

Text Message-based Interventions to Improve Appointment Attendance and Benefits Redemption Among ITCA WIC Participants

Emily M. Melnick, PhD, MPH^a; Francesco Acciai, PhD^a; Nicole Vaudrin O'Reilly, MS, RD^b; Mindy Jossefides^b, RD, A. Bea Ronan, MNSP^a; Punam Ohri-Vachaspati, PhD, RD^a

Affiliations:

^a College of Health Solutions, Arizona State University, Phoenix, Arizona

^b Inter Tribal Council of Arizona, Inc., Phoenix, Arizona

KEY FINDINGS

- **When WIC participants received two reminder messages, they were more likely to attend their scheduled appointments.**
- **More WIC households redeemed at least some of their food benefits during the intervention period when additional reminders were sent compared to a similar period in the previous year. However, an analysis of redemption trends across years did not demonstrate a clear benefit from the additional text reminders.**

INTRODUCTION

Participating in the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) is associated with healthier diets and better health outcomes. Families who are the most engaged in the program experience the greatest benefits. Therefore, appointment attendance and benefit redemption are two areas for potential improvement to maximize program use and associated benefits. To target these areas, the Inter Tribal Council of Arizona (ITCA) WIC piloted two text message-based interventions over a 5-month period:

1. **Appointment Attendance Intervention:**

Participants received two text message reminders (instead of one) prior to their scheduled WIC appointments.

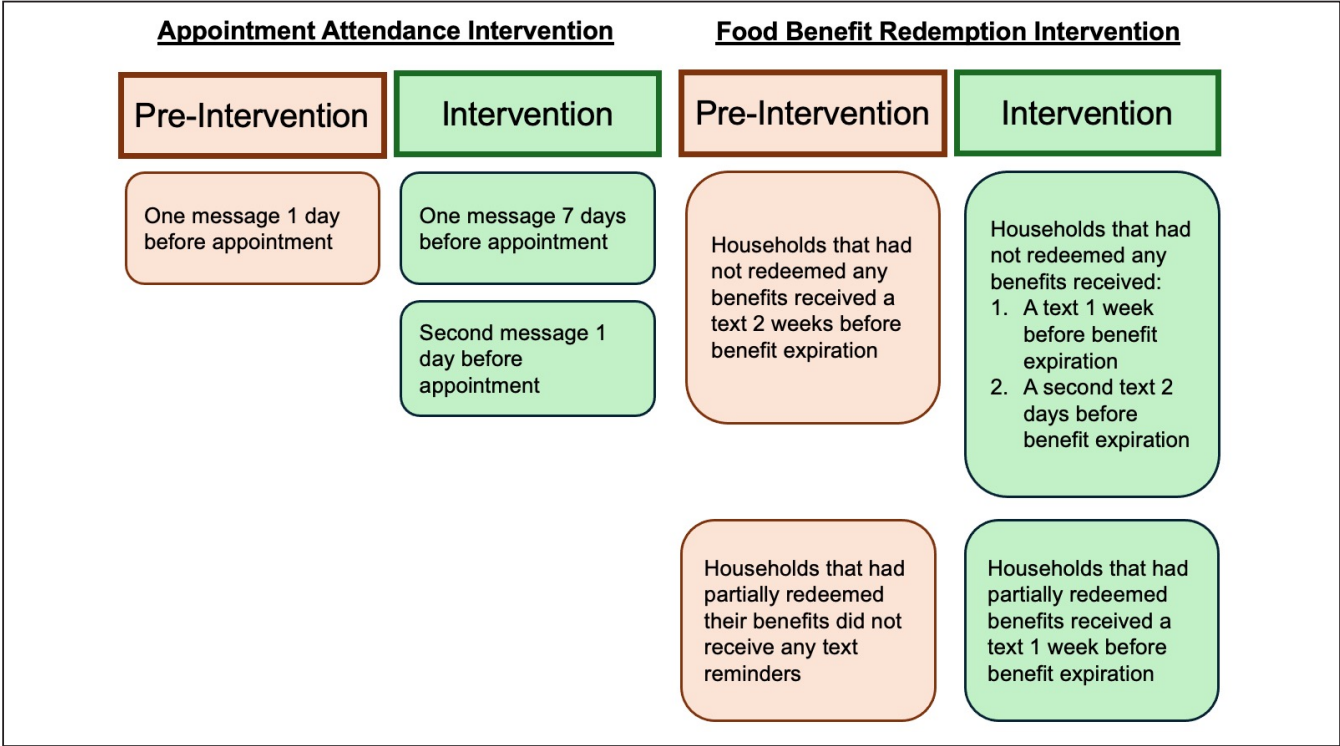
2. **Food Benefit Redemption Intervention:**

- For participants who had partially redeemed their benefits, a text reminder was sent one week before the benefits' expiration date (previously no reminder was sent).
- For participants who had not redeemed any benefits ("non-redeemers"), two reminders were sent: the first one week before the expiration date and a second two days before the expiration date if they were still non-redeemers (previously only one reminder was sent).

