


**ACHIEVING A STATE OF HEALTHY WEIGHT
RATING SCALES:
SUPPORTING OBESITY PREVENTION LANGUAGE IN
CHILD CARE LICENSING REGULATIONS**

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

May 2013





Copyright 2013, National Resource Center for Health and Safety in Child Care and Early Education.

Suggested Citation: National Resource Center for Health and Safety in Child Care and Early Education. 2013. *Achieving a state of healthy weight rating scales: Supporting obesity prevention language in child care licensing regulations*. Aurora, CO: University of Colorado, Anschutz Medical Campus.

This project was supported by Grant Number U46MCO9810 from the U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau.

The National Resource Center for Health and Safety in Child Care and Early Education (NRC) is a program of the Healthy Child Care America (HCCA) Cooperative Agreement Program, funded by the Maternal and Child Health Bureau (MCHB), Health Resources and Services Administration, U.S. Department of Health and Human Services (Marilyn J. Krajicek, EdD, RN, FAAN, Principal Investigator)

The NRC is operated by the College of Nursing of the University of Colorado, Anschutz Medical Campus, Aurora, Colorado.

CONTENTS

PURPOSE OF This document AND INTRODUCTION TO ASHW	1
Over-arching Rating Schema	2
Variable-specific scaling	2
Child and Adult Care Food Program (CACFP)	3
Rating scale Revisions	4
INFANT FEEDING VARIABLES and rating scales	6
IA1 (breastfeeding/feeding of breast milk)	7
IA2 (only human milk/infant formula, no cow's milk)	8
IB1 (feed on cue)	9
IB2 (do not feed beyond satiety)	10
IB3 (bottle feeding position)	11
IC1 (plan for solid food introduction)	12
IC2 (age for solid food introduction)	13
IC3 (iron-fortified foods for breastfed infants)	14
ID1 (do not mix formula with other foods)	15
ID2 (whole fruits, mashed or pureed)	16
ID3 (no fruit juice)	17
NUTRITION VARIABLES and rating scales	18
NA1 (limit oils)	20
NA2 (meats/beans)	21
NA3 (low-fat milk equivalents)	22
NA4 (whole or 2% milk, 12-24 months)	23
NA5 (skim or 1% milk, two years of age and older)	24

NB1 (whole grains) 25

NB2 (vegetables) 26

NB3 (fruits) 27

NC1 (100% juice, unsweetened)..... 28

NC2 (juice only at meal/snack time)..... 29

NC3 (daily juice consumption, 1-6 years of age) 30

NC4 (daily juice consumption, 7-12 years of age) 31

ND1 (water availability) 32

NE1 (teach portion sizes)..... 33

NE2 (adults eating meals with children)..... 34

NF1 (age-appropriate portions)..... 35

NF2 (meet individual caloric needs) 36

NG1 (Limit salt) 37

NG2 (avoid sugar) 38

NH1 (force/bribery) 39

NH2 (misuse of food)..... 40

PHYSICAL ACTIVITY AND SCREEN TIME VARIABLES and rating scales 41

PA1 (space for play, inside and outside) 43

PA2 (caregivers/teachers orientation/training, physical activity) 44

PA3 (physical activity policies on the promotion/barriers to participation) 45

PA4 (caregivers/teachers participate in active play) 46

PA5 (Do not withhold active play) 47

PB1 (no media exposure, under two years of age) 48

PB2 (weekly media time, age two years and older) 49

PB3 (Purpose of media USaGE, two years of age and older)..... 50

PB4 (no visual media during meals/snacks) 51

PC1 (frequency of outdoor play)52

PC2 (amount of daily physical activity, toddler)53

PC3 (amount of daily physical activity, preschooler).....54

PD1 (caregiver/teacher-led physical activities)55

PE1 (tummy time)56

PE2 (use of infant equipment)57

APPENDIX.....58

Appendix Table 1. Source of ASHW Variables in PCO2/CFOC3 Standards59

Appendix Table 2. Excluded Content.....68

PURPOSE OF THIS DOCUMENT AND INTRODUCTION TO ASHW

Purpose. This document is a compilation of the rating scales the National Resource Center (NRC) for Health and Safety in Child Care and Early Education uses to assess states' child care licensing regulations that relate to early childhood obesity prevention. The baseline assessment of regulations in effect in 2010 was reported by the NRC in *Achieving a State of Healthy Weight: A National Assessment of Obesity Prevention Terminology in Child Care Regulations 2010*¹(ASHW 2010). An update to the baseline assessment, *Achieving a State of Healthy Weight: 2011 Update (ASHW 2011)*,² examined new and revised licensing regulations made effective in 2011. A similar 2012 update will be published later in 2013. The NRC is releasing the rating scales to a) assist understanding of the scores assigned to states' regulations, and b) support development or revision of regulations that promote healthy weight in child care policies and practices. In addition, child care providers and early educators may use the rating scales to determine whether policies and practices in their own programs promote development of healthy weight habits.

Background: In ASHW 2010, and the 2011 and 2012 updates, the NRC examined states' child care licensing regulations in the areas of nutrition, infant feeding, and physical activity (including screen time exposure). The assessments were funded as part of the NRC's cooperative agreement # U46MCO9810 with the Maternal and Child Health Bureau, Health Resources Services Administration, U.S. Department of Health and Human Services. The ASHW assessments are based on the fifty healthy weight standards published in *Preventing Childhood Obesity in Early Care and Education Programs: Selected Standards from Caring for Our Children: National Health and Safety Performance Standards; Guidelines for Early Care and Education Programs, 3rd Edition(PCO)*.³ Development of the PCO standards was accelerated and released in 2010 prior to the 2011 comprehensive publication, *Caring for Our Children: National Health and Safety Performance Standards; Guidelines for Early Care and Education Programs, 3rd Edition (CFOC3)*.⁴ A second edition of PCO (PCO2) was published in 2012 to be aligned consistently with CFOC3.⁵

¹ National Resource Center for Health and Safety in Child Care and Early Education, University of Colorado Denver. 2011. *Achieving a state of healthy weight: A national assessment of obesity prevention terminology in child care regulations 2010*. Aurora, CO. Available at <http://nrckids.org>.

² National Resource Center for Health and Safety in Child Care and Early Education. 2012. *Achieving a state of healthy weight: 2011 update*. Aurora, CO: University of Colorado Denver. Available at <http://nrckids.org>.

³ American Academy of Pediatrics, American Public Health Association, and National Resource Center for Health and Safety in Child Care and Early Education. 2012. *Preventing childhood obesity in early care and education: Selected standards from caring for our children: national health and safety performance standards; Guidelines for early care and education programs, 3rd Edition*. http://nrckids.org/CFOC3/PDFVersion/preventing_obesity.pdf

⁴ American Academy of Pediatrics, American Public Health Association, National Resource Center for Health and Safety in Child Care and Early Education. 2011. *Caring for our children: National health and safety performance*

ASHW variables. In June 2010, the NRC staff deconstructed the 50 *PCO* standards into more than 300 component parts. An expert workgroup was tasked⁶ with rating these components of the *PCO* standards on their impact on obesity prevention when implemented in child care and early education programs. After applying statistical and conceptual criteria as described in *ASHW 2010*, the NRC staff identified the components of the standards with the highest impact, which were then scaled as described below. The 47 components of the *PCO* standards for which high inter-rater reliability was attained were retained as the *ASHW variables*.⁷

For technical assistance pertaining to these rating scales, contact the NRC at info@nrckids.org.

OVER-ARCHING RATING SCHEMA

The text of a state's child care licensing regulatory document for each of the 47 *ASHW variables* is scored with a rating, 1 to 4, where:

1 = Contradictory to the component of the *PCO* standard

2 = No reference to the component of the *PCO* standard

3 = Partially meets the component of the *PCO* standard

4 = Fully meets the component of the *PCO* standard

VARIABLE-SPECIFIC SCALING

The types of child care states regulate, the number and organization of regulatory documents, and preferred terminology vary widely. To address the variability of regulatory language from state to state,

standards; Guidelines for early care and education programs. 3rd edition. Elk Grove Village, IL: American Academy of Pediatrics; Washington, DC: American Public Health Association. Also available at <http://nrckids.org>.

⁵ The standards published in both editions of *PCO* are consistent with those of *CFOC3*; however, the standards are not numbered in either version of *PCO*. *PCO2* includes other format changes consistent with *CFOC3*. References in the earlier version of *PCO* to the USDA MyPyramid were replaced in *PCO2* with MyPlate, the newer USDA icon and food guidance, which was introduced after the publication of the first version of *PCO*. See <http://www.choosemyplate.gov/>.

⁶ The NRC Healthy Weight Advisory Meeting (July 2010), was conducted with support from both the Department of Health and Human Services (DHHS), Human Resources and Services Administration (HRSA), Maternal and Child Health Bureau (MCHB) and the DHHS, Administration for Children and Families, Child Care Bureau (now Office of Child Care).

⁷ For detailed information on scaling and rating procedures and *ASHW 2010* methodology, see *ASHW 2010*, cited above in Footnote 1.

the NRC developed 47 rating scales, one for each *ASHW* variable. Each rating scale is based on the four-point rating schema described above, but defines more specifically the criteria for evaluating the text of a regulation. That is, a variable-specific rating scale describes the kind of language or terms that must be present in a regulation to earn a rating of 1, 2, 3, or 4. Many of the rating scales also include additional guidance for assigning a rating, in the form of rating rules and notes for the rater.

Occasionally, a regulatory document contains conflicting information on a given *ASHW* variable, usually in different sections of the document. When this occurs, all of the pertinent information is taken into account in assigning the rating. In other cases, a state may regulate a type of care in two or more different documents, which earn different ratings for a given *ASHW* variable. It is NRC policy to use the highest rating the state attained for a given variable for the type of child care under consideration.⁸

CHILD AND ADULT CARE FOOD PROGRAM (CACFP)

The Child and Adult Care Food Program (CACFP) of the Food and Nutrition Service (FNS), U.S. Department of Agriculture (USDA) offers reimbursement to eligible programs to provide nutritious meals and snacks for children from low income families in child care programs (as well to low income elderly adults in day care). Participating programs must follow age-specific CACFP meal and snack patterns⁹ that define types of food and appropriate serving sizes, based upon the *USDA Dietary Guidelines for Americans, 2010*.¹⁰ Many states' child care regulations require that all licensed child care programs adhere to CACFP guidelines, whether or not the program participates in CACFP.

