

Obesity Prevention in Early Childcare: Summary of Findings

Prepared for Orange County Board of Health

By: Anna Spier, MPH Candidate in Health Behavior

The following is a summary report of research into the current landscape of obesity prevention efforts in early childcare settings in Orange County, North Carolina. The research was conducted by Anna Spier, an MPH candidate in the Health Behavior Department of the University of North Carolina at Chapel Hill's Gillings School of Global Public Health.

The findings were presented to the Childhood & Family Obesity Prevention subcommittee of the Board of Health in December of 2014. Since then, staff has been working to explore the feasibility and effectiveness of implementing selected recommendations of this report in Orange County with other obesity prevention stakeholders.

Any questions should be addressed to Meredith Stewart, Program Manager at the Orange County Health Department by e-mail (mstewart@orangecountync.gov) or phone (919-245-2070)

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Child and family obesity prevention is a focus area identified in the Orange County Board of Health's [2014-2016 Strategic Plan](#). Identifying and implementing evidence-based nutrition and/or physical activity interventions in early childhood is one key strategy. This report presents the results of my research on this topic, including a summary of my project and recommendations for next steps.

Table of Contents

Project Summary	4
Overall Themes, Ideas, and Observations	5
Recommendations.....	6
Resources Needed to Implement Recommendations.....	9
Regulatory Requirements for Early Child Care	9
Interviews with Key Informants	10
Interviews with Child Care Center Directors	14
Appendix:.....	15
A: Results of Literature Review (Matrix)	16
B. NAP SACC vs. LMCC comparison	23
C. Other Resources	24

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CACFP	Child and Adult Care Food Program
CCCHP	Community and Clinical Connections for Prevention and Health Branch
CCR&R	Child Care Resource and Referral agency
CCSA	Child Care Services Association
DCDEE	North Carolina Division of Child Development and Early Education
ECE	Early childhood education / Early childcare and education
ECELC	Early Care and Education Learning Collaborative
ESMM NC	Eat Smart, Move More North Carolina
IOM	Institute of Medicine
LMCC	Let's Move! Child Care
NAP SACC	Nutrition and Physical Activity Self-Assessment for Childcare
OCHD	Orange County Health Department
POD	Preventing Obesity By Design
SNAP-Ed	Supplemental Nutrition Assistance Program-Education
TA	Technical assistance

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Project Summary

1. Completed background research and literature review
 - Conducted background research about obesity prevention programs in early childhood education (ECE) and identified stakeholders and key informants
 - Reached out to key informants and conducted interviews with 14 stakeholders at the federal, state, and county levels as well as various subject matter experts
 - See Appendices D and E for detailed notes and results
2. Developed materials to recruit Orange County child care centers to participate in an obesity prevention intervention in summer 2014
 - Created a flyer detailing what the program entails (see Appendix F)
 - Provided a choice between NAP SACC and Let's Move! Child Care (LMCC)
 - If center chose to participate, they would receive a small recognition gift (i.e. an exercise activity item or book)
 - No cost to center to participate
 - Chose and ordered recognition gift items (\$500 total value)
 - Met with Debbie Hamlin-Aggrey, Child Care Health Consultant, and identified 11 centers to contact
 - Called each center (sometimes several times) until I reached the center director. Sent program materials via e-mail immediately after the call (see Appendix F for list)
 - Sent follow-up email to each center one week later
3. Conducted interviews with child care center directors in Orange County
 - E-mailed 26 centers requesting an interview to discuss their obesity prevention efforts and sent follow-up emails if there was no response
 - Conducted interviews with six directors and one teacher (summary of themes included below)
 - Offered summer obesity prevention program flyer to interested directors and followed up with information via email. Two directors expressed interest in participating (one completed NAP SACC workshop, the other did not respond beyond initial in-person contact)
4. Conducted two NAP SACC workshops: one child nutrition workshop (22 attendees) and one personal wellness workshop (9 attendees)

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Overall Themes, Ideas, and Observations

- There are many stakeholders in the early child care and obesity space at all levels (federal, state, county, non-profit, research)
 - There are duplicate efforts and a lack of communication between groups
 - Some entities are trying to bring all the stakeholders together and to the table, but this seems to be in early stages (the Community and Clinical Connections for Prevention and Health Branch is a notable example)
- Child care center directors generally recognize the importance of obesity prevention but are either overwhelmed with all of the program options or do not know about them
 - Their first accountability is to the federal and state regulatory bodies: North Carolina Division of Child Development and Early Education (DCDEE) and Child and Adult Care Food Program (CACFP)
 - They already have many agencies and individuals evaluating and coming through their centers (i.e. daily visits from behavioral specialists, regulatory visits, etc.)
 - Centers that are better resourced are more inclined to participate in programs (i.e. if the director is primarily an administrator or if there is a dedicated position for nutrition)
 - Anecdotally, faith-based centers seem to be less likely to hear about obesity prevention programs
- The motivators for child care center administrators include (in no particular order):
 - Staying in compliance with regulations and maintaining a high star rating (1-5 star rating system administered by DCDEE)
 - Parent satisfaction and retention of families
 - Recognition through the media and online (as it helps with recruitment and retention)
 - Money/resources
- Ideas for Orange County Health Department to recognize high-achieving child care centers:
 - Recognition materials
 - Certificate, banner, logo, press release

