



Using Scanner Data To Answer Food Policy Questions

Conference

**Wednesday, June 1 -
Thursday, June 2, 2011**

**Economic Research Service
1800 M Street, NW
Waugh Auditorium
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Effects of the Revised WIC Food Package on Redemption Patterns:

Putting Point of Sale Data to Good Use!

Stacy Gleason, MPH

Jennifer Pooler, MPP

Program Change with a Purpose

- ▲ IOM's Committee to Review the WIC Food Package recommended specific changes to **better align nutrient intake among WIC participants with the *Dietary Guidelines for Americans*** for participants age 2 and older and the dietary recommendations for children under age 2
 - Increase consumption of whole grain foods
 - Reduce total fat and saturated fat consumption
 - Increase access to and consumption of fruits and vegetables
 - Supplemental diets with several priority nutrients identified by IOM
 - Encourage consumption of nutrient dense foods by offering more choices

...Will Participants Realize the Intended Benefits?

- ▲ Only if they can and do choose to take advantage of the new offerings!
- ▲ This could depend on many things, including:
 - Personal and family preferences
 - Availability of foods
 - Understanding of the changes to the food package, and
 - WIC vendor and staff training

Study Purpose

- ▲ To examine acceptance of the new WIC food package
 - As measured by redemption rates, and
 - Reported by WIC participants through focus group discussions
- ▲ To understand and describe food choices made by WIC participants both before and after the changes were implemented
 - By examining participant purchases through point of sale data (POS), and
 - Focus group discussions



Presentation Outline

- ▲ Overview of methodology
- ▲ Describe steps to our approach
 - Store recruitment
 - Data collection
 - Development of an analytic file
 - Data analysis
- ▲ Present study findings
- ▲ Discuss key takeaways from the study

Overview of Methodology

- ▲ Altarum partnered with the Wisconsin WIC Program in early 2008
- ▲ Funded by the Food and Nutrition Assistance Research Program of the USDA Economic Research Service (ERS)
- ▲ Multi-method approach
 - Repeated cross-sectional study design, linking State WIC program files to POS files from a sample of stores in WI
 - Baseline (prior to implementation) – June/July 2009
 - 6 months postimplementation – February 2010
 - 12 months postimplementation – August 2010
 - 18 months postimplemenation – February 2011
 - Focus groups with program participants at 6 and 18 months postimplementation

Store Recruitment

▲ Goal

- Wanted a purposeful, diverse store sample
 - Limited expectations in terms of sample size and generalizability

▲ Approach

- Reviewed database of authorized stores, examined stores' share of WIC business
- Targeted large chains, smaller chains, and independent stores (serving minorities)
- Stores had to meet minimum criteria
- Employed multiple recruitment methods

