STATE(S) OF HEAD START
METHODOLOGY

RESPONDENT UNIVERSE

The respondent universe for this report is all Head Start and Early Head Start program administrators in the 50 states, the District of Columbia, and six U.S. territories (American Samoa, Guam, the Northern Mariana Islands, Palau, Puerto Rico, and the Virgin Islands). This universe also includes administrators of American Indian and Alaska Native (AIAN) Head Start and Early Head Start and Migrants and Seasonal Head Start (MSHS) programs. Head Start programs are in all 50 states, the District of Columbia, and all territories. However, American Samoa, Guam, and Palau do not have Early Head Start programs and the Northern Mariana Islands began an Early Head Start program mid-way through the 2014-2015 program year (and therefore not all data are available). Many MSHS programs operate across multiple states making it difficult to ascertain the precise number of children enrolled in MSHS in each state. Therefore, this report only presents data on MSHS at the national level. AIAN programs may also operate across multiple states. In the current report, AIAN data is reported based on the state in which the grantee is based. AIAN Head Start programs are based in 26 states (AK, AZ, CA, CO, ID, KS, ME, MI, MN, MS, MT, NE, NV, NM, NY, NC, ND, OK, OR, SC, SD, TX, UT, WA, WI, and WY). AIAN Early Head Start programs are based in 19 states (AK, AZ, CA, CO, ID, KS, MI, MN, MS, MT, NM, NC, ND, OK, OR, SD, WA, WI, and WY).

HEAD START PROGRAMS

This report includes information on five types of Head Start programs:

1. Head Start (HS): Serves children 3- to 5-years-old during the two years before kindergarten

2. Early Head Start (EHS): Serves children birth through age 3 and pregnant women

3. American Indian and Alaska Native Head Start (HS AIAN)

4. American Indian and Alaska Native Early Head Start (EHS AIAN)

5. Migrant and Seasonal Head Start (MSHS): Serves children birth through age 5

Throughout this report data on these different programs are reported both separately and together as noted in the "Guide to the State Profiles" section of the report. In most of the report, HS and HS AIAN are combined as are data for EHS and EHS AIAN. Some sections combine data across these four programs. MSHS data are reported separately on the MSHS pages. AIAN data is also reported separately on the AIAN pages. The national overview presents data from all five program types: the first two pages of the national overview include data from all five program types. The next two pages include data only on EHS and EHS AIAN and the last two pages include data only on HS and HS AIAN. MSHS programs are not included in these last four pages because data are not broken down into programs for infants and toddlers and preschool-age children. Rather, information on MSHS staff and program duration and type is reported separately in the MSHS section.

STATISTICAL METHODOLOGY

This is a universe data collection, employing data previously collected from surveys of Head Start programs. All Head Start programs are included in the data. Because the data collection is based on a universe of sample members, weighting adjustments and adjustments to variances for statistical purposes are not necessary.

DATA SOURCES

Program Information Report: The primary source of data for the *State(s) of Head Start* report is the Office of Head Start Program Information Report (PIR).[1] Each year all federally-funded Head Start grantees and delegates (including HS, EHS, AIAN HS, AIAN EHS, and MSHS) are required to complete the PIR questionnaire. The annual survey collects data on the children and families served by Head Start, program staff, and services provided. PIR data for 2007-2008 through 2014-2015 were downloaded

from the Head Start Enterprise System (HSES) in November, 2015. Data for the 2006-2007 program year were previously downloaded in December 2007. (Data from this year were not available in the newer PIR format). Some data for the 2007-2008 program year were downloaded previously in December, 2008. Some national level data were downloaded from the HSES as reports in fall 2016. Data were aggregated from the individual program to state level for analysis.

Administration for Children and Families: The Office of Head Start in the Administration for Children and Families (ACF) provided NIEER with additional Head Start data for this report. For each program year, they provided the number of funded Head Start and Early Head Start slots in each state and territory. They further separated this into federally-funded slots and state supplemental slots. In addition, they provided NIEER with the total enrollment for HS AIAN, EHS AIAN, and MSHS. In 2013-2014 and 2014-2015, they also provided the HS AIAN funded enrollment in each state.

ACF also provided the total federal funding for HS, EHS, HS AIAN, EHS AIAN, and MSHS each year. From 2006-2007 though 2010-2011, ACF could not disaggregate funding into HS and EHS due to resources and changes in data systems. Beginning with the 2011-2012 program year, funding was reported separately for HS and EHS programs. HS and EHS funding were provided for each state and territory. MSHS and EHS AIAN funding were provided at the national level only. HS AIAN funding was provided by state in 2013-2014 and 2014-2015; data for other years were provided at the national level only.

ACF provided average scores in each state on the Classroom Assessment Scoring System (CLASS).[2] CLASS scores are from Head Start's on-site review of grantees as part of the grant renewal process. Within each state, CLASS scores were averaged across grantees who received a CLASS observation and over years (between 2012 and 2015). Not all grantees are represented. Means and standard deviations for the three CLASS domains (Emotional Support, Classroom Organization, and Instructional Support) and the number of grantees that received a CLASS observation were provided to NIEER.

