

Origin of Achieving a State of Healthy Weight High-Impact Obesity Prevention Standards

Background. In 2010, the National Resource Center for Health and Safety in Child Care and Early Education (NRC) at the University of Colorado College of Nursing sought to identify a set of high impact best practices for obesity prevention in early child care and education (ECE) programs, based upon Caring for Our Children (CFOC) standards.³ The subset of evidence-based practices then could be used by ECE professionals, policy makers, regulators and to inform child care licensing regulations and strategies to prevent childhood obesity and promote healthy habits.¹ The task was jointly funded under the Health and Human Services (HHS) Healthy Weight Initiative by the Health Resources and Services Administration Maternal and Child Health Bureau (HRSA MCHB) and by the Administration for Children and Families Child Care Bureau (ACF CCB, now, the ACF Office of Child Care). The source document for the set of practices was a subset of CFOC standards developed with the input of more than 50 content experts nationally. It was published as *Preventing Childhood Obesity in Early Care and Education Programs: Selected Standards from Caring for Our Children: National Health and Safety Performance Standards; Guidelines for Early Care and Education Programs, 3rd Edition (PCO)*.¹

Healthy Weight Advisory Meeting Goal. The first step was the assembly of a national advisory group to guide the process. NRC convened the Healthy Weight Advisory Meeting in Aurora, Colorado (July 2010) with MCHB and CCB support. The meeting goal was to identify those components of the *PCO* standards with the highest probable impact upon pediatric obesity when implemented consistently in ECE programs.

Participants. Invitees were selected by NRC leadership in consultation with MCHB and CCB officers. Representation of diverse perspectives on children's health, nutrition, and physical activity from multiple disciplines, practitioners in pediatric health and child care sectors, and child care licensing regulation was imperative. The list of experts drew heavily upon the nearly 300 CFOC Technical Panel contributors and external reviewers who were concurrently engaged in NRC's comprehensive revision of CFOC standards, and

especially those who also assisted development of *PCO*. Participants represented: key federal agencies (Centers for Disease Control and Prevention Division of Nutrition, Physical Activity and Obesity (DNPAO), Head Start, U.S. Department of Agriculture Food and Nutrition Service, MCHB and CCB); leading organizations in child health and development and child care delivery and licensing (Food Research and Action Center, National Association for Regulatory Administration, National Association for Family Child Care, National Training Institute for Child Care Health Consultants, Nemours Foundation); as well as researchers from leading universities (Columbia University, Duke University, University of North Carolina at Chapel Hill, Yale University), and others (see [Appendix: Healthy Weight Advisors](#)).

Meeting Implementation. NRC contracted with experts in participatory evaluation at The Evaluation Center of the School of Education and Human Development at University of Colorado Denver to jointly facilitate the three-day meeting and for data analysis. Advisor invitation packages included copies of *PCO*, suggested readings, and instructions to prepare for the meeting. To enable advisors to focus on individual practices included *PCO*/CFOC standards, NRC staff extracted 275 components from the complete *PCO* standards. After deleting safety-oriented components (e.g., responses to choking or allergic reactions), a 217 item pool remained, consisting of practices with the potential to impact pediatric obesity. On Day 1, facilitators introduced background information and described meeting goals and procedures. Day 2 was dedicated to assigning impact ratings. In a Gallery Walk process, a poster for each component was mounted on meeting room walls. Participants were assigned to two matched groups (by discipline and sector). Each group rated half of the components. In successive sessions, the two groups rated their assigned components for *ease of implementation* in ECE programs, then switched rooms to view the work product of the other group and post notes on their opinions. In a second round, the groups rated the set of components they had not previously rated—this time for the *impact of implementation upon the prevention of childhood obesity*. After rating, they again switched rooms to