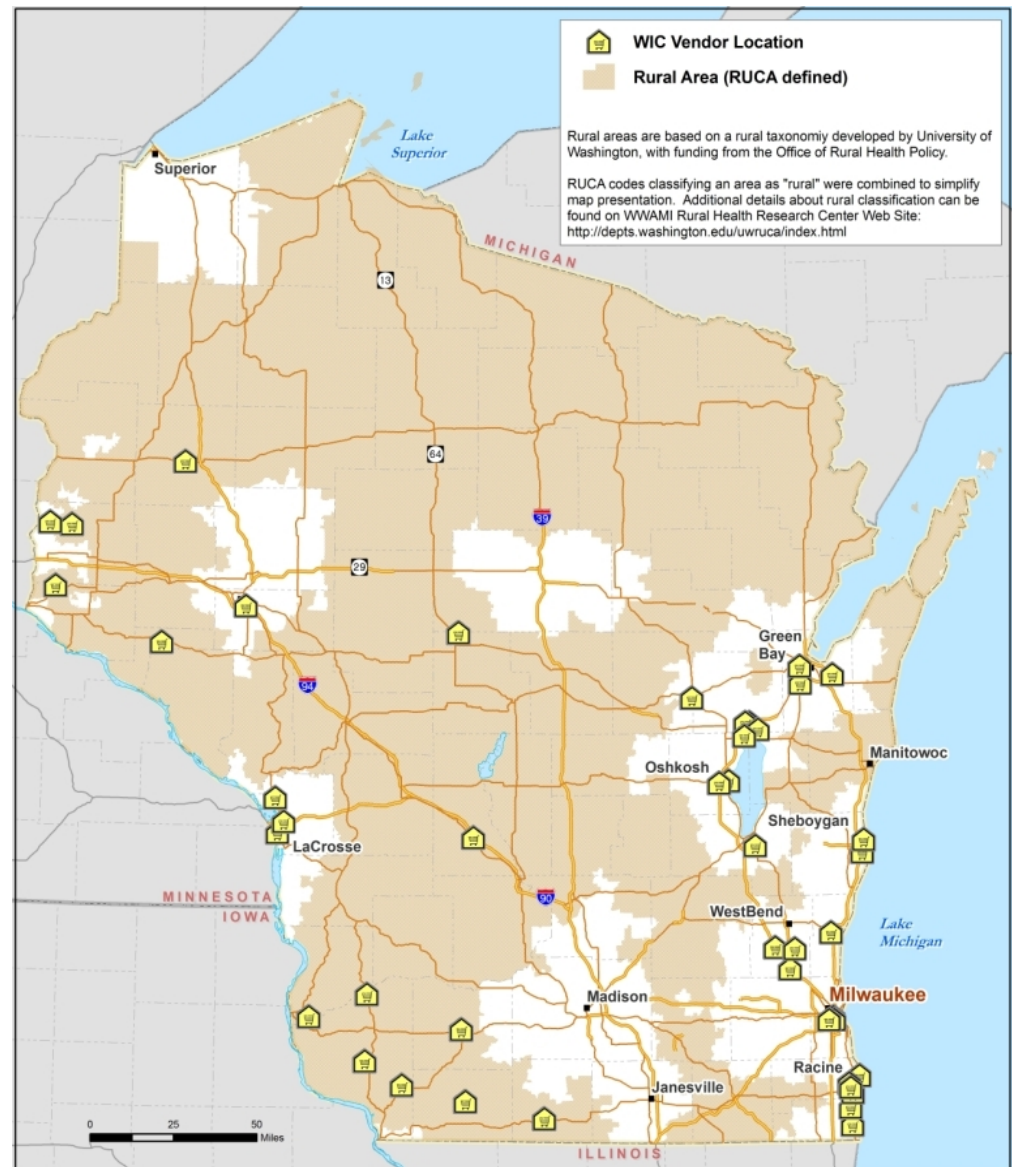
▲ Key considerations

- No large chains were willing to participate
- Required face-to-face contact with stores
- Greater level of effort than anticipated

Store Recruitment

▲ Results

- Approximately 44 stores in the sample with fewer providing CVV purchase information
- Account for approx. 6% of all WIC sales in the state
- Sample includes data for more than 16,000 food instruments (FIs) and 4,000 Cash Value Vouchers (CVVs)



Data collection

▲ State data contained information for each Food Instrument on

- Issuance: valid FI use dates, foods and amounts prescribed
- Redemption: redemption and use dates, redemption dollar amounts
- Participant Characteristics: race/ethnicity, age, family and person identification numbers, zip code

▲ Store data

- POS files contained information on each food purchased
 - UPC, description, quantity purchased, \$\$ amount paid
 - WIC food instrument (check) number
- UPC/PLU database?
 - POS files DID NOT contain the 'type' or 'category' of foods purchased (e.g., milk, fresh fruit)

▲ Qualitative data from focus groups

Development of analytic file

▲ Goal

- To analyze redemptions at the individual WIC participant level overall and for specific WIC foods

▲ Approach

- ‘Roll up’ POS items into individual WIC purchases/transactions containing
 - Amount purchased within each food category
 - Dollar amount, date of transaction
 - WIC Food Instrument number
- Match store-level WIC purchases with state data (FI-level) by FI number
- ‘Roll up’ matched FIs to the individual WIC participant