Summary of Themes

- ❖ **Abundance of stakeholders** in the early child care and obesity space contributes to **duplication of efforts**
- ❖ Child care center directors generally **recognize the importance** of obesity prevention
- ❖ Many directors are either **overwhelmed** with all of the program options or **unaware** of them
- ❖ Centers are **motivated** primarily **by regulatory agencies**, but also **parent satisfaction, money, and recognition**
- ❖ Most centers have not successfully engaged **parents** in educational opportunities around physical activity and nutrition
- ❖ **Integration** of best practices into **state level** regulations would be the most effective

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- Competitive mini-grant program
 - Would need to be very simple (center directors have very little time)
 - Would need to determine the criteria (existing best practices or shorter list)
- Collaboration and sharing best practices with other child care centers
 - Offer group classes for center cooks, center directors, and/or teachers
 - Have a different center sponsor the class or tour and provide a small reward for the sponsoring center
- Most centers have not successfully engaged parents in educational opportunities around physical activity and nutrition. While some centers have been successful with one-time events, no preschool has a mechanism for sustained engagement and education. Conducting focus groups with parents may be useful in learning what their needs and desires are for educational opportunities and how best to encourage participation by parents.
- I believe the most effective way to motivate centers to take evidence-based measures to prevent childhood obesity (i.e. NAP SACC best practices) would be to integrate them into DCDEE and/or CACFP regulations. Other stakeholders have identified this as an aim (i.e. NC IOM Taskforce Report), but progress depends on many external factors, including political climate.
 - See first four categories in the [“Spectrum of Opportunities”](#) for state-level strategies for improvement
 - Example from Maryland of state-level integration of early childcare obesity prevention best practices: [Maryland EXCELS](#)

Recommendations

These recommendations are based on my conversations with key informants and interviews with child care center directors, teachers, and cooks in Orange County.



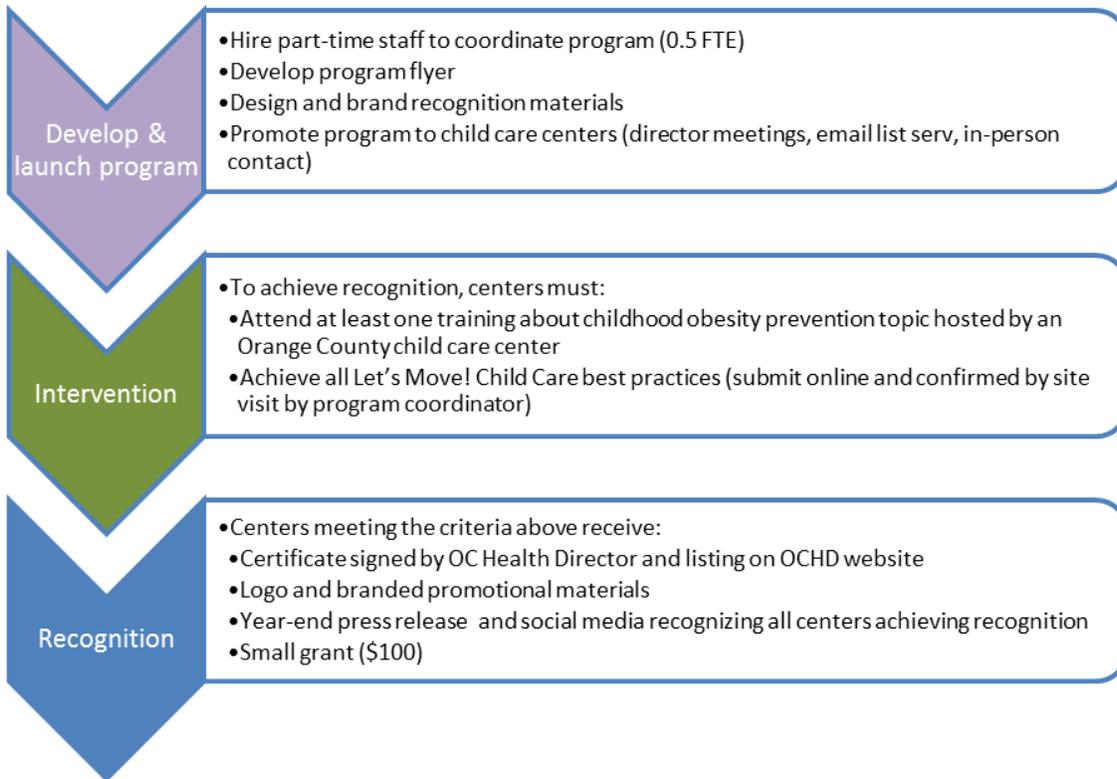
The recommendations target the Pre-Service & Professional Development, Facility-Level Interventions, Technical Assistance, and Family Engagement arms of the figure at left, with the goal of improving nutrition, breastfeeding, physical activity and screen time policies, practices and environments.