review and post comments upon the work of the other group. Ratings of impact used four-point scale: 4 = *Definitely will make a big difference*; 3 = *Definitely will make some difference*; 2 = *Could make some difference*; and, 1 = *Could make a small difference*. Facilitators recorded the posted comments and the assigned ratings, and calculated descriptive statistics for each component. The average ratings across the 217 components for both *ease* and *impact of implementation* showed normal distributions. On Day 3, facilitators shared the rating results and comments, highlighting the top quartiles of ease of implementation and impact. In the next step, advisors were asked to argue for inclusion of components they considered essential to preventing childhood obesity that received somewhat lower ratings. If at least five participants deemed a component “essential,” it was noted as a possible candidate for the final set. All comments were recorded, as well as facilitators’ field notes taken during group discussions. Participants also offered important feedback on methods of measuring the components in real-life settings, practical ideas for implementation, and potential barriers to adoption in ECE settings. A follow-up evaluation with the participants found that all respondents agreed that the meeting process assured the inclusion of a wide range of interdisciplinary perspectives and that their opinions were valued.

Defining Measurable High-Impact Obesity Prevention Components. After the Healthy Weight Advisory Meeting, MCHB funded NRC to finalize the set of high impact practices for use in a study of child care licensing regulations nationally (*Achieving a State of Healthy Weight, ASHW*). NRC focused initially upon *Criterion 1: Statistical*, selecting components that fell one standard deviation above the mean for impact ratings. The resulting components for impact were grouped into one of three content domains: Infant Feeding, Nutrition, or Physical Activity/Screen Time. Based upon expert advisory group discussions of “essential” components and written comments, two new review criteria were added: *Criterion 2. Comprehensive Representation of Age Ranges* (infants, toddlers, preschoolers/older children); and, *Criterion 3. Construct Comprehensiveness*, as illustrated in the following examples. *Criterion 2: Components specifying appropriate milk fat percentages* were included statistically for two of the

three age groups, so the third (rated slightly lower) was added for comprehensive age coverage. *Criterion 3: In the beverage group, availability of water* fell just short of the statistical cut-of, but was added to complete beverage coverage. As NRC developed rating scales for the first ASHW study,² some component language proved redundant or too vague to operationalize, so that *Criterion 4. Feasibility of Reliable Measurement* emerged as an additional basis for inclusion/exclusion or merging of components. For example, *promotion* of physical activity could not be reliably differentiated in states’ rules from *daily occasions for active play*, which could be reliably identified and expressed the intention of promoting play. So, the concepts were merged into one variable. Application of the four preceding criteria resulted in the final 47 high impact obesity prevention components in 2010 (shown in [Exhibit 1](#)).

Naming conventions for the 47 high-impact obesity prevention components. In ensuing ASHW studies, the 47 components were referred to as ASHW *variables* or *indicators*, and later, as ASHW *Healthy Weight Practices*. Beginning in 2019, *High-Impact Obesity Prevention Standards (HIOPS)* was adopted, in collaboration with the CDC Division of Nutrition, Physical Activity and Obesity (funder of ASHW studies since *ASHW 2015*).

References

¹ American Academy of Pediatrics, American Public Health Association, and National Resource Center for Health and Safety in Child Care and Early Education. *Preventing Childhood Obesity in Early Care and Education Programs: Selected Standards from Caring for Our Children: National Health and Safety Performance Standards; Guidelines for Early Care and Education Programs*, 3rd edition. Elk Grove Village, IL: American Academy of Pediatrics; 2010.

² National Resource Center for Health and Safety in Child Care and Early Education. *Achieving a state of healthy weight: a national assessment of obesity prevention terminology in child care regulations* 2010. Updated September 2020. <https://nrckids.org/HealthyWeight/Archives>

Endnote

^a Caring for Our Children (CFOC) standards are nationally recognized as the best evidence- and expertise-based guidance in the nation for quality health and safety policies and practices in early care and education settings. The most up to date versions of the standards may be accessed in the free CFOC Online Database @ <https://nrckids.org/CFOC>.

