on compliance with a daily medication regimen or regular injections from a physician. As such, the discrepancy in failure rates between perfect use and typical use observed among OCP users is not seen in LARC users (Trussell 2011). LARC methods are safe and recommended for use among women with comorbidities such as cardiovascular disease and diabetes, as well as adolescent and nulliparous women (National Collaborating Centre for Women's and Children's Health 2005). Despite the advantages of LARC methods, utilization remains relatively low in the United States. From 2011-2013, only 7.4% of women aged 15-44 were using LARC methods of contraception (Branum and Jones 2015).

Several barriers to LARC use may contribute to low rates of utilization. Low levels of awareness and misperceptions about LARC methods are prevalent. A telephone study of 18- to 30-year-old women in Midwestern states demonstrated low levels of awareness of LARC methods, with only 50% of women reporting awareness of IUDs and 8% reporting awareness of implants (Spies et al. 2010).

Cost is another barrier to LARC utilization; high out-of-pocket expense is associated with failure to obtain an IUD (Gariepy et al. 2011) and the initial cost of a LARC device can exceed $800 (Paraguard 2014). Under the Patient Protection and Affordable Care Act (PPACA), LARC methods must be covered without a copay. However, some insurance plans are exempt from this requirement, and many Americans still lack insurance. Furthermore, clinicians are the gatekeepers of LARC services. Not only do clinicians provide counseling regarding the appropriateness of a LARC method, but they also perform the procedure to implant the devices. A provider's knowledge of available methods, their training on method delivery, and their beliefs regarding provision of

services all impact their patients' ability to access LARC methods (Luchowski et al. 2014). For example, the number of IUDs a physician inserts annually is positively correlated with the number of IUDs that they placed in residency and negatively correlated with their age (Luchowski et al. 2014). Different types of health care facilities attract different types of providers, with different educational backgrounds, beliefs, and experiences, potentially leading to variation in the services delivered to patients.

OBJECTIVES

Studies have shown that reproductive services offered and utilized by women differ according to their source of care (Rubin et al. 2015; Frost et al. 2012). For example, at Title-X clinics, women receiving STD services reported that their doctors discussed condom use 72% of the time, compared to just 46% of the time at a private doctor's office (Frost 2013). This study aims to fill a gap in the extant literature by determining if LARC utilization varies based on a woman's source of birth control services. Information regarding the sources of care where LARC methods are underutilized could be used in the design of interventions and promotion of LARC use.

LARC methods are among the most effective forms of birth control and are underutilized in the United States. LARC methods hold significant promise in preventing unintended pregnancies due to imperfect use of contraception. Theoretically, a woman's odds of receiving a LARC device should only be dependent on her medical needs and preferences. Where a woman receives her care should not dictate her ability to access these highly effective methods. If variations do occur in rates of LARC use by source of care, policy should be crafted to rectify disparities. Similarly if disparities do exist,

women should be informed, so they can select a medical provider that best suits their contraceptive needs.

METHODS

Data from the 2011-2013 National Survey of Family Growth (NSFG) was analyzed. The NSFG includes detailed information on factors affecting childbearing, marriage, and parenthood from a national probability sample of women and men aged 15-44 (Lepkowski et al. 2010). Interviews were conducted from September 2011 through September 2013. Black, Hispanic, teenage and female respondents were over sampled and sampling weights were used to adjust for the different sampling rates (Lepkowski et al. 2010). The NSFG contained data from 5,601 women, with a 73.4% response rate (National Center for Health Statistics 2015). The data was de-identified and exempted from Virginia Commonwealth University IRB approval.

Adult (age 18 or older) women who received birth control services in the past 12 months, were not currently pregnant or trying to become pregnant, and were not sterilized, nor were their partners sterilized, were included in this analysis. Women who had not been sexually active in the past 12 months were excluded. Women who did not know their method of birth control or refused to disclose their method of birth control were excluded from the analysis.

