Evaluating Florida Systems of Care for Zika Infected Individuals

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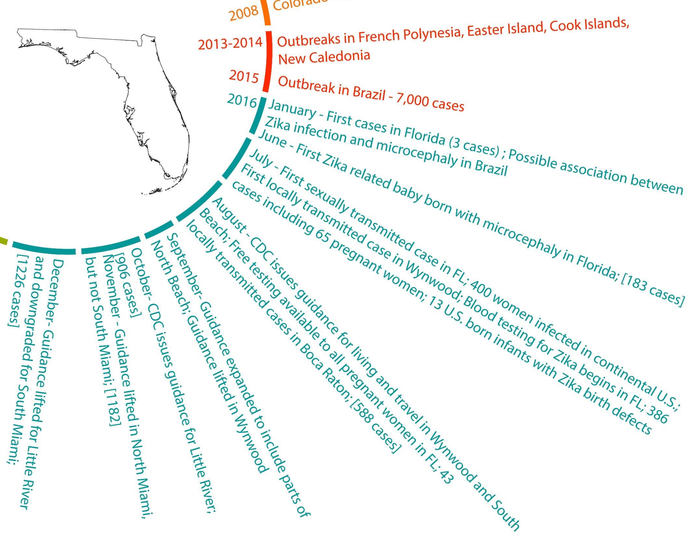
Background

In 2016, the Center for Disease Control and Prevention (CDC) issued a guidance to all pregnant women traveling to, or living in South Florida warning them about the dangers of the of Zika Virus outbreak within the Miami-Dade area (shown below). In order to better understand the systems of healthcare in Florida for Zika-positive individuals, we followed the Florida Department of Health's (FDOH) Zika process maps for pregnant women who were seeking testing in the Miami-Dade and Broward area. By using journey mapping approach in conjugation with focus groups and interviews, we were able to take a more personal look at the systems of care to identify patient points of contact, key partners and agencies, and strengths and challenges within the system.

Zika Timeline: Florida System of Care

In their evaluation of Zika management systems of care and patients' points of care, the Florida Birth Defects Surveillance Program research team at the University of South Florida followed the evolution of the Zika virus from it's first case in 1952 to its most recent cases in the United States.



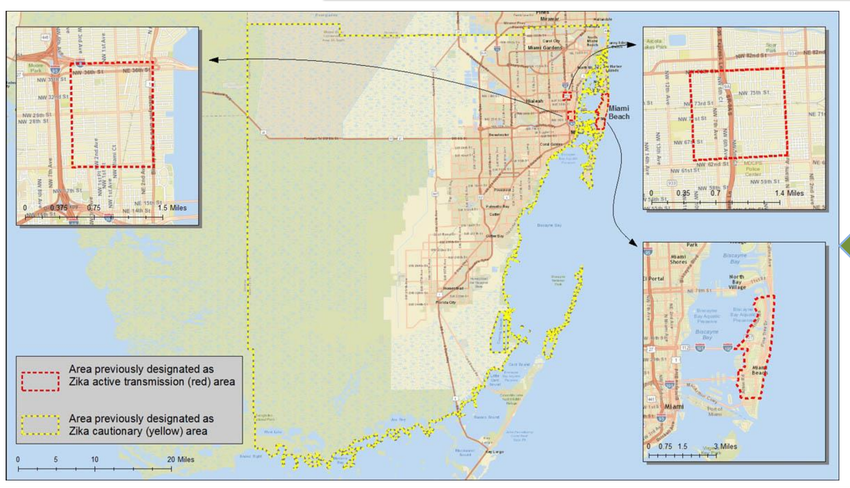
Purpose

Objective 1

- Use journey mapping methods to map the system
- Show the journey a Zika-positive mother must undergo (Fig. 1)
- Follow the steps taken to control an outbreak (Fig. 2)
- Present timeline tracking global spread of Zika

Objective 2

- Conduct interviews and focus groups
- Identify strengths and challenges within the system(s)
- Using a modified WHO Health Systems Framework, analyze interviews for recommendations on six essential building blocks needed for an effective health delivery system



Map of active Zika zones in South Florida during 2016

Methods

- Using the Journey mapping method, we followed the FDOH's Zika process maps that illustrate how to obtain free testing as a pregnant woman and the steps involved before and after her birth.
- Each organization/agency was contacted and comparable interviews were conducted using prewritten questions that allowed for open dialog while focused on particular topics such as new partnerships, strengths/challenges within the systems, or the role of their organization in addressing the outbreak and/or pregnant women.
- Themes and exemplary quotes were identified in the transcripts. Further analysis was performed using MAXQDA, a coding software that allowed us to highlight and tag responses of the interview for the six building blocks of a health system as well as strengths, challenges, and recommendations given by those working with Zika.
- These building blocks are based off a modified WHO Systems Framework. The WHO Health Systems framework was created to help monitor and evaluate systems of care in a standardized and sustainable manner. We modified the original framework to better suit the goals of this evaluation and the input provided by those we interviewed. A brief description of the building blocks can be seen below.

Service Delivery	Funding & Resources	Health Networks	Health Information Systems	Access to Essential Medicine	Leadership & Governance
• Providers of any health services, case work, disease/vector control and their roles within the system(s)	• Resources or money allocated to outbreak management or health services for Zika-positive individuals	• Coordination of communication channels in order to facilitate sharing of resources and information between agencies	• Collection, reporting, analysis, and sharing of data related to Zika-positive pregnancy, birth outcomes, or disease prevalence	• Availability of safe and effective medical products, screenings, treatments, or specialty care	• Regulatory or governmental offices tasked with creating policies or guidelines involving Zika control or clinical guidelines

Results

Building Blocks

- **Service Delivery** — • Strengths/Gaps • Quote
- **Access to Essential Medicines** — • Strengths/Gaps • Quote
- **Funding & Resources** — • Strengths/Gaps • Quotes
- **Health Networks** — • Strengths/Gaps • Quotes
- **Health Information Systems** — • Strengths/Gaps • Quotes
- **Leadership & Governance** — • Strengths/Gaps • Quotes

Journey Mapping

Figure 1. Zika Point of Care Map

An evaluation of a patient's points of care was conducted by the Florida Birth Defects Surveillance program research team at the University of South Florida by examining their journey through treatment and management of a Zika infection. Qualitative data was collected using interviews and focus groups from experts in Miami-Dade and Broward counties, and at the state level.

