

# National Household Education Surveys Program of 2019

Data File User's Manual

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### Parent and Family Involvement in Education Survey

### Early Childhood Program Participation Survey

**January 2021**

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## Chapter 1. Introduction

The *National Household Education Surveys Program of 2019 (NHES:2019) Data File User's Manual* provides documentation and guidance for users of the NHES:2019 data files. The manual provides information about the purpose of the study, the sample design, the data collection procedures, the data processing procedures, response rates, imputation, weighting and standard error calculation and use, the data files and codebooks, data considerations and anomalies, and derived variable details. In addition, the manual contains a nonresponse bias analysis, comparisons of estimates from NHES:2019 to those from prior NHES administrations and other data sources, tables of nonresponse adjustment cells and response rates, copies of the data collection instruments, and the data file layouts for the public and restricted-use data files.

The NHES:2019 data are contained in two public-use and two restricted-use data files, one for each topical survey that was fielded: the Early Childhood Program Participation (ECP) survey and the Parent and Family Involvement in Education (PFI) survey, which were last fielded in 2016. The ECP survey has a target population of children age 6 or younger who are not yet enrolled in kindergarten. The PFI survey has a target population of children and youth age 20 or younger who are enrolled in kindergarten through 12th grade in a public or private school or who are being homeschooled for the equivalent grades.

The NHES:2019 was a two-phase survey conducted primarily on the web, although a portion of the sample completed a paper-based version of the survey (see chapters 2 and 3 for details). The first phase of the survey was the administration of a short household screener questionnaire to identify households with children or youth under age 20. A total of 205,000 households were selected based on this screener, and the screener response rate was 63.1 percent. The second phase of the survey was the collection of topical survey data from households with eligible children. The topical response rate was 85.5 percent for the ECP survey and 83.4 percent for the PFI survey. The overall response rates (the product of the screener response rate and the topical response rate) were 54.0 percent for the ECP survey and 52.6 percent for the PFI survey.<sup>1</sup>

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<sup>1</sup>All of the response rates discussed in this paragraph are weighted by the inverse of the probability of selection.

The data files contain the following:

- The ECPP survey files contain data from surveys completed with the parents or guardians of 7,092 children age 6 or younger who are not yet enrolled in kindergarten.
- The PFI survey files contain data from surveys completed with the parents or guardians of 16,446 children age 20 or younger who are enrolled in kindergarten through 12th grade in a public or private school or who are being homeschooled for the equivalent grades.

The data are subject to federal law on data confidentiality (20 U.S.C. sec. 9573). The data may be used only for statistical purposes and may not be disclosed, or used, in identifiable form for any other purpose except as required by law.

### **1.1 Background of Study**

The National Household Education Surveys (NHES) Program was developed by the National Center for Education Statistics (NCES), an agency within the U.S. Department of Education's Institute of Education Sciences, to complement its institutional surveys. The surveys that comprise the NHES are integral data collection tools for addressing topics that cannot be studied through institutional data collections. By collecting data directly from households, the NHES has allowed NCES to gather data on a wide range of issues, such as early childhood care and education, children's readiness for school, the before- and after-school activities of school-age children, adult basic and work-related education, parents' involvement in education, school choice, and homeschooling. These topics have been addressed through a series of topical survey modules, many of which are repeated on a rotating basis, whereas others are one-time-only collections. Table 1-1 shows the topical survey modules included in the NHES by year of administration, beginning in 1991.

**Table 1-1. Topical surveys conducted under the NHES Program, by administration year: 1991-2019**

Topical survey	NHES survey administration											
	1991	1993	1995	1996	1999 <sup>1</sup>	2001	2003	2005	2007	2012	2016	2019
<b>Young children</b>												
Early childhood education/program participation	X		X		X	X		X		X	X	X
School readiness		X			X				X			
<b>School-age children</b>												
School safety and discipline		X										
Parent and family involvement in education				X	X		X		X	X	X	X
Homeschooling <sup>2</sup>					X		X		X	X	X	X
After-school programs and activities			X <sup>3</sup>		X	X <sup>4</sup>		X				
Civic involvement				X	X							
<b>Adults</b>												
Adult education	X		X		X	X	X	X				
Credentials for work											X	
Civic involvement				X	X							
Household library use				X								

<sup>1</sup>The NHES:1999 was a special end-of-decade administration that measured key indicators from the surveys fielded during the 1990s.

<sup>2</sup>In 2012 and 2016, homeschooling data were collected using a separate questionnaire. In other years, homeschooling data were collected using a questionnaire that was also used for parents of students enrolled in schools. Homeschooling data have consistently been released within the Parent and Family Involvement in Education survey files.

<sup>3</sup>The After-School Programs and Activities Survey of the NHES:1995 only collected data about children in the first through third grades.

<sup>4</sup>The After-School Programs and Activities Survey of the NHES:2001 also included items on before-school programs.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Surveys Program (NHES), 1991-2019.

Data from the NHES are used to provide national estimates on populations of interest to education researchers and policymakers. The NHES targets populations of interest using specific screening and sampling procedures and, by design, includes oversamples of Black and Hispanic individuals who might otherwise be underrepresented in the NHES sample. The NHES is conducted in English and Spanish.

Until 2012, the NHES was conducted by telephone interviewers using list-assisted random-digit-dial (RDD) and computer-assisted telephone interview (CATI) methodologies. Data were collected between January and June in approximately every other year from 1991 through 2007. After the 2007 collection, the NHES was redesigned to improve response rates and population coverage. In the redesigned survey, samples were developed using household address information, and data were

collected using self-administered questionnaires delivered and returned through the mail. The redesign process included a feasibility pilot test, cognitive interviews about the redesigned survey questionnaires and materials, and a full-scale field test of the new methodology and instruments. The time invested in the redesign resulted in a gap in NHES data collections between 2007 and 2012.

Beginning in 2016 and continuing in 2019, surveys were administered through a web-based questionnaire as well as through the mail. In 2017, NCES also conducted a large-scale web test of the NHES. It was the first time NHES responses were collected entirely online to fully test the use of the web as a primary mode of data collection. The NHES surveys from 1991 through 2007, and the NHES redesign pilot and field tests, were administered by Westat, Inc., on behalf of NCES. The NHES surveys in 2012, 2016, and 2019 and the 2017 NHES web test were administered by the U.S. Census Bureau on behalf of NCES.

NHES survey data have been used for a large number of descriptive and analytic reports and articles, including NCES publications, publications of other federal agencies, policy analyses, theses and dissertations, conference papers, and journal articles. Because many of the topical surveys fielded as part of the NHES are repeated over time, in addition to providing cross-sectional estimates, some NHES data can be used to develop trend estimates.<sup>2</sup>

A list of NHES publications issued by NCES can be found on the NHES website: <https://nces.ed.gov/nhes>. Non-NCES publications that use NHES data can be found using the NCES Bibliography Search Tool at <https://nces.ed.gov/bibliography/>.

## **1.2 Overview of the NHES:2019 Design**

The NHES:2019 surveys were designed to provide nationally representative data about topics central to education policy and research. Multiple topical surveys are conducted simultaneously in NHES because of the high costs associated with screening large numbers of households in order to meet the sample size requirements for precise nationally representative estimates about young children and students. By fielding more than one topical survey simultaneously, the cost of screening households to find eligible household members is distributed over the surveys. This strategy is key to the NHES design.

In 2019, households were mailed either an invitation to respond to the web questionnaire or a short paper screener asking them to list the first name, age, sex, type of school enrollment (preschool, public

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<sup>2</sup> Data users should take into consideration that the mode change—from a computer-assisted telephone interview to a self-administered paper- and-pencil or web survey—required changes in item wording that may affect the comparability of estimates from NHES:2012, NHES:2016, and NHES:2019 with those from NHES administrations from 1991 through 2007.

or private school, homeschool, or not enrolled), and grade or level of enrollment of every child living in the household. After the screener was completed on the Web or returned by mail, one child per household was selected, and the sampled child’s parent was immediately directed to the follow-up topical questionnaire on the Web or mailed a topical follow-up questionnaire. Households without eligible children were not asked to complete a topical questionnaire.

Table 1-2 displays the number of completed questionnaire and the unweighted and weighted single-stage and overall (two-stage) unit response rates for the NHES:2019 screener and topical surveys. Details on the computation of these rates, as well as a discussion of the uses of weighted and unweighted response rates, are provided in chapter 5.

**Table 1-2. Number of completed NHES:2019 surveys and unweighted and weighted single-stage and overall (two-stage) unit response rates, by survey type**

Survey type	Number of completed surveys	Unweighted single-stage unit response rate <sup>1</sup>	Unweighted overall (two-stage) unit response rate <sup>2</sup>	Weighted single-stage unit response rate <sup>1</sup>	Weighted overall (two-stage) unit response rate <sup>2</sup>
Screener	108,978	61.7		63.1	
ECPP survey	7,092	86.1	53.1	85.5	54.0
PFI survey	16,446	84.5	52.1	83.4	52.6

<sup>1</sup>The unit response rate is the percentage of completed surveys for a specific stage of the study (i.e., the screener or topical stage) and is derived by dividing the number of completed surveys by the number of eligible units (e.g., addresses and children) sampled.

<sup>2</sup>The overall unit response rate indicates the percentage of surveys that have been completed, taking all sampling stages into account. It is the product of the screener unit response rate and the topical unit response rate.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Program Participation (ECPP) Survey and Parent and Family Involvement in Education (PFI) Survey of the 2019 National Household Education Surveys Program (NHES:2019).

### 1.3 NHES:2019 Topical Questionnaires

The NHES:2019 was administered using two topical questionnaires: one for the ECPP survey and one for the PFI survey. The content, target population, and respondents for these questionnaires are described below.

#### 1.3.1 Early Childhood Program Participation Survey

The Early Childhood Program Participation (ECPP) survey focused on children age 6 or younger who were not yet enrolled in kindergarten. The survey questionnaire covered children’s participation in early education and care arrangements provided by relatives or nonrelatives in private homes, center-based day care, or preschool programs (including Head Start). Additional topics included family learning activities, early literacy and numeracy skills, out-of-pocket expenses for nonparental care and education, factors related to parents’ selection of providers, and parents’ perceptions of care and

education quality. Parents also were asked about child characteristics, including the child's health and disability status; characteristics of the child's parents or guardians who live in the household; and household characteristics.

### **1.3.2 Parent and Family Involvement in Education Survey**

The Parent and Family Involvement in Education (PFI) survey focused on children and youth age 20 or younger who were enrolled in kindergarten through 12th grade in a public or private school and children who were homeschooled for the equivalent grades.

The questionnaire included questions for parents of enrolled students about school choice (e.g. charter school enrollment, not attending a district assigned school, or moved to the neighborhood to attend the school), parent and family involvement at school, the child's behavior at school, grade retention, parents' satisfaction with the child's school, the family's involvement in schoolwork and activities outside of school, and factors affecting family involvement. It also included questions for parents of homeschooled students about who is primarily responsible for homeschooling the sampled child, the amount of time that the child is homeschooled, parents' reasons for homeschooling, subjects covered in homeschooling, and the resources used for homeschooling, including internet resources. New for 2019, parents of children who attended online or virtual schools were asked about their reasons for choosing an online or virtual school and the cost of that type of schooling. Please see chapter 9 for a complete discussion of homeschooling estimates and full-time virtual school student estimates. Parents were also asked about their child's health and disability status; parent/guardian characteristics; and household characteristics.

### **1.3.3 Mixed Mode Questionnaire Design**

The NHES:2019 questionnaires were provided in both paper and web versions. The NHES:2019 paper-based instruments were developed through cognitive testing. Usability testing was conducted on the web-based instruments before data collection began. The web-based instruments were programmed by the U.S. Census Bureau and securely hosted on the Census Bureau's server. The paper and the web instruments were designed to be very similar, but some items were worded differently in the web instruments to take advantage of web-based functionality. The web instruments were also designed to minimize respondent burden by eliminating the cumbersome skip patterns required in the paper instruments.

The web instruments allowed respondents to complete both the screener and a topical questionnaire in one sitting. In contrast, respondents to the paper-based instruments had to complete the screener instrument, mail it back to the Census Bureau, and receive the topical questionnaire by mail at a later date. Some respondents completed the NHES:2019 survey over the phone through the Census Bureau's

Telephone Questionnaire Assistance (TQA) help desk. The help desk interviewers were trained to collect data over the phone using the self-administered web instrument when they received calls from members of sampled households.

#### **1.4 Contents of This Manual**

The chapters that follow provide information about the NHES:2019 sampling methodology (chapter 2), data collection (chapter 3), data processing (chapter 4), response rates (chapter 5), imputation (chapter 6), weighting and standard error calculations (chapter 7), nonresponse bias analysis (chapter 8), data considerations and anomalies (chapter 9), and the data files and codebook (chapter 10). Additional information is contained in the appendixes. Appendix A provides a copy of the paper survey questionnaires; appendix B shows the data file layouts in position order; appendix C compares NHES:2019 estimates with those from other surveys; appendix D contains nonresponse adjustment cells and response rates for the screener survey; appendixes E and F contain nonresponse adjustment cells and response rates for the topical surveys; appendix G includes a summary of weighting and variance estimation variables; appendix H includes SAS code for the derived variables; and appendix I includes summary of the changes across cycles for homeschooling estimates in the NHES.

## Chapter 2. Sampling Methodology

The 2019 National Household Education Survey (NHES:2019) used an address-based sample (ABS) covering the 50 states and the District of Columbia and was conducted from January through September of 2019. The target population was all residential addresses in the United States, including P.O. boxes<sup>3</sup> that were flagged by the United States Postal Service (USPS) as the only way to get mail, totaling about 131 million<sup>4</sup> addresses. Addresses were randomly sampled as described in this chapter, and an invitation letter to complete the questionnaire on the Web and/or a paper screening questionnaire was sent to each sampled household.<sup>5</sup> All U.S. civilian, noninstitutional, residential addresses were eligible to be sampled for the screener. Demographic information provided in the screener was used to determine whether a child in the household was eligible for one of the second-phase topical surveys: the Early Childhood Program Participation (ECPP) survey or the Parent and Family Involvement in Education (PFI) survey. Regardless of the number of eligible children, no more than one child per household was sampled for the topical surveys and no more than one topical survey was administered per household.

The target population for the ECPP survey consisted of children age 6 or younger (as of December 31, 2018) who were not yet in kindergarten. The target population for the PFI survey included children/youth ages 3 through 20 who were enrolled in kindergarten through 12th grade or who were homeschooled for the equivalent of grades kindergarten through 12th grade.

### 2.1 Sampling Households

An initial sample of 225,500 addresses was selected, of which 205,000 were designated for the NHES:2019. The initial sample of addresses was drawn from a file of residential addresses maintained by Marketing Systems Group (MSG), based on the USPS Computerized Delivery Sequence File (CDSF).

The NHES:2019 sample was a two-phase, stratified sample. In the first phase, a sample of residential addresses was selected from the MSG master address file. In the second phase, an eligible child was selected from information provided in the completed household screener. Households were selected with differential probabilities of selection based on the proportion of households identified as Black and

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<sup>3</sup>P.O. boxes were excluded from the sampling frame with the exception of P.O. boxes identified as being a household's "only way to get mail" (OWGM). This exclusion is intended to reduce overcoverage due to households that receive mail at both a residential address and a P.O. box. More information about the address types included in the sample is provided in section 2.1.1.

<sup>4</sup>The estimate of 131 million households came from Marketing Systems Group (MSG), the sample frame vendor.

<sup>5</sup>For most households, the first mailing (excluding any advance mailings) was a letter with a user identification code and URL address asking someone in the household to complete the survey on the Web, rather than a letter with a screening questionnaire. However, three randomly assigned experimental treatments deviated from this approach. In the "choice plus" condition, households received a letter inviting them to complete the survey on the Web, as well as a paper screener questionnaire. In the "random paper-only" condition, households received a paper screener with a cover letter for all mailings. In the "modeled mode" condition, a subset of households chosen using a mode preference model received a paper screener with a cover letter for all mailings, while the balance of households in the condition received the standard web invitation.

Hispanic in the Census tract in which the address was located. For households that completed the screener and reported at least one eligible child, a child's probability of selection depended on the number of children in the household and their survey eligibility (ECP or PFI). These differential probabilities of selection at both phases are accounted for in the NHES weighting methodology. When weights are applied to the NHES topical surveys, the ECP survey is nationally representative of all children from birth through age 6 who were not yet enrolled in kindergarten and the PFI survey is nationally representative of students enrolled in grades K-12, including children who were enrolled in public or private school, and those who were homeschooled for the equivalent grades.

### **2.1.1 Black and Hispanic Oversample, Sort Order, and Address Type**

As in past NHES surveys, the NHES:2019 survey oversampled Black and Hispanic households using U.S. Census and sampling frame data. Oversampling provides improvement in the precision of estimates by race/ethnicity and protects against unknown factors that might affect the estimates for key subgroups, especially differential response rates.

To facilitate the oversampling of Black and Hispanic households, addresses were stratified by race/ethnicity into three strata:

- Census tracts with 25 percent or more Black persons (Black stratum);
- Census tracts with 40 percent or more persons of Hispanic origin (and not 25 percent or more Black persons) (Hispanic stratum);
- All other tracts (All other stratum).

As shown in table 2-1, the sample allocation was 20 percent to the Black stratum, 15 percent to the Hispanic stratum, and 65 percent to the "All other" stratum. Assignment to strata was sequential: Tracts with 25 percent or more Black persons were assigned to the Black stratum; of the remaining tracts, tracts with 40 percent or more persons of Hispanic origin were assigned to the Hispanic stratum; and all remaining tracts were assigned to the "All other" stratum.

The NHES:2019 Black and Hispanic oversampling strategy was the same as that used in the NHES:2012 and 2016 administrations. This strategy was selected because it allows for the specification of sufficient Black and Hispanic sample sizes, and it helps to target Spanish-language mailings to households in the Hispanic stratum. Table 2-1 shows the percentage and number of sampled addresses from each stratum.

**Table 2-1. Percentage of sample and number of addresses, by address selection characteristic: NHES:2019**

Address selection characteristic	Percentage of sample	Sample size
Total	100	205,000
Addresses in Census tracts with 25 percent or more Black persons	20	41,000
Addresses in Census tracts with 40 percent or more Hispanic persons (and not 25 percent or more Black persons)	15	30,750
Addresses in all other Census tracts	65	133,250

SOURCE: National Household Education Surveys Program (NHES) of 2019 sample specifications provided to Marketing Systems Group (MSG) for sample purchase.

In addition to stratifying by race and ethnicity groups as described above, addresses within each of the three strata were sorted by a Census tract-level poverty indicator. The sample for each stratum was selected systematically from the sorted list in order to maintain the population poverty-level proportions, which otherwise could be skewed if the addresses were selected using a simple random sample within the race/ethnicity strata. The tract-level poverty indicator classifies an address into one of two poverty categories based on the proportions of households below the poverty line in the Census tract in which the address is based. Specifically, tracts were classified as follows:

- tracts with 20 percent or more of households below the poverty line
- tracts with less than 20 percent of households below the poverty line

This sort methodology was the same as the sort by poverty status used in the NHES:2016. The sort by poverty status was not used in the NHES:2012.

Additionally, P.O. box addresses not flagged as the “Only Way to Get Mail” were dropped from the sample frame prior to sampling. These P.O. boxes generally are not unique mailing addresses for households (Iannacchione, Staab, and Redden 2003), which means that including them in the sampling frame would be likely to result in duplication of households. To the extent P.O. boxes could be mapped to households, they could provide additional contact information. However, a methodology with a high degree of reliability has not been developed for determining which addresses also receive mail from a P.O. box. Therefore, to avoid duplication of households, P.O. box addresses that are not flagged as the only way to get mail were dropped at the frame development stage.<sup>6</sup> This methodology is the same as that used in the NHES:2016, and the current recommendation (Harter et al. 2016) from experienced ABS

<sup>6</sup> The indicator “Only Way to Get Mail” (OWGM) is subject to potential error. Some proportion of the non-OWGM addresses are in fact OWGM, according to McMichael and Brown (2018). The exclusion of these addresses might be a coverage problem for small area estimates but it is unlikely to affect national estimates like those obtained from the NHES.

sample vendors is that excluding these addresses helps avoid duplication of households. In 2019, about 1 percent of addresses in the initial sample were P.O. boxes flagged as the “Only Way to Get Mail.”

### **2.1.2 Within-Household Sampling of Eligible Individuals**

Among households that completed a screener and reported children who were eligible for one or more topical surveys, a four-step procedure was used to select a single child as a sample member for the ECPP or PFI topical samples. To minimize household burden, only one eligible child from each household was sampled; therefore, each household received only one of the two topical questionnaires.

In all NHES administrations of the PFI, data for students who are enrolled in school and data for homeschooled students are combined into one data file and weighted to population control totals. However, in NHES:2016, an oversample of homeschooled students was drawn from the screener data. NHES:2019 retained the homeschool oversample. Thus, eligible children could fall into one of three topical sampling domains: ECPP, PFI-Homeschooled, and PFI-Enrolled. The topical sampling procedure selected one of these three domains for every screener respondent household by first randomly assigning two domain predesignations:

- predesignation of whether PFI-Homeschooled child/children were selected; and
- predesignation of whether PFI-Enrolled or ECPP child/children were selected, conditional on not selecting the PFI-Homeschooled child/children.

The predesignations were assigned at specified rates, determined to be optimal to balance the sample requirements for the two surveys being fielded. Depending on the composition of the household, one or both predesignations were used to assign the household to one of the three topical sampling domains. If the household had more than one child eligible for the domain for which it was selected, the within-household sampling randomly selected one of these children from that domain. After the selection of the topical sampling domain and eligible child, the final step of the topical sampling procedure routed each household to the corresponding questionnaire based on their domain assignment. The four-step process to select a child for a topical sample is described below.

In the first step of sampling, called the homeschooling predesignation, each address was randomly predesignated for *selection* as either a “PFI-Homeschooled household” or an “other household.” A household was predesignated for selection as a “PFI-Homeschooled household” with an 80 percent probability and for selection as an “other household” with a 20 percent probability. This predesignation was only used when (1) a household had at least one child whose enrollment response on the screener was “homeschool instead of attending a public or private school for some or all classes” (PFI-Homeschooled child); and (2) the household had at least one ECPP child or a child who was reported to

“attend a public or private school for some or all classes” (PFI-Enrolled child). This flag was used to determine which domain should be selected, where more than one option existed. If a household had only homeschooled children, the PFI-Homeschooled domain was selected regardless of the predesignation. Likewise, if a household only had ECPP and/or PFI-Enrolled children, then the PFI-Homeschooled predesignation was not used. The purpose of oversampling homeschooled children in this first step of topical sampling was to increase the number of homeschooled children for whom data could be collected.