Both *CFOC3* and *PCO* (first and second editions) include Standard [4.2.0.3 - Use of USDA - CACFP Guidelines](#), which encourages adoption of the CACFP food guidance by all child care programs. Indeed, Standard 4.2.0.3 was rated high in impact upon obesity prevention by the NRC's 2010 expert workgroup, whose efforts informed the selection of *ASHW* variables. The CACFP meal and snack patterns for child care contain substantial information related to the *ASHW* variables. Therefore, the NRC rated the meal and snack patterns on all *ASHW* nutrition and infant feeding variables.¹¹ The NRC raters were then able to take into consideration the ratings earned by CACFP when rating the regulations of states that require licensed child care programs to adhere to CACFP. If a state document specified only CACFP adherence without supplemental, pertinent text, the state received the ratings for nutrition and infant feeding

⁸ See *ASHW 2010*, for more on variable-specific scaling. To access the report refer to footnote 1.

⁹ The Child and Adult Care Food Program (CACFP) Meal Patterns may be accessed at http://www.fns.usda.gov/cnd/care/programbasics/meals/meal_patterns.htm.

¹⁰ U.S. Department of Agriculture and U.S. Department of Health and Human Services. *Dietary Guidelines for Americans, 2010. 7th Edition*, Washington, DC: U.S. Government Printing Office, December 2010.

¹¹ Rating scales for each *ASHW* Infant Feeding and Nutrition variable, presented later in pages 6 – 40, include a note that explains the rationale for the rating to be assigned to states that require adherence to CACFP program requirements. CACFP does not include text for every infant feeding and nutrition variable. For such variables, the rating associated with CACFP = 2 (*No reference to the component of the PCO standard*), as shown in the notes.

variables that the NRC assigned to CACFP. If however, the state specified additional relevant text, the NRC examined that text, which could either raise or lower the rating from that assigned to CACFP.

2011 changes to CACFP: Water and milk. Two changes to the CACFP requirements were made effective in 2011: (a) serving skim or 1% fat milk to children age 2 years and older and (b) making water available throughout the day. Therefore, the NRC revised the *ASHW* rating rules in the two scales to which these changes apply (rating scales for availability of water (ND1) and milk for two year olds and older (NA5)). In both cases, the two new CACFP requirements are now aligned with *PCO2/CFOC3* standards. The revised rules for these two variables are included in this release.

Related food guidance programs. In 2010, using a process similar to that for CACFP, the NRC also rated the USDA MyPyramid Food Guidance System and applied ratings to selected *ASHW* nutrition and physical activity variables.¹² MyPyramid was replaced in 2011 by the MyPlate icon and program.¹³ *Choose MyPlate* is consumer guidance to the federally approved program on healthy nutrition presented in the *Dietary Guidelines for Americans, 2010*. *PCO2* and *CFOC3* promote MyPlate as a valuable tool, but unlike CACFP, there is no *CFOC3* standard that specifies adoption of the MyPlate recommendations. Therefore, the *ASHW* procedure does not assign ratings to state regulations based on adherence to the MyPlate program.

RATING SCALE REVISIONS

Since the 2010 baseline study, a few instances arose where new text in a state's regulations in 2011 and/or 2012 forced further clarification of the *ASHW* rating scales. Procedurally, this need is identified in the post-rating reviews of inter-rater reliability. Where discrepant ratings are associated with new text and discrepancies cannot be resolved on the basis of existing rating rules, refinements are made to the scale to attain inter-rater agreement. The problematic text is re-rated by multiple raters based on the refinement. These changes in the rating scales are applied to states regulations under review for the current year. Previous years' ratings are not changed. Modifications to rating scales are identified in footnotes to the scales on the following pages.

Implications of future CACFP revisions. With passage of the Healthy, Hunger-Free Kids Act of 2010, Section 221,¹⁴ the USDA FNS is responsible for development of new and revised CACFP regulations that are expected to become effective in 2014. The revisions will be program requirements for CACFP child care providers, as well as other licensed providers if indicated in a state's regulations. Once the revised CACFP regulations are effective, they will have an effect upon the *ASHW* rating scales for several variables. The NRC conducted preliminary ratings of the recommended changes to CACFP. If the final

¹² MyPyramid did not address children under age two years.

¹³ *PCO2* has updated references to MyPlate. MyPlate may be viewed at <http://www.choosemyplate.gov/>.

¹⁴ Healthy, Hunger-Free Kids Act of 2010. Public Law No. 111-296, 124 Stat, 3183 (2010). Retrieved from the Government Printing Office website: <http://www.gpo.gov/fdsys/pkg/PLAW-111publ296/content-detail.html>.

regulations are similar to the recommendations, states that require adherence to CACFP (with no supplementary enhancing or conflicting language) would be in greater alignment with several aspects of the obesity prevention standards of *PCO2/CFOC3*. These states therefore would experience improved ratings for several infant feeding and nutrition ASHW variables in the calendar year in which the regulations are made effective.



The *ASHW* rating scales follow in three sections by content area—Infant Feeding, Nutrition, and Physical Activity/Screen Time. Each section begins with a list of the variables in the content area, along with the alphanumeric codes assigned to the variables. Each variable is derived from one, and sometimes two, standard(s) published in *CFOC3* (and *PCO2*). Following the rating scales, the Appendix to this document lists all *ASHW* variables, links to the source *CFOC3* standard(s) in the NRC searchable *CFOC3* database, and print copy page numbers in *PCO2* and *CFOC3*. This enables the content of the *ASHW* variables to be viewed in context—standards, rationale and references. (The searchable *CFOC3* database may also be accessed directly at [http://cfoc.nrckids.org/.](http://cfoc.nrckids.org/))

The NRC gratefully acknowledges the expert review of this document by NRC Licensing Advisor Judy Collins, Norman, Oklahoma.

INFANT FEEDING VARIABLES AND RATING SCALES

NOTE: A variable code (first column in table below) followed by the symbol ♦ indicates that the variable was derived from content of two PCO2/CFOC3 standards. The Appendix at the end of this document identifies the source standard(s) for each ASHW variable.

ASHW VARIABLE #	TEXT
IA1	Encourage and support breastfeeding and feeding of breast milk by making arrangements for mothers to feed their children comfortably on-site.
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.
IB1	Feed infants on cue.
IB2♦	Do not feed infants beyond satiety; Allow infant to stop the feeding.
IB3♦	Hold infants while bottle feeding; Position an infant for bottle feeding in the caregiver/teacher's arms or sitting up on the caregiver/teacher's lap.
IC1	Develop a plan for introducing age-appropriate solid foods (complementary foods) in consultation with the child's parent/guardian and primary care provider.
IC2	Introduce age-appropriate solid foods (128 a) 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.
ID1	Do not feed an infant formula mixed with cereal, fruit juice or other foods unless the primary care provider provides written instruction.
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.

IA1 (BREASTFEEDING/FEEDING OF BREAST MILK)

Encourage and support breastfeeding and feeding of breast milk by making arrangements for mothers to feed their children comfortably on-site.

Minimum for “comfortable” = privacy; seat (not toilet); electricity available for pumping breast milk)¹⁵

Ratings are assigned as follows for rules that:

- 1 = Permit **only the child’s mother to handle/feed** human (breast) milk on-site (explicitly)
- 2 = Mention neither on-site breastfeeding nor feeding human milk
- 3 = State **one or more** of the following:
 - Permit/support **breastfeeding by mother** during child care hours
 - Permit/recommend **feeding of human (breast) milk** (by staff or mother)
 - Require **arrangements** for mothers to breastfeed/express milk on site (**but** not specifying “comfortable arrangements,” similar language, or minimum requirements as defined above)

NOTE: *If a state refers to **CACFP without additional pertinent text**, the **rating = 3** as “breast milk” is recommended in the Meal Pattern, but arrangements for breastfeeding are not mentioned.*

- 4 = State **all three** of the following:
 - Permit/support **breastfeeding by mother** during child care hours
 - Permit/recommend **feeding of human (breast) milk**
 - Require **“comfortable” arrangements** for mothers to breastfeed/express milk on site

¹⁵ Clarification of “comfortable” added 2012.

IA2 (ONLY HUMAN MILK/INFANT FORMULA, NO COW'S MILK)

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.

Ratings are assigned as follows for rules that:

- 1 = Permit **cow's milk for infants under 12 months** (explicitly), without primary care provider and parent/guardian written exception
- 2 = Do not mention prohibiting cow's milk **nor** serving only human milk or infant formula for infants less than 12 months of age
- 3 = State **one or both** of the following **with some limitation/contradictory statement in either or both (other than** written exception by primary care provider and parent/guardian):
 - Prohibit cow's milk until at least 12 months of age
 - Require/recommend human milk and/or formula for infants until at least 12 months of age
- 4 = State **one or both** of the following:
 - Prohibit cow's milk until at least 12 months of age, unless written exception by primary care provider and parent/guardian

AND/OR

- Require human milk or formula for infants until at least 12 months of age

NOTE: *If a state refers to **CACFP without additional pertinent text, the rating = 4** because the Meal Plan requires human milk or formula for children under the age of 12 months.*

IB1 (FEED ON CUE)**Feed infants on cue.**

Raters: Do not lower ratings if exceptions are stated for schedules prescribed by PCP, or upon parental written instruction.

Ratings are assigned as follows for rules that:

- 1 = Permit infant **feeding on schedule** basis (explicitly) (**Raters:** Implication is that the schedule is set by the facility and not responsive to infant cues.)
- 2 = Do not mention timing/circumstances of initiation of feeding
- 3 = Require/recommend feeding on cue with some limitation/contradictory statement. (**Raters:** Limitation must be other than PCP order or written parental instruction.)
- 4 = Require/recommend **feeding on cue**

NOTE: If a state refers to **CACFP without additional pertinent text**, the **rating = 4** as the Meal Pattern includes language that implies responsiveness to infant cues.¹⁶

¹⁶ From CACFP Meal Pattern Infant charts in effect during 2010- 12 ASHW studies: “For some breastfed infants who regularly consume less than the minimum amount of breastmilk per feeding, a serving of less than the minimum amount of breastmilk may be offered, with additional breastmilk offered if the infant is still hungry.”

IB2 (DO NOT FEED BEYOND SATIETY)

Do not feed infants beyond satiety; Allow infant to stop the feeding.

Ratings are assigned as follows for rules that:

- 1 = Permits feeding **beyond satiety** (explicitly) (e.g., “until bottle is empty”)
- 2 = Do not mention cessation of feeding
- 3 = Require cessation of feeding **when child gives cues of fullness** or **starts to fall asleep**, with some limitation/contradictory statement (e.g., “unless the bottle remains full”)
- 4 = Require cessation of feeding when child gives **cues of fullness or starts to fall asleep**

NOTE: *If a state refers to CACFP without additional pertinent text, the rating = 4 as the Meal Pattern includes language that implies responsiveness to infant cues to stop feeding.¹⁷*

¹⁷ From CACFP Meal Pattern Infant charts in effect during 2010- 12 ASHW studies: “For some breastfed infants who regularly consume less than the minimum amount of breastmilk per feeding, a serving of less than the minimum amount of breastmilk may be offered, with additional breastmilk offered if the infant is still hungry.”

