

Nutrition and Physical Activity in Child Care Centers:



The Impact of a Wellness Policy Initiative on Environmental and Policy Assessment (EPAO) Outcomes

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Childhood Obesity in Georgia



OBESITY: A Weighty Issue for Children



- 12.4% of 2-5 years old are obese
- **GA: 14.5%**

States with the Highest Rates of Obese 10- to 17-year-olds

Rank	States	Percentage of Obese 10- to 17-year-olds (95 percent Confidence Intervals)
1	Mississippi	21.9% (+/- 3.5)
2	Georgia	21.3% (+/- 5.1)
3	Kentucky	21.0% (+/- 3.5)
4 (tie)	Illinois	20.7% (+/- 3.6)
4 (tie)	Louisiana	20.7% (+/- 4.0)
6	Tennessee	20.6% (+/- 3.7)
7 (tie)	Arkansas	20.4% (+/- 3.6)
7 (tie)	Texas	20.4% (+/- 5.0)
9	D.C.	20.1% (+/- 3.9)
10	West Virginia	18.9% (+/- 3.2)

7th annual F as in Fat: How Obesity Threatens America's Future 2010, Trust for America's Health and the Robert Wood Johnson Foundation. <http://healthyamericans.org/reports/obesity2010/Obesity2010Report.pdf>
Ogden et al. Prevalence of high body mass index in US children and adolescents 2007-2008. JAMA 2010; 303: 242-249

Potential of Child Care Setting



- 12 million, or 61%, of children 5 years of age and younger are in some form of child care on a regular basis
 - Georgia: >380,000 children, or 51% of the 740,000 children ages 0-5 years each year
- Opportunity in child care
 - Children ages 2-5 consume a majority of their daily dietary intake and for many a majority of day spent in child care
 - Previous studies have shown that children in CC do not meet dietary intake recommendations and need greater volume of physical activity
 - Food habits and physical activity initiated in childhood is associated with more physically active teenagers, and better diets