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Obesity Prevention in Early Childcare: Summary of Findings

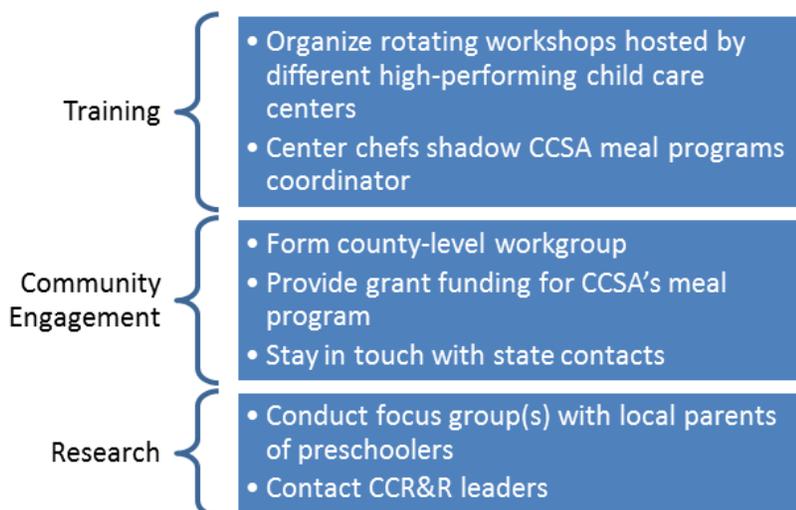
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Part I: Intervention and Recognition



To support the intervention and recognition program, a supportive infrastructure must be created and sustained. This consists of the training, community engagement, and research components as outlined below:

Part II: Training, Community Engagement & Research



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Training and Education

- Implement a training program consisting of a rotating set of workshops hosted by high-performing child care centers. Consider providing a small reward (mini-grant or nutrition and physical activity-related item) to the hosting center. Workshop topic ideas include:
 - Talking about changes made at a center and conducting a tour.
 - Tips for creating healthy meals on a budget.
 - Creating outdoor spaces that promote physical activity.
 - How to engage parents in physical activity and nutrition.
- Have preschool chefs shadow CCSA meal programs coordinator (Robert Cates) OR have Robert conduct a class about how to create nutritious menus on a budget.

Partnerships and Community Engagement

- Provide grant funding directly to the CCSA Meal Service Program so they can: buy needed equipment, source more local foods, purchase more fresh fruits and vegetables, and/or lower the cost of the program to recruit additional centers.
- Form workgroup/advisory group of county stakeholders (motivated center directors, Smart Start representative, CCSA, etc.). This group would come together periodically to discuss ways to collaborate. The advisory group could potentially be linked to other school obesity prevention efforts.
- Stay in touch with state-level contacts to keep abreast of regulatory and programmatic changes
 - Susanne Schmal: CCCHP Branch
 - Lori Rhew: ESMM NC
 - Jen Kozaczek: CACFP

Intervention

- It is difficult to implement successful interventions in preschools, even with staff persons whose time is dedicated solely to administrative tasks (due mainly to time and resource constraints).
- I recommend implementing a recognition program to recognize centers that are already meeting best practices and encourage centers that are not yet complying with best practices to take positive steps forward.
- To achieve recognition, centers would need to complete the Let's Move! Child Care program certifying that they are meeting all of the best practices. The staff coordinator would do a site visit to confirm that all the best practices are being met.
- To encourage participation, centers would receive a certificate signed by the Health Director, logo, branded promotional materials, and a \$100 mini-grant. Each year, a list of the centers achieving recognition would be published and added to the OCHD website.

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Further Research

- Conduct focus group(s) with local parents of preschoolers to find out how they would like to engage with centers on topics of nutrition and physical activity. Qualitative data would be shared with county-level and other stakeholders.
- Contact Jeannie Reardon and Janet Singerman to find out more about the role of child care resource and referral agencies (CCR&Rs) in early child care and potential avenues for collaboration.

Resources Needed to Implement Recommendations

- Part-time staff person (0.5 FTE) to manage the recognition and training program, form and lead the advisory group, and promote the program.
- Communications Manager time and expertise to develop branded materials for recognition program.
- Funding for mini-grants, recognition items, and food or snacks for workshops (could be part of an innovation grant).

Regulatory Requirements for Early Child Care

Early childcare centers are subject to a variety of federal and state regulatory requirements related to food and physical activity. In order to become a licensed center, maintain licensure, and/or receive government reimbursements, centers must comply with lengthy sets of regulations.

Federal level

- USDA requirements
 - [Child and Adult Care Food Program \(CACFP\)](#) is a federal program administered by all 50 states and funded by the United States Department of Agriculture (USDA), Food and Nutrition Service (FNS).
 - A variety of public or private nonprofit child care centers, Head Start programs, outside-school-hours care centers, and other institutions which are licensed or approved to provide day care services participate in CACFP. For-profit centers that serve lower income children may also be eligible.
 - CACFP reimburses centers at free, reduced-price, or paid rates for eligible meals and snacks served to enrolled children, targeting benefits to those children most in need.
 - Not all child care programs participate in the CACFP. 22 centers in Orange County participated in CACFP in 2013.

State level

- Division of Child Development and Early Education ([DCDEE](#))
 - Regulatory services division enforces child care [laws and regulations](#)
 - Several regulations pertain to food (they are modeled after the federal CACFP requirements)
 - Responsible for licensing and implementing the star rating system for child care centers.