IB3 (BOTTLE FEEDING POSITION)

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.

Ratings are assigned as follows for rules that:

1 = Permit infant feeding by bottle **without being held** (e.g., in crib, propped up) (explicitly)

2 = Do not mention position for bottle feeding

NOTE: *If a state refers to CACFP without additional pertinent text, the rating = 2 as the Meal Pattern does not mention bottle feeding positions*

3 = Require an infant to be held when fed by a bottle with some exception/contradictory statement (e.g., up until 9 months of age; until infant can hold own bottle¹⁸)

4 = Require an infant to be **held** when fed by a bottle

¹⁸ Second example, *until infant can hold own bottle*, added 2012.

IC1 (PLAN FOR SOLID FOOD INTRODUCTION)

Develop a plan for introducing age-appropriate solid foods with parent/guardian and primary care provider.

Raters: *Solid foods may be referred to as “complementary” foods.*

Ratings are assigned as follows for rules that:

- 1 = Recommend a uniform plan for introducing solid food that does not take into account individual children’s needs, or that otherwise contradicts the standard component
- 2 = Do not mention a plan/planning for introduction of age-appropriate solid foods for infants
- 3 = State **one or two** of the following (but not all three):
- Require plan/planning for introducing **age-appropriate** solid foods for the individual child
 - Require plan/planning for introducing solid foods **in** consultation with the **child’s parent/guardian**
 - Require plan/planning for introducing solid foods in consultation with the child’s **primary care provider (or similar language for health care provider)**
- NOTE:** *If a state refers to **CACFP without additional pertinent text, the rating = 3** because the Meal Pattern constitutes a plan for introduction and includes the language regarding developmental readiness for solid food but does not require consultation.*
- 4 = Require **all three** elements in 3 above (**Raters:** *To receive “4,” rule must included language “age-appropriate” or similar language to describe foods (e.g., “suited to the child’s developmental level).*)

IC2 (AGE FOR SOLID FOOD INTRODUCTION)

Introduce age-appropriate solid foods no sooner than 4 months of age, and preferably around 6 months of age.

NOTE: *The focus of this rating is the **age range** for introduction of solid food.*

Ratings are assigned as follows for rules that:

- 1 = Permit introduction of solid foods **sooner than 4 months** (explicitly)
- 2 = Do not mention a minimum age for introduction of solid foods
- 3 = Permit introduction of solid foods **no sooner than age 4 months but less than 6 months**

NOTE: *If a state refers to **CACFP** without **additional pertinent text**, the rating = 3 because the Meal Pattern allows for the introduction of solid foods between the ages of 4-7 months.*

- 4 = **Permit** introduction of solid (complementary) foods **no sooner than 4 months, and recommend** introduction of solid foods at **6 months of age or more**

IC3 (IRON-FORTIFIED FOODS FOR BREASTFED INFANTS)

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.

Ratings are assigned as follows for rules that:

- 1= Permit introduction of iron-fortified foods **for breastfed infants sooner than 4 months** (explicitly)
- 2 = Do not mention timing of introduction of iron-fortified foods to **breastfed infants**
- 3 = Permit introduction of solid (complementary) iron-fortified foods for **breastfed infants no sooner than 4 months (Raters: For a rating of "3," there is no additional recommendation of preference for later introduction, that is, 6 months of age or older.)**

NOTE: *If a state refers to CACFP without additional pertinent text, the rating = 3* as the Meal Pattern allows for the introduction of iron-fortified foods between the ages of 4-7 months

- 4 = **Permit** introduction of solid (complementary) iron-fortified foods for **breastfed infants no sooner than 4 months, and recommend** introduction of solid foods at **6 months of age or more**

ID1 (DO NOT MIX FORMULA WITH OTHER FOODS)

Do not feed an infant formula mixed with cereal, fruit juice or other foods unless the primary care provider provides written instruction.

Raters: *Do not lower ratings if exceptions are stated for orders prescribed by PCP.*

Ratings are assigned as follows for rules that:

1 = Permit feeding an infant formula mixed with juice or other foods (including cereal) (explicitly)

2 = Do not mention feeding an infant formula mixed with other foods or juice

NOTE: *If a state refers to CACFP without additional pertinent text, the rating = 2 because the Meal Plan lists human milk or formula and cereal as meal and snack components for infant ages 4 months up, but does not specify the means of preparation of cereal or formula (i.e., no “mixing” or “combining” language).*

3 = State **one** of the following (but not both):

-Prohibit feeding an infant formula **mixed with juice**

-Prohibit feeding an infant formula **mixed with other foods (including cereal)**

4 = Prohibit feeding an infant formula **mixed with either juice or other foods (including cereal)** (except by PCP written instruction)

ID2 (WHOLE FRUITS, MASHED OR PUREED)

Serve whole fruits, mashed or pureed, for infants 7 months up to one year of age.

Raters: Do not deduct points on this component for “**fruit juice**” for infants. That occurs in another component.

Ratings are assigned as follows for rules that:

1 = Permit serving of fruit to infants **under 7 months of age** (explicitly)

NOTE: If a state refers to **CACFP without additional pertinent text, the rating = 1** because the Meal Pattern allows fruit to be served at the age of 4-7 months, “when the infant is developmentally ready to accept it.”

2 = Do not mention serving fruit to infants

3 = Recommend serving fruit to infants **not before age 7 months**

4 = Require/recommend fruit to be served to infants **age 7 to 12 months** in **mashed or pureed form**

ID3 (NO FRUIT JUICE)

Serve no fruit juice to children younger than 12 months of age.

Ratings are assigned as follows for rules that:

1 = **Permit serving fruit juice** to children **less than 12 months of age** (explicitly)

NOTE: *If a state refers to **CACFP without additional pertinent text, the rating = 1** because the CACFP Meal Pattern allows for the serving of fruit juice at ages 8-11 months.*

2 = Do not mention serving fruit juice for children less than 12 months of age

3 = **Prohibit serving fruit juice** to children less than 12 months of age, **with some limitation/contradictory statement** (e.g., older **infants** may be served juice in a cup when developmentally able to hold the cup)

4 = Prohibit serving fruit juice to children less than 12 months of age

NUTRITION VARIABLES AND RATING SCALES¹⁹

NOTE: A variable code (first column in table below) followed by the symbol ♦ indicates that the variable was derived from content of two PCO2/CFOC3 standards. The Appendix at the end of this document identifies the source standard(s) for each ASHW variable.

ASHW VARIABLE #	TEXT
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.
NA2	Serve meats and/or beans - chicken, fish, lean meat, and/or legumes (such as dried peas, beans), avoiding fried meats.
NA3	Serve other milk equivalent products such as yogurt and cottage cheese, using low-fat varieties for children 2 years of age and older.
NA4	Serve whole pasteurized milk to twelve to twenty-four month old children who are not on human milk or prescribed formula, or serve reduced fat (2%) pasteurized milk to those who are at risk for hypercholesterolemia or obesity.
NA5	Serve skim or 1% pasteurized milk to children two years of age and older.
NB1	Serve whole grain breads, cereals, and pastas.
NB2	Serve vegetables, specifically, dark green, orange, deep yellow vegetables; and root vegetables, such as potatoes and viandas.
NB3	Serve fruits of several varieties, especially whole fruits.
NC1	Use only 100% juice with no added sweeteners.
NC2	Offer juice only during meal times.

¹⁹ In 2010, states referring to MyPyramid or Food Pyramid without additional text pertinent to selected nutrition variables were assigned scores for those variables based on the NRC scoring of the USDA MyPyramid Food Guidance System. The program was phased out in 2011 and scores were no longer assigned to ASHW variables on the basis of reference to this program. References to MyPyramid occurred in two states' documents examined in 2010 and none in 2011 and 2012.

ASHW VARIABLE #	TEXT
NC3	Serve no more than 4 to 6 oz juice/day for children 1-6 years of age.
NC4	Serve no more than 8 to 12 oz juice/day for children 7-12 years of age.
ND1	Make water available both inside and outside. (Selected as alternative beverage in light of restrictions on juice and elimination of sweetened beverages--water is a beverage of default.
NE1 [♦]	Teach children appropriate portion size by using plates, bowls and cups that are developmentally appropriate to their nutritional needs
NE2	Require adults eating meals with children to eat items that meet nutrition standards.
NF1	Serve small-sized, age-appropriate portions.
NF2 [♦]	Permit children to have one or more additional servings of the nutritious foods that are low in fat, sugar, and sodium as needed to meet the caloric needs of the individual child; Teach children who require limited portions about portion size and monitor their portions.
NG1	Limit salt by avoiding salty foods such as chips and pretzels. (Selected to complete the food groups)
NG2	Avoid sugar, including concentrated sweets such as candy, sodas, sweetened drinks, fruit nectars, and flavored milk.
NH1	Do not force or bribe children to eat.
NH2	Do not use food as a reward or punishment.

NA1 (LIMIT OILS)

Limit oils by choosing monounsaturated and polyunsaturated fats (such as olive oil or safflower oil) and avoiding trans fats, saturated fats and fried foods.

NOTE: *As the CFO3 standard does not specify a quantity or frequency for serving oils and fried or fatty foods, the critical issue for assigning ratings is whether states include some limitation or avoidance language in their rules, even if high limits are set (e.g., serving multiple times per week).*

Ratings are assigned as follows for rules that:

- 1 = Permit serving saturated fats and/or trans fats, and fried foods without limitation (explicitly)
- 2= Do not mention serving preferred fats and restrictions on saturated fats, trans fats, fried foods

NOTE: *If a state refers to CACFP without additional text, the rating = 2 as oils and fats are not listed in the Meal Pattern.*

- 3 = State **one** of the following (but not both):
 - Require/recommend **limitation of oils to monounsaturated and polyunsaturated fats** (such as olive oil or safflower oil)
 - Require/recommend **avoidance of trans fats, saturated fats and fried foods**
- 4 = Require/recommend limitation of oils to monounsaturated and polyunsaturated fats (such as olive oil or safflower oil) **and** avoidance of trans fats, saturated fats and fried foods²⁰

²⁰ Prior to 2011, states requiring adherence to MyPyramid without additional text earned a rating = 4 for this variable, because the program limited consumption by proportion, listed preferred oils and recommended avoiding saturated fats and fried foods.

NA2 (MEATS/BEANS)

Serve meats and/or beans - chicken, fish, lean meat, and/or legumes (such as dried peas, beans), avoiding fried meats.

