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
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Collaborators
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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

Source: Finkelstein et al., 2012; Flegal et al., 2010

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)

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
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

- October: 31
- September: 38
- August: 67
- July: 73
- June: 127

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?

- Never
- Rarely
- Sometimes
- Usually
- Always
Barriers to Purchasing Fresh Fruits & Vegetables

- Cost of food
- My budget
- Stores or markets too far away
- Lack of transportation
- Don't like veggies
- Don't know how to cook veggies

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

Total Receipts: 6,799
Pre-SNS = 3,518
Post-SNS = 3,281

All changes statistically significant at <.001
Food Assistance Expenditures Pre-SNS and Post-SNS by Market Week

Above $200
Pre-SNS: 2 or 20 weeks
Post-SNS: 14 of 20 weeks
Weeks without Food Assistance Revenue

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

- **Post-SNS**
  - 0%
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
Freedman, Hebert: Double down on obesity with double bucks at farmers’ markets
March 26, 2013
Next Steps

• Disseminate “Building Farmacies: A Guide for Implementing a Farmers’ Market at a Community Health Center”

• 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