Rewards-Based Incentive Programs on Fruit and Vegetable Purchases

PRESENTATION TO THE INSTITUTE OF MEDICINE
COMMITTEE TO REVIEW WIC FOOD PACKAGES
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IOM Presentation

Incentives to change food purchasing behavior

- Overall goal is to improve population health through multiple strategies that encourage consumption of healthier foods and make it possible for lower income households to afford to buy them.
- Research (and policy) questions:
  - Who do they work for? Who don’t they work for?
  - In what form?
  - For what purpose?
  - For how long?
  - Cost benefit?

The Rewards Study*

- Designed to test impact of a consumer rewards program model on increasing purchases of fresh and frozen fruit and vegetables among low-income families.
- Primary outcomes: number of (adult) servings of fresh and frozen fruit and vegetables purchased per week (0.5 cup/portion size)
- Design: Randomized trial with wait-listed controls. Longitudinal cohort study 4 phase design:
  - Baseline (min 8 wks)
  - Intervention (full incentive 8 wks)
  - Tapering of incentive (4 wks)
  - Follow-up (no incentive, 6 wks)
- Full service supermarket established to address food deserts.
- Data collection: December 2010 to October 2011

*Funded by the Robert Wood Johnson Foundation through its Healthy Eating Research Program. E. Phipps, Ph D 66246

Intervention

- Delayed incentive based on accumulated purchases.
- Provided dollars added onto supermarket gift cards based on purchases of fresh and frozen produce.
- Rebate of 50% of dollar amount spent on fresh and frozen produce during intervention, reduced to 25% during tapering, eliminated at follow-up.
- Tailored reports with feedback about their purchases during intervention and tapering, study specific newsletters.
- Plan for immediate feedback at POS but weren’t able to work out with market.
Linking Purchases

- Participant's purchase data collected via supermarket loyalty card and sent to Center researchers as individual text files (Figure 4).

To calculate reward points per week, reference file is linked to the participant's purchase data.
For each eligible item a participant purchases, the reference file is used to calculate the number of rewards a participant earns.

Rewards study households (N=58)

- Primary shopper: African American (95%) and female (81%). Average age 50.4 years.
- Household: Average household size was 3.8 persons, with an average of 1.7 children living in the household.
- 69% reported a household income of $25,000 or less.
- 62% enrolled in Supplemental Nutrition Assistance Program (SNAP)
- 29% in Supplemental Nutrition Program for Women, Infant and Children (WIC) at the time of recruitment.

Healthy eating pilot study*

- 30 lower income female shoppers.
- Focus on fresh produce only.
- 4 week phases (baseline, intervention, follow up)
- Participants mailed 4 paper coupons for $10.00 off purchase of fresh produce.
- Each coupon good for 1 time purchase for 1 week during intervention.
- Each coupon was a different color and numbered for the specific week.
- A brightly colored calendar displayed the one-month intervention period showing the periods using the same colors as the coupons themselves.
- Nutritional information and tips also included in the mailing.
- All instructional and educational materials assessed to be at or below a sixth-grade reading level.

- Funded by the Pennsylvania Department of Health, E Phipps, PI.

Baseline purchases: Average weekly expenditures of fresh fruit and vegetables among low-income households (n=30)

- Intervals from 0 to 1 and from 1 to 2 are much wider than the others. This provides an accurate depiction of the households with weekly expenditures less than $2.

Pilot results

- The average weekly purchases of fresh fruit increased by 4.7 servings (95% CI=1.9, 8.1) from baseline to intervention.
- The average weekly purchase of fresh vegetables increased by 1.8 (95% CI=-0.8, 4.0) servings from baseline to intervention.
- Once coupons ended: households [still] bought 2.1 (95% CI=0.03, 4.5) more servings of fresh fruit than in baseline and similar amounts (1.9 servings) of vegetables.

Paper experience from pilot

Coupon redemption was low:
- 38% used 2 or more
- 28% used one
- 34% did not use any
- Coupons were already paid for so $ went to store (down drain for us/participants).

Participant experience:
- Hard for participants to keep track of, forgot to bring with, lost them, store personnel not familiar with them.....

What we changed to improve study

- Verified shopping history to enroll those who shopped at store.
- Added tapering to increase likelihood of maintaining change.
- Used rewards collected by swiping.
- Used delayed rewards to build points rather than immediate discount.
- Increased contact - participant monthly report with amount loaded on gift card (and personal note of encouragement)
- Shopper brought updated gift card on next trip to receive added dollars when they checked out.

Reports: engagement, reinforcement

Healthy Eating Study
Reward Points Update

Congratulations Healthy Rewards Earner!

You have earned 5016 reward points for your purchase of eligible fresh and frozen fruits and vegetables.
You have earned $20.00 on your rewards gift card.
Continue to earn reward points for buying your favorite fresh and frozen fruits and vegetables, such as broccoli, bananas, and grapes!
Average number of servings of vegetable and fruit purchased by study week, The Rewards Study 2010-2011

Rewards Study results

- RC: Households in intervention phase purchased an average of 8 (95% CI=1.5, 16.9) more servings of vegetables and
- 2.5 (95% CI= 0.3, 9.5) more servings of fruit per week than controls.

In longitudinal price adjusted analyses, when incentive reduced (from 50%) to 25% and then 0, both fruit and vegetable purchases were similar to baseline.


Rewards study: participant feedback

- Low research burden (80% reported no difficulties with study participation).
- 62% said they bought fruit and vegetables “that were more nutritious;” 50% bought “more fruit and vegetables [than they usually did];” 40% bought fruit and vegetables “that were new to them.”
- Challenges: Forgetting to bring or swipe their study loyalty card; produce overpriced; transportation problems, store personnel not familiar with study; their own financial constraints and other personal life issues.

Challenges with incentivizing purchase

<table>
<thead>
<tr>
<th>Program</th>
<th>Targeted Product</th>
<th>Duration</th>
<th>Additional Components</th>
<th>Expiration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthy Eating Fruit (n=250)</td>
<td>Fresh fruit and vegetables</td>
<td>6 weeks for 6 weeks; recipes included in newsletter; telephone pre and post intervention study surveys to establish control</td>
<td>100% used or more</td>
<td>100% used or more</td>
</tr>
<tr>
<td>Rewards Study (n=58)</td>
<td>Fresh and frozen fruit and vegetables</td>
<td>Participants received a $10/month cash value benefit (CVV) loaded on store gift card; monthly CVV increased from 50% to 75% to 100%</td>
<td>Participants filled out study specific parameters, requirements, cost, 8 newsletters with similar content, tailored reports, participant contact pre and post study</td>
<td>80% households made rewards at some point during the intervention (first or learning)</td>
</tr>
<tr>
<td>Cash Value Benefit (n=850,000 families)</td>
<td>Fresh and frozen fruit and vegetables</td>
<td>CVV per month for healthy eating fruit and vegetables, participants received a $6 ($3.00/child) per month</td>
<td>Participants filled out study specific parameters, requirements, cost, 8 newsletters with similar content, tailored reports, participant contact pre and post study</td>
<td>Average $12.00 ($6.00 to $18.00)</td>
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Parting thoughts

- Incentives can help jump start purchases for some people.
- Cannot underestimate the need to engage consumers.
- Clearly ease of access, mechanism of implementation important.
- Hard to reach the hard to reach.

Thank you!