Achieving a State of Healthy Weight (ASHW) Methodology

The National Resource Center for Health and Safety in Child Care and Early Education (NRC) based at the University of Colorado College of Nursing designed the Achieving a State of Health Weight (ASHW) methodology in 2010 to assess all states' licensing regulations that were in effect for early care and education (ECE) programs during calendar year 2010. Licensing regulations of all states and the District of Columbia (the states, for convenience) for child care centers (CTRS), large or group family child care homes (LFCCHs), and small family child care homes (SFCCHs) were reviewed and rated. In annual updates, the ASHW assessment team screens new and revised licensing documents and rates those with new or changed rules that pertain to the ASHW 47 high-impact obesity prevention standards (HIOPS).

Note: *The NRC was funded to complete the annual ASHW assessment from 2010 to 2021. As of October 1, 2022, the NRC left the University of Colorado; however, the ASHW assessment and key team members remained at the University of Colorado. Starting with this annual report (ASHW 2022), the University of Colorado College of Nursing's Office of Research and Scholarship is now funded to complete this work. All past and present ASHW publications are now housed on the University of Colorado College of Nursing research page: https://nursing.cuanschutz.edu/research/healthy-weight. Although the Caring for Our Children (CFOC) database, where the 47 High-Impact Obesity Prevention Standards were derived, remains with the NRC, the ASHW assessment team continues to monitor CFOC changes to assess impact on future ASHW assessment years.*

The ASHW assessment team applies the following method in annual reassessments as described below. Modifications are identified with the year of adoption.

1. **Identification of new and revised child care regulations.** The ASHW assessment team assesses regulations for CTRs, LFCCHs and SFCCHs for licensure or mandatory registration. New and revised regulations made effective January 1 – December 31 of a given year are identified by monitoring states' child care licensing websites and through outreach to state licensing agencies as needed. Final website checks occur by mid-January of the following year (e.g., January 2023 for *ASHW 2022*). The ASHW assessment team downloads regulatory documents directly from the state website. Documents posted after the final check (which occurs in mid-March of the publication year) are screened in the next assessment. Periodically, the National Center for Early Childhood Quality Assurance state pages are reviewed to identify new/revised or previously missed documents (practice formally adopted 2018). Missed documents are screened and reported in the year of discovery.

2. **Categorization of documents by care type.** Most states define care types consistent with the *Caring for Our Children (CFOC)* definitions (see https://nrckids.org/files/CFOC4GuidingPrinciples.pdf). In other cases, the ASHW assessment team categorizes documents according to the best logical fit with CFOC. Prior to *ASHW 2019*, some states' center ratings also were assigned to LFCCHs if there were not separate LFCCH rules and the center definition could encompass care provided in a residence for approximately 7 – 12 children.

[1] HIOPS were referred to as ASHW variables or Healthy Weight Practices until the nomenclature was changed to HIOPS in ASHW 2019. This revised appendix replaces previous nomenclature with the term HIOPS. For more information on the HIOPS, see Origin of Achieving a State of Healthy Weight high-impact obesity prevention standards: https://nursing.cuanschutz.edu/docs/librariesprovider2/research/ashw/hiopsorigin.pdf

The ASHW assessment team discontinued this procedure as a general practice in 2019 in collaboration with the CDC Division of Nutrition Physical Activity and Obesity (DNPAO). Exceptions remain for center regulations that recognize a subtype of care that aligns substantially with the LFCCH definition (specifying location in a residence and similar group size). In these cases, center ratings remain assigned to the LFCCH category. Two examples are North Carolina (10A NCAC Chapter 9 - Child Care Rules, effective September 1, 2019) and Kentucky (922 KAR 2:090. Child-Care Center Licensure, updated August 2018). States for which the center definition could, but does not specifically, align with the CFOC LFCCH definition, no longer have LFCCH ratings. The policy change was not retroactive, so that 2010-2018 LFCCH ratings remain in the historical ASHW data sets and in prior reports and supplements.