The second step of sampling determined the domain that was selected conditional on *not* selecting any homeschooled children from the household. There were two topical domains for which a child could be eligible in the second step: the ECPP domain or the PFI-Enrolled domain. The eligibility criterion only allowed a child to be eligible for one of the topical domains, not both. Because children eligible for the ECPP domain composed a smaller proportion of the population than children eligible for the PFI-Enrolled domain, differential sampling was used to ensure a sufficient sample size for the ECPP group. This predesignation was used only when (1) the household had no homeschooled children or the household had homeschooled children but they were not selected in the first step; and (2) the household had a child/children eligible for the ECPP topical domain and a child/children eligible for the PFI-Enrolled topical domain. Each household was predesignated for selection as an “ECPP household” with a 70 percent probability or for selection as a “PFI-Enrolled household” with a 30 percent probability. If a household only had a child/children eligible for the ECPP topical domain and not the PFI-Enrolled topical domain, the child/children eligible for ECPP were sampled, regardless of predesignation. Likewise, if a household only had a child/children eligible for the PFI-Enrolled topical domain and not the ECPP topical domain, the eligible enrolled child/children were sampled, regardless of predesignation.

The third step of sampling was at the person level. If the household had only one child that was eligible for the domain that was selected in the first two steps of sampling, then that child was selected. If any household had two or more children eligible for the domain that was selected in the first two steps, then one of those children was randomly selected (with equal probability) to receive the corresponding topical questionnaire. At the end of the three steps of within-household sampling, one eligible child within a household was sampled from the ECPP, PFI-Enrolled, or PFI-Homeschooled domain, provided that the household contained at least one person under the age of 20.

The fourth and last step was to assign topical questionnaires based on the selected domain. After domain selection and within-household selection to determine the single child to be sampled, a household was routed to the corresponding topical questionnaire based on the selected domain and questions were asked about the sampled child. In NHES:2019, PFI-Homeschooled and PFI-Enrolled children received the

same PFI questionnaire, whereas a separate questionnaire was used for enrolled students and for homeschooled students in NHES:2012 and NHES:2016. NHES:2019 combined the two questionnaires into one instrument because of the challenges with identifying homeschooled children accurately at the screener stage. Therefore, if either the PFI-Homeschooled or PFI-Enrolled domain was selected, the household was directed to complete the PFI questionnaire. If the ECPP domain was selected, as in previous NHES administrations, these households were directed to complete the ECPP questionnaire.

Table 2-2 presents the actual percentages of households with individuals eligible for each possible combination of topical domains in NHES:2016 and NHES:2019. For comparison, the 2018 American Community Survey (ACS) estimated that 30.8 percent of households have NHES-eligible children. This is approximately the same as the estimate from the 2015 ACS (31.9 percent), the most recent estimate prior to that from NHES:2016. Therefore, the decline in the eligibility rate from NHES:2016 to NHES:2019 was not expected. NCES believes that a change in the design of the screener between the two administrations, which lessened the response burden for households without children, may have caused a higher proportion of screener responses to come from households without children; however, no experimental data are available to verify this assumption.

**Table 2-2. Percentage of households with eligible children for one or more topical domains: NHES:2016 and NHES:2019**

Household eligibility status	NHES:2016	NHES:2019
Total households with no eligible child	70.5	73.2
Total households with eligible children	29.5	26.8
Households with ECPP-eligible children	10.8	9.7
Households with PFI-eligible children	24.1	22.0
Households with PFI-Enrolled-eligible children	23.3	21.3
Households with PFI-Homeschooled-eligible children	1.1	1.0

NOTE: ECPP = Early Childhood Program Participation. PFI = Parent and Family Involvement in Education. Percentages do not sum to 100 because some households have children eligible for more than one survey. NHES:2016 and NHES:2019 estimates are calculated among respondents to the household screener using household-level nonresponse-adjusted weights.

SOURCE: National Household Education Surveys Program (NHES) of 2016 and 2019.

## 2.2 Sampling for Experiments

The NHES:2019 incorporated multiple methodological experiments to evaluate the impact of different contact strategies and modes on survey response. The experimental treatments were pre-assigned to all 205,000 sampled addresses. Households were first randomly assigned to one of the six data collection treatment conditions: baseline, targeted mailing, updated sequential mixed-mode, choice plus incentive, modeled mode, and random paper-only. Cases assigned to the updated sequential mixed-mode and choice plus incentive were further randomly allocated between several subconditions, as described below. Table 2-3 shows the experiments and their expected and actual sample sizes.

**Table 2-3. Number of households sampled for methodological experiments, expected and actual sample sizes: NHES:2019**

Experiment	Number of households sampled	
	Expected	Actual
<b>Baseline-control</b> (2016-equivalent mixed-mode protocol)	<b>40,000</b>	<b>40,000</b>
<b>Targeted mailing</b>	<b>15,000</b>	<b>15,000</b>
<i>Baseline contact materials</i>	11,700	11,630
<i>Contact materials targeted to Spanish speakers</i>	3,300	3,370
<b>Updated sequential mixed-mode</b>	<b>80,000</b>	<b>80,000</b>
Opt-out screener (with advance letter and FedEx 2nd)	10,000	10,000
No advance letter x FedEx 2nd	7,778	7,778
No advance letter x FedEx 4th	7,778	7,778
No advance letter x FedEx modeled	7,777	7,777
<i>No advance letter x FedEx modeled - FedEx 2nd</i>	5,443	5,443
<i>No advance letter x FedEx modeled - FedEx 4th</i>	2,334	2,334
Advance letter x FedEx 2 <sup>nd</sup>	7,778	7,778
Advance letter x FedEx 4th	7,778	7,778
Advance letter x FedEx modeled	7,778	7,778
<i>Advance letter x FedEx modeled - FedEx 2nd</i>	5,444	5,444
<i>Advance letter x FedEx modeled - FedEx 4th</i>	2,334	2,334
Advance mailing campaign x FedEx 2nd	7,778	7,778
Advance mailing campaign x FedEx 4th	7,777	7,777
Advance mailing campaign x FedEx modeled	7,778	7,778
<i>Advance mailing campaign x FedEx modeled - FedEx 2nd</i>	5,444	5,444
<i>Advance mailing campaign x FedEx modeled - FedEx 4th</i>	2,334	2,334
<b>Choice plus</b>	<b>30,000</b>	<b>30,000</b>
\$10 incentive	24,000	24,000
\$20 incentive	6,000	6,000
<b>Modeled mode</b>	<b>36,000</b>	<b>36,000</b>
<i>Baseline</i>	30,600	30,600
<i>Paper-only</i>	5,400	5,400
<b>Random paper-only</b>	<b>4,000</b>	<b>4,000</b>
<b>Overall sample</b>	<b>205,000</b>	<b>205,000</b>

NOTE: Italics denote nonrandom subgroups that, under the assigned condition, received a different protocol from the balance of the condition.  
 SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019.

### 2.2.1 Baseline Treatment

To facilitate comparisons between the 2019 and 2016 response rates, the baseline sample mimicked the NHES:2016 sequential mixed-mode design protocols that were developed for the web experiment in that administration. A total of 40,000 randomly assigned cases were chosen for the baseline condition.

Additionally, control groups for the targeted mailing experiment (11,630 cases) and the modeled mode experiment (30,600 cases) also received the baseline mailing protocols in order to evaluate the effectiveness of the experiments compared to sequential mixed-mode data collection response rates from NHES:2019 and NHES:2016.

### **2.2.2 Targeted Mailing**

This experiment tested whether using targeted mailings for likely Spanish-speaking households (based on information available in the sampling frame and from the ACS) increased the response rate for those cases. The experiment tested a set of contact materials targeted specifically to these households in their presentation and wording. For example, different pictures, cover letter language, and a Spanish-first bilingual presentation were used. Fifteen thousand randomly assigned cases were sampled for this experiment. Among the cases allocated to the experiment, the following criteria were applied to determine which cases received mailings targeted to Spanish speakers:

- The household is flagged in the frame as having a Hispanic surname,
- The household is in a tract with 40 percent or more Hispanic persons, or
- The household is in a tract where 10 percent or more of households speak Spanish as their primary language and have “limited English-speaking” status.

Based on these criteria, about 22.5 percent of sampled cases (3,370) in this condition received tailored materials and the other 77.5 percent (11,630) received the same mailing protocol and materials as the baseline condition.

### **2.2.3 Updated Sequential Mixed-Mode**

This experiment varied contact methods to test alternative contact materials or protocols designed to increase response and/or reduce costs. Exactly 80,000 randomly selected cases were chosen for the updated sequential mixed-mode condition. Multiple subtreatments were embedded in the updated sequential mixed-mode experiment. These subtreatments included a total of nine treatments that varied the type of advance mailing and the timing of the FedEx mailing in a factorial design (referred to as the “3x3 FedEx and advance mailing experiment). Additionally, a tenth subtreatment tested an opt-out screener.

Additionally, the updated sequential mixed-mode group varied from the baseline by using a thank-you/reminder pressure-sealed mailer to thank respondents and to remind nonrespondents to the first web survey invitation to complete the questionnaire online. The pressure-sealed mailer was made of bifolded paper with perforated tear-off edges, and it provided login information to complete the questionnaire on the web. The use of the pressure-sealed mailer allowed for comparison against the use of a thank you/reminder postcard with no login information sent to cases in the baseline condition.

The 3x3 FedEx and advance mailing experiment (70,000 randomly assigned cases) varied the type of advance contact received and when a nonresponse follow-up package was sent using FedEx rather than

USPS mail. The advance contact experiment was designed to assess the effect of an advance letter within the context of a mixed-mode survey as well as the effect of an advance mailer campaign. The advance contact experiment conditions were advance mailing campaign, advance letter, and no advance mailings (23,333 to 23,334 randomly assigned cases in each). The advance mailing campaign consisted of two glossy oversized postcard mailings, designed to build brand awareness with information about the NHES, followed by an advance letter in a letter-sized envelope. The advance letter condition included a single letter in a letter-sized envelope. For households in the no advance letter group, the first screener package was their first NHES mailing.

As part of the 3x3 mailing experiment, NHES:2019 also experimented with nonresponse follow-up packages by sending some addresses a survey package via FedEx at the second mailing and some addresses a survey package via FedEx at the fourth mailing, compared to the baseline condition with the third mailing sent using FedEx. Cost models were used to determine the relative efficiency of changes to the FedEx package timing compared to the cost of the mailing and the cost of survey follow-up mailings. The FedEx experiment conditions were FedEx for the second survey package, FedEx for the fourth survey package, and modeled FedEx timing (23,333 to 23,334 randomly assigned cases in each). The modeled FedEx timing treatment used model-based predictions of response propensity and the cost of the FedEx mailing to determine which households should not receive a mailing by FedEx until the fourth package because the cost of FedEx is high and the cases are predicted to be more likely to respond to earlier mailings. All other cases in the modeled FedEx timing experiment treatment group received their second survey package by FedEx to encourage earlier response. The FedEx experiment was fully crossed with the advance contact experiment to evaluate the experimental effects alone and combined.

Because NHES:2019 only included surveys about children, “opt-out” web invitation letters, screener instruments, and cover letters were tested (10,000 randomly assigned cases, separate from the 3x3 mailing experiment) to encourage response from topical-ineligible households—that is, households without children. Web invitation letters informed respondents, “If you don’t have children, you will only need to answer one question.” The “opt-out” screener included a question on the cover of the paper questionnaire, which was sent at the third and fourth mailings, about whether any children lived in the household. Households without children only needed to answer that one question; placing it on the cover of the questionnaire allowed them to respond without moving beyond the cover of the paper questionnaire. Cover letters included a sentence that told sampled households, “If there are no children in your household, all you need to do is answer one question on the cover of the enclosed survey.” Cases assigned to this condition used the same protocol as those receiving an advance letter and FedEx at the second mailing in the 3x3 mailing experiment, which served as a control group for the opt-out screener condition.

#### **2.2.4 Choice Plus**

To encourage respondents to respond via the Web or by inbound Census TQA (Telephone Questionnaire Assistance) instead of by paper, this experiment offered concurrent web and paper response options and tested two levels of promised incentives for incentivizing web or TQA response. The experimental design was informed by Biemer et al. (2018). For 24,000 randomly assigned cases, respondents were offered a \$10 promised incentive for web or TQA completion; for an additional 6,000 randomly assigned cases, respondents were offered a \$20 promised incentive for web or TQA completion. Respondents were made aware of the incentive in the first mailing after the advance letter, which also contained the standard NHES \$5 prepaid incentive. Follow-up contacts also referenced the promised incentive. To be eligible to receive the promised incentive, cases needed to complete all questionnaire assigned to them either on the Web or TQA. If no one was sampled for a topical questionnaire, submitting the screener would be sufficient; if a child was sampled for a topical questionnaire, the household was also required to submit the topical questionnaire. If the household completed a topical questionnaire by paper, it did not receive the promised incentive. The promised incentive was sent with a cover letter via first class mail in a letter-sized envelope shortly after completion of the household's questionnaire via the Web or TQA.

#### **2.2.5 Modeled Mode**

This experiment (36,000 randomly assigned cases) tested whether targeting some cases with a paper-only protocol—specifically, those cases for which a paper-only protocol would lead to the largest increase in response relative to a mixed-mode survey protocol—would increase the response rate among those cases and overall. Data from the NHES:2016 mixed-mode experiment were used to develop a model predicting response mode preference. This model was used to identify NHES:2019 households whose propensity for paper response would most exceed their propensity for web response. The top 15 percent of the cases (5,400) with the highest difference in modeled propensity for paper response over web response were sent the paper questionnaire only and were not offered a web version. All nonresponse follow-up mailings were paper questionnaires and cover letters. All other cases assigned to the modeled mode experiment were given the same mixed-mode protocol administered to the baseline condition in NHES:2019, in which the respondent was invited to respond on the Web in the first two survey invitation mailings.

#### **2.2.6 Random Paper-Only**

Finally, 4,000 cases were assigned to receive the paper-only protocol regardless of their mode preference. This small, randomly assigned paper-only group was added to aid in the analysis of the modeled mode experiment, allowing an evaluation of the model's accuracy at identifying paper-sensitive cases. In particular, this allocation allowed the treatment effect (the response rate increase attributable

to the paper-only protocol, relative to the baseline mixed-mode protocol) to be compared between the paper-sensitive and non-paper-sensitive cohorts. If the model was accurate, the treatment effect would be larger within the paper-sensitive cohort than within the non-paper-sensitive cohort. The random paper-only sample would also allow analysis to be conducted to confirm that the mixed-mode protocol does not lead to higher nonresponse bias than the paper-only protocol.

### **2.3 Expected and Actual Yields**

In planning the NHES:2019 sample design, consideration was given to the number of completed interviews that the design was expected to yield. This section discusses the assumptions used in the calculations of expected interview counts and then compares the expected to the actual interview counts.

In calculating expected yields, it was necessary to make assumptions about expected address eligibility rates and screener and topical response rates. These rates were estimated on the basis of the NHES:2016 due to the similarities in the sample design. Adjustments were made for the expected effects of the NHES:2019 stratification and experimental treatments. The expected address eligibility rate was assumed to be constant across experimental groups, with a rate of 90 percent for all screener samples. This rate was based on the overall address eligibility rate of 90.5 percent observed in the NHES:2016 and adjusted downward for a conservative assumption.

To attain the overall screener response rate, a screener response rate of 53 percent for the baseline group was first assumed based on the final screener response rate under the mixed-mode condition in the NHES:2016. Screener response rates within the various treatment groups were then projected, based on assumptions about the effect of the experimental treatments on response rates relative to the baseline group. The expected overall screener response rate in 2019 was approximately 53.7 percent, combining the expected screener response rates from all experimental treatment groups. Topical response rates were also projected based on the NHES:2016, with adjustments for experimental treatments. Table 2-4 summarizes the expected eligibility and response rates within each of the treatment groups and for the overall sample. The actual response rates are shown for comparison. For more information about the NHES:2019 response rates, including weighted response rates and the effects of the experiments, see Chapter 5. Response Rates.

**Table 2-4. Expected and actual screener eligibility rates, screener response rates, and topical response rates, by experimental treatment group: NHES:2019**

Experimental treatment group	NHES:2019 expected rates						NHES:2019 actual rates				
	Number of households (actual)	Screener eligibility rate	Screener response rate	ECPP response rate	PFI		Screener eligibility rate	Screener response rate	ECPP response rate	PFI	
					Overall	Among home-schoolers <sup>1</sup>				Overall	Among home-schoolers <sup>1</sup>
<b>Baseline-control</b> (2016 mixed-mode)	40,000	90.0	53.0	81.3	82.0	68.3	91.7	57.2	85.2	83.5	72.8
<b>Targeted mailing</b>											
Targeted mailing-baseline wording	11,630	90.0	53.0	81.3	82.0	68.3	90.8	61.2	86.7	85.8	75.0
Targeted mailing-targeted wording											
Hispanic population	3,370	90.0	46.0	81.3	82.0	68.3	86.7	39.5	80.6	78.5	77.8
<b>Updated sequential mixed-mode<sup>2</sup></b>											
Updated sequential mixed-mode-opt-out screener	10,000	90.0	53.0	81.3	82.0	68.3	91.1	58.4	88.5	88.0	84.4
Updated sequential mixed-mode-no advance letter	23,333	90.0	50.0	81.3	82.0	68.3	91.8	55.3	86.7	86.4	70.7
Updated sequential mixed-mode-advance letter	23,334	90.0	53.0	81.3	82.0	68.3	91.1	56.8	89.1	86.0	77.1
Updated sequential mixed-mode-advance mailing campaign	23,333	90.0	56.0	81.3	82.0	68.3	91.0	56.6	87.9	85.8	88.8
<b>Choice plus</b>	30,000	90.0	56.0	86.3	87.0	73.3	91.9	63.4	86.8	85.1	81.6
<b>Modeled mode</b>											
Modeled mode-baseline	30,600	90.0	53.0	81.3	82.0	68.3	91.0	54.9	84.9	83.5	75.7
Modeled mode-paper only	5,400	90.0	62.0	69.9	71.6	55.9	95.2	79.1	66.3	70.2	52.0
<b>Random paper-only</b>	4,000	90.0	59.0	69.9	71.6	55.9	92.0	62.8	73.5	72.7	60.9
<b>Overall sample</b>	205,000	90.0	53.7	81.5	82.3	68.4	91.4	58.1	86.1	84.5	76.5

<sup>1</sup>Homeschoolers were identified through screener data.

<sup>2</sup>In addition to the opt-out screener and advance letter experiments, the updated sequential mixed-mode group included an experiment with the timing of the FedEx mailing that was crossed with the advance letter experiment. Holding the advance letter treatment constant, it was assumed that any effects of the FedEx timing treatments would cancel each other out. Therefore, the sample calculations did not assume differential response rates by FedEx timing treatments.

NOTE: ECPP = Early Childhood Program Participation. PFI = Parent and Family Involvement in Education. Expected eligibility and response rates are based on the calculations from the NHES:2016. The overall response rates represent the response rates over the entire NHES:2019 sample after accounting for the differential effects of experimental treatments. All response rates are unweighted.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016, 2017 and 2019; U.S. Energy Information Administration, Residential Energy Consumption Survey Study (RECS) of 2015.

The following assumptions were made in deriving the response rates shown in table 2-4:

- The expected screener response rate among households receiving none of the experimental treatments, the baseline condition (control), was 53 percent. As discussed earlier, this assumption is based on the final screener response rate under the mixed-mode condition in the NHES:2016, minus 4 percentage points to account for the expected decrease in response rates over time.
- In the targeted mailing group, about 22 percent of cases were expected to be likely Hispanic households, according to the NHES:2016. The targeted mailing was expected to obtain a screener response rate of 46 percent for these households. This represents an increase of 5 percentage points relative to the assumed response rate of 41 percent for likely Hispanic households in the baseline condition.
- Within the updated sequential mixed-mode condition, the screener response rate for the opt-out screener was expected to be the same as for the baseline condition. For those not receiving any advance letter, the screener response rate was expected to be 3 percentage points lower than for the group with the advance letter. The group with the advance letter was, in turn, expected to have a 3-percentage-point lower response rate than for the group receiving the advance mailing campaign. The group with the advance letter was assumed to have the same response rate as the group in the baseline condition.<sup>7</sup>
- In both choice plus experimental conditions, the screener response rate was expected to increase by 3 percentage points relative to the baseline group, based on the 2015 Residential Energy Consumption Survey Study (Biemer et al. 2018).<sup>8</sup>
- Within the modeled mode experimental condition, about 15 percent of cases were expected to be targeted with a paper-only protocol, according to the results of preliminary paper preference modeling. It was assumed that these cases would have a screener response rate of 62 percent, a 3-percentage-point increase relative to the equivalent cases (i.e., cases predicted to prefer paper) in the baseline group.
- The random paper-only experiment was expected to have a screener response rate of 59 percent, a 4-percentage-point decrease from paper-only cases in the NHES:2016.

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<sup>7</sup> Holding the advance letter treatment constant, it was assumed that any effects of the FedEx treatments (FedEx at the second and fourth mailings and the modeled treatment) would cancel each other out. Therefore, the sample calculations did not assume differential response rates for the FedEx timing treatments.

<sup>8</sup> The 2015 Residential Energy Consumption Survey Study (RECS) compared sequential mixed-mode vs. choice plus and found a 4-percentage-point increase in the response rate with choice plus. This was reduced to 3 percentage points in this analysis to be more conservative and to account for differences in the two surveys' designs.

- The topical response rates under the baseline and updated mixed-mode conditions were assumed to be about 81 percent for the ECPP and about 82 percent for the PFI; these assumptions reflect an expected 2-percentage-point decrease from the NHES:2016 mixed-mode condition. For cases receiving a paper-only protocol, the expected topical response rate was about 70 percent for the ECPP and 72 percent for the PFI, again about 2 percentage points lower than for the paper-only cases in NHES:2016. The choice plus condition was expected to have an upward effect of 5 percentage points on topical response rates. Based on patterns observed in the NHES:2016, homeschoolers were expected to have lower topical response rates than the other PFI cases. The proportion of screener respondents eligible for each topical survey was expected to be the same across experimental conditions.

In calculating expected yields, it also was necessary to make assumptions about the number of screener respondent households that would report children eligible for one or more topical domains. The NHES:2016 screener domain percentages suggested that approximately 29 percent of screener respondent households would have eligible children. The actual data collection experiences for NHES:2019 differed from this expectation to some degree. Table 2-5 shows both the assumptions for within-household sampling based on the NHES:2016 results and the actual data collection results. As noted above, the decline in the eligibility rate from NHES:2016 to NHES:2019 was unexpected and is hypothesized to have been driven by a change in the screener design that lessened the response burden for households without children.