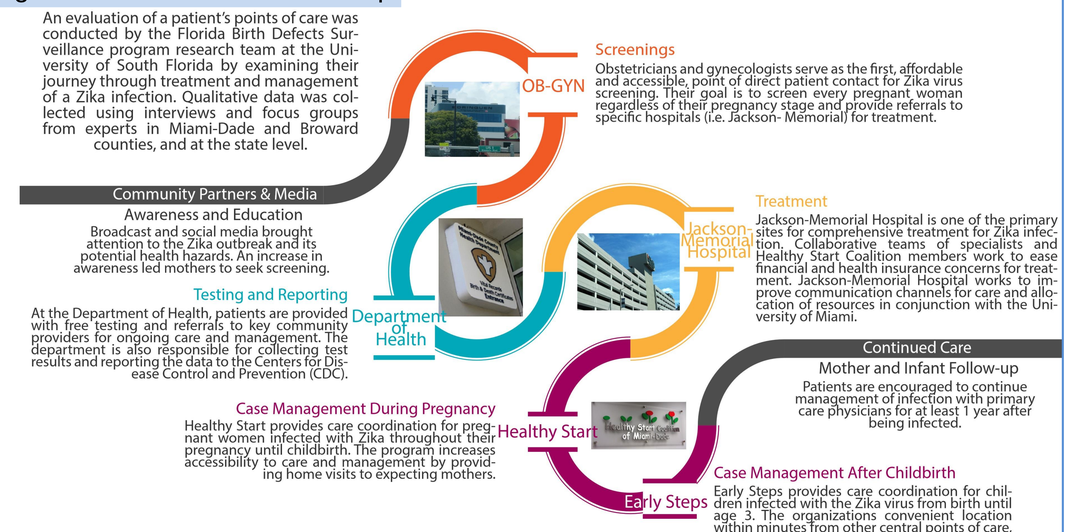
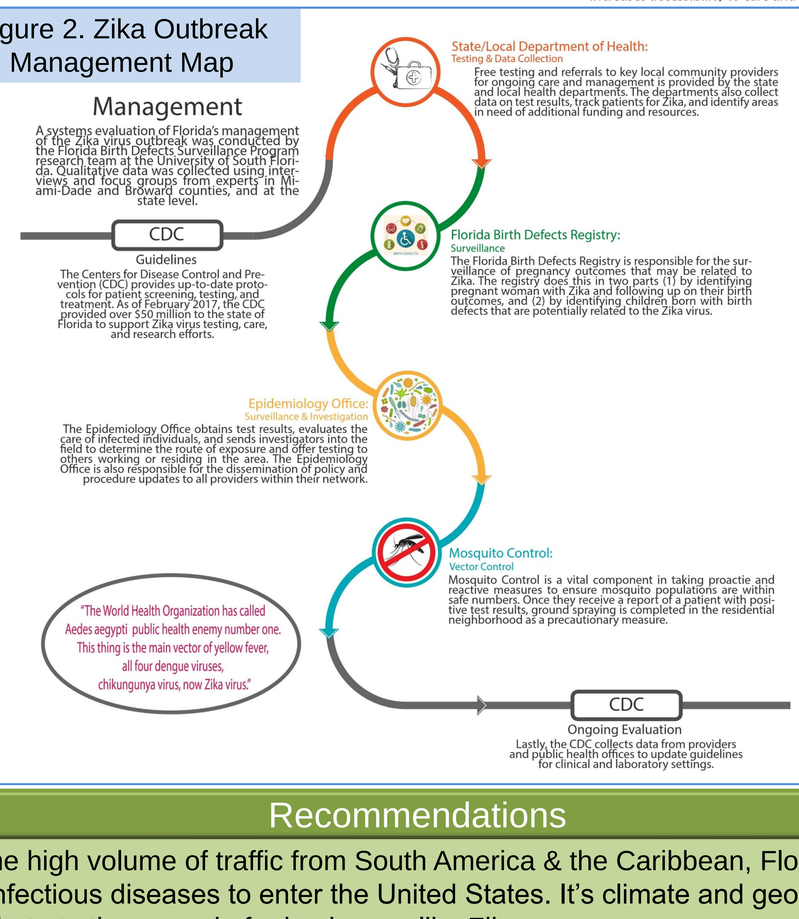


Figure 2. Zika Outbreak Management Map



Recommendations

- Because of the high volume of traffic from South America & the Caribbean, Florida is a potential gateway for infectious diseases to enter the United States. It's climate and geography play also heavily contribute to the spread of arboviruses, like Zika.
- Therefore, it is essential for Florida to be prepared to control outbreaks that might occur. While the Zika outbreak was successfully controlled, the experience with the virus tested the adaptability and cooperability of those key players in the system.
- The viral outbreak forged new partnerships between agencies in the State that previously had no communication because there simply was no need. Data collection and disease surveillance strategies also had to be adjusted to better suit the Zika virus outbreak.
- The high number of cases also allowed Florida to be the forerunner of updating CDC testing guidelines by confirming the ability to urine tests in Zika screenings.

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