



ACHIEVING A STATE OF HEALTHY WEIGHT

ASHW 2017 Report



National Resource
Center for Health and
Safety in Child Care and
Early Education



 University of Colorado
Anschutz Medical Campus



National Resource Center for Health and Safety in Child Care and Early Education

ACKNOWLEDGEMENTS

NRC Director

Marilyn J. Krajceck, EdD, RN, FAAN

Research Associate and NRC Evaluator

Geraldine Steinke, PhD

2016 Healthy Weight Project Manager, Rater 1

Alison Pilsner, MPH, RN, CLC

Rater 2

Linda Satkowiak, ND, RN

Rater

Nicole R. Patterson, MSACN, NDTR

Advisors

Amy Lowry Warnock, MPA

CAPT Meredith Reynolds, PhD;

Early Care and Education Team Lead

Centers for Disease Control and Prevention

Division of Nutrition, Physical Activity and Obesity

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Note: The [ASHW 2017 Supplement: State Profiles](#) (released July 2018) contains additional details and state-specific information.

INTRODUCTION

Annually since 2010, the National Resource Center for Health and Safety in Child Care and Early Education (NRC) at the University of Colorado College of Nursing, has published studies in the series *Achieving a State of Healthy Weight (ASHW)*. The ASHW studies track changes in the states' child care licensing regulations that support the prevention of child obesity in early care and education (ECE) programs. ASHW 2017 is the seventh update since publication of the baseline report, *Achieving a State of Healthy Weight: A National Assessment of Obesity Prevention Terminology in Child Care Regulations 2010 (ASHW 2010)*.¹ ASHW 2010 reported the assessment of all child care licensing regulations in effect in the 50 states and the District of Columbia (collectively, *the States*) through December 2010 for center-based child care, large/group family child care, and small family child care homes. Subsequent annual updates examined new and revised rules made effective by December 31st of each study year that were publicly available on the state's child care licensing website no later than January of the following year

Pediatric Obesity

In the ASHW series, state regulations are examined for text that aligns with 47 ASHW indicators. The indicators are healthy weight practices (HWPs) in Infant Feeding, Nutrition and Physical Activity/Screen Time. The practices were derived from *Caring for our Children: National Health and Safety Performance Standards; Guidelines for Early Care and Education Programs, 3rd Edition (CFOC3)*.² More specifically, the HWPs are components of CFOC3 standards published in the special collection *Preventing Childhood Obesity in Early Care and Education: Selected Standards from Caring for Our Children: National Health and Safety Performance Standards* (available in a revised second edition, PCO2).³ (See Appendix A. Source of ASHW Indicators in PCO2/CFOC3 Standards.) *Key Findings of ASHW Assessments: 2010-2016* are presented in the box to the right.

Pediatric obesity remains a widespread public health threat, affecting approximately 17% of U.S. children and adolescents, ages 2 – 19 years old. It is associated with higher likelihood of current and future physical health and mental health vulnerabilities.⁴ Overweight and obesity often emerge in the earliest years of life,^{5,6} while racial and ethnic disparities in obesity are discernable by the time children enter kindergarten.^{7,8} Obesity upon school entry often signals entrenched obesity, persistent into adolescence.⁹

Key Findings in ASHW Assessments: 2010-2016

Only regulations with ASHW content are discussed below.
(See prior ASHW reports @ <http://nrckids.org/HealthyWeight/Archives>)

ASHW 2010 & ASHW 2011

- 2010 baseline study rated all states' regulations for HWPs in Nutrition, Infant Feeding, & Physical Activity/Screen Time
- In both 2010 & 2011:
 - HWPs were not substantially better regulated for one care type vs. others
 - Only 13% all ratings nationally indicated regulations fully supporting HWPs
 - More than ½ of ratings indicated no relevant HWP text was identified
 - Physical Activity/Screen Time was the least regulated domain
 - Leading states (with strongest HWP regulations) were DE & MS
- AZ, AR & ND enacted 2011 regulatory changes—88% of changes improved HWPs

ASHW 2012

- 12 states (CA, CO, FL, IA, KS, MD, NV, NM, NC, TX, WA & WY) enacted regulatory changes—94% of rated changes improved HWPs
- 15% of all ratings nationally indicated regulations fully supporting HWP
- Physical Activity/Screen Time HWPs remained largely unregulated
- Child and Adult Care Food Program (CACFP) guidelines newly supported 2 HWPs:
 - *Serve 1% or skim milk to children 2 and older*—30 states received higher ratings
 - *Make water available both inside and outside*—25 states received higher ratings
- Leading states were DE, MS

ASHW 2013

- 10 states (FL, KS, KY, MS, NE, NJ, NC, ND, RI & WY) enacted regulatory changes—94% of rated changes improved HWPs
 - 16% of all ratings nationally indicated regulations fully supporting HWPs
 - Physical Activity/Screen Time HWPs remained least regulated
 - COPR scores (weighted summary scores) were introduced to compare states regulations and treatment of HWPs
- Leading states were DE, MS, NC & RI

ASHW 2014

- 7 states (GA, IL, MI, NM, NY, TX & WV) enacted regulatory changes—100% of rated changes improved HWPs
- 17% of all ratings nationally indicated regulations fully supporting HWPs
- Most improved HWPs were for infant tummy time and prohibiting juice for infants
- Physical Activity/Screen Time HWP remained largely unregulated
- Leading states remained DE, MS, NC & RI
- 23 states' regulations re: HWPs were unchanged since 2010

ASHW 2015

- 6 states (AR, CO, DE, LA, MD & NY) enacted regulatory changes—91% of rated changes improved HWPs
- 17% of all ratings nationally indicated regulations fully supporting HWPs
- Most improved HWPs were serving low-fat milk for children 2+, and use screen media only for educational and physical activity purposes
- Leading states remained DE, MS, NC & RI
- 23 states' regulations re: HWPs remained unchanged since 2010
- Physical Activity/Screen Time changed more than Infant Feeding and Nutrition

ASHW 2016

- 6 states (CO, DC, MO, OH, OK & VT) enacted regulatory changes—76% of rated changes improved HWPs
- 18% of all ratings nationally indicated regulations fully supporting HWPs
- Leading states: DE, MS, NC, & CO
- DC's HWP changes yielded vast "state" improvements
Regulations often contradict 3 HWPs—*Avoid sugar*; for infants, *No juice under 12 mos.*, *Serve mashed/pureed whole fruit 7 - 12 mos.*

Annual %s of positive change were recalculated to account for data adjustments described in Appendix C of this report.

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The risk for early obesity is multi-determined, but can be attributed in part to modifiable factors in the environment,¹⁰ such as policies and practices for infant feeding, child nutrition, access to play equipment and opportunities, and screen time exposure.^{11,12} Therefore, the ECE programs, where many children spend much of their early lives, is a prime venue to support establishment of healthy lifestyles.^{13,14} The developing literature continues to present conflicting evidence for the current, actual impact of ECE programs upon children's weight, leaning slightly towards associating child care exposure with later obesity.^{15,16} Yet, evidence for the potential of ECE programs to favorably impact children's lifestyle habits through implementation of HWPs also is evolving, although research quality and limited follow-up are problematic.^{10,12,16} Evidence for the importance of these domains continued to accrue since the publication of *ASHW 2016*.

Infant Feeding Practices

New support for the protective effects of breastfeeding was reported in a longitudinal Chilean study in which both early infant weight gain and short-term breastfeeding without formula-supplementation (i.e., less than six months) were each independently associated in adolescence with lower levels of the cardiovascular protective hormone adiponectin.¹⁷ Such later health benefits of breastfeeding may be unavailable to many. In the U.S., Asian and white women, particularly those of higher socioeconomic status, breastfeed substantially more often than women of other racial and ethnic groups, for whom social and cultural differences may be explanatory factors.¹⁸ Culturally-sensitive child care practices policies that support and encourage longer breastfeeding may be helpful in reducing racial and ethnic disparities in pediatric obesity and its future consequences. However, the return to work after childbirth is a transition that challenges the commitment to continue breastfeeding of many new mothers of all backgrounds--and the degree to which child care supports breastfeeding mothers may not be a decisive factor in their child care selection.¹⁹

The Arizona's Empower program, a state education and technical assistance program, sought to support implementation of five healthy child care policies influencing: a) physical activity/screen time, b) fruit juice and water, c) family-style meals, d) staff training, and e) breastfeeding. At least partial implementation was achieved for all five areas, but policies to create breastfeeding-friendly environments were the least implemented.²⁰ Participants often attributed failure to implement the policy to the perception that breastfeeding was of low relevance to their programs, which were often preschooler-oriented. The authors argued for recognizing broader relevance, citing pertinence for breastfeeding staff and the potential to impact mothers of who had younger children as well.

A follow-up evaluation of the comprehensive *National Early Care and Education Learning Collaboratives* (ECELC) program explored the commitment to breastfeeding policies among ECE programs in states previously trained in infant feeding/breastfeeding, nutrition, physical activity and screen time policies and practices in the ECELC program as funded by the Centers for Disease Control and Prevention (CDC). The authors found that: plans for breastfeeding policy dissemination were generally insufficient; parent education was the least included aspect; and perceived "low-priority" of breastfeeding was again a common barrier.^{21,p.813}

New maternal survey findings from the Infant Feeding Practices Study II and Year 6 Follow-Up Study identified breastfeeding, and choice of infant complementary foods, as predictors of diet and weight at a later age.²² At six years of age, children who had been primarily formula-fed as infants ate fewer fruits and vegetables and consumed more sugar-sweetened beverages than their breastfed peers. Furthermore, more frequent consumption of fruits and vegetables at nine months of age was associated with higher fruit and vegetable intake, while children who had been more frequently fed foods with higher fat levels and added sugar in infancy were more often overweight at age six.

ECE programs have the potential to inform and encourage families and demonstrate healthier infant feeding practices. Implementation of breastfeeding-friendly policies may support mothers to prolong their commitments to affording their children long-lasting health benefits of breastfeeding and breast milk. Similarly, the implementation of ECE policies consistent with evidence and best practices for the well-timed introduction of varied, healthy, complementary foods in infancy may favorably impact a child's developing lifestyle habits and later weight.

Child Nutrition

Recent observational studies offer support for some HWPs in nutrition. They also offer a glimpse into how children are being fed in geographically and programmatically diverse ECE programs.

A Rhode Island study in Head Start programs compared discrepancies between teachers' self-reported, versus observed, practices during mealtimes. Teachers' self-reported frequencies of unhealthy controlling practices, such as using food as a reward, were close to observed frequencies, whereas their self-reported frequencies of healthful practices, such as modelling healthy eating were over-reported.²³ A similar discrepancy between self-report versus observation was published in a study of snacks and beverages provided to Virginia preschoolers in 55 licensed childcare centers of varying sizes.²⁴ Whereas program directors reported often offering fruits and vegetables, observers recorded less nutritious snacks, including foods high in salt and calories.

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Interestingly, program cost of care generally did not differentiate which snacks were served. Of all varieties of snacks, only the serving of fresh or canned fruit and canned vegetables was associated with higher cost programs. The authors concluded that, in their sample, snacks provided were generally unhealthy, high in fat, sugar and salt, and that “the directors overstated the amount of fruits and vegetables served and understated the amount of unhealthy snacks.”^{24,p.5}

A large Canadian study compared children’s food intake of teachers who did and did not engage in best practices.²⁵ ECE teachers positively influenced children’s lower sugar intake by modeling the behavior, and negatively impacted fat intake when food was not used as a reward. (There were no significant relationships between teachers’ physical activity practices and children’s measured activity.) Other studies reported that ECE staff often struggle personally with healthy lifestyle habits,^{26,27,28} and that their personal challenges or successes can influence their effectiveness in implementing best practices for children.²⁹

Staff impact on the decisions of preschoolers to taste different foods was observed in 25 licensed Oklahoma ECE programs, including a large percentage of tribally-affiliated programs.³⁰ Children tasted more healthy foods and fewer unhealthy ones (i.e., higher fat and sweetened foods) when staff: 1) ate the same foods; 2) spoke about the healthfulness of foods; and 3) inquired about hunger prior to serving seconds. Children were served more fruits and vegetables than any other food category. However, 22% of teachers used food as a reward. The foods offered in studied sites often included fried foods and other foods high in fat or sugar. Children’s overall caloric intake was reduced in association with nutrition education (but again, physical activity was not affected by teachers’ behaviors).

Some of the same investigators also compared nutritional quality of ECE observations in 16 Oklahoma ECE programs with family dinners.³¹ Foods observed being served in programs were compared with those recalled by families in their dinners at home. There were no differences in consumption of high-fat meats and whole grains. However, children consumed more fruits, vegetables, and low-fat dairy products, and fewer sugary beverages and high-fat/sugar foods, during child care lunches than in family dinners. (It is noteworthy, as the authors remark (and the NRC confirms) that Oklahoma child care licensing regulations require that all child care centers in the state serve foods and beverages consistent with the Meal and Snack Patterns of the Child and Adult Care Food Program (CACFP).)

In interviews with 63 North Carolina Head Start staff, families were often perceived as barriers to effective classroom nutrition education. Staff often perceived a lack of support or engagement with teachers regarding children’s nutrition and scant parental nutrition knowledge. They also recognized barriers families face that they

perceived to contribute to children’s preferences for fast foods, including the cost of healthy foods and the time required to prepare them. However, staff sought to overcome barriers and engage parents through a variety of strategies.³²

Similarly, in a smaller interview study in varied care types in Illinois, participants also perceived challenges in engaging parents in their children’s healthy nutrition. Parents were seen as a) too busy to communicate, b) potentially offended by, or non-receptive to, nutrition information, c) providing unhealthy foods, and d) less concerned about nutrition than issues such as allergies. Program policies such as Head Start standards and CACFP participation made it easier to structure discussion of nutrition information with parents.³³

Interviews with 28 Arkansas caregivers and teachers in Head Start and state-funded child care centers that served low-income families revealed that nutrition practices employed with children were also influenced by staff personal histories.³⁴ Both positive and negative past familial rules and routines affected current interactions around mealtime behaviors with children. Sometimes the effect of past experience enhanced best practices (e.g., by reducing controlling behaviors), but sometimes it negatively impacted healthful behaviors (e.g., food served must be eaten).

There is some evidence that family meal choices relying on convenience foods are at least in part attributable to more complex issues, such as a lack of confidence in meal planning and preparation abilities.³⁵ This suggests that better understanding of the reasons for family behaviors that ECE personnel find unhelpful may open the way for them to offer information and resources that strengthen the ECE-family alliance in supporting healthy weight for young children.

Physical Activity & Screen Time

Recent studies of physical activity and screen time exposure among young children focused on current practices in ECE and the success of interventions that affected policies, environment, and practices (primarily in physical activity). For example, an Australian study that objectively measured children’s physical activity in 11 ECE programs found children were seated nearly half of the time they were in care, stood for about a third, and were physically active less than 20% of the time. Girls were less active than boys, and preschoolers were less active than toddlers.³⁶

Similarly, children in two Midwestern U.S. ECEs were sedentary or inactive 70% of the time and spent 30% of their time in objectively measured light-to-vigorous activity. Children were more active outdoors and in small versus large group activities.³⁷ Higher activity levels during time outside was also confirmed by other researchers.³⁸

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An extensive quantitative literature review of more than 40 factors related to change in children's physical activity found that only parental monitoring reliably predicted child activity levels. Increased provider training was limited to predicting change in moderate-to-vigorous physical activity only. Where studied, introduction of physical activity equipment and curricula consistently failed to predict behavioral change in quantitative studies examined.³⁹ A second synthesis of systematic reviews sought to assess the effectiveness of ECE interventions on nutrition and physical activity, and associated policies. It found stronger evidence for factors expected to influence physical activity than interventions focused on nutrition-related outcomes. Specifically, teacher educational preparation and physical activity training (more education and training yield better outcomes), aspects of the physical environment, and use of structured activities were associated with increased physical activity.⁴⁰

Qualitative literature was the focus of a review that explored barriers and facilitators of physical activity and sedentary behavior in young children, birth to six years.⁴¹ The review found that family modeling, outdoor time, space, and resources such as equipment were consistently related to children's physical activity. Providers' recognized their roles in engaging children in physical activity, as well as their own potential to inhibit sufficient activity. Parents and providers alike acknowledged family reliance on childcare to support and facilitate children's daily physical activity. Providers saw parents as role models for their children, but also cited their abilities to impede activity, particularly out of doors, through their concerns for safety and weather, and the failure to provide appropriate clothing. Similarly, a review of both qualitative and quantitative research reiterated the importance family modeling, parental concerns, and activity out-of-doors as influencers of young children's physical activity.⁴² Dependent use databases searched and selection criteria employed, recent systematic reviews provide varying degrees of evidence across investigations for best practices in physical activity influencing children's activity levels. Recent singular investigations also have had mixed results and variable sustainability.

The intervention *Supporting Physical Activity in the Childcare Environment* (SPACE), employed portable play equipment, four 30-minute outdoor playtime periods daily, and a four-hour staff training intervention in 22 Ontario child care centers over eight-weeks. Children's physical activity and sedentary time were objectively measured. Although significant improvements in both moderate-to-vigorous and total physical activity were obtained for children in the intervention, improvements were not sustained at six- and 12-month follow-ups.⁴³

The CDC-funded *National Early Care and Education Learning Collaboratives* (ECELC) project, as described earlier, sought to impact the full range of policy and practice areas in pediatric obesity—a) infant feeding

(including breastfeeding support), b) nutrition, c) physical activity, and d) screen time—in ECE center programs in several states. Evaluation findings from the ECELC second cohort revealed significant director-reported change in all four areas upon completion of the 10-month program, including 1.4 more best practices in screen time and 2.2 more in infant and child physical activity. Impressively, there were no significant changes (i.e., no losses of improvement) from program completion to one-year follow-up evaluation.⁴⁴ The authors caution limitations regarding the self-reported nature of the data, but also speculate that enduring changes may have resulted from the multifaceted program approach that supported “change at the policy, environmental, and practice levels.”^{44,p3}

State actions to influence ECE physical activity policies and practices yielded modest positive results for a mandatory South Carolina quality improvement program for subsidized child care, as compared to a North Carolina control group.⁴⁵ However, in a similar investigation, strengthened child care licensing requirements in Massachusetts licensed centers (in 2010) for at least 60 minutes daily of physical activity did not achieve differences in observed child activity relative to a Rhode Island comparison sample, where similar state regulations were not in effect. Children in both states increased their light-to-vigorous physical activity comparably over several repeated observations.⁴⁶

An exploration of the impact of Florida child care licensing regulations upon 34 Miami-Dade ECE centers revealed programs provided about an hour of outdoor play daily. There was near total compliance with state physical activity rules for routinely providing periods of quiet and active play and limiting screen time exposure less than 2 hours daily for children aged two or more years, both of which fall quite short of *CFOC3* recommendations, which the authors recognized. The authors also noted that compliance with two of three nutrition standards tended to approximate the level of CACFP participation of 75% of centers, and centers in low-income areas, which would have more subsidized children enrolled, achieved higher compliance than other centers.⁴⁷

Active Early 2.0 was a two-year, multifaceted intervention focused on physical activity, an outgrowth of a CDC-funded project in Wisconsin.⁴⁸ The intervention was re-implemented in programs serving very diverse children from lower socioeconomic status families.⁴⁹ It included staff training, quality improvement planning, and ongoing technical assistance (including financial support to programs of \$2,500 for home programs and \$5,000 for centers, spent primarily on equipment). At baseline, measurements of child activity documented 63% sedentary behavior per hour, and 34% light and 3% moderate-to-vigorous activity. At program completion, observed teacher-led physical activity increased significantly (primarily indoors), and more programs had developed written policies requiring at least an hour of physical activity daily. Although physical activity of children

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did not increase overall, there were trends for improvement in home-based programs. Failure to obtain significant improvements in child activity, measured by accelerometer, was suspected to be associated with very high child turnover resulting sample attrition. Although not a study focus, significant improvements in several nutrition measures also were attained. Qualitative data from exit interviews and technical consultants were recorded in which providers reported barriers to activity that included lack of family engagement, turnover in centers, and the child age range in home-based programs. Positives were improved provider behavior and health, understanding use of transition time for activity, and providers' increased recognition of the importance of physical activity, or provider buy-in, a key factor in implementation of regulations, policies and practices.