Obesity Prevention in Early Childcare: Summary of Findings

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- [CACFP](#)
 - In North Carolina, the CACFP is administered by the Special Nutrition Programs Unit in the Division of Public Health, Department of Health and Human Services.
 - Government mandated meal patterns specify the minimum number of components and amounts of food which must be served as part of a reimbursable breakfast, lunch, supper, or snack.
 - [Infant meal pattern](#)
 - [Child meal pattern](#)
 - Meal patterns will likely be changing; updated meal patterns should be released for public comment summer 2014.
 - In order to be eligible for CACFP, at least 25% of the children need to be eligible for free and reduced lunch (unless it is a non-profit center → there is no minimum for non-profits).
 - Centers receive money on a sliding scale depending on what percentages of the children are eligible for free/reduced lunch.
- [NC Department of Environment and Natural Resources](#)
 - [15A NCAC 18A .2800](#)
 - Regulate the storage, handling, preparation, serving and cleaning of food, utensils, preparation and storage areas.
 - For example, regulate if and how garden-grown vegetables can be served in child care and if food can be served “family-style”
- NC Division of Public Health [Community and Clinical Connections for Prevention and Health \(CCCPH\) Branch](#)
 - Implements evidence and practice-based interventions to improve physical activity and nutrition; reduce obesity; prevent and control diabetes and prevent cardiovascular disease, with a focus on high blood pressure.
 - In the early stages of forming an Early Childcare and Education (ECE) Collaborative. The first meeting was held in February, 2014 (see Appendix G for first meeting summary). The goal is to bring diverse stakeholders together and form workgroups targeting the IOM Report Blueprint goals
 - Are also forming internal Advisory Council

Interviews with Key Informants

State level

- NC Cooperative Extension (SNAP-Education):
 - The Supplemental Nutrition Assistance Program-Education (SNAP-Ed) is funded by the USDA-Food and Nutrition Service and works in collaboration with the NC Department of Health and Human Services, Division of Social Services (funded federally, administered by the state via 6 implementing agencies, of which NC State University is the largest)

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- The goal of SNAP-Ed is to assist those eligible for food assistance to eat smart and move more.
- NC State University's SNAP-Ed Program is [Steps to Health](#), a nutrition education program for preschoolers, kindergarteners, 2nd grade students, 3rd grade students, adults, Latino families, and older adults.
 - preschool and kindergarten program (4-5 year olds) is [Color Me Healthy for SNAP-Ed](#)
 - adapted the curriculum (i.e. added taste tests)
 - at least 50% of the children need to be receiving free and reduced lunch for the center to qualify.
 - delivered by county-based NC Cooperative Extension Agents across North Carolina (as opposed to train-the-trainer model)
 - in 2013, ran this program with a total of 1,642 4-5 year olds at 17 schools and 15 counties (342 were from 9 Head Start centers)
 - not running this program in Orange County currently
 - as of last year, added a modified NAP SACC program to the Head Start curriculum (nutrition pre- and post- assessment, 3 workshops, and additional tools)
 - Color Me Healthy is one of the evidence-based nutrition programs recommended by the federally developed [toolkit](#)
- [Eat Smart, Move More NC \(ESMM NC\)](#)
 - Statewide movement that promotes increased opportunities for healthy eating and physical activity: “trying to make healthy eating and physical activity the easy choice”
 - Guided by the ESMM NC Leadership Team, a multi-disciplinary team composed of statewide partners
 - any organization that aligns with the mission can join for no cost
 - meet 4x per year, with different topics each time
 - overseen by [Executive Committee](#) (nominations approved by Leadership Team)
 - [NC Obesity Prevention Plan](#) is the guiding document → written by a writing group with input from technical experts and the leadership team (see Appendix I)
 - Counties can get involved by joining the leadership team, using the tools and resources on the website, and implementing the State Plan

County level

- Catawba County: [Healthy Childcare Centers Recognition Program](#)
 - Based on Healthy Schools Recognition program created 4 years ago
 - Largely driven by local coalition; coalition members review the program annually
 - Centers are evaluated on 8 measures selected by subgroup of obesity prevention coalition (self-report + site visit)
 - Have recognized 20 centers to date (10 per year)
 - Secured grant funds to give each recognized center a nutrition and physical activity kit (Kaplan). Also promote in the local paper, provide a banner.
 - 80+ centers in Catawba County; do 10 per year due to limited resources (select those that are most ready). Nurse consultant provides technical assistance to other centers.

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- Alamance County: Mini-grant from Mebane on the Move to pilot [Early Sprouts](#) program
 - Interim Health Director (Stacie applied for \$300 mini-grant from Mebane on the Move to pilot the Early Sprouts program at preschool. Wrote grant in February 2014, began program in April.
 - Funds were used to purchase tools, seeds, container pots, root view system, gloves, art supplies, soil. The rest were in-kind donations.
 - Biggest challenge was getting director buy-in. First got teachers, parents, and Board Members on board and then brought the idea back to the director.
 - Weren't able to purchase full curriculum; use bits and pieces from Early Sprouts and Color Me Healthy
 - 2 parent volunteers helped administer the program
- [CCSA Meal Service Program](#)
 - provides two nutritious meals plus one nutritious snack per day to children enrolled in participating child care centers
 - serves Durham and Orange counties (currently about 20 centers total)
 - see Appendix H for more information