**Table 2-5. Expected and actual percentage and number of households with eligible individuals for one or more topical domains: NHES:2019**

Household eligibility status	Expected percentage of households	Actual percentage of households	Expected number of screened households	Actual number of screened households
<b>Total households with eligible children</b>	<b>28.7</b>	<b>25.4</b>	<b>28,459</b>	<b>27,718</b>
Households with PFI-eligible children enrolled in K-12 and no homeschooled- or ECPP-eligible children	17.6	15.7	17,470	17,105
Households with homeschooled children and no other PFI- or ECPP-eligible children	0.6	0.5	572	554
Households with ECPP-eligible children and no PFI-eligible children enrolled in K-12 or homeschooled	5.1	4.5	5,025	4,911
Households with PFI-eligible children enrolled in K-12, at least one homeschooled-eligible child, and no ECPP-eligible children	0.2	0.2	214	183
Households with PFI-eligible children enrolled in K-12, at least one ECPP-eligible child, and no homeschooled-eligible children	5.0	4.3	4,920	4,718
Households with homeschooled-eligible children, ECPP-eligible children, and no other PFI-eligible children	0.2	0.2	189	203
Households with PFI-eligible children enrolled in K-12, homeschooled-eligible children, and ECPP-eligible child	0.1	#	68	44

# Rounds to zero.

NOTE: ECPP = Early Childhood Program Participation. PFI = Parent and Family Involvement in Education. Details may not sum to totals because of rounding. Expected estimates are based on calculations from the NHES:2016. All percentages are unweighted.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016 and 2019.

On the basis of topical eligibility assumptions, table 2-6 summarizes the expected and actual numbers of completed screener and topical interviews for the NHES:2019. The expected numbers take into account the allocation to the experimental treatments and within-household sampling. Table 2-7 disaggregates the number of actual completed cases by the sampling stratum and response mode (paper, web, or inbound telephone call).

**Table 2-6. Expected and actual number of cases sampled and number of completed screeners and topical surveys: NHES:2019**

Survey	Expected number sampled	Actual number sampled	Expected number of completed interviews	Actual number of completed interviews
Household screeners <sup>1</sup>	205,000	205,000	99,038	108,978
ECPP	8,516	8,245	6,938	7,092
PFI	19,941	19,473	16,402	16,446
Homeschooled <sup>2</sup>	949	919	649	703

<sup>1</sup>It was assumed that approximately 10 percent of screener cases would be ineligible; therefore, an eligible sample size of 184,500 was used as the basis for the expected screener interviews.

<sup>2</sup>Homeschoolers were identified through screener data.

NOTE: ECPP = Early Childhood Program Participation. PFI = Parent and Family Involvement in Education. Expected estimates are based on calculations from the NHES:2016.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016 and 2019.

**Table 2-7. Number of completed interviews, by sampling stratum and response mode: NHES:2019**

Sampling stratum and response mode	Number of completed interviews			
	Screener	ECPP	Overall	PFI
				Among homeschoolers <sup>1</sup>
Black stratum (total)	16,823	1,043	2,287	118
Paper	6,627	254	669	41
Web	8,540	764	1,520	74
Phone	1,656	25	98	3
Hispanic stratum (total)	12,590	980	2,176	88
Paper	5,280	265	717	27
Web	6,527	699	1,404	61
Phone	783	16	55	0
Other stratum (total)	79,565	5,069	11,983	497
Paper	27,609	1,108	2,880	125
Web	47,180	3,879	8,940	368
Phone	4,776	82	163	4

<sup>1</sup>Homeschoolers were identified through screener data.

NOTE: ECPP = Early Childhood Program Participation. PFI = Parent and Family Involvement in Education. Response mode refers to the mode by which the survey was completed, regardless of the initial mode offered. The phone response mode refers to respondents who were sampled for the web experiment or the paper survey but who completed the screener through the toll-free questionnaire assistance phone line.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019.

## 2.4 Precision Requirements

In designing the NHES:2019 sample, a number of measures were examined to ensure that the expected number of interviews would be large enough to report estimates with the desired level of statistical precision. Measures of precision included expected design effects, margins of error on percentage estimates, and detectable differences from prior NHES administrations.

### 2.4.1 Design Effects and Effective Interview Counts

Because the NHES:2019 has a two-phase sampling design similar to that used in NHES:2016, with unequal probabilities of selection to select households for the screener and topical surveys, the variances of estimates were expected to be larger than would be observed if a sample of the same size were selected using simple random sampling. The factor by which the variance of an estimate increases due to a complex sampling design is referred to as the *design effect*. The actual interview count divided by the design effect is referred to as the *effective interview count* and represents the interview count that, under simple random sampling, would give the same variance as that observed under the complex design. Table 2-8 shows the expected average design effect and effective interview count for each of the NHES:2019 topical surveys.<sup>9</sup> (The actual design effects for the NHES:2019 are reported in Chapter 7. Weighting and Standard Error Calculation.) Table 2-8 also shows the average design effect and effective interview count for the NHES:2016 for comparison.

**Table 2-8. Actual interview counts, design effects, and effective interview counts for topical surveys: NHES:2019 expected and NHES:2016 actual**

Survey	2019 expected			2016 actual		
	Interview count	Design effect	Effective interview count	Interview count	Design effect	Effective interview count
ECPP	6,938	2.1211	3,270	5,844	1.8916	3,089
PFI	16,402	2.5289	6,485	14,075	2.5413	5,538
Homeschooled <sup>1</sup>	649	2.2125	293	552	3.1656	174

<sup>1</sup>Homeschoolers were identified through screener data.

NOTE: Expected 2019 design effects were approximated based on observed NHES:2016 web experiment design effects at the screener and topical stages (including screener sampling design, screener nonresponse adjustment, topical within-household sampling, and topical nonresponse adjustments) and on estimated topical sampling design effects using the *I+L* formula due to domain changes in 2019. Actual 2016 design effects represent the average design effect across key estimates, as reported in the NHES:2016 data file user's manual (McPhee et al. 2018). The effective interview count represents the number of expected (2019) or actual (2016) completed interviews divided by the design effect. The effective interview count may not exactly equal the interview count divided by the design effect due to rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016.

### 2.4.2 Topical Estimate Margins of Error

Taking into account the expected sample sizes described above, the expected reliability of estimated proportions was also considered as part of the design of the NHES:2019 sample. The reliability of proportion estimates under the expected sample sizes was measured using the margins of error for a 95 percent

<sup>9</sup> The expected design effect for the NHES:2019 was calculated by using four multiplicative factors that contribute to the larger sampling variance in the current design: stratification of the initial screener sample, differential sampling of households into each topical domain and selection of children within topical domains, the effect of nonresponse adjustment at the screener stage, and the effect of nonresponse adjustment and raking at the topical stage. Due to the similar design, the effect of stratification, nonresponse adjustment, and raking was approximated by the results in the NHES:2016. The design effect attributable to the differential sampling at the topical stage was approximated using Kish's (1965) *I+L* statistic.

confidence level. Table 2-9 shows the expected reliability of various proportion estimates under the expected effective topical interview counts. For example, in the PFI topical estimates, if an estimated proportion is 20 percent or 80 percent, the margin of error was expected to be 1.0 percentage point for the overall population; within subgroups that constitute 50 percent of the population, the margin of error was expected to be about 1.4 percentage points; and within subgroups that constitute 10 percent of the population, the margin of error was expected to be about 3.1 percentage points. As can be seen from table 2-9, based on the expected topical interview count, estimates for proportions ranging from 10 percent to 90 percent were expected to have a margin of error ranging from 0.7 percentage points to 18.1 percentage points, depending on the topical survey and the size of the subgroup for which the proportion was estimated.

**Table 2-9. Expected margins of error for topical surveys, by proportion estimate and subgroup: NHES:2019**

Topical survey	Proportion estimate	Margin of error on proportion estimate (percent)			
		Overall	Within 50% subgroup	Within 20% subgroup	Within 10% subgroup
ECPP	10% or 90%	1.0	1.5	2.3	3.3
	20% or 80%	1.4	1.9	3.1	4.3
	30% or 70%	1.6	2.2	3.5	5.0
	40% or 60%	1.7	2.4	3.8	5.3
	50%	1.7	2.4	3.8	5.4
PFI-Overall	10% or 90%	0.7	1.0	1.6	2.3
	20% or 80%	1.0	1.4	2.2	3.1
	30% or 70%	1.1	1.6	2.5	3.5
	40% or 60%	1.2	1.7	2.7	3.8
	50%	1.2	1.7	2.7	3.9
Among homeschoolers only	10% or 90%	3.4	4.9	7.7	10.9
	20% or 80%	4.6	6.5	10.2	14.5
	30% or 70%	5.3	7.4	11.7	16.6
	40% or 60%	5.6	7.9	12.5	17.7
	50%	5.7	8.1	12.8	18.1

NOTE: The margins of error were calculated assuming a confidence level of 95 percent, using the following formula:  $1.96 \cdot \sqrt{p \cdot (1 - p) / n_e}$ , where  $p$  is the proportion estimate and  $n_e$  is the effective sample size for the topical survey in the specified subgroup.

### 2.4.3 Detectable Differences From Prior NHES Administrations

The NHES:2019 was designed to meet precision requirements that allow for comparison with prior NHES administrations. The precision requirements specified that one be able to detect a 10 to 15 percent relative change in percentage estimates between 30 and 60.

Table 2-10a shows the minimum detectable change in key ECPP proportion estimates, both overall and within key subgroups, between the 2016 and 2019 administrations ( $\alpha = .05$ ), given the expected 2019 effective interview count of 3,270. The percent relative change in an estimate is equal to the change in an estimate from 2016 to 2019 divided by the 2016 estimate—for example, if an estimate was 30 percent in 2016, then a 10 percent relative increase would be equivalent to an increase of 3 percentage points. The expected effective ECPP interview count of 3,270 was sufficient to detect a 10 percent relative change in the majority of overall estimates and estimates within the White subgroup. The expected ECPP sample size does not permit the detection of 10 percent relative increases within the smaller Black and Hispanic subgroups. However, for one estimate within the Black subgroup and two estimates within the Hispanic subgroup, a 15 percent relative change was expected to be detectable. The rightmost column in the table also shows the minimum effective interview count in 2019 necessary to detect a 15 percent relative increase<sup>10</sup> in the estimate. For most estimates, a 15 percent relative increase would be detectable even with an effective sample size that is substantially lower than expected.

<sup>10</sup> The minimum effective sample size to detect a 15 percent relative decrease would be similar, but not identical, to the minimum effective sample size to detect a 15 percent relative increase.

Table 2-10b shows the minimum detectable change in key PFI proportion estimates, given the expected 2019 interview counts of 6,485 for the PFI overall and 293 for the PFI homeschoolers. It was expected that 10 percent relative changes would be detectable for all overall estimates and most of the estimates within race/ethnicity subgroups., only a handful of estimates within race/ethnicity subgroups would not show a 15 percent detectable change under the expected effective sample sizes. For most overall estimates and estimates within race/ethnicity subgroups, a 15 percent relative increase would be detectable even with an effective sample size that is substantially lower than expected. For most of the estimates among homeschoolers, a 15 percent relative change was *not* expected to be detectable given the small size of the 2016 and 2019 expected PFI homeschooler samples.

**Table 2-10a. Expected detectable changes from 2016 for key Early Childhood Program Participation characteristics: NHES:2019**

Characteristic	ECPP:2016		Detectable upward change <sup>1</sup>		Detectable downward change <sup>1</sup>		Minimum effective sample size to detect 15 percent relative increase
	Estimate (percent)	Standard error (percent)	Level (percent)	Percent relative change	Level (percent)	Percent relative change	
Overall estimates							
Participation in care arrangements							
Any care	61.9	0.94	2.5	4.0	-2.5	-4.0	95
Relative care	26.9	0.74	2.1	7.9	-2.1	-7.7	580
Nonrelative care	14.0	0.48	1.6	11.1	-1.5	-10.5	1,465
Center-based	35.8	0.79	2.3	6.4	-2.2	-6.3	353
Can count higher than 10 (age ≥ 2)	56.2	1.17	3.1	5.4	-3.1	-5.5	195
Knows all letters (age ≥ 2)	29.3	1.17	3.0	10.2	-2.9	-10.0	891
Can write own name (age ≥ 2)	40.0	1.12	3.0	7.5	-3.0	-7.4	448
Estimates by race/ethnicity							
White, non-Hispanic, percentage of population							
Participation in care arrangements							
Any care	64.0	1.03	2.9	4.6	-3.0	-4.6	145
Relative care	25.6	1.04	2.9	11.2	-2.8	-10.8	1,279
Nonrelative care	16.3	0.73	2.3	13.8	-2.1	-13.0	2,535
Center-based	38.3	0.89	2.8	7.4	-2.8	-7.2	541
Can count higher than 10 (age ≥ 2)	58.5	1.45	3.9	6.6	-3.9	-6.7	310
Knows all letters (age ≥ 2)	31.6	1.41	3.8	12.0	-3.7	-11.6	1,500
Can write own name (age ≥ 2)	40.8	1.42	3.9	9.5	-3.8	-9.4	813

See notes at end of table.

**Table 2-10a. Expected detectable changes from 2016 for key Early Childhood Program Participation characteristics: NHES:2019–Continued**

Characteristic	ECPP:2016		Detectable upward change <sup>1</sup>		Detectable downward change <sup>1</sup>		Minimum effective sample size to detect 15 percent relative increase
	Estimate (percent)	Standard error (percent)	Level (percent)	Percent relative change	Level (percent)	Percent relative change	
Black, non-Hispanic, percentage of population							
Participation in care arrangements							
Any care	71.2	3.35	8.2	11.6	-8.9	-12.5	1,037
Relative care	33.8	2.73	8.1	24.0	-7.6	-22.5	**
Nonrelative care	14.6	2.08	6.5	44.3	-5.4	-37.1	**
Center-based	40.3	3.37	9.0	22.4	-8.7	-21.7	**
Can count higher than 10 (age ≥ 2)	61.2	3.95	10.2	16.6	-10.7	-17.4	6,008
Knows all letters (age ≥ 2)	30.1	3.48	9.9	32.9	-9.1	-30.1	**
Can write own name (age ≥ 2)	39.6	3.19	9.6	24.3	-9.2	-23.2	**
Hispanic, percentage of population							
Participation in care arrangements							
Any care	53.7	2.19	5.7	10.6	-5.7	-10.7	965
Relative care	26.3	1.67	4.8	18.3	-4.5	-17.3	8,368
Nonrelative care	10.0	1.04	3.3	32.8	-2.8	-28.2	**
Center-based	28.3	1.60	4.8	16.8	-4.5	-16.0	5,113
Can count higher than 10 (age ≥ 2)	47.9	2.49	6.7	13.9	-6.6	-13.8	2,405
Knows all letters (age ≥ 2)	21.5	1.97	5.6	26.0	-5.1	-23.8	**
Can write own name (age ≥ 2)	37.7	2.57	6.8	18.0	-6.6	-17.4	10,186

<sup>1</sup>The detectable upward change is the minimum increase from the 2016 estimate that would be statistically significant (at the .05 level) given the expected ECPP effective sample size of 3,270. The detectable downward change is the minimum decrease from the 2016 estimate that would be statistically significant.

NOTE: The symbol “\*\*” in the minimum sample size column indicates that a percent relative increase of 15 percent would not be detectable with any 2019 sample size due to the precision of the 2016 estimate.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Program Participation Survey of the National Household Education Surveys Program (NHES) of 2016.

**Table 2-10b. Expected detectable changes from 2016 for key Parent and Family Involvement in Education characteristics: NHES:2019**

Characteristic	PFI:2016		Detectable upward change <sup>1</sup>		Detectable downward change <sup>1</sup>		Minimum effective sample size to detect 15 percent relative increase <sup>2</sup>
	Estimate (percent)	Standard error (percent)	Level (percent)	Percent relative change	Level (percent)	Percent relative change	
Overall estimates							
Child's parents participate in three or more activities at child's school <sup>3</sup>	66.9	0.65	1.7	2.6	-1.7	-2.6	72
Child's parents report school practices have been done very well							
School tells family how child is doing in school	57.4	0.66	1.8	3.1	-1.8	-3.1	124
School provides information about how to help child with homework	42.3	0.73	1.9	4.5	-1.9	-4.4	261
School provides information about why child is in groups/classes	40.7	0.69	1.8	4.5	-1.8	-4.5	280
School provides information on how to help prepare child for college	24.0	0.60	1.6	6.7	-1.6	-6.5	689
School provides information about parents' expected role	45.9	0.64	1.8	3.9	-1.8	-3.8	217
Child's parents told child a story in the last week (K-5)	72.1	0.92	2.5	3.5	-2.6	-3.5	125
Child's parents did arts and crafts with child in the last week (K-5)	69.5	1.09	2.8	4.0	-2.8	-4.1	155
Child's parents talked with child about family history/ethnicity in the last week	54.1	0.62	1.7	3.2	-1.7	-3.2	140
Child's parents and child visited a library in the last week	35.1	0.65	1.7	4.9	-1.7	-4.9	355
Child's parents and child went to a concert/live show in the last week	34.0	0.58	1.6	4.8	-1.6	-4.7	370
Child's parents and child visited a museum/gallery/historical site in the last week	26.0	0.56	1.5	5.9	-1.5	-5.8	574
Child's parents and child visited a zoo/aquarium in the last week	24.2	0.56	1.5	6.3	-1.5	-6.2	645
Child's parents and child went to a sporting event in the last week	41.7	0.63	1.7	4.1	-1.7	-4.1	255

See notes at end of table.

**Table 2-10b. Expected detectable changes from 2016 for key Parent and Family Involvement in Education characteristics:  
NHES:2019—Continued**

Characteristic	PFI:2016		Detectable upward change <sup>1</sup>		Detectable downward change <sup>1</sup>		Minimum effective sample size to detect 15 percent relative increase <sup>2</sup>
	Estimate (percent)	Standard error (percent)	Level (percent)	Percent relative change	Level (percent)	Percent relative change	
Estimates by race/ethnicity (PFI-Enrolled and PFI-Homeschooled)							
White, non-Hispanic, percentage of population							
Child's parents participate in three or more activities at child's school <sup>3</sup>	72.8	0.81	2.1	2.9	-2.2	-3.0	82
Child's parents report school practices have been done very well							212
School tells family how child is doing in school	58.2	0.75	2.2	3.8	-2.2	-3.8	212
School provides information about how to help child with homework	42.6	0.88	2.4	5.6	-2.4	-5.5	466
School provides information about why child is in groups/classes	41.9	0.76	2.2	5.3	-2.2	-5.2	473
School provides information on how to help prepare child for college	22.1	0.60	1.8	8.3	-1.8	-8.0	1,395
School provides information about parents' expected role	48.7	0.85	2.3	4.8	-2.3	-4.8	344
Child's parents told child a story in the last week (K-5)	73.2	1.16	3.2	4.4	-3.3	-4.6	211
Child's parents did arts and crafts with child in the last week (K-5)	69.1	1.12	3.2	4.7	-3.3	-4.8	290
Child's parents talked with child about family history/ethnicity in the last week	42.2	0.79	2.2	5.3	-2.2	-5.2	449
Child's parents and child visited a library in the last week	33.2	0.90	2.3	7.1	-2.3	-7.0	737
Child's parents and child went to a concert/live show in the last week	35.7	0.74	2.1	6.0	-2.1	-5.9	617
Child's parents and child visited a museum/gallery/historical site in the last week	26.4	0.75	2.1	7.9	-2.0	-7.7	1,064
Child's parents and child visited a zoo/aquarium in the last week	20.5	0.78	2.0	9.9	-2.0	-9.6	1,713
Child's parents and child went to a sporting event in the last week	44.0	0.92	2.4	5.5	-2.4	-5.5	420

See notes at end of table.

**Table 2-10b. Expected detectable changes from 2016 for key Parent and Family Involvement in Education characteristics:  
NHES:2019—Continued**

Characteristic	PFI:2016		Detectable upward change <sup>1</sup>		Detectable downward change <sup>1</sup>		Minimum effective sample size to detect 15 percent relative increase <sup>2</sup>
	Estimate (percent)	Standard error (percent)	Level (percent)	Percent relative change	Level (percent)	Percent relative change	
Black, non-Hispanic, percentage of population							
Child's parents participate in three or more activities at child's school <sup>3</sup>	61.8	2.22	5.7	9.2	-5.8	-9.4	1,228
Child's parents report school practices have been done very well							
School tells family how child is doing in school	58.1	2.32	5.9	10.2	-6.0	-10.3	1,609
School provides information about how to help child with homework	43.9	2.44	6.2	14.1	-6.1	-13.9	4,881
School provides information about why child is in groups/classes	41.2	2.24	5.9	14.3	-5.8	-14.0	5,280
School provides information on how to help prepare child for college	26.4	1.58	4.8	18.1	-4.5	-17.0	14,073
School provides information about parents' expected role	46.0	2.21	5.8	12.7	-5.8	-12.6	3,469
Child's parents told child a story in the last week (K-5)	74.1	2.38	6.9	9.3	-7.7	-10.3	1,329
Child's parents did arts and crafts with child in the last week (K-5)	66.9	2.99	8.1	12.1	-8.6	-12.9	2,862
Child's parents talked with child about family history/ethnicity in the last week	69.7	2.07	5.3	7.6	-5.5	-7.9	668
Child's parents and child visited a library in the last week	40.9	2.09	5.6	13.8	-5.5	-13.5	4,657
Child's parents and child went to a concert/live show in the last week	32.5	2.00	5.4	16.7	-5.2	-16.1	10,827
Child's parents and child visited a museum/gallery/historical site in the last week	25.7	1.87	5.1	20.0	-4.8	-18.8	59,557
Child's parents and child visited a zoo/aquarium in the last week	28.4	1.72	5.0	17.5	-4.7	-16.6	12,689
Child's parents and child went to a sporting event in the last week	44.7	2.23	5.8	13.1	-5.8	-12.9	3,769

See notes at end of table.