Ratings are assigned as follows for rules that:

- 1 = Contradict the standard component (e.g., serve fried bacon)
- 2 = Do not mention serving lean meats/legumes **and** do not mention avoidance of fried meats
- 3 = State **one** of the following (but not both):
 - Require/recommend serving chicken, fish, lean meat, and/or legumes (such as dried peas, beans), and the like
 - Require/recommend avoidance of fried meats

NOTE: *If a state refers to **CACFP without additional pertinent text**, the **rating = 3** as these food groups are recommended in the Meal Pattern, but the avoidance of fried meats is not stated specifically.*

- 4 = Require/recommend serving lean meats (including chicken and fish), and/or beans/legumes, **and** avoid fried meats²¹

²¹ Prior to 2011, states requiring adherence to MyPyramid without additional text earned a rating = 4 for this variable, because the program recommended lean meats and legumes and avoidance of fried meats.

NA3 (LOW-FAT MILK EQUIVALENTS)

Serve milk equivalent products such as yogurt and cottage cheese, using low-fat varieties for children 2 years of age and older.

Raters: *Whole milk = full fat milk*

Ratings are assigned as follows for rules that:

1 = Permit serving **full fat (whole) milk equivalents** (e.g., yogurt and cottage cheese) to children 2 years and older (explicitly) (**Raters:** *Do not penalize here for serving full fat fluid milk, as it is addressed in Variable NA5.*)

2 = Do not mention serving milk equivalents

3 = Require/recommend serving milk equivalents, **without reference to fat content**

NOTE: *If a state refers CACFP without additional text, the rating = 3 as the Meal Pattern does not specify recommended milk fat content.*

4 = Require/recommend **low-fat milk equivalent products for 2 years and older**²²

²² Prior to 2011, states requiring adherence to MyPyramid without additional text earned a rating = 4 for this variable, because the program recommended serving low-fat milk equivalent products for 2 years and older.

NA4 (WHOLE OR 2% MILK, 12-24 MONTHS)

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.

Raters: *Whole milk = full fat milk*

Ratings are assigned as follows for rules that:

- 1 = Permit **skim or 1% milk** for children twelve- to twenty-four months of age (explicitly)
- 2 = Do not mention fat content of milk children twelve- to twenty-four months of age²³

NOTE: *If a state refers CACFP without additional text pertinent to fat content of milk, the rating = 2 as the Meal Pattern does not specify recommended milk fat content.*

- 3 = State **one** of the following (but not both):

Require/recommend serving **whole pasteurized milk** to children twelve- to twenty-four months of age

OR

Require/recommend serving **reduced fat (2%)** pasteurized milk to children twelve- to twenty-four months of age who are **at risk for hypercholesterolemia or obesity**

- 4 = Require/recommend serving **whole pasteurized milk** to children twelve to twenty-four months of age, **and** require/recommend serving **reduced fat (2%)** pasteurized milk to children twelve to twenty-four months of age who are **at risk for obesity or have other health conditions for requiring lower fat milk**

²³ Prior to 2011, states requiring adherence to MyPyramid without additional text earned a rating = 2 for this variable, because the program did not include recommendations for children under two years of age.

NAS (SKIM OR 1% MILK, TWO YEARS OF AGE AND OLDER)

Serve skim or 1% pasteurized milk to children two years of age and older.

Raters: *Whole milk = full fat milk*

Ratings are assigned as follows for rules that: (**See notice of rule changes*)

1 = Permit **full fat milk (whole milk) for children 2 years and older** (explicitly)

2 = Do not mention fat content of milk for children ages 2 and older

3 = State **one or both** of the following:

-Require/recommend serving **“low fat” or 2% milk to children 2 years and older** (**Raters:** *Fat content is not sufficiently low, but lowered fat content is directed to correct age.*)

-Require/recommend serving **only skim or 1% milk to children at an age 3 and older** (**Raters:** *Fat content is correct, but age of introduction is too high.*)

4 = Require/recommend serving **only skim or 1% milk to children 2 years and older**

NOTE: *If a state requires adherence to CACFP without additional, detracting text pertinent to fat content of milk, the rating = 4^{24, 25}*

²⁴ Prior to 2011, CACFP did not specify milk fat content for children age 2 years and older, so the previous rating = 2. With the specification in 2011 of a new CACFP program requirement, which aligns with the *CFOC3* standard, the rating = 4.

²⁵ Prior to 2011, states requiring adherence to MyPyramid without additional text earned a rating = 4 for this variable, because the program recommended serving only skim or 1% milk to children 2 years and older.

NB1 (WHOLE GRAINS)

Serve whole grain breads, cereals, and pastas.

Ratings are assigned as follows for rules that:

- 1 = Contradict the standard component (e.g., serve sandwiches on enriched white bread)
- 2 = Do not mention serving whole grains
- 3 = Require/recommend **whole grain breads, cereals, and pastas**, with some limitation/contradictory statement

NOTE: *If a state refers to the CACFP without additional contradictory text, the rating = 3 because the CACFP Meal Pattern includes whole grain breads, but also allows choice of serving enriched grain products. They do not specify all or a percentage that must be whole grain.*

- 4 = Require/recommend serving whole grain breads, cereals, and pastas²⁶

²⁶ Prior to 2011, states requiring adherence to MyPyramid without additional text earned a rating = 4 for this variable, because the program recommended at least 50% breads, cereals, and pastas be whole grain.

NB2 (VEGETABLES)

Serve vegetables, specifically, dark green, orange, deep yellow vegetables, and root vegetables, such as potatoes and viandas.

Ratings are assigned as follows for rules that:

- 1 = Contradict the standard component
- 2 = Do not mention serving vegetables
- 3 = Require/recommend serving **vegetables, generically** (no recommendation of variety or specification of types)

NOTE: *If a state refers to CACFP without additional pertinent text, the rating = 3 because CACFP recommends vegetables, but does not provide specification on variety and/or type.*

- 4 = Require/recommend **serving a variety of vegetables** (or **provides examples** such as dark green, orange, deep yellow vegetables, and root vegetables, such as potatoes and viandas)²⁷

²⁷ Prior to 2011, states requiring adherence to MyPyramid without additional text earned a rating = 4 for this variable, because the program recommended a variety of types and colors of vegetables daily.

NB3 (FRUITS)

Serve fruits of several varieties, especially whole fruits.

Raters:

*It must be apparent that any statement about variety clearly applies to a **variety of fruits**. Text that states that generally meals should be varied, then lists a number of food groups, without specifying varied fruits, does not merit a score of 4.*

*Text regarding serving **fruit juice should not be evaluated** in rating this component.*

Ratings are assigned as follows for rules that:

1 = Contradict the standard component

2 = Do not mention serving fruits

3 = State **one** of the following (but not both):

-Require/recommend serving fruits (without reference to a variety of fruits)

NOTE: *If a state refers to **CACFP without additional pertinent text**, the **rating = 3** because CACFP recommends fruits, but does not specify variety and/or wholeness.*

4 = Require/recommend serving fruit of **several varieties**²⁸

²⁸ Prior to 2011, states requiring adherence to MyPyramid without additional text earned a rating = 4 for this variable, because the program recommended a variety of types and colors of vegetables daily.

NC1 (100% JUICE, UNSWEETENED)

Use only 100% juice with no added sweeteners.

Raters: The term “**full strength**” in reference is fruit juice that is 100% juice with no added sweeteners, and no added water in the product (undiluted) as purchased. Fruit-based beverages (juice drinks, fruit punches, and fruit nectars) are neither 100%, nor full strength juice.

Ratings are assigned as follows for rules that:

- 1 = Permit serving **fruit juice drinks, fruit punches or fruit nectars** (that is, fruit beverages that are sweetened) (explicitly)
- 2 = Do not mention serving juice in any form

OR require/recommend juice or fruit juice without further qualification
- 3 = Require/recommend serving **only 100% full strength juice** with no added sweeteners, with some **limitations/contradictory statement** (**Raters:** *At time of serving, full strength juice may be diluted with water when served to children 12 months of age or older.*)
- 4 = Require/recommend serving only 100% full strength juice with no added sweeteners²⁹ (**Raters:** *At time of serving, full strength juice may be diluted with water when served to children 12 months of age or older.*)

NOTE: *If a state refers to **CACFP without contradictory text, the rating = 4** because CACFP recommends full strength (that is, 100%) fruit juice.*

²⁹ Prior to 2011, states requiring adherence to MyPyramid without additional text earned a rating = 4 for this variable, because the program recommended 100% juice.

NC2 (JUICE ONLY AT MEAL/SNACK TIME)

Offer juice only during meal or snack times.

Raters: *The emphasis in rating this variable is the **timing** for serving juice.*

Ratings are assigned as follows for rules that:

- 1 = Permit serving juice **at times other than meal and/or snack times** (explicitly)
- 2 = Do not mention times/opportunities when juice may be served, or does not limit when juice may be served³⁰
NOTE: *If a state refers to **CACFP without additional pertinent text, the rating = 2** because CACFP does not prohibit serving fruit juice at non-meal times.*
- 3 = Require/recommend serving 100% juice **only during meals and/or snack times**, with some **limitations/contradictory statement** (e.g., highly diluted juice may also be served at other times)
- 4 = Require/recommend serving 100% juice **only during meals and/or snack times**

³⁰ Prior to 2011, states requiring adherence to MyPyramid without additional text earned a rating = 2 for this variable, because the program did not prohibit serving fruit juice at non-meal times.

NC3 (DAILY JUICE CONSUMPTION, 1-6 YEARS OF AGE)

Serve no more than 4 to 6 oz juice/day for children 1-6 years of age.

NOTE: 8 oz. = 1 cup

Ratings are assigned as follows for rules that:

- 1 = Permit serving **unlimited juice for children 1 through 6 years of age** (explicitly)
- 2 = Do not mention limitation of juice for children ages 1 through 6
- 3 = State **one** of the following:
- Require/recommend **limitation of the quantity of juice served to some, but not all, age groups** of young children within the age range of **1 through 6 years** (e.g., limits juice for toddlers, but not preschoolers, etc.).³¹
 - Require/recommend limitation of juice for all children 1 through 6 years of age, but **amount is unspecified or is more than 6 oz juice/day**
- OR
- Place some other less specific limitation on serving juice (e.g., 1 serving per day)³²
- NOTE:** *If a state refers to **CACFP without additional limiting or contradictory text**, the **rating = 3** because CACFP sets limits per meal or snack, which may exceed CFOC daily limit over the course of a day.*
- 4 = Require/recommend limitation of juice for **children 1 through 6 years of age** and the amount is limited to **no more than 6 oz. juice/day**

³¹ Prior to 2011, states requiring adherence to MyPyramid without additional text earned a rating = 3 for this variable, because the program recommended limiting quantities of juice for some, but not all, age groups.

³² The criterion, *Place some other less specific limitation on serving juice (e.g., 1 serving per day)*, was added in 2012 to clarify rating new language in a state's rules.

