Using Data and Technology to Rapidly Respond to Public Health Emergencies

In 2016, epidemiologists recognized an outbreak of Zika virus, a mosquito-borne illness, was linked to devastating birth defects in Brazil. Furthermore, it was discovered Zika could also be spread through sexual transmission. In response to this unprecedented threat, the Centers for Disease Control and Prevention (CDC) launched a comprehensive behavior change communications campaign in the continental U.S. and Puerto Rico to protect future generations from Zika’s effects.

Committed to meeting this complex communication challenge head on, Abt Associates worked closely with CDC to rapidly develop and deploy a comprehensive, evidence- and research-based behavior change campaign to reach, engage, and protect the most vulnerable populations during the public health emergency. Success was realized through a blended approach which included conducting ongoing evaluations throughout the life of the communications initiative to help inform message content; adjusting messaging to reflect knowledge, attitudes and beliefs about Zika; maintaining cultural sensitivity of messages and materials; and precisely targeting at-risk populations with a multi-tiered digital/social media response optimized to reach the multiple audiences of the different campaigns.

As Zika rapidly spread in Puerto Rico, and with outbreaks expected in several U.S. regions, Abt used existing formative research and a variety of innovative approaches such as social media-based A/B testing, real-time data analysis and visualization, and online behavioral intent studies, to quickly design, test and deliver critical information, and also to pivot the campaign’s messaging and media distribution as needed to maximize the uptake of prevention behaviors.

Starting with a response in Puerto Rico, the Abt team implemented a full-scale media campaign on the Caribbean island, distributing prevention messages through the radio, on billboards and in social spaces such as bus shelters, malls, restaurants, bars, and grocery stores, in magazines and newspapers, as well as digital and social media channels. Whenever possible, messages were targeted towards the most vulnerable population suffering Zika’s ill effects—pregnant women, women of childbearing age who may be thinking of becoming pregnant, and their partners.

Alongside the work in Puerto Rico, Abt simultaneously tested Zika prevention messaging in the continental U.S., refining the campaign as new science about the disease emerged. Abt utilized epidemiological data and a geo-targeting strategy to stay in front of the crisis, developing several “Day One” scenarios in preparation for potential outbreaks in 20 high-risk states. As a result of this innovative approach, when the Wynwood neighborhood of Miami, Florida confirmed the presence of Zika, messages were successfully pushed out within 2-3 days helping to minimize the further spread of the disease and arm residents and tourists alike with knowledge about how to protect themselves from Zika.
As news coverage of Zika waned and the public’s perception of the associated risks began decreasing in early 2017, Abt worked with CDC to keep up a steady drumbeat about the ongoing threat of the disease. Additionally, the Abt team modified messaging to focus more heavily on adopting and consistently taking preventative actions, reduced complacency by better defining the risks and appealing to the innate human desire to protect babies, and ensured the evolving research around Zika and risk communication were kept front and center throughout message development and delivery.

As a result of the innovative use of data and technology, and a capacity to pivot to change, initial impressions data across all media platforms indicate the campaign successfully reached almost 12 million in Puerto Rico (including over 5 million likely pregnant women), and 26 million people in the U.S (including almost 7 million likely pregnant women).