

# Nutrition and Physical Activity Self-Assessment for Child-Care NAP SACC

University of North Carolina at Chapel Hill, Center for Health Promotion and Disease Prevention  
Division of Public Health, North Carolina Department of Health and Human Services

## INTENT OF THE INTERVENTION

The Nutrition and Physical Activity Self-Assessment for Child Care (NAP SACC) program is a research-tested intervention designed to enhance policies, practices, and environments in child care by improving the:

- nutritional quality of food served,
- amount and quality of physical activity
- staff-child interactions
- facility nutrition and physical activity policies and practices and related environmental characteristics

The NAP SACC intervention primarily addresses the inter-personal and organizational levels of the socioecologic model.

## OVERVIEW

The Nutrition and Physical Activity Self-Assessment for Child Care (NAP SACC) program targets child care policy, practice and environmental influences on nutrition and physical activity behaviors in young children. Extensive formative work with stakeholder groups (child care providers, parents, and experts in the field) informed the development of the intervention. NAP SACC uses an organizational assessment of 14 areas of nutrition and physical activity policy, practices and environments to identify the strengths and limitations of the child care facility. Following the self-assessment, a health consultant (i.e., child care health consultant, nurse, health educator or other trained professional) works with the child care facility staff to set goals for change and develop plans for follow-up actions to improve practice. Collaborative goal-setting is followed by staff training and targeted technical assistance to promote organizational change.

**Intended Population:** Child care centers and young children (ages 2 – 5 years)

**Setting:** Child care centers (The intervention can be adapted for family child care homes.)

**Length of time in the field:** Since January 2003

## CORE ELEMENTS

*This section outlines the aspects of an intervention that are central to its theory and logic and that are thought to be responsible for the intervention's effectiveness. Core elements are critical features of the intervention's intent and design and should be kept intact when the intervention is implemented or adapted.*

1. **Organizational Self-assessment:** Child care directors or other lead staff assess the strengths and weaknesses of healthy eating practices and regular physical activity in the child care facility using a structured tool.

2. **Goal Setting and Action Planning:** Each participating facility sets goals for organizational change and develops a plan for improving areas in greatest need and/or in areas where staff are most ready and willing to make such changes.
3. **Continuing Education for Child Care Providers:** A series of five workshops aimed at increasing child care providers' knowledge of the relationship between nutrition, physical activity and the development of healthy weight in children, and guidelines and strategies for overcoming barriers to organizational change.
4. **Skill Building Activities:** The intervention imbeds skill-building activities in each continuing education workshop to allow staff to increase their confidence (self-efficacy) to make both personal lifestyle changes and organizational changes.
5. **Technical Assistance and Consultation:** NAP SACC Consultants promote problem solving, link child care facilities to community resources, assist staff as needed, and support organizational change.
6. **Follow-up and Reinforcement:** Consultants follow-up with child care facilities by phone, email, or in-person to assess progress and document/reinforce positive changes and develop plans for continuous quality improvement.

## RESOURCES REQUIRED

**Staff:** At the community level, a health professional (can be drawn from fields such as health education, nutrition, and nursing) familiar with child care serves as a NAP SACC Consultant. Based on the NC experience, approximately .0375 FTE of healthcare professional time over a 6-month period (1.5 hours/week) is required to address (or accommodate) each participating child care facility.

**Training:** The health professional who is to serve as the NAP SACC Consultant should receive training prior to enrolling child care facilities into the intervention. Training on implementation of NAP SACC is available in a web-based format free of charge. It takes approximately four hours to complete training.

**Materials:** The cost of materials depends on the number of consultants and facilities that participate in the intervention:

- One tool kit is needed for every consultant implementing the intervention. In NC, tool kits were packaged in 3-inch lightweight plastic boxes (\$3.00 each). The technical assistance manual that is part of the tool kit can be inserted in a one-inch soft-covered binder (\$ 5.00).
- Copy costs for duplication of tool kit contents (described in the materials section of this template) are estimated at approximately \$30 per toolkit.
- Cost of printing handouts for continuing education workshops.
- Cost of printing brochures and materials for parents.

