

# Perceptions of the Zika Virus, Contraceptive Access, and Motivation to Participate in the Zika Contraception Access Network Program: Qualitative Analysis of Focus-group Discussions with Puerto Rican Women

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**Objective:** During the 2016-2017 Zika virus outbreak in Puerto Rico, the Zika Contraception Access Network (Z-CAN) provided client-centered contraceptive counseling and access to the full range of reversible contraceptive methods at no cost to prevent unintended pregnancies and thereby to reduce Zika-related birth outcomes.

**Methods:** To understand how Puerto Rican women's perceptions of the Zika virus affected contraceptive decisions and assess how they heard about the Z-CAN program and what influenced their participation, or lack thereof, 24 focus-group discussions were conducted among women of reproductive age who did and did not participate in Z-CAN.

**Results:** Women who participated in the discussions often had heard about Z-CAN from their physician or friends; non-participants had heard about Z-CAN from Facebook or friends. Women expressed satisfaction on finding a Z-CAN clinic and valued the same-day provision of contraceptives. When a preferred contraceptive method or a first appointment was not readily available, women reconsidered accessing the program. Women's perceptions and trust of reproductive healthcare providers, their engagement in social networks, and their ability to choose a contraceptive method that best meets their needs can influence participation in contraception-access programs.

**Conclusions:** Focus groups can be used to understand women's knowledge of the Zika virus, barriers and facilitators to contraception access, and motivations for participation in the Z-CAN program.

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Zika virus infection during pregnancy is a cause of microcephaly and other birth defects (1–4). During the 2016-2017 Zika virus outbreak, Puerto Rico reported the highest number of Zika virus infections in the US and its territories (5). The Centers for Disease Control and Prevention (CDC) identified strategies to prevent pregnancies from being affected by the Zika virus, including the use of contraception as a medical countermeasure to prevent unintended pregnancy among women who chose to delay getting pregnant during the Zika virus outbreak (6,7).

Before the Zika virus outbreak, Puerto Rico had one of the highest unintended pregnancy rates in the US and its territories (8,9), and contraception was not widely available (6,9). An assessment of contraception access, conducted in Puerto Rico early in the outbreak, identified barriers to contraception provision and use, including the limited availability of the full range of reversible contraceptive methods, a shortage of physicians trained in comprehensive contraception care, the limited availability of same-day provision of contraception services, and high out-of-pocket costs (9,10). Eliminating barriers to contraceptive services and ensuring reproductive autonomy—which is the freedom to decide what contraceptives to use, if any, and when and if one will get pregnant and bear children—were critical, given Puerto Rico's history of coerced sterilization and unethical contraceptive testing (11–16).

In response, the National Foundation for the CDC (CDC Foundation), an independent non-profit organization that supports the CDC's critical public health mission, with technical assistance from the CDC, established the Zika Contraception Access Network (Z-CAN), a short-term emergency response program for the rapid provision of reversible contraceptives in Puerto Rico (6,17–19). The Z-CAN program consisted of 153 trained physicians providing client-centered contraceptive counseling and same-day access to the full range of Food and Drug Administration–approved reversible contraceptive methods at no cost. The program established strategies and safeguards to ensure that women who chose a long-acting reversible contraceptive

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(LARC) (e.g., intrauterine devices and hormonal implants) had access to no-cost removal for up to 10 years after the program ended (17,18).

In addition, a multi-strategy social marketing communication campaign, “Ante La Duda, Pregunta,” translated as “When in Doubt, Ask,” was developed and implemented to increase awareness of Z-CAN services (21–23). A mix of social and digital media materials and strategies, including a campaign website and Facebook page, storyline videos for consumers, videos tailored for providers, digital advertisements, print materials, radio public service announcements, and community-engagement events in Puerto Rico were utilized to ensure that messages would reach women, including those in rural areas and/or without digital access.

