Pima County, AZ Evaluation Plan

Problem Description

The Pima County Health Department (PCHD) administers the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) with a caseload of over 9,000 each month. About 37% of clients who received WIC services from PCHD in 2018 did not recertify. Local Management Information System (MIS) data from 2018 demonstrates that the group least likely to recertify are non-English speaking families with infants receiving formula benefits, and children over 1 year.

MIS data corroborates staff reports that many parents don't recertify after their child is no longer eligible to receive formula benefits. Staff has provided anecdotal data that many potentially eligible individuals may not participate because they do not know that benefits continue until age five. Another staff reported barrier is that families assume that they do not qualify financially. Staff also report that some caregivers, including single fathers, foster parents, or kinship caregivers, did not engage because they believed WIC was only for pregnant women or children whose primary caretaker is their biological mother.

To address these assumptions and keep participants on the program longer, PCHD will utilize a text messaging campaign known as WICBuzz, a communication strategy that sends, or "drips," a pre-written set of messages to clients designed to increase nutritional and programmatic knowledge and timed to encourage program retention. The goal of this project is to implement and evaluate this drip-marketing innovation in terms of feasibility, acceptability, and impact on participation and retention of children in the WIC program. The SMART objectives are provided below, and a logic model for this project is provided in the Appendix. To provide plausible evidence of impact on child participation and retention, the project will compare WIC MIS data on participation and re-certification (retention) of infants and children 1-4 y from Pima County and Pinal County WIC both before and after the implementation of WICBuzz. The baseline or pre-implementation period will be January 1, 2019 to December 31, 2019, with the implementation period being the subsequent year from March 1, 2020 through February 28, 2021. **UPDATED JULY 2020:** The dates for the baseline and implementation periods changed as a result of the COVID-19 pandemic (see Update/changes due to COVID-19 below).

Description of the Innovative Tool

PCHD's innovative tool is WICBuzz, a drip marketing text message campaign. The campaign features targeted nutrition education and WIC brand awareness messages aimed at parents and guardians of children from birth to age four who are currently enrolled with PCHD WIC. The messaging will be distributed at a minimum monthly, and no more than weekly. One challenge of this tool will be to determine what number and frequency of messages will be welcomed by WIC Buzz participants, and at what number do the messages become undesirable and participants opt out. Ad hoc messages will also be employed to remind or educate caregivers of when recertification is due and how the recertification process works. WICBuzz messaging will be designed based on the participants' primary language (English

or Spanish) and child's age. Participants have the option to opt out of receiving messages by replying STOP to a message. This innovative drip text massaging campaign is intended to encourage timely recertification, increase participation and increase redemption of food benefits.

SMART Objectives

The SMART objectives consider the project activities for implementation and data collection as well as the metrics to evaluate evidence for the feasibility, acceptability and impact of WICBuzz on child participation and retention in WIC.

Goal	Objective
1. To document an innovative and replicable interactive tool development process for use by WIC clinics and agencies beyond Pima County	A. Document planning strategies and activities throughout the planning phase (3 months) and implementation phase (12 months) of the project.
	B. Develop at least 24 English and Spanish-language messages for the parents or guardians of PCHD WIC clients ages birth to four by the end of the three-month project planning phase. Messages will feature information about WIC services and eligibility, how to maximize benefits, and nutrition education for each identified program subpopulation
	C. Acquire necessary licensing for text messaging campaign management service by the end of the three-month project planning phase.
	D. Initiate drip marketing text message campaign within three months of the start of the project implementation phase or upon funder approval.
	E. Track client engagement with WICBuzz by monitoring opt-out, message delivery rates, and clicks at least monthly for the duration of project implementation and investigate potential reasons for failed message delivery and opting out.
	F. Conduct qualitative data collection with PCHD WIC program staff to catalogue feedback on the WICBuzz implementation process strengths and weaknesses, including fidelity to plans developed during the project planning phase, by April 30, 2021.
	G. Design and administer a client feedback survey by April 30, 2021 including an assessment of the degree to which WICBuzz added value to the WIC client experience.
	H. Complete analysis of quantitative and qualitative process data by May 31, 2021.
To utilize a quasi-experimental design and	I. Knowledge of WIC services and eligibility, ways to maximize benefits, and nutrition education among parents and guardians of children birth to 4 will increase by the end of the project.