### Other Costs:

- Laptop computer and LCD projector (optional) for workshop presentations; could use overheads and overhead projector to decrease one-time costs
- Incentives for child care facilities such as gift cards for classroom supplies, books for classrooms, balls, hula hoops or other low-cost items that promote activity (optional, but recommended)
- Mileage reimbursement for travel to child care facilities

## IMPLEMENTATION

*Note: This section of the template provides a succinct outline of the basic steps to implement the intervention. A more detailed implementation guide is available in Intervention Materials, providing a thorough description of the implementation process.*

NAP SACC relies on trained consultants, familiar with child care facilities, to implement the intervention. Consultants who will be working with child care facilities should complete four-hours of web-based training on implementation of the intervention, nutrition, physical activity and healthy weight in young children. Training is highly recommended to increase the confidence of the consultants and to promote implementation of the core elements of the intervention. Consultants can recruit child care facilities to participate in the intervention by letter, phone, or in-person. The intervention can be fully implemented in about six months; however, child care facilities may continue to use NAP SACC as part of quality improvement.

### How It Works:

- 1. Self-Assessment:** Prior to a site visit, the consultant mails a NAP SACC self-assessment instrument to the child care facility director, who completes the instrument with help from key staff, such as the cook, teacher or program planner. This tool assesses the facility on 14 key areas in nutrition and physical activity with response options ranging from minimal standard to best practice. This should be completed without Consultant help. *[Note: The instrument is recommended for use as a self-assessment but not as a research tool to assess outcomes.]*
- 2. Goal Setting and Action Planning:** During a scheduled site visit, the Consultant reviews the entire self-assessment instrument with the child care facility director and talks about each key area. Based on self-assessment answers, facilities chose to improve at least 1 nutrition, 1 physical activity, and 1 other key area. The Consultant assists in the development of a facility-specific plan with action steps to implement the specific policy, practice and environmental changes they intend to address. Facility directors should be challenged to make positive and sustainable improvements.
- 3. Workshop Delivery:** The NAP SACC Consultant delivers 5 ready-to-use workshops to the facility staff. These workshops include: 1) Childhood Obesity, 2) Nutrition for Young Children, 3) Physical Activity for Young Children, 4) Personal Health and Wellness for Staff, and, 5) Working with Families to Promote Healthy Weight Behaviors. Each workshop takes approximately 30-60 minutes to complete. Delivery of the workshops can be tailored to meet the needs of the Consultant and facilities and to maximize staff participation. For example, they may be delivered on site as a series during “nap time,” or on a Saturday as a single event. North Carolina child care providers receive continuing education credits for attending the workshops.
- 4. Targeted technical assistance:** The NAP SACC Consultant maintains regular contact (recommend monthly, but more often if needed); contact can be through in-person meetings, telephone, or email) with the facility to provide support and guidance in making their improvements. NAP SACC provides technical assistance materials to Consultants which include: 1) the Consultant Technical Assistance Manual which provides tips for meeting Best Practice Guidelines, potential strategies for overcoming barriers to change, guidance on the rationale for each “best practice” recommendation, and associated references and resources; 2) handouts for the child care facility; and 3) handouts for parents.

5. **Evaluate, Revise, and Repeat:** The NAP SACC self-assessment instrument is completed a second time (after 6 months or earlier if necessary) to see where improvement have or haven't been made. At this time Action Plans are revised to include new goals and objectives and technical assistance continues.

### **Keys to Success:**

- Consistency with state licensing requirements: It is essential to tailor the NAP SACC assessment to ensure that responses on the tool are consistent with state licensing requirements for child care facilities. In addition, collaboration with the state agency that oversees implementation of the Child and Adult Care Food Program is helpful.
- Continuing education credits: Often, child care providers are required by the state licensing agency, to complete continuing education each year. Offering CEUs through the child care licensing agency is an incentive for staff to participate in training.
- Setting achievable goals: Some facilities are overly anxious to “fix” everything at one time. It is helpful to set smaller achievable goals and then add new goals as the facility succeeds at making change.
- Incentives for child care facilities: Incentives in the form of small items that support organizational change (gift cards for classroom supplies, balls or hula hoops, activity or nutrition books for children) can be provided periodically.
- Community resources: It is beneficial to link the child care centers to community resources in order to enhance their ability to implement change.
- Tailoring technical assistance: Some child care facilities may need lots of support and encouragement, while others may be able to accomplish change on their own so tailoring technical assistance to the needs of the facility is suggested.
- Commitment: Gaining organizational commitment from child care facilities prior to implementation is essential.
- Consultant attributes: Communication skills and experience of the Consultants working with child care centers is important to making the implementation work.

