Contraception as a Medical Countermeasure to Reduce Adverse Outcomes Associated With Zika Virus Infection in Puerto Rico: The Zika Contraception Access Network Program

The Zika Contraception Access Network established a network of 153 physicians across Puerto Rico as a short-term emergency response during the 2016–2017 Zika virus outbreak to provide client-centered contraceptive counseling and same-day contraception services at no cost for women who chose to prevent pregnancy. Between May 2016 and August 2017, 21 124 women received services. Contraception was used as a medical countermeasure to reduce adverse Zika-related reproductive outcomes during the outbreak and may be considered a key strategy in other emergencies. (*Am J Public Health*. 2018;108:S227–S230. doi:10.2105/AJPH.2018.304558)

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Contraception can serve as a medical countermeasure to reduce unintended pregnancy among women who choose to delay pregnancy during a Zika outbreak[1] and could substantially reduce the number of cases of Zika virus–associated microcephaly[2] and health care costs.[3]

INTERVENTION

In response to identified challenges to contraceptive access in Puerto Rico,[4] the National Foundation for the Centers for Disease Control and Prevention (CDCF), with technical assistance from the Centers for Disease Control and Prevention (CDC), established the Zika Contraception Access Network (Z-CAN). Z-CAN was a network of trained physicians across Puerto Rico that provided client-centered contraceptive counseling and same-day access to the full range of US Food and Drug Administration (FDA)–approved reversible contraceptive methods at no cost. Lathrop et al.[1] previously described Z-CAN's design and baseline characteristics of the first 21 124 participants. Here we describe the strategies for rapid-implementation and scale-up, including the development of a system for contraceptive product distribution, a health communication campaign to drive demand for services, and rapid implementation of Z-CAN within the context of a public health emergency.

PLACE AND TIME

To improve contraceptive access in Puerto Rico during the Zika outbreak, Z-CAN was implemented across all five public health regions and 69% of municipalities (54 of 78), through 153 physicians at 139 clinics between April 2016 and September 2017.[1]

PERSON

Approximately 138 000 women in Puerto Rico were estimated to be at risk for unintended pregnancy at the onset of the 2016–2017 Zika outbreak.[4] The number of health care providers in Puerto Rico who offered contraception, specifically long-acting reversible contraception (LARC), was limited by lack of training and inadequate reimbursement.[4] Women of reproductive potential in Puerto Rico were eligible to receive Z-CAN services regardless of age or insurance.

PURPOSE

To address the urgent public health need during the 2016–2017 Zika outbreak in Puerto Rico, CDCF launched Z-CAN as a short-term emergency response to increase access to contraceptive services.

IMPLEMENTATION

We considered several key domains during the program design and rapid implementation of Z-CAN, including procurement and supply chain for contraceptive methods, development of data collection and management systems, building capacity among