Regarding provider buy-in, development of children's healthy behaviors did not emerge as a major priority for ECE personnel in an interview study with 30 Oklahoma City child care workers.⁵⁰ They expressed attitudes about physical activity in which they tended to regard physical activity as primarily useful for motor skill development and behavior management. They saw children as sufficiently active, and therefore teacher engagement in their physical activity was unnecessary. To lesser extents, they expressed that children's physical activity is sometimes inhibited by staff safety concerns, and it also poses an opportunity for some adult interaction while children are occupied. Contrary findings were obtained in key informant and focus group interviews with a convenience sample of 54 Florida childcare center directors, teachers, and family home care providers as part of the development an ECE physical activity curriculum for delivery as a two-hour teacher training workshop.⁵¹ All Florida participants regarded teaching children healthy habits as important and recognized their importance in modeling of physical activity. They also expressed interest in having physical activity training to support enhancement of physical activity in children in their care, especially when offered during non-work hours (i.e., Saturdays) and for continuing education credit. The family child care home providers in the sample reiterated challenges with the difficulty in adapting activities to meet the wider age range of children they served and the space limitations inherent in home-based services. Directors of 22 childcare centers in the sample that served infants to five-year old children also completed a physical activity self-assessment (adapted from NAP SACC⁵²). The majority (77%) reported at least 45 minutes of active play daily at their centers. Respondents also reported high levels of sedentary behavior, and, alarmingly inconsistent with best practices, 91% reported punishment by withholding active playtime. Most programs reported "limiting" (*not further defined*) entertainment media during meals and snacks, and limited computer time to 15 minutes daily. Centers had received no training on screen time policies. More than 90% of centers had written policies for both screen time and physical activity. The workshop was ultimately delivered to 16 participants who

reported increased physical activity knowledge and skills and intention to apply their learning. No follow-up data were reported.

A qualitative study conducted with 37 Pennsylvania Head Start teachers in six focus groups also found teachers wanted more training in promotion of physical activity with their students. However, as opposed to viewing physical activity as useful for supporting healthy lifestyle habits these teachers associated physical activity with themes related to learning and support of children's social skills, as well as viewing their own engagement in activity with children as bonding experience. To some extent, movement also served as a behavior management technique, but it was not dominant among the emergent themes.⁵³

Both parents and preschool staff in a small Finnish focus group study on children's sedentary behavior expected ECE programs to facilitate most of young children's daily physical activity, but both also had inaccurate opinions, generally overestimating the level of children's activity. As in U.S. studies, parents were seen by ECE staff as impeding physical activity to some extent by their concerns about safety or soiled clothing. Furthermore, children's active play required more supervisory time and personal motivation, whether parent or staff. Both parents and staff in the Finnish study believed that limitation of screen time in ECE should be easier because of the lesser availability of screen media versus most home environments.⁵⁴

Few recent publications addressed ECE screen time exposure as a focal research issue. One investigation with older children (nine - ten years old) found that screen exposure of three or more hours daily was associated with obesity, and was independently associated with insulin resistance (controlling even for physical activity), elevating the risk for type 2 diabetes.⁵⁵

Although the argument has been made that a focus on the amount of screen time is misdirected, and that quality of screen time is far more important,⁵⁶ the 2016 American Academy of Pediatrics technical report on digital media recognized the importance of media quality and the variations in purposes for which they are employed.⁵⁷ The implementation of *CFOC3* standards (e.g. [2.2.0.3: Screen Time/Digital Media](#)) however may at least help offset the mounting screen and digital exposure children have outside of ECE programs, particularly that which meets solely entertainment purposes.

It is noteworthy, that recent research in physical activity centered almost exclusively upon three-five year old children. Few studies or interventions targeted time spent encouraging infant and toddler physical activity. Given the data on the very early emergence of overweight and obesity,^{5,6} more attention to ECE interventions and their outcomes for these age groups is warranted. healthy weight for young children.

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Messaging Healthy Weight Practices

It is reasonable to assume that inclusion of a responsibility as part of one's role concept facilitates the fulfillment of that responsibility. However, embedded throughout several recent studies is conflict between how child care providers and early educators conceptualize and fulfill their roles. All seemed to recognize that they are influential in the lives of children they serve, but some don't prioritize development of children's healthy lifestyle habits, as they do school readiness and general caregiving.^{20,27} Others embrace their importance in establishing children's healthy diet and physical activity patterns,^{32,51} but many were uninformed about best practices and/or inconsistent in their implementation.^{23,24} Some did not model best practices,^{26,34} and/or were challenged personally with less healthy lifestyle habits.^{26,27,28,29}

Based on these recent findings, support of HWP in ECE programs may occur less reliably when personnel are not appropriately informed or supported, or fail to see children's healthy weight as an ECE goal that they may substantially influence. A review of publications on 77 different ECE obesity prevention interventions evaluated 135 studies from a social marketing lens. Social marketing strategies, which can evoke voluntary behavior change (e.g., drug and tobacco campaigns), were largely untapped resources for obtaining formative feedback and user buy-in to enhance fidelity of implementation.⁵⁸ Specifically, the authors argue that caregivers (and parents) are "gatekeepers and stakeholders whose own changes in behaviour will be required for prompting and supporting change in children's behaviours."^{58,p.1435} Indeed, in a multifaceted child/teacher-focused intervention in Hawaii, Head Start teachers who placed higher priority on children's nutrition had greater intervention effects, and those who made improvements in their own lifestyle habits had more changes in the physical activity environments of their classrooms.²⁹

Consistent messaging of evidence-based practices has been suggested as a mechanism for engaging ECE programs in the effort to reduce pediatric obesity.¹⁴ Numerous opportunities exist for messaging the centrality of healthy weight goals and dissemination of best practices in ECE. These range from ECE professional and service organizations (e.g., National Association for Family Child Care, Child Care Aware, and local agencies) to more explicitly structured state systems to ensure quality in ECE programs, including quality rating and improvement system (QRIS) and state child care licensing.

A recent assessment of the degree to which states integrate obesity prevention into their QRIS programs found that 20 of 38 state systems utilized one or more of the 47 ASHW HWPs.⁵⁹ Practices addressed in the Infant Feeding domain included only feeding of breast milk for young infants (IA1, the ASHW variable code), and holding infants while bottle feeding (IB3), two of the 11 Infant Feeding HWPs. In Nutrition, 15 of 21 ASHW variables were addressed. Of 15 HWPs in the Physical Activity/Screen *Achieving a State of Healthy Weight 2017*

Time domain, all were addressed by at least one state system. However, the frequencies across all domains for any single standard were quite low (i.e., <25% of states - 0 states). The authors note that following guidelines for, or participating in, CACFP was a common QRIS standard. They conclude that QRIS programs could be more supportive of HWPs and should consider CFOC3 standards (the source of ASHW HWPs) in their revision processes.

While voluntary QRIS has the potential for consistent messaging for obesity prevention in ECE, mandatory child care licensing has an even broader target audience. Past ASHW studies have demonstrated that even those states with the strongest regulations could be far more effective in disseminating and requiring implementation of HWPs. Child care licensing can contribute to messaging by including regulations clearly supportive of evidence-based best practices. For example, when states align their infant feeding and nutrition regulations with the CACFP Infant and Child Meal Patterns (but not necessarily require participation in the subsidy program), they provide clarity and ready access to straightforward guidance and publicly available resources.

A 2017 investigation reviewed the impact of governmental policies and regulations upon disparities in weight status among young children of diverse racial, ethnic, and socioeconomic backgrounds.⁶⁰ Particular emphasis was placed upon recent revisions of Head Start Performance Standards and of CACFP Meal Patterns for their potential to reduce weight disparities among young children. Head Start Performance Standards were cited for new nutrition practices and emphasis on physical activity, and CACFP for a wide range of nutrition practices affecting infants and children, as there is emerging evidence that each program is associated with healthier ECE nutrition and/or physical activity environments.

In fact, when CACFP introduced new requirements impacting two HWPs (that drinking water be freely available to children, and that children older than two years of age be served low fat milk), the *ASHW 2012* report documented the most discernible, single-year improvement in states' support of HWPs in ASHW reporting through 2016. This is because states that align their child care licensing regulations with CACFP are assigned ASHW ratings based upon CACFP Meal Patterns (unless state-specific text rates better). The NRC team rated the Infant and Child Meal Patterns in 2010 and made 2012 rating adjustments for the two practices mentioned above. More than 25 states had improved ratings for licensed care required to follow CACFP. In October 2017, when newly updated Meal Patterns for Infants and Children were fully implemented among CACFP participants, nine additional HWPs for child care were strengthened. The NRC re-rated the Meal Pattern to reflect these improvements in HWPs and assigned ratings to select states. The extent of that change is reported as part of *ASHW 2017*.

METHOD

The ASHW study methodology, as developed in 2010 and used in each annual assessment to date, includes the following essential steps:

1. *Identification of new and revised documents.* Documents are identified through phone/email contact with states' licensing agencies and monitoring of states' child care licensing websites.
2. *Document screening.* New documents are screened for key search terms related to the study indicators. Revised documents are compared with the version most recently rated, using Adobe® Acrobat® X Pro. Revised documents are searched similarly for terminology related to HWPs, using advanced Boolean search methods. Each year, many new and revised documents are searched that contain no content/changes relevant to ASHW indicators. Documents lacking ASHW-pertinent content or changes are not rated. (See Appendix B: State Documents Searched: 2017.) Table 1, Assessment Years for Each State (below), displays years in which each state's new/revised regulations were rated, for the 2010 baseline study and thereafter.
3. *Rater training.* New rating teams, consisting of an experienced and a new rater, are trained until high inter-rater reliability is achieved (for ASHW 2017, $r_s > .0.99$).
4. *Document rating and data entry.* Two raters independently rate each document on the 47 indicators (variables), using a set of indicator-specific guidelines to assign values on a four-point scale (1 to 4) in which, ratings of:
1 = Regulation contradicts the HWP
2 = Regulation does not address the HWP
3 = Regulation partially supports the HWP
4 = Regulation fully supports the HWP
and
0 = State does not regulate child care type.
5. *Resolution of discrepant ratings.* When raters disagree on the rating values for an ASHW indicator, the text each rater records as the basis for the numerical rating is reviewed by the raters with the NRC Evaluator to determine the appropriate rating.
6. *Establishment of "final ratings."* A single score for each indicator for each regulated care type is assigned in cases where multiple documents regulate a given care type in a state. The higher rating prevails (see ASHW 2010 method).
7. *Data analysis.* Final ratings are exported to Excel for analysis and generation of charts and tables and comparison of current year data to baseline data. In 2013, the NRC introduced weighted summary scores, Childcare Obesity Prevention Regulation

Scores, or COPR Scores, to facilitate comparisons of ratings across states and across indicators. In 2015, a modification adding a constant was made to the COPR formula, described later, to enhance the readability of charts using the calculations.

Data Decisions for Assigning 2017 Improved Ratings to "CACFP States"

In 2010, the NRC rated the Child Care Food Program (CACFP) Meal Patterns on the ASHW Infant Feeding and Nutrition variables. Where a state required a given care type to serve meals and snacks aligned with CACFP, the state received the ratings assigned to CACFP, unless state regulatory text rated higher. In preparation for full implementation of updated CACFP Meal Patterns in October 2017, the NRC rated the updated Meal Patterns and revised the ASHW Rating Manual to reflect CACFP improvements in HWPs. Rating for nine ASHW variables improved and no ratings declined. The improvements applied to the following ASHW variables:

- 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 to complement the human milk
- ID2: Serve whole fruits, mashed or pureed, for infants 7 months up to one year of age
- ID3: Serve no fruit juice to children younger than 12 months of age
- 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
- NC2: Offer juice 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
- NG2: Avoid sugar, including concentrated sweets such as candy, sodas, sweetened drinks, fruit nectars, and flavored milk

METHOD

A second task was the establishment of decision rules governing which “CACFP states” would receive the 2017 improvements. The underlying principle was that regulations should lead a child care program or provider to the updated versions of the Meal and Snack Patterns. The NRC determined to assign the improvements to CACFP states that: a) reproduce the new patterns or cite the new requirements in regulatory text; b) direct the reader to a source for the updated materials (either a state source or the USDA FNS CACFP website); c) cite the need to follow the *current* or most *up-to-date* Meal Patterns (or similar verbiage), regardless of any out-of-date reproductions or text; or, d) a less desirable alternative, provide only the CACFP program name, so that the reader would independently need to seek out the information. As has been NRC policy since 2010, where state-specific text rated higher than ratings assigned to CACFP, the rating of the state text prevailed. States with older regulations that included only reproduced versions of the earlier Meal Patterns, or only outdated text, with no additional information encouraging the reader to seek out updates did not receive 2017 CACFP improvements.

The identification and evaluation of applicable state text during this process resulted in the discovery of some past errors in the preceding seven annual studies, 2010-2016. Where errors were uncovered, the NRC returned to the applicable documents, rerated them (two-person ratings), and entered the revised ratings into the national dataset for each year the error was present. The details of the states affected in the instances of rerating are presented in Appendix C: *ASHW 2017 Method Notes*. In the following Results section, baseline data presented for comparisons to 2017 results are calculated from the corrected dataset and may differ from charts and tables included in previous reports as a consequence. The accompanying *Achieving a State of Healthy Weight 2017 Supplement: State Profiles* also includes adjusted ratings reported in Appendix C.

New ratings from seven states that made pertinent 2017 regulatory changes were added to the cumulative ASHW national database, as were other changes specified in Appendix C and a small number of assorted non-systematic errors detected in preparation of this report. Also, in 2017, Georgia ceased licensing Large/Group Family Child Care Programs, as announced in regulatory changes of 2016. Programs previously licensed under this category are now licensed as centers, subject to Georgia center regulations. The associated ratings from 2010-2016 are retained in the national database and contribute to baseline data, but Georgia was not penalized in terms of rating changes since the children in the former large/group family child care programs continue to be served in regulated care.

Calculation of Child Care Obesity Prevention Regulation Scores (COPR Scores)

COPR Scores summarize the strength of regulatory language across all child care types that states choose to regulate. COPR Scores are calculated to assess the strength of:

- Each state’s body of child care regulations;
- The national body of child care regulations (i.e., the states cumulatively);
- Each ASHW indicator (i.e., each healthy weight practice) across all states’ rules that pertain to the specific indicator.

The equation for calculation of COPR Scores is based on the assumptions listed below:

Assumptions in COPR Score Computation

- ASHW ratings = 1 (regulations that contradict the standard) are weighted “-1,” as they weaken regulatory promotion of healthy weight.
- ASHW ratings = 2 (missing, i.e., regulations do not address the standard) are weighted “0” as they don’t contribute to promotion of health weight.
- ASHW ratings = 3 (regulations partially meet the standard) are weighted “+1,” as they somewhat strengthen promotion of healthy weight.
- ASHW ratings = 4 (regulations fully meet the standard) are weighted “+2,” as they fully promote healthy weight.

Thus, COPR Scores are the sum of weighted ratings of regulations that either strengthen or weaken rules about HWPs. In the formula, there is no reference to *ratings = 2*. ASHW ratings that equal “2” indicate that no content was found to contribute positively or negatively to the strength of the regulations, so they are weighted “0.” No matter how large or small the proportion of *ratings = 2* in the total number of ratings, when multiplied by the weight of “0,” they always contribute “0” to the sum. The possible range of COPR Score values as computed in 2013 and 2014 was -1 to +2. This narrow range resulted in data displays that were very compressed and hard to read. To enhance the readability of charts of the COPR Scores for national-, state-, and indicator-level data in 2015, the computation of COPR scores now includes a multiplier of 50, as shown in the formula box.

METHOD

Therefore, theoretically, if a state's regulations contradicted all 47 HWPs, 100% of the ASHW *ratings* = 1. When entered into the COPR Score formula, the outcome would be a score of "-1 x 50 (the constant multiplier)" or "-50." In contrast, were a state's regulations fully consistent with HWPs, 100% of ASHW *ratings* = 4, the resulting COPR score would be "2 x 50" (the constant multiplier) or, "100". Similarly, for indicators, if a given HWP was rated

"4" in every state, the outcome would be a COPR Score of "2 x 50" (the constant multiplier), or "100." Therefore, *COPR Scores = 100 are the goal both for states and for indicators*, which signifies maximizing the capacity of early childhood education as a resource to support children's healthy weight.