▲ Key considerations

- Data reliability
 - WIC check numbers
 - Payment tender

Data analysis

▲ State-level analysis

- Individual-level use of traditional FIs
- Individual-level use of CVVs

▲ Store-level analysis

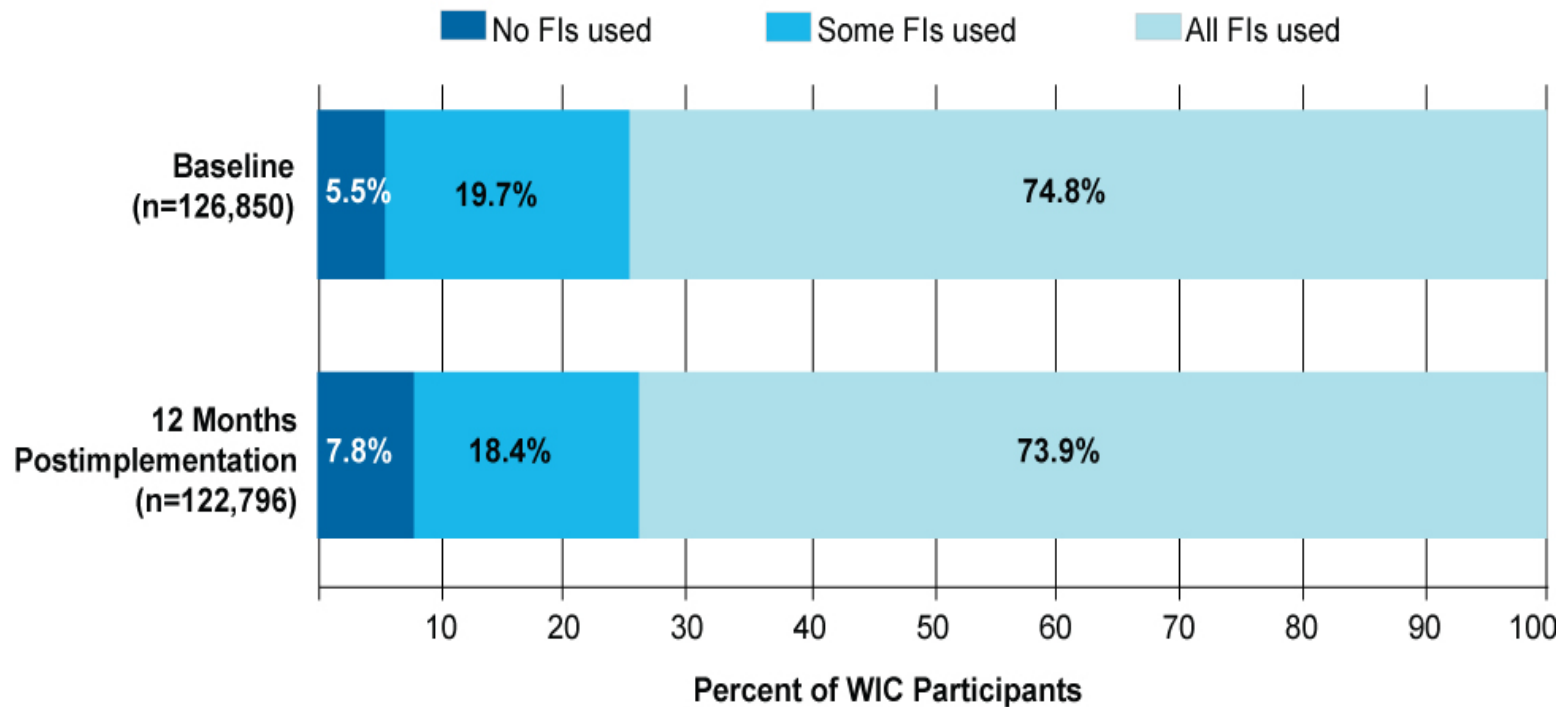
- Individual-level use of “Traditional” FIs
 - Full purchases of FIs in stores (purchased all foods on their FIs in the quantities prescribed)
 - Full redemption of prescribed foods (purchased full amount of a prescribed food item)
 - Food preferences
- Family-level use of CVVs
 - Value of CVV redemptions in stores
 - Fruit and vegetable preferences

Findings

State-level redemptions – FIs

✧ Increased non-use of traditional food instruments

FIGURE 1.—*Traditional food instrument usage by participants, baseline and 12 months postimplementation*

