Mobile App for WIC Families

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Development of CHEW App for WIC Program
The Special Supplemental Nutrition Program for Women, Infants and Children (WIC Program)
PROBLEM

WIC works but enrollment is declining

Barriers to using WIC exist at the clinic and store

WIC Participants desire EFFICIENCY

Improvements are needed at the clinic, vendor, and administrative levels

WIC needs updated tools to help future generations

Technology could ease the use of WIC, increase redemption of WIC foods, and improve diet quality of WIC participants
CURRENT PRACTICE
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Suboptimal Redemption – Low Satisfaction – Dropping Out of Program
TECHNOLOGY SOLUTION
Mobile App for WIC Families

• Supported by USDA AFRI Grant
• Developed and user-tested the CHEW app for WIC families
  • Apple (iOS) and Android platforms
  • English and Spanish
• Provides easy, practical ways to shop for WIC plus nutrition education

Intended Outcomes:

Increased:
• Redemption
• Satisfaction
• Retention

Improved:
• Dietary Intake
• Child feeding
• Home food environment
Version 1 Prototype
- Needs assessment
- Input from WIC participants & program
- Grad student build prototype
- Iterative feedback from committee
- Test w/ 80 users
- Post survey feedback

Version 2 Development
- WIC partnership
- Contract developer and userX designer
- Iterative user testing
- User interface design
- Connection with WIC server
- Data security & privacy

Version 2 Deployment
- Field testing
- Debugging
- Pilot county
- Matched counties – delayed control design
- Analytics on all
- Survey sample
- Dietary intake on subsample
- Sustainability plan
User experience (UX) testing for CHEW

- Qualitative Interviews
  - Participants: WIC caregivers of 2-4 year old children
  - Baseline testing: 22 participants
  - 3 follow-up rounds of iterative testing (3-4 per round)
  - 32 total interviews

- Interview Protocol
  - WIC experience
  - Using smartphone technology
  - Mental models: recipes, lists, WIC shopping
  - Feedback on draft screens

- Desirable app features
  - Cart sorting activity
  - Prioritization of features
  - Natural groupings
UX testing for **CHEW**

Qualitative Analysis
- Interview transcripts coded
- Constant comparative analysis

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**EMERGING THEMES**

- Desire for efficiency in WIC
- Desire to maximize WIC benefits

"Trying to get it done, trying again, trying to make it efficient, trying to maximize the benefit and do it all quickly in the store. I’ll try to make it as quick as possible. Plus you know you still got to get home and do homework and get ready for school the next day and you know you don’t want to spend a whole lot of time in the store." (WIC Caregiver; parent of 2 children)

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**USER PRIORITIES**

- Balance checking
- Bar-code scanning
- Appointments
- Recipes

"I think the ‘scan items to validate that it is WIC’, that’s a good [app feature]. I think that’s like the biggest one. Just to make sure. I have come across that a lot with just making sure that it is a WIC item. That’s like the biggest thing." (WIC Caregiver; parent of 1 child)
UX Design of Core Features

- **Opening Screen:** Check WIC Balance
- **WIC Food Rx Details** ‘behind the buttons’
- **Shopping List Feature**

- Add Items from available WIC Balance
- Add Items from personal shopping list
- Indicates whether item is WIC covered AND available from current balance
UX Design of Core Features

Recipe Feature: 500+ Healthy Recipes
- Search recipes by diet type, cook time, etc.

‘Inside’ a Recipe
- Add to meal plan
- View Meal Plan

Standard Nutrition Facts Label for each Recipe
- Calories
- Nutrition facts

Meal planning tool
UX Design of Core Features

Profile Screen with Menu of App Features

Map Feature: Find a WIC Store
Implementation in WIC Program
IMPLEMENTATION IN WIC CLINICS

• Train-the-Trainer Approach
  • Tennessee State University – Cooperative Extension Program
  • Teaches individuals (WIC staff) who will then teach the end user (WIC clients)
IMPLEMENTATION PLAN

1. Development of Training Materials
   - Training modules
   - PowerPoint presentation
   - Instructional videos
   - Instructional pamphlets
   - Webinars

2. In-Person Training of WIC Staff
   - Conduct staff training in WIC clinics throughout TN
   - Schedule visits to each clinic
   - Deliver educational materials
   - New staff training

3. WIC Staff Train Clients
   - Flow with WIC visit
   - Check-in and receive CHEW flyer
   - Download and set-up app in waiting room
   - QR code to link to WIC ID
   - Brief orientation
   - Provides handouts

4. Ongoing Support and Evaluation
   - Technical support to staff
   - Webinar for new hires
   - Online refresher courses
   - In-person follow-ups as needed
   - WIC staff survey
TRAINING MODULES

"CHEW How-To"

- Video Tutorials - 15-30 seconds long
  Overview of specific features
  Full version in WIC waiting rooms
  Accessible online and in-app
- Instruction sheets and pamphlets
  Quick-start guide
  Images and infographics

"Training Participants to Use CHEW"

- Includes the "CHEW How-To" module
- PowerPoint presentation for in-person training
  Step-by-step instructions
  Different learning styles
  Comfort level with smartphone apps
- Webinar version for new hires
TRAIN-THE-TRAINER SESSION

ICE BREAKER ACTIVITY
- Introductions
- Builds Rapport
- Increase Engagement

SURVEY AND DISCUSSION
- Comfort with Smartphone Apps
- Confidence Training Others
- Perceived Benefits

BACKGROUND AND BUY-IN
- Info on WIC Apps in Other States
- Background on CHEW App
- Benefits of CHEW App
TRAIN-THE-TRAINER SESSION

CHEW HOW-TO MODULE

- CHEW Set-Up
- Hands-On Activities
- CHEW Features

TRAINING PARTICIPANTS TO USE CHEW

- WIC Staff Trains Each Other
- Hands-On Activities
- Tailoring for Different Learning Styles

INCORPORATING CHEW INTO WIC VISITS

- Download and Set-Up App in Waiting Area
- QR Code Links to WIC ID
- Nutritionist Trains/Individualized Nutrition Education
CHEW App as Dissemination Tool
Recipes and Meal Planning
Townsend Lab: Self-Assessment Quizzes

Validated assessment tools for print and web

Target: Low-income parents / caregivers of pre-school age children
Platform to Integrate Existing Tools: Healthy Kids & My Child at Mealtime Quizzes

CHEW App: VUMC
HK & MCMT Quizzes: UCDavis
Partnering with Partner

IDENTIFY TOOL
- Developed and tested for target population
- Low income, diverse families
- Parents of children birth to age 5
- Feasible to adapt to mobile phone

ADAPT TOOL
- Institutional agreement and approval by WIC
- Funding for software developer
- User testing and iterative development
- Funding for implementation costs

EVALUATE TOOL
- Pilot and implement
- Innovative WIC research
- Built-in app analytics
- In-app pop-up questions
- Separate surveys
- Co-author publications

Mutually-Beneficial Partnerships with Non-Profit Organizations and Universities
Team

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