MIS data to evaluate the impact of WICBuzz on retention, participation, and benefit redemption among children ages 1-4.	J. Change in child retention (from baseline period) will be more positive after implementation of WICBuzz as compared to changes in the comparison agency.
	K. Change in average monthly participation for all child categories will be more positive after implementation of WICBuzz compared to changes in the comparison agency.
	L. Compared to baseline period, changes in monthly benefit issuance will be more positive compared with changes in the comparison agency.

Implementation Activities

To implement the WICBuzz innovation, there are protocols to be developed or approved, pre-testing of the tool, and the development of training materials and training of the WIC staff. These are detailed below.

Implementation Protocols
- Educational Messaging System: Educational Messaging System (EMS) is a texting platform that supports drip marketing campaigns. In other words, EMS sends programmed messages to selected groups at selected dates and times. The WICBuzz team developed the messages, selected the groups and scheduled the message release times.
- Selecting Clients for the WICBuzz Intervention: As part of an intake visit, WIC staff ask clients if their primary number is a cell phone and, if so, are they willing to receive text messages at that number. The majority of clients agree to accept text messages and request to be set up in the automated text appointment reminder system. The WICBuzz team opted-in all clients that consented to receive texts from WIC into the WICBuzz intervention. This was permissible as long as in each message, clients were given instructions on how to opt themselves out of the intervention. For that reason, "Text Stop to stop receiving messages" was added to each WICBuzz message.
- Creating a submission for EMS of Active WIC clients in WICBuzz
  - Client Data Request to ADHS: The WICBuzz team asked for a report in an Excel format from the Arizona Department of Health Services (ADHS) of families who opted-in to receive text messages.
  - The master dataset was then divided into subsections for participant category and language.
  - Each worksheet was clearly labeled with the appropriate age/language identifier in order to be imported into the age- and language-appropriate EMS message campaign.
- Preparing Client Data to Upload to Education Messaging Systems (EMS)

- o Client identifiable information not needed to associate them with the age- and language-appropriate message campaign, was removed prior to sharing the datasets with EMS.
  - o Datasets (Excel spreadsheet format) were emailed securely to EMS.
  - o The project's dedicated EMS representative uploaded the prepared datasets into the EMS platform, ensuring that the clearly labeled age- and language-appropriate datasets were matched to the corresponding message campaigns.
- Rules for editing client data: The WICBuzz team understood that families with multiple children in different age categories could receive up to four messages per month. It was important to ensure that families would not receive the same message multiple times. The WICBuzz team together with EMS partners programmed messages to ensure that participants did not receive duplicate messages.
- Text WICBuzz 85511 to Opt-in: The WICBuzz team worked with EMS to set up an opt-in system for WIC clients interested in participating in WICBuzz that were not enrolled in the intervention at the time of the March 2020 launch. WIC clients would be asked by WIC staff to opt in to WICBuzz at their scheduled WIC appointments. Also, promotional materials, including posters, fliers and oven mitts with the WICBuzz logo indicated to clients that they could text WICBuzz to 85511 to opt themselves in. The WICBuzz team worked with EMS to create a welcome message for clients that opted into the program as well as an algorithm that would help the client get into the correct age group for their child.
- Required Opt-out Option: By law, individuals must be able to opt themselves out of a text marketing campaign. Therefore, included in each WICBuzz message was the phrase, "Text Stop to stop receiving messages".

Implementation Training Materials: WICBuzz Staff training began with the introduction of the innovation at an all staff meeting. A description of the project and its purpose as given. Discussion of what type of text messages could be sent and the brainstorming for the title of the innovation as made, this is how the drip marketing campaign was named.
At subsequent Pima County WIC staff meetings, WICBuzz training and discussions continued. The discussions included brainstorming of WIC topics to be used in the text messages, what sort of incentives could be used to promote the campaign, logo improvements and progression of the WICBuzz intervention. PowerPoint presentations were made to include messages to be used, images of posters and how to opt-in to WICBuzz (Attachments C and D).

Innovative Tool Adaptation and Pre-Test: Adaptation of the WICBuzz innovative tool began with the development of English and Spanish-language messaging focused on increasing the perceived value of the WIC program for parents and guardians of children in the program. Some of the messages have been shared with parents and guardians of all children, while nutrition messages were developed specifically for defined age categories. The categories are birth to age one, ages one to two and two through four. Early in month two,

both PCHD WIC staff and staff from the Arizona Department of Health Services (ADHS) ADHS staff created a variety of messages to best target the audience and retain clients in both WICBuzz and WIC. The last step in the message approval process was receiving the approval from the USDA FNS program.