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A visual representation of the intervention design is shown in Figure 1. This brief summarizes the results of these two pilot interventions.

Figure 1. Pilot Intervention Designs



RESULTS

Intervention 1 (two appointment reminder texts instead of one)

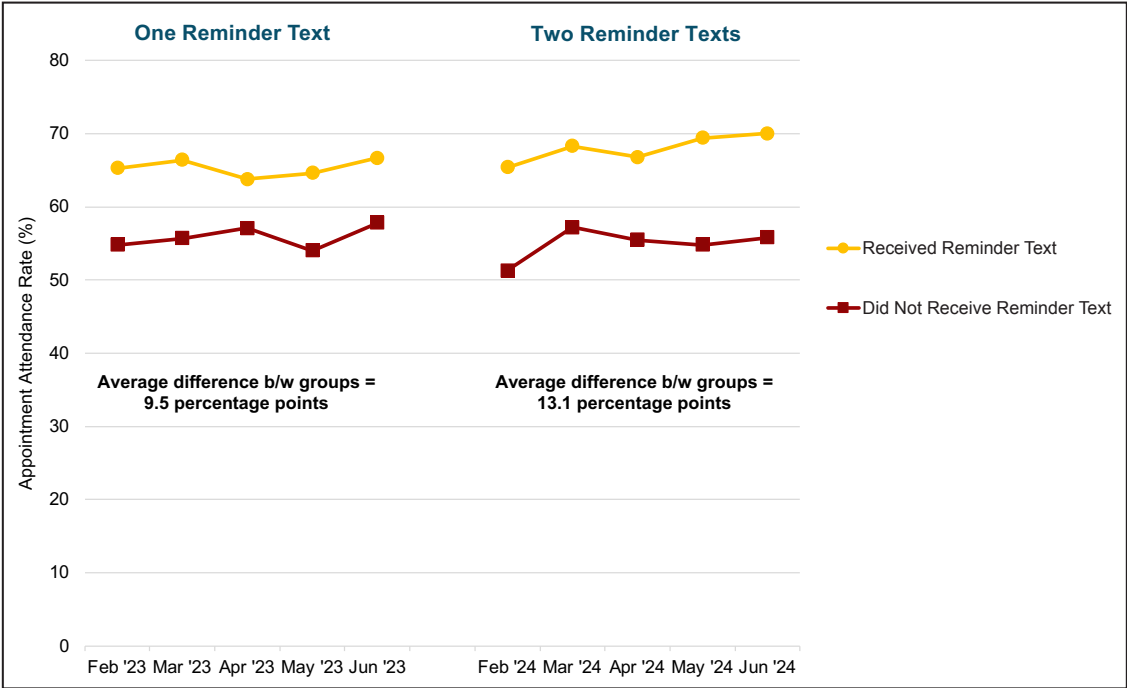
Prior to intervention 1, WIC participants who received one text message reminder attended their scheduled appointments at a higher rate (+9.5%) than those who did not receive a reminder because they had opted out or could not be reached. When two text reminders were sent as part of the intervention, the difference in attendance rates between those who received the text message(s) and those who did not grew from 9.5% (with a single reminder text) to 13.1% (with two reminder texts) (see Figure 2).

Intervention 2 (text message reminders to partial redeemer and non-redeemer households)

Following intervention 2, which included sending one text message reminder to partially-redeeming households and two reminders to non-redeeming households, 91% of households redeemed at least some of their food benefits. In comparison, only 84% of households redeemed at least some of their benefits during the same period in the previous year when only one reminder text was sent exclusively to non-redeeming households. However, when benefit redemption trends were compared for months before and after the intervention with the same months in the previous year when no intervention took place, the results did not show benefits of additional reminder texts (see Figure 3). In the intervention year, both before and after the intervention was implemented, about the same number of household (greater than 90%) redeemed at least some of their benefits.