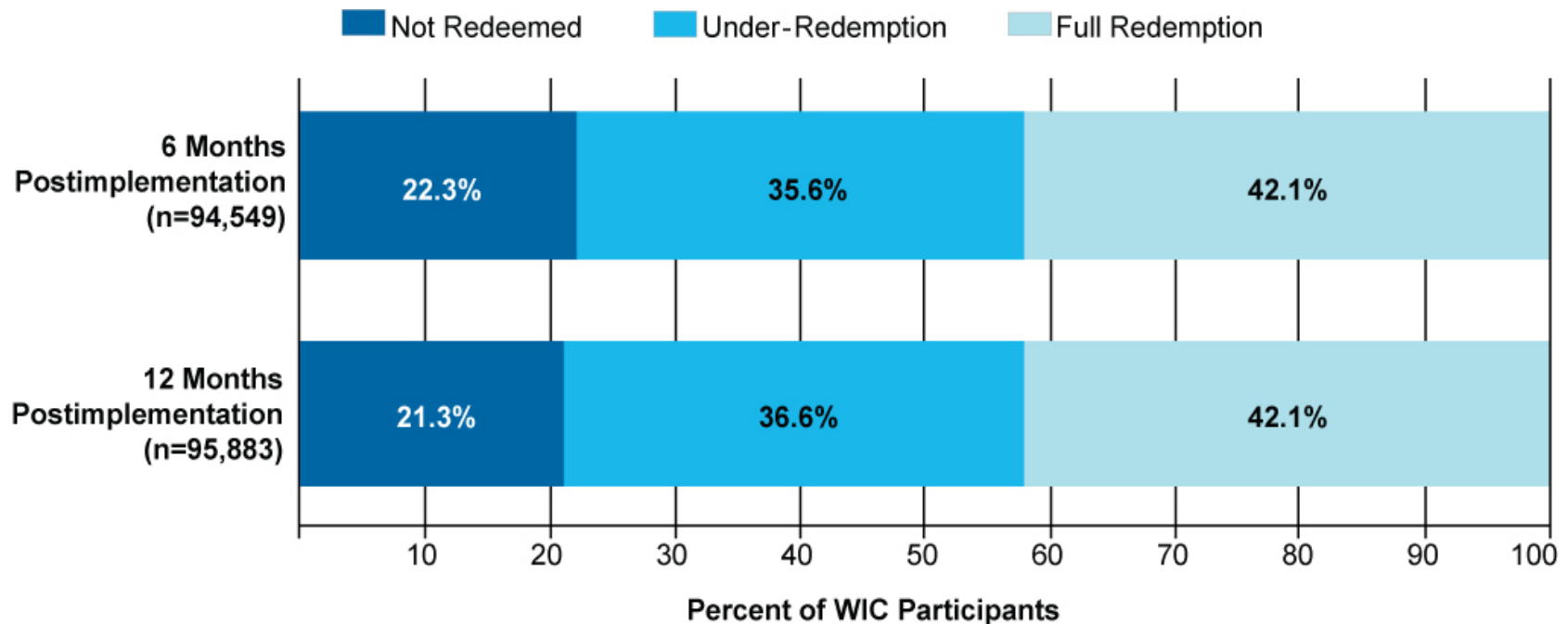


Findings

State-level redemptions – CVVs

✧ Despite allowing split-tender, full use of CVVs is still somewhat limited

FIGURE 3.—Overall CVV redemptions (State-level), 6 and 12 months postimplementation

