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Long-Acting Reversible Contraception Use and Unmet Desire among Patients After the Zika Contraception Access Network Program in Puerto Rico

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Abstract

Objective: To describe unmet desire for long-acting reversible contraception (LARC) after the Zika Contraception Access Network (Z-CAN) in Puerto Rico during the 2016–2017 Zika outbreak.

Study design: Z-CAN patients completed web-based surveys about contraception experiences over a three-year period.

Results: Of 1,809 survey respondents, 3% never used LARC, but reported wanting it since their initial visit. As reasons for not getting LARC, nearly 50% indicated a provider-related reason and 25% reported cost.

Conclusions: Few Z-CAN patients who never used LARC had unmet LARC desire. Provider training in contraception guidelines and strategies to address costs can expand access to the full range of reversible contraception.

Keywords

Client-centered contraception counseling; Contraceptive implant; Emergency response; Long-acting reversible contraception (LARC); Intrauterine device (IUD); Zika

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1. Introduction

The Zika Contraception Access Network (Z-CAN) provided access to the full range of reversible contraceptive methods to women choosing to prevent pregnancy during the 2016−2017 Zika outbreak. Between May 2016 and September 2017, 29,221 women in Puerto Rico received Z-CAN services, 70% of whom chose a long-acting reversible contraception (LARC) method (i.e., intrauterine device [IUD] and implant) [1], [2]. Z-CAN incorporated best practices for contraceptive service delivery including client-centered counseling and in-clinic stocking of all methods [3], and ethical considerations including offering the full range of reversible contraceptive options at no cost and a 10-year LARC removal safety net [4]. In a post-visit survey, 85% reported receiving high-quality client-centered contraceptive counseling, and 87% reported same-day access [5].

While initial Z-CAN evaluations indicated high LARC uptake and satisfaction, understanding the characteristics of patients who wanted but did not receive LARC after their initial visit can help identify areas for service improvement and support equitable contraceptive care [6],[7].

The aim of this report is to describe characteristics of Z-CAN patients who wanted but did not receive LARC in the three years since their initial Z-CAN visit.

2. Materials and methods

Of 3,503 respondents to a two-week follow-up survey of Z-CAN patients aged 18 and older, [5] 3,278 were invited via text or e-mail to complete a 6-month follow-up survey. Respondents not opting out of future contact received texts and e-mails with links to complete 24- and 36-month surveys. All surveys were administered in Spanish. This activity was reviewed and approved by the Institutional Review Boards of the University of Puerto Rico and the Centers for Disease Control and Prevention.

At each survey, respondents were asked about their current contraceptive method and which methods they used since their initial visit but discontinued. In the 24- and 36-month surveys, respondents not currently using LARC were asked whether they had an IUD or implant since their Z-CAN initial visit. If they responded “no”, they were asked whether they had wanted one. If respondents reported wanting but not receiving LARC, they were asked why.

LARC use since initial Z-CAN visit was classified for 36-month survey respondents as: (1) current LARC use, (2) discontinued LARC, (3) never used and wanted LARC, or (4) never used and did not want LARC.

Chi-squared tests were used to compare initial visit and 36-month survey respondent characteristics across LARC use categories.

For each characteristic that was significantly different across categories ($p<0.05$), the relative difference in the likelihood of being in each category was estimated by adjusted prevalence ratios (aPRs) based on predicted marginal probabilities from age-adjusted multinomial logit regressions.

Analyses were conducted in SAS-callable SUDAAN version 11.

3. Results

Of the 3,278 invited to the 6-month survey, 1,809 responded to the 36-month survey. Compared with all 27,619 Z-CAN patients aged ≥18 years, a greater proportion of 36-month respondents had a college or graduate degree, private health insurance, and used contraception before Z-CAN (Table 1).

Among the 36-month respondents, 949 (52%) were currently using LARC, 557 (31%) discontinued LARC since their initial Z-CAN visit, 59 (3%) reported never using but wanting LARC since their initial visit, and 244 (14%) did not.

There were significant differences across LARC use categories in the following initial visit characteristics: age, education, relationship status, clinic type, parity, and effectiveness of contraception used before Z-CAN; and 36-month characteristics: trouble paying for housing, transportation, food, or medical care; desire to prevent pregnancy; reason for preventing pregnancy; and whether they had been pregnant since their initial visit (Table 1).