The COPR Scores are calculated for 2017 by applying the following formula:

$$COPR\ Score = \left(\left(\frac{No.\ ratings = 1}{Total\ no.\ ratings} \times -1 \right) + \left(\frac{No.\ ratings = 3}{Total\ no.\ ratings} \times 1 \right) + \left(\frac{No.\ ratings = 4}{Total\ no.\ ratings} \times 2 \right) \right) \times 50$$

METHOD

Table 1. Assessment Years for Each State (all states at baseline, and updated ratings when states made pertinent changes to their licensing regulations)

State	Year Rated								State	Year Rated							
	2010	2011	2012	2013	2014	2015	2016	2017		2010	2011	2012	2013	2014	2015	2016	2017
Alabama	X		X						Montana	X		X					X
Alaska	X		X					X	Nebraska	X		X	X				X
Arizona	X	X							Nevada	X		X					
Arkansas	X	X				X		X	New Hampshire	X							X
California	X		X					X	New Jersey	X			X				X
Colorado	X		X			X	X	X	New Mexico	X		X		X			X
Connecticut	X		X					X	New York	X				X	X		X
Delaware	X		X			X		X	North Carolina	X		X	X				X
District of Columbia	X						X	X	North Dakota	X	X	X	X				
Florida	X		X	X				X	Ohio	X		X					X
Georgia*	X		X		X			X	Oklahoma	X							X
Hawaii	X		X					X	Oregon	X		X					
Idaho	X								Pennsylvania	X							
Illinois	X				X				Rhode Island	X		X	X				X
Indiana	X								South Carolina	X		X					X
Iowa	X		X					X	South Dakota	X							
Kansas	X		X	X					Tennessee	X							
Kentucky	X			X					Texas	X		X		X			
Louisiana	X		X			X		X	Utah	X		X					X
Maine	X		X					X	Vermont	X						X	X
Maryland	X		X			X		X	Virginia	X		X					X
Massachusetts	X		X						Washington	X		X					X
Michigan	X		X		X			X	West Virginia	X		X		X			
Minnesota	X		X					X	Wisconsin	X		X					
Mississippi	X		X	X					Wyoming	X		X	X				
Missouri	X						X										

Legend:

X	Baseline Rating in 2010 (all states, all regulated child care types, all variables)
X	Assessed new or changed rules in year indicated
X	Changed ratings due ONLY to automatic application of CACFP changes
X	Assessed new or changed rules and revised 2010 baseline ratings due to retirement of MyPyramid
X	Revised 2010 baseline ratings only due only to retirement of MyPyramid

*Georgia: In October 2016, Georgia updated Rules for Child Care Learning Centers Chapter 591-1-1. The revised document newly specified a lower threshold of seven as the number of children to be cared for in a "Child Care Learning Center" or "Center." Georgia discontinued licensing Group Day Care Homes, effective 2017. The ASHW 2017 Supplement now shows Group Family Child Care as an unregulated care type in the state. However, children formerly served in Group Day Care Programs continue to be in regulated care under the rules for center-based programs. Since ASHW ratings for both care types were matching as of 2016, the deletion of the 47 ratings Group Care ratings was not calculated as a negative change in 2017.

RESULTS

ASHW 2017 findings are presented in four sections: National Overview, New and Revised Regulations, Status of States, and Status of Healthy Weight Practices.

RESULTS: Key Findings 2017

Key 2017 findings are identified below, along with locations where the data are presented.

National Overview

- Full regulatory support of HWPs rose from 12% (2010) to 24% (2017); contradictory regulation decreased (3% to 1%). Ratings partially supporting HWPs remained constant (~30%) (Figure 1, p. 12 & Appendix E, p. 37-42).
- Failure to address HWPs declined from 55% (2010) to 44% (2017) (Figure 1, p. 12 & Appendix E, p. 37-42).
- HWPs remain most supported in centers (59%) and least in small family child care homes (50%), with large/group care at 56% (Figure 2, p. 12 & Appendix E, p. 37-39).
- Nearly 600 positive changes for at least one care type were assigned to 28 states due to CACFP improvements (Table 2, p. 13).

New and Revised Regulations

- In 2017, 7 states (Delaware, Florida, Maine, New Hampshire, New Jersey, Rhode Island, and Utah) enacted regulatory changes affecting HWPs in one or more care types (see Table 3, p. 14).
- HWPs were strengthened by 83% of state changes, but weakened by 17% (Table 5, p. 14). Total improvements include CACFP-related changes for 5 of the 7 states (Table 2, p. 13).
- Only 41% of regulations partially/fully supported HWPs in 2010; 64% support HWPs in 2017, 30% fully (Figure 3, p. 14).
- Utah, New Hampshire, New Jersey and Florida made the most positive changes (Table 5, p. 14).
- In 2017, full support of HWPs across all care types is regulated by: Florida for 17 HWPs; Utah, 16; Rhode Island, 15; Delaware, 14 (Appendix D, p. 35; *ASHW 2017* Supplement, State Profiles).
- Regulatory changes in Delaware, Florida, Maine and Rhode Island negatively impacted HWPs in Physical Activity/Screen Time (Appendix D, p. 35).

Status of States

- Since 2010, 36 states made regulatory changes affecting HWPs (Table 4, p. 14).
- In 2017, regulations in the District of Columbia, North Carolina, Colorado, Vermont, and Maryland are most supportive (fully/partially) of HWPs (Figure 4, p. 16).
- The District of Columbia, Florida, Vermont, Utah, and New Jersey improved most since 2010 (Figures 5a & 5b, p. 17-18).
- 11 states have 50+ ratings in full support of various HWPs in at least 1 care type, with the District of Columbia & North Carolina leading at 54 each (see Table 6, p. 15)
- 16 states have regulations contradicting HWPs (i.e., 2-9 ratings = 1) (see Table 6, p. 15).

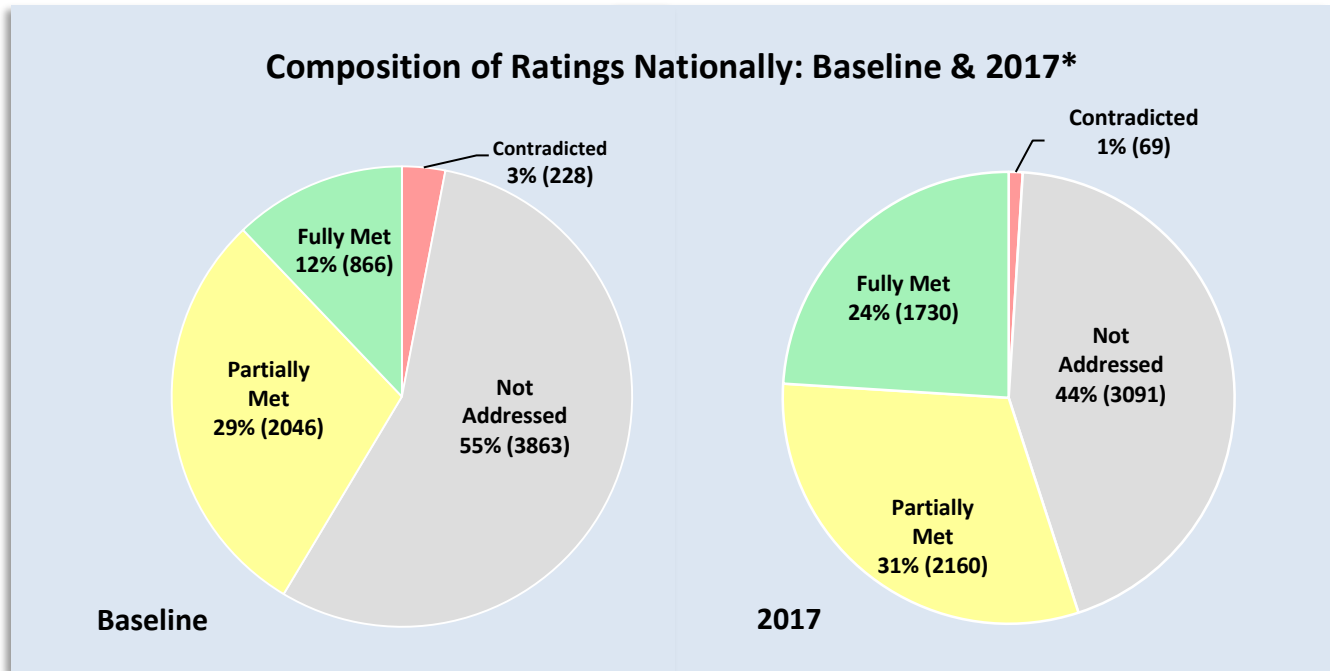
Status of Healthy Weight Practices

- Changes in the status of HWPs are due primarily to CACFP improvements (Table 2, p. 13).
- No HWP remains frequently contradicted in 2017 (Figure 6, p. 19).
- The least supported HWPs are: *Limit oils and fats* (NA1), *Write activity policies* (PA2), *Training on activities* (PA3), and *Play with children* (PA4) (Figure 6, p. 19).
- The most improved HWPs are *Serve no juice before age 12 months* (ID3) and *Serve low-fat milk from age 2* (NA5) due to CACFP changes since 2010 (Figure 7, p. 20).
- HWPs still contradicted in regulations include: 5 of 11 in Infant Feeding; 5 of 21 in Nutrition and 2 of 15 in Physical Activity/Screen Time (Appendix E, pp. 37-39).

Results: National Overview

Figure 1

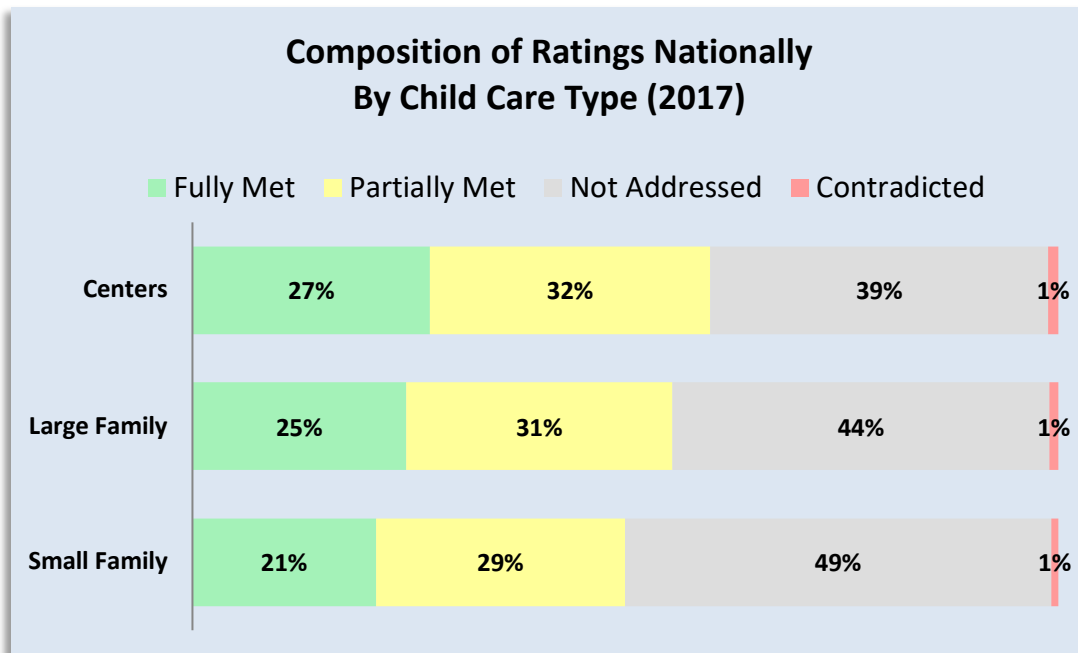
As seen in Figure 1, full and partial regulatory support for HWPs rose from 41% in 2010 to 55% in 2017, due largely to growth in the full support category (i.e., rating = 4). Contradictory regulations decreased from 3% to 1% of ratings nationally.



* Total pool of ratings of regulations across all states and all of their regulated child care types. (Baseline 2010 N=7003, 2017 N=7050.)

Figure 2

Figure 2 (below) shows that, among the three care types examined, the fewest child care licensing regulations affecting HWPs are in place nationwide for small family child care programs.



Results: National Overview

Table 2

Table 2 shows the states that received CACFP 2017 updates. States in blue were also rated this year for regulatory changes. (Abbreviation Key: CTR=Centers, LRG=Large Family Child Care Home; SML=Small Family Child Care Home; No. CACFP +s = total improved ratings)

STATE	IC2			IC3			ID2			ID3			NA4			NC2			NC3			NC4			NG2			No. 2017 CACFP +s						
	C	L	S	C	L	S	C	L	S	C	L	S	C	L	S	C	L	S	C	L	S	C	L	S	C	L	S		C	L	S			
	T	R	M	T	R	M	T	R	M	T	R	M	T	R	M	T	R	M	T	R	M	T	R	M	T	R	M	T	R	M	T	R	M	
Alaska	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	27
Arkansas	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	27
California	+			+			+			+			+			+			+			+			+			+			+			9
Colorado	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	19
Connecticut	+	+		+	+		+	+		+	+		+	+		+	+		+	+		+	+		+	+		+	+		+	+		18
District of Columbia	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	27
Florida	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	27
Georgia	+			+			+			+			+			+			+			+			+			+			+			8
Hawaii	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	27
Iowa	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	26
Louisiana	+	+		+	+		+	+		+	+		+	+		+	+		+	+		+	+		+	+		+	+		+	+		18
Maryland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	24
Michigan	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	26
Minnesota	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	27
Montana	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	26
Nebraska	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	27
New Hampshire	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	21
New Jersey				+	+		+	+		+	+					+	+		+	+		+	+		+	+								12
New Mexico	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	24
New York	+			+			+			+			+			+			+			+			+			+			+			9
North Carolina	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	16
Oklahoma													+			+			+			+			+			+			+			5
Rhode Island	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	12
South Carolina	+	+		+	+		+	+		+	+		+	+		+	+		+	+		+	+		+	+		+	+		+	+		18
Utah	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	27
Vermont	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	24
Virginia	+			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	23
Washington		+	+		+	+		+	+		+	+		+	+		+	+		+	+		+	+		+	+		+	+		+	+	16
Total No. 2017 CACFP Positive Changes																									570									

RESULTS: New & Revised Regulations

Table 3

States with New Ratings in 2017			
STATE	CTR	LRG	SML
Delaware		X	X
Florida	X	X	X
Maine		X	X
New Hampshire	X	X	X
New Jersey	X	X	X
Rhode Island	X		
Utah	X	X	X

Table 4

Cumulative Changes in ASHW: 2010-2017			
YEAR	No. of States	No. +	No. -
2011	3	37 (3 states)	5 (3 states)
2012	12	111 (12 states)	10 (3 states)
2013	10	173 (9 states)	11 (3 states)
2014	7	77 (7 states)	0
2015	6	95 (6 states)	15 (2 states)
2016	6	231 (6 states)	80 (5 states)
2017	7	747 (7 states)	54 (6 states)

36 states updated regulations that relate to ASHW indicators at least once since 2010.

Included in 2012 and 2017 rows are CACFP improvements assigned to states that made no additional regulatory changes in those years (20 in 2012; 23 in 2017). They were ratings for the indicators: IC2, IC3, ID2, ID3, NA4, NA5, NC2, NC3, NC4, ND1, and/or NG2.

Table 5

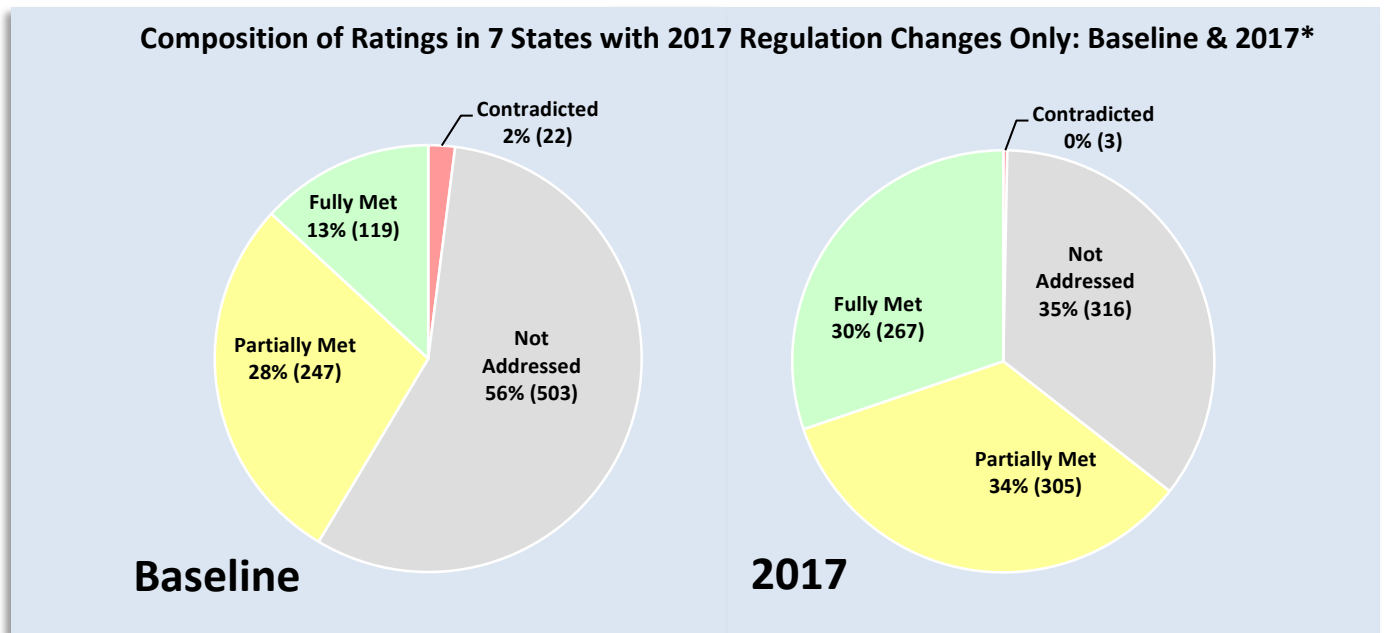
The table below demonstrates that most 2017 regulatory changes were improvements that support HWPs. NOTE: For 2017 rating details see Appendix B.

	Summary of Ratings Improved and Lowered in 2017																					Totals		
	DELAWARE			FLORIDA			MAINE			NEW HAMPSHIRE			NEW JERSEY			RHODE ISLAND			UTAH			+	-	%
2017 Ratings	CTR	LRG	SML	CTR	LRG	SML	CTR	LRG	SML	CTR	LRG	SML	CTR	LRG	SML	CTR	LRG	SML	CTR	LRG	SML			
Total Improved	0	5	7	24	28	28	0	4	4	19	19	19	11	11	2	6	4	4	15	17	32	259		83%
Total Lowered	0	9	9	4	4	4	0	5	5	1	1	1	0	0	1	10	0	0	0	0	0		54	17%
Improved/All	12 / 30			80 / 92			8 / 18			57 / 60			24 / 25			14 / 24			64 / 64					
% Improved	40%			87%			44%			95%			96%			58%			100%					

Abbreviation Key: CTR=Centers, LRG=Large Family Child Care Home, SML=Small Family Child Care Home

Figure 3

The figure below shows regulatory changes in 2017 increased support of HWPs among the seven states that made changes.