LARC Use

The outcome variable, LARC use, was determined based on women's reported contraceptive use at the time of the interview. Birth control use was categorized as: LARC users, high efficacy birth control users, low efficacy birth control users or non-contraceptive users. Women were categorized as LARC users if they utilized a hormonal

implant or an IUD, coil, or loop at the time of the interview. Women were categorized as highly effective birth control users if they utilized hormonal methods including Depo-Provera injections, contraceptive pills, the vaginal ring or transdermal patch. Low efficacy birth control users included those who utilized emergency contraception, the male condom, female condom, diaphragm, cervical cap, cream or jelly, suppository, withdrawal, natural family planning or another method. Women who reported receiving birth control services, but were not using any form of contraception at the time of the interview, were categorized as non-users. If women reported using multiple methods of birth control, they were categorized by their most effective method.

The exposure variable, source of care, was categorized into: a) private doctor's office or HMO facility, b) a community or public health clinic, c) a family planning or Planned Parenthood Clinic and d) other source of care, including an employer or company clinic, a school or school-based clinic, a hospital outpatient clinic, hospital emergency room, hospital regular room, urgent care center or some other place.

In accordance with previous literature, this study assessed potential confounding factors, including socio-demographic factors, life style behaviors, as well as sexual and reproductive history (Xu et al. 2011; Kavanaugh et al. 2011; Xu et al. 2012). The socio-demographic factors considered include age at interview (18-24, 25-29, 30-24, 35-44), race or ethnicity (Non-Hispanic White, Non-Hispanic Black, Non-Hispanic Other, Hispanic), whether the individual was born outside of the United States (yes, no), relationship status (not married or cohabitating, married, cohabitating), insurance status (private insurance, public insurance, other/not covered), poverty status (<100% federal poverty level, 100-199%, 200-299%, 300% or higher), educational attainment (no high

school diploma or GED, high school diploma or GED, some college, college graduate) and region of residence (South, Midwest, Northeast and West). Sexual and reproductive characteristics included number of partners in the past 12 months (1-2 partners, 3 or more partners), age at sexual debut (<18 or ≥ 18 years), parity (none, 1 or more births) and if the respondent ever discontinued a hormonal birth control method due to dissatisfaction (yes, no).

Descriptive analysis was conducted to examine the characteristics of the study population. A bivariate logistic model was conducted to evaluate the unadjusted association between the source of care and method of birth control, as well as the unadjusted association between covariates and birth control method. Three logistic models were created: model one compared the odds of being a LARC user to being a non-user (women who received contraceptive services but are using a non-LARC method or using no method), the second model compared the odds of being a LARC user versus being a highly effective method user and the third model compared the odds of being a LARC user versus being a low efficacy method user.

A multivariate logistic regression model was used to evaluate the association between source of birth control services and LARC use, after controlling for confounding factors. Similar to the unadjusted analysis, the association was examined using the three models (LARC use compared to non-use, high efficacy method use, and low efficacy method use, respectively). For each model, an iterative process of model building was conducted by individually introducing potential confounders into the model. The variables whose inclusion resulted in a greater than 10% change in the odds ratio for LARC use were retained in the model.

RESULTS

Table 1 summarizes the socio-demographic, sexual, and reproductive characteristics of the study population. The majority of the study population was under the age of 30 (69.1%), non-Hispanic white (55.8%), born in the United States (88.1%), married or cohabitating (59.8%), covered by private insurance (55.2%), had a college degree or some college education (62.4%) and had at least 1 child (57.4%). The majority of the study population used high efficacy contraceptive methods (59.3%), followed by LARC use (16.3%). Low efficacy method users and non-users comprised 11.6% and 12.8% of the study population, respectively. Over two-thirds (67.9%) of the women had received birth control services from a private doctor's office or HMO facility. Approximately 14%, 12% and 6% of the women reported receiving contraceptive services at a community health clinic or public health clinic, family planning or Planned Parenthood clinic, or some other location, respectively.

LARC use versus non-use

The unadjusted analysis showed a statistically significant association between age, relationship status, number of partners, parity, cessation of hormonal method due to dissatisfaction, source of care, and LARC use (Table 2). After adjusting for confounding factors, the association between source of care and LARC use remained statistically significant (Table 3). Compared to women receiving care from a private doctor's office or HMO, women receiving care from a family planning or Planned Parenthood clinic had lower odds of LARC use (OR=0.27 95% CI=0.10-0.74).