Finally, ACF provided NIEER with information on the percent of HS children who received at least 1,020 hours of HS services each year.

OTHER DATA SOURCES:

Census: U.S. Census data were used to determine the number of children by single year of age in each state for each year covered by this report.[3] Data from the U.S. Census American Community Survey, three-year estimates, were used to determine the number of children by single year of age who were living below 100 percent and 200 percent of the FPL.[4] Children below 200 percent of the FPL were considered to be "low-income" for the purposes of this report. And children below 100 percent of the FPL were considered to be "in poverty." The percent of children below 200 percent of the FPL was approximately double the percent of children below 100 percent of the FPL.

The number of children by single year of age for each territory (other than Puerto Rico) was retrieved from the International Census, Mid-year population by Single Year Age Groups.[5] The 2010 Census was used to estimate the percent of low-income children in the territories, using information about the percent of families living below the federal poverty level.[6] This data was not available for Palau. The number of children and the number of children living below the poverty line in Puerto Rico was obtained from the Puerto Rico Census.[7]

Public School Teacher Salary: The National Education *Association Rankings & Estimates 2016* report was used to determine the average salary of elementary school teachers in public schools.[8] This data was not available for the territories.

State Supplemental Head Start Funding: The Education Commission on the States report, *State Pre-K Funding: 2014-15 Fiscal Year,*[9] and information collected directly from states as part of the *2015 State of Preschool Yearbook*[10] were used to determine the amount of supplemental funding for Head Start provided by each state.

Cost Adjustments: A State Cost Index was used to adjust funding in each state to account for cost of education differences across states. This cost index was based on 2014 updates by one of the original authors of the 2006 state cost index from the Institute of Education Sciences report, A Comparable Wage Approach to Geographic Cost Adjustment.[11]

Inflation Adjustment: Spending data from 2007 through 2014 was adjusted to 2015 dollars using inflation adjusters from the U.S. Office of Management and Budget. The chained deflators for the Gross Domestic Product, total non-defense, from 2007 through 2015 were used.[12]

CALCULATIONS OF STATE AND NATIONAL DATA

Both *funded enrollment* and *cumulative enrollment* of children and pregnant women are presented in this report. *Funded enrollment* refers to the number of slots that each Head Start program is funded to provide. *Cumulative enrollment* refers to the total number of children and pregnant women who attend Head Start during the program year. Cumulative enrollment is typically larger than funded enrollment as multiple children may be enrolled in the same slot during different parts of the year. That is, cumulative enrollment reflects all children who move in and out of the program during the program year.

The PIR data includes the number of children, families, and teachers in each program who have various characteristics and qualifications and/or who received specific Head Start services. For the purposes of this report, the number of children, families, and teachers were summed across all programs in a state to calculate the total for each state. Next, the percentage of children, families, or teachers in each state meeting each criterion was calculated by dividing by the total number of children, families, or teachers. All percentages are rounded to the nearest whole number and percentages less than 0.5 are rounded to 0.

Funded enrollment was not provided by single year of age. Therefore, federally-funded enrollment by age was estimated based on the proportion of the cumulative enrollment that was either under 1-, 1-, 2-, 3-, 4- or 5-years-old.[13] In this report, we consider a 3-year-old to be someone eligible to attend kindergarten two years from now. (For example, a 3-year-old in the 2014-2015 program year would be eligible to attend kindergarten in 2016-2017.) A 4-year-old is eligible to attend kindergarten during the following year. Because HS is intended to serve 3- and 4-year-olds, we counted 2-year-olds in HS as 3-year-olds; and we counted 5-year-olds as 4-year-olds. Similarly, since EHS is intended to serve infants and toddlers, we considered 3-year-olds enrolled in EHS to be under 3 years old. For MSHS, 0-, 1-, and 2-year-olds were considered to be under 3 years old and 5-year-olds were considered to be 4-year-olds.

The percentages of children under 3 years, 3 years old, and 4 years old in each state who were enrolled in Head Start were calculated by dividing by the total number of children under 3, 3 years old, and 4 years old (respectively) in the state based on census data. Similar calculations were done to determine the percent of children from low-income families in

each state enrolled in Head Start. Here, the number of children living below 200 percent of the FPL was used, based on data from the census. Head Start enrollment as a percent of children in poverty in each state was calculated by dividing the number of children enrolled in Head Start by the number of children living below 100 percent of the FPL.

Funding per child in each state was calculated by dividing the federal funding in that state by the number of federally-funded slots. Spending per child for the 2014-2015 program year was adjusted for differences in cost of living in each state using a state cost index so that state-to-state comparisons could be made on the same scale. Funding per child from 2007 through 2014 was adjusted for inflation so that all funding per child amounts are presented in 2015 dollars to show how spending has changed in "real" dollars.