From May 2016 through September 2017, a total of 29,221 women received Z-CAN services (17). The program collected patient encounter data from each woman at her first Z-CAN visit to document demographic information and the chosen contraceptive method (17); a patient satisfaction survey to assess same-day access to whatever method that patient preferred; the patient’s perception of the quality of care received; the patient’s satisfaction with the chosen method and services (24); a physician and staff interview to identify areas for programmatic improvement and sustainability (25); a policy review to identify policy and practice change strategies used to increase access to or the provision of contraceptive services in Puerto Rico (26); and follow-up patient surveys at 6 months, 24 months, and 36 months to examine contraception continuation and satisfaction with the methods used, as well as access to no-cost removal of LARC. However, information about women who did not access the Z-CAN program was not available. The purpose of this study was to understand how the Puerto Rican women of reproductive age who participated in the Z-CAN program decided to do so. We also aimed to discover why their non-participating counterparts (referred to hereafter as non-participants) decided to opt out of enrolling in the program. In either case, we wanted to learn how family-planning and contraceptive decisions were made during the outbreak, learn what knowledge and beliefs about the Zika informed those decisions, and assess both how Puerto Rican women heard of the program and what influenced their decision to access Z-CAN services.

## Materials and Methods

### Data Collection

From January through August 2017, we conducted 24 focus-group discussions with women aged 18 to 44 years in Puerto Rico: 12 focus groups with Z-CAN participants and 12 with non-participants. A total of 205 women participated in these focus groups: 98 Z-CAN participants and 107 non-participants. The study was limited to women who were residents of Puerto Rico, were fluent in Spanish, were not currently pregnant or planning a pregnancy within the next 12 months, were heterosexual, had been sexually active within the past 3 months, and were capable of becoming pregnant (not sterile).

The study participants were recruited using flyers posted at Z-CAN clinics to recruit women who had received and/or were

receiving Z-CAN services. Flyers were also posted in community and business venues that are often frequented by women (e.g., grocery stores, laundromats) to recruit those who had not accessed Z-CAN services. Additionally, advertisements were disseminated using newspapers, the radio, and internet outlets. Interested participants completed an eligibility screening form.

The Z-CAN program staff developed focus-group guides that included open-ended questions and probes to gather information from the focus-group participants on their perceptions about Zika transmission, pregnancy, and pregnancy planning; on their experiences with contraceptive access, their contraceptive methods of choice, and their use of those methods; and on their awareness of and/or experiences with the Z-CAN program. The guides were reviewed by local staff to ensure the questions were culturally appropriate. Trained facilitators conducted the focus-group discussions using a semi-structured format. Informed consent was obtained from the focus-group participants, who received a \$50 gift card as compensation for their time and transportation costs.

### Data Analysis

All the focus-group discussions were digitally recorded and then transcribed verbatim. From the collected data, we developed a codebook using a hybrid approach of a priori and inductive coding. We coded translated transcripts using MaxQDA qualitative analysis data software by reading line-by-line to identify emerging concepts and themes. Next, we reviewed each code branch for consistency, identified biases, noted our overall impressions, searched for patterns and interconnectedness, and mapped themes. We reviewed each transcript and the relevant coded segments and identified patterns in relation to the study’s aims. Thematic analysis was used to identify emerging topics related to the research objectives. This study was approved by the institutional review boards at the CDC and the University of Puerto Rico Medical Science Campus.

## Results

We categorized themes into 3 focus-group domains: (1) knowledge, perceptions, and the influence of the Zika virus on family planning; (2) knowledge of and access to family-planning services prior to the Zika virus epidemic; and (3) factors that influenced accessing Z-CAN.

### Knowledge, Perceptions, and the Influence of the Zika Virus on Family Planning

The Z-CAN focus-group participants had basic knowledge of the Zika virus, including knowledge that Zika could be transmitted from mother to baby during pregnancy or at birth (Table). Some knew that Zika could be transmitted sexually. Most of the participants understood that Zika virus infection during pregnancy could be dangerous to their unborn baby. The participants who reported concerns about Zika often had personal connections to individuals affected by the virus and/or were keeping current on all Zika-related information and as a result used strategies to protect themselves and their unborn babies. The participants reported a decreased desire to engage in care-seeking behaviors when they did not have personal connections to Zika-infected individuals and, that being

the case, a low risk of potential infection. In addition, the participants reported a high perceived risk of Zika in pregnant women or women planning a pregnancy and that there was more incentive for pregnant women or women planning a pregnancy to protect oneself from Zika infection. The participants reported they were worried about the effects Zika had on babies and feared microcephaly, noting that the epidemic was a motivator for seeking contraceptives. The participants reported that Zika prevention programs had made contraception more accessible. The use of contraceptives as a strategy to prevent adverse outcomes from Zika infection was not a driving factor in planning or postponing pregnancies.