Caregivers Promoting Healthy Habits

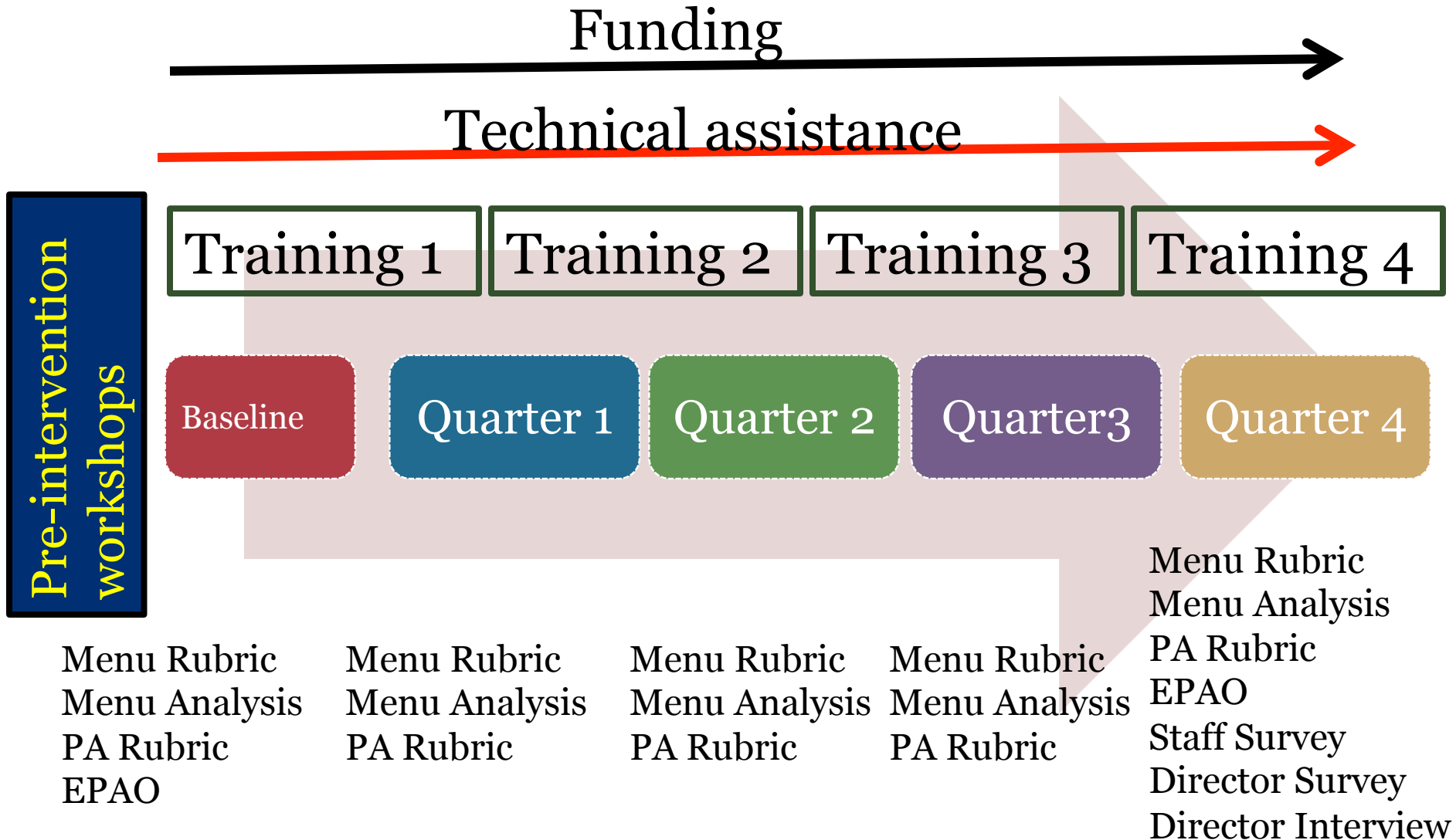


Improve children's eating and physical activity habits by training caregivers on the importance of nutrition and physical activity

- Centers adopt wellness policies
- Childcare providers are assisted in implementation
- Childcare providers are given training, technical assistance, and funding



GA Department of Early Care and Learning Caregivers Promoting Healthy Habits



Caregivers Promoting Healthy Habits Evaluation Tools

	PURPOSE OF MEASURE	Occurrence
Director Survey	Understand best practices for implementing wellness policy, with barriers to implementation.	Monthly
Director Interview	Identify center improvements, recommendations for the future, and how the program was perceived.	Q4
Director Extensive Survey	Evaluate perceptions of the sustainability of the program.	Q4
Staff Survey	Evaluate the impact of the wellness policy implementation on practices at the center, and perceptions of staff.	Q4
EPAO	Assessment of changes to the physical activity and nutrition environment in centers.	Baseline and Q4
Menu Rubric	Assess nutritional changes to menu compared to Dietary Guidelines for Americans.	Baseline and Q4
Physical Activity Rubric	Assess changes in physical activity practices.	Baseline and Q4
Menu Analysis	Assess changes in nutrition practices related to the Dietary Guidelines for Americans 2005.	Baseline and Q4

Research Question: To what extent did scores for the physical activity environment change from Baseline to Quarter 4?



- Active play
- Sedentary behaviors
- Sedentary environment
- Portable play environment
- Fixed play environment
- Staff behaviors-physical activity
- Physical activity training and education
- Physical activity policy



Research Question: To what extent did overall scores for the nutrition environment change from Baseline to Quarter 4?



- Fruits and vegetables served
- Whole grains and low fat meats served
- High sugar/high fat foods served
- Beverages served
- Nutrition environment
- Staff behaviors
- Nutrition training and education
- Nutrition policy

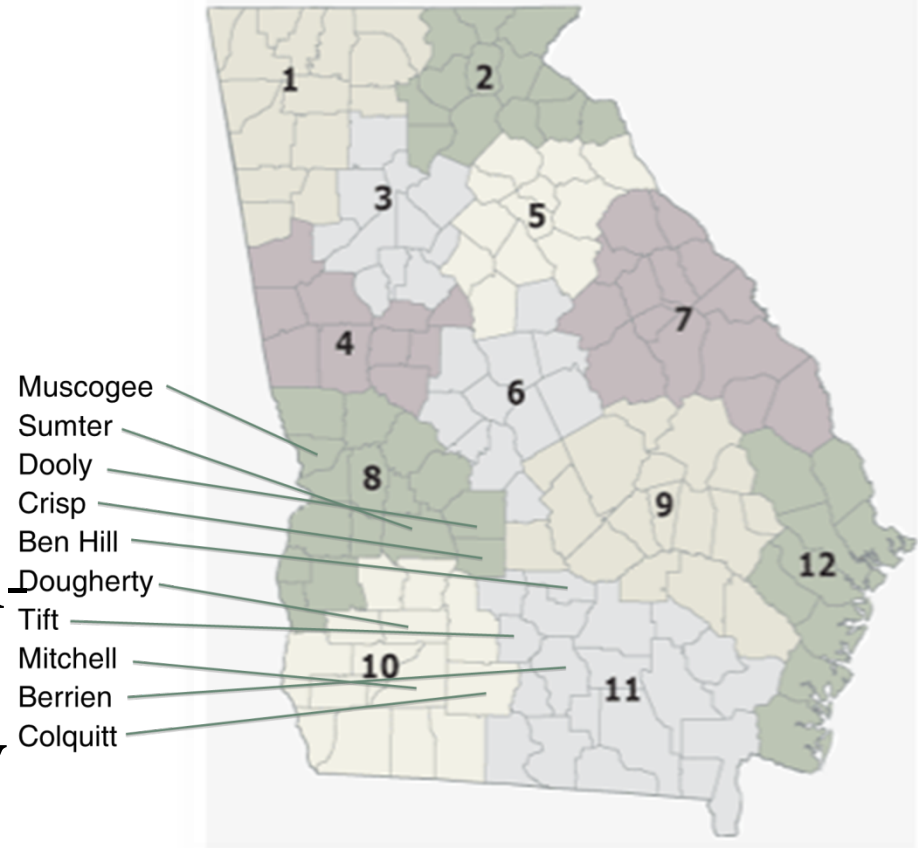


Methods



- 24 licensed child-care centers in Southwest Georgia, serving 2,042 children
- Environment and Policy Assessment Observation Instrument (EPAO), validated instrument
- Baseline data collected in April-May 2010 (n=24)
- Q 4 data collected in June-July 2011 (n=22)