Individual ECE obesity prevention programs

Name Contact	Ages	Program targets	Description	Evaluation	Additional info	Future plans
NAP SACC/Go NAP SACC <i>Ellie Morris</i>	NAP SACC: 2-5 Go NAP SACC: 0-5	Nutrition Physical activity Screen time Beverages Infant feeding (Go NAP SACC only)	A trained consultant (who received 4-hour online training) administers the program that includes self-assessment, action planning, educational workshops, technical assistance, and re-assessment.	Research base Center TRT evaluation information	Recently revised self-assessments available online. Go NAP SACC expanded on NAP SACC to include infant feeding and is now aligned with LMCC.	Online version is currently being tested. Eventually will have an online training and curated set of resources online.
Let's Move! Child Care (LMCC) <i>Erica Cooper</i>	0-5	Nutrition Physical activity Screen time Beverages Infant feeding	One of several nationally recognized, comprehensive set of initiatives launched by the office of the First Lady.	None. Success stories posted online.	Assessment adapted from NAP SACC.	No centralized promotion of the program. Recently did a promotion for 3-year anniversary.
Color Me Healthy <i>Carolyn Dunn</i>	4-5	Nutrition	Research-tested nutrition curriculum for 4-5 year olds. Kits start at \$78. In NC, Color Me Healthy is disseminated through local Cooperative Extension agents via 4-hour training or directly	Center TRT evaluation information. Not planning on doing any further evaluation	Not currently receiving any funding. Sell kits to other states and the money is used to print more kits.	Future plans in flux; currently looking at how to make the program more sustainable in NC SNAP-Ed is a promising avenue; no train-

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			though SNAP-ED.			the-trainer component, more prescriptive, doesn't cost as much.
Be Active Kids <i>Ryan Fahey</i>	0-5	Physical activity	Evidence-based, free, physical activity curriculum. Use the train-the-trainer model to disseminate (trainers attend 4-hour training and then host 3-hour trainings for providers).	Evaluation results (2001) Evaluation results (2007) See Appendix E for latest evaluation results.	Previously the curriculum focused on 4-5 year olds. Launched a new Movement Guide in Jan. that has lesson plans for each development stage.	Want to work more closely with directors. Will make changes to movement guide as needed and add additional tools to keep the Guide fresh. Plan to add more nutrition/wellness information to modules. Working with NC Professional Association of Nannies to create Nanny guide.
Shape NC <i>Jennifer MacDougall</i> <i>Maria Hitt</i>	0-5	See NAP SACC Outdoor learning environment	Combines NAP SACC, Preventing Obesity By Design, and Be Active Kids. Disseminated through NC Partnership for Children via local Smart Start networks.	SHAPE NC 2012 Annual Report	Funded by \$6 million, 6-year BCBSNC grant. Currently in year 4. In first 3 years, tracked 19 centers. Grants were disseminated to four hubs throughout the state.	Planning to track 250 centers in the next 3 years. Working on a communications plan to disseminate findings.
National Early Care and Education Learning Collaboratives (ECELC) <i>Erica Cooper</i>	0-5	Aligned with Go NAP SACC and LMCC	Five-year, CDC-funded effort, implemented by Nemours and partners. Currently working with 9 states. Overall objective is to assist ECE providers in adopting nutrition, breastfeeding support, physical activity and screen time policies and practices that support healthy weight. Basically a structured version of LMCC very similar to Go NAP SACC model.	In the process of evaluating Cohort 1 participants with Gretchen Swanson Nutrition Center	Each collaborative consists of: Each ECE collaborative will consist of: <ol style="list-style-type: none"> 1. 5 in-person learning sessions 2. ongoing TA for the ECE providers 3. access to tools, materials, 	Cohort 1 (6 states) is about to finish the program but will continue to receive TA. Cohort 2 (3 states) in beginning stages.

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					resources and curricula	
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Other programs

- [Farm to Preschool](#)
- [I Am Moving, I am Learning \(affiliated with Head Start\)](#)

Interviews with Child Care Center Directors

I reached out to 27 child care center directors in Orange County. Eight responded, constituting a 30% response rate. I was able to interview 6 directors and 1 teacher. The low response rate may be due to the fact that many child care center directors have limited time. They may also be wary of outsiders coming to their centers given the revolving door of people they already interact with (i.e. DCDEE agent, Child Care Health Consultant, CACFP representative, etc.). Of the directors that I spoke to, the majority were very already motivated and engaged around the topic of child health and obesity already. This highlights one of the main challenges I encountered; how to engage with the centers that are either less motivated or that are less well resourced.

Themes from interviews:

- **Responsibility for child health and wellness:** it's a partnership between families and centers; everyone is responsible
- **Motivators:**
 - Compliance with state regulations
 - Wanting to stay on the cutting-edge
 - Keeping parents satisfied
 - Doing the right thing for the kids
- **Barriers:**
 - Lack of time and resources (especially small centers)
 - Don't know about the programs
 - Don't see the value in the programs if already doing a good job on nutrition and physical activity
- **Ideas for recognition:**
 - PR is never a bad thing (i.e. certificate)
 - Nice to feel a sense of "completing" something, reaching goals
 - There is sometimes a feeling of competitiveness among centers, but also curiosity about what others are doing; collaborative approach would be nice
 - High-performing centers are open to sharing best practices
 - Money

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Appendix:

- A. Results of literature review (matrix)
- B. NAP SACC vs. LMCC comparison
- C. Other resources

A: Results of Literature Review (Matrix)

Name	Topics	Recognition system	General Process	Resources Needed/ Implementation Time	Outcome Measures and Results
Comprehensive Interventions					
Let's Move Child Care (LMCC) Target: birth to 5 years old	Physical activity (PA) Screen time Healthy eating Healthy beverages Infant feeding	<ul style="list-style-type: none"> Participation certificate Recognition award certificate Added to map on Let's Move website 	<ol style="list-style-type: none"> Online sign-up + receive participation certificate Checklist quiz Goal setting Free resources Re-take quiz, receive recognition award 	Copy and duplication costs Implementation time: not specified	<p>Outcome measure: meet all five LMCC Goals (or four if you do not provide care to infants). Meeting the LMCC goals means achieving the best practices on the LMCC Checklist Quiz items that are relevant to you based on the age groups of the children you serve</p> <p>No study conducted to analyze effectiveness</p>
NAP SACC Target: 2-5 year olds	Nutrition PA Provider-child interactions around food and PA Educational opportunities for children, parents, & providers Program policies related to nutrition and PA	Certificate of completion	<ol style="list-style-type: none"> Self-assessment Goal setting Workshop delivery (x5) Technical assistance Evaluate, revise, repeat <p>*Facilitated by certified NAP SACC consultant</p>	Trained NAP SACC consultant, working 1.5 hours per week NAP SACC consultant 4-hour training Copy and duplication costs Incentives for child care facilities (optional, but recommended) More information Implementation time: 6 months	<p>Research base:</p> <p>Study Design: NAP SACC was tested in a randomized control trial in childcare centers located in both urban and rural areas of NC (diverse population).</p> <p>Primary outcome measure: The Environment and Policy Assessment and Observation (EPAO) instrument. It assesses child-care nutrition and physical activity environments, policies, and practices. The EPAO consists of a 1-day observation and review of pertinent center documents.</p> <p>Results: Intention-to-treat analysis results were nonsignificant. Exploratory analyses using only centers that completed most of the NAP SACC</p>

APPENDIX

					program suggest an intervention effect.
Go NAP SACC* Target: 0-5 year olds *Updated version of NAP SACC	Child nutrition Infant feeding/breastfeeding Infant & child PA Outdoor play & learning Screen time	Certificate of completion	Same as NAP SACC. New online trainings and updated materials to be available in 2015.	See NAP SACC	Not yet available
Shape NC* Target: 2-5 year olds *Combines NAP SACC, POD, and Be Active Kids (see below) Associated with the Natural Learning Initiative	Nutrition Physical activity Outdoor learning environment (OLE)	None	1) Assessment 2) Priorities setting 3) Action planning 4) Technical assistance and coaching 5) Re-assessment Note: process very similar to NAP SACC	Funded by \$6 million, 6-year grant and implemented in local Smart Start Partnerships in NC. Currently in year 4. Implementation time: not specified	Outcome measures: - Number of children 2-5: provided with 90 minutes of active play time daily, offered health fruits, nutrient-dense vegetables, and lean protein daily - Number/% of 4-yr old children who are at a healthy weight Preliminary results: <ul style="list-style-type: none"> • Reach: 19 counties, 27 communities, 1000 children • Children’s Weight: Percent of children who reach a healthy weight is gradually improving. • Active Play: Children getting 90 minutes or more of physical activity daily rose from 51% to 85%. • Fruit: Children being provided with fruit two or more times per day rose from 34% to 80%. • Vegetables: Children being provided with vegetables two or more times per day rose from 32% to 60%. • Beans and Lean Meats:

APPENDIX

					<p>Children being provided with beans or lean meats one or more times per day rose from 9% to 40%.</p> <ul style="list-style-type: none"> • Outdoor Learning: 19% of child care centers made improvement to outdoor learning environments including additions like bike paths and vegetable gardens. • Center Staff: 74 staff members at child care centers improved at least one of their own health behaviors, including eating more fruits and vegetables, more physical activity and less sweetened beverages. <p>SHAPE NC 2012 Annual Report</p>
Other Interventions					
<p>Be Active Kids®</p> <p>Target: 0 to 5 year olds</p>	Physical activity (primarily)	Provider rewards program; points redeemable for items in an online store (i.e jump rope, gift cards, exercise mat). Submitting forms, providing school/community information, and submitting personal health change information earns the provider points.	Be Active Kids utilizes a developmentally appropriate curricula and various training modules to increase physical activity of both children and adults in early childhood settings.	<p>Be Active Kids kits are available for free to any North Carolina child care provider or teacher who works with four or five year olds.</p> <p>Providers and teachers are asked to attend a 3 hour training session given by a local Be Active Kids Trainer.</p> <p>Be Active Kids Trainers required to attend a 4-hour training</p>	<p>Outcome measures:</p> <p>Parent and trainer knowledge, attitudes and self-efficacy</p> <p>Child knowledge of healthy food choices</p> <p>Child consumption of healthy foods</p> <p>Child screen time</p> <p>Major findings</p>
<p>Preventing Obesity by Design</p>	Outdoor learning environments (OLE) Physical activity	Start-up incentives to buy plant materials and tools, and support to lead	Teacher training on the use of the outdoors to promote physical activity and healthy	Time to attend trainings and webinars	<p>Study design:</p> <p>Pre-post evaluation: childcare provider and Smart Start TA</p>