PCHD WIC staff worked with EMS to develop the WICBuzz messaging platform. PCHD WIC staff also worked with ADHS to compile a list of all WIC clients with infants or children up to age five. Once messages were developed and uploaded onto the EMS platform, all PCHD WIC clients within this category were opted into WICBuzz, with the option to opt out at any time.

Several messages were tested in a pilot group comprising PCHD WIC staff. Staff were asked to opt into WICBuzz and received two to three messages. Staff provided feedback on the potential of these messages to improve participation, redemption, and retention.

Update/changes due to COVID-19
After the development of text messages targeting various client age-groups and their approval by FNS, implementation began on March 6, 2020 with the first WICBuzz message sent to all clients who had given permission to receive text messages. Since this date, messages have been sent according to a message schedule without interruption. While project implementation did not pause due to COVID-19, clinic operations shifted from in-person visits to phone visits on March 21, 2020, due to COVID-19 with FNS approval of a physical presence waiver for the state of Arizona. Appointments have not yet returned back to in-person visits as of February 2021. Because of these changes at PCHD, changes were made in the data periods for the program evaluation. Therefore, the baseline or pre-implementation period was changed to be the calendar year of 2019, and the implementation period to be March 1, 2020-February 28, 2021.

Evaluation Design
PCHD WICBuzz utilizes a quasi-experimental design with a pre- and post-evaluation to determine the effectiveness of the WICBuzz intervention. Outcome evaluation will integrate quantitative analysis of MIS data and qualitative summary of stakeholder perspectives to determine whether the campaign adds value to the WIC experience for clients and improves target population retention. The outcome evaluation will include a comparison between the baseline data set and the post-innovation data set, with a focus on benefit issuance, and program retention.

PCHD WICBuzz post-intervention outcome findings will be compared to Pinal County WIC, a comparison site located directly north of Pima County. Outcomes would include WIC participation, and retention (evaluation question 4). Pinal County WIC was chosen as a comparison site due to similar client demographics, with the exception of a higher percentage of clients that identify as White in Pinal

County (19.2% of children compared to 8.52%) and a higher percentage of Hispanic in Pima County (32.68% of children compared to 26.78%). In both Pima County Health Department WIC program and Pinal County WIC greater than 90% of clients selected text messaging as their preferred method of communication.

Several other agencies offer WIC services in Pima County. Another Pima County WIC agency was not selected due to client crossover between clinics, i.e., clients can receive their WIC services from numerous agencies, based on the client's convenience. Contamination of the comparison pool may have occurred if another agency within Pima County was selected. Due to distance, there are not as many client transfers between Counties as there are between agencies within the same county.

Process evaluation will augment campaign scalability by comprehensively documenting planning, implementation, and evaluation activities throughout the project. The process evaluation will include a description of clients that participated in WICBuzz, feedback from staff and participants, and a narrative description of the process.

Evaluation Questions and Indicators

The evaluation was designed to address the following questions, which reflect the SMART Objectives (see above) as well as the Logic Model (see Appendix).

Process Evaluation Questions and Indicators					
Question: Was the project implemented as intended? What were the strengths and weaknesses of the development and launch of WICBuzz?					
Indicator	Definition	Source	Frequency of Data Collection	Expectation	Analysis
Documents Obtained/ Completed	- Vendor agreement - Messages and timeline - Document that includes process for developing and deploying WICBuzz messages - Promotional Materials - WICBuzz Implementation Protocol - Data/reports: MID, vendor data, survey data	N/A	N/A	Completed documents	Documentation

Implementation Documentation	• # messages sent (monthly by category) • # staff trained on WIC Buzz • # staff trained on customer service	N/A	N/A	Record-keeping throughout the project	Documentation

