User-Centered Design of a Texas WIC ChatBot: Formative Investigation

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Abstract

Introduction
- The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) serves people at nutritional risk, including:
  - Low income pregnant, postpartum, and breastfeeding women
  - Children from infancy to the age of 5
- WIC provides:
  - Vouchers for healthy foods
  - Health care referrals
  - Nutrition education counseling
- Enrollment has been declining.
- Most WIC participants use smartphones, and many choose to take their nutrition education classes from WIC online.
- While there is information regarding eligibility on the Texas WIC website, there is currently no way for potential participants to ask questions about eligibility and make appointments.
- We collaborated with Texas WIC to obtain USDA funding to investigate developing a ChatBot to meet this gap.

Objective
- To develop a WIC ChatBot prototype based on input from stakeholders and potential users.

Methods
- Compliant with the university IRB.
- Employed User-Centered Design to the process of developing the WIC ChatBot prototype (Figure 1).
- The first step, reported here, involves concept generation based on results of online group interviews and focus groups with:
  - Stakeholders in Texas WIC and cooperating states and territories: 1 focus group, 2 group interviews, n=7
  - Texas WIC clinic directors: 1 group interview, 3 focus groups, n=13
  - Texas WIC staff: 1 group interview, 3 focus groups, n=12
- Participants were recruited via email and phone calls.

Figure 1. User-centered Design of ChatBot

Figure 2. Themes and Quotes about the ChatBot

May increase clinic efficiency by:
- Reducing the amount of clinic calls
- Beginning registration online
- Scheduling appointments online

In the very beginning, where they're not needing a staff member directly to answer the phone, to answer basic questions about income guidelines or even scheduling the first appointment.

May decrease clinic efficiency by:
- Overbooking appointments
- Not syncing with agency's booking system

There's so many different questions and so many ways to approach client questions that if it's an automated chatbot it might just make things more difficult.

Figure 3. ChatBot Personality

Hi there! I'm Mimi, the Texas WIC ChatBot. I'm here to answer your questions about WIC, the Texas nutrition program for pregnant and breastfeeding women and families with children younger than 5.

How can I help you today?

Do I qualify for WIC?

Let's see if you qualify. Are you pregnant, or do you have children under the age of 5 who live with you?

Yes

Great! That's the first step. What is your full and last name?

Alice Brown

What We Know So Far

- Participants were enthusiastic.
- A WIC Chatbot was described as a technician to increase clinic efficiency. Participants were excited about the potential ability of Chatbots to inform clients and reduce clinic calls, and help with the new client registration.
- A Chatbot may help provide information to clients such as clinic information, basic nutrition education, and a description of WIC client benefits.
- Participants were most concerned about areas that the ChatBot would create more work for WIC staff.
- Participants should be friendly and personable but also consider age, region, language, and stress level of individuals.

References
1. Designing a WIC App to Improve Health Behaviors: A Latent Class Analysis
2. User-Centered Design of a Texas WIC App: A Focus Group Investigation

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