APPENDIX

<p>(POD)</p> <p>Associated with the Natural Learning Initiative</p>		<p>teachers to attend training sessions</p> <p>Participatory design assistance for preschool staff, parents, volunteers, and community members (extension agents, garden clubs, Rotary Club, etc.)</p>	<p>nutrition.</p> <p>Train-the-trainers sessions for Smart Start technical assistance (TA) providers (500).</p> <p>Ten webinars a year.</p> <p>On-call, on-site, and website-based technical assistance and resource dissemination.</p> <p>Dissemination of information.</p>		<p>surveys, behavior mapping, photo documentation.</p> <p>Results:</p> <p>Reach: 30 centers</p> <p>Trained 500 early childhood technical assistance providers and community members</p> <p>Approximately 1,875 children benefits from OLE renovation.</p> <p>68% POD centers reported positive change in children’s behavior</p> <p>40% reported new gardens and edible plant installations as greatest successes</p> <p>22% children more likely to be observed in moderate activity (behavior mapping).</p> <p>Teacher custodial behavior reduced</p> <p>POD centers raised additional \$70,000 in cash (beyond seed grants) and received countless donations and volunteer hours</p> <p>Link to complete study</p>
<p>Color Me Healthy</p> <p>Target: 4 and 5 year olds</p>	<p>Nutrition</p> <p>Physical Activity</p>	<p>None</p>	<p>Aimed at children ages four and five. Curriculum and resources with fun, interactive learning opportunities on physical activity and healthy eating.</p> <p>It is designed to stimulate all of the senses of young children: touch, smell, sight, sound, and, of course, taste. Through the use of color, music, and</p>	<p>Cost: \$78- \$88/kit + cost of additional optional add-ons</p> <p>Time: work with your local Cooperative Extension Family & Consumer Science Agent to attend training and receive materials (in NC).</p> <p>Training materials, training venue</p>	<p>Reach: More than 50,000 childcare providers are using Color Me Healthy across the nation.</p> <p>Randomized controlled trial conducted in Idaho.</p> <p>Child care providers completed an 8-week follow up survey (n=1102):</p> <ul style="list-style-type: none"> 95.3% gave Color Me Healthy an excellent or very good overall rating.

APPENDIX

			<p>exploration of the senses, Color Me Healthy teaches children that healthy food and physical activity are fun.</p> <p>Dissemination:</p> <p>Train-the-trainer model through Cooperative Extension Agents</p> <p>Incorporated into SNAP-Ed in NC</p>		<ul style="list-style-type: none"> • 92.0% felt that using Color Me Healthy increased children's physical activity • 93.0% felt that using Color Me Healthy improved children's knowledge about healthy eating • 90% of the children, as perceived by their teachers, improved their recognition of fruits and vegetables • 87% said they spent more time talking about fruit and vegetables and nutrition in general after attending Color Me Healthy training • 78% of teachers perceived that the children were willing to try new fruits and vegetables • 20% of centers and daycare homes increased physical activity time <p>Full evaluation details</p>
<p>I am Moving, I am Learning (for Head Start centers)</p>	Physical Activity Nutrition	None	<p>Introduces multidisciplinary teams from local Head Start programs to the science of obesity prevention, and arms them with state-of-the-art resources and best practices for addressing the growing child obesity epidemic.</p> <p>Participating Head Start staff</p>	Time: train-the-trainer workshops and subsequent trainings for staff	<p>Results Brief Full Evaluation Report</p>

			attend a two and a half day intensive training program, with follow-up support provided by the Region III Head Start Technical Assistance System. Intervention targeted 4 levels of the social-ecological framework (children, parents, staff, communities)		
State and County Level Recognition Programs					
YoungStar (Wisconsin)	Comprehensive rating system for day care centers; includes physical activity and food standards	<p>Tiered Reimbursement:</p> <p>5 Star Provider - Meets highest levels of quality standards. Wisconsin Shares subsidy reimbursement is increased by 25%.</p> <p>4 Star Provider - Meets elevated levels of quality standards. Wisconsin Shares subsidy reimbursement is increased by 10%.</p> <p>3 Star Provider - Meets proficient levels of quality standards. Wisconsin Shares subsidy reimbursement remains the same.</p> <p>2 Star Provider - Meets health and safety standards. Wisconsin Shares subsidy reimbursement is reduced by 5%.</p>	Online application		Outcome measures: number of 5 star providers
Missouri Eat Smart Program	Nutrition	2 levels of recognition Certificate, banner and	To qualify, child care centers must submit an application with their menus, nutrition-	Nutritionist time Recognition materials	Outcome measures: number of providers receiving recognition