The program's non-participants also had basic knowledge about the Zika virus and its potential severity for pregnant women and their unborn babies (Table). These non-participants reported having a low perceived risk of Zika virus infection for reasons that included their skepticism of the government's educational campaign, their belief that the effects of the Zika virus were exaggerated as an economic strategy to encourage them to purchase certain products and medicines, comparisons to the well-known dengue and chikungunya viruses, and their personal experiences

with and their lack of personal connections to individuals affected by the Zika virus. Most of the non-participants reported that the Zika virus was not a factor in their planning or postponing a pregnancy. The non-participants reported that economic factors and pregnancy prevention were their reasons for engaging in family planning, to the degree that if their accessing of such planning could be attributed to the fear of being infected by the Zika virus, the true driving force was, in fact, the fear of potential birth defects resulting from said virus.

**Knowledge of and Access to Family-Planning Services Prior to the Zika Virus Epidemic**

Both the Z-CAN participants and the non-participants who took part in the focus-group discussions reported that before the Zika virus epidemic, discussing family planning was considered taboo and generational differences prevented information sharing within households (Table). The Z-CAN participants and non-participants reported that discussions about family planning were restricted to abstinence and that parents often felt that if

**Table.** Focus-Group Participant Perceptions of Zika Virus, Contraception, and Access to Contraception in the Context of the Zika Virus Outbreak, Puerto Rico, January-August 2017

Focus-Group Domain	Zika Contraception Access Network (Z-CAN) Participant	Non-participant
<p><i>Knowledge, Perceptions, and the Influence of the Zika virus on Family Planning</i></p>	<p>“If you get bitten by the mosquito, it can affect you and your baby.”</p> <p>“Pregnant women are at risk for Zika virus. It can cause microcephaly.”</p> <p>“What I heard [is that] Zika comes from a mosquito. How is it transmitted sexually? That’s new information to me.”</p> <p>“I have a friend who is pregnant, and she is very scared of Zika. She wears things that cover her and sprays herself with OFF all the time.”</p> <p>“There is a lot of fear among women.”</p> <p>“Here the Puerto Rican [women] are not aware until it happens to them or someone they know. The public in general is not aware of the consequences or that they can contract Zika. They are not worried.”</p> <p>“Having a child with some condition from Zika must be difficult. . . . It is the fear that my baby will be born with a problem that makes me protect myself.”</p> <p>“Now it is summer, and people go to the beach, and no one is thinking about [Zika] . . . since you do not hear so much in the news.”</p> <p>“Contraception and condoms are more accessible because of Zika.”</p> <p>“I decided to go get contraceptives because I wanted to avoid pregnancy, not because of Zika.”</p> <p>“Zika has led to an interest in family planning among women I know.”</p> <p>“Most women want to control and plan childbearing in general, but not because of Zika.”</p> <p>“The effect of Zika on children is scary. I do not want to get pregnant now. It has motivated me to get on a method.”</p> <p>“As the epidemic has slowed, there is less talk on TV and radio. People are less concerned because no one is talking about it anymore.”</p>	<p>“I know Zika is caused by the mosquito, but I don’t understand how it can affect a baby.”</p> <p>“If a woman is pregnant and gets Zika, it can hurt her baby.”</p> <p>“I didn’t know Zika could be transmitted sexually.”</p> <p>“At the beginning, when Zika started, the worry was very strong. Now it is not so strong.”</p> <p>“I was pregnant at the beginning of Zika and was worried the whole pregnancy.”</p> <p>“I don’t think Zika is a reason to postpone pregnancy. It’s just another virus, like dengue and chikungunya.”</p> <p>“It is not being heard that it is something alarming . . . because I’m not going to avoid getting pregnant if I do not know almost anyone who has [had] Zika.”</p> <p>“I have even read that this is the government creating ideas to prevent people from continuing to conceive. I have read in the networks that this is putting fear in the people so that they do not have children, a [form of] birth control. . . .”</p> <p>“I think the effects of Zika have been exaggerated in the media.”</p> <p>“Zika is exaggerated for economic purposes.”</p> <p>“Zika is a political issue. To scare people. People do not want to hear about it anymore. There is misinformation about the number of children really affected by microcephaly.”</p> <p>“I work in a hospital, and I started receiving babies with microcephaly. . . . I did not understand the severity of the matter and the reality until I could see with my own eyes.”</p> <p>“Young people are avoiding pregnancies but not because of Zika, more because of school and careers.”</p> <p>“I do think that people are using contraceptives because they do not want to put a baby at risk and cannot control the behavior of others [i.e., male sexual partners].”</p>