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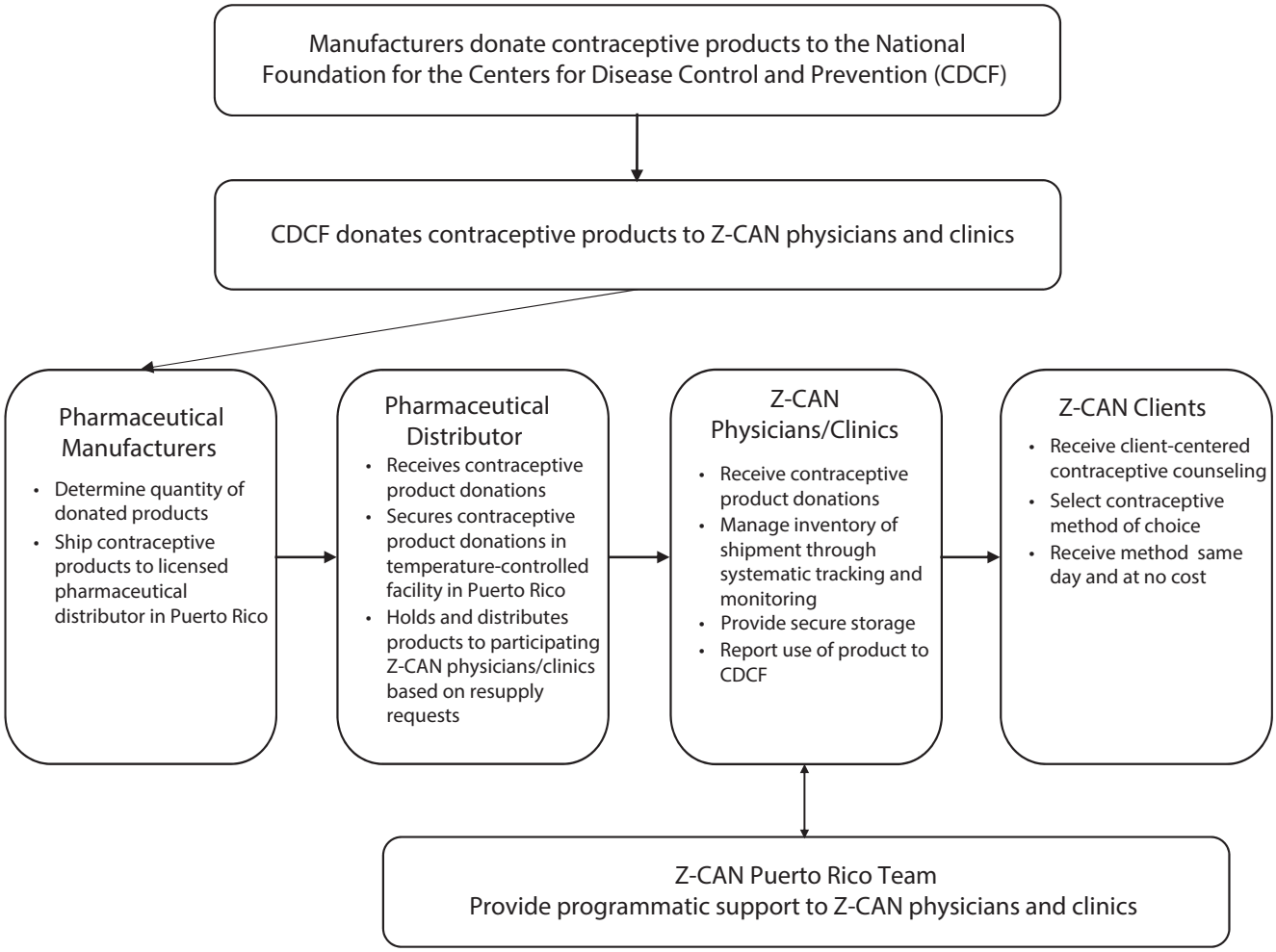


FIGURE 1—Chain of Custody for Contraceptive Product Donations for the Zika Contraception Access Network (Z-CAN): Puerto Rico, 2016–2017

health care providers and staff to implement the intervention, and the development of health communication strategies to reach and engage the target audience and maximize the opportunities for success. In order to ensure rapid implementation, a multidisciplinary group of public–private partners were critical for leadership, technical, and programmatic support.

