

# Application of a Novel Forecasting and Footprinting Dissemination Framework to a Community Based Childhood Obesity Prevention Program

Allison M Morris<sup>1</sup>, Rebecca L Hagedorn<sup>1</sup>, Makenzie L Barr<sup>1</sup>, Sina J King<sup>1</sup>, Oluremi A Famodu<sup>1</sup>, Rashel L Clark<sup>1</sup>, Camille M Charlier<sup>2</sup>, Adrienne White<sup>3</sup>, Sarah E Colby<sup>4</sup>, Kendra Kattelmann<sup>5</sup>, Lisa Franzen-Castle<sup>6</sup>, **Melissa D Olfert<sup>1</sup>**.

<sup>1</sup>West Virginia University, Morgantown, WV, <sup>2</sup>Clinical Translational, West Virginia University, Morgantown, WV, <sup>3</sup>White Adrienne, University of Maine, Orono, ME, <sup>4</sup>Nutritional Science, University of Tennessee, Knoxville, TN, <sup>5</sup>South Dakota State University, Brookings, SD, <sup>6</sup>University of Nebraska, Lincoln, NE



LIFESTYLE INTERVENTION  
OLFERT RESEARCH LAB



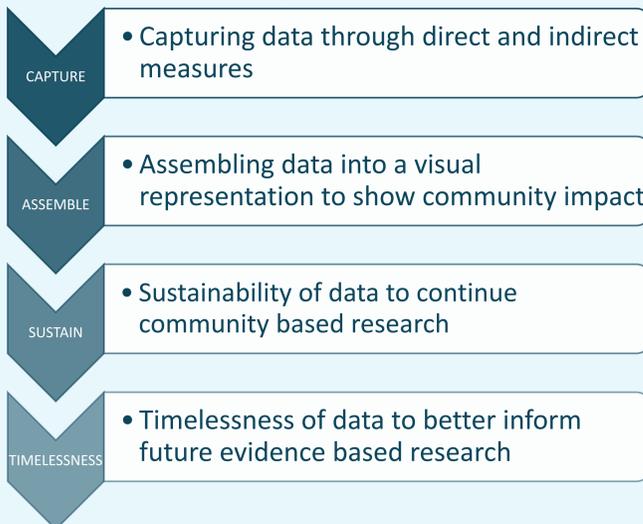
## Objective

To create an eb4CAST program report for the iCook 4-H program, a community-based childhood obesity prevention programs that uses a dyad approach to increase culinary skills, physical activity and family meal time among 9-11 year old children and their primary meal preparer.

## Introduction

Currently, there is an estimated 10-25 year gap between research discoveries and their impact on the health of populations<sup>1</sup> and dissemination of research results beyond scientific publications and to study participants and the general public has been identified as the ethical responsibility of researchers<sup>2</sup>. This is of particular importance in Community-Based Participatory Research (CBPR) where community members are engaged in all stages of the research process including *disseminating findings and knowledge gained to all partners and obtaining a long-term commitment by all partners*<sup>3</sup>. Community based interventions have an increased need to report program impact to participants, programs leaders and community stakeholders in order to justify the continued support of furthered programming and future dissemination research must address the 'challenges and barriers of dissemination from the perspective of community partners<sup>2</sup>. eb4CAST addresses this by:

- Disseminating research findings to participants, community members and stakeholders in a format that is accessible to the general population.
- Using CBPR principles to create a novel dissemination tool that can help bridge the research to practice gap.



eb4CAST is a dissemination tool that was developed to address this need. It uses a community-based research approach designed to capture the overall impact and effect of evidenced based programming in implementation and dissemination. This approach collects indirect publicly available data to forecast the need and feasibility of potential programming. Post-intervention, direct participant and facilitator data is compiled to measure community impact and program longevity. This combined forecast and footprint report created by eb4CAST will **Capture, Assemble** and **Sustain** the community based research to ensure its **Timelessness**.

## iCook 4-H

- 5-state obesity prevention program: Maine, Tennessee, Nebraska, South Dakota, and West Virginia
- Utilized a dyad approach to target childhood obesity through increasing culinary, meal time and physical activity for adolescents, 9-10 years of age, and their primary meal preparer.
- A community-based participatory research approach was utilized to target adolescents in achieving healthy weight and lifestyle behaviors.
- Randomized, control-treatment, 12-week program emphasized "learning by doing" through skill building and increased knowledge in healthy lifestyle decisions through a 8 lesson, dyad-based learning intervention program.