### **Barriers to Implementation:**

- Scheduling: Initial meeting between the facility director and Consultant was often difficult to schedule.
- *Staff turnover*: The child care industry has more frequent staff turnover that is seen in many other sectors. This presents a challenge to implementation of any intervention that requires staff participation.
- **Control over food selection**: Many facilities have food catered and feel as if they have little control over changes to the foods served at the center. These facilities may need more support to succeed.
- Consultant time commitment: Consultants with many competing responsibilities had difficulty finding the time to provide adequate technical assistance and follow-up.
- Child care Director commitment: Directors who were not committed and motivated to make changes were not as willing to find the time to work on implementing changes. In

some cases, another interested staff person at the facility can take a lead with support from the Director.

- Consultant knowledge: Consultants who are not confident in their knowledge of nutrition and physical activity and feeding young children are less comfortable providing technical assistance to facilities. Consultants may need training beyond that provided by NAP SACC to acquire what is needed to make the program work at their childcare facilities.
- Addressing physical activity areas: Many times child care directors did not think that the center needed assistance with enhancing physical activity because they generally view the children as active (“hyperactive”) and because the children go outside to play. Helping providers understand ACTIVE (climbing, running) vs. PASSIVE (sitting in the sand box) play may be helpful.
- Food Access: Child care facilities often buy food at large discount clubs and through whole sellers. This may limit access to whole grain products and fresh fruits and vegetables, while increasing access to inexpensive, commercially-prepared snacks and breakfast items.

## EVIDENCE REVIEW SUMMARY

**Underlying Theory:** The NAP SACC intervention uses constructs of the Social Cognitive Theory including: expectancies, observational learning, self-efficacy, behavioral capability, environment, situation, reinforcement, and reciprocal determinism.

**Strategy(ies) Used:** The NAP SACC intervention includes strategies for both healthy eating and physical activity that have been adapted to child care settings, including:

- Social Support for both healthy eating and physical activity using child care providers as teachers and role models
- Increased availability of healthy foods through menu changes
- Increased time for physical activity through active play while in child care
- Increased access to places for physical activity through changes in indoor and/or outdoor play space.

### Research Findings and Evaluation Outcomes:

The NAP SACC intervention was developed and evaluated first in the field as a practice-based intervention and subsequently studied in a larger randomized controlled trial involving 30 consultants assigned to 84 centers. Child care centers were randomly assigned to receive the intervention or serve as controls. Among the 82 centers remaining in the study, 56 were randomly assigned to receive the intervention. Forty-one intervention centers (73%) completed most (>75%) or all of the intervention components. The program outcomes listed below are based on this subset of intervention sites compared to controls.

Intervention Effect (overall environment and policy assessment)\*: Child care centers completing most or all of the intervention components improved their nutrition and physical activity policies and practices more than control facilities. Changes (16% increase) in the total child care nutrition environment scores were statistically significant ( $p < .01$ ). Changes in physical activity were not, but showed positive improvement.

*\*When all centers are included in the analysis of the intervention effect, the 11% improvement in nutrition environment and policies, was only marginally statistically significant ( $p=.06$ ). Physical activity changes were modest and non-significant when compared to controls.*

Individual Item Scores in Nutrition and Physical Activity: Because the NAP SACC intervention allows some flexibility in the areas targeted for change by centers and because the observation instrument is scored using averages of sub-areas to obtain the Nutrition and Physical Activity scores, an additional assessment of an intervention effect was measured using all of the individual 75-items from the observation instrument. Nutrition effects are assessed with 51 items and physical activity with 24 items. The mean change in nutrition scores was a 4.3 point improvement in the intervention centers compared to -0.5 change in the controls; for physical activity, scores increased by 3.6 in the intervention centers compared to a -0.2 change in the controls. Both nutrition and physical activity improvements were statistically significant.

## POTENTIAL PUBLIC HEALTH IMPACT

The NAP SACC intervention has a high potential for public health impact.

**Reach:** With approximately three quarters of US children spending time in out-of-home child care, this intervention has potential for efficiently reaching a large number of children.

**Effectiveness:** Data available at the time of the review suggest that, compared to a control group, intervention centers are more likely to make significant changes in nutrition policies, environments and practices and some positive (but statistically non-significant) changes in physical activity policies, environments and practices.