RESULTS: Status of Healthy Weight Practices (HWPs)

Table 6

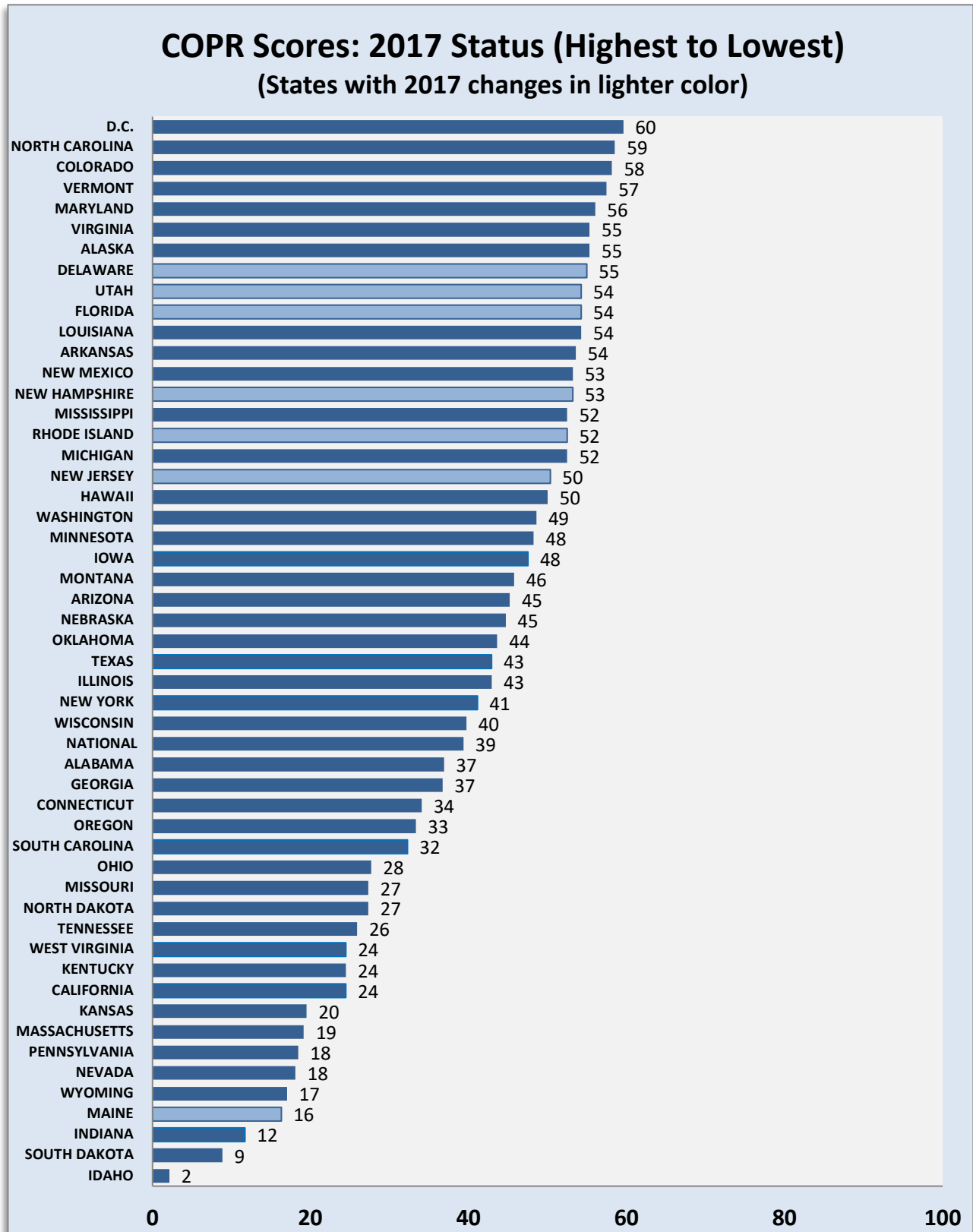
The table below provides a quick overview of each state's ratings in 2017 that contradict HWPs (=1), fail to address them (=2), and support HWPs, partially (=3) or fully (=4). (* signifies that the state does not regulate one care type).

STATE	Number of ratings = 1		Number of ratings = 2		Number of ratings = 3		Number of ratings = 4		Total number of ratings
ALABAMA	9	6%	50	35%	51	36%	31	22%	141
ALASKA	0	0%	36	26%	54	38%	51	36%	141
ARIZONA*	2	2%	31	33%	35	37%	26	28%	94
ARKANSAS	0	0%	37	26%	57	40%	47	33%	141
CALIFORNIA	0	0%	94	67%	25	18%	22	16%	141
COLORADO	0	0%	30	21%	58	41%	53	38%	141
CONNECTICUT	0	0%	77	55%	32	23%	32	23%	141
DELAWARE	3	2%	31	22%	56	40%	51	36%	141
DISTRICT OF COLUMBIA	0	0%	27	19%	60	43%	54	38%	141
FLORIDA	0	0%	40	28%	49	35%	52	37%	141
GEORGIA*	0	0%	45	48%	29	31%	20	21%	94
HAWAII	0	0%	49	35%	43	30%	49	35%	141
IDAHO	0	0%	137	97%	2	1%	2	1%	141
ILLINOIS	8	6%	45	32%	47	33%	41	29%	141
INDIANA	2	1%	112	79%	19	13%	8	6%	141
IOWA	0	0%	52	37%	44	31%	45	32%	141
KANSAS	3	2%	89	63%	40	28%	9	6%	141
KENTUCKY	2	1%	89	63%	29	21%	21	15%	141
LOUISIANA*	2	2%	20	21%	40	43%	32	34%	94
MAINE	0	0%	104	74%	28	20%	9	6%	141
MARYLAND	0	0%	34	24%	56	40%	51	36%	141
MASSACHUSETTS	0	0%	102	72%	24	17%	15	11%	141
MICHIGAN	0	0%	40	28%	54	38%	47	33%	141
MINNESOTA	0	0%	45	32%	56	40%	40	28%	141
MISSISSIPPI	6	4%	31	22%	54	38%	50	35%	141
MISSOURI	0	0%	82	58%	41	29%	18	13%	141
MONTANA	0	0%	54	38%	45	32%	42	30%	141
NEBRASKA	0	0%	57	40%	42	30%	42	30%	141
NEVADA	3	2%	93	66%	36	26%	9	6%	141
NEW HAMPSHIRE	0	0%	42	30%	48	34%	51	36%	141
NEW JERSEY	0	0%	48	34%	44	31%	49	35%	141
NEW MEXICO	0	0%	42	30%	48	34%	51	36%	141
NEW YORK	0	0%	59	42%	48	34%	34	24%	141
NORTH CAROLINA	0	0%	33	23%	51	36%	57	40%	141
NORTH DAKOTA	0	0%	87	62%	31	22%	23	16%	141
OHIO	0	0%	87	62%	30	21%	24	17%	141
OKLAHOMA	2	1%	50	35%	48	34%	41	29%	141
OREGON	9	6%	52	37%	57	40%	23	16%	141
PENNSYLVANIA	0	0%	103	73%	24	17%	14	10%	141
RHODE ISLAND	0	0%	42	30%	50	35%	49	35%	141
SOUTH CAROLINA	0	0%	77	55%	37	26%	27	19%	141
SOUTH DAKOTA	0	0%	124	88%	9	6%	8	6%	141
TENNESSEE	2	1%	78	55%	47	33%	14	10%	141
TEXAS	0	0%	60	43%	41	29%	40	28%	141
UTAH	0	0%	36	26%	57	40%	48	34%	141
VERMONT	0	0%	33	23%	54	38%	54	38%	141
VIRGINIA	0	0%	36	26%	54	38%	51	36%	141
WASHINGTON	3	2%	43	30%	50	35%	45	32%	141
WEST VIRGINIA	4	3%	82	58%	37	26%	18	13%	141
WISCONSIN	9	6%	42	30%	59	42%	31	22%	141
WYOMING	0	0%	102	72%	30	21%	9	6%	141
ALL STATES	69	1%	3091	44%	2160	31%	1730	25%	7050

RESULTS: Status of Healthy Weight Practices (HWPs)

Figure 4

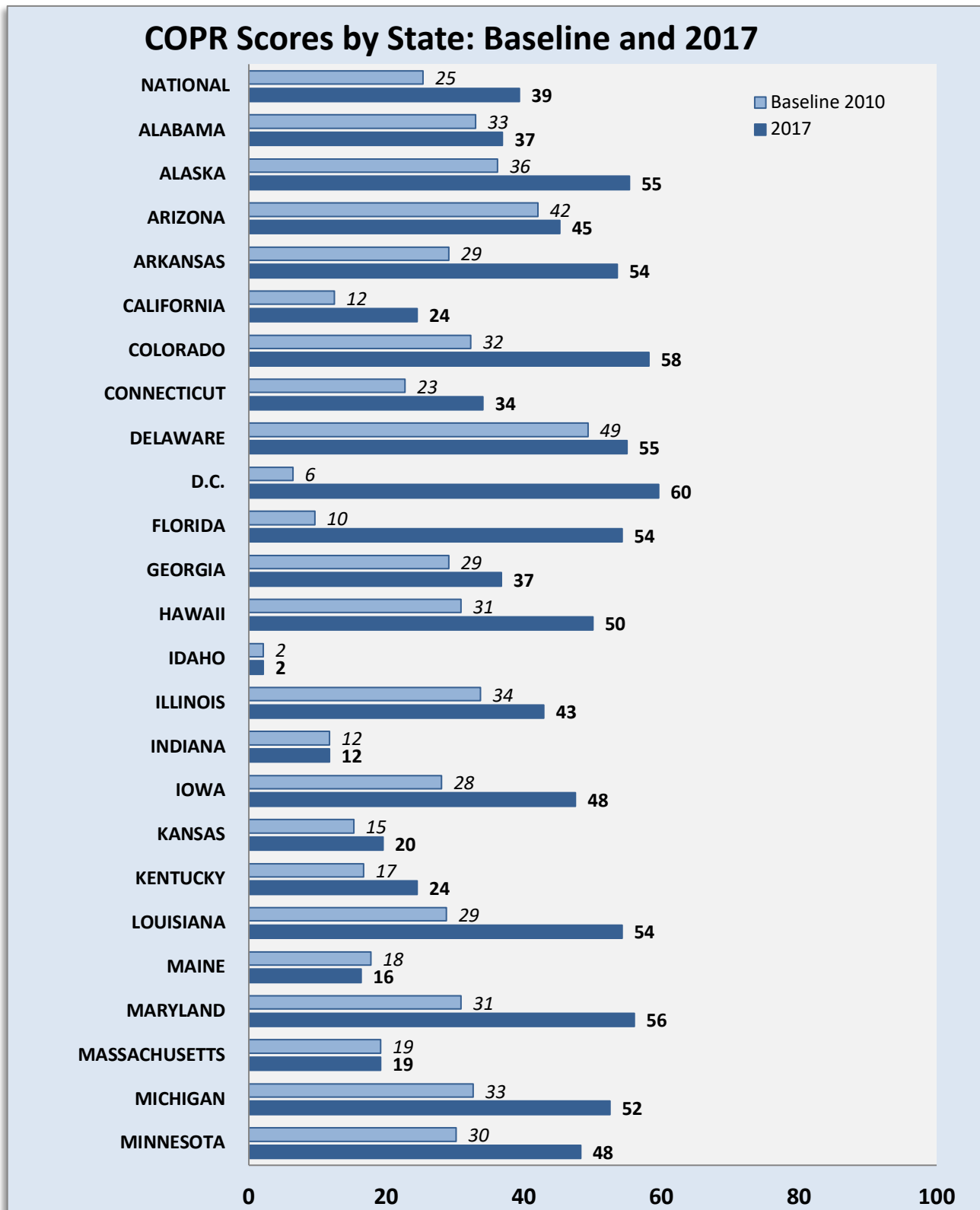
Figure 4 shows the states with child care licensing regulations that most to least (top to bottom) support HWPs.



RESULTS: Status of Healthy Weight Practices (HWPs)

Figure 5a

Figures 5a and 5b (next page) show changes in states' child care licensing regulations that support HWPs, 2010 to 2017.

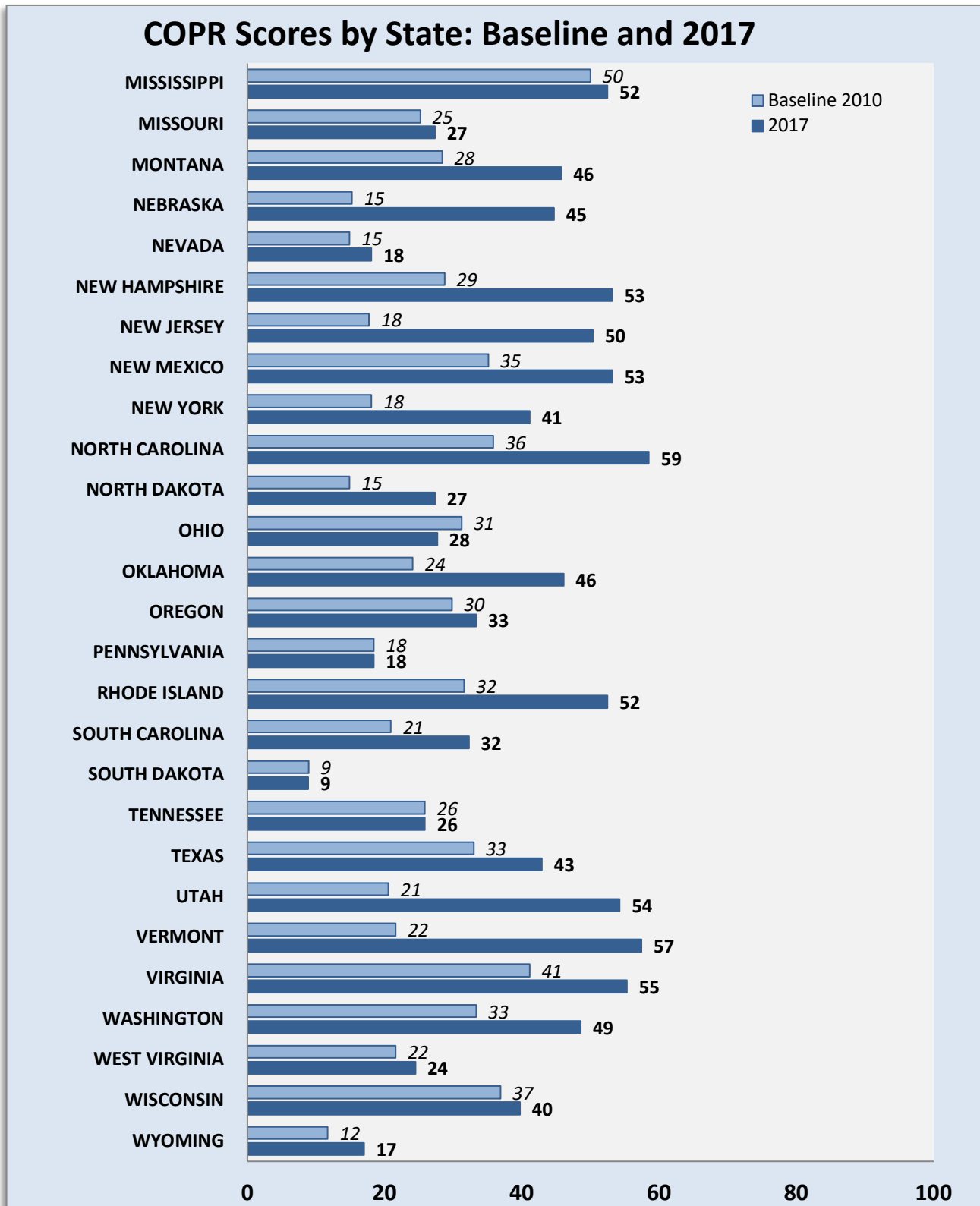


* NOTE: See page 8 for information on the COPR score calculation

RESULTS: Status of Healthy Weight Practices (HWPs)

Figure 5b

Figures 5a (preceding page) and 5b show changes in states' child care licensing regulations that support HWPs, 2010 to 2017.



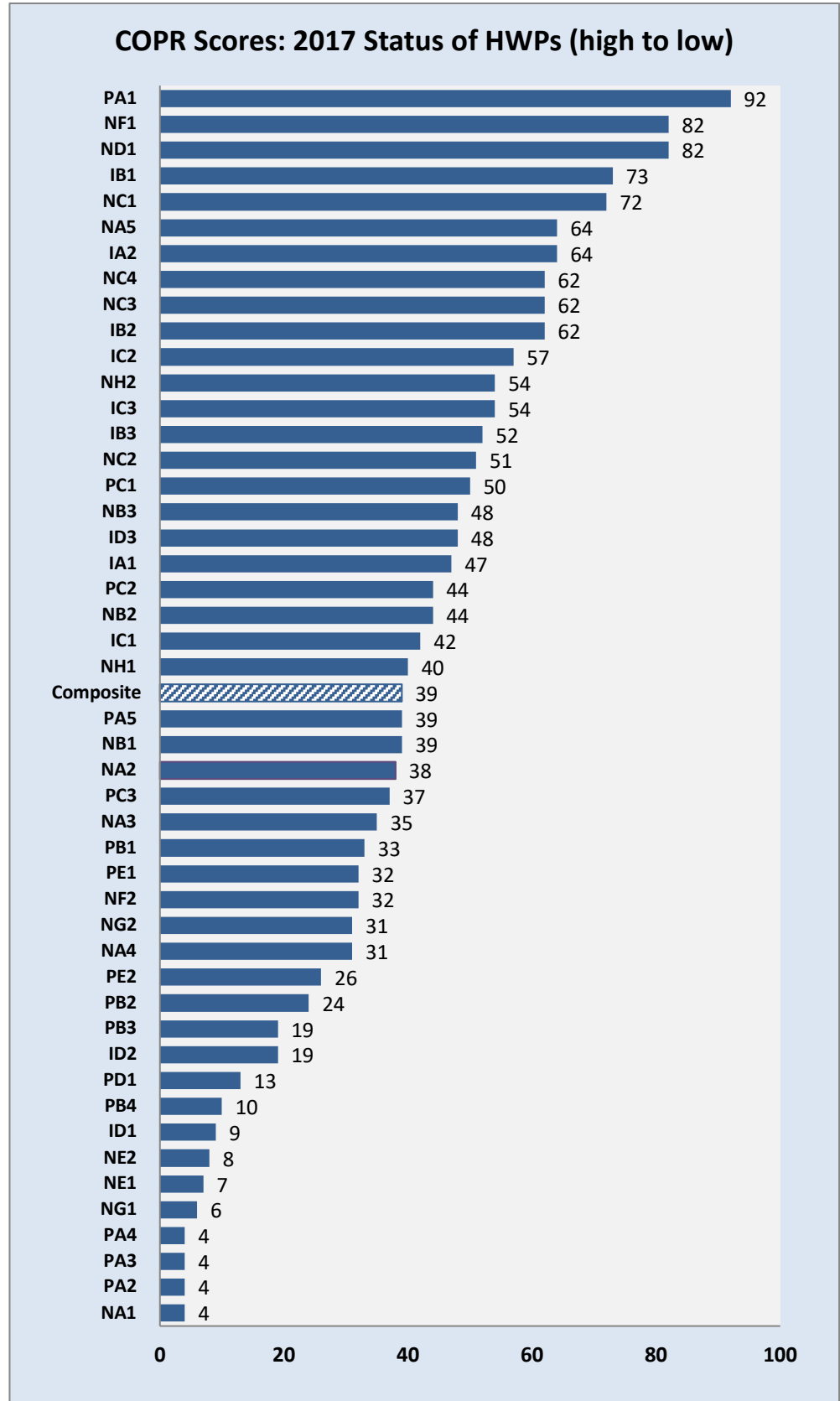
* NOTE: See page 8 for information on the COPR score calculation

RESULTS: Status of Healthy Weight Practices (HWPs)

Figure 6

Figure 6 shows the most to least well-supported HWPs in child care licensing regulations across the nation in 2017.