Focus-Group Domain	Zika Contraception Access Network (Z-CAN) Participant	Non-participant
<i>Knowledge of and Access to Family-Planning Services Prior to the Zika Virus Epidemic</i>	<p>“I get information about family planning from my doctor or the internet.”</p> <p>“Family and friends are a good source of information because of personal experiences with contraception.”</p> <p>“I was never told about protection, I was never told about all the methods, at least not, by my family, never. My mother never sat with me and told me: ‘These things can happen. You have this option, protect yourself.’ Never, never, her method is abstinence.”</p> <p>“My priest would not be supportive of using birth control. You are supposed to accept a child.”</p> <p>“In places such as in the [education system,] providing information about family planning is taboo . . . if it were not, they would offer more education and guidance, and they are not doing so.”</p> <p>“As for the IUD . . . a false myth is that you cannot put the IUD in women who have not been pregnant. . . . Some doctors still have that idea.”</p> <p>“It is the stigma of society, that after a certain age you need to have a child. If you do not have a child, you are not complete as a woman.”</p> <p>“Where I live, there are only 2 gynecologists who take care of ALL the population there, and of the nearby towns.”</p> <p>“[The process is] difficult. . . . I went to a clinic, and they gave me an appointment for February. . . . I called in November.”</p> <p>“If you go to the family-planning clinic, they have a cost. . . . ‘It is an accessible cost,’ but according to whose parameter is that? If I do not have any kind of income, accessible to whom?”</p> <p>“. . . my wait at the gynecologist has always been more than 3 hours. . . . Already, when I enter, I am hungry, tired, cold . . . when I enter, I am already too anxious, and half of the questions that I was going to ask . . . I have forgotten.”</p>	<p>“There is no talk of family planning if you are not married, so everyone in the family who is not in a marriage, [according to] the rest of the family, is supposed to be abstinent.”</p> <p>“You are not supposed to have sex before marriage, and once you are married, you are not supposed to use birth control.”</p> <p>“When I took sex education at school, it was not sex education, it was anatomy. . . . They give you the dolls, they teach you that, but they do not teach you anything else—it is not worthwhile.”</p> <p>“I mean, unless you search the internet or something, you might not know about everything with only the information the gynecologist provides.”</p> <p>“The cultural norm is that the women are supposed to be mothers. Many women make the decision to have children based on this.”</p> <p>“The reality is that family-planning clinics [Title X] are not everywhere, and the family-planning clinics that take Reforma [Medicaid] patients are not everywhere, either. We are in the metro area, but there are areas in Puerto Rico that do not have these clinics. It [family planning] is not always accessible to everyone, or at the time that one determines.”</p> <p>“Each has a different system.” [referring to the physicians, labs, etc. that have to be visited to obtain contraceptives]</p> <p>“Depending on your health insurance, it may be contraceptive pills, but they come with a cost. They are very expensive for me . . . there was a point when health insurance no longer paid for them.”</p> <p>“Sometimes going to a clinic means being in the clinic all day. . . . I have no one to take care of my son.”</p>
<i>Factors That Influenced Accessing Z-CAN</i>	<p>“My gynecologist told me about the Z-CAN program. I didn’t have to go elsewhere, and I was very interested in the methods the program provided.”</p> <p>“My sister told me about the Z-CAN program. Her gynecologist told her, and she told me how to call to make an appointment.”</p> <p>“I saw a Facebook ad about the program. Then I went to my friend’s house, and she told me her physician told her about the Z-CAN program. She is participating. I called the next day to make an appointment.”</p> <p>“I heard about Z-CAN through my friend. I went to the website, and the information was good and there was a list of participating clinics and a map. My gynecologist was participating, so I called to make an appointment.”</p> <p>“I said to myself: ‘Look, I have the opportunity to receive this excellent product for free; if worse comes to worst, it does not suit me and I have it removed, but I did not pay hundreds of dollars for it.’”</p> <p>“The fact that not only was it free but everything was so easy and accessible, and so fast. [And fast but in a good] way, fast in terms of getting a quick appointment and being attended to quickly, but during the appointment, they took their time with me.”</p> <p>“It was easy to find a Z-CAN clinic; however, there was a delay in getting an appointment.”</p> <p>“When I called for a Z-CAN appointment, I was told that the implant list was quite long, that I had to wait. . . . I wanted the implant, so I had to wait.”</p>	<p>“I saw information on Facebook about the program but am not aware of anyone who is participating. If my friends tell me they are participating and it is a good program, I may call and make an appointment.”</p> <p>“I have a co-worker who went to her physician, and she was able to get into the program and get an IUD that day, for free. I told my cousin to look into it because she has no medical plan. I have not looked into it for myself, but I might.”</p> <p>“I heard about the program on Facebook and on the radio, but I checked the website and my gynecologist was not on the list. I do not want to go to someone new.”</p> <p>“I saw the flyer, but it seemed too good to be true, that all the methods were free.”</p> <p>“I only had the consultation with the doctor, who explained to me the different options I had, and I chose the option that I wanted; [the doctor] explained that they were all free of charge. It seemed good. When I decide to get [contraception], I will join the program.”</p> <p>“If you have Reforma [Medicaid], it’s the same thing.”</p> <p>“I have a provider. I did not have time to see whether mine was part of the program or to go to a new provider.”</p> <p>“When I went to look for information about the implant, I was told that there was a waitlist. That is the only thing, but I imagine it is normal because there are many people, many women who are looking for contraceptive methods.”</p>