In age-adjusted models, relationship status, parity, initial visit clinic type, difficulty paying for basic needs, and experiencing pregnancy since the initial visit were associated with never using but wanting LARC after Z-CAN (Table 2).

Among those who never used but wanted LARC, nearly half (49%) reported a provider-related reason (24% were recommended another method, 17% could not find a provider, 15% said their provider did not have it in stock, 8% said they had to come back), while cost was a reason for 25%, and 31% reported “Other” as a reason.*

4. Discussion

Among respondents to a survey of patients served by a program to increase access to contraception during the 2016−2017 Zika outbreak, only 3% reported never using but wanting LARC three years since their initial program visit.

While this survey indicated low unmet LARC desire among Z-CAN patients, there was a lower likelihood of never using but wanting LARC among older and parous respondents, and nearly half of respondents with unmet LARC desire reported a provider-related reason. Z-CAN included provider training on client-centered contraceptive counseling, contraceptive guidelines, and LARC insertion and removal [2], but seeking care from a non-Z-CAN-trained provider may have resulted in provider-mediated unmet LARC desire.

Respondents who reported trouble paying for basic needs were more likely to report unmet LARC desire, and 25% reported cost as a reason, indicating potential economic barriers to LARC access. Respondents who initially received Z-CAN services at a private or academic clinic were less likely to report unmet LARC desire compared with those who attended a

*“Other” reasons included: pain, discomfort, or difficulty during insertion, and health conditions.

public or community health clinic. These findings are consistent with surveys that found that same-day access and no-cost contraception receipt differed by clinic type [5].

These findings are subject to several limitations. First, unmet LARC desire does not represent Z-CAN program results exclusively, as respondents' preferred method could have changed, or they could have sought methods after the program ended. Second, the response rate was 59% of those who were contacted for the 6-month survey, within the range of other long-term follow-up contraception surveys [8],[9]. Third, differential response by LARC use could have affected the findings. Since survey respondents were older, had higher levels of education and past contraception use compared with the overall Z-CAN population, unmet LARC desire may have been underestimated. Unmet LARC desire may also be underestimated because respondents who were using or who had formerly used LARC were not asked about their current desire for LARC.

A Z-CAN patient survey indicated that few never used but wanted LARC during the three years after their initial visit. Programs to increase access to contraception like Z-CAN can consider strategies to ensure providers are trained in contraceptive guidelines [10], and methods are available same-day at low or no cost.

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Implications:

Three years after a short-term program provided reversible contraception in Puerto Rico, few respondents had never used but wanted a long-acting reversible contraception (LARC) method. Nearly half reported provider-related reasons for not receiving LARC, and 25% reported cost. Provider awareness of contraceptive guidance and method availability can support client-centered care.

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Table 1.

Demographic and reproductive health characteristics of patients and survey respondents at the initial Zika Contraceptive Access Network (Z-CAN) visit in Puerto Rico in 2016 or 2017 and survey respondents 36 months later, by Long-Acting Reversible Contraception (LARC) use.