**Table 2-10b. Expected detectable changes from 2016 for key Parent and Family Involvement in Education characteristics:  
NHES:2019—Continued**

Characteristic	PFI:2016		Detectable upward change <sup>1</sup>		Detectable downward change <sup>1</sup>		Minimum effective sample size to detect 15 percent relative increase <sup>2</sup>
	Estimate (percent)	Standard error (percent)	Level (percent)	Percent relative change	Level (percent)	Percent relative change	
Hispanic, percentage of population							
Child's parents participate in three or more activities at child's school <sup>3</sup>	58.8	1.42	3.8	6.5	-3.9	-6.6	599
Child's parents report school practices have been done very well							
School tells family how child is doing in school	55.6	1.44	3.9	7.0	-3.9	-7.0	718
School provides information about how to help child with homework	41.8	1.57	4.1	9.8	-4.1	-9.7	1,609
School provides information about why child is in groups/classes	38.6	1.60	4.1	10.7	-4.1	-10.5	1,995
School provides information on how to help prepare child for college	26.0	1.28	3.5	13.6	-3.4	-13.0	4,498
School provides information about parents' expected role	40.4	1.61	4.1	10.3	-4.1	-10.1	1,785
Child's parents told child a story in the last week (K-5)	69.4	2.00	5.4	7.7	-5.6	-8.1	789
Child's parents did arts and crafts with child in the last week (K-5)	72.5	2.14	5.4	7.5	-5.8	-7.9	627
Child's parents talked with child about family history/ethnicity in the last week	67.6	1.42	3.7	5.4	-3.8	-5.6	332
Child's parents and child visited a library in the last week	31.8	1.21	3.5	10.9	-3.4	-10.6	2,478
Child's parents and child went to a concert/live show in the last week	31.6	1.43	3.8	12.0	-3.7	-11.6	2,893
Child's parents and child visited a museum/gallery/historical site in the last week	25.4	1.32	3.5	13.9	-3.4	-13.4	4,858
Child's parents and child visited a zoo/aquarium in the last week	30.3	1.49	3.9	12.7	-3.7	-12.4	3,419
Child's parents and child went to a sporting event in the last week	40.3	1.48	3.9	9.7	-3.9	-9.6	1,619

See notes at end of table.

**Table 2-10b. Expected detectable changes from 2012 for key Parent and Family Involvement in Education characteristics: NHES:2016—Continued**

Characteristic	PFI:2016		Detectable upward change <sup>1</sup>		Detectable downward change <sup>1</sup>		Minimum effective sample size to detect 15 percent relative increase <sup>2</sup>
	Estimate (percent)	Standard error (percent)	Level (percent)	Percent relative change	Level (percent)	Percent relative change	
Homeschooling estimates (PFI-Homeschooled)							
Reasons for homeschooling							
Concerns about the environment of other schools	77.3	2.51	6.5	8.4	-7.2	-9.3	34
Dissatisfaction with academic instructions at other schools	57.2	3.13	8.2	14.4	-8.4	-14.7	242
To provide religious or moral instruction	65.5	2.94	7.7	11.7	-8.1	-12.3	113
Child has a physical or mental health problem	18.7	3.16	8.0	42.7	-7.2	-38.4	**
Child has other special needs	19.4	1.75	6.0	31.2	-5.3	-27.1	**
Nontraditional approach to child's education	39.1	3.99	9.7	24.8	-9.4	-24.1	**
Other reasons	21.2	2.60	7.3	34.2	-6.5	-30.6	**
Most important reason for homeschooling							
Concerns about the environment of other schools	31.3	2.78	7.8	24.9	-7.3	-23.4	**
Dissatisfaction with academic instructions at other schools	18.9	2.30	6.7	35.7	-5.9	-31.4	**
To provide religious or moral instruction	17.8	2.49	6.9	39.1	-6.1	-34.4	**
Child has a physical or mental health problem	10.2	3.39	8.0	78.3	-6.9	-68.2	**
Child has other special needs	5.1	1.14	4.0	77.6	-2.8	-55.0	**
Nontraditional approach to child's education	5.3	1.14	4.0	75.2	-2.8	-53.5	**
Other reasons	11.4	1.68	5.4	47.2	-4.4	-38.5	**

<sup>1</sup>The detectable upward change is the minimum increase from the 2016 estimate that would be statistically significant (at the .05 level) given the expected PFI effective sample size of 6,485 for the PFI overall and 293 for the PFI homeschoolers. The detectable downward change is the minimum decrease from the 2016 estimate that would be statistically significant.

<sup>2</sup>For non-homeschooling estimates, this column shows the minimum PFI overall effective sample size at which a 15 percent relative increase from the 2016 estimate would be statistically significant (at the .05 level). For homeschooling estimates, this column shows the number of responding homeschoolers required.

<sup>3</sup>Any three or more of FSMTNG, FSATCNFN, FSSPORT, or FSVOL.

NOTE: The symbol "\*\*\*" in the minimum sample size column indicates that a percent relative increase of 15 percent would not be detectable with any 2019 sample size due to the precision of the 2016 estimate.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Parent and Family Involvement in Education Survey of the National Household Education Surveys Program (NHES) of 2016.

## **Chapter 3. Data Collection**

### **3.1 Overview of Data Collection**

Data collection for the 2019 National Household Education Surveys Program (NHES:2019) was a primarily web-first administration using online instruments for most sample addresses, with paper-and-pencil instruments mailed during nonresponse follow-up. Since the NHES is administered in two stages, a screener stage and a topical stage, data collection began with the mailing of an initial contact letter inviting respondents to complete the screener questionnaire via the web or a paper screener, along with a cash incentive. Once completed screener questionnaires were returned or submitted via the online instrument, information from the questionnaires was used to sample children in the household for a more in-depth topical follow-up questionnaire.

Parents of sampled children were eligible for one of two topical surveys in the second stage of data collection: (1) the Early Childhood Program Participation (ECPP) questionnaire for children ages 6 or younger and not yet enrolled in school; and (2) the Parent and Family Involvement in Education (PFI) questionnaire for parents of children ages 3-20 enrolled in public or private school in grades kindergarten through 12 (or homeschooled for the equivalent). No more than one child per household was sampled for a topical survey.

NHES:2019 tested new strategies in the context of multi-mode design as well as the impact of incentives and targeted mailings. NHES:2019 tested respondent contact strategies, that is, whether incentivizing web/Telephone Questionnaire Assistance (TQA) responses (when offering web and paper concurrently) increased the web/TQA response rate. Furthermore, it tested whether using targeted mailings for likely Spanish-speaking/Hispanic households increased the response rates for these groups, and whether targeting some cases for a paper-only protocol increased the response rate among those cases. Refer to Section 3.1.2. Methodology for detailed information about what experiments and treatments were applied to either the screener and/or topical data collection activity.

New in NHES:2019 was the utilization of Integrated Postal Tracking Service (IPTS) bar codes, which gathered additional mailing data from the postal service. These data provided scan dates and locations for the mail pieces through each step of the postal delivery. The back pages of the questionnaires contained the Census Bureau's mailing address and the returned (or incoming) IPTS barcodes so that scans of the incoming barcodes by the postal service could be accurately attributed to each mail piece.

#### **3.1.1 Data Collection Activities**

The NHES:2019 data collection activities were conducted between December 2018 and September 2019. Table 3-1 highlights the timing of these activities.

**Table 3-1. Data collection activity timeline: NHES:2019**

Activity	Date
First advance glossy postcards mailed	December 13, 2018
Second advance glossy postcards mailed	December 20, 2018
Advance letters mailed	January 8, 2019
Initial screener questionnaire packages mailed	January 14, 2019
Screener thank you/reminder postcards/pressure-sealed envelopes mailed	January 22, 2019
Received incoming phone calls from respondents	January-September 2019
Second screener questionnaire packages mailed, via FedEx or U.S. Postal Service	February 13, 2019
Third screener questionnaire packages mailed, via FedEx or U.S. Postal Service	March 14, 2019
Automated telephone calls to nonresponding screener households	March 14-19, 2019
Fourth screener questionnaire packages mailed, via FedEx or U.S. Postal Service	April 11, 2019
Submitted/returned screener questionnaires processed, and households with children assigned to receive the PFI or ECPP questionnaire	January-May 2019
Initial topical questionnaire packages mailed	February-June 2019
Topical thank you/reminder postcards/pressure-sealed envelopes mailed	February-June 2019
Second topical questionnaire packages mailed	March-June 2019
Third topical questionnaire packages mailed, via FedEx <sup>1</sup>	March-July 2019
Automated telephone calls to nonresponding topical households	March-July 2019
Fourth topical questionnaire packages mailed	April-August 2019
Last submitted/completed topical questionnaires accepted	September 20, 2019
Last undeliverable as addressed (UAA) questionnaires accepted	September 20, 2019

<sup>1</sup>With the exception of packages addressed to P.O. boxes, which were sent by U.S. Priority Mail.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019.

Table 3-2 shows a full list of the mailing materials used throughout the NHES:2019 data collection process. The NHES:2019 paper questionnaires and web instruments were available in both English and Spanish. The English language questionnaires are shown in appendix A. Additional versions, including the Spanish questionnaires, are available upon request by contacting [nhes@ed.gov](mailto:nhes@ed.gov).

**Table 3-2. Data collection mailing materials: NHES:2019**

Material name	Each respondent received materials in the following language
<b>Questionnaires/Forms</b>	
Targeted screener <sup>1</sup>	English and Spanish
Opt-out screener <sup>2</sup>	English and Spanish
Screener	English and Spanish
Early Childhood Program Participation (ECPP)	English and Spanish
Parent and Family Involvement in Education (PFI)	English and Spanish
Screener Commonly Asked Questions (CAQ) - Web/Mail	Bilingual <sup>3</sup>
<b>Letters and Envelopes</b>	
Advance mailing postcard 1	English
Advance mailing postcard 2	English
Screener Advance letter - Mail/Web	English or Bilingual
Screener Advance letter - Mail	English or Bilingual
Initial Screener mailing letter - Web	English or Bilingual
Initial Screener mailing letter - Targeted materials condition <sup>4</sup>	Bilingual
Initial Screener mailing letter - Opt-out screener	English or Bilingual
Initial Screener mailing letter - Web, no advance letter	English or Bilingual
Initial Screener mailing letter - Mail	English or Bilingual
Initial Screener mailing letter - Choice plus, <sup>5</sup> \$10 incentive	English or Bilingual
Initial Screener mailing letter - Choice plus, \$20 incentive	English or Bilingual
Screener thank you/reminder postcard - Mail/Web	English or Bilingual
Screener thank you/reminder pressure-sealed mailer - Web	English or Bilingual
Screener thank you/reminder pressure-sealed mailer - Choice plus, \$10 incentive	English or Bilingual
Screener thank you/reminder pressure-sealed mailer - Choice plus, \$20 incentive	English or Bilingual
Second Screener mailing letter - Web	English or Bilingual
Second Screener mailing letter - Mail	English or Bilingual
Second Screener mailing letter - Choice plus, \$10 incentive	English or Bilingual
Second Screener mailing letter - Choice plus, \$20 incentive	English or Bilingual
Second Screener mailing letter - Web, FedEx	English or Bilingual
Second Screener mailing letter - Web, Opt-out Screener	English or Bilingual
Third Screener mailing letter - Mail	English or Bilingual
Third Screener mailing letter - Targeted materials condition	Bilingual
Third Screener mailing letter - Choice plus, \$10 incentive	English or Bilingual
Third Screener mailing letter - Choice plus, \$20 incentive	English or Bilingual
Third Screener mailing letter - Mail, Non-FedEx	English or Bilingual
Third Screener mailing letter - Mail, Opt-out Screener	English or Bilingual
Fourth Screener mailing letter - Mail	English or Bilingual
Fourth Screener mailing letter - Mail, Opt-out Screener	English or Bilingual
Fourth Screener mailing letter - Choice plus, \$10 incentive	English or Bilingual
Fourth Screener mailing letter - Choice plus, \$20 incentive	English or Bilingual
Fourth Screener mailing letter - Mail, FedEx	English or Bilingual
Initial ECPP mailing letter - Mail	English or Spanish
Initial ECPP mailing letter - Web	English or Spanish
Initial ECPP mailing letter - Choice plus, \$10 incentive	English or Spanish
Initial ECPP mailing letter - Choice plus, \$20 incentive	English or Spanish
Initial PFI mailing letter - Mail	English or Spanish
Initial PFI mailing letter - Web	English or Spanish

See notes at end of table.

**Table 3-2. Data collection mailing materials: NHES:2019–Continued**

Material name	Each respondent received materials in the following language
Initial PFI mailing letter - Choice plus, \$10 incentive	English or Spanish
Initial PFI mailing letter - Choice plus, \$20 incentive	English or Spanish
Topical thank you/reminder postcard - Mail - ECPP/PFI	English or Spanish
Topical thank you/reminder pressure-sealed mailer - Web - ECPP/PFI	English or Spanish
Topical thank you/reminder pressure-sealed mailer - Choice plus, \$10 incentive - ECPP/PFI	English or Spanish
Topical thank you/reminder pressure-sealed mailer - Choice plus, \$20 incentive - ECPP/PFI	English or Spanish
Second ECPP mailing letter - Mail	English or Spanish
Second ECPP mailing letter - Web	English or Spanish
Second ECPP mailing letter - Choice plus, \$10 incentive	English or Spanish
Second ECPP mailing letter - Choice plus, \$20 incentive	English or Spanish
Second PFI mailing letter - Mail	English or Spanish
Second PFI mailing letter - Web	English or Spanish
Second PFI mailing letter - Choice plus, \$10 incentive	English or Spanish
Second PFI mailing letter - Choice plus, \$20 incentive	English or Spanish
Third ECPP mailing letter - Mail	English or Spanish
Third ECPP mailing letter - Web	English or Spanish
Third ECPP mailing letter - Choice plus, \$10 incentive	English or Spanish
Third ECPP mailing letter - Choice plus, \$20 incentive	English or Spanish
Third PFI mailing letter - Mail	English or Spanish
Third PFI mailing letter - Web	English or Spanish
Third PFI mailing letter - Choice plus, \$10 incentive	English or Spanish
Third PFI mailing letter - Choice plus, \$20 incentive	English or Spanish
Fourth Topical mailing letter - Mail - ECPP/PFI	English or Spanish
Fourth Topical mailing letter - Choice plus, \$10 incentive - ECPP/PFI	English or Spanish
Fourth Topical mailing letter - Choice plus, \$20 incentive - ECPP/PFI	English or Spanish
Promised Incentive letter	Bilingual
Return mailing envelope, postage-paid	English

<sup>1</sup>Targeted screeners used a special set of cover images as part of an experiment to increase responses from likely Spanish-speaking households.

<sup>2</sup>Opt-out screeners provided respondents the opportunity to respond that they were an ineligible household (that is, they had no children) on the front of the screener, without opening the questionnaire. They were used in an experiment to increase screener responses from these households.

<sup>3</sup>Bilingual materials are double-sided, with one side in English and one side in Spanish.

<sup>4</sup>The targeted materials condition mailings were for a random sample of 15,000 households, of whom about 3,370 were sent mailings using targeted language and images as part of an experiment designed to increase responses from Spanish-speaking households.

<sup>5</sup>Choice plus mailings were for a random sample of 30,000 cases that were offered either \$10 (24,000 cases) or \$20 (6,000 cases) to complete the survey online or via the telephone questionnaire assistance number instead of completing the paper questionnaire.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019.

### 3.1.2 Methodology

New data collection strategies were used in NHES:2019 to test their impact on response rates. A total of 205,000 addresses were sampled and broken into a number of experimental conditions. NHES:2019 included experiments in

- Mode of data collection
  - Offering an incentive after completing the survey by web when offering web and paper concurrently
  - Targeting some cases for a paper-only protocol
- Advance mailings
  - Using different advance mailing strategies, including an advance mailing campaign or advance letter
- Timing for utilizing FedEx rather than first-class mail
  - Using FedEx for the 2nd or 4th screener questionnaire mailing instead of the 3rd mailing to some households during the screener data collection
- Attracting responses from specific subgroups
  - Using targeted mailings for likely Spanish-speaking/Hispanic households
  - Using an opt-out screener that has a question on the cover page to make it easier for households to indicate that there are no children in the household

A detailed explanation of each experiment and its associated data collection materials is provided below. The control conditions are described first.

*Baseline Condition and Updated 2019 Mailing Protocol*

The data collection strategy in the baseline mailings mimicked the 2016 mixed-mode design. This mailing group is a control group to compare results to the additional experimental conditions. The baseline contact strategy began with an initial (advance) mailing letter sent to all households in the sample. These letters simply informed the household of the forthcoming survey.

*Screener mailings.* The initial screener mailing followed the advance mailing. This mailing included the URL to the web survey, the household's user ID to log in and complete the questionnaire, and a \$5 cash incentive. Following the first mailing, households received a postcard that either thanked them for their participation or reminded them about the survey. Subsequently, it was possible for households to receive up to three nonresponse follow-up screener mailings. A paper questionnaire was offered for the first time in the third screener mailing, which was mailed via FedEx<sup>11</sup> (if necessary, households would receive another paper screener in the fourth and final mailing).

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<sup>11</sup> With the exception of packages addressed to P.O. boxes, which were sent by U.S. Priority Mail.

Furthermore, any households in which an associated phone number could be matched to the address using vendor records received calls as part of an auto-call operation at the third screener mailing. This is one deviation from the NHES:2016 mixed-mode experimental protocol, in which auto-call reminders happened concurrently with the final mailing. In the NHES:2019 there was a phone number match for 65.4 percent of households.

*Topical mailings.* The contact strategy for the topical sample mimicked that for the screener, with an initial package followed by a postcard, a total of three follow-up mailings, and an auto-call operation at the third mailing. The contents of the initial topical package were determined by the screener response mode. Respondents who returned a paper screener received a paper topical questionnaire along with a letter and a cash incentive of either \$5 (7,236 respondents) or \$15 (1,663 respondents). Respondents who submitted their screener responses via the Web (but did not start the topical questionnaire) received a letter encouraging web completion along with a cash incentive of \$5 (59 cases) or \$15 (11 cases).<sup>12</sup>

Of the 205,000 addresses in the sample, 40,000 addresses were assigned to the baseline condition, while 80,000 addresses were assigned to receive an updated 2019 mailing protocol. The updated mailing protocol was tested against the baseline condition to ensure that it increased rather than decreased response rates compared to the 2016 protocol. The updated 2019 mailing protocol was a sequential mixed-mode protocol exactly like the baseline condition, with two exceptions. First, the updated mailing protocol utilized pressure-sealed thank you/reminder mailings that included web survey login credentials rather than paper thank you/reminder postcards, with no web credentials included. The pressure-sealed thank you/reminder mailing was a mailing where the sides of the letter are sealed and have perforations to allow the respondent to open the mailing by ripping off the perforated sides. This mailing included the web instrument URL and the household's unique login credentials. Second, the 80,000 addresses assigned to the updated 2019 mailing protocol were used for three additional experiments, advance materials experiment, FedEx timing experiment, and opt-out experiment, described in the sections below.

#### *Choice Plus Experimental Condition*

The choice plus incentive experiment built on promising research conducted as part of the 2015 Residential Energy Consumption Survey (RECS) National Pilot study—an experimental component conducted by the U.S. Energy Information Administration. In RECS, the choice plus protocol was one in which both paper and web response options were offered, and the respondent was offered an incentive contingent on completing the survey on the web (Biemer et al 2018). An objective of NHES:2019 was to test whether incentivizing a web/TQA response when web and paper response options were offered concurrently

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<sup>12</sup> Topical cash incentive amounts were determined based on the timeliness of a household's screener response. Households that responded to the screener after March 11, 2019, were considered "late responders" that required a larger incentive to respond to the topical survey. For late screener responders, the topical incentive was increased from \$5 to \$15.

increased response rates. This treatment also examined whether different incentive values yielded differing response rates. Specifically, a total of 30,000 cases received the choice plus treatment. Of these, 24,000 cases were offered a \$10 cash incentive and the remaining 6,000 cases were offered a \$20 cash incentive if they completed the survey on the Web or through the TQA line.

The sample members in this treatment received a paper screener with a letter including web survey credentials and a promise for \$10 or \$20 upon completion of the survey on the Web or phone, along with \$5 in the first survey package. Subsequent mailings then reminded the recipient of the incentive to respond and continued to include web survey credentials and paper questionnaire. The respondent only received the incentive after completion of the survey via the web instrument or via TQA. Households without children needed to complete only the screener, while households sampled for a topical survey needed to complete the screener and the topical questionnaire to receive the \$10 or \$20 incentive.

#### *Paper-Modeled Mode Experimental Condition and Random Paper-Only Experimental Condition*

NHES:2019 tested whether targeting some cases for a paper-only protocol increases the response rate among those cases. Using data from previous NHES collections and auxiliary data sources, analysts built a model that predicted the extent to which sending only paper questionnaires and letters throughout the data collection would increase the probability of response for a given case (relative to the use of the baseline mixed-mode protocol for that case).

A total of 36,000 cases were randomly assigned to the paper-modeled mode condition. Within these 36,000 cases, the 5,400 cases for which the model predicted the largest increase in the probability of response (the “paper-sensitive” cases) were designated to receive only paper questionnaires and letters throughout collection. Specifically, paper-sensitive cases within the modeled mode condition received a paper screener and cover letter (in a full-size envelope) for all four screener mailings and all four topical mailings. For the remaining 30,600 cases within the paper-modeled mode condition, the baseline mixed-mode protocol was used.

An additional, 4,000 cases (separate from the paper-modeled mode condition) were randomly designated to receive the same paper-only protocol described above. This small randomly assigned paper-only condition was included to aid in the analysis of the modeled mode experiment, allowing an evaluation of the model’s accuracy at identifying paper-sensitive cases.

#### *Advance Materials Experimental Condition*

Although NHES had found in prior collections that advance letters help boost earlier response in both telephone and mail surveys, their usefulness in web surveys had not been tested prior to 2019. Simultaneously, NCES theorized that if it developed “brand awareness” about what NHES is, households might be more likely to respond to the survey request. Consequently, an advance materials experiment–

which tested no advance letter (23,333 randomly assigned cases) against an advance letter (23,334 randomly assigned cases) and against the advance mailer campaign (23,333 randomly assigned cases)—was embedded within the updated 2019 mailing protocol. The “advance mailer campaign” consisted of two NHES postcards preceding the advance letter.

*FedEx Timing Experimental Condition*

Although NHES had traditionally used FedEx to send all third screener mail packages and topical mail packages, NCES was curious about whether there were some cases for whom spending money on FedEx was unhelpful and if there were other cases where sending second screener packages by FedEx would increase responses. Using prior NHES response information and FedEx cost information, analysts developed a model that identifies cases for whom it might be more cost-effective to send the second screener package by FedEx. The model was applied to an experimental condition within the updated 2019 mailing protocol. In this condition, a random set of about 23,333 cases received the second screener package by FedEx, and another random set of about 23,333 cases received the fourth and final screener package by FedEx.