LARC use versus high-efficacy method use

When LARC users were compared to high-efficacy method users, the unadjusted analysis showed a statistically significant association between age, relationship status, parity, cessation of hormonal method due to dissatisfaction and source of care and LARC use (Table 2). After adjusting for confounding factors, the relationship between source of care and LARC use remained significant among women who received care at family planning or Planned Parenthood clinics (Table 3). Compared to women who received care from a private doctor's office or HMO, women who received care from a family planning or Planned Parenthood clinic were less likely to use LARC methods as opposed to high efficacy methods (OR=0.32 95% CI=0.11-0.88). No statistically significant difference was found in LARC use between women who received care at private doctor's office or HMO facility and those who received care from community health or public health clinics. However, women who received care at other sources, such as hospitals and school clinics, had higher odds of using LARC methods versus high efficacy methods, compared to those receiving care at private/HMO clinics (OR=4.10 95% CI=1.45-11.57).

LARC use versus low efficacy method use

When LARC users were compared to low efficacy method users, the unadjusted analysis showed a statistically significant association between age, poverty status, source of care, and LARC use. After adjusting for confounding factors, the adjusted analysis showed that, compared to women receiving care from a private doctor's office or HMO, women receiving care from a family planning or Planned Parenthood clinic had lower odds of LARC use (OR=0.13, 95% CI=0.02-0.87) (Table 3). No statistically significant difference in LARC use was found between women who received care at private doctor's

office or HMO and community or public health clinics or among those who received care from other sources.

DISCUSSION

This study found that women who received care from a family planning or Planned Parenthood Clinic had lower odds of LARC use compared to women receiving care from a private doctor's office or HMO facility. On the other hand, women receiving contraception services from other sources, such as school clinics and hospitals, showed higher odds of using a LARC method as opposed to a high efficacy method.

Previous literature exploring the relationship between LARC methods and source of care has focused on the availability of contraceptive services by source of care. Consistently, literature has shown that clinics with a family planning focus offer a greater range of contraceptive services and are more likely to offer LARC methods (Moskosky et al. 2011; Biggs et al. 2014; Frost et al. 2012). For example, a survey of the medical directors of practices participating in California's family planning Medicaid program showed that Planned Parenthood or Community health centers were more likely to provide LARC methods on site (Biggs et al. 2014). Similarly, a national survey of clinics providing federally funded contraception services revealed that clinics with a reproductive health focus offered a greater range of contraceptive methods and were more likely to offer a LARC method (Frost et al. 2012). Among the surveyed clinics, 75% of clinics with a reproductive focus offered at least one LARC method, compared to just 57% of clinics with a primary care focus (Frost et al. 2012).

However, few studies have evaluated whether or not the increased availability of LARC methods at these facilities translates to higher rates of utilization. Unlike the

findings of the current study, an analysis of California's family planning Medicaid program reported that, compared to those receiving care from a title-X public clinics, women who received care from a private provider or non-title X clinic had lower odds of LARC method use (Park et al. 2012). The inconsistent findings between the two studies may be explained by the differing study methodology. While the study in California examined the association by title-X status, the current study was not able examine title-X status, and instead evaluated LARC utilization by the source of care.

Even though family planning clinics are more likely to offer LARC methods to patients (Moskosky et al. 2011; Frost et al. 2012), other factors could contribute to low rates of utilization. Staffing differences could be a contributing factor. At publicly funded clinics with a family planning focus, method selection counseling is provided by health counselors 18% of the time, along with registered nurses (39%), midlevel clinicians (30%) , and physicians (5%) (Frost et al. 2012). However, at publicly funded clinics with a primary care focus, health counselors provided contraception method selection counseling 8% of the time, along with nurses (22%), midlevel clinicians (41%) , and physicians (29%) (Frost et al. 2012). Providers with less advanced medical training may be overly cautious when recommending LARC methods and may have less training in the insertion of LARC devices. A national survey reported that nurse practitioners (NPs) frequently use overly restrictive patient eligibility requirements for LARC use, inconsistent with CDC guidelines (Harper et al. 2013). Additionally, only 42% of NPs trained in women's health and 10% of NPs trained in primary care provide long acting implants (Harper et al. 2013).