HWP Quick Reference Chart	
IA1	Support breastfeeding
IA2	No cow's milk < 1yr
IB1	Feed infants on cue
IB2	Stop feed @ satiety
IB3	Hold infant to feed
IC1	Plan solid introduction
IC2	Intro solids @ 4-6 mo
IC3	Iron-Fort @ 4-6 mo
ID1	Don't mix formula
ID2	Whole fruit 7 m-1 yr
ID3	No juice < 12 mo
NA1	Limit oils/fats
NA2	Low fat meat/proteins
NA3	Low fat milk equivalent
NA4	Whole milk 1-2 y/o
NA5	Low fat milk > 2 y/o
NB1	Whole grains
NB2	Variety of vegetables
NB3	Variety of whole fruit
NC1	100% juice
NC2	Juice only @ meals
NC3	Juice 4-6 oz. 1-6 y/o
NC4	Juice 8-12 oz. 7+ y/o
ND1	Make water available
NE1	Teach portion sizes
NE2	Eat with children
NF1	Appropriate servings
NF2	Healthy seconds
NG1	Limit salt
NG2	Avoid sugary foods
NH1	Food no force/bribe
NH2	Food no reward/punish
PA1	Space for active play
PA2	Training on activities
PA3	Write activity policies
PA4	Play with children
PA5	Don't withhold play
PB1	No screen time < 2 yr
PB2	Screen time 30 min/wk
PB3	Screen time purpose
PB4	No TV w/meals
PC1	Outdoor play occasions
PC2	Toddler play time
PC3	Preschool play time
PD1	Structured play
PE1	Tummy time often
PE2	Limit time infant equip.



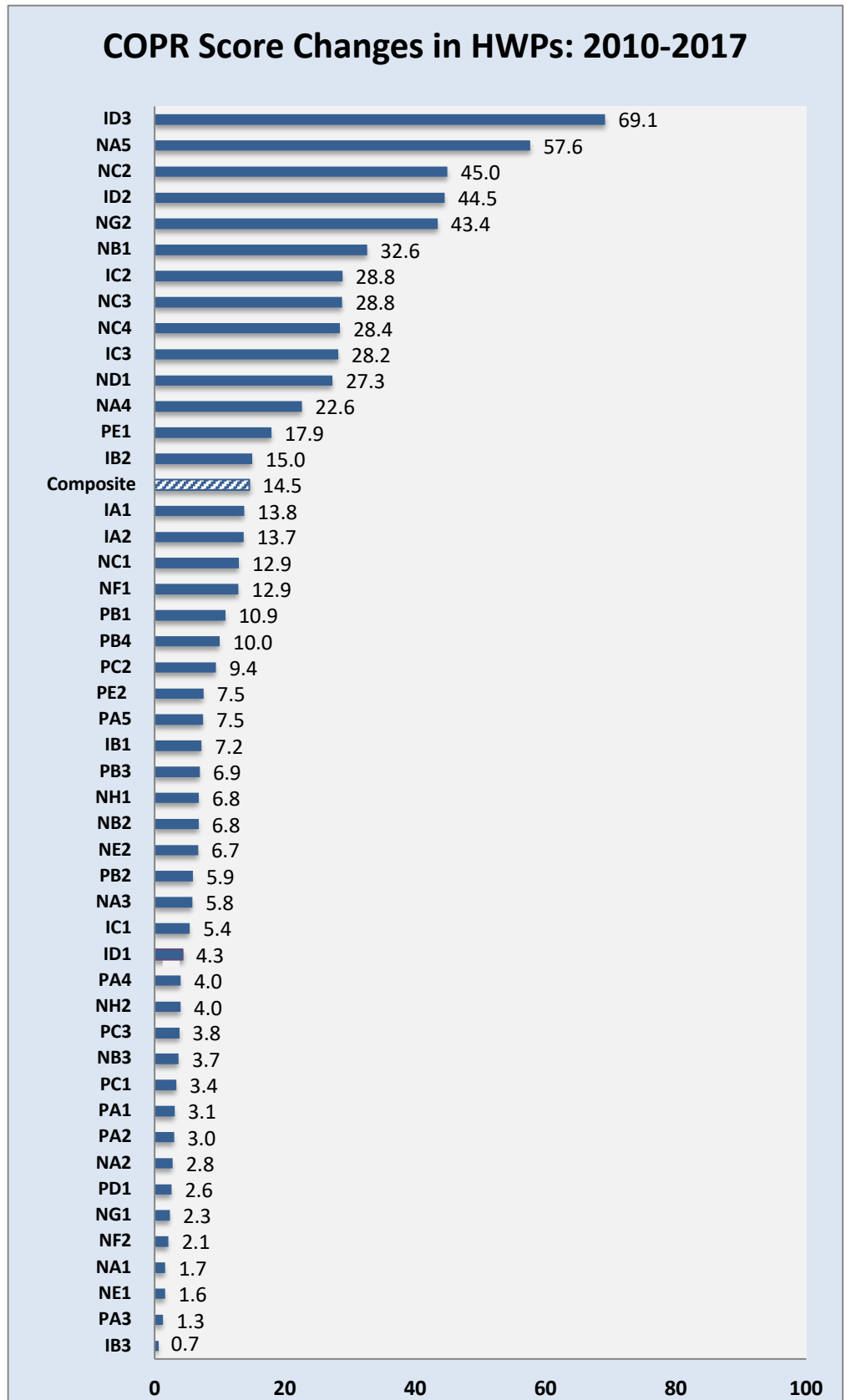
* NOTE: See page 8 for information on the COPR score calculation

RESULTS: Status of Healthy Weight Practices (HWPs)

Figure 7

Figure 7 shows improvement (or decline) in child care licensing regulatory support of each HWP across the nation from 2010 to 2017.

HWP Quick Reference Chart	
IA1	Support breastfeeding
IA2	No cow's milk < 1yr
IB1	Feed infants on cue
IB2	Stop feed @ satiety
IB3	Hold infant to feed
IC1	Plan solid introduction
IC2	Intro solids @ 4-6 mo
IC3	Iron-Fort @ 4-6 mo
ID1	Don't mix formula
ID2	Whole fruit 7 m-1 yr
ID3	No juice < 12 mo
NA1	Limit oils/fats
NA2	Low fat meat/proteins
NA3	Low fat milk equivalents
NA4	Whole milk 1-2 y/o
NA5	Low fat milk > 2 y/o
NB1	Whole grains
NB2	Variety of vegetables
NB3	Variety of whole fruit
NC1	100% juice
NC2	Juice only @ meals
NC3	Juice 4-6 oz. 1-6 y/o
NC4	Juice 8-12 oz. 7+ y/o
ND1	Make water available
NE1	Teach portion sizes
NE2	Eat with children
NF1	Appropriate servings
NF2	Healthy seconds
NG1	Limit salt
NG2	Avoid sugary foods
NH1	Food no force/bribe
NH2	Food no reward/punish
PA1	Space for active play
PA2	Training on activities
PA3	Write activity policies
PA4	Play with children
PA5	Don't withhold play
PB1	No screen time < 2 yr
PB2	Screen time 30 min/wk
PB3	Screen time purpose
PB4	No TV w/meals
PC1	Outdoor play occasions
PC2	Toddler play time
PC3	Preschool play time
PD1	Structured play
PE1	Tummy time often
PE2	Limit time infant equip.



* NOTE: See page 8 for information on the COPR score calculation

DISCUSSION

ASHW 2017 is the eighth assessment by the National Resource Center for Health and Safety in Child Care and Early Education (NRC) of the strength of pediatric obesity prevention in states' child care licensing regulations. It is the second assessment of annual changes resulting from both state regulatory text and systematic changes associated with improvements in the Child and Adult Care Food Program (CACFP) Meal Patterns in a study year (the first was *ASHW 2012*). Together CACFP and states' regulatory changes cumulatively doubled full support of HWPs in child care licensing, from 12% in 2010 to the current 24%. They also meaningfully diminished the extent to which regulations undermined implementation of HWPs in ECE programs.

2017 State Regulatory Changes

The seven states that made regulatory changes in 2017, Delaware, Florida, Maine, New Hampshire, New Jersey, Rhode Island, and Utah, varied in the extent to which they fostered obesity prevention as a goal in child care licensing. Overall, the states (plus nearly 100 CACFP improvements among five of the seven states) moved their regulations toward stronger support of HWPs in 2017. Utah made entirely positive changes, while those made by New Jersey, New Hampshire, and Florida were nearly as strong. However, several of the 2017 regulatory changes were focused in Physical Activity/Screen Time. Unfortunately, the majority of these changes were negative in Maine, Rhode Island, Delaware, and Florida, lowering support for HWPs in this domain. Also noteworthy is the fact that Delaware removed text for large and small family child care homes about following CACFP guidelines. Nonetheless, five of the states (Delaware, Florida, New Hampshire, and Rhode Island, and Utah) each fully supports 30% or more of the HWPs across all regulated care in their states.

2017 CACFP Improvements

Full implementation in 2017 of the updated CACFP Meal Patterns improved guidelines nationwide for nine ASHW indicators in the Infant Feeding and Nutrition domains. The improved ratings were assigned to applicable licensed care types (i.e., care types required by regulation to follow the Meal Patterns) in "CACFP states," if the existing state rating for an indicator was lower. Therefore, nearly 600 ratings improved solely on the basis of CACFP, accounting substantially for the overall rate of positive change in 2017, and markedly advancing regulatory support of HWPs in ECE programs.

Although the Meal Patterns were strengthened significantly in their potential to favorably impact pediatric obesity, they could be made stronger (e.g., fried foods may still be served if not fried on-site). Nor, understandably, do the Meal Patterns alone provide much guidance for caregiver/teacher behaviors during feeding and meals (e.g., avoiding misuse of food), although formal participants in the CACFP subsidy program may receive such training.⁶¹ CACFP Recommended Best Practices scored somewhat higher than the basic Meal Patterns,⁶² when the NRC

ASHW team rated them on the ASHW indicators. However, no state was found in 2017 to require alignment of infant feeding and nutrition practices with the CACFP Best Practices. Although QRIS program have much to accomplish in linking to HWPs,⁵⁹ promotion of CACFP Best Practices would be an appropriate next step.

The Institute of Medicine's recommendations to update CACFP were published in 2010,⁶³ and the final rule was published in early 2016,⁶⁴ giving states notice of the coming changes and opportunity to plan for updated regulations. Therefore, unlike 2012 when all CACFP states were assigned improved ratings for the two improved indicators, in 2017, the NRC did not automatically upgrade ratings in CACFP states. The decision rules employed to determine which states received 2017 CACFP improved ratings for *ASHW 2017* (as described in the Method section) may underestimate the actual impact of Meal Pattern improvements. That is, additional states may have informed and required licensees to follow the new guidance although regulations were not yet updated. Furthermore, it is known that Nevada enacted revised rules that newly align state rules with CACFP in September 2017, but the revised regulations were not publicly available on the state website before the *ASHW 2017* cutoff date in January 2018. Other states may be planning revisions and will be assigned improved ratings as applicable.

As states currently may be engaged in this process, NRC's review of documents to identify precise language regarding CACFP revealed another opportunity for improvement of consistent messaging. Some states were very thorough in identifying CACFP in regulations (e.g., citing the Federal Code, 7 CFR Part 226 - Child and Adult Care Food Program), although NRC staff encountered surprising variety in citing the program. While licensees may be well informed in direct contact with the licensing agencies, when CACFP or other external resources are intended but not clearly identified in publicly available regulations, misinterpretation is possible. The NRC encourages licensors drafting new or revised rules to use the entire program name, the Child and Adult Care Food Program, at least once in each applicable document, preferably citing it as a program of the U.S. Department of Agriculture Food and Nutrition Service as well. Where the CACFP Meal Patterns are reproduced as part of the regulations or appendices, it would assist ECE programs to identify CACFP as the source.

It is important that child care licensing capitalize upon the systemic potential of regulation to reinforce support of children's healthy weight and obesity prevention as a central ECE goal. Based upon NRC interactions in 2017 and 2018 with some states' licensing personnel, it seems that the silos between state agencies may inhibit some state child care licensing departments in promoting CACFP guidance among licensees. The NRC recommends that child care licensing professionals seek to fortify connections with their state CACFP agency where

DISCUSSION

resources allow, particularly when alignment with CACFP is the primary source of state licensing infant feeding and nutrition regulations. When this is not feasible, it may be helpful to inform licensees that CACFP resources are freely accessible (at <https://www.fns.usda.gov/cacfp/child-and-adult-care-food-program>). They are invaluable tools in fostering ECE support of HWPs, even when providers do not participate in the subsidy program and are not required by regulation to follow the Meal Patterns.

However, even strong commitment to HWPs in child care does not guarantee public and legislative support to enact regulation. Voluntary measures alone evoke complex socio-political and economic forces that may arise as impediments. For example, a 2014 Washington State coalition sought unsuccessfully to pass legislation to create a voluntary recognition program for breastfeeding-friendly environments, including in child care.⁶⁵ The authors of the assessment of the failed *Breastfeeding-Friendly Washington* (BFW) legislative campaign identified a host of challenges, including the entanglement of personal opinion with policy decisions (e.g., fear that public promotion of breastfeeding-friendly environments would be insensitive to women who had unsuccessful experiences). Proponents' messaging was limited to evidence about breastfeeding's benefits for society, mothers, children, and worksites, but lacked planning for a strategic response to opponents' arguments, including governmental overreach into private matters. The authors recommend strategies learned from the BFW experience that may help alter outcomes of attempted legislation for HWPs. The strategies include: framing the issue "beyond individuals and health...so that non-health policy actors have a stake" in the outcome; creating a coalition that extends "beyond traditional health entities;" and, proactive anticipation and response to opposing arguments.^{65, p.667} The BFW experience makes clear that consistent messaging is but one part of a comprehensive strategy when powerful

socio-political forces are enmeshed with strong personal opinion, as may occur in promotion of many other HWPs. The recommended strategies blend well with previously-discussed aspects of social marketing for gaining buy-in,⁵⁸ as both are mechanisms for securing commitment to HWPs. However, once HWPs are successfully included in regulation, there is no guarantee of permanence. Although CACFP is not the only route to strengthen infant feeding and nutrition practices in child care, both Ohio and Delaware recently revoked association of CACFP with requirements in licensing regulations, which, to date, are now somewhat less supportive of HWPs.

Authors of a recent analysis of basic, translational, and intervention research on pediatric obesity, viewed through the lens of behavioral economics, advise health care practitioners that "environmental factors powerfully affect choice and nudges may improve personal and population health."^{66 p.7} Child care licensors are uniquely positioned to impact pediatric population health by shaping the ECE environment to promote children's healthy weight. They may integrate evidence-based best practices in infant feeding, nutrition, physical activity, and screen/digital media use, such as those in *CFOC3/PCO2* standards, into their state regulations as legislation allow. Through program site visits and other communications (e.g., emails, newsletters, web-based resources), child care licensing professionals also are uniquely positioned to "nudge" caregivers and teachers to fully implement the HWPs their state requires.

ASHW 2017 provides state policy makers and child care licensing professionals with the data to understand how the nation is moving forward to impact pediatric obesity through child care regulation. It also provides state data on key HWPs to inform an agenda for change that mobilizes the potential of ECE programs to prepare our nations' children for healthier futures.

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APPENDIX A: Source of ASHW Indicators in PCO2/CFOC3 Standards

The tables in this appendix display the source standards in PCO2 and CFOC3 from which the ASHW study indicators were derived. The link to the NRC's searchable CFOC3 data base (<http://nrckids.org/CFOC>) enables viewing the complete standard(s), rationale, references and related standards for each indicator assessed. The page numbers of source standards in the print copies of PCO2 and CFOC3 also are provided.

Multiple source indicators. The concepts captured in some ASHW indicators are present in different contexts in more than one PCO2/CFOC3 standard. For example, the Infant Feeding indicator IB2: do not feed beyond satiety, is a core concept that is addressed slightly differently in two standards: Standard [4.3.1.2 - Feeding Infants on Cue by a Consistent Caregiver/Teacher](#) ("observing satiety cues can limit overfeeding") and Standard [4.3.1.8 - Techniques for Bottle Feeding](#) ("Allow infant to stop the feeding"). The table below identifies those ASHW indicators that were informed by more than one standard, including the numbers and names of the standards.