*Targeted Materials Experimental Condition*

One objective of NHES:2019 was to test whether a targeted mailing for likely Spanish-speaking/Hispanic households would increase response rates for those cases. A random sample of approximately 15,000 households was selected as part of the targeted mailing experiment. Among the 15,000 households, those identified as likely Spanish-speaking received the letters and envelopes with the targeted wording and, at the third mailing, paper instruments with cover images of Hispanic families. The remaining households received the baseline wording, envelopes, and instruments (see table 3-3). Data from the American Community Survey as well as frame data from the vendor were analyzed to determine who received the targeted materials as opposed to the baseline materials. Targeted materials were primarily used in the screener mailings, but the targeted envelopes were utilized in both the screener and topical stages.

**Table 3-3. Targeted materials experimental condition sample size: NHES:2019**

Treatment	Sample size (number of households)	Percent
Received targeted materials mailing	3,370	22
Received baseline materials mailing	11,630	78
Total	15,000	100

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019.

*Opt-Out Screener Experimental Condition*

Roughly two of three screener addresses were households that did not have children. These households were not eligible for a topical survey, but their responses were critical for statistical purposes. To make it easier for these households to respond, NHES:2019 experimented with a specially designed paper

screeener, the opt-out screener, which displayed a question on the cover that allowed the respondent to declare that there are no children in the household (and thus complete the questionnaire without opening it). About 10,000 cases within the updated 2019 mailing protocol were set aside for this experimental condition. Because these addresses first received requests to complete the questionnaire on the Web, the letters for these cases mentioned the fact that households without children would need to answer only one question to complete the questionnaire.

## **3.2 Details of Data Collection**

### **3.2.1 Screener Data Collection**

Several advance mailing materials were utilized in NHES:2019. Addresses that were sampled to be a part of the advance mailing campaign experiment received two oversize glossy postcards designed to build awareness of the NHES. One postcard featured data from the ECPP, and the other featured data from the PFI. The first advance postcard was mailed to sampled addresses on December 13, 2018, and the second on December 20, 2018.

Data collection began with the mailing of an advance letter to most sampled addresses on January 8, 2019 (a small sample of addresses that was part of the advance mailing experiment did not receive an advance letter). The letter introduced the survey, informed the household that it had been selected to participate, and provided notice of the forthcoming survey. It informed the household that the next mailing would include a small token of appreciation for participating in the survey. The letter also included a toll-free number for the recipient to call with any questions or to report that the address was ineligible (e.g., if the address was a school or business).

In all mailings of screener packages, the package was addressed to “Member of CITY Household” in the mailing address and “Dear CITY Household” in the salutation. In both, “CITY” corresponded to the city or town name in the sample frame file.

The initial screener packages were mailed to all sampled addresses on January 14, 2019. Nonresponding households were sent screener packages in three subsequent mailings. Packages were shipped via U.S. Postal Service (USPS) First-Class priority mail or FedEx.<sup>13</sup> All envelopes were preprinted with the Census Bureau logo on the left-hand side.

There were several versions of the initial screener survey package, depending on the experimental condition. Most households in NHES:2019 were asked to complete the survey via the web instrument in the first screener mailing. The web survey package included a letter with login information inviting the respondent to complete the survey via the web instrument, the Commonly Asked Questions (CAQ) insert, and a \$5 cash incentive. The

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<sup>13</sup> FedEx does not ship to P.O. boxes, so any packages with a P.O. Box address were sent by USPS Priority Mail.

letter also included contact information should the respondent be unable or unwilling to complete the survey online.

The mail/paper survey package included the screener questionnaire, a letter introducing the survey with instructions on how to complete it, the CAQ insert, a \$5 cash incentive, and a pre-addressed, postage-paid return envelope. The opt-out screener experimental condition received a letter with login information inviting the respondent to complete the survey via the web instrument, the CAQ insert, and a \$5 cash incentive. The only difference between this package and the web survey package is that the letter stated that the survey would only take a minute or two if there were no children in the household. The letter also included contact information should the respondent be unable or unwilling to complete the survey online. The opt-out screener experimental condition, in later follow-up screener mailings, also received a paper screener. This paper screener for this condition included the question about whether or not the household has children on the cover, rather than on the inside, of the screener.

Some addresses that were part of the advance mailing experiment condition did not receive any advance mailing, and thus their screener letters did not make any reference to previous mailings. The initial packages for the advance mailing experiment received the above-mentioned letter with the login information inviting the respondent to complete the survey via the web instrument, the CAQ insert, and a \$5 cash incentive. The letter also included contact information should the respondent be unable or unwilling to complete the survey online.

The targeted materials condition received letters with targeted wording for likely Spanish-speaking households. The initial targeted materials experimental condition mailing packages included this letter with the Spanish side facing up, the CAQ insert, and a \$5 cash incentive. These packages were mailed in an envelope designed specifically for likely Spanish-speaking households.

The choice plus package gave respondents the choice of completing the survey via the web instrument, over the phone with TQA staff, or on paper. The choice plus package included the screener questionnaire, a letter with login information inviting the respondent to complete the survey (which promised an additional \$10 or \$20 cash incentive if the household completed the survey via the web instrument or over the phone with TQA staff), the CAQ insert, a \$5 cash incentive, and a pre-addressed, postage-paid return envelope.

With the exception of the targeted materials experimental condition, all of the cases received package materials prepared in either English or in English and Spanish (i.e., bilingual). The targeted materials experimental condition's package materials were prepared only in a bilingual version. The English versions of the package contained a cover letter in English and one screener questionnaire in English, if the package included a paper form. The bilingual version of the package had English on one side of the cover letter and Spanish on the other side and included both an English and Spanish screener questionnaire, if it included paper forms.

One week after the initial screener mailing, a thank you/reminder postcard or pressure-sealed mailer was sent to each household. Approximately 3 weeks after the thank you/reminder mailer, nonresponding households were sent their first follow-up package. The contents of most of these packages were identical to those in the initial mail-out, with the exclusion of the incentive and a slightly different letter. These packages were mailed with either English or bilingual materials. Only the targeted materials condition's first follow-up package differed from its initial mailing, as it did not include targeted materials. All packages were sent via USPS first-class priority mail, with the exception of those included in the FedEx timing experiment, which were sent via FedEx.

Nonresponding households were sent two additional follow-up mailings, each mailed approximately 4 weeks after the previous follow-up package to allow time for the receipt of completed screener questionnaires. Regardless of whether or not the household was originally sampled for the baseline treatment, the packages sent to nonresponding households after the first follow-up package included a cover letter, the CAQ insert, a screener questionnaire(s), and a postage-paid return envelope. For most cases, the second follow-up packages for nonresponding households were mailed using FedEx services.<sup>14</sup> However, households that received FedEx packages at the second or fourth mailing received their third mailing via USPS priority mail.

The schedule for all screener-related mailings is shown in table 3-4.

**Table 3-4. Mailing schedule for screener questionnaires: NHES:2019**

Item	Mailing date	Number mailed
Advance mailing campaign letter - first mailing	December 13, 2019	23,322
Advance mailing campaign letter - second mailing	December 20, 2019	23,322
Advance letter	January 8, 2019	181,666
Initial screener questionnaire mailing - All packages	January 14, 2019	205,000
Thank you/reminder postcard or pressure-sealed mailing - All cases	January 22, 2019	205,000
Second screener questionnaire mailing, via FedEx or USPS	February 13, 2019	141,873
Third screener questionnaire mailing, via FedEx or USPS	March 14, 2019	128,366
Fourth screener questionnaire mailing, via FedEx or USPS	April 11, 2019	106,330

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019.

Table 3-5 presents the number of screener questionnaires completed by respondents during each week of data collection. Data from the paper screeners were keyed and transmitted weekly to Census Bureau analysts on Wednesdays. Data from the web screener questionnaire were processed immediately. By January 25, 2019, 2 weeks after the initial NHES:2019 mail-out, which consisted mostly of web letters, a total of 40,355 screener questionnaires had been processed and used to identify the cases for the topical mailings that are for parents to complete a topical questionnaire about a sampled child. By May 16, 2019 (the cut-off date for the receipt of

<sup>14</sup> As mentioned earlier, packages with a P.O. box address were mailed using USPS Priority Mail because FedEx does not deliver to P.O. boxes.

screeners used to identify cases for the topical mailings), 40,176 paper screener questionnaires and 69,709 web screeners had been received or submitted.

**Table 3-5. Number of completed screeners received throughout data collection, by week:  
NHES:2019**

Week	Week ending	Completed screeners <sup>1</sup>			
		Paper total	Web/TQA total	Weekly total	Cumulative total
<b>Total</b>		<b>40,179</b>	<b>69,948</b>	<b>110,127</b>	<b>110,127</b>
1	January 25, 2019	3,463	36,892	40,355	40,355
2	February 1, 2019	4,558	13,077	17,635	57,990
3	February 8, 2019	1,663	3,856	5,519	63,509
4	February 15, 2019	525	3,747	4,272	67,781
5	February 22, 2019	403	5,065	5,468	73,249
6	March 1, 2019	796	1,534	2,330	75,579
7	March 8, 2019	331	885	1,216	76,795
8	March 15, 2019	161	702	863	77,658
9	March 22, 2019	3,023	1,817	4,840	82,498
10	March 29, 2019	11,338	566	11,904	94,402
11	April 5, 2019	3,908	296	4,204	98,606
12	April 12, 2019	1,141	254	1,395	100,001
13	April 19, 2019	2,434	515	2,949	102,950
14	April 26, 2019	3,551	233	3,784	106,734
15	May 3, 2019	1,567	133	1,700	108,434
16	May 10, 2019	1,021	80	1,101	109,535
17	May 17, 2019	293	57	350	109,885
18	May 24, 2019	1	42	43	109,928
19	May 31, 2019	0	24	24	109,952
20	June 7, 2019	0	21	21	109,973
21	June 14, 2019	0	24	24	109,997
22	June 21, 2019	0	8	8	110,005
23	June 28, 2019	0	10	10	110,015
24	July 5, 2019	0	23	23	110,038
25	July 12, 2019	0	18	18	110,056
26	July 19, 2019	0	13	13	110,069
27	July 26, 2019	0	10	10	110,079
28	August 2, 2019	0	10	10	110,089
29	August 9, 2019	0	4	4	110,093
30	August 16, 2019	1	4	5	110,098
31	August 23, 2019	0	7	7	110,105
32	August 30, 2019	1	6	7	110,112
33	September 6, 2019	0	5	5	110,117
34	September 13, 2019	0	4	4	110,121

See notes at end of table.

**Table 3-5. Number of completed screeners received throughout data collection, by week: NHES:2019—Continued**

Week	Week ending	Completed screeners <sup>1</sup>			Cumulative total
		Paper total	Web/TQA total	Weekly total	
35	September 20, 2019	0	4	4	110,125
	After close of data collection	0	2	2	110,127

<sup>1</sup>This number does not include cases closed out as undeliverable as addressed (UAA) because these cases were determined to be ineligible for the study.

NOTE: Differences in counts of respondents between the tables in chapter 3 and other chapters are due to differences in case status coding resulting from survey post-processing. TQA refers to the Telephone Questionnaire Assistance line.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019.

Table 3-6 presents the number of completed screener questionnaires returned/submitted by mailing wave and mode.

**Table 3-6. Number of completed screeners received by mailing wave and mode: NHES:2019**

Mailing wave	Mail date	Completed screeners <sup>1, 2</sup>			Cumulative total
		Paper total	Web/TQA total	Wave total	
<b>Total</b>		<b>40,179</b>	<b>69,948</b>	<b>110,127</b>	<b>110,127</b>
1	January 14, 2019	956	29,440	30,396	30,396
2	February 13, 2019	9,547	32,330	41,877	72,273
3	March 14, 2019	2,376	5,496	7,872	80,145
4	April 11, 2019	27,300	2,682	29,982	110,127

<sup>1</sup>This number represents the total number in each mailing wave that returned/submitted a completed questionnaire, regardless of when that form was returned.

<sup>2</sup>This number does not include cases closed out as undeliverable as addressed (UAA) because these cases were determined to be ineligible for the study.

NOTE: Differences in counts of respondents between the tables in chapter 3 and other chapters are due to differences in case status coding resulting from survey post-processing. TQA refers to the Telephone Questionnaire Assistance line.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019.

### 3.2.2 Topical Data Collection

The NHES:2019 topical data collection was conducted from January through September of 2019. Households with eligible children were assigned to a topical mailing batch upon receipt of a sufficiently complete screener questionnaire submitted by paper or via the web instrument. A sufficiently complete screener questionnaire included answers for at least one household member's month and year of birth (or age), school enrollment status, or grade. Once the screener data were processed, within-household sampling occurred.

One child was selected from each eligible household that returned or submitted a completed screener. Sampled households received an invitation to complete a single topical survey, either an ECPP or PFI.

When the screener data were submitted via the web instrument, within-household sampling occurred immediately. A respondent who logged in to the survey and completed the screener and topical questionnaire during the same session did not receive a topical mailing and thus was not eligible to receive a topical incentive. The only screener web response cases that received a topical mailing and incentive were those that completed the screener but did not continue forward into the topical questionnaire. In these instances, a cash incentive and reminder letter were included in the initial topical package.

When households completed a paper screener, the screeners were processed by the Census Bureau, and Census conducted within-household sampling of one child per eligible household. If sampled for a topical survey, a household was mailed an initial package containing the paper topical questionnaire and a cash incentive. Topical nonrespondents received as many as three additional reminder mailings. Depending on their experimental condition, the topical mailings were composed of either a reminder letter with login information, a reminder letter with a questionnaire, or both. All third reminder mailings were sent via FedEx (except those for P.O. box addresses, which were sent by U.S. Priority Mail).

Households were assigned to a mailing batch based on the date when their completed screener questionnaire was received (paper) or submitted (Web). There were eight topical mailing batches in total. Each topical mailing batch followed its own mailing track for initial and nonresponse follow-up mail packages. Topical mailing batch assignments took place 2 weeks prior to mailing out the initial topical package; any screeners received or submitted between batch assignment and the batch mailing were assigned to the next batch.

The initial screener packages were received in mid-January, with the first topical mailing batch assignment beginning on January 31, 2019. Topical mail packages were sent between 2 and 3 weeks after a screener package was received. There were two versions of the initial topical package: a mail package and a web package. Details on both can be found below.

The initial topical mail package contained the following:

- A letter to the household introducing the topical questionnaire and requesting that an adult knowledgeable about the sampled child complete the questionnaire
- A monetary incentive—either \$5 or \$15<sup>15</sup>
- A pre-addressed, postage-paid return envelope
- The appropriate topical questionnaire:
  - Households with a sampled child age 20 or younger enrolled in kindergarten through 12th grade or being homeschooled for an equivalent grade received the PFI questionnaire

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<sup>15</sup> Households whose screener questionnaire was received at Census after March 11, 2019, and were eligible to complete a topical questionnaire received a \$15 cash incentive instead of \$5 in their topical package.

- Households with a sampled child age 6 or younger not yet enrolled in kindergarten received the ECPP questionnaire

The initial web topical package contained the following:

- A letter to the household introducing the topical questionnaire and requesting that a knowledgeable adult log in to the survey website and complete the questionnaire using the information provided.
- A monetary incentive—either \$5 or \$15<sup>16</sup>

The language of the topical mailing package (English or Spanish) was determined by the language in which the household completed the screener. For example, if a Spanish screener questionnaire was returned, the topical mailing package materials were sent in Spanish (likewise, if the screener was in English, the topical mailing was sent in English). For households that completed their screener using the web instrument, the language of the topical mailing was based on the last completed screener question. For example, if the last completed screener question was in English, the topical mailing package materials were sent in English. The reason the last item was used to determine the language the questionnaire was completed on the web is because the respondent could switch from English to Spanish throughout the web instrument.

The topical packages for sampled children were addressed to “Member of CITY Household” on the first line and “Attn: Parent or Guardian” on the second line. The salutation of the letter was addressed to “Dear parent of <Insert name of Sampled Child>” when the child’s first name, nickname, or initials were provided in the screener. When the name was not provided, no reference to the child appeared in the salutation of the letter, and instead it said “Dear Parent.” The sampled child was referenced in the letter and questionnaire by his or her name, age, grade, and sex, if available.

A postcard or pressure-sealed mailer was mailed to all topical households approximately 1 week after the initial mailing to remind them to complete the survey and thank them if they had already completed it. Approximately 2 weeks after the thank you/reminder postcard/pressure-sealed mailers, nonresponding households were sent their first follow-up package. The contents of this package were identical to the initial mail-out, with the exclusion of the incentive.

Nonresponding households were sent two additional follow-up mailings, each mailed approximately 3 weeks after the previous follow-up package to allow time for the receipt of completed topical questionnaires. Regardless of experimental condition, the packages sent to nonresponding households after the second mailing included a cover letter, the appropriate topical questionnaire, and a postage-paid return envelope.

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<sup>16</sup>Web cases with screeners submitted after March 11, 2019, received a \$15 cash incentive instead of \$5.

The third package for nonresponding households was mailed using FedEx services, where possible,<sup>17</sup> for all batches. A total of four mailings were completed for topical mailing batches 1 through 8. The cut-off date for receipt of completed topical questionnaires to be included in the data file was September 20, 2019.

Table 3-7 summarizes the specific data collection activities for the topical surveys and the date when each occurred. The table shows that the first mailing of topical packages occurred on February 14, 2019, and that a total of 42 cases in topical mailing batch 1 were mailed an initial topical package. The total of all mailings of topical packages was 32,068 through all eight topical mailing batches.

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<sup>17</sup>Packages with a P.O. box address were mailed using USPS Priority Mail because FedEx does not deliver to P.O. boxes.

**Table 3-7. Data collection schedule for topical questionnaires, by topical mailing batch and number mailed: NHES:2019**

Topical mailing batch	Initial mailing			Follow-up mailings to nonresponding households		
		Initial package	Thank you/reminder postcard/pressure-sealed envelope	First follow-up (second topical mailing)	Second follow-up (third topical mailing)	Third follow-up (fourth topical mailing)
Batch 1	Date	February 14, 2019	February 21, 2019	March 7, 2019	March 28, 2019	April 18, 2019
	Number	42	42	39	38	35
Batch 3	Date	March 14, 2019	March 21, 2016	April 4, 2019	April 25, 2019	May 16, 2019
	Number	1,384	1,384	782	542	417
Batch 4	Date	March 28, 2019	April 4, 2019	April 18, 2019	May 9, 2019	May 30, 2019
	Number	284	284	225	154	116
Batch 5	Date	April 11, 2019	April 18, 2019	May 2, 2019	May 23, 2019	June 13, 2019
	Number	435	435	271	187	139
Batch 6	Date	April 25, 2019	May 2, 2019	May 16, 2019	June 6, 2019	June 27, 2019
	Number	3,718	3,718	2,473	1,738	1,373
Batch 7	Date	May 9, 2019	May 16, 2019	May 30, 2019	June 20, 2019	July 11, 2019
	Number	1,043	1,043	756	567	442
Batch 8	Date	June 6, 2019	June 13, 2019	June 27, 2019	July 18, 2019	August 8, 2019
	Number	2,062	2,062	1,633	1,230	975

NOTE: The topical mailing batch 2 and 3 mailings were combined into one mailing for batch 3.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019.

Tables 3-8, 3-9, and 3-10 present the number of completed paper, submitted web/TQA, and combined topical questionnaires received during each week of data collection, respectively. However, the tables do not indicate the total number of topical questionnaires marked as complete for the final data products. During data review, some of the questionnaires marked as complete during data collection were reclassified as non-interviews because they did not meet completeness requirements for processing or turned out to be out of scope for the topical survey they received. (See Chapter 4. Data Processing for additional information.)

**Table 3-8. Number of completed paper topical questionnaires received throughout data collection, by week: NHES:2019**

		Number of completed paper topical questionnaires <sup>1</sup>					
Week	Week ending	Total received by week	Total cumulative received	ECPP received by week	ECPP cumulative received	PFI received by week	PFI cumulative received
<b>Total</b>		<b>6,035</b>	<b>6,035</b>	<b>1,660</b>	<b>1,660</b>	<b>4,375</b>	<b>4,375</b>
1	February 22, 2019	0	0	0	0	0	0
2	March 1, 2019	0	0	0	0	0	0
3	March 8, 2019	0	0	0	0	0	0
4	March 15, 2019	0	0	0	0	0	0
5	March 22, 2019	38	38	11	11	27	27
6	March 29, 2019	384	422	90	101	294	321
7	April 5, 2019	270	692	51	152	219	540
8	April 12, 2019	95	787	24	176	71	611
9	April 19, 2019	185	972	51	227	134	745
10	April 26, 2019	163	1,135	48	275	115	860
11	May 3, 2019	350	1,485	98	373	252	1,112
12	May 10, 2019	915	2,400	249	622	666	1,778
13	May 17, 2019	506	2,906	142	764	364	2,142
14	May 24, 2019	384	3,290	121	885	263	2,405
15	May 31, 2019	405	3,695	128	1,013	277	2,682
16	June 7, 2019	210	3,905	50	1,063	160	2,842
17	June 14, 2019	287	4,192	80	1,143	207	3,049
18	June 21, 2019	561	4,753	183	1,326	378	3,427
19	June 28, 2019	300	5,053	82	1,408	218	3,645
20	July 5, 2019	189	5,242	53	1,461	136	3,781
21	July 12, 2019	194	5,436	55	1,516	139	3,920
22	July 19, 2019	145	5,581	39	1,555	106	4,026
23	July 26, 2019	116	5,697	22	1,577	94	4,120
24	August 2, 2019	144	5,841	31	1,608	113	4,233
25	August 9, 2019	62	5,903	17	1,625	45	4,278
26	August 16, 2019	33	5,936	9	1,634	24	4,302
27	August 23, 2019	41	5,977	6	1,640	35	4,337
28	August 30, 2019	24	6,001	7	1,647	17	4,354
29	September 6, 2019	15	6,016	6	1,653	9	4,363
30	September 13, 2019	14	6,030	4	1,657	10	4,373
31	September 20, 2019	5	6,035	3	1,660	2	4,375
	After close of data collection	0	6,035	0	1,660	0	4,375

<sup>1</sup>This number does not include cases closed out as undeliverable as addressed (UAA) because these cases were determined to be ineligible for the study.

NOTE: Differences in counts of respondents between the tables in chapter 3 and other chapters are due to differences in case status coding resulting from survey post-processing. ECPP is the Early Childhood Program Participation survey, and PFI is the Parent and Family Involvement in Education survey.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019.