3. **Document screening.** The ASHW assessment team screens regulatory documents visually and electronically. Revised documents are compared to the most recently rated version using Adobe® Acrobat Pro to identify new and altered text. If extensive revisions make the Adobe comparison difficult to decipher, screeners scan and search the revised document for key ASHW terms. Screeners scan new documents visually for general organization and information, and follow up with electronic searches. Review of specific sections (e.g., infant care, nutrition, prohibited practices, screen time, and physical activity) often are reread for related language not identified in searches. The ASHW assessment team screens numerous documents each year (typical range = 40-60). Since the majority of revisions are not relevant to HIOPS, a state may issue several unrated versions.

4. **Rater training.** New raters are trained to use the ASHW Rating Manual on previously assessed documents and by observing procedures and decisions during rating of a new document by an experienced rater. In the latter case, the new rater would not be assigned to rate a document used for training. ASHW rating teams achieve high inter-rater reliability (typically $r_s > 0.90$).

5. **Document rating and data entry.** Two raters independently rate each regulatory document on 47 ASHW HIOPS using the ASHW Rating Manual (last updated February 2023). The manual defines rules for assignment of rating values, with specific guidelines for each HIOPS. The manual uses a four-point scale (1 to 4), where:

    1 = Regulation contradicts the HIOPS
    2 = Regulation does not address the HIOPS
    3 = Regulation partially supports the HIOPS
    4 = Regulation fully supports the HIOPS

If a state does not regulate a specific child care type, ratings of "0" are displayed for the care type for all HIOPS on the state profile page in ASHW Supplements. In instances where states have more than one relevant document for a child care type, all of the documents are rated and entered into an ASHW database, a Microsoft Access database management system. Both raters record her/his ratings for a document in the database, along with text justifying the rating.

6. **Resolution of discrepant ratings.** When raters disagree, the raters meet with the assessment team arbitrator to determine the appropriate value. Occasionally, the conferences point to the need to include a new search term or more clarification in the ASHW Rating Manual. If new search terms or guidance are added to the manual, the amended guidance is not applied to past ratings. The update rating rules would be applied the next time a state's documents are rated.

7. **"CACFP States."** CFOC standard 4.2.0.3: Use of US Department of Agriculture Child and Adult Care Food Program Guidelines (CACFP) encourages following CACFP guidelines. Many states align some nutrition and infant feeding regulations with CACFP by requiring licensed programs to follow the guidelines, whether or not they formally participate in CACFP. The ASHW assessment team refers to these states as "CACFP states." The CACFP Meal and Snack Patterns include guidance related to ASHW HIOPS in nutrition and infant feeding. The ASHW assessment team rated the patterns in 2010 (with subsequent adjustments for CACFP updates in 2011 and 2017). The ASHW assessment team assigns the ratings earned by the CACFP to selected HIOPS for the impacted care type(s), taking into account any state specific regulatory text that may raise or lower the rating. Where CACFP lacks related content, ratings are based upon state text alone.

   In 2011, CACFP added new for the availability of water and serving only skim or 1% milk to children age 2 years and older. The ASHW assessment team revised the ASHW Rating Manual, and improved ratings for "CACFP states in *ASHW 2012*. More CACFP updates became mandatory for participating programs in October 2017. The ASHW assessment team again revised the ASHW Rating Manual in *ASHW 2017*, and CACFP states were assigned improved ratings (no CACFP ratings declined), contingent upon additional state text and the following decision rules.

States with older regulations that included only reproduced versions of the earlier Meal Patterns, or only outdated text from the Meal Pattern with no additional information encouraging the reader to seek out updates did not receive the 2017 CACFP improvements. They retained their ratings based on CACFP as of 2012. The ASHW assessment team's 2017 CACFP decision rules remain in effect for regulatory revisions going forward (adopted 2018).

Starting with *ASHW 2022*, the criteria used to identify a state as a "CACFP state" was modified. State child care regulations that included only "USDA Guidelines," outdated meal pattern charts, or reproduced similar (but not verbatim) meal pattern charts do not receive CACFP credit. Previously, the ASHW assessment team gave states credit that verbally confirmed that "USDA Guidelines" was equivalent to CACFP, when there was an absence of meal pattern charts or further clarification in the regulations. This change of methodology to determine CACFP status was announced in the *ASHW 2021* Annual Report.