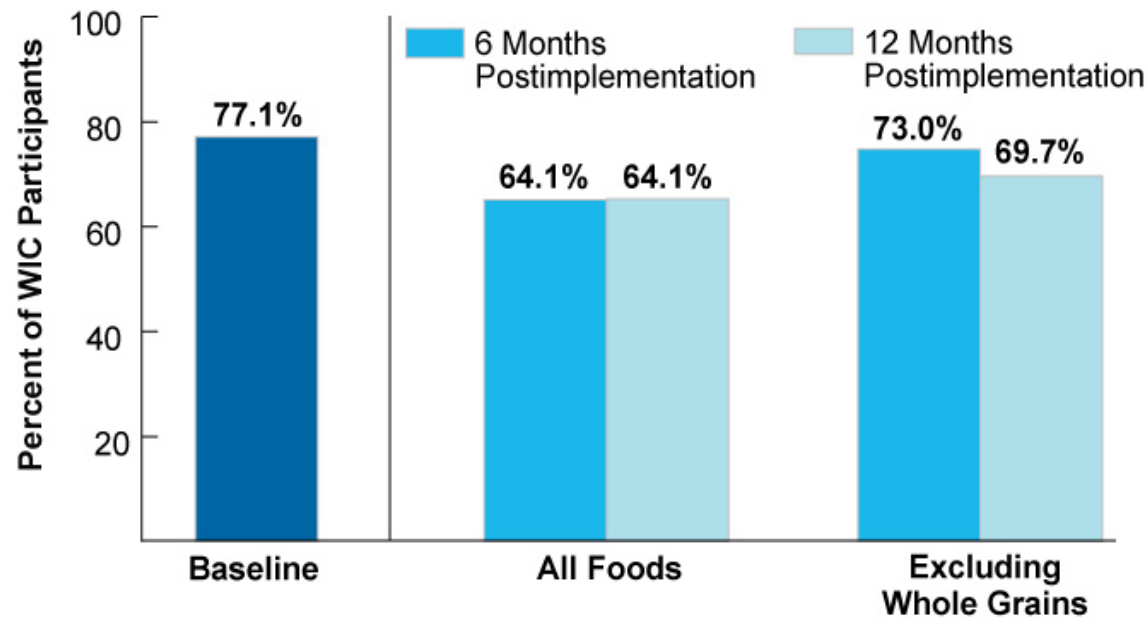


Findings

Store-level redemptions – FIs

✧ Participants are less likely at 12 months post to make full purchases

FIGURE 5.—Percent of participants making full purchases, baseline, 6 months, and 12 months



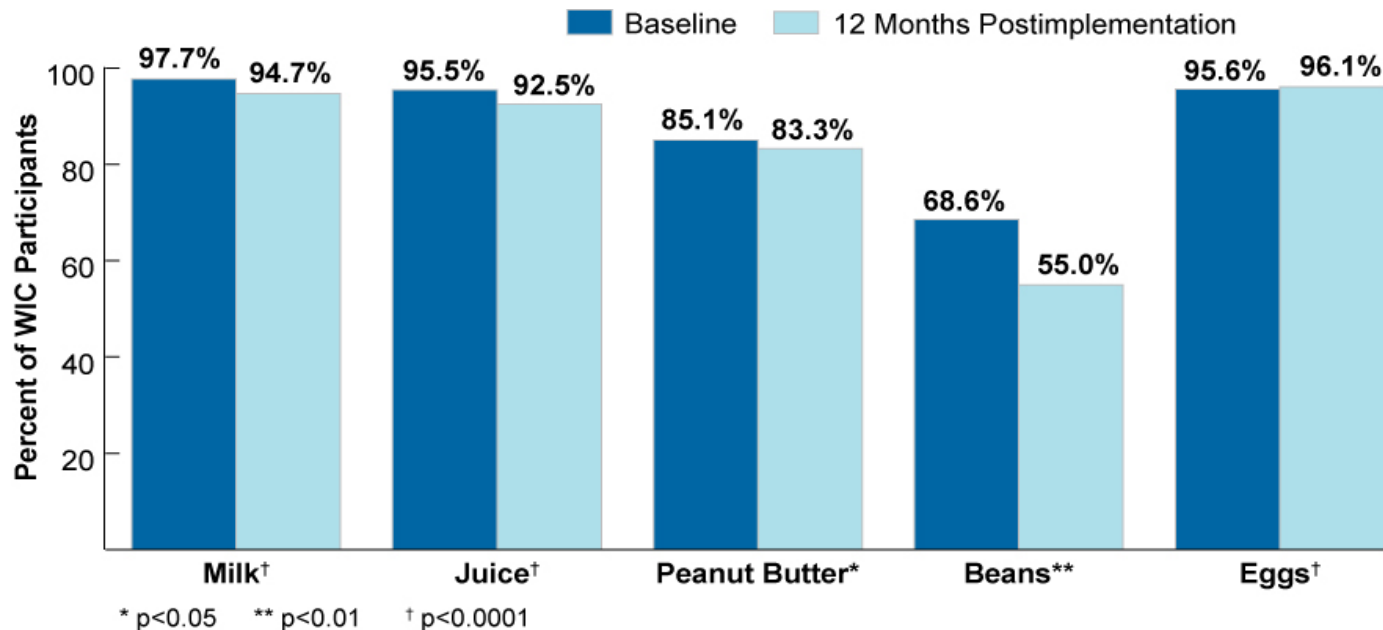
Note: All comparisons with baseline are significant at $p < 0.0001$.