**Adoption:** There was good adoption of the intervention, with an adoption rate of 73% (41/56) for the statewide evaluation study. At the time of review, NAP SACC had been adopted/adapted in several other states.

**Implementation:** This intervention was designed for dissemination – training, intervention materials, implementation guidance and technical support for implementation are available. The intervention is relatively easy to implement at a relatively low cost. The intervention has been replicated in other states. It seems reasonable to expect that the intervention could be implemented as intended (with fidelity) in similar settings with similar infrastructure.

**Maintenance:** It was not possible to assess long-term maintenance of the intervention at the time of this review. Given the use of existing infrastructure (child care health consultants in NC), the nature of some of the changes in infrastructure, and the relatively low cost of implementation, it is reasonable to expect that the intervention could be sustained over time.

## INTERVENTION MATERIALS

(Last revision: Summer 2007)

The **tool kit** includes:

- Technical Assistance Materials
  - An Intervention Implementation Guide
  - A Consultant Technical Assistance Manual that provides the rationale for best practice recommendations and suggestions for reducing barriers to change.

- Handouts for child care providers and parents (in both English and Spanish)
- A sample nutrition and physical activity policy

➤ Intervention Materials

- The self-assessment instrument with instruction sheet and a completed sample.
- The Action Planning Document with completed sample
- Five continuing education workshops including PowerPoint presentations, talking points, and activities. The 5 **workshops** offered to child care providers include: Childhood Obesity, Nutrition for Young Children; Physical Activity for Young Children; Personal Health and Wellness for Staff; Working With Families to Promote Healthy Weight Behaviors.

➤ Informational Materials

- NAP SACC informational brochure for parents
- NAP SACC recruitment letter for providers
- NAP SACC Certificate of Completion
- NAP SACC Best Practice Recommendations

➤ Evaluation Materials

- Monitoring Guide
- Workshop Evaluation
- Environment and Policy Assessment and Observation (EPAO) instrument

## TRAINING AND TECHNICAL ASSISTANCE

On its website, the Center TRT provides access to online training for the implementation of the NAP SACC intervention. This training will prepare health professionals to become NAP SACC Consultants. Go to [www.centertrt.org](http://www.centertrt.org) and click on the Training link then look for NAP SACC in the left navigation bar.

## ADDITIONAL INFORMATION

**Web links:** [www.napsacc.org](http://www.napsacc.org)

**Program Contact(s):**

Christina McWilliams  
 UNC Center for Health Promotion and Disease Prevention  
 Phone: 919-966-8648  
 Email: [cjmcwill@email.unc.edu](mailto:cjmcwill@email.unc.edu)

**Related Resources:**

ChildCare Welcome Page <http://nti.unc.edu/>  
 Welcome to the CACFP <http://www.cacfp.org/>  
 National Resource Center for Health and Safety in Child Care and Early Education, State's  
 Child Care Licensure Regulations <http://nrc.uchsc.edu/STATES/states.htm>

**Publications:**

Benjamin SE, Ammerman A, Sommers J, Dodds J, Neelon B, Ward DS. Nutrition and Physical Activity Self-Assessment for Child Care (NAP SACC): Results from a Pilot Program. *J Nutr Edu Behav* 2007;39:142-149.

Ammerman A, Ward DS, Benjamin SE, Ball SC, Sommers J, Malloy M, Dodds J. An Intervention to Promote Healthy Weight: Nutrition and Physical Activity Self-Assessment for Child Care (NAP SACC) Theory and Design. *Prev Chron Dis (serial online)* 2007 July. Available from: <http://www.cdc.gov/pcd/issues/2007/jul/toc.htm>.

Benjamin SE, Tate DF, Bangdiwala SI, Neelon BH, Ammerman AS, Dodds JM, Ward DS. Preparing Child Care Health Consultants to Address Childhood Overweight: A Randomized Controlled Trial Comparing Web to In-Person Training. *Matern Child Health J.* 2007 Aug 23[Epub ahead of print].

Ward DS, Benjamin SE, Ammerman AS, Ball SC, Neelon BH, Bangdiwala SI. Nutrition and physical activity in child care: Results from an environment intervention. *Am J Prev Med* 2008;35(4):352-356.

**For more information on this intervention, visit [www.Center-TRT.org](http://www.Center-TRT.org).**