INFANT FEEDING			Print copy pg #	
Indicator #	ASHW Indicator Text	Source of Indicator in CFOC3 Standards	PCO2	CFOC3
IA1	Encourage and support breastfeeding and feeding of breast milk by making arrangements for mothers to feed their children comfortably on-site.	4.3.1.1 - General Plan for Feeding Infants	26	162
IA2	Serve human milk or infant formula to at least age 12 months, not cow's milk, unless written exception is provided by primary care provider and parent/guardian.	4.3.1.7 - Feeding Cow's Milk & 4.2.0.4 - Categories of Foods	39 & 18	169 & 155
IB1	Feed infants on cue.	4.3.1.2 - Feeding Infants on Cue by a Consistent Caregiver/Teacher & 4.3.1.8 - Techniques for Bottle Feeding	27 & 33	164 & 170
IB2	Do not feed infants beyond satiety; Allow infant to stop the feeding.	4.3.1.2 - Feeding Infants on Cue by a Consistent Caregiver/Teacher & 4.3.1.8 - Techniques for Bottle Feeding	27 & 33	164 & 170
IB3	Hold infants while bottle feeding; Position an infant for bottle feeding in the caregiver/teacher's arms or sitting up on the caregiver/teacher's lap.	4.3.1.8 - Techniques for Bottle Feeding	33	170
IC1	Develop a plan for introducing age-appropriate solid foods (complementary foods) in consultation with the child's parent/guardian and primary care provider.	4.3.1.11 - Introduction of Age-Appropriate Solid Foods to Infants	35	172
IC2	Introduce age-appropriate solid foods (128 a) no sooner than 4 months of age, and preferably around 6 months of age.	4.3.1.11 - Introduction of Age-Appropriate Solid Foods to Infants	35	172
IC3	Introduce breastfed infants gradually to iron-fortified foods no sooner than four months of age, but preferably around six months to complement the human milk.	4.3.1.11 - Introduction of Age-Appropriate Solid Foods to Infants	35	172
ID1	Do not feed an infant formula mixed with cereal, fruit juice or other foods unless the primary care provider provides written instruction.	4.3.1.5 - Preparing, Feeding, and Storing Infant Formula	31	167
ID2	Serve whole fruits, mashed or pureed, for infants 7 months up to one year of age.	4.2.0.4 - Categories of Foods 4.3.1.11 - Introduction of Age-Appropriate Solid Foods to Infants	18	155
ID3	Serve no fruit juice to children younger than 12 months of age.	4.2.0.4 - Categories of Foods & 4.2.0.7 - 100% Fruit Juice	18 & 21	155 & 157

APPENDIX A: Source of ASHW Indicators in PCO2/CFOC3 Standards

NUTRITION			Print copy pg #	
Indicator #	ASHW Indicator Text	Source of Indicator in CFOC3 Standards	PCO2	CFOC3
NA1	Limit oils by choosing monounsaturated and polyunsaturated fats (such as olive oil or safflower oil) and avoiding trans fats, saturated fats and fried foods.	4.2.0.4 - Categories of Foods	18	155
NA2	Serve meats and/or beans - chicken, fish, lean meat, and/or legumes (such as dried peas, beans), avoiding fried meats.	4.2.0.4 - Categories of Foods	18	155
NA3	Serve other milk equivalent products such as yogurt and cottage cheese, using low-fat varieties for children 2 years of age and older.	4.2.0.4 - Categories of Foods	18	155
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	4.3.2.3 - Encouraging Self-Feeding by Older Infants and Toddlers	39	175
NA5	Serve skim or 1% pasteurized milk to children two years of age and older.	4.3.2.3 - Encouraging Self-Feeding by Older Infants and Toddlers	39	175
NB1	Serve whole grain breads, cereals, and pastas.	4.2.0.4 - Categories of Foods	18	155
NB2	Serve vegetables, specifically, dark green, orange, deep yellow vegetables; and root vegetables, such as potatoes and viandas.	4.2.0.4 - Categories of Foods	18	155
NB3	Serve fruits of several varieties, especially whole fruits.	4.2.0.4 - Categories of Foods	18	155
NC1	Use only 100% juice with no added sweeteners.	4.2.0.7 - 100% Fruit Juice	21	157
NC2	Offer juice only during meal times.	4.2.0.7 - 100% Fruit Juice	21	157
NC3	Serve no more than 4 to 6 oz juice/day for children 1-6 years of age.	4.2.0.4 - Categories of Foods & 4.2.0.7 - 100% Fruit Juice	17 & 21	155 & 157
NC4	Serve no more than 8 to 12 oz juice/day for children 7-12 years of age.	4.2.0.4 - Categories of Foods & 4.2.0.7 - 100% Fruit Juice	18 & 21	155 & 157
ND1	Make water available both inside and outside.	4.2.0.6 - Availability of Drinking Water	20	157
NE1	Teach children appropriate portion size by using plates, bowls and cups that are developmentally appropriate to their nutritional needs.	4.3.2.2 - Serving Size for Toddlers and Preschoolers & 4.7.0.1 - Nutrition Learning Experiences for Children	38 & 46	174 & 183
NE2	Require adults eating meals with children to eat items that meet nutrition standards.	4.5.0.4 - Socialization During Meals	41	179
NF1	Serve small-sized, age-appropriate portions.	4.3.2.2 - Serving Size for Toddlers and Preschoolers	38	174
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.	4.3.2.2 - Serving Size for Toddlers and Preschoolers & 4.5.0.4 - Socialization During Meals	38 & 41	174 & 179
NG1	Limit salt by avoiding salty foods such as chips and pretzels.	4.2.0.4 - Categories of Foods	18	155
NG2	Avoid sugar, including concentrated sweets such as candy, sodas, sweetened drinks, fruit nectars, and flavored milk.	4.2.0.4 - Categories of Foods	18	155
NH1	Do not force or bribe children to eat.	4.5.0.11 - Prohibited Uses of Food	43	182
NH2	Do not use food as a reward or punishment.	4.5.0.11 - Prohibited Uses of Food	43	182

APPENDIX A: Source of ASHW Indicators in PCO2/CFO3 Standards

PHYSICAL ACTIVITY/SCREEN TIME			Print copy pg #	
Indicator #	ASHW Indicator Text	Source of Indicator in CFO3 Standards	PCO2	CFO3
PA1	Provide children with adequate space for both inside and outside play.	3.1.3.1 - Active Opportunities for Physical Activity	51	90
PA2	Provide orientation and annual training opportunities for caregivers/teachers to learn about age-appropriate gross motor activities and games that promote children's physical activity.	3.1.3.4 - Caregivers'/Teachers' Encouragement of Physical Activity	57	95
PA3	Develop written policies on the promotion of physical activity and the removal of potential barriers to physical activity participation.	9.2.3.1 - Policies and Practices that Promote Physical Activity	58	353
PA4	Require caregivers/teachers to promote children's active play, and participate in children's active games at times when they can safely do so.	3.1.3.4 - Caregivers'/Teachers' Encouragement of Physical Activity	57	95
PA5	Do not withhold active play from children who misbehave, although out-of-control behavior may require five minutes or less calming periods to help the child settle down before resuming cooperative play or activities.	3.1.3.1 - Active Opportunities for Physical Activity	51	90
PB1	Do not utilize media (television [TV], video, and DVD) viewing and computers with children younger than two years.	2.2.0.3 - Limiting Screen Time – Media, Computer Time	59	66
PB2	Limit total media time for children two years and older to not more than 30 minutes once a week. Limit screen time (TV, DVD, computer time).	2.2.0.3 - Limiting Screen Time – Media, Computer Time & 3.1.3.4 - Caregivers'/Teachers' Encouragement of Physical Activity	59 & 57	66 & 95
PB3	Use screen media with children age two years and older only for educational purposes or physical activity.	2.2.0.3 - Limiting Screen Time – Media, Computer Time	59	66
PB4	Do not utilize TV, video, or DVD viewing during meal or snack time.	2.2.0.3 - Limiting Screen Time – Media, Computer Time	59	66
PC1	Provide daily for all children, birth to six years, two to three occasions of active play outdoors, weather permitting.	3.1.3.1 - Active Opportunities for Physical Activity	51	90
PC2	Allow toddlers sixty to ninety minutes per eight-hour day for vigorous physical activity.	3.1.3.1 - Active Opportunities for Physical Activity	51	90
PC3	Allow preschoolers ninety to one-hundred and twenty minutes per eight-hour day for vigorous physical activity.	3.1.3.1 - Active Opportunities for Physical Activity	52	90
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.	3.1.3.1 - Active Opportunities for Physical Activity & 3.1.3.4 - Caregivers'/Teachers' Encouragement of Physical Activity	51 & 57	90 & 95
PE1	Ensure that infants have supervised tummy time every day when they are awake.	3.1.3.1 - Active Opportunities for Physical Activity	51	90
PE2	Use infant equipment such as swings, stationary activity centers (ex. exersaucers), infant seats (ex. bouncers), molded seats, etc. only for short periods of time if at all.	3.1.3.1 - Active Opportunities for Physical Activity	51	90

APPENDIX B: State Documents Searched (2017)

Although the NRC makes extensive efforts to discover new and revised documents each year through website searches and calls to state child care licensing agencies, a new regulation may go undiscovered and unrated in the year it is made effective. In such a case, the document will be screened and rated as appropriate for inclusion in the ASHW report for the year it is discovered. If state licensing personnel are aware of any such documents in their state's regulatory set, please inform the NRC at info@nrckids.org. Child care types: CTR=Centers, LRG=Large Family Homes, SML=Small Family Homes.

Documents rated in 2017 are highlighted in purple.

STATE & Document Status	Document Title	New 2017 Document Date	Revision Date	Previous rated version	Child care types covered by document		
					CTR	LRG	SML
AK	ALASKA						
Screened	7 AAC 57 Child Care Facilities Licensing		6/29/2017	6/23/2006	X	X	X
CA	CALIFORNIA						
Screened	Title 22, Division 12, Chapter 1. Article 3 – Child Care Centers General Licensing Requirements		2/8/2017	6/15/2005	X		
Screened	Title 22, Division 12, Chapter 1. Article 6 – Child Care Centers		4/27/2017	6/8/2005	X		
Screened	Title 22, Division 12, Chapter 1. Article 6 (Cont.) – Child Care Centers		2/8/2017	6/8/2005	X		
Screened	Title 22, Division 12, Chapter 1. Subchapter 2 Child Care Centers - Infant Centers and Subchapter 3. Child Care Centers - School-Age Day Care		4/27/2017	11/1/1998	X		
Rated	Title 22, Division 12, Chapter 3 - Family Child Care Homes		4/1/2016	N/A		X	X
Screened	Assembly Bill No. 2084, Chapter 593		9/30/2010	N/A	X	X	X
CO	COLORADO						
Screened	General Rules for Child Care Facilities		10/1/2017	10/1/2015	X	X	X
CT	CONNECTICUT						
Screened	Statutes and Regulations: Child Care Centers and Group Child Care Homes		2/2017	7/2009	X	X	
Screened	Statutes and Regulations: Family Child Care Homes		2/2017	7/2009			X
DE	DELAWARE						
Rated	Delacare Regulations for Family and Large Family Child Care Homes	7/2017	7/2017	N/A		X	X
FL	FLORIDA						
Rated	Chapter 65C-22 Child Care Standards		10/25/2017	8/2013	X		
Rated	Chapter 65C-20 Family Day Care Standards and Large Family Child Care Homes		10/25/2017	1/13/2010		X	X
Rated	Child Care Facility Handbook	10/2017	10/2017	N/A	X		
Rated	Family Day Care Home/Large Family Child Care Home Handbook	10/2017	10/2017	N/A		X	X
GA	GEORGIA						
Screened	Rules for Child Care Learning Centers Chapter 591-1-1		7/1/2017	3/2014	X		
Screened	Rules and Regulations Family Child Care Learning Homes Chapter 290-2-3		7/1/2017	3/2014			X
IL	ILLINOIS						
Screened	Part 407 Licensing Standards for Day Care Centers		7/1/2017	9/2014	X		
IA	IOWA						
Screened	Chapter 109 Child Care Centers		6/7/2017	5/1/2012	X	X	
Screened	Chapter 110 Child Development Homes		8/3/2016	11/1/2009		X	X

APPENDIX B: State Documents Searched (2017)

STATE & Document Status	Document Title	New 2017 Document Date	Revision Date	Previous rated version	Child care types covered by document		
					CTR	LRG	SML
KS	KANSAS						
Screened	Kansas Laws and Regulations for Licensing Preschools and Child Care Centers		5/2017	2/3/2012	X		
Screened	Kansas Laws and Regulations for Licensing Day Care Homes and Group Day Care Homes for Children		5/2017	2/2012		X	X
LA	LOUISIANA						
Screened	Bulletin 137-Louisiana Early Learning Center Licensing Requirements		4/2017	7/1/2015	X	X	
ME	MAINE						
Rated	State of Maine Family Child Care Provider Licensing Rule		9/20/2017	9/1/2009		X	X
MN	MINNESOTA						
Screened	Chapter 9503 Department of Human Services Child Care Center Licensing		8/21/2017	10/8/2007	X		
Screened	Chapter 9502 Department of Human Services Licensing of Day Care Facilities		8/1/2017	10/8/2007		X	X
MS	MISSISSIPPI						
Screened	Regulations Governing Licensure of Child Care Facilities		8/16/2017	8/2013	X		
Screened	Regulations Governing Licensure of Child Care Facilities for 12 or Fewer Children in the Operator's Home		8/16/2017	8/2013		X	X
NH	NEW HAMPSHIRE						
Rated	Part He-C 4002 NH Child Care Program Licensing Rules		5/17/2017	2008-2016	X	X	X
NJ	NEW JERSEY						
Rated	Chapter 52 Manual of Requirements for Child Care Centers		3/6/2017	9/2013	X	X	
Rated	Chapter 54 Manual of Requirements for Family Child Care Registration		3/20/2017	8/25/2009			X
NY	NEW YORK						
Screened	Part 418-1: Child Day Care Centers		3/20/2017	6/2015	X		
Screened	Part 418-2: Small Day Care Centers		3/20/2017	6/2015		X	
Screened	Part 416: Group Family Day Care		3/20/2017	5/2014		X	
Screened	Part 417: Family Day Care		3/20/2017	5/2014			X
NC	NORTH CAROLINA						
Screened	Chapter 9 - Child Care Rules		10/1/2017	1/2013	X	X	X
Screened	Family Child Care Home Requirements		10/1/2017	5/2013		X	X
OH	OHIO						
Screened	Child Care Center Manual		10/29/2017	12/23/2016	X		
Screened	Family Child Care Manual		10/29/2017	12/23/2016		X	X
OK	OKLAHOMA						
Rated	Licensing Requirements for Child Care Programs		11/1/2016	7/1/2010	X		
Rated	Licensing Requirements for Family Child Care Homes and Large Child Care Homes		11/1/2016	7/1/2010		X	X
OR	OREGON						
Screened	Rules for Certified Child Care Centers		3/27/2017	1/1/2010	X		
Screened	Rules for Certified Family Child Care Homes		3/27/2017	1/1/2010		X	
Screened	Rules for Registered Family Child Care Homes		3/27/2017	1/1/2010			X

APPENDIX B: State Documents Searched (2017)

STATE & Document Status	Document Title	New 2017 Document Date	Revision Date	Previous rated version	Child care types covered by document		
					CTR	LRG	SML
RI	RHODE ISLAND						
Rated	Part 1 – Child Care Center and School Age Program Regulations for Licensure		9/18/2017	11/2013	X		
SC	SOUTH CAROLINA						
Rated	Family Child Care Home Regulations		4/23/1993	N/A			X
TN	TENNESSEE						
Screened	Chapter 1240-04-03 Licensure Rules for Child Care Centers		12/27/2016	3/14/2009	X		
Screened	Chapter 1240-04-01 Standards for Group Child Care Homes		12/27/2016	3/14/2009		X	
Screened	Chapter 1240-04-04 Standards for Family Child Care Homes		12/27/2016	3/14/2009			X
TX	TEXAS						
Screened	Chapter 746 Minimum Standards for Child-Care Centers		4/2017	6/2014	X		
Screened	Chapter 747 Minimum Standards for Child-Care Homes		4/2017	6/2014		X	X
UT	UTAH						
Rated	R381-100 Child Care Centers		12/28/2017	7/1/2009	X		
Rated	R430-90 Licensed Family Child Care		12/28/2017	9/1/2008		X	
Rated	R430-50 Residential Certificate Child Care		12/28/2017	9/1/2009			X
WA	WASHINGTON						
Screened	Chapter 170-295 WAC Minimum Licensing Requirements for Child Day Care Centers		7/13/2017	5/31/2008	X		
Screened	Chapter 170-296A WAC Licensed Family Home Child Care Standards		7/13/2017	5/8/2012		X	X
WV	WEST VIRGINIA						
Rated	Title 78, Series 18, Family Child Care Facility Licensing Requirements			7/1/2007		X	
Rated	Title 78, Series 19, Family Child Care Home Registration Requirements			7/1/2007			X
WI	WISCONSIN						
Screened	DCF 202 Child Care Certification		1/2017	11/2008	X	X	X

ASHW 2017 Method Notes

As described in the Method section of the 2017 ASHW report, the NRC needed to establish policies for awarding improvements in *ASHW 2017* to several states' ratings in association with the full implementation of updated Child and Adult Care Food Program (CACFP) Infant and Child Meal and Snack Patterns (October 2017). Specifically, NRC determined to assign the new CACFP-related ratings to states that align their regulations for specific care types with CACFP *AND* where the regulations could lead a child care program to the updated versions of the Meal and Snack Patterns. State regulations could accomplish this by: a) reproducing the new patterns or citing the new requirements in regulatory text; b) directing the reader to a source for the updated materials (either a state source or the USDA FNS CACFP website); c) stating explicitly the need to follow the *current* or most *up-to-date* Meal Patterns (or similar verbiage); or, d) less desirably, citing only the CACFP program name (or CACFP Meal Patterns), so that the reader would need to seek out the information independently.

Re-confirmation of each applicable state's exact method for identifying the Meal Patterns was therefore required. However, in the NRC's ASHW database, designed in 2012, each CACFP-related ASHW variable receives the CACFP rating (unless state text rated higher). The database does not include distinct variables recording which licensed care type/s was/were required to follow CACFP, nor how that information was presented in the regulatory text. Furthermore, it was discovered in 2015 that much of the original 2010 and 2011 electronic documentation that describe the preceding was irretrievably lost during conversion from Excel to the database. Accordingly, NRC staff re-examined states' websites and regulations assessed since 2010 to verify the historical assumptions regarding CACFP status per care type and the current CACFP status in 2017. Some past errors were identified and were corrected for *ASHW 2017* data analysis. States' profiles were corrected retroactively as applicable. All new or changed ratings were entered in the ASHW dataset and are reflected in state profiles reported in *Achieving a State of Healthy Weight 2017 Supplement: State Profiles*. Details of state corrections or other verification details are presented below.

- Documents concerning regulation of California large/group family child care and South Carolina small family child care programs were uncovered that were either missed or unavailable on state websites in 2010. These regulations were rated using the *ASHW Rating Manual* in effect at the time. Ratings were added to the 2010 dataset retroactively.

It is notable that there is wide variability in the precision with which states refer to nutrition resources and labelling in their regulations. Lacking lost documentation, past decisions to confer CACFP-related ratings for a few states (as implied in the ratings) were questioned upon reassessment of state-specific language. Additional state follow-up was necessary where language referred solely to USDA standards or guidelines. NRC staff called and/or emailed licensing contacts in our ASHW Contact Database and general child care licensing numbers to determine whether or not the reference was intended to mean CACFP, and whether state licensing inspectors used the Meal Patterns on-site with programs. (No CACFP 2010 ratings were assigned to states that referred specifically to USDA *Dietary Guidelines for Americans: 2010*, which neither included infant nutrition recommendations, nor was childcare-specific). Based on the outcomes of those contacts, the following actions were taken:

- Massachusetts confirmed by phone that USDA standards cited in their regulations are not intended as CACFP and the Meal Patterns are not used in site inspections. Infant feeding and nutrition ratings for 2010 through 2016 were corrected retroactively to reflect ratings based solely upon state text for all three care types.
- North Dakota licensing could not be reached through email and several calls to clarify which USDA standards are in regulations. CACFP was not assumed, so Infant feeding and Nutrition ratings for 2010 through 2016 were corrected retroactively to reflect ratings based solely upon state text for all three care types.
- Nebraska and Oregon each clarified in phone contact that CACFP was intended in regulations. No rating corrections were required.