**Table 3-9. Number of submitted web/TQA topical questionnaires throughout data collection, by week: NHES:2019**

Number of submitted web/TQA topical questionnaires <sup>1</sup>							
Week	Weekending	Total submitted by week	Total cumulative submitted	ECPP submitted by week	ECPP cumulative submitted	PFI submitted by week	PFI cumulative submitted
<b>Total</b>		<b>19,337</b>	<b>19,337</b>	<b>5,975</b>	<b>5,975</b>	<b>13,362</b>	<b>13,362</b>
1	January 18, 2019	5,269	5,269	1,673	1,673	3,596	3,596
2	January 25, 2019	4,996	10,265	1,549	3,222	3,447	7,043
3	February 1, 2019	3,276	13,541	972	4,194	2,304	9,347
4	February 8, 2019	1,087	14,628	302	4,496	785	10,132
5	February 15, 2019	1,045	15,673	342	4,838	703	10,835
6	February 22, 2019	1,452	17,125	423	5,261	1,029	11,864
7	March 1, 2019	431	17,556	144	5,405	287	12,151
8	March 8, 2019	256	17,812	75	5,480	181	12,332
9	March 15, 2019	215	18,027	66	5,546	149	12,481
10	March 22, 2019	544	18,571	180	5,726	364	12,845
11	March 29, 2019	182	18,753	65	5,791	117	12,962
12	April 5, 2019	81	18,834	29	5,820	52	13,014
13	April 12, 2019	76	18,910	19	5,839	57	13,071
14	April 19, 2019	171	19,081	57	5,896	114	13,185
15	April 26, 2019	79	19,160	21	5,917	58	13,243
16	May 3, 2019	49	19,209	11	5,928	38	13,281
17	May 10, 2019	31	19,240	11	5,939	20	13,301
18	May 17, 2019	20	19,260	6	5,945	14	13,315
19	May 24, 2019	16	19,276	10	5,955	6	13,321
20	May 31, 2019	6	19,282	1	5,956	5	13,326
21	June 7, 2019	5	19,287	1	5,957	4	13,330
22	June 14, 2019	14	19,301	1	5,958	13	13,343
23	June 21, 2019	2	19,303	0	5,958	2	13,345
24	June 28, 2019	4	19,307	1	5,959	3	13,348
25	July 5, 2019	7	19,314	6	5,965	1	13,349
26	July 12, 2019	8	19,322	5	5,970	3	13,352
27	July 19, 2019	2	19,324	1	5,971	1	13,353
28	July 26, 2019	2	19,326	1	5,972	1	13,354
29	August 2, 2019	1	19,327	0	5,972	1	13,355
30	August 9, 2019	2	19,329	0	5,972	2	13,357
31	August 16, 2019	0	19,329	0	5,972	0	13,357
32	August 23, 2019	0	19,329	0	5,972	0	13,357
33	August 30, 2019	5	19,334	1	5,973	4	13,361
34	September 6, 2019	2	19,336	1	5,974	1	13,362
35	September 13, 2019	0	19,336	0	5,974	0	13,362
36	September 20, 2019	1	19,337	1	5,975	0	13,362
37	After close of data collection	0	19,337	0	5,975	0	13,362

<sup>1</sup>This number does not include cases closed out as “undeliverable as addressed” because these cases were determined to be ineligible for the study.

NOTE: Differences in counts of respondents between the tables in chapter 3 and other chapters are due to differences in case status coding resulting from survey post-processing. TQA refers to the Telephone Questionnaire Assistance line. ECPP is the Early Childhood Program Participation survey, and PFI is the Parent and Family Involvement in Education survey.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019.

**Table 3-10. Number of completed and submitted topical questionnaires (web and paper) throughout data collection, by week: NHES:2019**

Week	Week ending	Number of completed and submitted topical questionnaires <sup>1</sup>					
		Total received by week	Total cumulative received	ECPP received by week	ECPP cumulative received	PFI received by week	PFI cumulative received
<b>Total</b>		<b>25,372</b>	<b>25,372</b>	<b>7,635</b>	<b>7,635</b>	<b>17,737</b>	<b>17,737</b>
1	January 18, 2019	5,269	5,269	1,673	1,673	3,596	3,596
2	January 25, 2019	4,996	10,265	1,549	3,222	3,447	7,043
3	February 1, 2019	3,276	13,541	972	4,194	2,304	9,347
4	February 8, 2019	1,087	14,628	302	4,496	785	10,132
5	February 15, 2019	1,045	15,673	342	4,838	703	10,835
6	February 22, 2019	1,452	17,125	423	5,261	1,029	11,864
7	March 1, 2019	431	17,556	144	5,405	287	12,151
8	March 8, 2019	256	17,812	75	5,480	181	12,332
9	March 15, 2019	215	18,027	66	5,546	149	12,481
10	March 22, 2019	582	18,609	191	5,737	391	12,872
11	March 29, 2019	566	19,175	155	5,892	411	13,283
12	April 5, 2019	351	19,526	80	5,972	271	13,554
13	April 12, 2019	171	19,697	43	6,015	128	13,682
14	April 19, 2016	356	20,053	108	6,123	248	13,930
15	April 26, 2019	242	20,295	69	6,192	173	14,103
16	May 3, 2019	399	20,694	109	6,301	290	14,393
17	May 10, 2019	946	21,640	260	6,561	686	15,079
18	May 17, 2019	526	22,166	148	6,709	378	15,457
19	May 24, 2019	400	22,566	131	6,840	269	15,726
20	May 31, 2019	411	22,977	129	6,969	282	16,008
21	June 7, 2019	215	23,192	51	7,020	164	16,172
22	June 14, 2019	301	23,493	81	7,101	220	16,392
23	June 21, 2019	563	24,056	183	7,284	380	16,772
24	June 28, 2019	304	24,360	83	7,367	221	16,993
25	July 5, 2019	196	24,556	59	7,426	137	17,130
26	July 12, 2019	202	24,758	60	7,486	142	17,272
27	July 19, 2019	147	24,905	40	7,526	107	17,379
28	July 26, 2019	118	25,023	23	7,549	95	17,474
29	August 2, 2019	145	25,168	31	7,580	114	17,588
30	August 9, 2019	64	25,232	17	7,597	47	17,635
31	August 16, 2019	33	25,265	9	7,606	24	17,659
32	August 23, 2019	41	25,306	6	7,612	35	17,694
33	August 30, 2019	29	25,335	8	7,620	21	17,715
34	September 6, 2019	17	25,352	7	7,627	10	17,725

See notes at end of table.

**Table 3-10. Number of completed and submitted topical questionnaires (web and paper) throughout data collection, by week: NHES:2019–Continued**

Week	Week ending	Number of completed and submitted questionnaires <sup>1</sup>					
		Total received by week	Total cumulative received	ECPP received by week	ECPP cumulative received	PFI received by week	PFI cumulative received
35	September 13, 2019	14	25,366	4	7,631	10	17,735
36	September 20, 2019	6	25,372	4	7,635	2	17,737
	After close of data collection	0	25,372	0	7,635	0	17,737

<sup>1</sup>This number does not include cases closed out as undeliverable as addressed (UAA) because these cases were determined to be ineligible for the study.

NOTE: Differences in counts of respondents between the tables in chapter 3 and other chapters are due to differences in case status coding resulting from survey post-processing. ECPP is the Early Childhood Program Participation survey, and PFI is the Parent and Family Involvement in Education survey.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019.

Table 3-11 shows the number of questionnaires returned during data collection as undeliverable as addressed (UAA) at least once for screener and topical mailings during data collection. This table also provides the number of cases that were UAA for one mailing but returned a form in a subsequent mailing.

**Table 3-11. Number of undeliverable as addressed (UAA) returns: NHES:2019**

Form type	Returned as UAA <sup>1</sup>	Converted to interview	Converted to non-UAA status <sup>2</sup>
Screener	18,283	881	905
Topical	153	0	3

<sup>1</sup>At least one mailing resulted in the form being returned as UAA.

<sup>2</sup>Includes interview, non-interview, and out-of-scope status.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019.

If a screener was returned as UAA in the first mailing, the Census Bureau continued to mail nonresponse follow-up packages to determine if delivery was possible. As described in chapter 5, UAAs at the topical level were considered eligible cases since the sampled child remained eligible even though the family was no longer at the same address. These cases were considered nonrespondents in the topical response rate calculations.

### 3.2.3 Bilingual Mailings

NHES:2019 used several variables in the sample file to determine which addresses would receive a bilingual screener package. As described in Chapter 2. Sample Design, NHES:2019 used a stratified sample design and oversampled areas with high Black and Hispanic populations. The high Hispanic stratum was made up of Census tracts with a Hispanic population of 40 percent or higher. The NHES used an augmented mailing frame that contained information about the household, including the surname of the head of household for some cases. The frame vendor matched the surname to a Census Bureau file of surnames that are commonly shared

by people of Hispanic origin. If the surname was in the Census file, an indicator of Hispanic surname was placed in the frame file.

A variable was then created to identify sampled households in Census tracts with high concentrations of Spanish-speaking or “limited English-speaking” households. These are tracts in which a selected percentage of the households spoke Spanish as their primary language and had no one over the age of 14 who spoke only English or who spoke English “well or very well.” The percentage of Spanish-speaking or limited English-speaking households within a Census tract that was used as a threshold to trigger receipt of bilingual materials decreased over the course of the four mailings, from 10 percent (in the initial mailing) to 3 percent (in the second mailing) to 2 percent (in the third and fourth mailings).

The percentage cutoff was lowered during the course of the mailings to balance the cost of including additional forms in the mailings while providing Spanish language forms to households in areas with lower concentrations of Spanish speakers that may have needed Spanish language materials. The following criteria were used to determine which addresses received a bilingual screener package:

- *First mailing criteria:* If an address is in the Hispanic stratum, or there is a Hispanic surname associated with the address, or the address is in a Census tract where 10 percent or more of persons live in households that meet the criteria of being Spanish-speaking and limited English-speaking, then the address will receive a bilingual package for all four mailings.
- *Second mailing criteria:* If an address is in the Hispanic stratum, or there is a Hispanic surname associated with the address, or the address is in a Census tract where 3 percent or more of persons live in households meeting the criteria of being Spanish-speaking and limited English-speaking, then the address will receive a bilingual package for mailings 2 through 4.
- *Third and fourth mailing criteria:* If an address is in the Hispanic stratum, or there is a Hispanic surname associated with the address, or the address is in a Census tract where 2 percent or more of persons live in households meeting the criteria of being Spanish-speaking and limited English-speaking, or the address is in a Census tract where 2 percent or more of the population speaks Spanish at home, then the address will receive a bilingual package for mailings 3 and 4.

If necessary, respondents could call the TQA line or e-mail Census staff and request materials in a different language. During the course of data collection, four respondents called the TQA line for this reason. However, no action was taken as one case was a household with no children and the screener questionnaire was completed over the phone, and the other three were already scheduled to receive bilingual materials in their next mailing.

Table 3-12 displays the total number of bilingual screener packages mailed and Spanish language screeners completed during each wave.

**Table 3-12. Bilingual screener package assignments and Spanish language screener responses, by mailing wave: NHES:2019**

	Mailing wave			
	Initial mailing	Second mailing	Third mailing	Fourth mailing
Total screener mailings	205,016	141,889	128,382	106,345
Bilingual screener packages	45,383	50,181	96,928	81,278
Bilingual as a percentage of total screener mailings	22.14%	35.37%	75.50%	76.43%
Total Spanish screeners completed from bilingual packages	289	185	495	6,398
Total Spanish screeners completed as a percentage of total bilingual packages	0.64%	0.37%	0.51%	7.87%
Total Spanish screeners completed as a percentage of total mailings	0.14%	0.13%	0.39%	6.02%
Spanish web screeners completed from bilingual packages	275	101	17	11
Spanish web screeners completed as a percentage of total bilingual packages	0.61%	0.20%	0.02%	0.01%
Spanish web screeners completed as a percentage of total mailings	0.13%	0.07%	0.01%	0.01%
Spanish paper screeners completed from bilingual packages	14	84	478	6,387
Spanish paper screeners completed as a percentage of total bilingual packages	0.03%	0.17%	0.49%	7.86%
Spanish paper screeners completed as a percentage of total mailings	0.01%	0.06%	0.37%	6.01%

NOTE: Bilingual packages in this table include all cases that received a bilingual mailing (web letter, letter and Spanish paper survey, and targeted condition mailings). Differences in counts of respondents between the tables in chapter 3 and other chapters are due to differences in case status coding resulting from survey post-processing.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019.

Households that returned a completed Spanish screener and were eligible for a topical questionnaire were sent a Spanish topical form. As with the screener packages, respondents could call or e-mail at any time to request materials in a different language; however, there were no requests for a language change for the topical cases.

Table 3-13 displays the total number of Spanish topical questionnaires mailed and returned during each wave.

**Table 3-13. Spanish paper topical questionnaire assignments and returns, by week:  
NHES:2019**

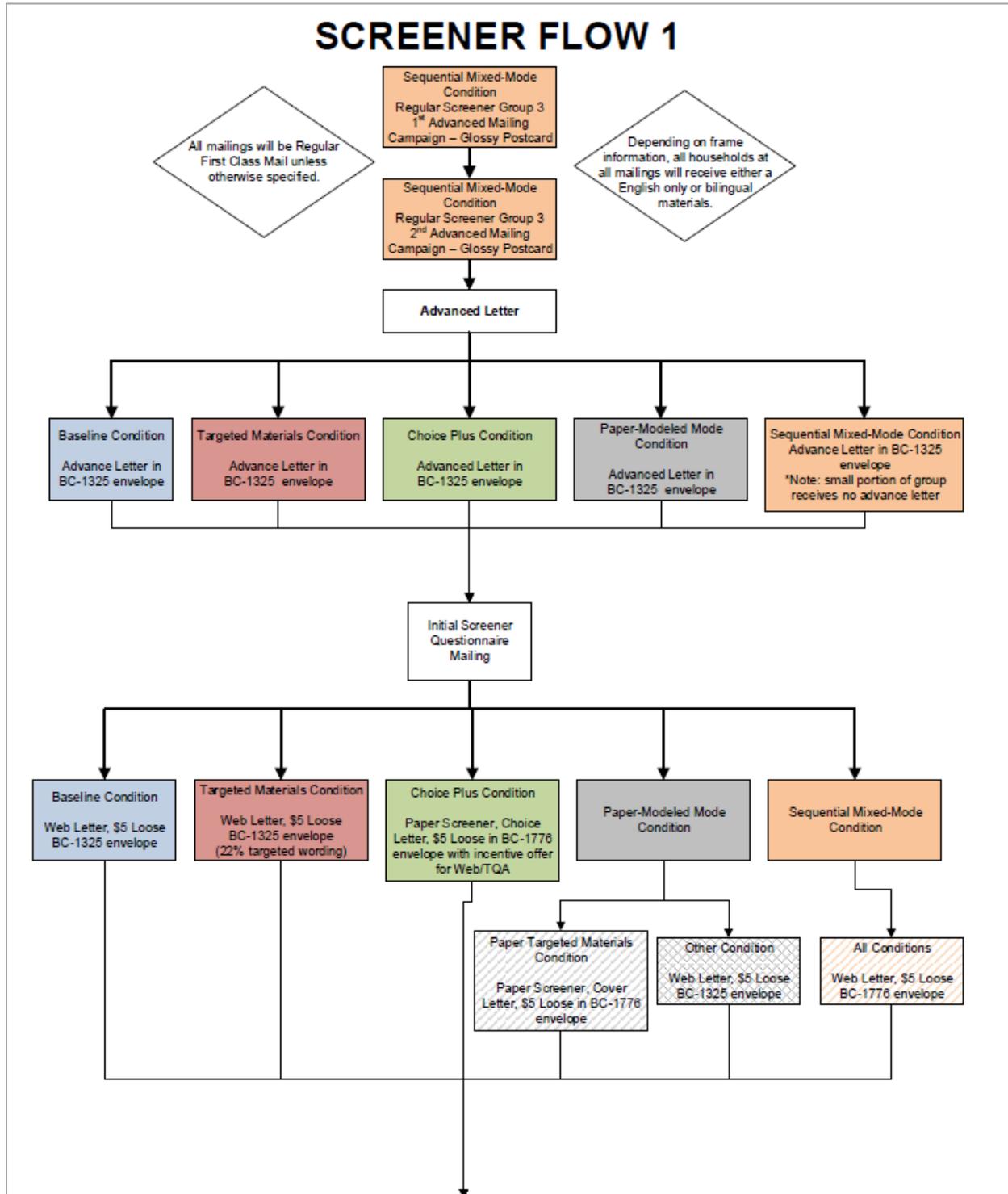
Week	Week ending	Spanish topical questionnaires mailed	Spanish topical questionnaires mailed (as a percent of total English and Spanish mailed)	Spanish topical questionnaires returned	Spanish topical questionnaires returned (as a percent of total English and Spanish completed)
Total		881	4.67	554	6.68
1	February 22, 2019	0	0.00	0	0.00
2	March 1, 2019	0	0.00	0	0.00
3	March 8, 2019	0	0.00	0	0.00
4	March 15, 2019	6	0.72	6	0.91
5	March 22, 2019	0	0.00	0	0.00
6	March 29, 2019	34	11.93	25	13.15
7	April 5, 2019	31	2.28	16	1.56
8	April 12, 2019	10	2.31	5	1.55
9	April 19, 2019	1	0.34	1	0.73
10	April 26, 2019	237	6.37	189	7.24
11	May 3, 2019	10	2.34	5	1.58
12	May 10, 2019	109	10.45	80	12.01
13	May 17, 2019	21	0.57	8	5.23
14	May 24, 2019	0	0.00	0	0.00
15	May 31, 2019	10	0.97	3	5.66
16	June 7, 2019	222	10.77	132	10.82
17	June 14, 2019	0	0.00	0	0.00
18	June 21, 2019	0	0.00	0	0.00
19	June 28, 2019	44	2.14	38	7.04
20	July 5, 2019	0	0.00	0	0.00
21	July 12, 2019	38	7.43	16	11.76
22	July 19, 2019	0	0.00	0	0.00
23	July 26, 2019	0	0.00	0	0.00
24	August 2, 2019	0	0.00	0	0.00
25	August 9, 2019	108	9.74	30	11.15
26	August 16, 2019	0	0.00	0	0.00
27	August 23, 2019	0	0.00	0	0.00
28	August 30, 2019	0	0.00	0	0.00
29	September 6, 2019	0	0.00	0	0.00
30	September 13, 2019	0	0.00	0	0.00
31	September 20, 2019	0	0.00	0	0.00
32	After close of data collection	0	0.00	0	0.00

NOTE: This table only includes Spanish paper topical questionnaire assignments and returns because web returns occurred almost seamlessly from the screener stage online and thus did not require a topical mailing assignment. Only 12 web cases were assigned topical mailings, of which all responded online (and only 1 was a Spanish language response). Differences in counts of respondents between the tables in chapter 3 and other chapters are due to differences in case status coding resulting from survey post-processing.

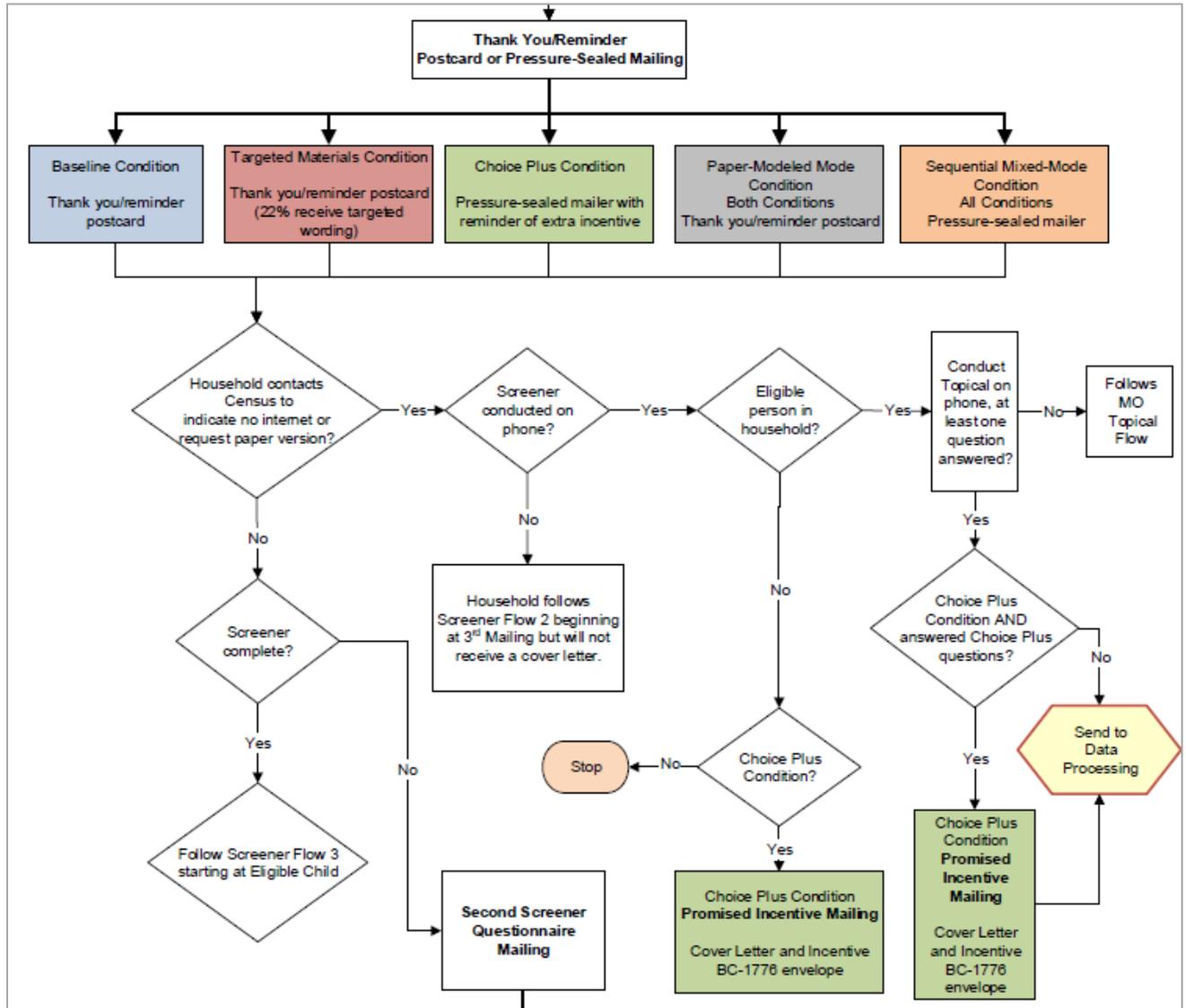
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019.