Public–Private Partnership

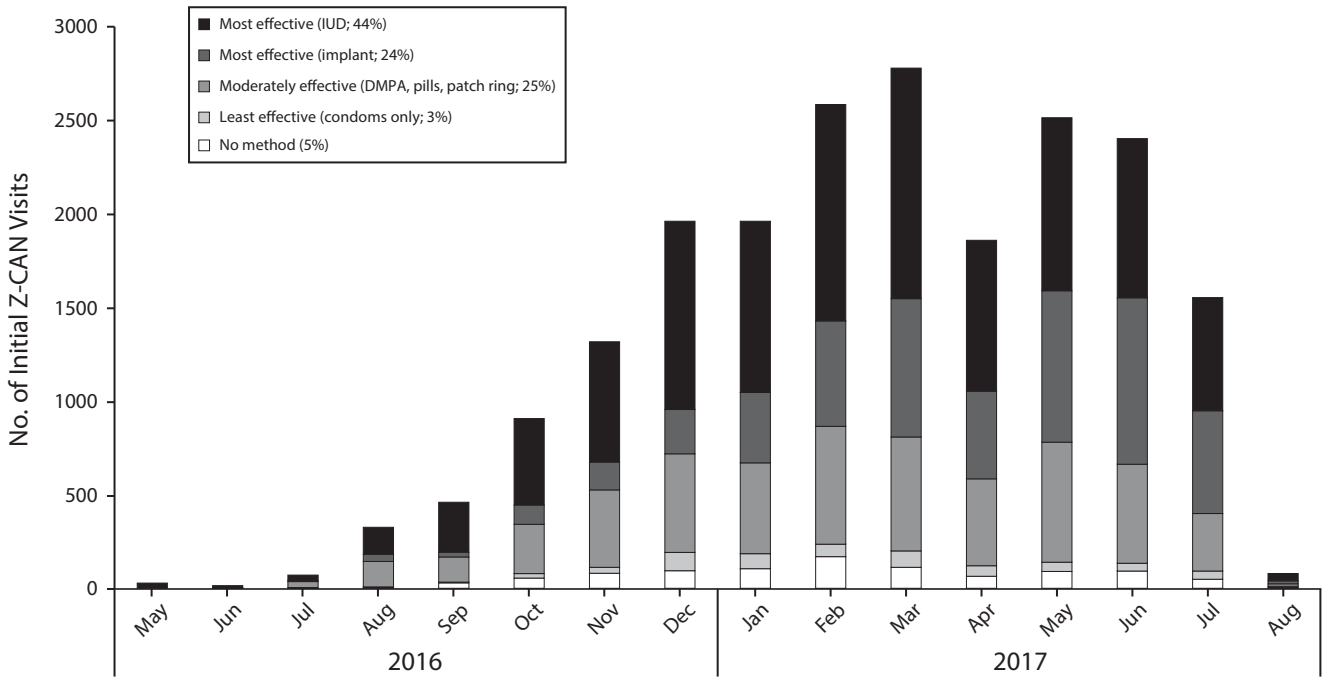
Public–private partnerships, including federal agencies, territorial health agencies, private corporations, and domestic philanthropic and nonprofit organizations, were critical in the program design and rapid scale up. The CDCF secured contraceptive products to make the full range of FDA-approved reversible contraceptive methods available. Private organizations donated resources for physician and staff training and proctoring, physician reimbursement, infrastructure costs, and a health communication campaign.

Distribution, Inventory, and Reimbursement

Z-CAN established a chain of custody for receipt and distribution of contraceptive products to Z-CAN clinics to comply with federal and territorial regulations (Figure 1). The Puerto Rico Department of Health issued waivers to Z-CAN physicians to allow on-site stocking of contraceptives for same-day service provision. Z-CAN clinics were required to track receipt and distribution of all contraceptives provided through the program and agreed to offer client-centered contraceptive counseling and contraceptive methods at no cost to women seeking services. Z-CAN implemented a data collection and monitoring system for service reimbursement and product restock. Reimbursement rates for Z-CAN visits and procedures were commensurate with Medicaid reimbursement rates in the continental United States.

Network of Trained Physicians and Clinics

Z-CAN recruited, trained, and proctored 153 physicians across Puerto Rico in one of eight Z-CAN trainings from April to December 2016.[1] Proctoring, including direct observation of contraceptive



Note. DMPA = depot medroxyprogesterone acetate; IUD = intrauterine device; Z-CAN = Zika Contraception Access Network. Proportions may not add to 100% because of rounding. Monthly tallies may change because of delays in data receipt or entry. Cumulative visits reported (21 124) are for data available as of August 15, 2017.

FIGURE 2—Zika Contraception Access Network (Z-CAN) Service Delivery and Impact by Month and Method Mix: Puerto Rico, 2016–2017

counseling and intrauterine device insertion, was conducted by expert family planning clinicians to ensure delivery of high-quality care.