Review of other states regulations revealed the following issues:

- An Ohio 2016 regulatory revision, rated in *ASHW 2016*, included the deletion of previous text that required meals to meet the requirements of CACFP. The deletion was overlooked for *ASHW 2016*. In email contact, it was clarified that change was intentional and in effect, although a footnote remained advising that additional information could be obtained at a link to the Meal Patterns. Ohio was re-rated for 2016 on the basis of state text only.
- In 2016, Oklahoma added new center requirements that meals and snacks to CACFP guidelines. Re-review of the document identified regulatory text that had been missed in *ASHW 2016* that specifically excluded infant care from the CACFP requirement, so 2016 Infant Feeding ratings were re-rated based upon state text only. Website review also revealed a revised large and small family child care home document that was not previously identified but was dated November, 2016. Ratings of both documents were entered retroactively in the 2016 dataset.
- West Virginia large and small family child care types were rated as CACFP incorrectly in 2010. Re-rating was based on state text only and corrections were applied retroactively, 2010-16.

Finally, after reviewing a 2017 Maine document regarding family child care homes, NRC staff called the state to clarify that Maine licenses only one category of family child care homes, and does not distinguish large and small capacity homes. In 2010, in an apparent data entry error, large family child care was entered as consistent with center rules rather than small family child care. The error was corrected retroactively for 2010-16.

APPENDIX D: 2017 At-A-Glance

This table shows where healthy weight practice regulations were improved or lowered in states that made changes in 2017, as well as where states “Fully Meet” standards (Ratings = 4).

Indicator	Short Description	DELAWARE			FLORIDA			MAINE			NEW HAMPSHIRE			NEW JERSEY			RHODE ISLAND			UTAH			Δ Totals						
		CTR	LRG	SML	CTR	LRG	SML	CTR	LRG	SML	CTR	LRG	SML	CTR	LRG	SML	CTR	LRG	SML	CTR	LRG	SML	+	-	4s				
IA1	Support breastfeeding				+	+	+		+	+	+	+	+										+	9	0	3			
IA2	No cow's milk < 1yr				+	+	+																	+	4	0	17		
IB1	Feed infants on cue				+	+	+																	+	4	0	18		
IB2	Stop feed @ satiety				+	+	+					+	+	+										+	7	0	17		
IB3	Hold infant to feed		-	-		+	+																		2	2	2		
IC1	Plan solid introduction				+	+	+																	+	4	0	2		
IC2	Intro solids @ 4-6 mo				+	+	+					+	+	+				+	+	+	+	+	+	+	12	0	17		
IC3	Iron-Fort @ 4-6 mo		-	-	+	+	+					+	+	+	+	+		+	+	+	+	+	+	+	14	2	14		
ID1	Don't mix formula																								0	0	3		
ID2	Whole fruit 7 m-1 yr				+	+	+					+	+	+	+	+		+	+	+	+	+	+	+	14	0	0		
ID3	No juice < 12 mo				+	+	+					+	+	+	+	+		+	+	+	+	+	+	+	13	0	14		
NA1	Limit oils/fats																	-							0	1	0		
NA2	Low fat meat/proteins				+	+	+																	+	4	0	0		
NA3	Low fat milk equivalents				+	+	+					+	+	+										+	7	0	0		
NA4	Whole milk 1-2 y/o		+	+	+	+	+																+	+	+	8	0	2	
NA5	Low fat milk > 2 y/o		-	-	+	+	+					+	+	+										+	7	2	15		
NB1	Whole grains		+	+	+	+	+			+	+	+	+	+										+	11	0	4		
NB2	Variety of vegetables				+	+	+			+	+													+	7	0	5		
NB3	Variety of whole fruit				+	+	+			+	+													+	6	0	5		
NC1	100% juice				+	+	+																	+	4	0	17		
NC2	Juice only @ meals				+	+	+											+						+	9	0	14		
NC3	Juice 4-6 oz 1-6 y/o		-	-	+	+	+					+	+	+	+	+							+	+	+	11	2	14	
NC4	Juice 8-12 oz 7+ y/o		-	-	+	+	+					+	+	+	+	+							+	+	+	11	2	14	
ND1	Make water available											+	+	+										+	4	1	16		
NE1	Teach portion sizes																								0	0	0		
NE2	Eat with children		+	+														-							2	1	3		
NF1	Appropriate servings				+	+	+																	+	4	0	17		
NF2	Healthy seconds		-	-								+	+	+										+	4	2	0		
NG1	Limit salt																	-							0	1	2		
NG2	Avoid sugary foods		+	+	+	+	+					+	+	+				-					+	+	+	11	1	0	
NH1	Food no force/bribe				+	+	+											+							4	0	1		
NH2	Food no reward/punish											+	+	+											3	0	4		
PA1	Space for active play			+																			+	+	+	4	0	21	
PA2	Training on activities		+	+	-	-	-							+	+			-							4	4	0		
PA3	Write activity policies				-	-	-																		0	3	0		
PA4	Play with children																	-							0	1	0		
PA5	Don't withhold play				+	+					-	-	-	+	+										4	3	11		
PB1	No screen time < 2 yr		-	-		+	+			-	-			+	+								+	+	+	7	6	6	
PB2	Screen time 30 min/wk					+	+																	+	+	+	5	0	0
PB3	Screen time purpose		-	-		+	+			-	-														2	4	7		
PB4	No TV w/meals																	+							1	0	1		
PC1	Outdoor play occasions				+					-	-						+							+	+	4	2	3	
PC2	Toddler play time				-	-	-			-	-	+	+	+									+	+	+	6	5	9	
PC3	Preschool play time				-	-	-			-	-	+	+	+									+	+	+	6	5	0	
PD1	Structured play											+	+	+											3	3	1		
PE1	Tummy time often													+	+	+							+	+	+	6	1	7	
PE2	Limit time infant equip.											+	+	+	+	+		-						+	+	+	7	1	3

Abbreviation Key: CTR=Centers, LRG=Large Family Child Care Home, SML=Small Family Child Care Home

Color Code:

- CACFP not required for care type
- CACFP required for care type

- 4 = Regulation fully meets standard
- Most frequently "fully met" indicator

Δ (Change) Code:

- +
-

2010 and 2017 Composite Tables by ASHW Domains

The 2010 baseline report, *Achieving a State of Healthy Weight: A National Assessment of Obesity Prevention Terminology in Child Care Regulations 2010 (ASHW 2010)*, included Appendix H - Composite Table, a summary table of the treatment nationally of the three major domains (previously entitled “Component Groups”) of Healthy Weight Practices (HWPs) assessed in states’ child care licensing regulations: Infant Feeding, Nutrition, and Physical Activity/Screen Time. The table summarized, within each care type, the frequencies and percentages of all rating scores = 1 – 4, by HWP.

In 2010, ASHW variables (HWPs) were sorted into conceptually-related subgroups (e.g., *Appropriate fluids for young infants*). The following 2010 and 2017 Composite Tables include subtotals for the subgroups, as well as totals for the Domains.

Note: The 2010 Composite Table that follows differs from the version presented in *ASHW 2010*, as it was recalculated to account for the data adjustments described in Appendix C: *ASHW 2017 Method Notes* of this report.

Composite Table Legend: The tables are organized as follows:

Column 1: Domain - Infant Feeding, Nutrition, or Physical Activity (and Screen Time)

Column 2: Domain Subgroup – e.g., *Appropriate fluids for young infants*

Column 3: ASHW variable – e.g., IA1, identifies *Encourage and support breastfeeding and feeding of breast milk by making arrangements for mothers to feed their children comfortably on-site*

Columns 4 – 6: Three care types rated - Centers, Large or Group Family Child Care Homes, and Small Family Child Care Homes; within each of these are sub-columns for the rating values 1 - 4

Column 7: Combined (All Child Care types); within which are sub-columns for the rating values 1 - 4

Rows present the data for each HWP, with additional rows totaling each subgroup, and finally, totaling across ASHW variables of the Domain.

APPENDIX E: Regulatory Treatment of ASHW Healthy Weight Practices

2010 Composite Table

Domain	Domain Subgroup	ASHW Variable	Center				Lg Fam Grp Home				Small Fam Home				Combined (All Child Care types)			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
I) Infant Feeding	Appropriate fluids for young infants	IA1	0 0%	21 41%	22 43%	8 16%	0 0%	22 45%	21 43%	6 12%	0 0%	26 53%	18 37%	5 10%	0 0%	69 46%	61 41%	19 13%
		IA2	2 4%	18 35%	6 12%	25 49%	1 2%	20 41%	3 6%	25 51%	1 2%	24 49%	3 6%	21 43%	4 3%	62 42%	12 8%	71 48%
		IA	2 2%	39 38%	28 27%	33 32%	1 1%	42 43%	24 24%	31 32%	1 1%	50 51%	21 21%	26 27%	4 1%	131 44%	73 24%	90 30%
	How to feed fluids to young infants	IB1	0 0%	11 22%	7 14%	33 65%	0 0%	14 29%	4 8%	31 63%	0 0%	19 39%	3 6%	27 55%	0 0%	44 30%	14 9%	91 61%
		IB2	0 0%	24 47%	4 8%	23 45%	0 0%	23 47%	3 6%	23 47%	0 0%	27 55%	3 6%	19 39%	0 0%	74 50%	10 7%	65 44%
		IB3	0 0%	5 10%	32 63%	14 27%	0 0%	9 18%	31 63%	9 18%	0 0%	12 24%	30 61%	7 14%	0 0%	26 17%	93 62%	30 20%
		IB	0 0%	40 26%	43 28%	70 46%	0 0%	46 31%	38 26%	63 43%	0 0%	58 39%	36 24%	53 36%	0 0%	144 32%	117 26%	186 42%
	Introduction of solids to infants	IC1	0 0%	12 24%	35 69%	4 8%	0 0%	13 27%	35 71%	1 2%	0 0%	20 41%	29 59%	0 0%	0 0%	45 30%	99 66%	5 3%
		IC2	1 2%	21 41%	27 53%	2 4%	1 2%	22 45%	24 49%	2 4%	0 0%	24 49%	23 47%	2 4%	2 1%	67 45%	74 50%	6 4%
		IC3	0 0%	23 45%	27 53%	1 2%	0 0%	23 47%	26 53%	0 0%	0 0%	27 55%	22 45%	0 0%	0 0%	73 49%	75 50%	1 1%
		IC	1 1%	56 37%	89 58%	7 5%	1 1%	58 39%	85 58%	3 2%	0 0%	71 48%	74 50%	2 1%	2 0%	185 41%	248 55%	12 3%
	Appropriate solids for infants	ID1	0 0%	48 94%	1 2%	2 4%	0 0%	46 94%	1 2%	2 4%	0 0%	47 96%	0 0%	2 4%	0 0%	141 95%	2 1%	6 4%
		ID2	28 55%	23 45%	0 0%	0 0%	26 53%	23 47%	0 0%	0 0%	22 45%	27 55%	0 0%	0 0%	76 51%	73 49%	0 0%	0 0%
		ID3	26 51%	22 43%	3 6%	0 0%	24 49%	23 47%	2 4%	0 0%	20 41%	27 55%	2 4%	0 0%	70 47%	72 48%	7 5%	0 0%
		ID	54 35%	93 61%	4 3%	2 1%	50 34%	92 63%	3 2%	2 1%	42 29%	101 69%	2 1%	2 1%	146 33%	286 64%	9 2%	6 1%
	Domain Total	I (A-D summed)	57 10%	228 41%	164 29%	112 20%	52 10%	238 44%	150 28%	99 18%	43 8%	280 52%	133 25%	83 15%	152 9%	746 46%	447 27%	294 18%

APPENDIX E: Regulatory Treatment of ASHW Healthy Weight Practices

2010 Composite Table

Domain	Domain Subgroup	ASHW Variable	Center				Lg Fam Grp Home				Small Fam Home				Combined (All Child Care types)				
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
N) Nutrition	NA	Limit dietary fats	NA1	0	49	2	0	0	46	3	0	0	47	2	0	0	142	7	0
				0%	96%	4%	0%	0%	94%	6%	0%	0%	96%	4%	0%	0%	95%	5%	0%
			NA2	0	14	36	1	0	14	34	1	0	19	29	1	0	47	99	3
				0%	27%	71%	2%	0%	29%	69%	2%	0%	39%	59%	2%	0%	32%	66%	2%
			NA3	0	18	33	0	1	18	30	0	1	22	26	0	2	58	89	0
				0%	35%	65%	0%	2%	37%	61%	0%	2%	45%	53%	0%	1%	39%	60%	0%
	NA4	0	42	9	0	0	42	6	1	0	42	6	1	0	126	21	2		
		0%	82%	18%	0%	0%	86%	12%	2%	0%	86%	12%	2%	0%	85%	14%	1%		
	NA5	1	46	2	2	0	44	2	3	0	45	2	2	1	135	6	7		
		2%	90%	4%	4%	0%	90%	4%	6%	0%	92%	4%	4%	1%	91%	4%	5%		
	NA	1	169	82	3	1	164	75	5	1	175	65	4	3	508	222	12		
		0%	66%	32%	1%	0%	67%	31%	2%	0%	71%	27%	2%	0%	68%	30%	2%		
	NB	Serve nutrient-dense whole foods	NB1	0	20	29	2	0	18	29	2	0	24	23	2	0	62	81	6
				0%	39%	57%	4%	0%	37%	59%	4%	0%	49%	47%	4%	0%	42%	54%	4%
			NB2	0	14	34	3	0	14	31	4	0	19	28	2	0	47	93	9
				0%	27%	67%	6%	0%	29%	63%	8%	0%	39%	57%	4%	0%	32%	62%	6%
	NB3	0	12	30	9	0	12	29	8	0	17	25	7	0	41	84	24		
		0%	24%	59%	18%	0%	24%	59%	16%	0%	35%	51%	14%	0%	28%	56%	16%		
	NB	0	46	93	14	0	44	89	14	0	60	76	11	0	150	258	39		
		0%	30%	61%	9%	0%	30%	61%	10%	0%	41%	52%	7%	0%	34%	58%	9%		
	NC	Wholeness and quantity of juice	NC1	1	16	2	32	1	16	2	30	1	22	1	25	3	54	5	87
				2%	31%	4%	63%	2%	33%	4%	61%	2%	45%	2%	51%	2%	36%	3%	58%
			NC2	0	46	3	2	0	45	2	2	0	46	1	2	0	137	6	6
				0%	90%	6%	4%	0%	92%	4%	4%	0%	94%	2%	4%	0%	92%	4%	4%
			NC3	0	19	31	1	0	17	28	4	0	22	24	3	0	58	83	8
		0%	37%	61%	2%	0%	35%	57%	8%	0%	45%	49%	6%	0%	39%	56%	5%		
	NC4	0	19	30	2	0	17	28	4	0	22	24	3	0	58	82	9		
		0%	29%	67%	4%	0%	23%	68%	9%	0%	34%	60%	6%	0%	29%	65%	6%		
	NC	1	100	66	37	1	95	60	40	1	112	50	33	3	307	176	110		
		0%	49%	32%	18%	1%	48%	31%	20%	1%	57%	26%	17%	1%	52%	30%	18%		
ND	Water availability	ND1	0	8	24	19	0	12	21	16	0	18	14	17	0	38	59	52	
	0%	16%	47%	37%	0%	24%	43%	33%	0%	37%	29%	35%	0%	26%	40%	35%			
NE	Nutrition instruction by word & example	NE1	0	43	8	0	0	44	5	0	0	46	3	0	0	133	16	0	
			0%	84%	16%	0%	0%	90%	10%	0%	0%	94%	6%	0%	0%	89%	11%	0%	
		NE2	0	49	1	1	0	48	1	0	0	49	0	0	0	146	2	1	
	0%	96%	2%	2%	0%	98%	2%	0%	0%	100%	0%	0%	0%	98%	1%	1%			
NE	0	92	9	1	0	92	6	0	0	95	3	0	0	279	18	1			
	0%	90%	9%	1%	0%	94%	6%	0%	0%	97%	3%	0%	0%	94%	6%	0%			
NF	Age and individual nutritional requirements	NF1	0	12	4	35	0	12	3	34	0	16	5	28	0	40	12	97	
			0%	24%	8%	69%	0%	24%	6%	69%	0%	33%	10%	57%	0%	27%	8%	65%	
		NF2	5	14	30	2	3	14	30	2	1	20	26	2	9	48	86	6	
	10%	27%	59%	4%	6%	29%	61%	4%	2%	41%	53%	4%	6%	32%	58%	4%			
NF	5	26	34	37	3	26	33	36	1	36	31	30	9	88	98	103			
	5%	25%	33%	36%	3%	27%	34%	37%	1%	37%	32%	31%	3%	30%	33%	35%			
NG	Limit sugar and salt	NG1	0	49	1	1	0	46	2	1	0	47	0	2	0	142	3	4	
			0%	96%	2%	2%	0%	94%	4%	2%	0%	96%	0%	4%	0%	95%	2%	3%	
		NG2	22	20	8	1	20	21	8	0	18	26	5	0	60	67	21	1	
	43%	39%	16%	2%	41%	43%	16%	0%	37%	53%	10%	0%	40%	45%	14%	1%			
NG	22	69	9	2	20	67	10	1	18	73	5	2	60	209	24	5			
	22%	68%	9%	2%	20%	68%	10%	1%	18%	74%	5%	2%	20%	70%	8%	2%			
NH	Misuse of food	NH1	0	21	26	4	0	17	30	2	0	20	27	2	0	58	83	8	
			0%	41%	51%	8%	0%	35%	61%	4%	0%	41%	55%	4%	0%	39%	56%	5%	
		NH2	0	6	35	10	0	7	36	6	0	9	34	6	0	22	105	22	
	0%	12%	69%	20%	0%	14%	73%	12%	0%	18%	69%	12%	0%	15%	70%	15%			
NH	0	27	61	14	0	24	66	8	0	29	61	8	0	80	188	30			
	0%	26%	60%	14%	0%	24%	67%	8%	0%	30%	62%	8%	0%	27%	63%	10%			
Domain Total	N (A-H summed)	29	537	378	127	25	524	360	120	21	598	305	105	75	1659	1043	352		
		3%	50%	35%	12%	2%	51%	35%	12%	2%	58%	30%	10%	2%	59%	33%	11%		