8. **Establishment of annual "final ratings."** ASHW calculations use a single score for each HIOPS for each regulated care type. Where multiple documents regulate a given care type in a state and the ratings differ among documents, the highest rating for the HIOPS prevails as the "final rating" (an *ASHW 2010* policy). The rationale for the policy is that providers must observe all existing pertinent regulations, so the regulation that rates higher supplants a lower-rated one.

9. **Data corrections.** Three types of past errors account for most corrections of previously published data. They are: 1) single rating errors such as data entry errors; 2) missed documents; and, 3) inappropriate award in 2010 of CACFP values based on reference to USDA Dietary Guidelines rather than CACFP. When past erroneous ratings are identified, the ASHW assessment team updates the ASHW database to reflect the corrected values. Through *ASHW 2018*, when the ASHW assessment team formalized its Data Quality Assurance (QA) Plan, data corrections were retroactive from the year in which they occurred through subsequent years until replaced by ratings of a later revision. From *ASHW 2019* onward, data corrections are no longer retroactive. A correction is made in the year of identification (as determined in collaboration with the CDC DNPAO, 2019). Earlier published ASHW reports and supplements do not reflect subsequently corrected data.

10. **Data analysis and presentation.** The ASHW assessment team exports annual ratings from the ASHW Database to Excel for generation of charts and tables and comparison of current year data to baseline data. Team members review the output to determine key findings for the ASHW reports. *ASHW 2010* through *ASHW 2012* were single volume presentations of national findings and included state profile pages (tables of each state's ratings for all 47 HIOPS and all care types). For *ASHW 2013* through *ASHW 2018*, the yearly changes and current national overview were retained in an ASHW report, and the state profile pages were presented separately in an ASHW supplement. Beginning with *ASHW 2019*, state profiles appear in a supplement for each care type (i.e., three supplements): centers, large family child care homes and small family child care homes.

11. **Computation of Summary Scores.** Beginning with *ASHW 2013*, the ASHW assessment team developed formulas to facilitate comparisons of states' support of HIOPS, and comparisons of support for each HIOPS across all states. Through *ASHW 2018*, the formula computed Childcare Obesity Prevention Regulation Scores, or COPR Scores. In 2019 in collaboration with the CDC DNPAO, the ASHW assessment team adopted a new formula to calculate summary scores, replacing the COPR Scores with Obesity Prevention Summary Scores, or OPSS.[2] The calculation serves the same functions as COPR Scores, allowing comparisons of the states and national treatment of the HIOPS. The OPSS formula weights ASHW ratings as follows, in the formula presented below:

    Ratings = 1 (contradict the HIOPS) are weighted 0 points
    Ratings = 2 (fail to address the HIOPS) are weighted 30 points
    Ratings = 3 (partially support the HIOPS) are weighted 70 points
    Ratings = 4 (fully support the HIOPS) are weighted 100 points

    Example of OPSS calculation:
    For example, State X regulates two care types, earning a total of 94 ratings (i.e., 2 care types x 47 HIOPS = 94 ratings), which are distributed as below:

    4 ratings = 1
    60 ratings = 2
    20 ratings = 3
    10 ratings = 4
    94 total ratings

    Applied to these data, the OPSS for State X equals 45 (44.68, rounded) of a possible 100.

$$\text{OPSS} = \frac{(4 \text{ ratings } x\ 0) + (60 \text{ ratings } x\ 30) + (20 \text{ ratings } x\ 70) + (10 \text{ ratings } x\ 100)}{94 \text{ total ratings}}$$

    Regardless of the number of regulated care types, the OPSS range remains 0 - 100 (i.e., OPSS = 0 if all ratings = 1, to OPSS = 100, if all ratings = 4). Currently, no state has either extreme score for all of their cumulative child care regulations. Similarly, when OPSS are calculated for each HIOPS nationally, the range remains 0 to 100. Nor is any HIOPS completely supported nor unsupported across the nation at present. Steps 1 -11 were applied as described in *ASHW 2019* and continue for future ASHW updates unless further modifications are deemed necessary.

[2] See the COPR formula in the Methodology/Appendices of the 2015-2018 reports. When used on the same data, COPR Score and OPPS formulas produced very similar, but not identical rankings, of states and HIOPS.