For a visual overview of the various data collection strategies for NHES:2019, please refer to the following flowcharts. Figures 3-1 through 3-3 show the screener data collection contact procedures. Figure 3-4 shows the topical data collection plan for mail treatment (paper response) households for the ECPP and PFI. Figure 3-5 shows the topical data collection plan for web response households for the ECPP and PFI.

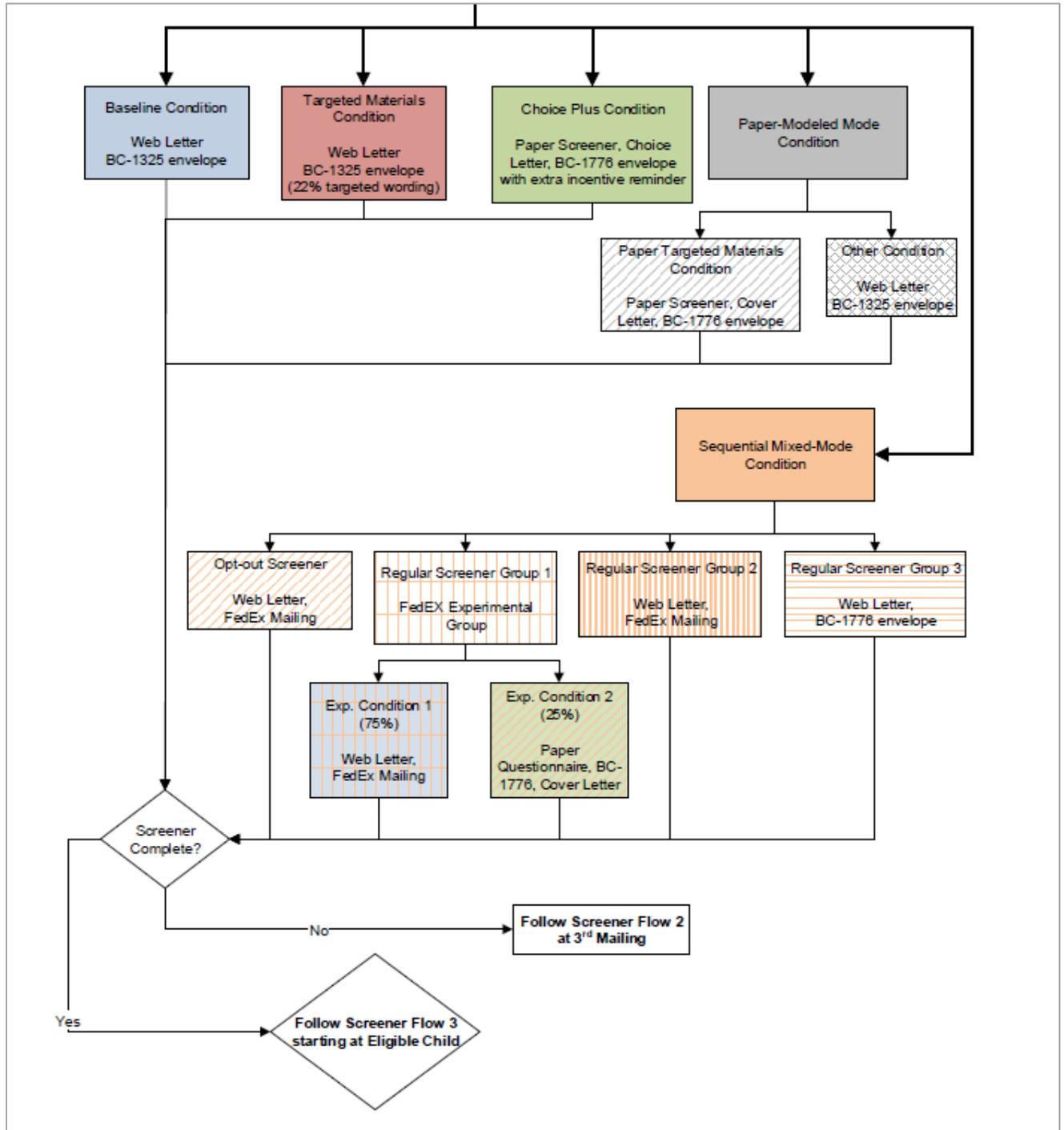
Figure 3-1. Screener data collection plan flow 1



**Figure 3-1. Screener data collection plan flow 1–Continued**

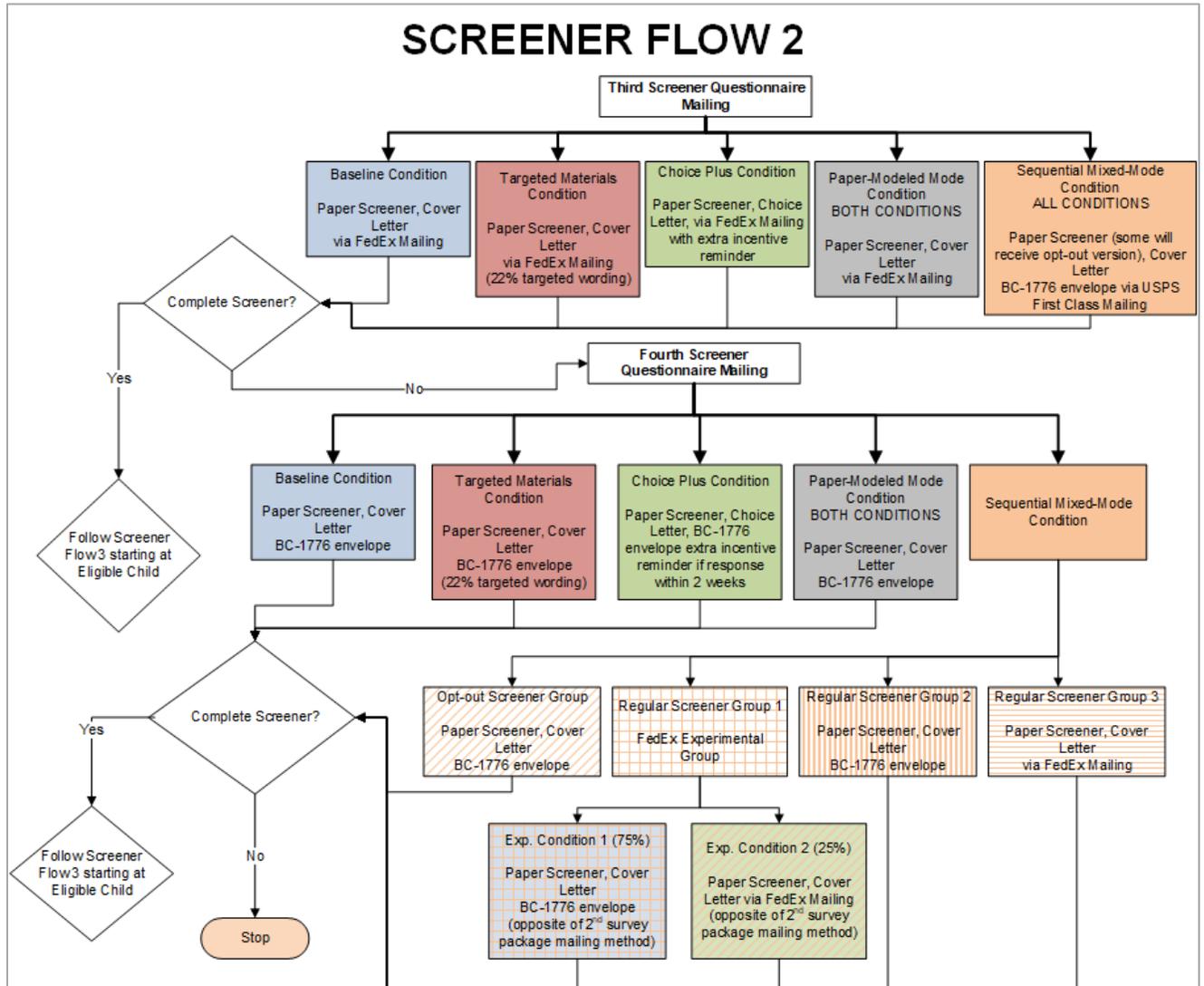


**Figure 3-1. Screener data collection plan flow 1–Continued**



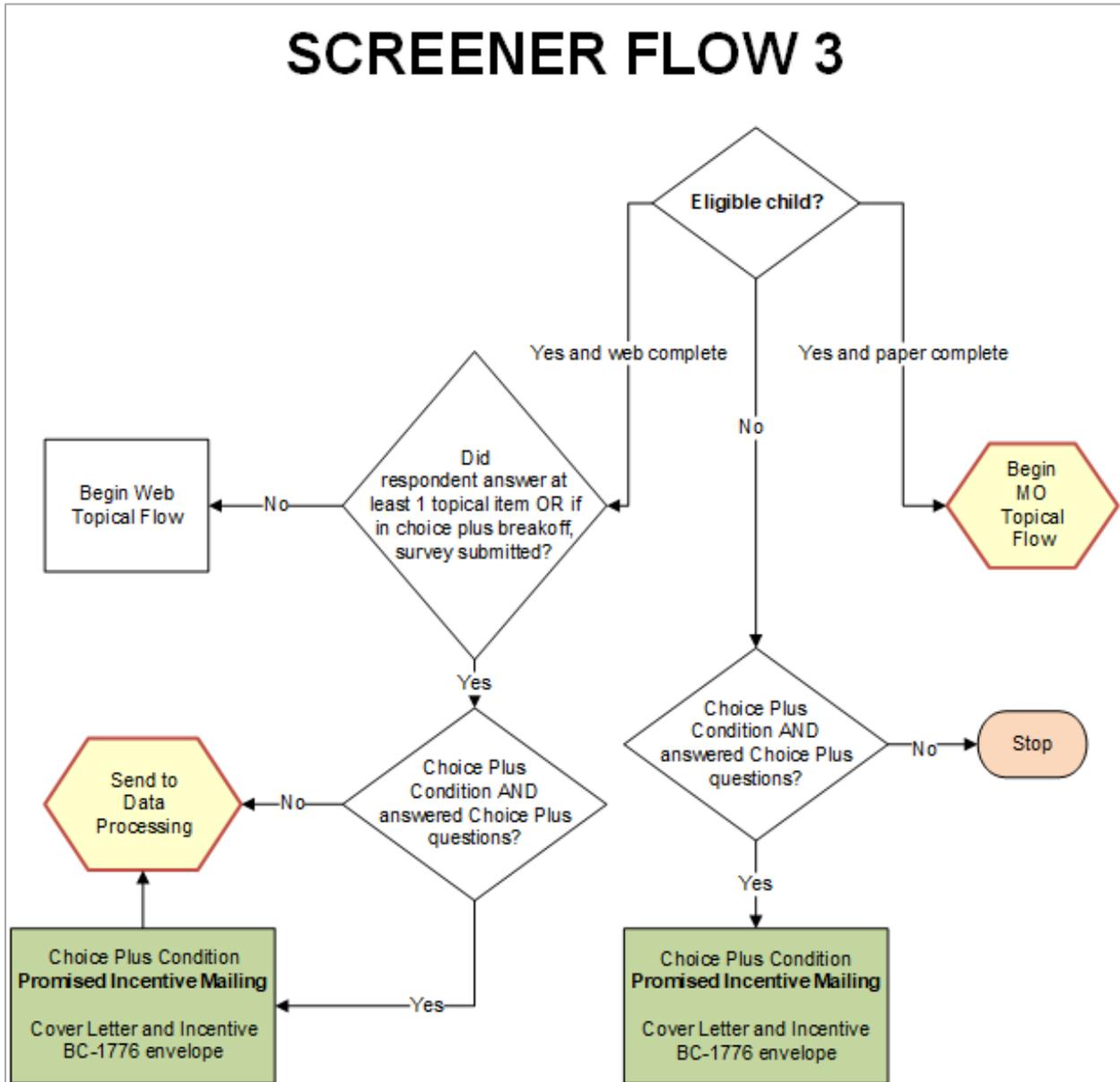
NOTE: The abbreviation “MO” refers to the “mail operation.” The BC-1325 envelope is a standard letter-size envelope (4x9 inch). The BC-1776 envelope is a full size 9x13-inch envelope.

Figure 3-2. Screener data collection plan flow 2



NOTE: The BC-1776 envelope is a full size 9x13-inch envelope.

Figure 3-3. Screener data collection plan flow 3



NOTE: The abbreviation “MO” refers to the “mail operation.” The BC-1776 envelope is a full size 9x13-inch envelope.

Figure 3-4. Topical mail-out data collection plan flow

# MO TOPICAL FLOW

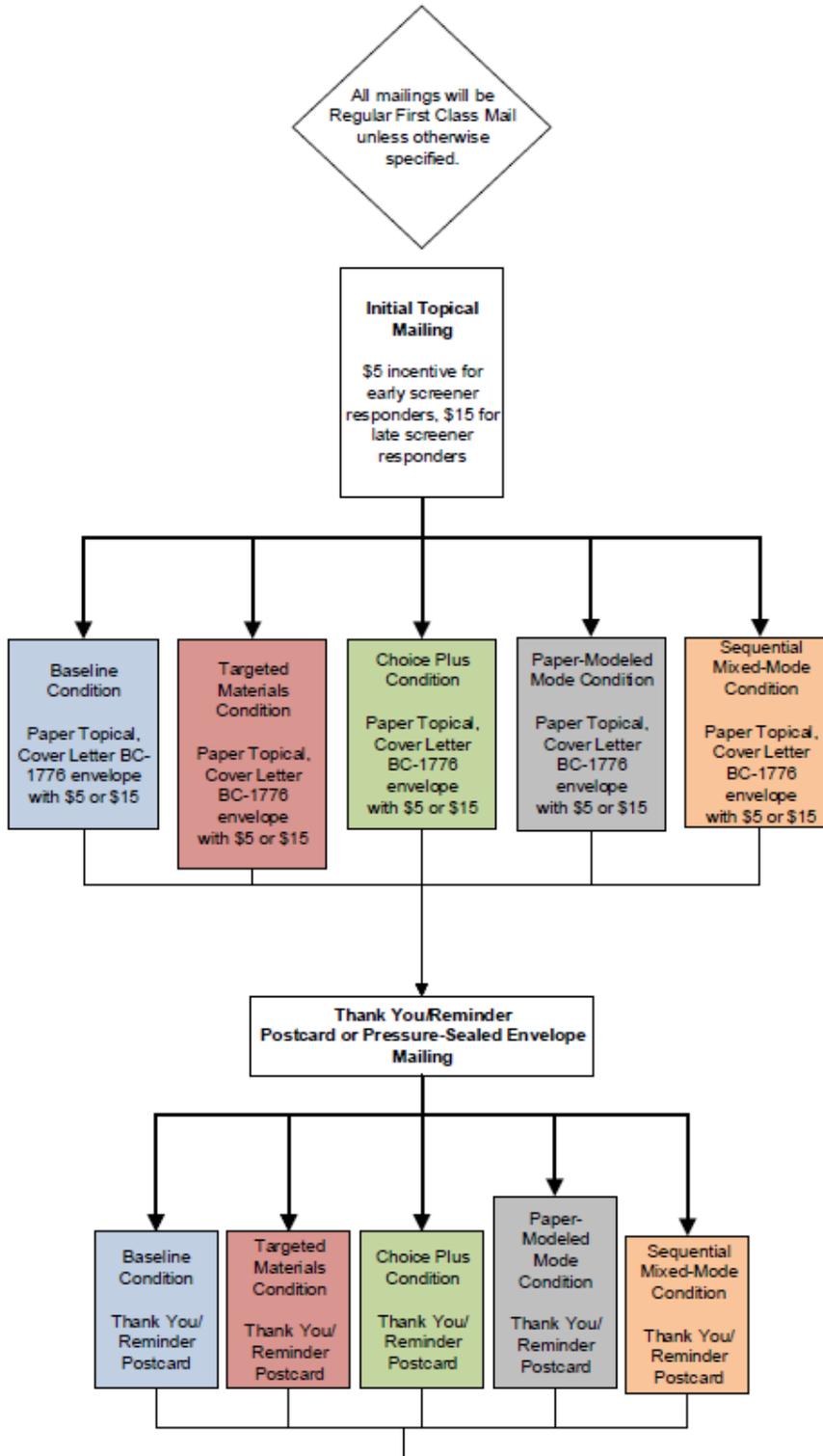
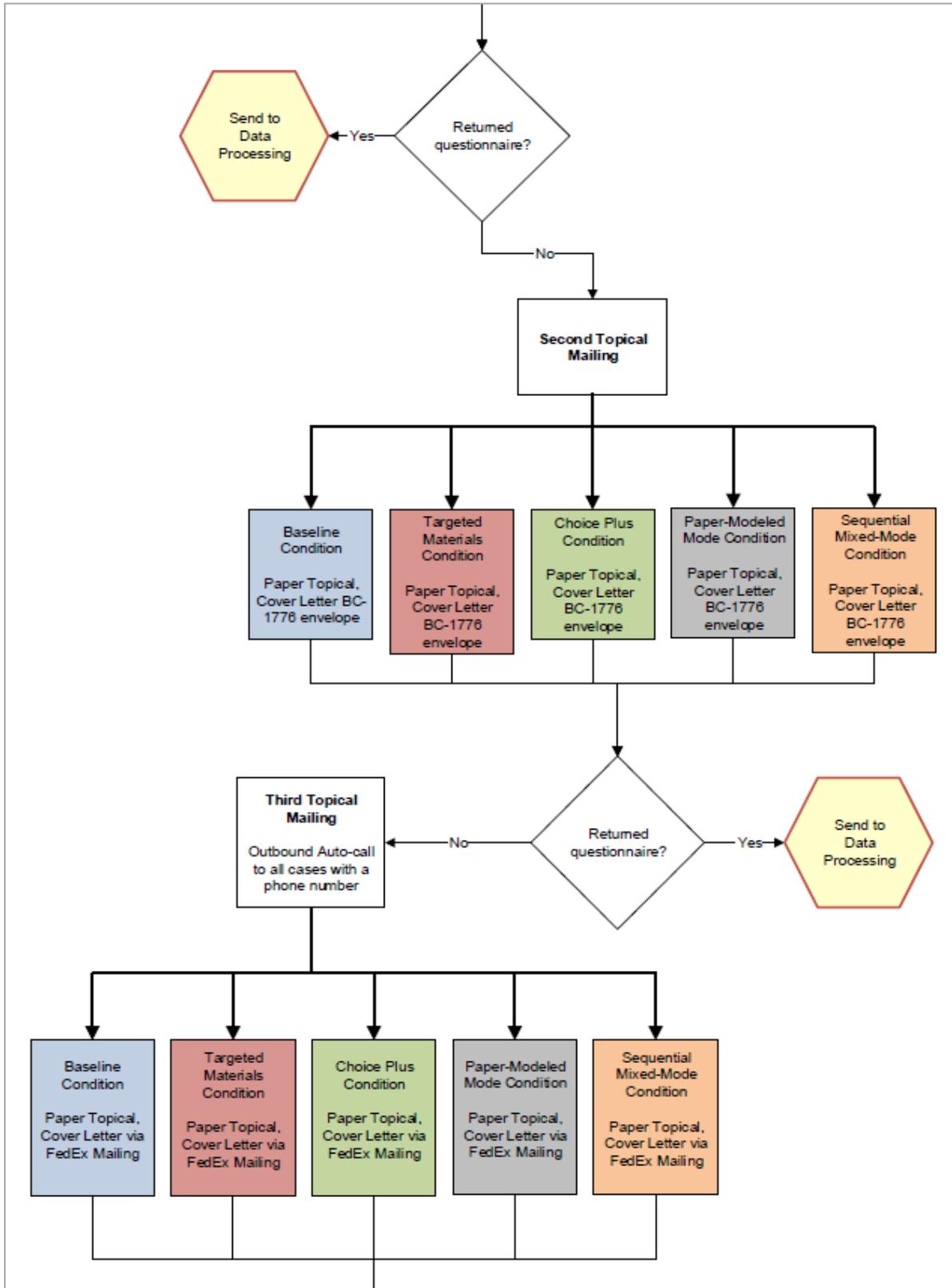
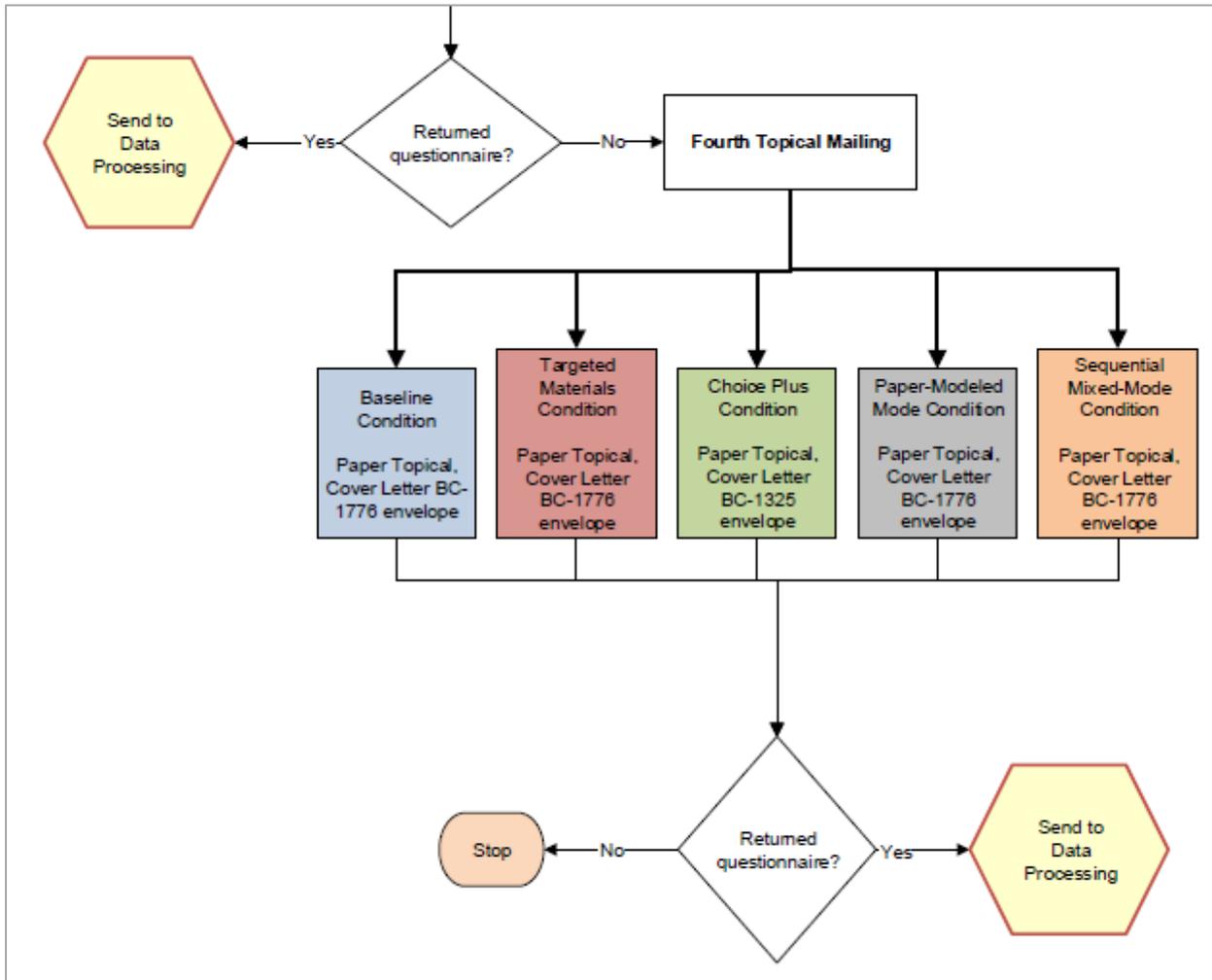


Figure 3-4. Topical mail-out data collection plan flow–Continued



**Figure 3-4. Topical mail-out data collection plan flow–Continued**



NOTE: The abbreviation “MO” refers to the “mail operation.” The BC-1776 envelope is a full size 9x13-inch envelope. The BC-1325 envelope is a standard letter-size envelope (4x9 inch).

