

P20 Making the New Sodium School Meal Standards Work in Your Community: Lessons Learned from the Field

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Objective: To share lessons learned about barriers and facilitators to sodium reduction in school meals.

Target audience: Public health practitioners, school administrators and nutrition personnel.

Theory, Prior Research, Rationale: The school environment can significantly influence children's health because many children consume over half of their calories at school. Yet, sodium levels in school meals exceed recommendations. The Healthy, Hunger Free Kids Act requires reductions of 25-50%. Public health and school leaders expect implementation challenges caused by limited availability, accessibility, and cost of products; necessary modifications to practices and infrastructure; and preparing palatable substitutes.

Description: In 2010, CDC launched the Sodium Reduction in Communities Program to reduce sodium through systems and environmental changes. Health departments in 3 diverse US communities collaborated with local districts to utilize dynamic, multi-level, community based approaches to sodium reduction in school meals.

Evaluation: Evaluators conducted 29 semi-structured interviews with program staff and partners to collect implementation strategies, and facilitators and barriers to use.

Conclusions and Implications: Cross-site thematic analysis identified common strategies: engaging decision makers and food service personnel in planning and implementation; conducting menu and recipe analyses; embedding sodium reduction language in broader messaging; and revising recipes. Prior relationships between health departments and districts and joint commitment to improving meals facilitated implementation. Barriers included difficulties with procurement administration, and perceptions of cost and palatability of substitute items. Effectively redesigning school menus to the updated standards for sodium can be a cost-effective and efficient way to minimize children's risk of developing hypertension. These early findings can assist with institutionalizing the revised standards and minimizing pitfalls of the process.

Funding: Centers for Disease Control and Prevention.

P21 Little Books and Little Cooks Parenting Education Program

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Objective: To increase nutrition knowledge and improve healthy eating habits of families; to strengthen the relationship between parent and child; and to improve preschoolers' cooking skills.

Target audience: Preschoolers and their parents.

Theory, Prior Research, Rationale: Bronfenbrenner's Ecological Model is used to address several factors impacting obesity among preschoolers. Whereas parental feeding practices influence young children's eating behaviors, food preferences and dietary patterns (Ventura & Birch, 2008), a few studies show that reading children's books about healthy eating encourages children to try new foods and make healthy choices (Murphy & Hammerschmidt, 2008) and involving young children in cooking is the best way to teach healthy eating (Dodge & Colker, 1996). Learning healthy eating habits at a young age can reap benefits for a lifetime (Savage, Fisher & Birch, 2007). Cooking is one activity that can help improve children's school readiness and parents' knowledge of healthy eating (Spears, 2000).

Description: This program is a 7-week parenting education program designed to increase positive parent-child interaction skills by reading children's books about healthy eating/nutrition followed by preparing a healthy recipe and eating together.

Evaluation: A parent self-report survey instrument (parents' feeding, child's eating, family's eating style) based on previously validated tools is administered pre and post program along with a pre and post observation checklist (child cooking skills, parent-child interaction during cooking and mealtime) which was created for this program.

Conclusions and Implications: Participant families showed promising results in enhancing children's cooking skills, along with reported improved parent-child interaction and parents' feeding practices, increasing fruits and vegetable consumption for children and decreasing children's picky eating.

Funding: Supplemental Nutrition Assistance Program - Education.

P22 Creating a Recipe for Success: An Emotion-driven, Communication Plan for Older Adult Nutrition Education

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Objective: Share the process for improving effectiveness of a nutrition education program for older adults using an emotion-driven, communication plan.

Target audience: Congregate meal participants.

Theory, Prior Research, Rationale: The Chef Charles Club was created in 2003 to provide monthly nutrition education to low-income, congregate meal participants throughout Iowa. Qualitative and impact evaluation have been used to measure program effectiveness and the program's theoretical framework was reviewed by an outside expert. In 2012, program staff determined that it was also important to update communication strategies to ensure that the program remains relevant to the lives of older adults going forward.

Description: Communication and marketing experts conducted 4 focus groups and individual interviews with

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program participants, non-participants and nutrition educators. The results were used to develop a research-based, emotion-driven communication plan that will guide program transformation in 2013 and 2014.

Evaluation: Qualitative data results and feedback from program partners.