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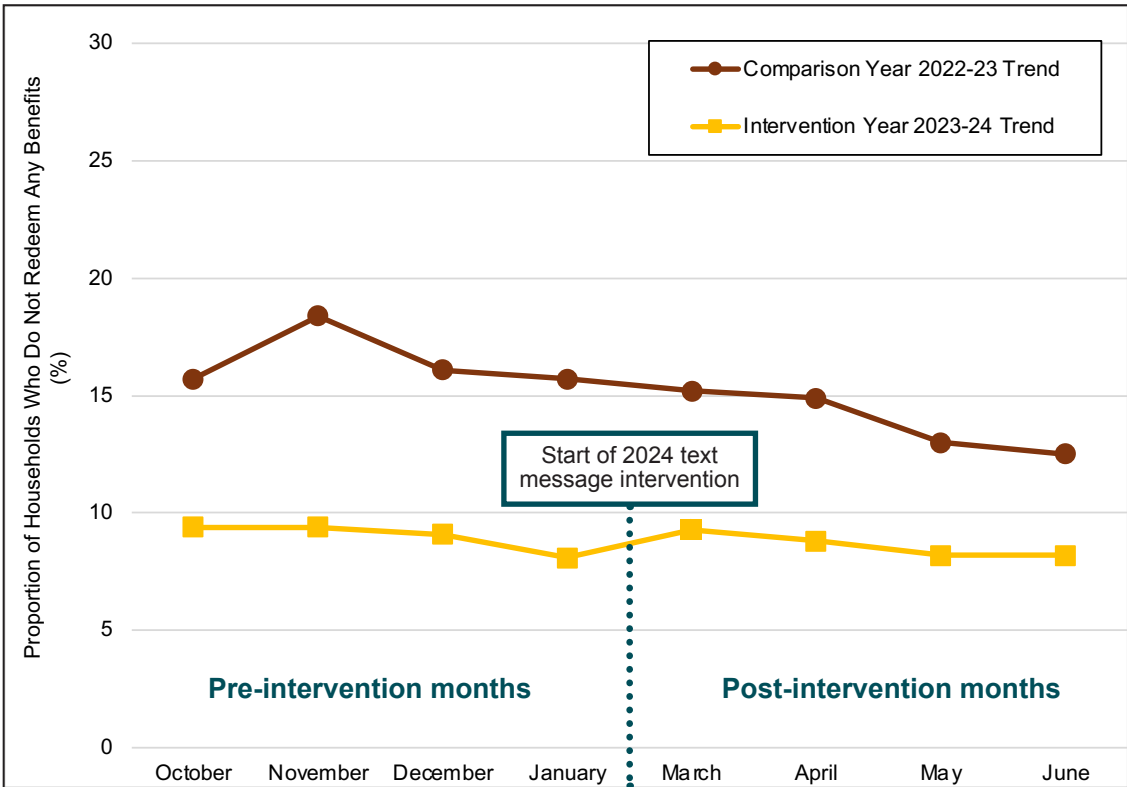
Figure 2. Differences in Appointment Completion Between Those Who Received and Those Who Did Not Receive Reminder Texts Before and After the Intervention.



* Received Reminder Text: Households that successfully received reminder texts
Did Not Receive Reminder Text: Households that did not receive a reminder text because they opted out or could not be reached

** Difference-in-difference between groups = 3.6 percentage points, P-value <0.05

Figure 3. Proportion of Households Who Did Not Redeem Any Food Benefits Before and After the Intervention.



METHODS

The ASU Food Policy and Environment Research Group partnered with ITCA to evaluate the text message interventions designed to increase appointment attendance and benefit redemption among ITCA WIC participants (see Figure 1). Text message reminders sent to participants for appointment attendance and benefit redemption are presented in Box 1. To evaluate these pilot interventions, we obtained de-identified WIC appointment attendance, benefit redemption, and text message data from ITCA WIC.

Intervention 1

(two appointment reminder texts instead of one)

Before the first intervention, one appointment reminder was sent one day in advance of appointments. For this intervention, an additional identical reminder was sent one week before the appointment. To test whether sending two reminder messages instead of one improved appointment attendance, we compared attendance rates of those who received reminders and of those who did not, because either they opted out of receiving messages or could not be reached. This comparison was made for the period of February – June 2024 (when two reminders were sent) and the same months in the previous year (when only one reminder was sent).

Appointment Reminder: “Hi {Caregiver Name}, it’s WIC! Your appointment is on {appt_date} at {appt_time}. You work hard to keep your family healthy – WIC is here to help! Don’t miss out on healthy WIC foods. Text C to confirm your appointment. Need to reschedule? Text R to reschedule.”

Benefits Redemption: “Hi {Caregiver Name}! Your WIC benefits expire on {expiration_date}. Don’t miss out on buying food with WIC dollars. WIC foods help your family be healthy & strong.”

Intervention 2

(text message reminders sent to all households with any remaining benefits with second reminder texts sent to non-redeeming households)

Our second intervention focused on benefit redemption reminders. Before the intervention, a single benefit redemption reminder was sent only to households that had not redeemed any of their food benefits two weeks before the expiration date. For this intervention, (i) a text message reminder was sent to households that had partially redeemed their benefits one week before the expiration date, and (ii) two reminders were sent to households that had not redeemed any benefits (“non-redeemers”)—the first one week before the expiration date and a second two days before the expiration date if benefits were still unredeemed. Given the complexity of this intervention, analyses were conducted at the program level. To test whether the pilot intervention improved benefit redemption, we compared the proportion of households who did not redeem any benefits for the period before the intervention took place (October 2023 – January 2024) and the period after the intervention took place (March 2024 – June 2024). We then compared this trend to the same months in the previous year.

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