Question: How did clients engage with WIC Buzz?					
Indicator	**Definition**	**Source**	**Frequency of Data Collection**	**Expectation**	**Analysis**
% opt-out by client category	# of people who opted out that month/# of people considered opted in at the start of the month * 100	Vendor data	Monthly	Less than 5% opt-out	Description and graphs visually showing trends over time
# and % of people who opted-out, by available demographics	# of people who opted out by message language, client category, other attributes as available	Vendor data	End of implementation phase	Opt-out behavior will be equitable across available demographic attributes	Descriptive analysis and graphics
Lack of text message capability	# WIC participants that do not have access to text messages or have selected "Do not contact via text"	MIS	Baseline Data Set and Post implementation data set	Low percentage	Chart showing number of clients not able to participate in WICBuzz due to lack of ability or desire to Text message by language (English/ Spanish).
% link click by message	# clicks on links in message/(# of people that were sent the message – # of people with rebounded message) * 100	Vendor data	Monthly by message	Increase over time and eventual plateau	Description and graphs visually showing trends over time

Question: How satisfied were clients with WIC Buzz?					
Indicator	**Definition**	**Source**	**Frequency of Data Collection**	**Expectation**	**Analysis**
% of clients satisfied with message length	# clients satisfied with message length/# clients who answered the question	Client Survey(s)	At least 1 time after implementation	High percentage	Description and graphs with subgroup analysis

Indicator	Definition	Source	Frequency of Data Collection	Expectation	Analysis
			first done 08/2020		
% of clients satisfied with message frequency	# clients satisfied with message frequency/# clients who answered the question	Client Survey(s)	At least 1 time after implementation begins TBD	High percentage	Description and graphs with subgroup analysis
% of clients indicating they would like WICBuzz to continue	# clients indicating they would like WICBuzz to continue/# clients who answered the question	Client post-intervention survey	1 time after implementation begins TBD	High percentage	Description and graphs with subgroup analysis
% of clients indicating that specific messages were "helpful to them"	# clients indicating a specific message was helpful/# clients who received that message	WICBuzz in-text survey	Ongoing	High percentage	Description and graphs with subgroup analysis

What is staff perception of WIC Buzz?					
Indicator	**Definition**	**Source**	**Frequency of Data Collection**	**Expectation**	**Analysis**
Staff awareness of WICBuzz	Qualitative feedback provided by staff members	Qualitative data collection (virtual focus group or key informant interviews as appropriate)	Once, post implementation	Staff provide insight into client receipt of and reactions to WICBuzz messages relative to previous agency practices (i.e., prior to WICBuzz)	Theming and summary of qualitative information

Short-term Outcome Evaluation Questions and Indicators					
Question: To what extent did WICBuzz add value to the WIC client experience (including increasing knowledge of WIC services and eligibility, ways to maximize benefits, and nutrition education)?					
Indicator	**Definition**	**Source**	**Frequency of Data Collection**	**Expectation**	**Analysis**

% of clients reporting they learned something new about their local WIC program through WICBuzz	# of clients reporting they learned something new about their local WIC program through WICBuzz/# clients answered question	Client Post-Intervention Survey	1 time at the end of the implementation period	High percentage	Description and graphs with subgroup analysis
% of WIC Clients indicating that WICBuzz helped them understand the WIC program better	# of WIC Clients indicating that WICBuzz helped them understand the WIC program better/# clients answered question	Client Post-Intervention Survey	1 time at the end of the implementation period	High percentage	Description and graphs with subgroup analysis
% of clients reporting they learned something new about nutrition/health lifestyles through WICBuzz	# of clients reporting they learned something new about nutrition- health lifestyles through WICBuzz /# clients answered question	Client Post-Intervention Survey	1 time at the end of the implementation period	High percentage	Description and graphs with subgroup analysis
Perceptions of changes in client knowledge compared to before WICBuzz	Perceptions of changes in client knowledge compared to before WICBuzz	Post-Implementation Qualitative Data Collection with WIC Staff	1 time post-implementation	Perceptions of positive change in knowledge	Qualitative Theming
% of clients indicating that WICBuzz helped them redeem more of their food benefits	# of clients indicating that WICBuzz helped them redeem more of their food benefits/# clients answered that question	Client Post-Intervention Survey	1 time at the end of the implementation period	High percentage	Description and graphs with subgroup analysis
% of clients stating that WICBuzz helped remind them to schedule WIC appointments	# of clients stating that WICBuzz helped remind them to schedule WIC appointments/# clients answered that question	Client Post-Intervention Survey	1 time at the end of the implementation period	High percentage	Description and graphs with subgroup analysis
% of clients stating that WICBuzz reminded them to attend scheduled WIC appointments	# of clients stating that WICBuzz reminded them to attend scheduled WIC appointments/# clients answered that question	Client Post-Intervention Survey	1 time at the end of the implementation period	High percentage	Description and graphs with subgroup analysis
% of clients reporting they purchased a new food or tried a new recipe mentioned by WICBuzz	# of clients reporting they purchased a new food or tried a new recipe mentioned by WICBuzz/ # clients answered that question	Client Post-Intervention Survey	1 time at the end of the implementation period	High percentage	Description and graphs with subgroup analysis

