Using children as change agents for preventing childhood obesity in Georgia

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• Children from low-income households in rural areas are most likely to be obese.

• Adults, role models for children, are also overweight and obese.

• School-based interventions have shown to be effective in improving diet and physical activity, but change has been modest. More work is needed related to both child behavior and home (parent and environmental) change.

• The family environment is a critical influence in the development of childhood obesity. Yet, engaging parent participation and influencing parental behavior change are difficult.
HOW WE GOT HERE

Colquitt County Archway Community

Formed the Healthy Colquitt Coalition

Partnered with UGA

Completed community assessments with pilot funding

USDA grant* for full program development, implementation and evaluation

*USDA Agriculture and Food Research Initiative (AFRI) Childhood Obesity Prevention: Integrated Research, Education, and Extension to Prevent Childhood Obesity A2101 (Award # 2012-68001-19625)
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Children can be change agents for their home environment and advocates for school and community policies and activities. The children can motivate their parents to make behavior changes through skills learned at school, and parents and children can work together to adapt the information to their own family life.

Community partnerships, through community participatory research, have the potential to develop more effective interventions and enhance translation of the results into practice.
Using an evidence-based curriculum that utilized the child as change agent, test the efficacy on child consumption of healthy food and body composition, to reduce excessive weight gain in an ethnically diverse group of children.

Using the child as a community advocate, support community policy changes and increase child and family involvement in community and Extension programs.

Determine factors that facilitate successful program delivery.

Integrate the intervention components into the ongoing county Cooperative Extension programs to foster wide-scale dissemination and long-term sustainability.
PROGRAM IDENTIFICATION

- Name
- Logo Development
- Action Pack Cheer

Teaching their parents the cheer at Family Night

Logo developed by community
CLASSROOM PROGRAM

• Curriculum
  – Child as health messenger/change agent
  – Emphasis on increasing consumption of fruits and vegetables, decreased consumption of sugar sweetened beverages, low nutrient/processed foods, decrease in sedentary behavior, increase in physical activity
  – Skills in encouraging healthy eating and physical activity at home
  – Activities for being advocates of school wellness and community-wide policies
SCHOOL ENVIRONMENT

- Program Awareness
- Classroom Energizers
- Encouragement to try fruit and vegetables at lunch
- Teachers as Role Models
- School Wellness Policies
FAMILY TO SCHOOL

• Child will take activities home in their “Action Pack” Backpack to share with the family
  – Recipes
  – “Action Trackers”
  – Nutrition and physical activity related items (MyPlate, pedometers, etc)
HOME PROGRAM

- Facebook
- Family Fun Nights
  - Delivered by Family Nutrition Educator
  - Once a semester in 3rd, 4th, 5th grades
  - Emphasis on fruits and vegetables, high-fat, high-sugar, sugar sweetened beverages and physical activity/sedentary behavior
  - Importance of healthy home environment
  - Benefits of family meals, meal planning and shopping
  - Strategies for making food environment and physical activity/sedentary behavior changes
  - Portion sizes
  - Food and activity preferences
  - Food marketing to children
COMMUNITY

- Partnership with Healthy Colquitt Coalition
- Linking program components to community activities
  - Sporting Events
  - Recognition at community events
  - Opportunities for physical activity
  - Community gardens
  - Access to healthy foods at Farmer’s Markets
  - Walking trails
**RESEARCH DESIGN**

- Group-randomized design, with random assignment of 10 schools to intervention or delayed intervention.

- The three-year intervention (2013-2016) will focus on two cohorts of 3rd grade children and follow them through the end of 5th grade.

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<th>Recruitment</th>
<th>Intervention</th>
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<td>Cohort 1 (n=5 schools; 325 students)</td>
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<tr>
<td></td>
<td>Cohort 2 (n=5 schools; 325 students)</td>
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<td></td>
<td>Cohort 3 (n=5 schools; 325 students)*</td>
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*Control schools are the same as Cohort 2, but children will be in the same age group as Cohort 1.*
By the end of the intervention, children will exhibit healthier eating and physical activity behaviors and age-appropriate growth patterns

- Increased fruit and vegetable consumption
- Decreased high fat, high sugar food consumption
- Increased physical activity
- Decreased screen time
- Increased family meals
- Increased family physical activity
- More children in normal range for BMI percentile and waist circumference

Factors related to implementation fidelity and adoption by families and schools will be determined

- Lesson type, duration, frequency
- School to home activities
- Community activities
CHILD OUTCOME MEASURES

• Height, weight and waist circumference

• Twice a year (beginning and end of school year) in all ten schools for the entire project period

• Parent report of child dietary intake

• Parent report of child physical activity and media use
PARENT OUTCOME MEASURES

- Eating and physical activity behaviors
- Physical activity and sedentary behaviors
- Food shopping, cooking, eating, and physical activity done as a family
- Accessibility of foods and beverages in the home
- Food insecurity
- Demographics
- Once a year in all ten schools for the entire project period
ENVIRONMENTAL OUTCOME MEASURES

- School menu
- Consumption during school lunch
- Classroom food policies
- School wellness policies
SUCCESSES AND CHALLENGES

• Engagement of the community

• Implementation of the program
  – Scheduling
  – Staffing

• Data collection
  – Absenteeism
  – Movement between schools
  – Staffing

• Follow-up
  – Tracking families over time
IMPORTANCE OF THIS WORK

• Brings together expertise from three colleges at UGA and a strong multi-disciplinary team to address a serious health problem in Georgia.

• Contributions to our knowledge in
  – Understanding the influence of home and school on elementary school children
  – Evaluating an intervention with a strong experimental design
  – Comprehensive model of process evaluation
  – Integrating research, education, and collaboration among community partners to find effective strategies to address childhood obesity
  – Articulating an engaged university-community model for developing and implementing childhood obesity prevention programs
  – Utilizing an existing delivery channel and infrastructure (Extension) to disseminate the intervention and foster sustainability