

Food Assistance Matching Intervention Increases Farmers' Market Utilization among Low-income Consumers in Rural South Carolina



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“I know the peaches are worth the price but I just don’t have the money to buy them.”

-Farmers’ Market Customer, 2007



Acknowledgements



Collaborators

- Amy Mattison Faye
- Kassy Alia
- Kathryn Kranjc
- Jason Greene
- Aaron Guest
- James Hebert
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Funders

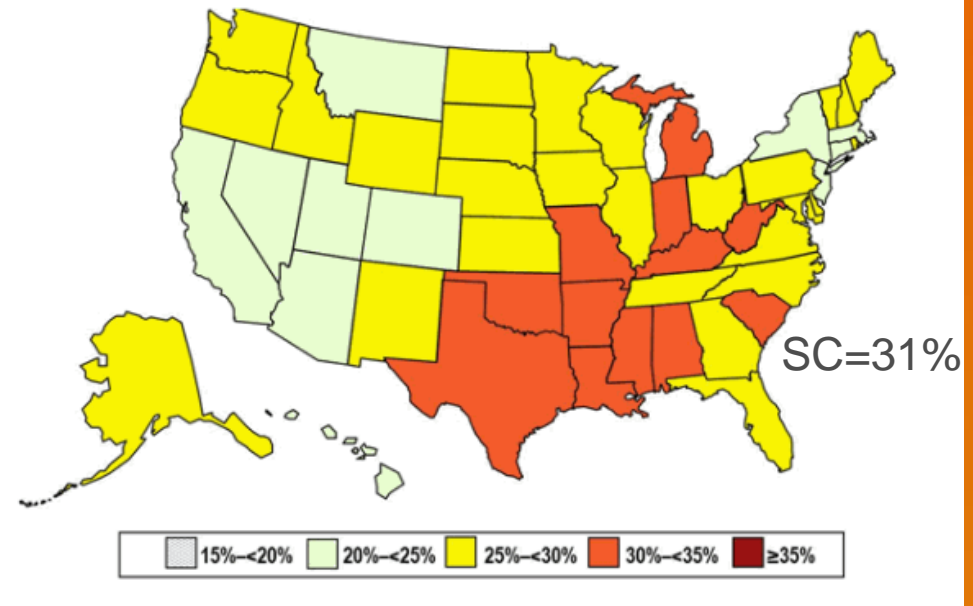
- CDC and NCI, USC Cancer Prevention and Control Research Network
- USC College of Social Work



Background

- ↑ obesity rates
- Obesity is related to:
 - type 2 diabetes,
 - cardiovascular disease,
 - several types of cancer
 - musculoskeletal disorders,
 - sleep apnea,
 - gallbladder disease
- Obesity is costly
 - Obesity-attributed medical expenditures = ~\$75 billion

Prevalence of Self-Reported Obesity Among U.S. Adults
BRFSS, 2011



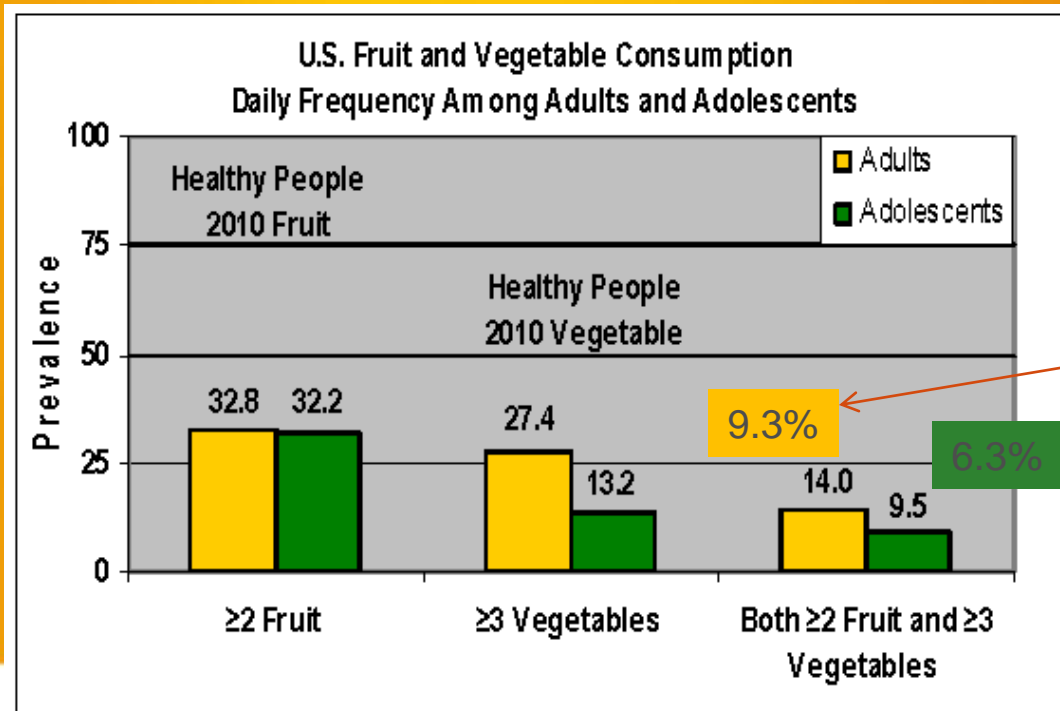
12 states had a prevalence of 30% or more in 2011:

Alabama, Arkansas, Indiana, Kentucky, Louisiana, Michigan, Mississippi, Missouri, Oklahoma, **SOUTH CAROLINA**, Texas, and West Virginia.



Intervention Rationale

- ↑ fruit and vegetable consumption key strategy for addressing obesity and diet-related health conditions (Ford et al., 2012; Gillies et al., 2007; Montonen et al., 2004; Yamaoka and Tango, 2005)
 - Americans consume low levels of fruits and vegetables (Grimm et al., 2010)



SC



Intervention Rationale

New emphasis on public health interventions designed to improve access to affordable healthy food in communities, particularly “food deserts” (i.e., low-income communities with low-access to healthy food retailers):

- Common Community Measures for Obesity Prevention (CDC, 2009)
- Early Childhood Obesity Prevention Policies (IOM, 2011)
- Local government Actions to prevention Childhood Obesity (IOM, 2009)
- Promising Strategies for Creating Healthy Eating and Active Living Environments (Prevention Institute, 2008)



Intervention Rationale



- Multi-level farmers' market intervention resulted in improvements in FV consumption (Freedman et al., in press)
 - Improvements similar to other farmers' market interventions (Abusabha et al., 2011; Evans et al., 2012)
 - Improvements equivalent to or better than results from behaviorally-based intervention (Ammerman et al., 2002)
- Dose-response relationship between intervention and improvements in fruit and vegetable consumption
- Financial incentives very important for low-income, diabetic population



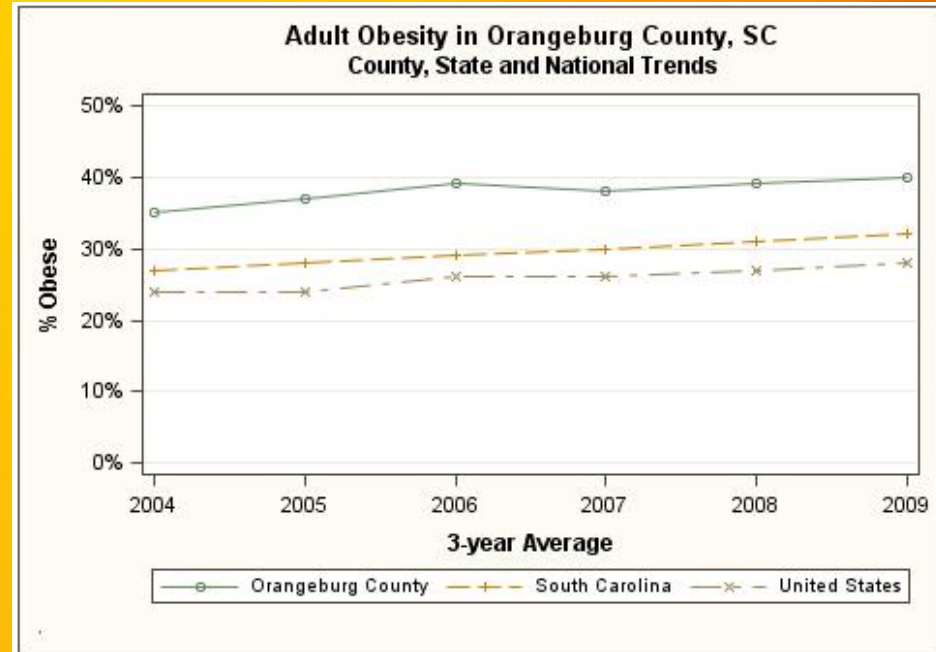
Research Aim

Examine the influence of a food assistance matching intervention on farmers' market utilization among low-income consumers before and after the implementation of a food assistance matching intervention at a health center-based farmers' market



Research Context

- Orangeburg, SC
 - Rural
 - Majority minority population
- County Health Ranking: 41 out of 46
- Right Choice Fresh Start Farmers' Market
 - Located at a Federally Qualified Health Center (FQHC)



Source: County Health Rankings
<http://www.countyhealthrankings.org/>



Intervention: Shop N Save

- \$5 matching coupons for customers spending \$5+ in food assistance
 - SNAP, WIC, or Senior or WIC Farmers' Market Nutrition Program (FMNP) vouchers
- Up to one \$5 match per week
- Self-enrollment