APPENDIX

		<p>menu templates with the Eat Smart logo to post in their facility, recognizing them as an Eat Smart Child Care program</p> <p>Use of the Eat Smart logo on their website and publications</p> <p>Sample press release</p> <p>Parent letter</p>	<p>related policies, food labels and other supporting documentation.</p> <p>A nutritionist reviews the application and does a site visit before a child care provider is approved and recognized as a Missouri Eat Smart Child Care program.</p>		
<p>The Healthy Childcare Recognition Program (HCCRP)</p> <p>Catawba County, NC</p>	<p>Nutrition Physical Activity Screen Time</p>	<p>Achieving childcare centers receive banners (e.g., “Tendercare is a Healthy Childcare Center!”) during year-end awards ceremonies, along with recognition in a press release and newspaper ads. They also receive two Kaplan educational kits (physical activity and nutrition).</p>	<p>Childcare center involvement in HCCRP is free and voluntary, and all licensed childcare centers in the county will be invited to participate over the next several years. Childcare centers are recruited in the fall and are formally evaluated in the spring. Technical assistance is provided to all participating childcare centers throughout the year.</p>	<p>Staff time (childcare nurse consultant and health educator)</p> <p>Recognition materials</p> <p>Sustained by Early Childhood Support Team and Catawba County Health Partners (funded by national and state grants and local supporting partners Catawba Valley Medical Center and Frye Regional Medical Center)</p>	<p>Outcome measures: number of providers receiving recognition</p> <p>20 providers recognized to date Reach: >1,200 children annually</p> <p>Scored on 8 criteria by childcare nurse consultant</p> <p>No formal outcome evaluation in place.</p>
<p>Georgia SHAPE</p>	<p>Nutrition Physical Activity</p>	<p>Certificate of achievement signed by governor Georgia SHAPE decals Access to logo Inclusion on DPH and Bright from the Start Websites</p>	<p>Part of existing Quality Rated Improvement System (1, 2, 3 star rating)</p> <ul style="list-style-type: none"> Information submitted about Child, Health, Nutrition and Physical Activity reviewed and scored Must receive a score of 85% or higher to receive award 	<p>Administrative time (to review the applications and score them)</p> <p>Recognition materials</p>	<p>Online portfolio consisting of 5 standards – 1 of the standards is Child Health, Nutrition and Physical Activity. No information on specific criteria used.</p>

B. NAP SACC vs. LMCC comparison

	Let's Move Child Care (LMCC)	NAP SACC	GO NAP SACC (In Development)
Topics	Physical activity (PA) Screen time Healthy eating Healthy beverages Infant feeding	Nutrition Physical activity Provider-child interactions around food and physical activity Educational opportunities for children, parents, & providers Program policies related to nutrition and PA	Child nutrition Infant feeding /breastfeeding Infant & child physical activity Outdoor play & learning Screen time
Target population	Birth to 5	2-5	Birth to 5
Evaluation	No study has been conducted to analyze effectiveness	Randomized control trial (RCT) conducted	No study has been conducted to analyze effectiveness
Outcome Measures	Meeting all 5 LMCC goals (achieving the best practices on the LMCC Checklist Quiz items)	Child-care nutrition and physical activity environments, policies, and practices	Child-care nutrition and physical activity environments, policies, and practices
Outcome Evaluation Tools	Online Assessment Quiz	Environment and Policy Assessment and Observation (EPAO) instrument 1. consists of a 1-day observation and review of pertinent center documents	Environment and Policy Assessment and Observation (EPAO) instrument 2. consists of a 1-day observation and review of pertinent center documents
Results	None	Intention-to-treat analysis results were non-significant. Exploratory analyses using only centers that completed most of the NAP SACC program suggest an intervention effect	Not yet available
Implementation Time	Variable (depends on results of self-assessment)	6 months+	6 months+
Recognition	Participation certificate Recognition award certificate Added to map on Let's Move website	Recognition award certificate	Recognition award certificate
Strengths	Comprehensive Relatively easy to implement Nationally recognized program Can be completed entirely online	Has been evaluated Evaluation tools available Already used in Orange County Guidance and technical assistance from NAP SACC consultant provided	Will be more comprehensive than NAP SACC and aligned better with LMCC. Will be online
Weaknesses	Has not been evaluated All data are self-reported	Time-consuming to implement Difficult to schedule workshops	Training not yet available Time-consuming to implement Has not been evaluated

Appendix C. Other Resources

Paper Copies Available:

- a. [North Carolina's Plan to Address Obesity: Healthy Weight and Healthy Communities. 2013-2020.](#)
- b. [Childhood Obesity Prevention Interventions in Childcare Settings: Systematic Review of Randomized and Nonrandomized Controlled Trials.](#) American Journal of Health Promotion, March/April 2014.
- c. [What Role Can Child-Care Settings Play in Obesity Prevention? A review of the Evidence and Call for Research Efforts.](#) Journal of the American Dietetic Association, 2011.
- d. [The Smart Start Resource Guide of Evidence-Based and Evidence-Informed Programs and Practices: A Summary of Research Evidence,](#) January 2013 (pp. 71-80)
- e. Obesity Evidence Based Strategies Overview for NC Local Health Departments, April 30, 2014

Online resources:

- a. Promoting Healthy Weight for Young Children: A Blueprint for Preventing Early Childhood Obesity in North Carolina (2013): [NC IOM Taskforce Report](#)
- b. [Center TRT](#): mission is to enhance the public health impact of state and community obesity prevention efforts by providing the training and evidence public health practitioners need to improve nutrition and physical activity behaviors, environments, and policies in ways that are equitable, efficient, and sustained over time.
- c. [Preventing Childhood Obesity in Early Care and Education Programs: 2nd Edition](#)