This study sheds some light on the variation in LARC utilization by source of birth control services, using a large sample of nationally representative data. By comparing the odds of LARC use to non-use, as well as high efficacy and low efficacy method use, these multiple comparisons provide a more robust finding. Despite its strengths, this study is not without limitations. First, the response variable in this study was the contraceptive method at the time of the interview. A woman who used oral contraceptive pills for 8 months, but who stopped use in the month of the interview would still be documented as a 'non-user'. Because the study question was to determine LARC use, and LARC varies little month to month, the introduction of bias due to the definition may be minimal. If women ceased LARC use in the month of the interview, the estimated rates of use reported in this study may be an underestimate due to the misclassification.

CONCLUSION

This study shows that women who receive care from a family planning clinic or Planned Parenthood clinic are less likely to utilize a LARC method than their peers who receive care from a private doctor's office or HMO. Although the findings of this study were adjusted for socio-demographic factors, family planning clinics predominantly serve women who are younger, unmarried, less educated, and from racial or ethnic minorities (Frost 2013). It is possible that young, unmarried and minority women with lower levels of education may be disproportionately disadvantaged by low rates of LARC utilization at these clinics (Blumenthal, Voedisch, and Gemzell-Danielsson 2010), since higher proportion of underserved and minority women receive care from these institutions.

Unplanned pregnancy remains a major public health concern in the United States, and LARC method utilization shows promise as an effective tool for reducing rates of unplanned pregnancy. Given the documented safety and efficacy of LARC methods (Stoddard, McNicholas, and Peipert 2011), a 7.4% rate of LARC method use (Branum and Jones 2015) represents significant underutilization. In an analysis of costs attributable to unintended pregnancy, 53% of the $4.5 billion dollars in expenditures were attributed to imperfect contraceptive adherence (Trussell et al. 2013). If just 10% of women aged 20-29 switched from oral contraception to LARC, total costs would be reduced by $288 million per year (Trussell 2007). Thus, increases in LARC utilization could have significant health and financial implications.

Women who seek care at family planning clinics deserve equal access to the most effective forms of birth control. The barriers that contribute to the lower rates of LARC method utilization at family planning and Planned Parenthood clinics are unclear. Thus, further study is necessary to identify the factors that result in low rates of LARC utilization by those who seek care at family planning clinics, so that policy remedies can be enacted to promote equitable utilization of the most effective methods of birth control.

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Table 1: Characteristics of women who received Birth Control Services or Prescriptions in the past 12 months, 2011-2013 National Survey of Family Growth