NC4 (DAILY JUICE CONSUMPTION, 7-12 YEARS OF AGE)

Serve no more than 8 to 12 oz juice/day for children 7-12 years of age.

NOTE: 8 oz. = 1 cup

Ratings are assigned as follows for rules that:

- 1 = Permit serving **unlimited juice for children 7 through 12 years of age** (explicitly)
- 2 = Do not mention of limitation of juice for children ages 7 through 12
- 3 = State **one** of the following:
 - Require/recommend **limitation of the quantity of juice served to some, but not all, age groups** of children within the age range of **7 through 12 years** (e.g., limits juice for 7-9 year olds, but not preteens, etc.)
 - Require/recommend limitation of juice for all children 7 through 12 years of age, but **amount is unspecified or is more than 12 oz juice/day**³³

OR

 - Place some other less specific limitation on serving juice (e.g., 1 serving per day)³⁴

NOTE: *If a state refers to **CACFP without additional limiting or contradictory text**, the **rating = 3** because CACFP sets limits per meal or snack, which may exceed CFOC daily limit over the course of a day.*
- 4 = Require/recommend limitation of juice **for children ages 7 through 12**, and the amount is limited to **no more than 12 oz. juice/day**

³³ Prior to 2011, states requiring adherence to MyPyramid without additional text earned a rating = 3 for this variable, because the program recommended limiting quantities of juice but quantities are not specified.

³⁴ The criterion, *Place some other less specific limitation on serving juice (e.g., 1 serving per day)*, was added in 2012 to clarify rating new language in a state's rules

ND1 (WATER AVAILABILITY)

Make water available both inside and outside.***Ratings are assigned as follows for rules that:***

- 1 = Restrict availability of clean, sanitary water (**Raters:** *Do not penalize for restricting consumption of unsanitary water.*)
- 2 = Do not mention making water available
- 3 = State **one** of the following (but not both):
- Require/recommend making water available inside
 - Require/recommend making water available outside
- OR
- Require/recommend making water available with no specification of location (inside or outside)
- OR
- Require/recommend making water available, but using terms such as freely, readily or other adverbs that are not easily quantifiable
- 4 = Require/recommend making water available **both** inside and outside³⁵
- NOTE:** Stating that water must/should be available **at all times, always or continuously** also implies all locations, and the **rating = 4**.
- NOTE:** *If a state refers to CACFP without additional pertinent text about water, the rating = 4 because CACFP requires that water be available throughout the day and available to children upon request.*³⁶

³⁵ Prior to 2011, states requiring adherence to MyPyramid without additional text earned a rating = 4 for this variable, because the program recommended water be available both indoors and outdoors.

³⁶ Prior to 2011, CACFP did not refer to availability of water, so that the previous rating = 2. With the 2011 specification of a new CACFP program requirement that water be available throughout the day *and* available in response to a child's request, it is interpreted that water be made available both inside and outside, yielding a rating = 4.

NE1 (TEACH PORTION SIZES)

Teach children appropriate portion size by using plates, bowls and cups that are developmentally appropriate to their nutritional needs.

NOTE: *Age- or developmentally-appropriately sized “utensils” are forks, spoons and knives, which do not impact the serving size. Text that refers to plates, bowls and cups that are age-appropriately sized (small-sized, etc.) is required as noted in assigning ratings of 3 or 4.*

Ratings are assigned as follows for rules that:

1 = Contradict standard component

2 = Do not mention teaching appropriate portion sizes³⁷

NOTE: *If a state refers to **CACFP** without additional text pertinent to “teaching,” the rating = 2 because the Meal Pattern does not address teaching, nor does it address tableware (except the term “cup” as a measure).*

3 = State **one** of the following (but not both):

-Require/recommend **teaching children** about appropriate portion sizes

-Require/recommend **using plates/ bowls/cups**, and the like, **that are developmentally appropriate** to children’s nutritional needs (or “child-sized,” or similar language)

4 = Require/recommend **teaching children about appropriate portion size by using plates/ bowls/cups** (and the like) that are developmentally appropriate to their nutritional needs

³⁷ Prior to 2011, states requiring adherence to MyPyramid without additional text earned a rating = 2 for this variable, because the program did not address teaching or tableware.

NE2 (ADULTS EATING MEALS WITH CHILDREN)

Require adults eating meals with children to eat items that meet nutrition standards.

Ratings are assigned as follows for rules that:

- 1 = Permit adults eating with children to **disregard nutrition standards for their own meals/snacks** (explicitly)
- 2 = Do not mention adults observing nutrition standards for their own meals/snacks eating when eating with children³⁸

NOTE: *If a state refers CACFP without additional text, the rating = 2 as the Meal Patterns do not mention adults eating meals with children.*

- 3 = Require/recommend adults eating with children to **observe nutrition standards** for their own meals/snacks when eating with children, **with some limitation/contradictory statement**
- 4 = Require/recommend adults eating with children to **observe nutrition standards for their own meals/snacks** when eating with children

³⁸ Prior to 2011, states requiring adherence to MyPyramid without additional text earned a rating = 2 for this variable, because the program did not mention adults eating meals with children.

NF1 (AGE-APPROPRIATE PORTIONS)

Serve small-sized, age-appropriate portions.

Ratings are assigned as follows for rules that:

- 1 = Permit/encourage large portions (explicitly)
- 2 = Do not mention serving small, age-appropriate **portions** (nor **developmentally appropriate-sized** “small”, “child-sized,” or similar language)
- 3 = Require/recommend **small-sized, age-appropriate portions** (or “child-sized,” or similar language), with some limitation/contradiction (other than to meet “individual caloric needs,” or similar language)
- 4 = Require/recommend **small-sized, age-appropriate portions** (or “child-sized,” or similar language)³⁹

NOTE: *If a state refers to CACFP without further text that limits or contradicts the component, the rating = 4, because CACFP recommends portion sizes based on age.*

³⁹ Prior to 2011, states requiring adherence to MyPyramid without additional text earned a rating = 4 for this variable, because the program recommended portion sizes based on age.

NF2 (MEET INDIVIDUAL CALORIC NEEDS)

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.

Raters: Do not lower a state’s rating for this component if the rule does not address **teaching children** who require/recommend limited portions about portion size. Teaching all children (therefore, inclusive of those needing limited portion size) is addressed the rating for Components 205 & 147.

Ratings are assigned as follows for rules that:

1 = **Either** of the following:

-Permit only a single serving per child of nutritious foods (explicitly), **without reference to individual needs**

-Permit **unlimited/additional servings per child** (explicitly), **without reference to individual needs**

2 = Do not mention the adequacy or sufficiency of servings **to meet individual caloric needs** (or “developmentally appropriate-sized portions,” nor similar language)⁴⁰ (**Raters:** Rules address neither children who need more calories than typical, nor those who need fewer.)

3 = State **one** of the following (but not both):

-Require/encourage **additional servings for** children whose **individual caloric needs** for nutritious foods **exceed typical age-appropriate portions**

-Require/recommend **monitoring portion size for children who require limited portions**

NOTE: If a state refers to **CACFP without additional pertinent text**, the **rating = 3** because CACFP sets minimums for all children and allows additional portions for infants as needed and for older children (does not address limiting portions or individual caloric needs overall).

4 = State **both** of the following:

-Require/encourage **additional servings for** children whose **individual caloric needs** for nutritious foods **exceed age-appropriate portions**

-Require/recommend **monitoring portion size for children who require limited portions**

⁴⁰ Prior to 2011, states requiring adherence to MyPyramid without additional text earned a rating = 2 for this variable, because the program did not mention the adequacy or sufficiency of servings to meet individual caloric needs or monitoring or limitation of portions.

NG1 (LIMIT SALT)

Limit salt by avoiding salty foods such as chips and pretzels.

Ratings are assigned as follows for rules that:

- 1 = Permit serving salty foods (e.g., chips, pretzels)
- 2 = Do not mention restrictions on salty foods such as chips and pretzels

NOTE: *If a state refers **CACFP** without additional text pertinent to salt, the rating = 2 as salty foods are not addressed the Meal Pattern.*

- 3 = Require/recommend limitation of salt by avoiding salty foods, with **some limitation/contradictory** statement
- 4 = Require/recommend limitation of salt, avoiding salty foods (e.g., chips, pretzels)⁴¹

⁴¹ Prior to 2011, states requiring adherence to MyPyramid without additional text earned a rating = 4 for this variable, because the program recommended limiting salt and salty foods in the diet.

NG2 (AVOID SUGAR)

Avoid sugar, including concentrated sweets such as candy, sodas, sweetened drinks, fruit nectars, and flavored milk.

NOTE: *As the CFOC standard does not specify a quantity or frequency for serving sugar and concentrated sweets, the critical issue for assigning ratings is whether states include some limitation or avoidance language in their rules, even if high limits are set (e.g., serving multiple times per week).*

Ratings are assigned as follows for rules that:

1 = Permit **some/all sugary foods** without reference to limitation (concentrated sweets such as candy, sodas, sweetened drinks, fruit nectars, and flavored milk)

NOTE: *If a state refers CACFP without additional text pertinent to sugar and sweets, the rating = 1 as the Meal Pattern allows sweetened yogurt and flavored milk.*

2 = Do not mention avoidance of sugary foods (concentrated sweets such as candy, sodas, sweetened drinks, fruit nectars, and flavored milk)

3 = Require/recommend **limited consumption** of concentrated sweets (such as candy, sodas, sweetened drinks, fruit nectars, and flavored milk)⁴² (**Raters:** *Implication is that **some** concentrated sweets may be consumed.*)

4 = Require/recommend **avoidance** of concentrated sweets (such as candy, sodas, sweetened drinks, fruit nectars, and flavored milk) (**Raters:** *Implication is that consumption of concentrated sweets is **rare or disallowed.***)

⁴² Prior to 2011, states requiring adherence to MyPyramid without additional text earned a rating = 3 for this variable, because the program recommended limited consumption of concentrated sweets and not adding sugar to foods.

NH1 (FORCE/BRIBERY)**Do not force or bribe children to eat.*****Ratings are assigned as follows for rules that:***

- 1 = Permit bribing or forcing children to eat (explicitly) (e.g., “must clean plate”)
- 2 = Do not mention force or bribery related to eating⁴³

NOTE: *If a state refers CACFP without additional text, the rating = 2 as they do not mention force or bribery related to eating.*

- 3 = State **one** of the following:
- Prohibit forcing children to eat
 - Prohibit bribing children to eat
- 4 = Prohibit forcing **and** bribing children to eat

⁴³ Prior to 2011, states requiring adherence to MyPyramid without additional text earned a rating = 2 for this variable, because the program did not mention force or bribery related to eating.