Findings

Store-level redemptions – FIs

- ✧ Participants are also less likely at 12 months post to fully redeem some prescribed foods

FIGURE 6.—Percent of participants making full redemptions, by WIC food, baseline and 12 mo postimplementation

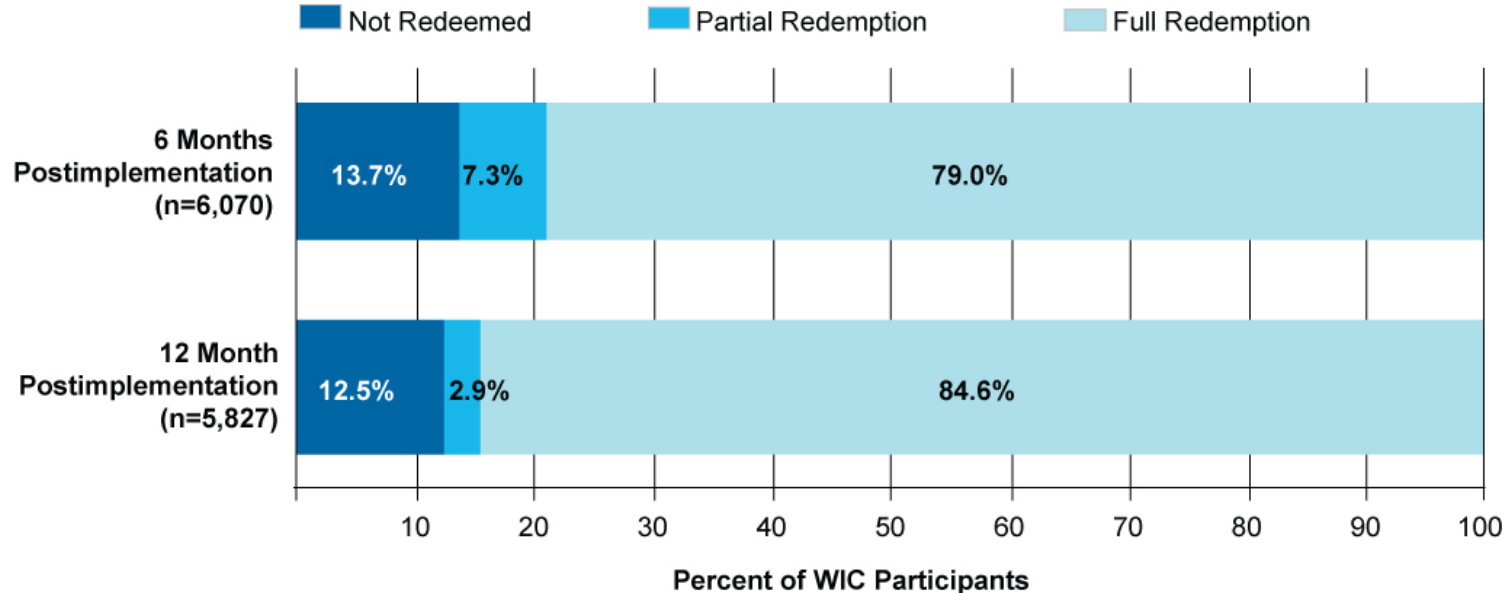


Findings

Store-level redemptions

- ✧ Increased uptake between 6 and 12 months among those prescribed whole grains

FIGURE 8. — *Whole grain redemption levels among participants prescribed whole grains, 6 and 12 months postimplementation*