	Total Population (Weighted N =7,021,382)	LARC Users (Weighted N=1,143,761)	LARC non-Users		
			All LARC non-users (Weighted N=5,877,620)	High Efficacy Method User (Weighted N=4,164,007)	Low Efficacy Method User (Weighted N=815,791)
Characteristics	Weighted Percent %				
Demographics					
Age					
18-24	43.5	24.4	47.2	48.5	36.1
25-29	25.6	33.2	24.1	26.2	16.7
30-34	17.3	25.8	15.7	11.1	34.9
35-44	13.6	16.6	13.0	14.2	12.4
Race or Ethnicity					
Non-Hispanic White	55.8	58.4	55.2	59.8	42.8
Non-Hispanic Black	15.1	11.1	15.9	14.6	19.9
Non-Hispanic Other	5.2	3.9	5.5	5.8	7.0
Hispanic	23.9	26.5	23.4	19.8	30.2
Born outside of the United States					
Yes	11.9	20.1	10.2	10.3	14.1
No	88.1	79.8	89.8	89.7	85.9
Relationship Status					
Married	36.7	53.0	33.5	35.5	39.7
Cohabitating	23.1	22.0	23.3	21.0	28.7
Not married or cohabitating	40.2	24.9	43.1	43.6	31.6
Insurance Status					
Private Insurance	55.2	59.5	54.3	57.8	41.9
Public Insurance	28.9	22.8	30.1	28.6	27.9
Other/Not Covered	15.9	17.7	15.5	13.6	30.2
Poverty Status					
<100% of federal poverty level	31.4	28.6	32.0	28.8	50.1
100-199%	18.9	19.7	18.7	19.0	11.9
200-299%	17.1	16.9	17.2	16.9	16.7
300% or higher	32.6	34.9	32.1	35.3	21.4
Education					
Not high school graduate	9.9	15.3	8.8	8.4	10.0
High School or GED	27.7	24.2	28.4	25.2	41.0
Some College	31.3	23.8	32.8	32.8	21.5
College Graduate	31.1	36.7	30.0	33.7	27.5
Region					
Northeast	15.1	13.6	15.3	14.2	12.1
Midwest	22.5	20.7	22.8	23.9	19.3
South	29.3	28.4	29.5	29.7	32.0
West	33.2	37.3	32.4	32.2	36.5
Sexual and Reproductive Characteristics					
Number of Partners in Past 12 months					
1-2 Partners	90.7	95.0	89.8	91.3	91.5
3 or more Partners	9.3	5.0	10.2	8.7	8.5
Age at first intercourse <18					
Yes	65.1	63.9	65.4	64.9	56.2
No	34.9	36.1	34.6	35.1	43.8
Total number of live births					
0	42.6	22.0	46.6	50.5	34.1
1 or more	57.4	78.0	53.4	49.5	65.9
Ever stopped using a hormonal method due to dissatisfaction					
Yes	43.7	64.5	39.6	33.7	52.4
No	56.3	35.5	60.4	66.3	47.6
Source of Birth Control Prescription/Service					
Private Doctor's Office or HMO facility	67.9	77.8	66.0	68.3	60.5
Community Health Clinic / Public Health Clinic	14.0	9.3	15.0	15.1	11.3
Family Planning or Planned Parenthood Clinic	12.0	4.1	13.5	11.5	21.9
Other	6.1	8.8	5.5	5.2	6.4
Method Currently Utilized					
LARC	16.3	100.0	0.0	0.0	0.0
High Efficacy	59.3	0.0	70.8	100.0	0.0
Low Efficacy	11.6	0.0	13.9	0.0	100.0
No Method	12.8	0.0	15.3	0.0	0.0

Table 2: Factors Associated with LARC Use, 2011-2013 National Survey of Family Growth

