

Assessment Strategies for a Nutrition and Physical Activity Promotion Project for Licensed Child Care Centers: Los Angeles County Continuing Project

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Introduction

California is often a leader in innovative health policy. Existing nutrition and physical activity standards for licensed child care do not reflect current knowledge and recommendations. An example of an existing nutrition standard is seen in the United States Agricultural Department's (USDA) Child and Adult Care Food Program (CACFP). This program allows for federal reimbursement to child care centers serving nutritious meals to low-income children. However, the program's standards are over 30 years old and are based on meal patterns rather than current, evidence-based nutritional standards. In 2009, California attempted to address this issue with Assembly Bill 627, which would have updated health and nutrition standards in licensed child care centers. The bill was vetoed by the governor after passing both houses of the legislature.

In Los Angeles County more than 20 percent of children ages 3 to 4 years old are classified obese (Los Angeles County Department of Public Health, Office of Health Assessment and Epidemiology, 2009). This statistic is of

concern to professionals, especially as the percentage continues to climb. In addition, nearly 40 percent of children under age 5 spend their day in child care centers (Whaley, 2009). Child care centers, in this study, exclude child care within homes. Child care center settings present an environment to establish healthy eating behaviors and attitudes early in life, and thus address the behaviors leading to obesity. Those who are obese as children are at high risk for becoming obese adults and, consequently, at high risk for developing chronic health problems (Daniels, 2006). Few states have attempted to improve child health through implementing nutrition and physical activity standards within licensed child care facilities (Benjamin, Craddock, Walker, Slining, & Gillman, 2008). Assessments will be made in the poorest neighborhoods of Los Angeles County. Insights from these assessments will reflect the resources that the centers have and the resources that the centers need to improve the nutrition and physical activity environments for children. This information will guide policy development.

Purpose

As mentioned previously, California had considered legislation to address childhood obesity (AB 627). Because the legislation failed to pass, advocates refocused on reviewing current child care standards in hopes of eventually revamping the bill. Delaware was found to be the only state to have new guidelines for licensed child care centers regarding nutrition and physical activity requirements. The guidelines were examined to determine the extent to which they could be replicated in California.

Data from the Women, Infant and Children (WIC) program revealed high rates of obesity in Los Angeles preschoolers. WIC also conducted an observational study of licensed child care facilities in the county that showed a wide variation of food served in Los Angeles child care (Whaley, 2009). Findings confirmed that this was an area of high need with significant opportunity for intervention and impact.

Support for the implementation of guidelines developed as research continued. Although it was unmistakably important to focus on the role that schools play in affecting the health of children, it was also important to recognize that many children entering kindergarten are already overweight with unhealthy lifestyle habits. A limited number of interventions have targeted this population, further encouraging the assessment of preschools (Ward, Hales, Haverly, Marks, Benjamin, Ball et al., 2008).

Child care centers are being evaluated to determine a baseline that reflects current nutrition and physical activity practices. Strengths and weaknesses of the centers will be identified, conveying a measurement of their current capacity. By observing the centers twice, once at the beginning of the study and once at the end, changes can be measured. Assessing the results of the

intervention will declare its effectiveness. In presenting this evidence to lawmakers, we may prompt improved child care legislation.

The Los Angeles County Department of Public Health is the lead on this childhood obesity prevention project. Maternal, Child and Adolescent Health (MCAH) programs are working with a series of both undergraduate and graduate public health interns to conduct the study. Interns serve as a major contribution to the study. In addition, several stakeholder organizations are partnering on the project:

- *Los Angeles County Department of Public Health, Maternal, Child, and Adolescent Health Programs (lead agency)*. This division of the Public Health Department works to address a multitude of issues involving its population.
- *California Food Policy Advocates*. Statewide public policy and advocacy organization dedicated to improving the health and well-being of low-income families.
- *University of North Carolina–Chapel Hill*. Consultant and developer of assessment tools.
- *Los Angeles County Office of Child Care*. Provided database of licensed centers.
- *Crystal Stairs*. A resource and referral agency that encourages participation in the study and will provide training space.
- *Community and Family Resource Center*. A resource and referral agency that encourages participation in the study.
- *Charles Drew University of Medicine and Science*. Will provide statistical support and financial support for \$25 incentives and mileage reimbursement.
- *First Five LA*. Will supply copies of “Sesame Street” curriculums for use at the end of the project.
- *Nemours (Delaware-based health and prevention services)*. This partner allowed reprinting of its document “Best Practices for Healthy Eating: A Guide to Help Children Grow Up Healthy,” which is the basis of the recommended standards. It will be distributed to centers in both intervention groups and to the control group at the end of the project.

The University of North Carolina–Chapel Hill is allowing the team to use its validated assessment tools and is consulting on the project. Its Environment and Policy Assessment and Observation Instrument (EPAO) has been adapted for the 4-hour observation. The Nutrition and Physical Activity Self-Assessment for Child Care (NAP SACC) (Ammerman, Benjamin, Sommers, & Ward, 2007; Benjamin, Neelon, Ball, Bangdiwala, Ammerman, & Ward, 2007) is completed by center directors.

Target Groups

Because the population and size of Los Angeles County is so large, the area is divided into eight geographic service planning areas (SPAs) for purposes of health care planning. This study focuses on SPA 6, a south-central region of Los Angeles County with the most alarming statistics. SPA 6 has the highest rates of obesity, inactivity, and poverty in Los Angeles County (Los Angeles County Department of Public Health [LACDPH], 2009). The community faces crime and unsafe recreational environments. The area lacks adequate parks and sidewalks. Barriers to a healthy lifestyle also include limited access to nutritious food. Lack of adequate education caps this collection of characteristics, influencing engagement in potentially risky behaviors.