NH2 (MISUSE OF FOOD)

Do not use food as a reward or punishment.***Ratings are assigned as follows for rules that:***

1 = Permit use of food as reward and/or punishment (explicitly) (e.g., “treats may be used to reward desired behaviors”)

2 = Do not mention use of food as reward, nor as punishment⁴⁴

NOTE: *If a state refers CACFP without additional text, the rating = 2 as they do not mention use of food as reward or punishment.*

3 = State **one** of the following (but not both)

-Prohibit use of food as reward

-Prohibit use of food as punishment

4 = Prohibit use of food as reward, and as punishment

⁴⁴ Prior to 2011, states requiring adherence to MyPyramid without additional text earned a rating = 2 for this variable, because the program did not mention use of food as reward or punishment.

PHYSICAL ACTIVITY AND SCREEN TIME VARIABLES AND RATING SCALES⁴⁵

NOTE: A variable code (first column in table below) followed by the symbol ♦ indicates that the variable was derived from content of two PCO2/CFOC3 standards. The Appendix at the end of this document identifies the source standard(s) for each ASHW variable.

ASHW VARIABLE #	TEXT
PA1	Provide children with adequate space for both inside and outside play.
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.
PA3	Develop written policies on the promotion of physical activity and the removal of potential barriers to physical activity participation.
PA4	Require caregivers/teachers to promote children's active play, and participate in children's active games at times when they can safely do so.
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.
PB1	Do not utilize media (television [TV], video, and DVD) viewing and computers with children younger than two years.
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).
PB3	Use screen media with children age two years and older only for educational purposes or physical activity.

⁴⁵ In 2010, states referring to MyPyramid or Food Pyramid without additional text pertinent to selected physical activity/screen time variables were assigned scores for those variables based on the NRC scoring of the USDA MyPyramid Food Guidance System. MyPyramid was phased out in 2011 and scores were no longer assigned to ASHW variables on the basis of reference to this program. References to MyPyramid occurred in two states' documents examined in 2010 and none in 2011 and 2012.

ASHW VARIABLE #	TEXT
PB4	Do not utilize TV, video, or DVD viewing during meal or snack time.
PC1	Provide daily for all children, birth to six years, two to three occasions of active play outdoors, weather permitting.
PC2	Allow toddlers sixty to ninety minutes per eight-hour day for vigorous physical activity.
PC3	Allow preschoolers ninety to one-hundred and twenty minutes per eight-hour day for vigorous physical activity.
PD1 [♦]	Provide daily for all children, birth to six years, two or more structured or caregiver/ teacher/ adult-led activities or games that promote movement over the course of the day—indoor or outdoor.
PE1	Ensure that infants have supervised tummy time every day when they are awake.
PE2	Use infant equipment such as swings, stationary activity centers (ex. exersaucers), infant seats (ex. bouncers), molded seats, etc. only for short periods of time if at all.

PA1 (SPACE FOR PLAY, INSIDE AND OUTSIDE)

Provide children with adequate space for both inside and outside play.

Ratings are assigned as follows for rules that:

1 = Contradict standard component

2 = Do not mention space required for physical activity (play)

3 = State **one** of the following (but not both)

-Require/recommend space for **inside** play **or** require/recommend space for **outside** play

OR

-Require/recommend space (location undefined) for physical activity (e.g., movement, exercise, free play)

4 = State **both** of the following:

-Require/recommend space for inside physical activity (play)

-Require/recommend space for outside physical activity (play)

OR

- Require/recommend space explicitly in one location, inside or outside, for physical activity (play), and it may be inferred, readily and logically, through additional language that space in the second location is also required (i.e., such as mention of equipment for physical activity in that location or mention of the kinds of physical activity that require space to execute in that location)⁴⁶

NOTE: If both indoor and outdoor areas are required/recommended, the assumption is that they are for play, unless specifically stated otherwise.

⁴⁶ This criterion was added in 2012 to clarify rating new language in a state's rules.

PA2 (CAREGIVERS/TEACHERS ORIENTATION/TRAINING, PHYSICAL ACTIVITY)

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.

Raters: *Emphasis in rating is on the **training in Physical Activity**, rather than age-appropriateness.*

Ratings are assigned as follows for rules that:

1 = Contradict standard component

2 = Do not mention **training** (orientation or continuing education) for caregivers/teachers **specific to aspects of physical activity (or gross motor activity)**

3 = State **one** of the following (but not both):

-Require/recommend **orientation** for caregivers/teachers about gross motor activities and/or games that promote children’s **physical activity**

OR

-Require/recommend **annual training (continuing education)** for caregivers/teachers to learn about gross motor activities and/or games that promote children’s **physical activity**

4 = State **both** of the following:

-Require/recommend **orientation** for caregivers/teachers about gross motor activities and/or games that promote children’s **physical activity**

AND

-Require/recommend annual training (continuing education) for caregivers/teachers to learn about gross motor activities and/or games that promote children’s **physical activity**

PA3 (PHYSICAL ACTIVITY POLICIES ON THE PROMOTION/BARRIERS TO PARTICIPATION)

Develop written policies on the promotion of physical activity and the removal of potential barriers to physical activity participation.

Ratings are assigned as follows for rules that:

- 1 = Contradict the standard component
- 2 = Do not mention policies on promotion of physical activity **nor** on removal of barriers to activity (**Raters: Both promotion and removal of barriers are absent.**)
- 3 = State **one** of the following (but not both):
- Require/recommend policies on the **promotion of physical activity**
- OR**
- Require/recommend policies on **removal of potential barriers** to physical activity participation
- 4 = State **both** of the following:
- Require/recommend written policies on the **promotion of physical activity**
- AND**
- Require/recommend written policies on **removal of potential barriers** to physical activity participation

PA4 (CAREGIVERS/TEACHERS PARTICIPATE IN ACTIVE PLAY)

Require caregivers/teachers to promote children’s active play, and participate in children’s active games at times when they can safely do so.

Raters: *The emphasis in this rating is **participation in**, versus **teacher-led**, activities. “**Participation**” requires the teacher to be **physically active**.*

Ratings are assigned as follows for rules that:

- 1 = Contradict the standard component (e.g., text that requires teachers to be stationary)
- 2 = Do not mention caregiver/teacher physical **participation** in physical activity
- 3 = Require/recommend caregiver/teacher **physical (or active) participation** in children’s active games, with some limitation/contradictory statement (*Limitation must be **other than** “when safe do so,” or similar language.*)
- 4 = Require/recommend caregiver/teacher **to physically (or actively) participate** in children’s active games (*may include “when safe do so,” or similar language*)

PA5 (DO NOT WITHHOLD ACTIVE PLAY)

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.

Ratings are assigned as follows for rules that:

- 1 = Permit withholding active play from children who misbehave for punitive purposes (explicitly)
- 2 = Do not mention withholding active play from children who misbehave
- 3 = Permit some withholding of active play from children who misbehave for calming periods of more than five minutes
- 4 = Prohibit withholding active play from children who misbehave, **or** prohibit withholding active play except for five minutes or less calming periods for out-of-control behavior

NOTE: If the document states the length of time-out for behavior is 5 minutes or less or according to the rule of 1 minute per year of age, there is no penalty for time out.

PB1 (NO MEDIA EXPOSURE, UNDER TWO YEARS OF AGE)

Do not utilize screen media (e.g., television, video, and DVD) viewing and computers with children younger than two years.

Ratings are assigned as follows for rules that:

- 1 = Permit **unlimited use** of screen media for children **younger than two years** (explicitly)
- 2 = Do not mention of screen media usage for children **younger than two years**
- 3 = Permit **some/limited** use of screen media for children **younger than two years**
- 4 = **Prohibit use** of screen media for children **younger than two years**

PB2 (WEEKLY MEDIA TIME, AGE TWO YEARS AND OLDER)

Limit total screen media time for children two years and older to not more than 30 minutes once a week; Limit screen time (TV, DVD, computer time).

Ratings are assigned as follows for rules that:

- 1 = Permit unlimited screen time for children **2 and older** (explicitly)
- 2 = Do not mention of limiting screen time for children **2 and older**
- 3 = Limit screen time for children **2 and older**, but **amount of time** either **exceeds 30 minutes per week** or **time limit is unspecified**⁴⁷
- 4 = **Limit** screen time for children **2 and older to 30 minutes per week or less**

⁴⁷ Prior to 2011, states requiring adherence to MyPyramid without additional text earned a rating = 3 for this variable, because the program recommended limitation of screen time without specifying length of time.

PB3 (PURPOSE OF MEDIA USAGE, TWO YEARS OF AGE AND OLDER)

Use screen media with children age two years and older only for educational purposes or physical activity.

*NOTE: Specification of the **purposes** for which screen media are used is rated here.*

Ratings are assigned as follows for rules that:

- 1 = Permit use of screen media for **purposes excluding education or physical activity**
*(Raters: Text must **specify** purposes other than **education or physical activity** with no mention of education or physical activity to get a “1.”)*
- 2 = **Do not mention purposes** for which screen media should be used⁴⁸
- 3 = Require/recommend **usage** of screen media **specifically for educational or physical activity** purposes, with some exception/contradictory statement (e.g., “special occasions” or “entertainment”)
- 4 = Require/recommend **usage** of screen media **only for educational or physical activity purposes**

⁴⁸ Prior to 2011, states requiring adherence to MyPyramid without additional text earned a rating = 2 for this variable, because the program did not mention purposes for which screen media was used.

PB4 (NO VISUAL MEDIA DURING MEALS/SNACKS)

Do not utilize TV, video, or DVD viewing during meal or snack time.

Ratings are assigned as follows for rules that:

- 1 = Permit use of screen media at meal/snack time (explicitly).
- 2 = Do not mention screen media usage during meals/snack⁴⁹
- 3 = Prohibit use of screen media during meals/snacks with some limitation/contradictory statement (e.g., exception for watching a film during a birthday celebration **snack time**)
- 4 = Prohibit use of screen media during meals/snacks

⁴⁹ Prior to 2011, states requiring adherence to MyPyramid without additional text earned a rating = 2 for this variable, because the program did not prohibit screen media usage during meals/snacks.

PC1 (FREQUENCY OF OUTDOOR PLAY)

Provide daily for all children, birth to six years, two to three occasions of active play outdoors, weather permitting.

Ratings are assigned as follows for rules that:

- 1 = Contradict the standard component
- 2 = Do not mention requiring daily outdoor play
- 3 = State **one or two** of the following (but not all three):
- Require/recommend **outdoor play daily** (may include “weather permitting” or similar language)
 - Require/recommend **two to three occasions** of outdoor play per day (may include “weather permitting” or similar language)
 - Require/recommend outdoor play **for all age children (birth to six)** (may include “weather permitting” or similar language)
- 4 = State **all three** of the following:
- Require/recommend **outdoor play daily** (may include “weather permitting” or similar language)
 - Require/recommend **two to three occasions** of outdoor play per day (may include “weather permitting” or similar language)
 - Require/recommend outdoor play **for all age children (birth to six)** (may include “weather permitting” or similar language)

PC2 (AMOUNT OF DAILY PHYSICAL ACTIVITY, TODDLER)

Allow toddlers sixty to ninety minutes per eight-hour day for vigorous physical activity.