Figure 1. Counties Participating in Project⁷



Statistical Analyses

- ❑ EPAO subscale and overall nutrition and physical activity scores (out of 20)
- ❑ Baseline and final score paired t-tests
- ❑ SPSS PASW Statistics 18, 2010, Chicago, Illinois)
- ❑ P-values < 0.05 were considered significant

RESULTS



Physical Activity EPAO	Baseline	Final	Diff.	P-value
Active Play score	8.94 ± 3.47	11.06 ± 4.53	2.12	0.019*
Sedentary behavior score	11.21 ± 4.55	11.82 ± 4.57	0.60	0.559
Sedentary Environment score	10.00 ± 5.73	13.03 ± 5.62	3.03	0.005*
Portable Environment score	9.87 ± 4.56	13.89 ± 3.45	4.02	0.002*
Fixed Environment score	12.84 ± 2.59	12.33 ± 2.51	-0.51	0.310
Staff Behavior score	11.27 ± 5.18	15.27 ± 5.18	4.0	0.004*
PA Training and Education score	5.45 ± 4.34	14.32 ± 4.44	8.87	<0.001**
PA policy score	16.82 ± 4.76	16.82 ± 4.76	0	-
Total Physical Activity Score	10.80 ± 1.33	13.57 ± 1.69	2.77	<0.001**

Nutrition EPAO	Baseline	Final	Diff.	P-value
Fruits and Vegetables score	11.82 ± 2.73	11.97 ± 1.71	0.15	0.793
Grains Score	10.98 ± 3.80	9.85 ± 3.52	-1.14	0.249
High sugar/high fat foods Score	12.02 ± 2.42	12.98 ± 1.62	0.96	0.063
Beverage Score	12.93 ± 2.61	13.51 ± 2.00	0.58	0.357
Staff Behavior Score	15.38 ± 3.41	15.91 ± 4.04	0.53	0.644
Nutrition Environment score	12.73 ± 4.07	16.36 ± 4.92	3.64	<0.001**
Nutrition Training and Education Score	8.36 ± 4.60	16.91 ± 3.00	8.54	<0.001**
Nutrition Policy Score	12.73 ± 1.96	14.85 ± 3.67	2.12	0.045*
Total Nutrition Score	12.12 ± 1.82	13.97 ± 1.22	1.85	0.001**

Summary



- Statistically significant improvement for physical activity, reflecting an increase in centers' volume of active playtime and structured physical activities.
 - Active play, structured PA, staff behavior, sedentary environment, PA education and training
- Statistically significant improvements in nutritional practices across centers:
 - Reduction in total fat, saturated fat, and percentage of calories from fat in meals served in centers
 - Increased servings of lower fat milk, vegetables and lean protein
 - Reduction in servings of fried/pre-fried foods

Strengths & Limitations



Strengths

- Use of validated instrument
- 1 year implementation with low drop-out rate (2 centers (8%))
- First study in GA

Limitations

- Findings based on one observation at Baseline and Q4 per center
- No comparison group

Conclusion



Caregivers Promoting Healthy Habits program:

- After one-year implementation of wellness policies, participating child care centers in SW Georgia were better equipped to promote good nutrition and physical activity.
- Child care centers that implement physical activity and nutrition policies, with engagement and training of child care center staff, have the potential to positively impact a child's health.
- A new wave of implementation in 38 centers will begin in April 2012. Comparison centers are also being recruited.

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Questions?

Centers chose 6 out of 12 policies to implement

1. Breastfeeding is promoted.
2. Foods served exceed USDA Child and Adult Care Food Program (CACFP) guidelines and meet the Dietary Guidelines for Americans/My Pyramid for Preschoolers recommendations.
3. Safe drinking water is accessible and children are encouraged to drink water frequently.
4. The daily schedule promotes a relaxed period for meals and snacks.
5. Food and physical activity are not used as incentives or punishment.
6. Children serve themselves during meals and snacks with supervision.

Policies Continued

7. Nutrition and physical activity taught as learning objectives
8. Parents are partners in the effort to promote healthy eating and physical activity.
9. Sanitation, hygiene, and food handling are monitored.
10. At least 60 minutes of physical activity are scheduled daily, and screen time is limited for toddlers and preschoolers.
11. Physical activities, equipment, and facilities meet the National Association for Sport and Physical Education guidelines
12. Staff is adequately trained about nutrition and physical activities for young children.