% clients reporting Benefit of having additional outlet for clients to express needs	Qualitative element	EMS, Client Post-Intervention Survey, Qualitative Data Collection with WIC Staff	Ongoing, as well as discrete data collection activities at the end of the implementation period	Various examples, positive feedback, high percentage	Qualitative theming

Long-Term Outcome Evaluation Questions and Indicators					
Question: Did WICBuzz contribute to improved retention rates of C1-C4 in the intervention sites vs. the comparison sites?					
Indicator	**Definition**	**Source**	**Frequency of Data Collection**	**Expectation**	**Analysis**
Re-certification rate	Re-certification = # clients 1-4 years who re-certified during the time period/# clients 1-4 years who were eligible to be re-certified during the time period	MIS	Pre/post implementation period	Greater positive change in re-certification rate in the intervention vs comparison over time	Difference in differences; stratification by client category;
Timely re-certification rate	Timely Re-certification = # clients 1-4 years who re-certified within 14 months/# clients who were eligible to be re-certified during the time period	MIS	Pre/post implementation period	Greater positive change in re-certification rate in the intervention vs comparison over time	Difference in differences; stratification by client category;
Question: Did WICBuzz increase benefit issuance?					
Indicator	**Definition**	**Source**	**Frequency of Data Collection**	**Expectation**	**Analysis**
Complete benefit issuance	# clients 1-4 y with benefits issued each	MIS	annual	Greater positive change in the	Difference in differences;

	month/ (# clients 1-4 y in the program) * 100			intervention vs comparison over time	stratification by client category
Benefits not issued	# clients 1-4 missing at least one month of benefits/ (# clients in the program) * 100	MIS	annual	Greater decrease between pre and post in intervention vs comparison	Difference in differences; stratification by client category
Question: Did WICBuzz contribute to improved participation rates of C1-C4 in the intervention sites compared with the comparison sites?					
Indicator	**Definition**	**Source**	**Frequency of Data Collection**	**Expectation**	**Analysis**
Monthly participating caseload	Monthly caseload = # clients with active benefits each month	LA MIS reports	Monthly	Greater positive change in the intervention vs comparison over time	Description and graphs visually showing trends over time; significance testing of change pre vs post
Average monthly caseload for the year	Sum of monthly caseload/ 12	LA MIS reports	Monthly	Greater positive change in the intervention vs comparison over time	Difference in differences; stratification by client category;
Monthly participation percentage	# clients with active benefits/ #enrolled * 100	LA MIS reports	Monthly	Greater positive change in the intervention vs comparison over time	Description and graphs visually showing trends over time; monthly difference in differences; stratification by client category
Average monthly participation percentage	Sum of monthly participation percentages/ 12 * 100	LA MIS reports	Monthly	Greater positive change in the intervention vs comparison over time	Difference in differences; stratification by client category

Data Collection Instrument and Protocol Description

Pre-launch WICBuzz Design Client Survey: Brief survey of WIC clients intended to elicit feedback on text message preferences in order to tailor the campaign prior to launch.

Mid-implementation survey: an opportunity for WIC clients to provide feedback after the campaign has been launched in ordered to inform mid-implementation adjustments.   (include reports from pre-launch and mid-implementation surveys).

Client Post-Intervention Survey: The primary source of WIC client satisfaction and self-reported change in knowledge, awareness, and/or behavior stemming from the campaign.

Post-project WIC staff qualitative data collection: A venue (virtual focus group or key informant interviews) for program staff to reflect on the project and provide insights based their experiences and feedback received from clients.

Data Management, Use, and Transfer Plan

The PCHD WIC program limited the data elements that were shared with the EMS texting platform by removing the WIC Client ID, Family ID, and providing the Authorized Representative's first name, child's first name, child's WIC category, child's date of birth, certification end date and Authorized Representative's phone number – all items required to stratify clients and send text messages. . Reporting to HPRIL will happen on a quarterly basis or as requested by HPRIL. At minimum, information pre- and post-intervention will be provided to HPRIL as it becomes available from ADHS.