		All Z-CAN Patients aged ≥18 years, n (%)	Current LARC Use n (%)	Discontinued LARC n (%)	Never used LARC[a]	
					Wanted LARC n (%)	Did not want LARC n (%)
	Total	27,619	949	557	59	244
Initial Visit Characteristics						
Age (years) *	18–20	5,133 (18.6)	104 (11.0)	74 (13.3)	13 (22.0)	36 (14.8)
	21–24	8,433 (30.5)	274 (28.9)	179 (32.1)	14 (23.7)	57 (23.4)
	25–34	10,556 (38.2)	403 (42.5)	246 (44.2)	26 (44.1)	113 (46.3)
	35 and over	3,497 (12.7)	168 (17.7)	58 (10.4)	6 (10.2)	38 (15.6)
Highest education completed *	≤12 years	9,944 (36.4)	235 (25.0)	146 (26.4)	20 (35.1)	74 (30.8)
	College or graduate degree	17,392 (63.6)	704 (75.0)	407 (73.6)	37 (64.9)	166 (69.2)
Relationship status *	Single/Widowed/Divorced	11,601 (42.4)	358 (38.3)	194 (35)	36 (61.0)	99 (41.1)
	Partnered but not cohabitating	3,191 (11.7)	121 (12.9)	79 (14.3)	7 (11.9)	30 (12.4)
	Married or cohabitating	12,552 (45.9)	456 (48.8)	281 (50.7)	16 (27.1)	112 (46.5)
Insurance status	Private/other	11,437 (42.1)	498 (54.1)	256 (46.5)	30 (51.7)	125 (51.9)
	Public	14,188 (52.2)	374 (40.6)	268 (48.7)	27 (46.6)	103 (42.7)
	None	1,535 (5.7)	49 (5.3)	26 (4.7)	1 (1.7)	13 (5.4)
Clinic type *	Community Health Center/ Public Health	5,756 (20.8)	149 (15.7)	89 (16)	18 (30.5)	48 (19.7)
	Private/Academic	21,863 (79.2)	800 (84.3)	468 (84)	41 (69.5)	196 (80.3)
Parity *	Nulliparous	10,646 (39.3)	381 (40.6)	232 (42.3)	39 (66.1)	134 (55.4)
	Parous	16,435 (60.7)	558 (59.4)	317 (57.7)	20 (33.9)	108 (44.6)
Wants to get pregnant in the next year	No/Unsure/Unknown	26,804 (98.1)	934 (98.6)	544 (98.7)	57 (98.3)	232 (96.7)
	Yes	510 (1.9)	13 (1.4)	7 (1.3)	1 (1.7)	8 (3.3)
Level of effectiveness of contraceptive method used before Z-CAN[b*]	None	12,392 (45.1)	324 (34.3)	201 (36.2)	21 (35.6)	82 (33.9)
	Least	8,271 (30.1)	304 (32.2)	188 (33.9)	14 (23.7)	71 (29.3)
	Moderately	5,743 (20.9)	253 (26.8)	151 (27.2)	24 (40.7)	85 (35.1)
	Most	1,050 (3.8)	64 (6.8)	15 (2.7)	0 (0.0)	4 (1.7)

		All Z-CAN Patients aged ≥18 years, n (%)	Current LARC Use n (%)	Discontinued LARC n (%)	Never used LARC[a]	
					Wanted LARC n (%)	Did not want LARC n (%)
36-Month Survey Characteristics						
Relationship status	Single/Widowed/Divorced		228 (24.1)	123 (22.7)	20 (33.9)	57 (24.4)
	Partnered but not cohabitating		154 (16.2)	74 (13.7)	8 (13.6)	31 (13.2)
	Married or partnered		566 (59.7)	344 (63.6)	31 (52.5)	146 (62.4)
Insurance status	Private/other		544 (57.4)	273 (50.7)	31 (52.5)	125 (54.3)
	Public		324 (34.2)	211 (39.2)	25 (42.4)	91 (39.6)
	None		79 (8.3)	54 (10)	3 (5.1)	14 (6.1)
Trouble paying for housing, transportation, food, or medical care *	No		574 (60.5)	360 (64.6)	26 (44.1)	160 (65.6)
	Yes		375 (39.5)	197 (35.4)	33 (55.9)	84 (34.4)
Wants to prevent pregnancy now *	No		53 (5.6)	145 (27.7)	10 (16.9)	75 (34.6)
	Yes		896 (94.4)	379 (72.3)	49 (83.1)	142 (65.4)
Main reason to prevent pregnancy *	Other		90 (10.0)	36 (9.5)	4 (8.2)	24 (17.1)
	Cannot afford		343 (38.3)	157 (41.4)	19 (38.8)	34 (24.3)
	Don’t want a baby		443 (49.4)	184 (48.5)	25 (51.0)	80 (57.1)
	Zika		20 (2.2)	2 (0.5)	1 (2.0)	2 (1.4)
Pregnant since initial Z-CAN visit *	No		905 (95.4)	449 (80.6)	44 (74.6)	196 (80.3)
	Yes		44 (4.6)	108 (19.4)	15 (25.4)	48 (19.7)

*p<0.05, chi-squared test for differences. Some values might not add to 100% due to rounding.

[a]Since their initial visit.

[b]Most effective contraceptive methods included IUDs, implants, and partner sterilization. Moderately effective contraceptive methods included injectables, pills, patch, ring, and diaphragm. Least effective contraceptive methods included male and female condoms, withdrawal, sponge, fertility awareness-based methods, and spermicides.

Table 2.