Raters:

Defining time: For Component 226, which examines time allotment for activities, some states may specify minutes per period of hours, rather than total minutes per day. This requires that you calculate the total minutes that would accrue over an eight-hour day to determine the appropriate rating.

Defining physical activity levels: If a state uses language such as “running, skipping, jumping, or climbing” or states ‘moderate to vigorous’ physical activity, they should get credit for moderate to vigorous physical activity. If a state uses language such as ‘play’ or ‘activity’ for the specified time period they should get credit for an unspecified level physical activity. If a state simply says to ‘be’ outside or set aside a specified time without using any language that indicates action, they should not get credit for physical activity.

Applicability: This component only applies to full time (8 or more hours) child care. Conflicting information for additional part-time programs will not result in a lower score. The physical activity may be indoors or outdoors, and the state rating should not be lowered because of ‘weather permitting’ language for outdoor activity.

Ratings are assigned as follows for rules that:

- 1 = Contradict the standard component
- 2 = Specify **neither** require/recommend length of time **nor** level of physical activity/active play for toddlers (or ‘all children’)
- 3 = Specify one of the following:
 - Require/recommend a **specified duration for moderate or vigorous physical activity for toddlers (or ‘all children’), but less than 60 minutes** per eight-hour day
 - Require/recommend a **minimum of 60 minutes of physical activity for toddlers (or ‘all children’)**, but do not specify **level of physical activity**⁵⁰ (Raters: See above terms in defining physical activity.)
 - Require/recommend **any length of time for toddlers (or ‘all children’)** for a list of activities that includes **both physical and non-physical activity** (Raters: The implication is that a portion of the time is spent in physical activity.)
- 4 = Require/recommend **60 or more minutes of moderate to vigorous physical activity** (e.g., running, skipping, jumping, climbing) per eight-hour day for **toddlers (or ‘all children’)**

⁵⁰ Prior to 2011, states requiring adherence to MyPyramid without additional text earned a rating = 3 for this variable, because the program recommended 60 minutes of physical activity daily.

PC3 (AMOUNT OF DAILY PHYSICAL ACTIVITY, PRESCHOOLER)

Allow preschoolers ninety to one-hundred and twenty minutes per eight-hour day for vigorous physical activity.

Raters:

Defining time: For Component 227, which examines time allotment for activities, some states may specify minutes per period of hours, rather than total minutes per day. This requires that you calculate the total minutes that would accrue over an eight-hour day to determine the appropriate rating.

Defining physical activity levels: If a state uses language such as “running, skipping, jumping, or climbing” or states ‘moderate to vigorous’ physical activity, they should get credit for moderate to vigorous physical activity. If a state uses language such as ‘play’ or ‘activity’ for the specified time period they should get credit for an unspecified level physical activity. If a state simply says to ‘be’ outside or set aside a specified time without using any language that indicates action, they should not get credit for physical activity.

Applicability: This component only applies to full time (8 or more hours) child care. Conflicting information for additional part-time programs will not result in a lower score. The physical activity may be indoors or outdoors, and the state rating should not be lowered because of ‘weather permitting’ language for outdoor activity.

Ratings are assigned as follows for rules that:

- 1 = Contradict the standard component
- 2 = Specify **neither** require/recommend length of time **nor** level of physical activity/active play for preschoolers (or ‘all children’)
- 3 = Specify one of the following:
 - Require/recommend a **specified duration for moderate or vigorous physical activity for preschoolers (or ‘all children’), but less than 90 minutes** per eight-hour day
 - Require/recommend a **minimum of 90 minutes of physical activity for preschoolers (or ‘all children’)**, but do not specify **level of physical activity** (Raters: See above terms in defining physical activity.)
 - Require/recommend **any length of time for preschoolers (or ‘all children’)** for a list of activities that includes **both physical and non-physical activity**⁵¹ (Raters: The implication is that a portion of the time is spent in physical activity.)
- 4 = Require/recommend **90 or more minutes of moderate to vigorous physical activity** (e.g., running, skipping, jumping, climbing) per eight-hour day for **preschoolers (or ‘all children’)**

⁵¹ Prior to 2011, states requiring adherence to MyPyramid without additional text earned a rating = 3 for this variable, because the program recommended 60 minutes of physical activity daily.

PD1 (CAREGIVER/TEACHER-LED PHYSICAL ACTIVITIES)

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.

Raters: *The emphasis in this rating is **explicit requirement of***

- 1) Language that relates specifically to physical activity, and
- 2) That the **physical activity is teacher-led, -directed, or structured versus participating in**

(Simply listing of “physical activity” as a required or recommended activity does not imply teacher-led. Structured play implies teacher-led. A “teacher-led activity” does not imply physical activity.)

Ratings are assigned as follows for rules that:

- 1 = Contradict the standard component (e.g., text explicitly allowing only free play)
- 2 = Do not mention requiring **caregiver/teacher-led** (or structured) **physical activity**
- 3 = States **one** of the following:
- Require/recommend unspecified number or frequency of **caregiver/teacher-led** (or structured) **physical activities**
- OR**
- Require/recommend unspecified number or frequency of **caregiver/teacher-led** (or structured) **physical activities for all children, birth to six years**
- OR**
- Require/recommend **caregiver/teacher-led** (or structured) **physical activities twice or more daily, without specification of “all children,” or ages birth-six years**
- 4 = Require/recommend **caregiver/teacher-led** (or structured) **physical activities twice or more daily for all children, birth to six years**

PE1 (TUMMY TIME)

Ensure that infants have supervised tummy time every day when they are awake.

Ratings are assigned as follows for rules that:

- 1 = Contradict the standard component
- 2 = Do not require/recommend tummy time for infants
- 3 = Require/recommend some, **but not daily**, supervised tummy time for infants
- 4 = Require/recommend daily, supervised tummy time for infants

PE2 (USE OF INFANT EQUIPMENT)

Use infant equipment such as swings, stationary activity centers (e.g., exersaucers), infant seats (e.g., bouncers), molded seats, etc. only for short periods of time if at all.

Raters:

Time limit for highest rating below is based upon wording from Standard on Active Opportunities for Active Play (p.52 in PCO standards book). (Infant equipment in this component excludes cribs and playpens).

Children should not be seated for more than fifteen minutes at a time, except during meals or naps. Infant equipment such as swings, stationary activity centers (ex. exersaucers), infant seats (ex. bouncers), molded seats, etc. if used should only be used for short periods of time. A least restrictive environment should be encouraged at all times. (5,6, 26)

NOTES: Time spent in **cribs and playpens** for sleeping is allowable. The implication for lower scoring is that the stationery time is for the convenience of the provider.

Where states specify numbers of minutes and also use qualifiers such as “brief,” “short,” or “limited,” the rating should be made on the basis of the numbers of minutes.

Ratings are assigned as follows for rules that:

- 1 = Permit **extended usage** of infant equipment (swings, stationary activity centers, such as exersaucers, infant seats such as bouncers, molded seats, etc.), that is, **longer than 30 minutes**
- 2 = **Do not mention length** (in minutes, hours)/**extent** (in qualifiers such as “brief,” “short,” “limited”) **of usage** of infant equipment of infant equipment (swings, stationary activity centers, such as exersaucers, infant seats such as bouncers, molded seats, etc.)
- 3 = Permit **limited use** (or other qualifier such as as “brief,” “short,” “limited”) of infant equipment (swings, stationary activity centers, such as exersaucers, infant seats such as bouncers, molded seats, etc.), that is, **16 to 30 minutes** (If the regulations use descriptive terminology without a prescribed time-limit, the rating is a 3.)
- 4 = **Prohibit usage** of infant equipment (swings, stationary activity centers, such as exersaucers, infant seats such as bouncers, molded seats, etc.) **for periods greater than 15 minutes**

APPENDIX

Appendix Table 1 displays the source standards in *PCO2* and *CFOC3* from which the *ASHW* study variables were derived. The link to the NRC's searchable *CFOC3* data base (<http://cfoc.nrckids.org/index.cfm>) enables viewing the complete standard(s), rationale, references and related standards for each study variable. The page numbers of source standards in the print copies of *PCO2* and *CFOC3* also are provided.

Multiple source variables. The concepts captured in some *ASHW* variables are present in different contexts in more than one *PCO2/CFOC3* standard. For example, the Infant Feeding variable 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* variables that were informed by more than one standard, including the numbers and names of the standards.

Supplementary components. The *ASHW 2010* baseline report described the empirical process by which high impact variables were identified in the expert workgroup convened in the NRC 2010 Healthy Weight Meeting. When, as detailed in *ASHW 2010*, selection criteria were applied to data generated by the workgroup, a few gaps in representation of age ranges and constructs emerged. NRC staff addressed these gaps by adding *supplementary components* to create full coverage of all ages and parallel constructs across content areas (in general, supplementary components were quite close to the statistical cut-off point for variable selection). These supplementary components are identified in the table below where an *ASHW* variable number (listed in the first column in the table below) is followed by the symbol "∗." The rationale for addition of the supplementary component is also provided.

Excluded content. In addition, a few of the components of *PCO2/CFOC3* standards that were rated high in impact on obesity prevention were not retained in the study variables as they: a) could not be scaled to yield reliable ratings, b) could not be scaled independently of more inclusive variables, or c) were taken into account by the NRC's treatment of the Child; and Adult Care Food Program (CACFP). These high impact components of standards and the rationales for their exclusion from the *ASHW* variable set is presented in Appendix Table 2. Excluded Content.