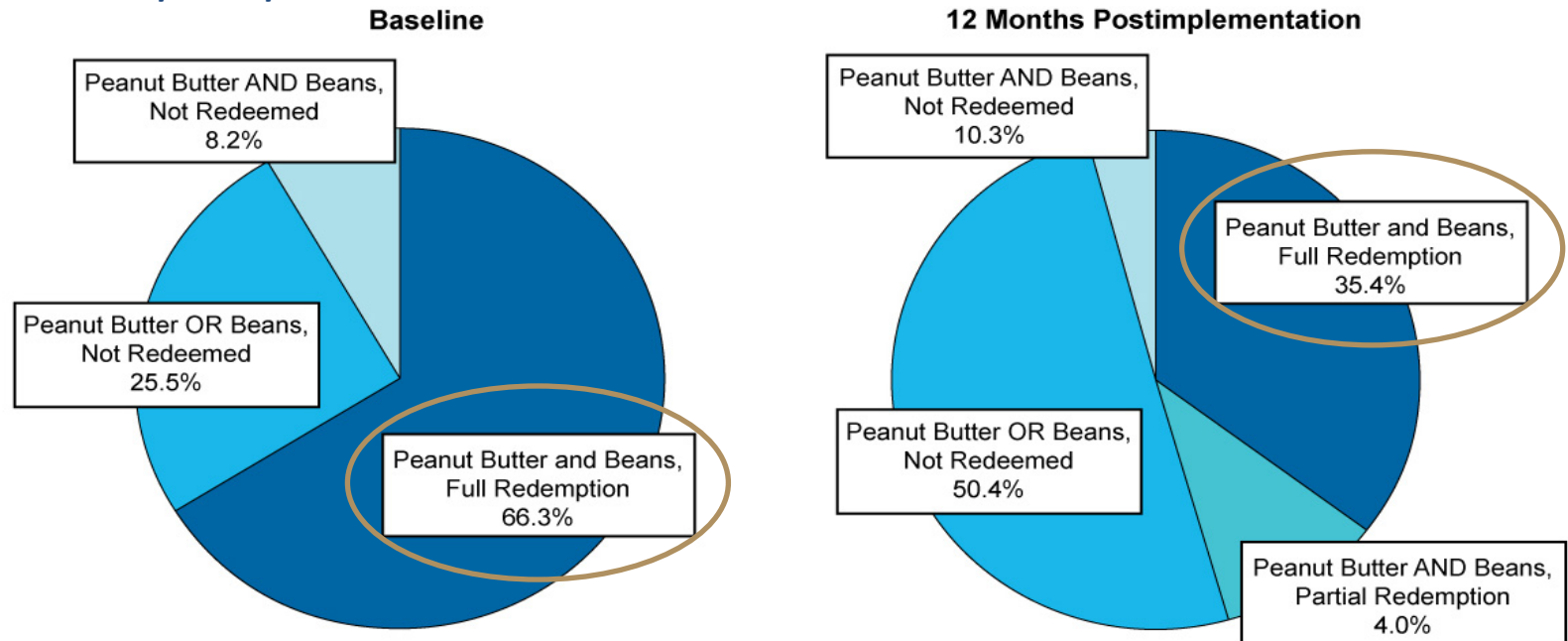


Findings

Store-level redemptions

- ✧ Substantially decreased rates of full bean and peanut butter redemptions among participants prescribed BOTH

FIGURE 7.—Redemption levels of participants prescribed both peanut butter and beans, baseline and 12 months postimplementation



Findings

Preferences

- ✧ Low-fat milk (versus skim) is the predominant choice at 12 months postimplementation