Age-adjusted prevalence ratios of being in each Long-Acting Reversible Contraception (LARC) use category, by respondent characteristics that were statistically significantly different across categories at the initial Zika Contraceptive Access Network (Z-CAN) visit in Puerto Rico in 2016 or 2017 and 36 months later.

		Current LARC Use	Discontinued LARC	Never used LARC[a]	
				Wanted LARC	Did not want LARC
		aPR, 95% CI	aPR, 95% CI	aPR, 95% CI	aPR, 95% CI
Initial Visit Characteristics					
Age (years) *	18–20	(REF)	(REF)	(REF)	(REF)
	21–24	1.14 (0.97, 1.34)	1.05 (0.84, 1.31)	0.47 (0.24, 0.90)	0.69 (0.48, 0.97)
	25–34	1.12 (0.96, 1.3)	0.96 (0.76, 1.2)	0.58 (0.31, 1.08)	0.9 (0.64, 1.27)
	35+	1.36 (1.15, 1.60)	0.66 (0.49, 0.89)	0.39 (0.14, 1.07)	0.89 (0.57, 1.39)
Highest education completed	<=12 years	(REF)	(REF)	(REF)	(REF)
	College or graduate degree	1.03 (0.92, 1.15)	1.13 (0.96, 1.32)	0.72 (0.43, 1.2)	0.75 (0.56, 1.02)
Relationship status	Single/Widowed/Divorced	(REF)	(REF)	(REF)	(REF)
	Partnered but not cohabitating	0.99 (0.85, 1.14)	1.17 (0.92, 1.5)	0.56 (0.26, 1.24)	0.88 (0.59, 1.31)
	Married or cohabitating	0.98 (0.88, 1.08)	1.24 (1.05, 1.47)	0.36 (0.20, 0.67)	0.86 (0.65, 1.14)
Clinic type	Community Health Center/Public Health	(REF)	(REF)	(REF)	(REF)
	Private/Academic	1.09 (0.94, 1.26)	1.06 (0.86, 1.31)	0.46 (0.27, 0.77)	0.83 (0.54, 1.26)
Parity	Nulliparous	(REF)	(REF)	(REF)	(REF)
	Parous	1.11 (0.99, 1.23)	1.19 (1.01, 1.41)	0.41 (0.24, 0.70)	0.57 (0.42, 0.77)
Wants to get pregnant in the next year	No/Unsure/Unknown	(REF)	(REF)	(REF)	(REF)
	Yes	0.85 (0.58, 1.23)	0.79 (0.44, 1.41)	1.08 (0.15, 7.76)	2.10 (1.12, 3.93)
36-Month Survey Characteristics					
Trouble paying for housing, transportation, food, or medical care	No	(REF)	(REF)	(REF)	(REF)
	Yes	1.07 (0.98, 1.17)	0.88 (0.75, 1.02)	2.03 (1.23, 3.36)	0.86 (0.65, 1.14)
Wants to prevent pregnancy now	No	(REF)	(REF)	(REF)	(REF)
	Yes	3.33 (2.68, 4.15)	0.50 (0.43, 0.58)	0.93 (0.48, 1.82)	0.37 (0.28, 0.48)
Main reason to prevent pregnancy	Cannot afford	(REF)	(REF)	(REF)	(REF)
	Other	0.87 (0.74, 1.02)	0.96 (0.71, 1.3)	0.88 (0.33, 2.35)	2.60 (1.65, 4.12)
	Don’t want a baby	0.97 (0.89, 1.07)	0.89 (0.73, 1.08)	1 (0.55, 1.81)	1.78 (1.25, 2.54)

		Current LARC Use	Discontinued LARC	Never used LARC[a]	
				Wanted LARC	Did not want LARC
		aPR, 95% CI	aPR, 95% CI	aPR, 95% CI	aPR, 95% CI
	Zika	1.26 (1.03, 1.54)	0.31 (0.09, 1.04)	1.28 (0.17, 9.59)	1.34 (0.37, 4.89)
Pregnant since initial Z-CAN visit	No	(REF)	(REF)	(REF)	(REF)
	Yes	0.37 (0.29, 0.47)	1.75 (1.5, 2.04)	2.47 (1.34, 4.57)	1.86 (1.46, 2.37)

*Unadjusted. All other models were adjusted for age.

[a]Since their initial visit.