Abbreviations: IUD, intrauterine device; Z-CAN, Zika Contraception Access Network



they discussed family planning, they were tacitly permitting their adolescent children to be sexually active. Both the Z-CAN participants and non-participants reported the perception that women were to remain abstinent until marriage, that the cultural norm for women was to reproduce and become mothers, and that pressure from the perceived role of women often created shame, judgment, and fear (specifically in terms of their seeking contraceptives). Yet, they reported, these women felt that the responsibility for pregnancy prevention was primarily on women; they indicated that men were praised for purchasing condoms while women were judged for their efforts at acquiring contraception. Both the Z-CAN participants and the non-participants reported that contraceptive use was not supported by their religious institutions because, according to those institutions, women were not supposed to prevent pregnancy and that these views often deterred women from accessing contraceptive services and prevented the sharing of information among family and friends. The Z-CAN participants reported that the information shared by physicians about contraceptive methods did not always include the full range of said methods. Both the Z-CAN participants and the non-participants reported that the lack of accessible services was a barrier that Puerto Rican women faced when attempting to obtain family planning. Both groups reported that contraceptives were generally expensive, especially LARC, and that health insurance coverage of contraception was limited. The Z-CAN participants reported that community pharmacies and family-planning clinics provided contraceptives at lower costs and that some health insurance policies covered the cost of contraceptives, facilitating access to family-planning services. The Z-CAN participants reported that before the Zika virus epidemic, they had generally accessed family-planning services for pregnancy-related care, routine tests, and/or managing other pertinent health conditions, such as hormone imbalances and period regulation. For some Z-CAN participants who made up the focus groups, the desire to prevent pregnancy was a major contributor to the decision to access contraceptives. These Z-CAN participants reported that their economic stability was not what it needed to be to support a child and that accessing family-planning services was important to prevent pregnancy to achieve goals and fulfill responsibilities outside of being a mother. The non-participants also reported that major motivators for accessing family-planning services included preventing pregnancy, avoiding reduced economic stability, achieving goals, and fulfilling responsibilities.