APPENDIX TABLE 1. SOURCE OF ASHW VARIABLES IN PCO2/CFOC3 STANDARDS

INFANT FEEDING					
ASHW Variable #	ASHW Variable Text	2010 Healthy Weight Advisors High Impact Components (component #)	Source of Variable in CFOC3 Standards:	Print copy pg #	
				PCO2	CFOC3
IA1	Encourage and support breastfeeding and feeding of breast milk by making arrangements for mothers to feed their children comfortably on-site.	Encourage and support breastfeeding and feeding of breast milk by making arrangements for mothers to feed their children comfortably on-site (# 64)	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.	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 (#15)	4.3.1.7 - Feeding Cow's Milk & 4.2.0.4 - Categories of Foods	39 & 18	169 & 155
IB1	Feed infants on cue.	Feed infants on cue (#68)	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.	Do not feed infants beyond satiety; & Allow infant to stop the feeding (#s70 & 101)	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.	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 (#s100 & 101)	4.3.1.8 - Techniques for Bottle Feeding	33	170

INFANT FEEDING					
ASHW Variable #	ASHW Variable Text	2010 Healthy Weight Advisors High Impact Components (component #)	Source of Variable in CFOC3 Standards:	Print copy pg #	
				PCO2	CFOC3
IC1	Develop a plan for introducing age-appropriate solid foods (complementary foods) in consultation with the child's parent/guardian and primary care provider.	Develop a plan for introducing age-appropriate solid foods (complementary foods) in consultation with the child's parent/guardian and primary care provider (#127)	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.	Introduce age-appropriate solid foods no sooner than 4 months of age, and preferably around 6 months of age, and as indicated by the individual child's nutritional and developmental needs in consultation with child's parent/guardian and primary care provider (#128)	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.	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 (#129)	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.	Do not feed an infant formula mixed with cereal, fruit juice or other foods unless the primary care provider provides written instruction (#96)	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.	Serve whole fruits, mashed or pureed, for infants 7 months up to one year of age (#11)	4.2.0.4 - Categories of Foods	18	155

INFANT FEEDING					
ASHW Variable #	ASHW Variable Text	2010 Healthy Weight Advisors High Impact Components (component #)	Source of Variable in CFOC3 Standards:	Print copy pg #	
				PCO2	CFOC3
ID3	Serve no fruit juice to children younger than 12 months of age.	Serve no fruit juice to children younger than 12 months of age (#12)	4.2.0.4 - Categories of Foods & 4.2.0.7 - 100% Fruit Juice	18 & 21	155 & 157

NUTRITION					
ASHW Variable #	ASHW Variable Text	2010 Healthy Weight Advisors High Impact Components (component #)	Source of Variable in CFOC3 Standards:	Print copy pg #	
				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.	Limit oils by choosing monounsaturated and polyunsaturated fats (such as olive oil or safflower oil) and avoiding trans fats, saturated fats and fried foods. (#20)	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.	Serve meats and/or beans - chicken, fish, lean meat, and/or legumes (such as dried peas, beans), avoiding fried meats. (#19)	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.	Serve other milk equivalent products such as yogurt and cottage cheese, using low-fat varieties for children 2 years of age and older. (#18)	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	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. (#152)	4.3.2.3 - Encouraging Self-Feeding by Older Infants and Toddlers	39	175

NUTRITION					
ASHW Variable #	ASHW Variable Text	2010 Healthy Weight Advisors High Impact Components (component #)	Source of Variable in CFOC3 Standards:	Print copy pg #	
				PCO2	CFOC3
NA5	Serve skim or 1% pasteurized milk to children two years of age and older.	Serve skim or 1% pasteurized milk to children two years of age and older. (#153)	4.3.2.3 - Encouraging Self-Feeding by Older Infants and Toddlers	39	175
NB1	Serve whole grain breads, cereals, and pastas.	Serve whole grain breads, cereals, and pastas. (#8)	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.	Serve vegetables, specifically, dark green, orange, deep yellow vegetables; and root vegetables, such as potatoes and viandas. (#9)	4.2.0.4 - Categories of Foods	18	155
NB3	Serve fruits of several varieties, especially whole fruits.	Serve fruits of several varieties, especially whole fruits. (#10)	4.2.0.4 - Categories of Foods	18	155
NC1	Use only 100% juice with no added sweeteners.	Use only 100% juice with no added sweeteners, and offer only during meal times. (#39a)	4.2.0.7 - 100% Fruit Juice	21	157
NC2	Offer juice only during meal times.	Use only 100% juice with no added sweeteners; and offer only during meal times. (#39b)	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.	Serve no more than 4 to 6 oz juice/day for children 1-6 years of age. (#13)	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.	Serve no more than 8 to 12 oz juice/day for children 7-12 years of age. (#14)	4.2.0.4 - Categories of Foods & 4.2.0.7 - 100% Fruit Juice	18 & 21	155 & 157

NUTRITION					
ASHW Variable #	ASHW Variable Text	2010 Healthy Weight Advisors High Impact Components (component #)	Source of Variable in CFOC3 Standards:	Print copy pg #	
				PCO2	CFOC3
ND1 [♦]	Make water available both inside and outside.	Make water available inside and outside. (#34) Supplementary Component Rationale: Completed coverage of beverage content, given restrictions on juice and elimination of sweetened beverages, water is beverage of default (after infancy).	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.	Teach children appropriate portion size by using plates, bowls and cups that are developmentally appropriate to their nutritional needs; & Teach children about appropriate portion sizes. (#s 147 & 205)	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.	Require adults eating meals with children to eat items that meet nutrition standards. (#163)	4.5.0.4 - Socialization During Meals	41	179
NF1	Serve small-sized, age-appropriate portions.	Serve small-sized, age-appropriate portions. (#144)	4.3.2.2 - Serving Size for Toddlers and Preschoolers	38	174
NF2 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.	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. (#s 145 & 168)	4.3.2.2 - Serving Size for Toddlers and Preschoolers & 4.5.0.4 - Socialization During Meals	38 & 41	174 & 179

NUTRITION					
ASHW Variable #	ASHW Variable Text	2010 Healthy Weight Advisors High Impact Components (component #)	Source of Variable in CFOC3 Standards:	Print copy pg #	
				PCO2	CFOC3
NG1 [◆]	Limit salt by avoiding salty foods such as chips and pretzels.	Limit salt by avoiding salty foods such as chips and pretzels. (#22) Supplementary Component Rationale: Completed Nutrition content--foods to limit/avoid	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.	Avoid sugar, including concentrated sweets such as candy, sodas, sweetened drinks, fruit nectars, and flavored milk. (#21)	4.2.0.4 - Categories of Foods	18	155
NH1	Do not force or bribe children to eat.	Do not force or bribe children to eat. (#183)	4.5.0.11 - Prohibited Uses of Food	43	182
NH2	Do not use food as a reward or punishment.	Do not use food as a reward or punishment. (#184)	4.5.0.11 - Prohibited Uses of Food	43	182

PHYSICAL ACTIVITY/SCREEN TIME					
ASHW Variable #	ASHW Variable Text	2010 Healthy Weight Advisors High Impact Components (component #)	Source of Variable in CFOC3 Standards:	Print copy pg #	
				PCO2	CFOC3
PA1	Provide children with adequate space for both inside and outside play.	Provide children with adequate space for both inside and outside play. (#237)	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.	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. (#256)	3.1.3.4 - Caregivers'/Teachers' Encouragement of Physical Activity	57	95

PHYSICAL ACTIVITY/SCREEN TIME					
ASHW Variable #	ASHW Variable Text	2010 Healthy Weight Advisors High Impact Components (component #)	Source of Variable in CFOC3 Standards:	Print copy pg #	
				PCO2	CFOC3
PA3	Develop written policies on the promotion of physical activity and the removal of potential barriers to physical activity participation.	Develop written policies on the promotion of physical activity and the removal of potential barriers to physical activity participation. (#258)	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.	Require caregivers/teachers to promote children's active play, and participate in children's active games at times when they can safely do so. (#250)	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.	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. (#233) Supplementary Component Rationale: Addresses prohibited uses of physical activity; theoretical equivalent of prohibited use of food.	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.	Do not utilize media (television [TV], video, and DVD) viewing and computers with children younger than two years. (#269) Supplementary Component Rationale: Completed age range coverage	2.2.0.3 - Limiting Screen Time – Media, Computer Time	59	66

PHYSICAL ACTIVITY/SCREEN TIME					
ASHW Variable #	ASHW Variable Text	2010 Healthy Weight Advisors High Impact Components (component #)	Source of Variable in CFOC3 Standards:	Print copy pg #	
				PCO2	CFOC3
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).	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). (#s 270a & 257)	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.	Use [screen media] only for educational purposes or physical activity; Limit screen time) (#s 270 b & 257)	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.	Do not utilize TV, video, or DVD viewing during meal or snack time. (#271)	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.	Provide daily for all children, birth to six years, two to three occasions of active play outdoors, weather permitting. (#221)	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.	Allow toddlers sixty to ninety minutes per eight-hour day for vigorous physical activity. (#226)	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.	Allow preschoolers ninety to one-hundred and twenty minutes per eight-hour day for vigorous physical activity. (# 227)	3.1.3.1 - Active Opportunities for Physical Activity	52	90

PHYSICAL ACTIVITY/SCREEN TIME					
ASHW Variable #	ASHW Variable Text	2010 Healthy Weight Advisors High Impact Components (component #)	Source of Variable in CFOC3 Standards:	Print copy pg #	
				PCO2	CFOC3
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.	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; & Require caregivers/teachers to lead structured activities to promote children’s activities two or more times per day. (#s 222 & 251; 222 entirely encompasses 251)	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.	Ensure that infants have supervised tummy time every day when they are awake. (#228) Supplementary Components Rationale: Completed Physical Activity coverage of age ranges (infants), with 235 (below)	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.	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. (#235) Supplementary Components Rationale: Completed Physical Activity coverage of age ranges (infants), with 228 (above)	3.1.3.1 - Active Opportunities for Physical Activity	51	90

APPENDIX TABLE 2. EXCLUDED CONTENT

Components of *PCO2/CFOC3* standards that were not retained as ASHW variables)

Component #	Text of High Impact Component	Source of Text in <i>CFOC3</i> Standard	Print copy#		Reason for Exclusion
			<i>PCO2</i>	<i>CFOC3</i>	
7	Prepare, serve, and store meals and snacks that meet the CACFP requirements.	4.2.0.3 - Use of USDA - CACFP Guidelines	17	153	CACFP Meal Patterns were scored on applicable ASHW variables; States requiring adherence to or duplicating CACFP requirements were assigned CACFP scores, subject to ASHW rating rules
143	Provide at least the minimum amount of foods shown in the meal and snack patterns in CACFP guidelines.	4.3.2.1 - Meal and Snack Patterns for Toddlers and Preschoolers	38	174	
62	Follow CACFP guidelines in providing meals and snacks to infants.	4.3.1.1 - General Plan for Feeding Infants	26	162	
154	Follow the CACFP guidelines for meal and snack patterns shown for school-age children, at a minimum.	4.3.3.1 - Meal and Snack Patterns for School-Age Children	40	174	
146	Use serving dishes that contain the appropriate amount of food based on serving sizes or portions recommended for each child and adult as described in the CACFP guidelines.	4.3.2.2 - Serving Size for Toddlers and Preschoolers	38	174	Does not add content independent of ASHW variable NE1
219	Promote children's active play every day.	3.1.3.1 - Active Opportunities for Physical Activity	51	90	"Promote" could not be operationally define to yield reliable scoring