FIGURE 10.—Milk preferences at 12 months postimplementation

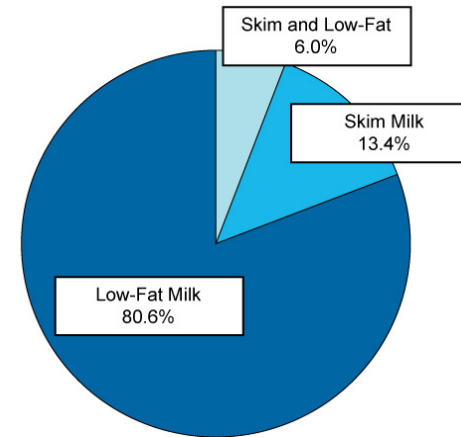
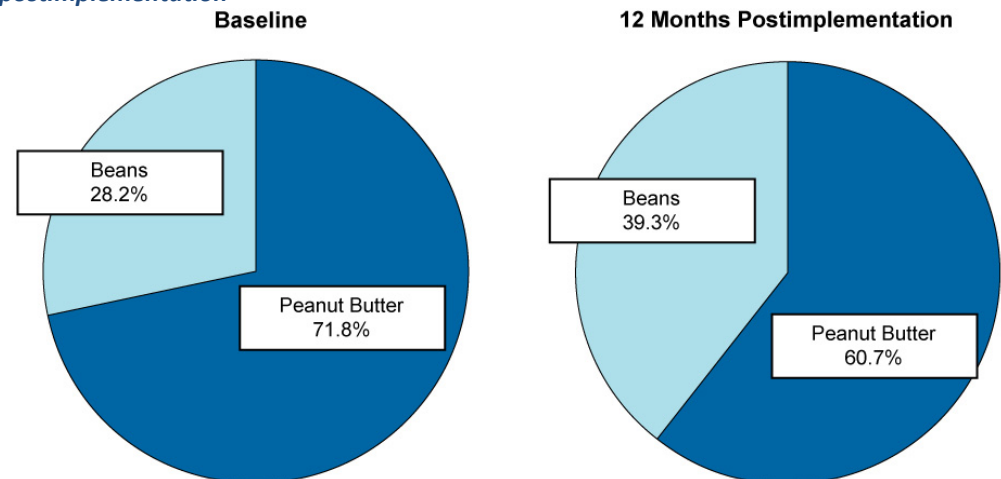


FIGURE 11.—Bean substitutions for peanut butter prescription, baseline and 12 months postimplementation

- ✧ Increased substitution of beans for peanut butter at 12 months postimplementation



Findings

Preferences

- ▲ Fruit more popular than vegetables
 - 92.1 versus 64.3 percent of participants purchasing any type
- ▲ Fresh by far the most popular variety
- ▲ Top 5 fruit choices: bananas, apples, grapes, strawberries, and peaches
- ▲ Top 5 vegetable choices: tomatoes, greens, carrots, peppers, and onions



Insight from Focus Groups

▲ Why participants don't purchase all prescribed foods

- Many participants believed they were purchasing all of the foods prescribed but because of issues interpreting checks, they were not
- Participants with multiple food packages reported not needing all of the milk, PB, and baby food prescribed
- Some trouble identifying WIC allowable foods in the stores
- Issues at check out (both cashier and participant error) may contribute to participants not making full purchases

▲ Why the dramatic decrease in bean redemptions

- Confusion interpreting checks
- Some participants report not liking or knowing how to cook with beans

Insight from Focus Groups

▲ What's the deal with whole grains

- Participants report great satisfaction with the addition of whole grains
- Lots of trouble with whole wheat bread availability at 6 months post, but less so at 18 months post

▲ Use of the CVV

- Participants report great satisfaction with the addition of the CVV
- Everyone in the FGs reported using all of their CVVs
- Reasons why other WIC participants might not redeem their CVVs:
 - Doing math in the store is challenging
 - F&V may not be available if they shop in small stores
 - Lost or stolen checks
- Some reports of cashiers not allowing split-tender
- Some trying to maximize benefit by waiting for sales

Key takeaways from the study

- ▲ Having a good partner was critical
- ▲ Recruitment of stores was challenging but overall a success
- ▲ Data quality varied by store
- ▲ There is a lot we can do and say with POS data, especially when it can be linked to another rich data source
- ▲ Complementary, qualitative data collection is critical for understanding and interpreting what quantitative results show
- ▲ Using scanner data for food and nutrition related research, particularly program or policy evaluation should be considered a best practice!
 - Added benefit of not relying on self-report

Stacy Gleason

207-772-1410

stacy.gleason@altarum.org

Jennifer Pooler

207-772-1410

jennifer.pooler@altarum.org