Health Communication Campaign

A health communication campaign was developed to educate women about options to prevent unintended pregnancy in the context of Zika and raise awareness of the full range of contraceptive methods available through Z-CAN. In November 2016, Z-CAN launched *Ante La Duda, Pregunta* (If in Doubt, Ask; http://www.anteladudapregunta.org), a social marketing campaign that encouraged women to initiate conversations about contraception with a health care provider. Campaign strategies included social media, community engagements, public service announcements, and a clinic finder tool. Key communications metrics included 21 000 Facebook page likes, 175 000 Web site homepage visits, 27 000 Z-CAN clinic searches, 121 million impressions (e.g., recorded spots, public service announcements, blog, Facebook, Twitter, Instagram), and 33 community engagement events.

Service Delivery

Between May 4, 2016, and August 15, 2017, 21 124 women received Z-CAN services.[1] The number of initial Z-CAN visits by month rapidly increased between August 2016 and March 2017 (Figure 2), reflecting the program's rapid scale up. Method mix by month was consistent over project period; approximately 68% received a most-effective method, 25% a moderately effective method, 3% a least-effective method, and 5% did not receive a contraceptive method. Nearly all (95%) women received a contraceptive method on the day of their initial visit.[1]

EVALUATION

We developed a mixed-method evaluation to assess (1) women's knowledge and perceptions of facilitators and barriers to accessing contraception in Puerto Rico, (2) Z-CAN physician and clinic staff perceptions of areas for Z-CAN program improvement and sustainability, and (3) contraceptive use patterns and continuation rates, unintended pregnancy, and unmet need for contraceptive services. Overall, women had some awareness about different contraceptive methods; however, awareness of LARC methods was low. Zika in Puerto Rico was not a motivating factor in pregnancy planning or contraception decision-making; instead, economic factors were the major drivers. Quality improvement feedback from Z-CAN physicians and clinic staff related to changing clinic norms (e.g., integrating client-centered contraceptive counseling into current practice, provision of methods previously unavailable) and raising awareness of Z-CAN services among women. Z-CAN served more than 21 000 women seeking to prevent pregnancy during the risk period for Zika virus infection and might have prevented adverse reproductive outcomes related to prenatal Zika virus infections. A cost-effectiveness model estimated that increasing access to contraception in Puerto Rico during a Zika virus outbreak could reduce Zika virus–related costs by $65.2 million.[3]

ADVERSE EFFECTS

We incorporated ethical considerations and safeguards into program design to limit adverse effects and unintended consequences. Safeguards to ensure no-cost LARC removal after the program's end included bundled LARC insertion and removal reimbursement at the time of insertion to cover future removal costs. The CDCF developed a safety net (up to 10 years) with communication channels (i.e., Web site, hotline, e-mail) for women to find a Z-CAN physician for LARC removal and contracted with select Z-CAN providers for consultation and services for complicated LARC removals.

SUSTAINABILITY

Activities after Z-CAN are directed at reducing barriers and increasing access to contraception and preparing for other emergencies in Puerto Rico. Physicians across Puerto Rico who participated in Z-CAN have the capacity to provide high-quality contraceptive services. Women in Puerto Rico have increased awareness of the full range of reversible contraceptive methods. Before Z-CAN, Puerto Rican women with public insurance were referred to a Medicaid managed care organization clinic for contraceptive services (13 clinics across the island, representing 12 of 78 municipalities). Contraceptive access points increased from these 13 publicly funded sites to 139 public and private sites, and efforts to sustain contraceptive services are in process.[1] Expanding contraceptive access before a Zika epidemic or emergency would be advantageous and is highly recommended.

PUBLIC HEALTH SIGNIFICANCE

Z-CAN met an urgent public health need in Puerto Rico by providing women options to prevent pregnancy during the Zika virus outbreak. Contraception was a medical countermeasure during the Zika outbreak and may be considered as a key strategy for other settings in other emergencies that pose a risk to pregnant women and their infants. AJPH

CONTRIBUTORS

All of the authors contributed to the literature search; study design; data collection, analysis, and interpretation; and article preparation. The Z-CAN Program Development Working Group members collectively contributed to the study design and rapid scale-up of the intervention implementation.

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Note. The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

HUMAN PARTICIPANT PROTECTION

Implementation of Z-CAN was approved by the Centers for Disease Control and Prevention as public health practice and institutional board review was not required.

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