Design and Measures

- Time Series Design
 - 20 weeks pre-SNS (2011)
 - 20 weeks post-SNS (2012)
- Measures
 - Sales receipts
 - SNS enrollment survey

Total cost from the other side:

██████████

FORMS OF PAYMENT:		Amount	
Type			
Cash or Check	<input type="radio"/>	\$	███.██
Shop 'n' Save Vouchers	<input type="radio"/>	\$	███.██
\$1.00 off coupon*	<input type="radio"/>	\$	███.██
EBT/SNAP*	<input type="radio"/>	\$	███.██
Senior FM Voucher	<input type="radio"/>	\$	███.██
WIC FM Voucher	<input type="radio"/>	\$	███.██
FHC Voucher	<input type="radio"/>	\$	███.██
Other payment:	<input type="radio"/>	\$	███.██

Amount Customer Paid: \$ ███.██

Is this person a Shop 'n' Save participant?
 Yes No

If Yes, Participant ID:
██████████

(First Initial; Last Initial; Month; Day; Year e.g., JM022112)



SNS Participants, N=336

91% women

90% African American

54% patients at the FQHC

37% had children in the household

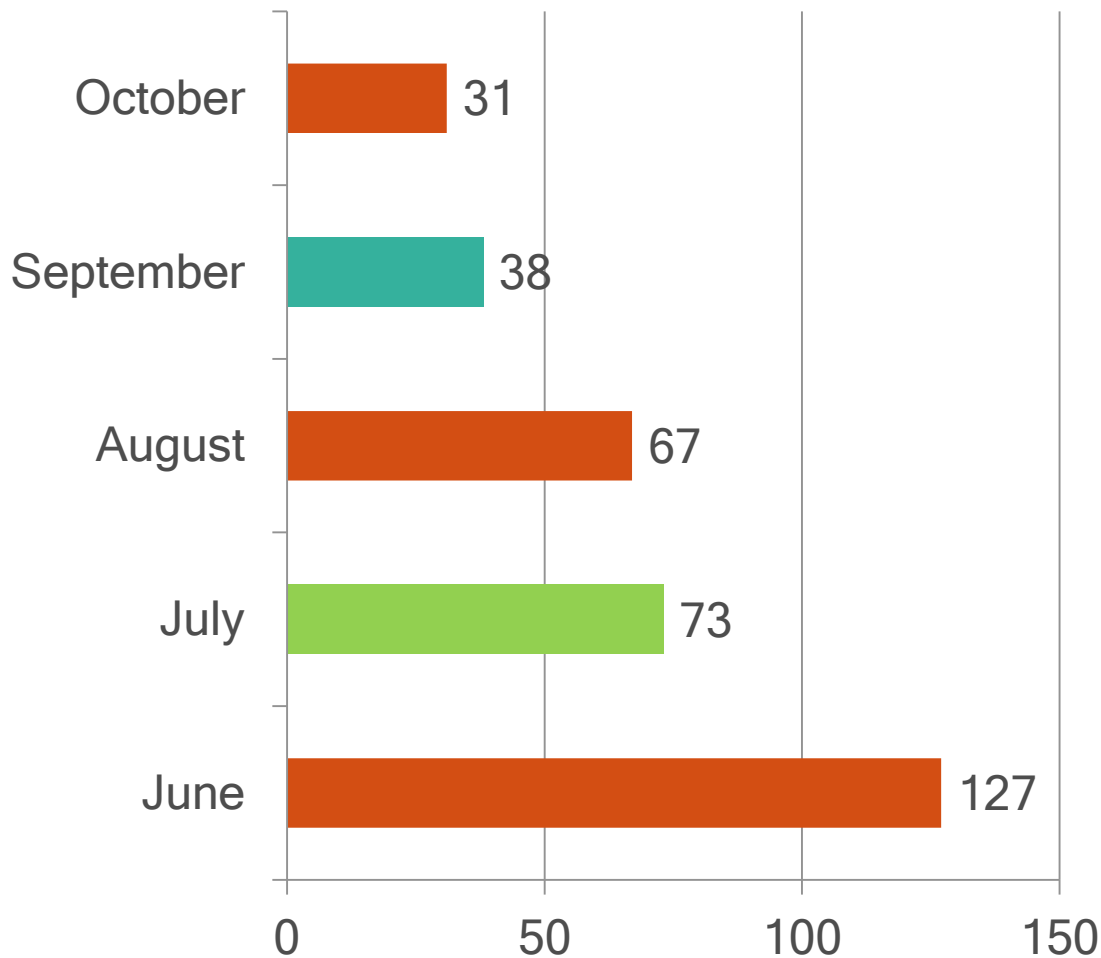
Forms of food assistance (can have 1+):

