



# The Veggie Van Implementation Study: History, Current Work and Future Plans

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North Carolina: 2009-2011

# FORMATIVE WORK

# Food Access Focus Groups

- 8+ focus groups with lower-income individuals in NC
- Asked people about what would help them eat more F&V
- Explored several options including farmers' markets incentive programs, community gardens, low-cost healthy fast food restaurant, etc.



# Feedback on Mobile Markets

- Generally well-received by participants
- Having markets come to convenient locations would make it easier to purchase fresh F&V
  - Consistent timing, i.e., operating at the same time each week, and flexible hours crucial for accessibility
  - Produce sold at mobile market needs to be high quality and fresh:
    - “We don’t want them to come through our neighborhood because we are low income realty. We don’t want them to bring no leftovers.”
- Good customer service, trusting vendors, and building relationships with vendors/farmers increases participants likelihood of shopping there



# Participants preferred Mobile Markets

- 88% of participants indicated on a post-focus group survey that they would be “very likely” or “somewhat likely” to use a mobile produce market



# Veggie Van Model

- Weekly boxes of North Carolina grown F&V
  - Delivered to convenient locations in community
  - Reduced cost, accepts multiple tenders including SNAP
  - Nutrition and Cooking Education, Recipes, Newsletters and more



# Social Cognitive Theory

## Food Access Intervention

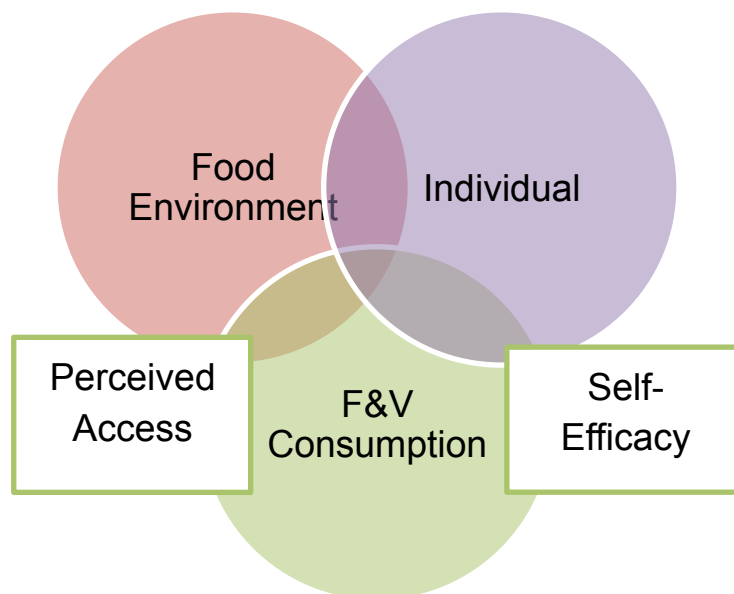
**Spatiotemporal:** Delivery to frequently visited locations in underserved communities