This region has the highest percentage of children in the county. The team has access to many child care facilities and can evaluate conditions where disparity is the greatest.

Observation Assessment Methodology

It was determined that an observational study, including two levels of intervention and a control group, would be effective in gathering the needed information to reform legislation. An extensive literature review identified the toolkit and the measurement instruments. This saved time and resources that would have been spent developing and testing such products.

Secondary Data Review

A full year, from 2008–2009, was spent reviewing all studies that involved child care settings. It was found that two instruments developed by the University of North Carolina–Chapel Hill could be used by the project. The EPAO and the NAP SACC had been tested and normalized to assess the nutrition and physical activity environments in child care settings. It also was found that Delaware had used these instruments in a study of child care practices leading up to its legislation.

The EPAO will be conducted by trained observers. It has 87 items, including a document review. Among the components to be evaluated are fundraising policies, menus, parent/staff handbook, and playground safety. The document review allows for information to be gathered outside of the day of observation, specifically an analysis of foods listed on the menu for the entire week. The EPAO was pilot tested to ensure that the questions were understandable. Slight revisions have been made for clarity. Because observations will be conducted by unpaid graduate and undergraduate interns, the observation time has been shortened from 8 to 4 hours, and it includes only lunch, not lunch and breakfast.

Maternal, Child and Adolescent Health Programs staff partnered with a representative from California Food Policy Advocates to examine materials that could be used during the intervention process. The Nemours resource kit, which reflects the standards in the Delaware legislation, was selected after unanimous agreement that it was the most appropriate.

This study will measure the effects of providing nutrition and physical activity information and training. The study will determine barriers to implementing these recommendations. In addition, it will provide information regarding the amount of support needed to motivate policy changes within child care centers.

Recruitment involved an initial mailing, providing information to each licensed child care facility within the targeted area. An invitational letter was signed by the Director of Public Health, Dr. Jonathan Fielding. Also enclosed were a project brochure and a written project description. Phone calls were made to follow-up with all centers that received the mailing, attempting to enlist as many participants as possible and maximize sample size. Through phone conversations, interns verified that all three of the inclusion criteria were met: that the child care center (1) served children ages 3 to 5 years, (2) provided lunch, and (3) was not designated as a Head Start facility. Confidentiality was reviewed over the phone, and informed consent was officially obtained on-site from directors. A goal was set to observe 120 licensed child care centers in order to collect sufficient data to achieve 95 percent statistical significance.

The assessment consists of three components: the EPAO, the NAP SACC, and key informant interviews. The EPAO tool focuses on nutrition and physical activity practices and policies within the child care sites. Observations are made by pairs of observers, who are trained until 85 percent interobserver reliability is achieved, because questions may be subjective in nature. Each member of the observation team makes independent assessments. Then the team reconciles their findings and produces one set of agreed-upon measurements.

The NAP SACC instrument collects similar information, but from the director's viewpoint. Key informant interviews collect information from the viewpoint of the directors as well. Predetermined, open-ended questions are prompted by the observers in a face-to-face interview. It is used to document existing resources and perceived barriers for implementing better nutrition and physical activity practices and policies. The key informant interview also gathers data reflecting existing and desired training topics.

The EPAO observation includes the following:

- Date, time period, weather
- Documentation of food: what was served, how it was served, and how the children responded
- Staff interaction with children during meals and physical activity

- Staff consumption of food/drinks in front of children
- Television/computer/screen time
- Water availability
- Center environment: indoor/outdoor play equipment, differentiating between portable and stationary
- Number of physical activity and nutrition posters and books

The EPAO document review includes the following:

- Comparison of the menu with the actual foods and beverages served
- Documentation of total weekly food servings by category (e.g., fruits, vegetables, whole grains)
- Nutrition and physical activity policy review
- Parent and staff training documentation

The initial assessment phase is being conducted over a 9-month period, from August 2010 until May 2011. The second and final assessment phase will mimic the first, from August 2011 through May 2012. The assessment will provide a comprehensive overview of the nutrition and physical activity environment. Examples of nutrition measurements include frequency of offering whole grains, processed meats, fresh and syrup-free canned fruits, and colorful vegetables and the availability of drinking water. Average number of minutes of physical activity and screen time (television, computers, and video games) also will be measured, in addition to noting play area size and safety.

The intervention phase of the study will involve randomizing the enrolled child care centers into three groups: a control group and two intervention groups. The control group will continue with its standard programs without receiving nutrition or physical activity information or training. The intervention groups will receive either the nutrition or physical activity information alone or with training. The tools to be provided will be research-based standards pertaining to nutrition and physical activity. Training will teach center directors and their staff the information and encourage them to set goals to improve practices. The control group will receive the intervention tools with training at the end of the project. Analysis of this intervention will resolve the issue of whether training is required to motivate change within the targeted population.

Future Directions

At the time this case study is being written, the first set of observations are in process. Early findings suggest that many schools are feeding children low levels of nutritious food and are not providing adequate amounts of physical activity. Interviews with directors indicate that trainings would be welcomed.

The data gathered from this study will be used to support legislation that will improve nutrition and physical activity requirements in licensed child care centers. In addition, this study will leverage the increased attention now focused on the nutrition of children younger than age 5. In 2009, the WIC Program made significant changes to its food package and client education strategies. In 2010, First Lady Michelle Obama launched "Let's Move," which has sponsored numerous events and garnered significant national media attention, especially towards the nutrition of children younger than 5 years. The timing is optimal to align messages, implement policy changes, and improve the nutrition environment for young children across Los Angeles County.

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