- 52% SNAP
- 52% Senior FMNP
- 23% WIC
- 17% WIC FMNP



SNS Participants, N=336

Number Enrolled by Month

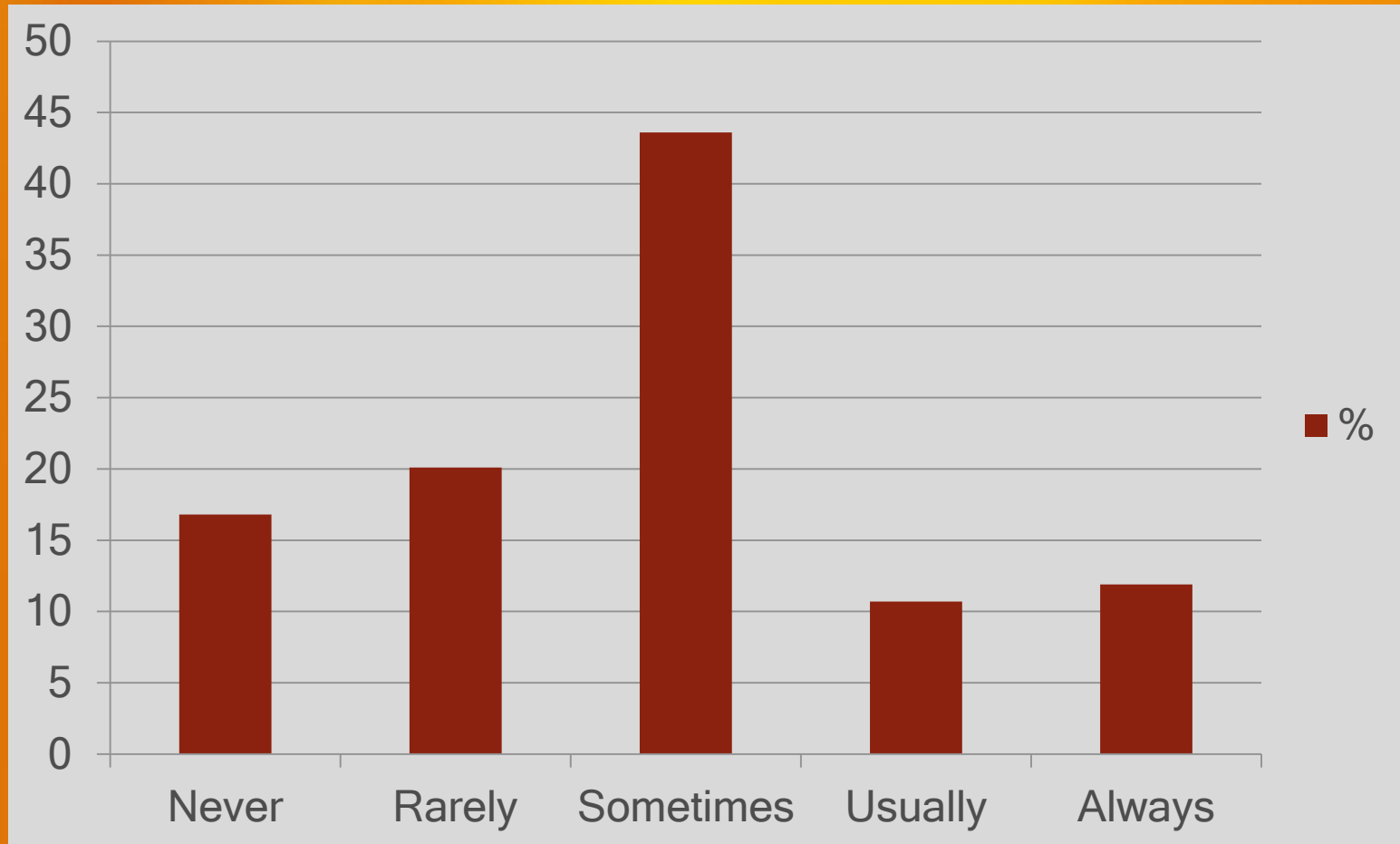


Shopping Frequency