Conclusions and Implications: Qualitative research revealed powerful emotions and pulse points that could be used to enhance the effectiveness of the monthly newsletter and the educators' communication strategies and facilitation skills. For example, nutrition educators must view education with older adults as transformational, not just informational. For older adult participants, the primary universal pulse point was the desire to be the best they could be—a form of achievement. Older adults wanted information that had a direct and immediate application in their lives. These and other findings were used to develop creative briefs and a communication plan that included a new program name and training video for educators.

Funding: Supplemental Nutrition Assistance Program - Education.

P23 Michigan Team Nutrition (MTN) Meeting the Challenge YouTube Videos

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Objective: To encourage Food Service Professionals to serve more nutrient rich meals by using YouTube as a culinary training platform and social media tool.

Target audience: Foodservice Professionals, Educators, Students.

Theory, Prior Research, Rationale: Social Learning Theory.

Description: The Healthy Hunger Free Kids Act of 2010 requires school foodservice professionals (FSP) to serve healthier school meals. MTN created 21 video vignettes capturing FSPs and Chef discussing approaches to encouraging students to consume healthier school meals. A companion cookbook was also developed providing viewers with recipes. These videos, posted on <http://www.youtube.com/user/miteamnutrition1>, were designed to be used by FSPs, educators, or groups seeking to learn school meal best practices to serving healthier school meals.

Evaluation: Meeting the Challenge videos were presented to FSPs at School Nutrition Conference (SNAM) and promoted through social media outlets. FSPs reported wanting to use the videos to conduct staff training and learn from their peers. During the three month period since posting (October 2012 – December 2012) they have been viewed over 540 times. The most viewed, with 90 views, is titled Helping Students Build a Better Meal with Taste Testing - Signature Sauces. The second most viewed, with 41 views, is titled Tips for Varying Your Veggies - Mirapoix. The least viewed, with 12 views, is Vary Your Veggies- Hearty Tuscan Soup.

Conclusions and Implications: YouTube is a powerful free service, which is an excellent way to share healthier school meal best practices. Organizations and nutrition educators wanting to promote best practices, create online training, and create a social media footprint should explore using YouTube.

Funding: USDA Team Nutrition TN 2011.

P24 Creature-101: A Virtual Reality Online Game to Promote Energy Balance Related Behaviors among Middle-Schoolers

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Objective: To evaluate the effectiveness of Creature-101 game at modifying middle-schoolers eating and physical activity behaviors.

Target audience: Middle school aged students.

Theory, Prior Research, Rationale: Prior games in nutrition education have focused primarily at increasing fruit and vegetables (FV) and physical activity (PA). Using social cognitive and self-determination theories as framework Creature-101 aims at increasing FV, water, PA, decreasing processed snacks (PS)(e.g. chips, candy), sweetened beverages (SB), and recreational screen time, and improving psychosocial mediators (knowledge, self-efficacy, outcome expectations, autonomous motivation).

Description: Creature-101 incorporates creature care in a virtual world "Tween". In the game (7-sessions, 30-minutes each) students learn scientific evidence that promotes energy balance by playing mini-games, short educational videos, slideshows and interactive dialogues with game characters. Students also assess their own behaviors; create own "real life" food and activity action plans, and report their progress.

Evaluation: Outcome evaluation used a quasi-experimental design (matched-paired schools) with 359 students in intervention; 172 students in control (delayed intervention) condition. Students (11-13yrs old, 50% males, 65% Hispanics) played Creature-101 in science/health education classes for 1-month. Two self-reported, validated, online surveys were administered at baseline and post intervention. Analysis of covariance compared post-test means between groups. Intention to treat analysis showed significant decreases in frequency of consumption of PS (scale:0-5, $I=1.79\pm 1.22$, $C=2.14\pm 1.37$, $p<0.000$) and increase in knowledge (scale:0-11, $I=5.06\pm 3.91$, $C=4.06\pm 1.43$, $p=0.012$). Positive trends ($p<0.1$) were reported for consuming fewer SB (scale:0-5, $I=1.72\pm 1.12$, $C=1.95\pm 1.16$, $p=0.08$), smaller sizes SB (scale:0-3, $I=1.46\pm 0.88$, $C=1.65\pm 0.93$, $p=0.09$) and PS (scale:0-3, $I=1.46\pm 0.88$, $C=1.65\pm 0.93$, $p=0.09$).

Conclusions and Implications: Creature-101 may be effective in modifying eating behaviors in middle-schoolers to promote energy-balance.

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