**Economic:** Priced to meet needs of community, accepts SNAP Benefits (food stamps)

**Social:** Responsive to cultural food norms

**Service Delivery:** Incentives, quality, customer education

**Quality:** Fresh, local food



## Educational Intervention

**Expectations:** Nutrition lessons/ newsletter content on benefits of healthy diet

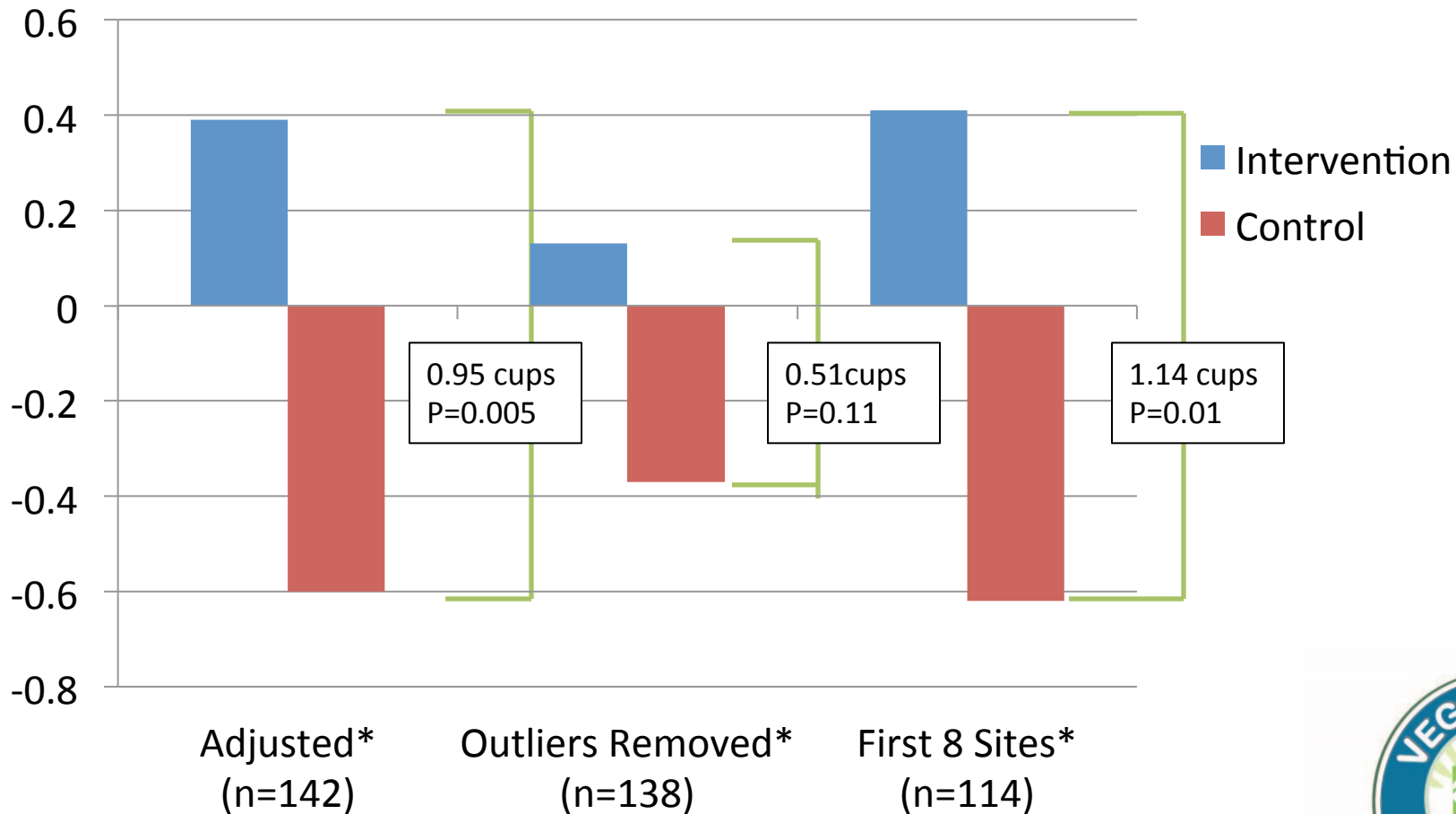
**Expectancies:** Social marketing campaigns at community sites

**Observational Learning:** Cooking demonstrations, social modeling

**Behavioral Capability:** Recipes and food preparation tips



# RCT in 12 communities



\*Adjusted for baseline values, education and clustering in sites







# OVERVIEW OF CURRENT STUDY

# Main Goal

- Take the “successful” Veggie Van model and help other organizations to adapt and implement it in new communities
  - Veggie Van toolkit will be used to help organizations start their own program
  - Our team will provide technical assistance and help with community engagement
  - We will look at changes in fruit and vegetable consumption and monitor implementation



# What's in the Veggie Van toolkit

- Marketing materials
- Sample budgets and “break-even analysis” spreadsheet
- Job Descriptions and Operations Manuals
- “Point-of-sale” Nutrition Curriculum including a database of recipes by produce item and season, sample newsletters and activity ideas





Aim 1a

# KEY INFORMANT INTERVIEWS

# Key Informant Interview Goals

- *Improve the toolkit by including additional financial models and community outreach strategies from other organizations*
- *Update RFP selection criteria based on additional measures of mobile market success identified through qualitative analysis*



# Methods

- Identified existing Mobile Markets and ask them to complete a screener survey
- Selected 21 experienced/successful market operators to serve as key informants
  - Initial Interview
  - Follow-up interviews on unique program aspects
  - 4 organizations undergoing business analysis
- Analyze interviews to determine best practices/ barriers and keys to success