- Mean: 3.3 days
- Range: 1-12 days

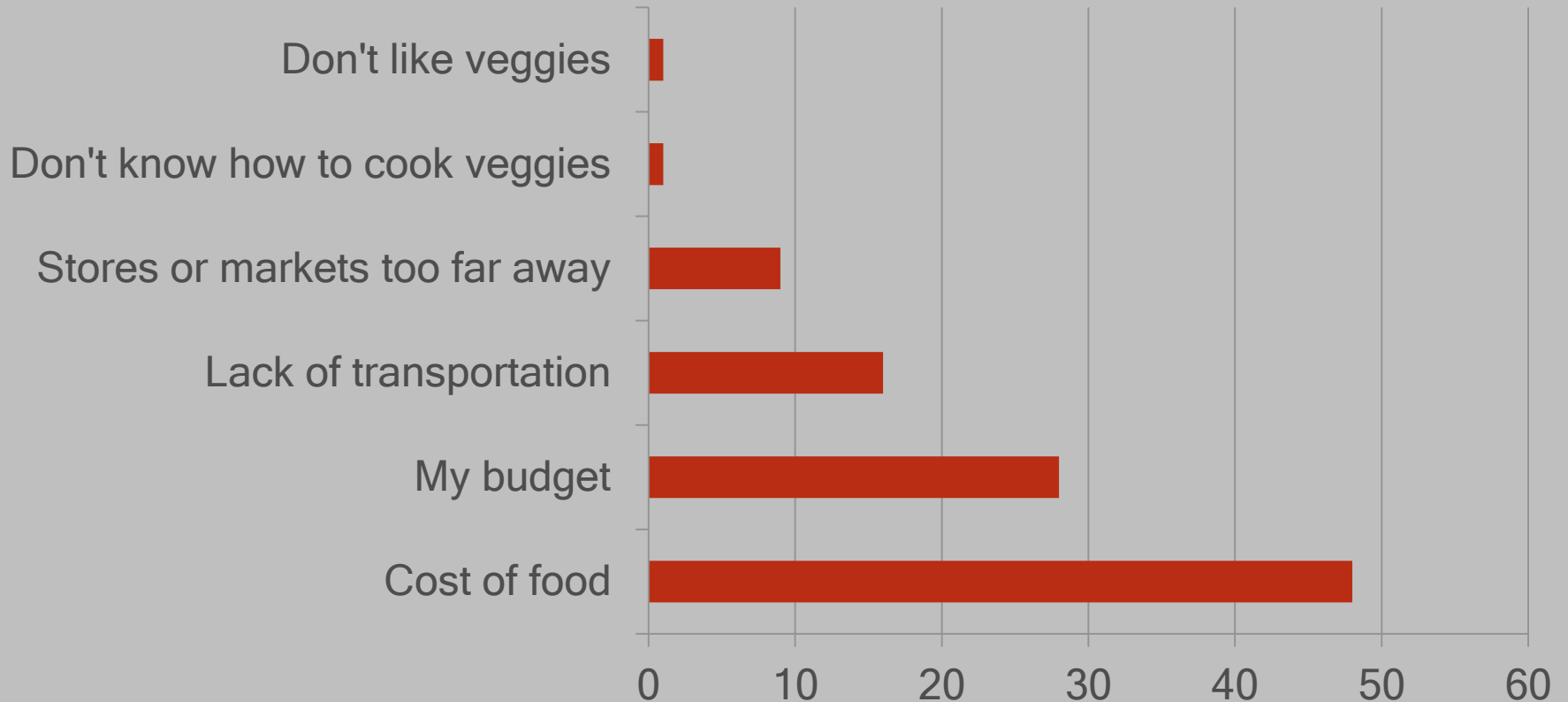


How often in past year were you worried about having enough money to buy nutritious meals?