Exhibit 1: Achieving a State of Health Weight 47 High-Impact Obesity Prevention Standards

IA1	Encourage and support breastfeeding and feeding of breast milk by making arrangements for mothers to feed their children on-site
IA2	Serve human milk or infant formula to at least age 12 months, not cow's milk, unless written exception is provided
IB1	Feed infants on cue
IB2	Do not feed infants beyond satiety; Allow infant to stop the feeding
IB3	Hold infants while bottle feeding; Position an infant for bottle feeding in the caregiver/teacher's arms or sitting up on the lap
IC1	Develop plan for introducing age-appropriate solid foods in consultation with child's parent/guardian and primary care provider
IC2	Introduce age-appropriate solid foods no sooner than 4 months of age, and preferably around 6 months of age
IC3	Introduce breastfed infants gradually to iron-fortified foods no sooner than four months of age, but preferably around six months
ID1	Do not feed an infant formula mixed with cereal, fruit juice or other foods without primary care provider's written instruction
ID2	Serve whole fruits, mashed or pureed, for infants 7 months up to 1 year of age
ID3	Serve no fruit juice to children younger than 12 months of age
NA1	Limit oils by choosing monounsaturated and polyunsaturated fats and avoiding trans fats, saturated fats and fried foods
NA2	Serve meats and/or beans - chicken, fish, lean meat, and/or legumes (such as dried peas, beans), avoiding fried meats
NA3	Serve other milk equivalent products (yogurt, cottage cheese) using low-fat varieties for 2 years of age and older
NA4	Serve whole pasteurized milk to twelve to twenty-four month old children who are not on human milk or prescribed formula, or serve reduced fat (2%) pasteurized milk to those who are at risk for hypercholesterolemia or obesity
NA5	Serve skim or 1% pasteurized milk to children two years of age and older
NB1	Serve whole grain breads, cereals, and pastas
NB2	Serve vegetables, specifically, dark green, orange, deep yellow vegetables; and root vegetables, such as potatoes and viandas
NB3	Serve fruits of several varieties, especially whole fruits
NC1	Use only 100% juice with no added sweeteners
NC2	Offer juice (100%) only during meal times
NC3	Serve no more than 4 to 6 oz juice/day for children 1-6 years of age
NC4	Serve no more than 8 to 12 oz juice/day for children 7-12 years of age
ND1	Make water available both inside and outside
NE1	Teach children appropriate portion sizes by using plates, bowls & cups that are developmentally suited to their nutritional needs
NE2	Require adults eating meals with children to eat items that meet nutrition standards
NF1	Serve small-sized, age-appropriate portions
NF2	Permit children to have one or more additional servings of the nutritious foods that are low in fat, sugar, and sodium as needed to meet the caloric needs of the individual child; Teach children who require limited portions about portion size and monitor their portions
NG1	Limit salt by avoiding salty foods such as chips and pretzels
NG2	Avoid sugar, including concentrated sweets such as candy, sodas, sweetened drinks, fruit nectars, and flavored milk
NH1	Do not force or bribe children to eat
NH2	Do not use food as a reward or punishment
PA1	Provide children with adequate space for both inside and outside play
PA2	Provide orientation and annual training opportunities for caregivers/teachers to learn age-appropriate gross motor activities and games that promote physical activity
PA3	Develop written policies on the promotion of physical activity and the removal of potential barriers to physical activity participation
PA4	Require caregivers/teachers to promote children's active play, and participate in active games at times when they can safely do so
PA5	Do not withhold active play from children who misbehave
PB1	Do not utilize media (television [TV], video, and DVD) viewing and computers with children younger than 2 years
PB2	Limit total media time for children 2 years and older to not more than 30 min. weekly
PB3	Use screen media with children age two years and older only for educational purposes or physical activity
PB4	Do not utilize TV, video, or DVD viewing during meal or snack time
PC1	Provide daily for all children, birth to 6 years, two to three occasions of active play outdoors, weather permitting
PC2	Allow toddlers 60-90 minutes per 8-hour day for moderate to vigorous physical activity
PC3	Allow preschoolers 90-120 minutes per 8-hour day for moderate to vigorous physical activity
PD1	Provide daily for all children, birth to six years, two or more structured or caregiver/ teacher/ adult-led activities or games that promote movement over the course of the day—indoor or outdoor
PE1	Ensure that infants have supervised tummy time every day when they are awake
PE2	Use infant equipment such as swings, stationary activity centers, infant seats, molded seats, etc. only for short periods if at all

Appendix: Healthy Weight Advisors

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