Aim 1b

## RFP PROCESS

# RFP Goals

- Identify organizations across the north and southeast to serve as partners in the Veggie Van implementation study
  - Received 58 intent to apply submissions
  - Invited 24 applicants to apply
  - Received 17 full applications
  - Invited 12 finalists to attend our training and selection meeting in March
- Select final 8 partner organizations by April 2019





# Benefits of Partnership

- Up to \$50,000 to offset the cost of running a mobile market according to the Veggie Van Model and participating in ongoing evaluation efforts
- Access to the online Veggie Van toolkit which includes:
- Training on the toolkit and ongoing technical assistance
- Assistance with community engagement and developing a community advisory board
- FarmersRegister Mobile Market point-of-sale software
- Access to data and reporting related to mobile market evaluation outcomes.
- Assistance with developing a sustainability plan and identifying program funding sources





Aim 2a.

# EFFECTIVENESS EVALUATION

# Participant Recruitment

Goals: Recruit 30 participants at each of 32 locations  
(8 organizations x 4 sites per organization x 30  
participants=960)

- Potential study participants will be those interested in having more healthy food options in their community.
  - Organizations will identify these individuals through different community engagement channels and ask them to complete an interest form
  - Those who complete an interest form will be invited to VV kick-off OR community forum (comparison)



# Data Collection

- At the kick-off/forum recruited participants will:
  - Have height and weight measured
  - Complete a survey
  - Veggie Meter
- After initial data collection, participants will be called and asked to complete two 24 hour dietary recalls
- If we don't get 30 participants at the kick-off/forum, additional participants will be recruited at their first mobile market visit or at future food systems planning events (comparison) for up to 2 months after initial data collection





Aim 2b.

# INTERVENTION IMPLEMENTATION

# Implementation Goals

- Work with organizations to adapt the Veggie Van program to their setting
- Understand barriers and facilitators to implementing the VV by each organization
- Document fidelity to the intervention, program adaptations and reach





Aim 3

## REVISE TOOLKIT FOR FUTURE DISSEMINATION

# Mobile Markets in Rural Communities

- Most of the RFP applicants who did not get invited to apply were rural
  - Limited to urban due to lack of experience/testing in rural areas
  - Concerns about viability of model in rural areas





# Preliminary questions/concerns

- Could not reach as many sites in one day or as many people at one site?
  - Would the idea of partnering with an organization that people are already going to still hold up?
  - Would home delivery work better? Could it be scaled at low-cost?



# Involving Rural Communities

- **Mobile Market Summit in Buffalo, NY**  
**March 5<sup>th</sup>&6<sup>th</sup>**
  - Networking and sharing
  - Training and expert consultations
  - Open to anyone
- Interviews with rural mobile markets to understand how they are different?





**Your thoughts  
and questions?**



Overcoming Previous Challenges

**STUFF I THINK IS COOL!**

# Challenge #1

Community Partners Don't Like Randomization

## **Solution: RFP Process**

- Organizations apply to receive technical assistance and funding to start/expand a mobile market program
- Each organization that applies identifies 4 sites/communities they would work with (2 most be lower-income)
- RFP team selects 8 organizations to participate in the intervention and randomize their 4 sites (2 to intervention, 2 to control)



# Challenge #2

Mobile market programs lack financial sustainability; How do we pay farmers enough and keep the price low for consumers

## **Solution: Business Model Analysis**

- Work with current successful programs to identify best practices
- Expert business model analysis
- Explore cost offset, incentive and sliding scale programs
- Share models as part of toolkit



# Challenge #3

VV host sites had limited reach; the underserved are by nature hard to reach; Not everyone used VV who said they would

## **Solution: Community Engagement**

- Our team will work with each organization to develop a community engagement plan and advisory committee
- Initial recruitment and data collection will happen at mobile market kick-off



# Challenge #4

Incomplete purchasing data from mobile market customers

**Solution: Point of Sale Software for Mobile Markets with Research “Back-End”**

- Each organization receive license for Farm Register software and iPad to run it on
- Back-end aggregates individual and site-level data for research access; link to personal info using a loyalty card
- De-identified data from any market using Farm Register will be available in perpetuity for research access





# Challenge #5

Self-report dietary data is difficult to collect and unreliable

**Solution: Veggie-Meter as a Supplement to 24-hour Dietary Recalls**

- All participants need to do is stick their finger in the machine
- Uses pressure mediated Raman Spectroscopy to measure dermal carotenoids
- Dermal carotenoids correlate with serum carotenoids which are a biomarker for fruit and vegetable consumption