### Factors That Influenced Accessing Z-CAN

The Z-CAN participants who engaged in the focus-group discussions reported that they had most often heard about Z-CAN from physicians/family-planning clinics, friends, and internet sources (Table). Information received by physicians and family-planning clinics was reported as being trustworthy. Information received by word of mouth through family, friends, and other women was valued. Information on the internet that also included reviews of services was reported as being highly valuable. The non-participants reported that they had most often heard about Z-CAN from Facebook, friends, and radio spokespersons. The participants mentioned television and schools as being potential sources of information.

Most of the participants reported that seeking contraceptive services through Z-CAN was to prevent pregnancy, though not necessarily because of a concern about Zika infection during pregnancy. These participants reported that given the program's provision of the full range of contraceptive methods at no cost, they felt empowered in their choice of method and in their ability to select said method without the burden of cost. The participants reported that the process of finding a Z-CAN provider via the Z-CAN physician-locator website was efficient and encouraged program participation. Some participants reported that there had been delays (caused by Z-CAN clinic waitlists) for first appointments or that the full range of methods was not always available, preventing access to the contraceptive method of choice.

Many of the non-participants had not heard of the Z-CAN program (Table). Those who had, reported that the program seemed too good to be true. Some of the participants also reported being wary that the program provided no-cost contraception. Concerns about the potential costs of specific methods, not having their current physician participate as a Z-CAN provider and not being interested in going to other providers, not having the time to identify and access providers in the program, long waitlists to participate, and not being motivated enough to prevent pregnancy at the time were all given as reasons for not participating.

### Discussion

Our findings highlight how the women who took part in the Z-CAN program perceived accessibility to contraception in Puerto Rico, how the Zika virus factored into contraceptive decision-making, and how the reach of and response to Z-CAN's campaign efforts led to each participating woman's decision regarding whether to involve herself in the Z-CAN program.

The women who participated in the Z-CAN focus-group discussions reported that increased access to affordable and same-day contraceptive services was an important consideration for that participation. The Z-CAN program increased the number of affordable contraceptive access points from 13 publicly funded sites to 139 public and private sites (6), trained Z-CAN physicians on evidence-based guidelines for contraceptive use and safety (27,28), coordinated with the Puerto Rico Department of Health to issue waivers to Z-CAN physicians to allow on-site stocking of contraceptives for their same-day provision (19), and implemented a culturally relevant health communication campaign to raise awareness of the availability of Z-CAN services (22). The women in the Z-CAN focus-group discussions, whether or not they were program participants, described waitlists to access the program and limited or no availability of the desired contraceptive methods, which may have discouraged some women from participating, despite the above-mentioned efforts. Future programs intending to improve contraception access may consider that building clinical capacity takes time, introducing methods that have so far been previously unavailable requires a shift in clinical practice, and the same-day provision of contraceptives requires a shift in protocols. Additionally, contraception-access programs may consider ways to manage patient expectations regarding the availability of an

initial appointment at a given clinic. Clarifying the expectations of potential patients regarding the time and availability of services may improve patient satisfaction.

Our findings highlight the fact that some women believed Z-CAN was too good to be true and had concerns about the continuity of services beyond Zika, especially when considering access to contraceptive removal after the program ended. Previous research reported that among Puerto Rican women of reproductive age, the awareness of Puerto Rico's history of forced sterilization and the unethical testing of oral contraceptives made the women skeptical of the intentions of governmental entities providing contraceptive methods (21,23). The women in the focus groups who did not participate in Z-CAN may not have been aware that the program incorporated into its policies and procedures ethical considerations, best practices for contraception service delivery, and strategies and safeguards to ensure access to LARC removal after the program ended. To improve future programs and the services delivered to women in Puerto Rico may require strategic communication about the program, including the continuity of its services (e.g., LARC device removal) so that women feel more comfortable with participating in a contraception-access program. Further, for programs interested in replicating or adapting the Z-CAN model in other jurisdictions that may be similarly affected by the challenges inherent to a short-term emergency service in which the continuity of services cannot be assured, upfront communication about the program and any strategies and safeguards for the continuity of services should be considered.