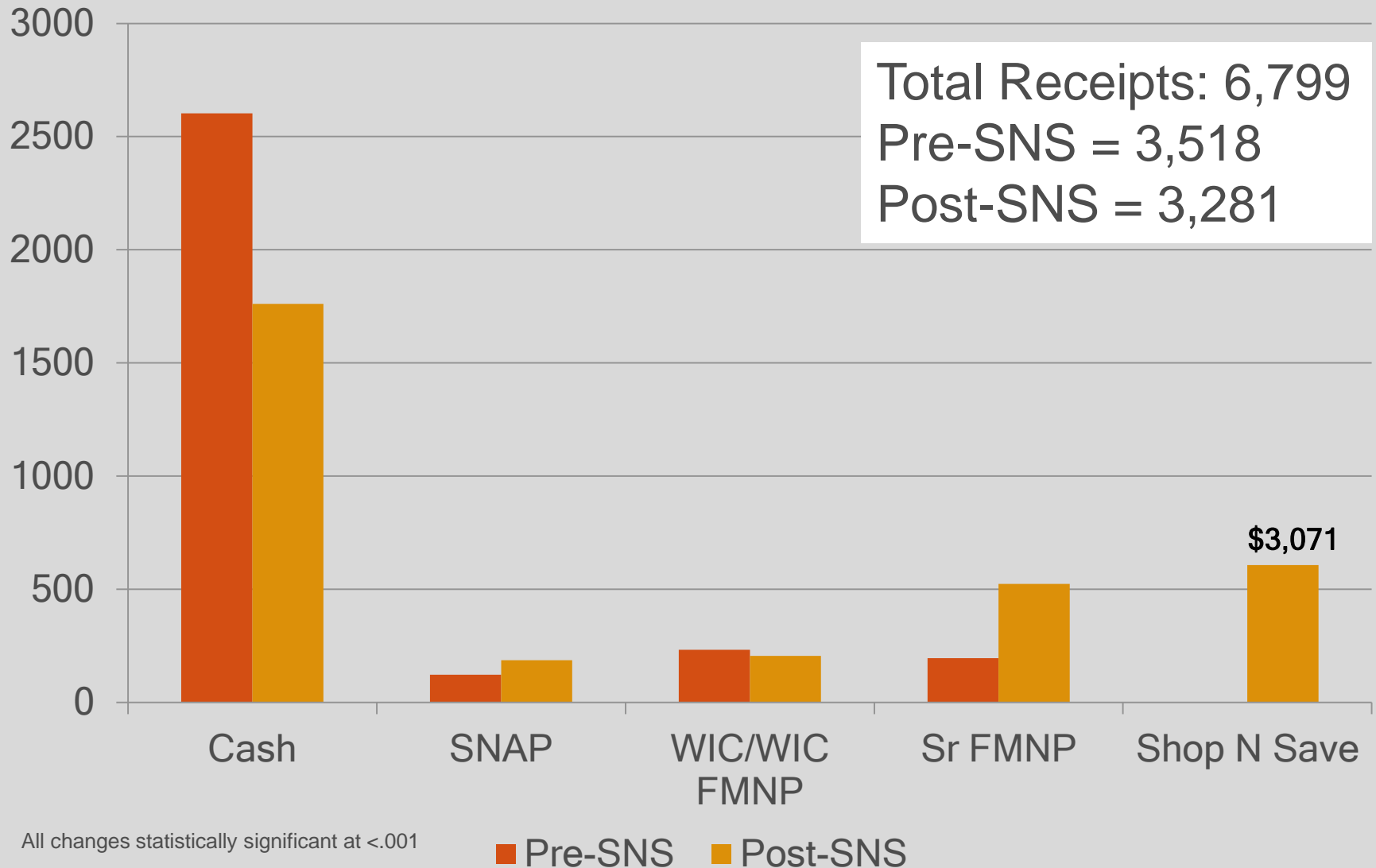


Barriers to Purchasing Fresh Fruits & Vegetables

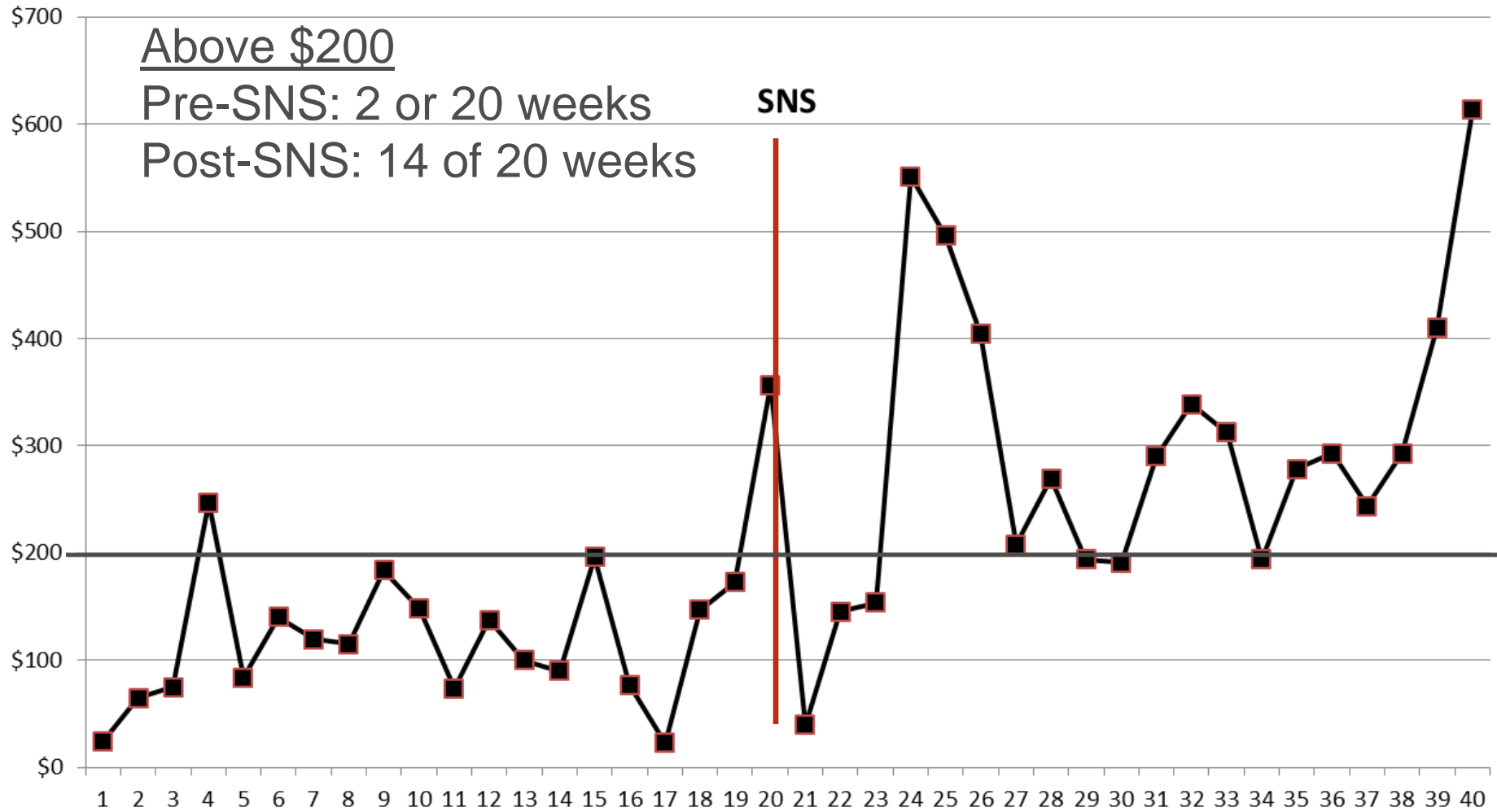
Percent Endorsed



Number of Receipts by Payment Type, Pre- and Post-SNS



Food Assistance Expenditures Pre-SNS and Post-SNS by Market Week

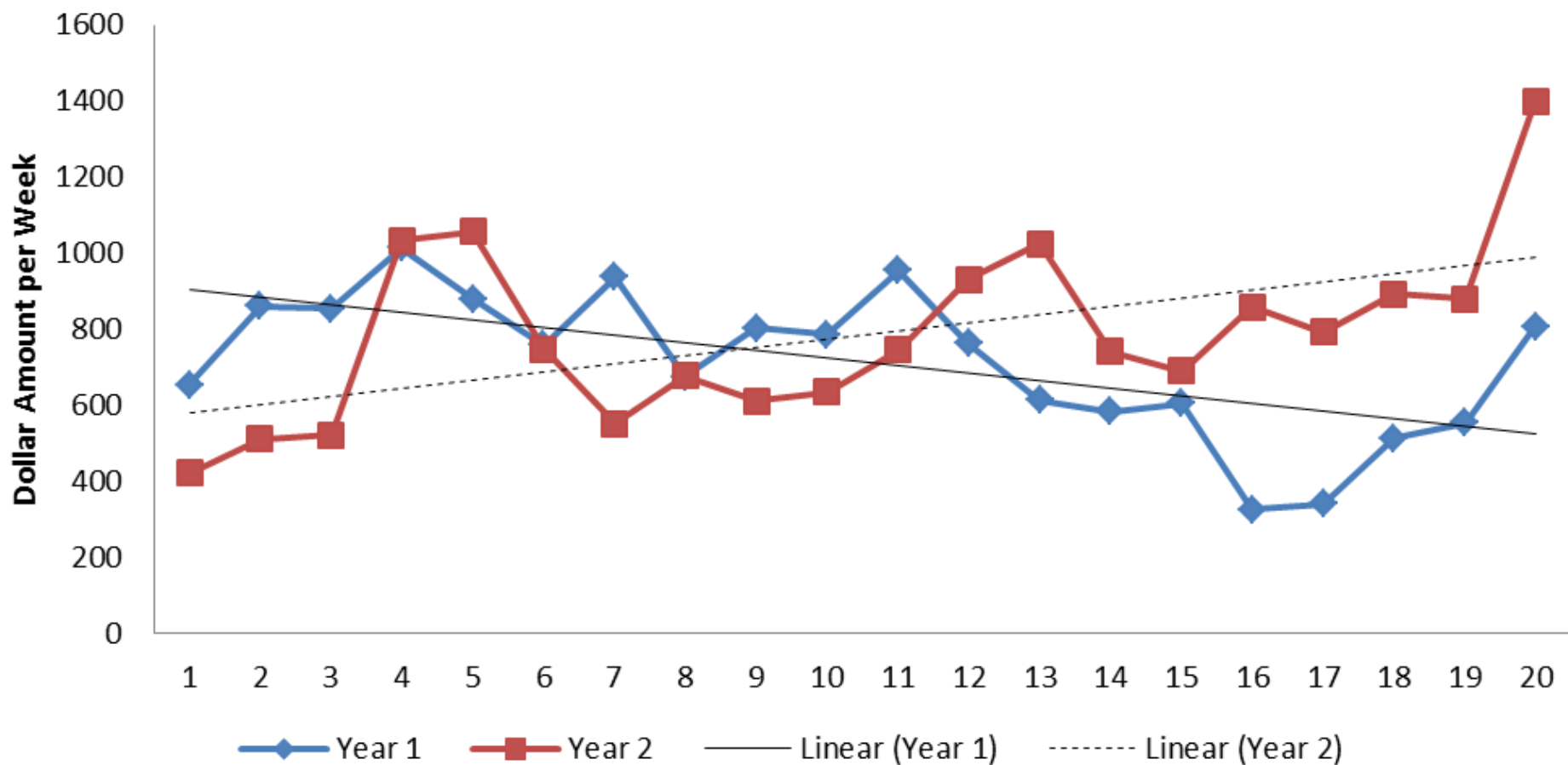


Weeks without Food Assistance Revenue

- Pre-SNS
 - 35% no SNAP
 - 10% no WIC or WIC FMNP
 - 5% no Senior FMNP
- Post-SNS
 - 0%



Total Revenue per Week Year 1 & Year 2



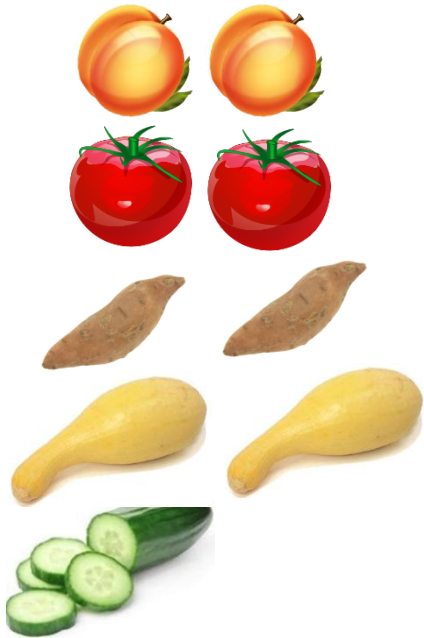
52% extension of food assistance dollars through SNS matching program

\$1.00 in food assistance became \$1.52 with SNS match

Example: \$5.00 food assistance resulted in