### Pilot 2012

- 6 session pilot Physical, process and program evaluations eb4CAST conceptualized

### Intervention 2013-2015

- 6 session intervention Physical, process and program evaluations eb4CAST development

### Pilot Dissemination 2014

- 8 session pilot dissemination Process and program evaluations eb4CAST development

### Full Dissemination 2015- present

- 8 session full dissemination Process and program evaluations eb4CAST reports

Cooking Together



Eating Together



Playing Together



## Methods

### Data Collection

#### Indirect Measures

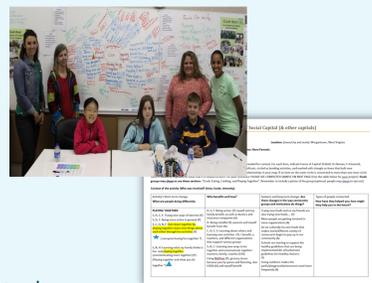
Publicly available data compiled to create community profile

Collected from:

- Robert Wood Johnson County Health Ranking
- Census Data

#### Direct Measures

- Process Evaluations
  - Youth
  - Adult
  - Program Leader
  - State Director
- Ripple Effect Mapping
  - Impact evaluation tool
  - Determines the positive outcomes using Community Capitals Framework (CCF)
  - Helps the participants, session leaders, community members and researchers understand how iCook 4-H has affected individuals, peer groups and environments



## Methods

### Infographic Development

#### Internal Expert Work Groups

To Determine:

- Indirect measures to include
- Direct measures to include
- Infographic format



#### Research Group Review

- By iCook PI's and multistate collaborators
- To Determine measures included and format

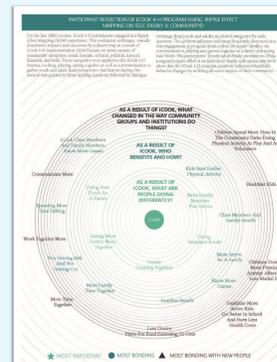
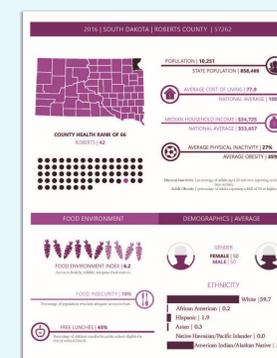
- Infographics given to reviewer
- Edits collected
- Group discussion
- Infographics modified

- Multiple rounds of review



## Results

- eb4CAST reports were created for iCook 4-H dissemination sites (n=11)
- Each report had four components: **program overview, community profile, program impact and Ripple Effect Mapping**
- Data from direct and indirect sources were graphically combined in a report to show how this innovative approach of parents and children working together toward a healthier lifestyle has impacted the community



## Conclusions

- eb4CAST has been implemented within the iCook 4-H program to better help stakeholders and community members implement this intervention at a community level.
- This infographic captures participant, facilitator, and state leader perceptions to visualize the story community programs have in specific geographical locations. For program sustainability and longevity, this infographic is encouraged to be shared in hopes of magnifying the program timelessness.



## Future Directions

- Infographic Expert Review (in progress)
  - To collect data about the perception of professionals of multidisciplinary expertise on the eb4CAST tool and infographic
  - To gain feedback for moving further with the dissemination of the tool
  - To demonstrate a need for the tool
- Apply the eb4CAST framework to community and campus environments
  - Being utilized for Get Fruved
  - Utilizing eb4CAST as a true forecast at baseline of interventions
- To develop eb4CAST into an electronic platform where eb4CAST reports can be easily generated for interventions and programs

## References

- Health Economics Research Group OoHE, RAND Europe. Medical research: what's it worth? Estimating the economic benefits from medical research in the UK. London: UK Evaluation Forum, 2008
- Chen, Peggy G., et al. "Dissemination of results in community-based participatory research." *American journal of preventive medicine* 39.4 (2010): 372-378.
- Israel BA, Schulz AJ, Parker E, Becker AB. (2001). Community-Based Participatory Research: Policy Recommendations for Promoting a Partnership Approach in Health Research. *Education for Health* 14(2):182-197.

## Collaborators/ Contact



Funding provided by Agriculture and Food Research Initiative Grant no. 20212-68001-19605 from the USDA National Institute of Food & Agriculture, Childhood Obesity Prevention: Integrated Research, Education, and Extension to Prevent Childhood Obesity, A2101 and state experiment stations.



Allison Morris  
Doctoral Student  
West Virginia University  
ammorris@mix.wvu.edu