Characteristic	Weighted Percent LARC users	LARC use vs LARC non-use (Weighted N =7,021,382)	LARC use vs High Efficacy Use (Weighted N=5,307,768)	LARC use vs Low Efficacy Use (Weighted N=1,959,552)
		Crude Odds Ratio (95% Confidence Interval)		
Age (Ref = 18-24)				
25-29	21.1	2.67 (1.56, 4.56)*	2.53 (1.44, 4.45) *	2.95 (1.16, 7.49)*
30-34	24.3	3.19 (1.55, 6.58)*	4.64 (2.42, 8.89)**	1.10 (0.33, 3.64)
35-44	19.9	2.48 (0.92, 6.69)	2.33 (0.84, 6.46)	1.99 (0.53, 7.48)
Race or Ethnicity (Ref = White)				
Non-Hispanic Black	12.0	0.66 (0.35, 1.26)	0.78 (0.38, 1.64)	0.41 (0.14, 1.21)
Non-Hispanic Other	12.2	0.68 (0.23, 2.01)	0.69 (0.29, 1.64)	0.41 (0.04, 4.24)
Hispanic	18.1	1.07 (0.56, 2.06)	1.37 (0.64, 2.92)	0.64 (0.25, 1.67)
Born Outside of the United States (Ref = No)	27.7	2.22 (0.91, 5.38)	2.21 (0.86, 5.68)	1.55 (0.61, 3.92)
Relationship Status (Ref = Not married/cohabitating)				
Married	23.5	2.74 (1.37, 5.47)*	2.62 (1.27, 5.37)*	1.69 (0.69, 4.14)
Cohabitating	15.5	1.63 (0.85, 3.15)	1.84 (0.95, 3.57)	0.97 (0.33, 2.90)
Insurance Status (Ref=Not Covered)				
Private Insurance	17.6	0.96 (0.50, 1.83)	0.79 (0.41, 1.51)	2.41 (0.87, 6.71)
Public Insurance	12.8	0.66 (0.35, 1.24)	0.61 (0.29, 1.26)	1.39 (0.58, 3.37)
Poverty Status (Ref=<100% of federal poverty level)				
100%-199% of FPL	17.0	1.18 (0.50, 2.75)	1.04 (0.44, 2.49)	2.90 (0.96, 8.74)
200-299% of FPL	16.1	1.10 (0.47, 2.59)	1.01 (0.41, 2.48)	1.78 (0.54, 5.82)
300% or higher	17.4	1.22 (0.55, 2.67)	1.00 (0.44, 2.28)	2.86 (1.02, 8.01)*
Education (Ref=Not high school graduate)				
High School or GED	14.2	0.49 (0.15, 1.63)	0.53 (0.15, 1.90)	0.38 (0.09, 1.65)
Some College	12.4	0.42 (0.13, 1.35)	0.40 (0.12, 1.35)	0.72 (0.18, 2.83)
College Graduate	19.2	0.70 (0.22, 2.30)	0.59 (0.17, 2.11)	0.87 (0.19, 3.92)
Region (ref='South')				
Northeast	14.7	0.92 (0.41, 2.09)	1.01 (0.44, 2.29)	1.27 (0.35, 4.56)
Midwest	15.0	0.94 (0.54, 1.65)	0.91 (0.49, 1.68)	1.21 (0.30, 4.82)
West	18.3	1.20 (0.56, 2.59)	1.21 (0.53, 2.80)	1.15 (0.49, 2.70)
3 or more partners in the past 12 months (ref=1-2 partners)	8.7	0.46 (0.22, 0.97)*	0.55 (0.25, 1.22)	0.56 (0.17, 1.83)
Age at first intercourse <18 (Ref=18 or older)	16.0	0.94 (0.53, 1.67)	0.96 (0.53, 1.73)	1.38 (0.63, 3.00)
1 or more live births (ref=no live births)	22.1	3.09 (1.60, 5.95)*	3.81 (1.99, 7.29)**	1.83 (0.77, 4.37)
Stopped using hormonal method due to dissatisfaction (Ref=No)	24.0	2.76 (1.57, 4.88)*	3.57 (1.94, 6.58)**	1.65 (0.72, 3.75)
Source of Birth Control Prescription/Service (Reference Private Doctor's Office or HMO Facility)				
Community Health Clinic / Public Health Clinic	10.8	0.53 (0.22, 1.28)	0.54 (0.21, 1.38)	0.64 (0.29, 1.43)
Family Planning or Planned Parenthood Clinic	5.5	0.26 (0.10, 0.64)*	0.31 (0.13, 0.77)*	0.15 (0.04, 0.58)*
Other	23.7	1.35 (0.61, 3.03)	1.50 (0.66, 3.39)	1.07 (0.21, 5.36)

* p<0.05 ** p<0.0001

Table 3: Multivariate Logistic Regression Model

Characteristic	LARC use vs. LARC non-Use (Weighted N =7,021,382) †	LARC use vs. High Efficacy Use (Weighted N=5,307,768) ‡	LARC use vs Low Efficacy Use (Weighted N=1,959,552) §
	Adjusted OR (95% CI)		
Source of Birth Control Prescription/Service (Reference Private Doctor's Office or HMO Facility)			
Community Health Clinic / Public Health Clinic	0.47 (0.20, 1.08)	0.47 (0.19, 1.16)	0.33 (0.09, 1.27)
Family Planning or Planned Parenthood Clinic	0.27 (0.10, 0.74)*	0.32 (0.11, 0.88)*	0.13 (0.02, 0.87)*
Other	2.22 (0.77, 6.35)	4.10 (1.45, 11.57)*	1.81 (0.10, 33.69)

* p<0.05 ** p<0.0001

†Other variables in this multivariate model include age, race or ethnicity, born outside of the US, marital status and parity

‡Other variables in this multivariate model include age, race or ethnicity, born outside of the US, marital status, education, number of partners and parity

§Other variables in this multivariate model include age, race or ethnicity, born outside of the US, insurance status, education, region and parity