APPENDIX E: Regulatory Treatment of ASHW Healthy Weight Practices

2010 Composite Table

Domain	Domain Subgroup	ASHW Variable	Center				Lg Fam Grp Home				Small Fam Home				Combined (All Child Care types)			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
P) Physical Activity	General Promotion of Activity	PA1	0 0%	1 2%	0 0%	50 98%	0 0%	4 8%	2 4%	43 88%	0 0%	7 14%	7 14%	35 71%	0 0%	12 8%	9 6%	128 86%
		PA2	0 0%	50 98%	1 2%	0 0%	0 0%	48 98%	1 2%	0 0%	0 0%	48 98%	1 2%	0 0%	0 0%	146 98%	3 2%	0 0%
		PA3	0 0%	50 98%	0 0%	1 2%	0 0%	47 96%	1 2%	1 2%	0 0%	47 96%	1 2%	1 2%	0 0%	144 97%	2 1%	3 2%
		PA4	0 0%	51 100%	0 0%	0 0%	0 0%	49 100%	0 0%	0 0%	0 0%	49 100%	0 0%	0 0%	0 0%	149 100%	0 0%	0 0%
		PA5	0 0%	27 53%	16 31%	8 16%	0 0%	27 55%	12 24%	10 20%	0 0%	28 57%	12 24%	9 18%	0 0%	82 55%	40 27%	27 18%
		PA	0 0%	179 70%	17 7%	59 23%	0 0%	175 71%	16 7%	54 22%	0 0%	179 73%	21 9%	45 18%	0 0%	533 72%	54 7%	158 21%
	Screen Time	PB1	0 0%	32 63%	16 31%	3 6%	0 0%	28 57%	20 41%	1 2%	0 0%	28 57%	20 41%	1 2%	0 0%	88 59%	56 38%	5 3%
		PB2	0 0%	35 69%	16 31%	0 0%	0 0%	30 61%	19 39%	0 0%	0 0%	30 61%	19 39%	0 0%	0 0%	95 64%	54 36%	0 0%
		PB3	0 0%	44 86%	2 4%	5 10%	0 0%	42 86%	2 4%	5 10%	0 0%	42 86%	2 4%	5 10%	0 0%	128 86%	6 4%	15 10%
		PB4	0 0%	51 100%	0 0%	0 0%	0 0%	49 100%	0 0%	0 0%	0 0%	49 100%	0 0%	0 0%	0 0%	149 100%	0 0%	0 0%
		PB	0 0%	162 79%	34 17%	8 4%	0 0%	149 76%	41 21%	6 3%	0 0%	149 76%	41 21%	6 3%	0 0%	460 77%	116 19%	20 3%
	Age- Specific Activity	PC1	0 0%	5 10%	41 80%	5 10%	0 0%	9 18%	36 73%	4 8%	0 0%	10 20%	34 69%	5 10%	0 0%	24 16%	111 74%	14 9%
		PC2	0 0%	13 25%	38 75%	0 0%	0 0%	17 35%	32 65%	0 0%	0 0%	16 33%	33 67%	0 0%	0 0%	46 31%	103 69%	0 0%
		PC3	0 0%	14 27%	37 73%	0 0%	0 0%	18 37%	31 63%	0 0%	0 0%	18 37%	31 63%	0 0%	0 0%	50 34%	99 66%	0 0%
		PC	0 0%	32 21%	116 76%	5 3%	0 0%	44 30%	99 67%	4 3%	0 0%	44 30%	98 67%	5 3%	0 0%	120 27%	313 70%	14 3%
	PD Caregiver/teacher involvement in	PD1	0 0%	41 80%	8 16%	2 4%	0 0%	41 84%	6 12%	2 4%	0 0%	42 86%	5 10%	2 4%	0 0%	124 83%	19 13%	6 4%
	Infant-specific Activity	PE1	0 0%	42 82%	1 2%	8 16%	0 0%	41 84%	2 4%	6 12%	0 0%	43 88%	1 2%	5 10%	0 0%	126 85%	4 3%	19 13%
		PE2	0 0%	28 55%	22 43%	1 2%	1 2%	32 65%	15 31%	1 2%	0 0%	35 71%	13 27%	1 2%	1 1%	95 64%	50 34%	3 2%
		PE	0 0%	111 73%	31 20%	11 7%	1 1%	114 78%	23 16%	9 6%	0 0%	120 82%	19 13%	8 5%	1 0%	221 74%	54 18%	22 7%
	Domain Total	P (A-E summed)	0 0%	484 63%	198 26%	83 11%	1 0%	482 66%	179 24%	73 10%	0 0%	492 67%	179 24%	64 9%	1 0%	1458 65%	556 25%	220 10%

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2017 Composite Table

Domain	Domain Subgroup	ASHW Variable	Center				Lg Fam Grp Home				Small Fam Home				Combined (All Child Care types)			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
I) Infant Feeding	IA Appropriate fluids for young infants	IA1	0 0%	10 20%	30 59%	11 22%	0 0%	12 24%	29 58%	9 18%	0 0%	16 33%	25 51%	8 16%	0 0%	38 25%	84 56%	28 19%
		IA2	1 2%	12 24%	4 8%	34 67%	1 2%	15 30%	1 2%	33 66%	1 2%	20 41%	1 2%	27 55%	3 2%	47 31%	6 4%	94 63%
		IA	1 1%	22 22%	34 33%	45 44%	1 1%	27 27%	30 30%	42 42%	1 1%	36 37%	26 27%	35 36%	3 1%	85 28%	90 30%	122 41%
	IB How to feed fluids to young infants	IB1	1 2%	6 12%	7 14%	37 73%	1 2%	9 18%	4 8%	36 72%	1 2%	13 27%	3 6%	32 65%	3 2%	28 19%	14 9%	105 70%
		IB2	0 0%	15 29%	3 6%	33 65%	0 0%	17 34%	2 4%	31 62%	0 0%	21 43%	2 4%	26 53%	0 0%	53 35%	7 5%	90 60%
		IB3	0 0%	2 4%	37 73%	12 24%	0 0%	7 14%	36 72%	7 14%	0 0%	9 18%	34 69%	6 12%	0 0%	18 12%	107 71%	25 17%
		IB	1 1%	23 15%	47 31%	82 54%	1 1%	33 22%	42 28%	74 49%	1 1%	43 29%	39 27%	64 44%	3 1%	99 22%	128 28%	220 49%
	IC Introduction of solids to infants	IC1	0 0%	9 18%	38 75%	4 8%	0 0%	10 20%	36 72%	4 8%	0 0%	15 31%	33 67%	1 2%	0 0%	34 23%	107 71%	9 6%
		IC2	1 2%	15 29%	7 14%	28 55%	1 2%	18 36%	5 10%	26 52%	0 0%	18 37%	9 18%	22 45%	2 1%	51 34%	21 14%	76 51%
		IC3	0 0%	17 33%	7 14%	27 53%	0 0%	20 40%	5 10%	25 50%	0 0%	23 47%	5 10%	21 43%	0 0%	60 40%	17 11%	73 49%
		IC	1 1%	41 27%	52 34%	59 39%	1 1%	48 32%	46 31%	55 37%	0 0%	56 38%	47 32%	44 30%	2 0%	145 32%	145 32%	158 35%
	ID Appropriate solids for infants	ID1	0 0%	44 86%	2 4%	5 10%	0 0%	44 88%	3 6%	3 6%	0 0%	45 92%	1 2%	3 6%	0 0%	133 89%	6 4%	11 7%
		ID2	8 16%	17 33%	24 47%	2 4%	6 12%	19 38%	23 46%	2 4%	6 12%	22 45%	19 39%	2 4%	20 13%	58 39%	66 44%	6 4%
		ID3	5 10%	16 31%	3 6%	27 53%	4 8%	18 36%	2 4%	26 52%	4 8%	21 43%	2 4%	22 45%	13 9%	55 37%	7 5%	75 50%
		ID	13 8%	77 50%	29 19%	34 22%	10 7%	81 54%	28 19%	31 21%	10 7%	88 60%	22 15%	27 18%	33 7%	246 55%	79 18%	92 20%
	Domain Total	I (A-D summed)	16 3%	163 29%	162 29%	220 39%	13 2%	189 34%	146 27%	202 37%	12 2%	223 41%	134 25%	170 32%	41 2%	575 35%	442 27%	592 36%

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2017 Composite Table

Domain	Domain Subgroup	ASHW Variable	Center				Lg Fam Grp Home				Small Fam Home				Combined (All Child Care types)			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
N) Nutrition	NA Limit dietary fats	NA1	0	47	3	1	0	46	4	0	0	47	2	0	0	140	9	1
			0%	92%	6%	2%	0%	92%	8%	0%	0%	96%	4%	0%	0%	93%	6%	1%
		NA2	0	9	41	1	0	13	36	1	0	16	32	1	0	38	109	3
			0%	18%	80%	2%	0%	26%	72%	2%	0%	33%	65%	2%	0%	25%	73%	2%
		NA3	0	11	40	0	1	14	35	0	1	17	31	0	2	42	106	0
			0%	22%	78%	0%	2%	28%	70%	0%	2%	35%	63%	0%	1%	28%	71%	0%
	NB Serve nutrient-dense whole foods	NA4	0	17	31	3	0	20	28	2	0	25	23	1	0	62	82	6
			0%	33%	61%	6%	0%	40%	56%	4%	0%	51%	47%	2%	0%	41%	55%	4%
		NA5	2	13	1	35	0	15	3	32	0	20	3	26	2	48	7	93
			4%	25%	2%	69%	0%	30%	6%	64%	0%	41%	6%	53%	1%	32%	5%	62%
		NA	2	97	116	40	1	108	106	35	1	125	91	28	4	330	313	103
			1%	38%	45%	16%	0%	43%	42%	14%	0%	51%	37%	11%	1%	44%	42%	14%
	NC Wholeness and quantity of juice	NB1	0	13	35	3	0	13	33	4	0	18	28	3	0	44	96	10
			0%	25%	69%	6%	0%	26%	66%	8%	0%	37%	57%	6%	0%	29%	64%	7%
		NB2	0	8	38	5	0	11	32	7	0	14	31	4	0	33	101	16
			0%	16%	75%	10%	0%	22%	64%	14%	0%	29%	63%	8%	0%	22%	67%	11%
	ND Water availability	NB3	0	7	35	9	0	10	31	9	0	13	29	7	0	30	95	25
			0%	14%	69%	18%	0%	20%	62%	18%	0%	27%	59%	14%	0%	20%	63%	17%
		NB	0	28	108	17	0	34	96	20	0	45	88	14	0	107	292	51
			0%	18%	71%	11%	0%	23%	64%	13%	0%	31%	60%	10%	0%	24%	65%	11%
		NC1	1	9	2	39	1	10	3	36	1	14	3	31	3	33	8	106
		2%	18%	4%	76%	2%	20%	6%	72%	2%	29%	6%	63%	2%	22%	5%	71%	
	NE Nutrition instruction by word & example	NC2	0	21	2	28	0	24	1	25	0	27	1	21	0	72	4	74
			0%	41%	4%	55%	0%	48%	2%	50%	0%	55%	2%	43%	0%	48%	3%	49%
		NC3	0	14	7	30	0	14	8	28	0	18	8	23	0	46	23	81
			0%	27%	14%	59%	0%	28%	16%	56%	0%	37%	16%	47%	0%	31%	15%	54%
		NC4	0	14	7	30	0	14	8	28	0	18	8	23	0	46	23	81
		0%	29%	67%	4%	0%	23%	68%	9%	0%	34%	60%	6%	0%	29%	65%	6%	
	NF Age and individual nutritional requirements	NC	1	58	18	127	1	62	20	117	1	77	20	98	3	197	58	342
			0%	28%	9%	62%	1%	31%	10%	59%	1%	39%	10%	50%	1%	33%	10%	57%
		ND1	0	3	7	41	0	6	7	37	0	8	5	36	0	17	19	114
		0%	6%	14%	80%	0%	12%	14%	74%	0%	16%	10%	73%	0%	11%	13%	76%	
NF Limit sugar and salt	NE1	0	42	9	0	0	44	6	0	0	44	5	0	0	130	20	0	
		0%	82%	18%	0%	0%	88%	12%	0%	0%	90%	10%	0%	0%	87%	13%	0%	
	NE2	0	44	4	3	0	45	2	3	0	45	1	3	0	134	7	9	
	0%	86%	8%	6%	0%	90%	4%	6%	0%	92%	2%	6%	0%	89%	5%	6%		
NH Misuse of food	NE	0	86	13	3	0	89	8	3	0	89	6	3	0	264	27	9	
		0%	84%	13%	3%	0%	89%	8%	3%	0%	91%	6%	3%	0%	88%	9%	3%	
	NF1	0	7	2	42	0	8	1	41	0	9	4	36	0	24	7	119	
	0%	14%	4%	82%	0%	16%	2%	82%	0%	18%	8%	73%	0%	16%	5%	79%		
NH Misuse of food	NF2	4	10	35	2	4	13	31	2	2	17	28	2	10	40	94	6	
		8%	20%	69%	4%	8%	26%	62%	4%	4%	35%	57%	4%	7%	27%	63%	4%	
	NF	4	17	37	44	4	21	32	43	2	28	32	38	10	64	101	125	
	4%	17%	36%	43%	4%	21%	32%	43%	2%	27%	33%	39%	3%	21%	34%	42%		
NH Misuse of food	NG1	0	47	1	3	0	45	3	2	0	47	1	1	0	139	5	6	
		0%	92%	2%	6%	0%	90%	6%	4%	0%	96%	2%	2%	0%	93%	3%	4%	
	NG2	3	11	35	2	2	14	34	0	3	19	27	0	8	44	96	2	
	6%	22%	69%	4%	4%	28%	68%	0%	6%	39%	55%	0%	5%	29%	64%	1%		
NH Misuse of food	NG	3	58	36	5	2	59	37	2	3	66	28	1	8	183	101	8	
		3%	57%	35%	5%	2%	59%	37%	2%	3%	67%	29%	1%	3%	61%	34%	3%	
	NH1	0	15	29	7	0	13	34	3	0	15	31	3	0	43	94	13	
	0%	29%	57%	14%	0%	26%	68%	6%	0%	31%	63%	6%	0%	29%	63%	9%		
NH Misuse of food	NH2	0	5	31	15	0	6	36	8	0	7	34	8	0	18	101	31	
		0%	10%	61%	29%	0%	12%	72%	16%	0%	14%	69%	16%	0%	12%	67%	21%	
	NH	0	20	60	22	0	19	70	11	0	22	65	11	0	61	195	44	
	0%	20%	59%	22%	0%	19%	70%	11%	0%	22%	66%	11%	0%	20%	65%	15%		
Domain Total	N [A-H summed]	10	367	395	299	8	398	376	268	7	458	335	229	25	1223	1106	796	
		1%	34%	37%	28%	1%	38%	36%	26%	1%	45%	33%	22%	1%	39%	35%	25%	

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2017 Composite Table

Domain	Domain Subgroup	ASHW Variable	Center				Lg Fam Grp Home				Small Fam Home				Combined (All Child Care types)				
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
			P) Physical Activity	PA General Promotion of Activity	PA1	0 0%	1 2%	0 0%	50 98%	0 0%	2 4%	2 4%	46 92%	0 0%	6 12%	5 10%	38 78%	0 0%	9 6%
PA2	0 0%	47 92%			4 8%	0 0%	0 0%	46 92%	4 8%	0 0%	0 0%	46 94%	3 6%	0 0%	0 0%	0 0%	139 93%	11 7%	0 0%
PA3	0 0%	47 92%			4 8%	0 0%	0 0%	45 90%	5 10%	0 0%	0 0%	46 94%	3 6%	0 0%	0 0%	0 0%	138 92%	12 8%	0 0%
PA4	0 0%	48 94%			1 2%	2 4%	0 0%	48 96%	1 2%	1 2%	0 0%	47 96%	1 2%	1 2%	0 0%	0 0%	143 95%	3 2%	4 3%
PA5	0 0%	24 47%			11 22%	16 31%	0 0%	25 50%	11 22%	14 28%	0 0%	27 55%	10 20%	12 24%	0 0%	0 0%	76 51%	32 21%	42 28%
PA	0 0%	167 65%			20 8%	68 27%	0 0%	166 66%	23 9%	61 24%	0 0%	172 70%	22 9%	51 21%	0 0%	0 0%	505 67%	65 9%	180 24%
PB Screen Time	PB1	0 0%		23 45%	15 29%	13 25%	0 0%	26 52%	17 34%	7 14%	0 0%	28 57%	16 33%	5 10%	0 0%	0 0%	77 51%	48 32%	25 17%
	PB2	0 0%		26 51%	25 49%	0 0%	0 0%	26 52%	24 48%	0 0%	0 0%	26 53%	23 47%	0 0%	0 0%	0 0%	78 52%	72 48%	0 0%
	PB3	1 2%		36 71%	4 8%	10 20%	1 2%	37 74%	5 10%	7 14%	0 0%	38 78%	5 10%	6 12%	2 1%	111 74%	14 9%	23 15%	
	PB4	0 0%		43 84%	1 2%	7 14%	0 0%	46 92%	0 0%	4 8%	0 0%	46 94%	0 0%	3 6%	0 0%	0 0%	135 90%	1 1%	14 9%
	PB	1 0%		128 63%	45 22%	30 15%	1 1%	135 68%	46 23%	18 9%	0 0%	138 70%	44 22%	14 7%	2 0%	401 67%	135 23%	62 10%	
PC Age- Specific Activity	PC1	0 0%		3 6%	40 78%	8 16%	0 0%	7 14%	38 76%	5 10%	0 0%	7 14%	37 76%	5 10%	0 0%	0 0%	17 11%	115 77%	18 12%
	PC2	0 0%		10 20%	33 65%	8 16%	0 0%	14 28%	29 58%	7 14%	0 0%	14 29%	29 59%	6 12%	0 0%	0 0%	38 25%	91 61%	21 14%
	PC3	0 0%		10 20%	41 80%	0 0%	0 0%	14 28%	36 72%	0 0%	0 0%	14 29%	35 71%	0 0%	0 0%	0 0%	38 25%	112 75%	0 0%
	PC	0 0%		23 15%	114 75%	16 10%	0 0%	35 23%	103 69%	12 8%	0 0%	35 24%	101 69%	11 7%	0 0%	0 0%	93 21%	318 71%	39 9%
PD Caregiver/teacher involvement in	PD1	0 0%		36 71%	13 25%	2 4%	0 0%	39 78%	9 18%	2 4%	0 0%	41 84%	6 12%	2 4%	0 0%	0 0%	116 77%	28 19%	6 4%
PE Infant-specific Activity	PE1	0 0%		30 59%	2 4%	19 37%	0 0%	34 68%	3 6%	13 26%	0 0%	34 69%	2 4%	13 27%	0 0%	0 0%	98 65%	7 5%	45 30%
	PE2	0 0%		22 43%	25 49%	4 8%	1 2%	28 56%	18 36%	3 6%	0 0%	30 61%	16 33%	3 6%	1 1%	80 53%	59 39%	10 7%	
	PE	0 0%		88 58%	40 26%	25 16%	1 1%	101 67%	30 20%	18 12%	0 0%	105 71%	24 16%	18 12%	1 0%	178 59%	66 22%	55 18%	
Domain Total	P (A-E summed)	1 0%		406 53%	219 29%	139 18%	2 0%	437 58%	202 27%	109 15%	0 0%	450 61%	191 26%	94 13%	3 0%	1293 57%	612 27%	342 15%	