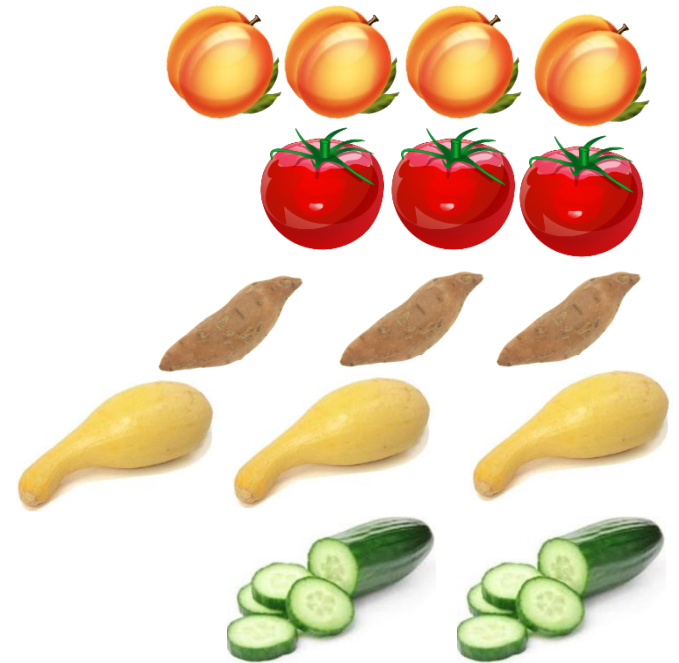
Without match (\$5.00)

9 fruits and veggies



With match (\$7.60)

15 fruits and veggies



Conclusion: Win-Win-Win!



- Food assistance matching is a low-cost obesity prevention policy intervention with community, economic, and health development benefits
 - All farmers' markets need to be EBT accessible!
- SNS matching intervention resulted in 2.3 more food assistance dollars expended at the farmers' market
 - 4.1 times more SNAP dollars (greatest increase)
- SNS matching intervention resulted in 66% more fruits and vegetables going into the homes of low-income consumers



Sustainability

onpoint!
with Cynthia Flemer

RADIOACTIVE TALK ON PROGRESSIVE ISSUES

JUNE

Letters to the Editor < ...
NEXT STEP > Letter to Editor: Why getting your opinion could end nullification

Freedman, Hebert: Double down on obesity with double bucks at farmers' markets

March 21, 2013

7TH



Healthy
South Carolina
INITIATIVE



Next Steps

- Disseminate “Building Pharmacies: A Guide for Implementing a Farmers’ Market at a Community Health Center”
 - http://cosw.sc.edu/index.php?option=com_rsform&formId=17
- Future Research
 - Scale-up food assistance matching intervention
 - National dissemination of “farmacies” model to FQHCs in rural communities
 - More targeted patient-provider communication and veggie prescription program