Trust in information and credible sources with firsthand experience with the Z-CAN program were important considerations for the women who participated in Z-CAN. The women who participated in Z-CAN most often heard about Z-CAN from their physician or a family-planning clinic or by word of mouth through family, friends, and other women, whereas non-participants most often heard about Z-CAN from Facebook, friends, and radio spokespersons and often expressed a lack of trust in government campaigns and healthcare providers. Our findings align with those of formative research conducted in Puerto Rico during the development of the Z-CAN program, which research reported that among women of reproductive age in Puerto Rico, physicians were the most trusted source of contraception information, followed by the internet, friends, and family (21). Previous research reported that consumers generally seek health-related information through digital sources (including the internet), but physicians remain a highly trusted information source (29–32). Seeking health information is not the same as seeking information on whether to use health services. Consumers often use the internet when seeking health information, but often listen to a trusted healthcare provider or family and friends when seeking information on whether to use health services. Further, while women valued being informed about contraceptives, they did not always engage their physicians in a discussion about desired contraceptives. Many women reported they felt uncomfortable asking their providers questions about contraceptives and Zika. Instead, women spoke with family, friends, and acquaintances about their experiences and asked those individuals for advice (21). Our findings suggest that recommendations from a trusted

healthcare provider or source may be particularly important in terms of helping to connect women to specific health services to increase the utilization of contraception-access programs.

The findings in our study have several strengths and limitations. Focus-group methodology has been confirmed to be a strong approach to explore knowledge and perceptions to guide program and quality-improvement efforts. The use of qualitative methods allowed us to explore women's perceptions of the Z-CAN program's accessibility and factors playing a role in their decision to participate. We were not able to conduct focus groups using Z-CAN participants from all 78 of Puerto Rico's municipalities. However, we did conduct focus groups in all the health regions of Puerto Rico. Furthermore, we were able to recruit only participants who were 18 years of age and older; therefore, we were not able to assess the perceptions or motivations of women younger than 18 years, who may experience additional barriers accessing contraceptive services. Therefore, our findings are not generalizable beyond our study population. While our study is not generalizable, we believe our findings can be useful to other programs implementing novel health service interventions in the context of public health emergencies.

## Conclusion

Findings from the focus groups indicated how the reach and response of Z-CAN's social marketing campaign efforts led to each focus-group-participating woman's decision regarding whether to involve herself in the Z-CAN program and revealed, as well, that many non-participants had not heard of the Z-CAN program. Women's perceptions and trust of reproductive healthcare providers and services, their engagement in social networks for the advice and support of family-planning programs and services, and their ability to choose a contraceptive method that best meets their needs also influenced participation. These findings can be used to improve future programs and services delivered to women in Puerto Rico and can be replicated or adapted in reproductive health programs, both in times in which complex emergency responses are necessary and in non-emergency times, in which latter the goal is to increase contraception access.

## Resumen

Objetivo: Durante el brote del virus del Zika 2016-2017 en Puerto Rico, la Red de Acceso a la Anticoncepción del Zika (Z-CAN, por sus siglas en inglés) brindó asesoramiento anticonceptivo centrado en la paciente y acceso a toda la gama de métodos anticonceptivos reversibles sin costo alguno para prevenir embarazos no deseados y reducir los resultados adversos de parto relacionados al Zika. Métodos: Para comprender cómo las percepciones de las mujeres puertorriqueñas sobre el virus del Zika afectaron las decisiones en métodos anticonceptivos, evaluar cómo se enteraron del programa Z-CAN y qué influyó en su participación, se llevaron a cabo veinticuatro grupos focales entre mujeres en edad reproductiva participantes y no participantes del programa Z-CAN. Resultados: Las mujeres que participaron en las discusiones a menudo escucharon sobre Z-CAN de su médico o amistades; las no participantes escucharon

sobre Z-CAN en Facebook o amistades. Las mujeres expresaron satisfacción al encontrar una clínica Z-CAN y valoraron la provisión de anticonceptivos el mismo día. Cuando los métodos o la primera cita no estaban disponibles, las mujeres reconsideraron su participar. Las percepciones y la confianza de las mujeres en los proveedores de salud reproductiva, su participación en las redes sociales y su capacidad para elegir el método anticonceptivo que mejor satisfaga sus necesidades pueden influir en la participación en los programas de acceso a la anticoncepción. Conclusiones: Los grupos focales son útiles para comprender el conocimiento de las mujeres sobre el virus Zika, las barreras y facilitadores de acceso a los métodos anticonceptivos y las motivaciones para participar en el programa Z-CAN.

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