Research-based thresholds for each of the three CLASS domains were determined by NIEER in consultation with the authors of the instrument and based on recent research findings regarding the level of quality in each domain needed to support learning and positive developmental outcomes. Average CLASS scores from evaluations of publicly funded preschool programs and Head Start FACES were also considered in determining the thresholds. For this report, the research-based thresholds are as follows: Instructional Support: 3; Emotional Support: 5.5; and Classroom Organization: 5.5.

One sample t-tests were conducted in Stata version 14 to determine, in each state, if average scores on each CLASS score domain (1) were statistically significantly lower than the research-based threshold, (2) statistically indistinguishable from the research-based threshold, or (3) statistically significantly higher than the research-based threshold. States were determined to have CLASS scores significantly higher or lower than the research-based threshold if $p < 0.05$.

Data from the PIR provided average salaries for all teachers and assistant teachers as well as average salaries for teacher by degree qualifications (Advanced degree, BA, AA, CDA, and no ECE-related credentials). To estimate the average salary for teachers with an advanced degree or BA (BA or

higher), a weighted average based on the average salary for teachers with a BA and advanced degree and the number of teachers with an advanced degree and BA was computed. A similar procedure was followed to calculate the average salary for teachers with a CDA or no ECE-related credentials. These averages were calculated separately for HS and EHS teachers.

Using data from the *State of Preschool Yearbook,*[14] the percent of children in each state enrolled in Head Start or state-funded preschool was calculated. As part of the *Yearbook* data collection, some states reported the number of children enrolled in state-funded preschool *and* Head Start. When this information was available, an unduplicated percentage was calculated. National averages on the state profiles and in the text of the report include the 50 states, District of Columbia, U.S. Territories, and AIAN programs (unless otherwise noted). National averages in the Figures (pages 25 to 44) do not include the U.S. Territories.

DETERMINATION OF HEAD START FUNDING NEEDED

To calculate the funding needed to serve 50 percent of all low-income 3- and 4-year-olds (or the equivalent of all 3- and 4-year-olds in poverty) in each state in Head Start, a per child funding amount of $10,000 was assumed to be needed to provide high-quality services for 1,020 hours per year. The $10,000 per child amount was adjusted to account for cost differences in each state (since $10,000 goes further in some states than others). The adjusted spending per child in each state was multiplied by the number of low-income 3- and 4-year-olds in that state to calculate the total funding needed to serve all low-income 3- and 4-year-olds per state. This number was divided by 2 to get the funding needed to serve 50 percent of all low-income 3- and 4-year-olds. To determine the *additional* funding needed to serve 50 percent of low-income 3- and 4-year-olds in each state, the current HS funding in each state was subtracted from this number.

FOOTNOTES

[1] Head Start Program Information Reports (PIR) for 2006-2007 through 2014-2015.

[2] Pianta, R. C., LaParo, K. M., & Hamre, B. K. (2008). *Classroom Assessment Scoring System (CLASS)*. Baltimore, MD: Brookes.

[3] U.S. Census Population Estimates, Single Year of Age and Sex Population Estimates: April 1, 2010 to July 1, 2014 - Civilian. 6 race groups. Retrieved from https://www.census.gov/popest/data/state/asrh/2014/SC-EST2014-ALLDATA6.html

[4] American Community Survey, PUMS Data 2000-current. Retrieved from https://www.census.gov/programs-surveys/acs/data/pums.html

[5] United States Census Bureau, International Programs. Retrieved from https://www.census.gov/population/international/data/idb/region.php

[6] 2010 Census Island Areas. Retrieved from http://www.census.gov/2010census/news/press-kits/island-areas/island-areas.html

[7] U.S. Census Bureau, American Fact Finder. Retrieved from http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk and http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_14_5YR_B17001&prodType=table

[8] National Education Association (2016). *Rankings & Estimates: Rankings of the States 2015 and Estimates of School Statistics 2016*. Retrieved from http://www.nea.org/assets/docs/2016_NEA_Rankings_And_Estimates.pdf

[9] Atchison, B., & Workman, E. (2015). *State Pre-K Funding: 2014-15 Fiscal Year*. Denver, CO: Education Commission on the States. Retrieved from http://www.ecs.org/clearinghouse/01/16/97/11697.pdf

[10] Barnett, W. S., Friedman-Krauss, A. H., Gomez, R. E., Horowitz, M., Weisenfeld, G. G., Brown, K., & Squires, J. H. (2016). *State of Preschool Yearbook*. New Brunswick, NJ: National Institute for Early Education Research.

[11] Taylor, L. (2014). Extending the NCES CWI. The Bush School of Government and Public Service, Texas A&M University.

[12] U.S. Office of Management and Budget. Table 10.1 - Gross Domestic Product and Deflators Used in the Historical Tables: 1940-2021. Retrieved from https://www.whitehouse.gov/omb/budget/Historicals

[13] As a result of rounding, enrollment numbers by age may not always add up to the total enrollment.

[14] Barnett, W. S. et al. (2016).