Figure 3-5. Topical web data collection plan flow

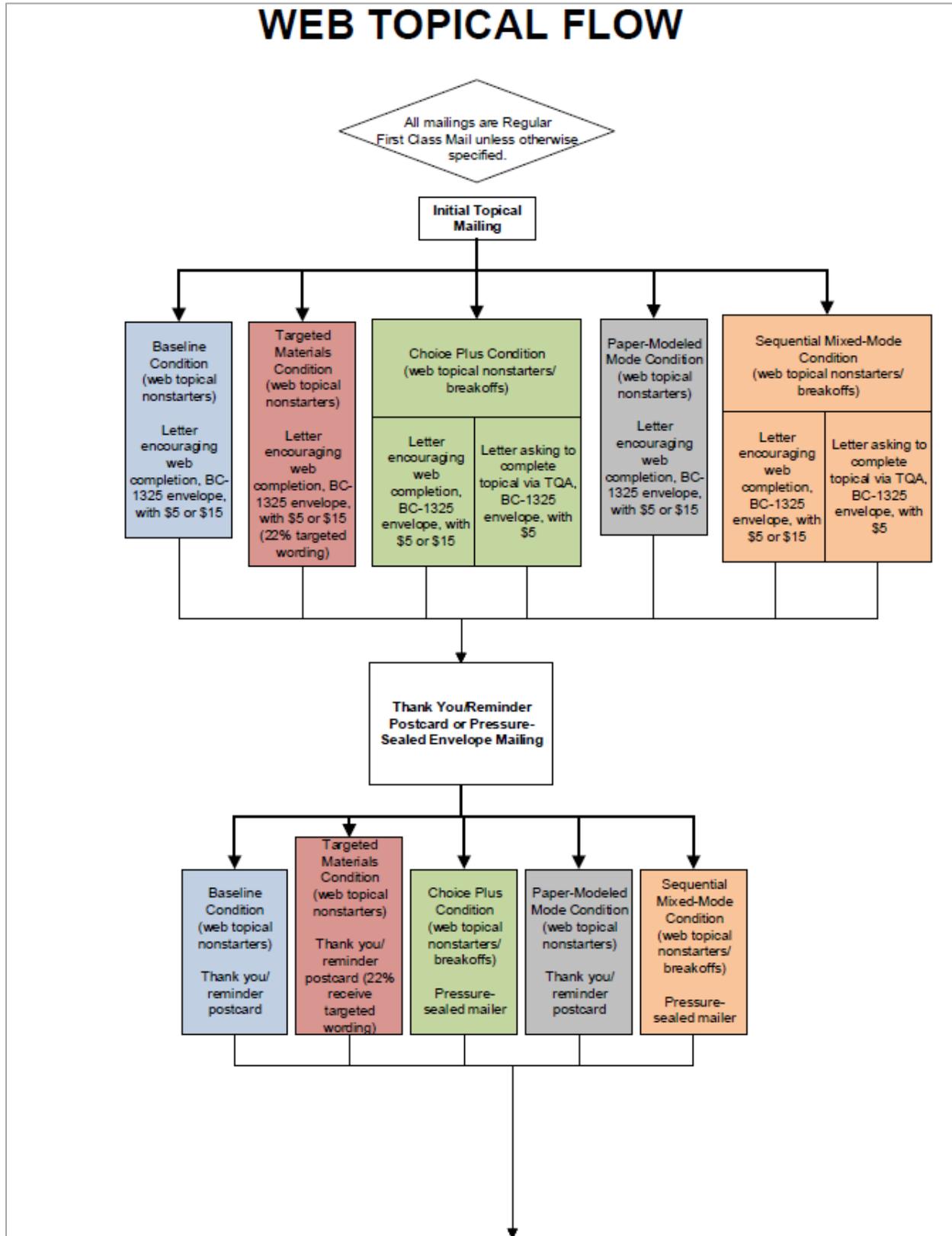
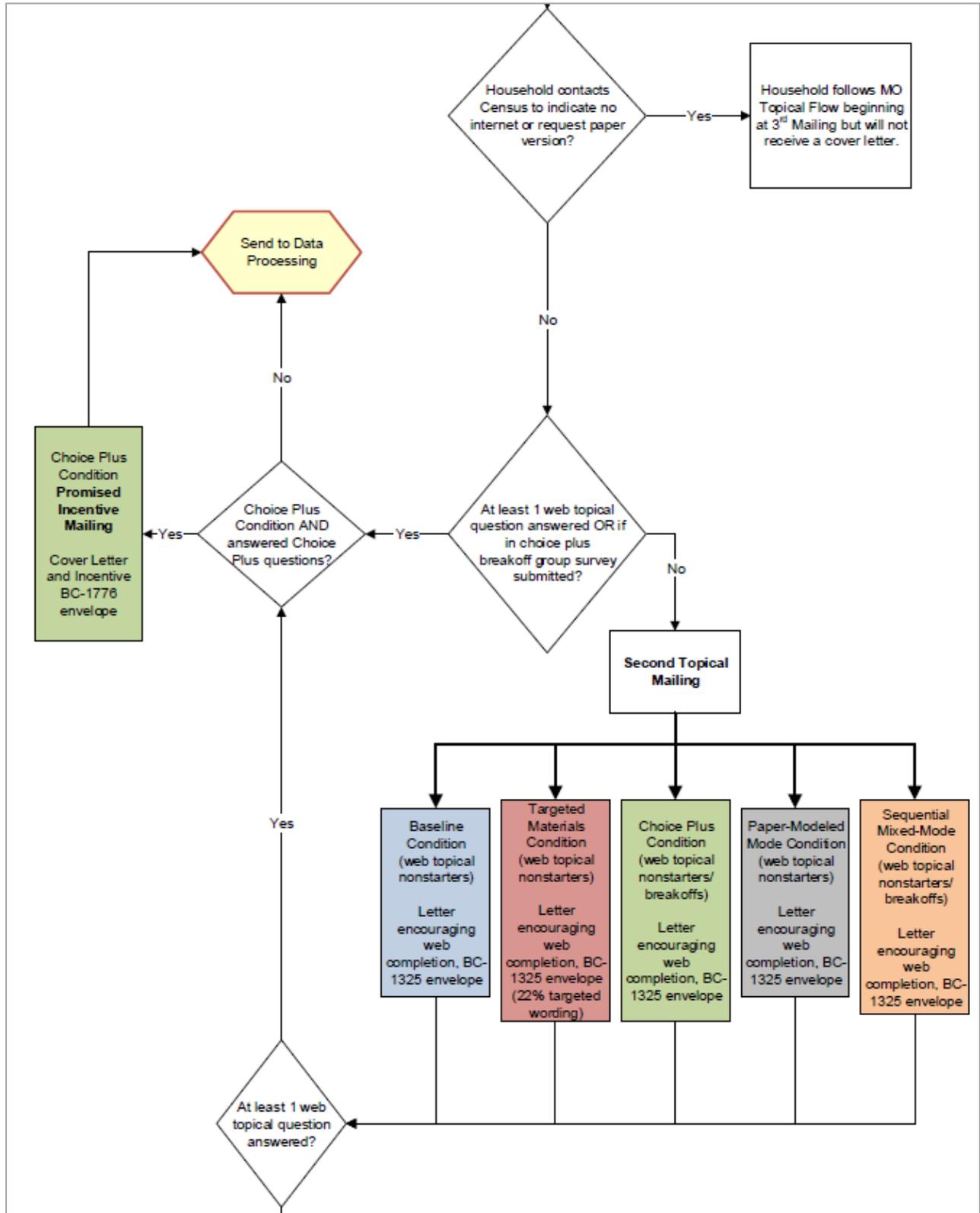
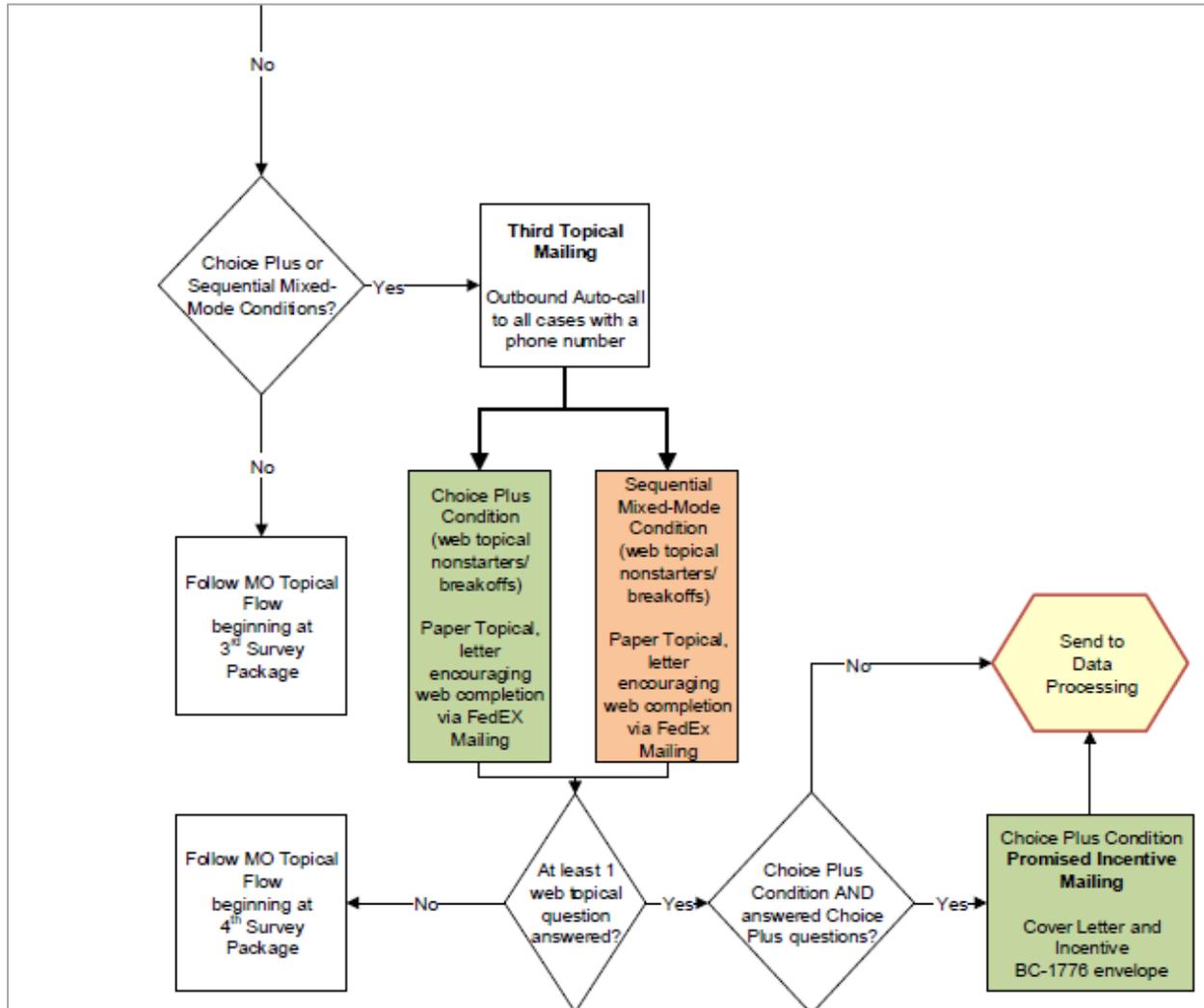


Figure 3-5. Topical web data collection plan flow–Continued



**Figure 3-5. Topical web data collection plan flow–Continued**



NOTE: The abbreviation “MO” refers to the “mail operation.” The BC-1776 envelope is a full size 9x13-inch envelope. The BC-1325 envelope is a standard letter-size envelope (4x9 inch).

### 3.3 Data Collection Support Activities

#### 3.3.1 Telephone Questionnaire Assistance Operation

The purpose of the Telephone Questionnaire Assistance (TQA) operation was twofold.

First, interviewers were trained to (1) assist respondents who called with questions about the screener or topical questionnaires or had questions about the web instrument, including issues logging into the instrument or forgotten pin numbers; (2) address respondent concerns about confidentiality, purpose, sponsorship, and other similar issues; and (3) convey the importance of survey participation to respondents who were reluctant to participate.

Second, interviewers collected screener and/or topical data over the phone via the web instrument when a respondent called about the screener or topical survey.

Forty-five telephone interviewers and three supervisors were selected for NHES:2019 by the Logistics and Command Center at the Census Bureau in November 2018. All of the interviewers had experience with at least two other surveys operating out of the Census Bureau’s Jeffersonville, Indiana, Communication Center (JCC). Because there were Spanish materials, two of the interviewers were bilingual. NCES and Census Bureau staff conducted training at the beginning of January 2019 to prepare interviewers for calls. Training took place at JCC over 2 days, with a morning and afternoon session for day and evening staff, respectively.

The interviewers used the Automatic Tracking and Control (ATAC) system to document the type of calls received from respondents. An ATAC purpose code was assigned to each case to identify the reason the call was placed. The ATAC system also documented whether or not a specific case was resolved. TQA staff were instructed to select all applicable codes, which is why there are cases logging certain reasons for calls that did not result in any action. Table 3-14 provides a full list of the reasons why respondents called the Census Bureau.

**Table 3-14. Telephone call-in reasons on the Telephone Questionnaire Assistance line:  
NHES:2019**

Call-in reason	Number of calls	Percent
Total	11,676	100
Survey complete via web instrument	6,942	59.46
Web survey/Paper questionnaire status	216	1.85
Needs materials in a different language	4	0.03
Hard refusal <sup>1</sup>	77	0.66
Respondent prefers paper questionnaire	41	0.35
Question or concern about incentive	62	0.53
Out of scope (not a residence)	92	0.79
Respondent does not have Internet	254	2.18
Other instrument issues	74	0.63
Question on how to fill out form	15	0.13
Request paper questionnaire <sup>2</sup>	337	2.89
Initial respondent moved (address correction)	31	0.27
Request replacement paper questionnaire	38	0.33
Sampled child deceased	1	0.01
General questions about survey	188	1.61
Comments <sup>3</sup>	3,252	27.85
Question about user ID	15	0.13
Question about PIN	37	0.32

<sup>1</sup>This number represents the total number of refusals received by telephone. Often, respondents called to refuse without providing an identifier, and analysts were unable to code these refusals in the system. For example, callers would frequently state that they had received the survey but refused to do it, and then hang up. Other reasons for refusing to participate included that the caller believed NHES:2019 asked too many personal questions, the caller did not have time to participate, and general complaints about intrusive government operations.

<sup>2</sup>This number includes respondent does not have Internet, requests replacement paper questionnaire, and prefers paper.

<sup>3</sup>Comments include calls to correct the demographic information about a child on a topical form. This process is discussed in detail in Section 3.3.3. Responses to the Topical Questionnaires below.

NOTE: Differences in respondent counts across tables are due to differences in counted cases from survey processing at the various survey stages.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019.

### 3.3.2 Telephone Tree Operation

A prerecorded automated telephone message was delivered to households included in the third mailing for both the screeners and topical surveys. The message varied depending on the experimental condition of the case, but its purpose was to encourage respondents to complete their screener or topical survey and remind them of the importance of their prompt response. Phone numbers were obtained by address-to-telephone matching, resulting in a match for 65.4 percent of households.

The scripts below are for the automated reminder calls that accompanied the third screener or topical mailings. Note that the targeted condition screener cases that received a FedEx package (the third script listed below) was recorded in English by someone who primarily speaks Spanish. The prerecorded phone operation ended when the packages for topical mailing batch 8 were mailed out on July 18, 2019. Table 3-15 shows the dates of and number of households contacted in the telephone tree operation.

Screener cases that received a FedEx package:

- “Hello, this is the U.S. Census Bureau on behalf of the National Household Education Survey. Thank you for receiving our earlier mailings. We know you are busy, but your response is vital to the success of our study about learning. Keep a lookout for our next mailing. It will be sent by FedEx. We thank you in advance for your help with this important national study.”

Screener cases that received a USPS priority mail package:

- “Hello, this is the U.S. Census Bureau on behalf of the National Household Education Survey. Thank you for receiving our earlier mailings. We know you are busy, but your response is vital to the success of our study about learning. Keep a lookout for our next mailing. It will be sent in the next few days. We thank you in advance for your help with this important national study.”

Targeted condition screener cases that received a FedEx package:

- “Hola, this is the U.S. Census Bureau on behalf of the National Household Education Survey. Thank you for receiving our earlier mailings. We know you are busy, but your response is vital to the success of our study about learning. Keep a lookout for our next mailing. It will be sent by FedEx. We thank you in advance for your help with this important national study.”

Topical ECPP cases:

- “Hello, this is the U.S. Census Bureau on behalf of the National Household Education Survey. Thank you for receiving our earlier mailings. We know you are busy; keep a lookout for our next mailing. It will be sent by FedEx. We thank you in advance for your help with this important national study about early childhood care and education.”

Topical PFI cases:

- “Hello, this is the U.S. Census Bureau on behalf of the National Household Education Survey. Thank you for receiving our earlier mailings. We know you are busy; keep a lookout for our next mailing. It will be sent by FedEx. We thank you in advance for your help with this important national study about children’s education.”

**Table 3-15. Telephone tree operation by mailing batch: NHES:2019**

Topical mailing batch	Date of operation	Number of households contacted
Screener	March 14-19, 2019	78,074
Topical batch 1	March 28, 2019	27
Topical batch 3	April 25, 2019	382
Topical batch 4	May 9, 2019	120
Topical batch 5	May 23, 2019	130
Topical batch 6	June 6, 2019	1,240
Topical batch 7	June 20, 2019	411
Topical batch 8	July 18, 2019	839

NOTE: The topical mailing batch 2 and 3 mailings were combined into one mailing for batch 3.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019.

### 3.3.3 Responses to the Topical Questionnaires

Several times, respondents called in to report problems with the demographic information on the topical questionnaire they received. Some respondents also called in to report receiving the wrong topical questionnaire or to report that their child was no longer in school. TQA staff documented these cases under the “comments” call-in reason code and Census Bureau analysts handled these on a case-by-case basis. In general, if a household called to report a problem, an analyst would cross-check the data given over the phone with the data on the screener to determine what changes needed to be made.

On four occasions, Census Bureau analysts updated demographic information. All changes came via e-mail correspondence with the respondent. Two were minor changes that did not affect the topical survey response, one being an update to the sample child’s year of birth and the other the sample child’s grade. The third was an update to the sample child’s year of birth and age, which made the case ineligible for a topical survey. The fourth was a correction to the sample child’s year of birth, which resulted in a topical survey switch from the ECPP to the PFI.

Twenty-four cases were coded as topical refusals through the telephone and e-mail operations and on correspondence received at Census. Other outcome codes that were assigned included “out of scope,” “moved household,” and “vacant household.”

### **3.3.4 E-mail Operation**

The NHES screener and topical letters as well as the web instrument contained an e-mail address that respondents could use to contact the Census Bureau with questions or comments. In total, 170 e-mails were received, including 61 that were received after the Census Bureau responded to an initial e-mail. Table 3-16 provides a full listing of the reason for contact of these e-mails.

**Table 3-16. E-mails received from respondents, by reason: NHES:2019**

Reason	Number of e-mails
Response to a previous e-mail	61
Out of scope	12
General NHES question	34
Answered question incorrectly, needed survey reset	6
General comment or question about incentive	9
Question if completed survey was received/submitted	3
Correcting demographic information	4
Question on validity of survey	1
Needed user ID	8
Forgot PIN - needed PIN reset	5
Asked for new user ID - never received follow-up materials	2
Wrong questionnaire received	4
Question on who should complete survey	2
Sampled person deceased	2
Survey incompatible with browser	1
Question about sending survey via e-mail	1
Needed the URL to complete survey online	1
Unable to access survey with URL provided	8
Asked to complete survey online	1
Lost survey materials	2
Asked to be added to sample	3

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019.

### 3.3.5 Standard Reports

Census Bureau analysts monitored the status of the data collection by creating and reviewing weekly reports. Statistics provided in the reports included the number of cases sent by topical questionnaire type and distributions by questionnaire response rates, refusal rates, and UAA rates. Statistics provided in the reports were also broken down in further detail to include the number of cases sent by topical questionnaire type and distributions by questionnaire response rate, refusal rates, and UAA rates. These reports also broke down statistics further to include geographic and demographic information and experimental conditions.

### 3.4 Data Check-in

Respondents were encouraged to complete and mail back all forms sent to them in the pre-addressed, postage-paid return envelope addressed to the Census Bureau's main processing facility in Jeffersonville, Indiana. Upon receipt of the questionnaires, clerical staff immediately assigned a check-in code that indicated the form's completion status and checked it into the ATAC system.

At this stage, both screener and topical questionnaires received an outcome code of complete if any item on the questionnaire was answered. During data review, some of the questionnaires marked as complete were reclassified as non-interviews because they did not meet completeness requirements for processing (see Chapter 4. Data Processing for additional information). See table 3-17 for a complete list of outcome codes. The questionnaires were then grouped into batches by type of form and interview status (i.e., interviews, non-interviews, and out of scope for the survey) for data capture.

**Table 3-17. Final screener and topical outcome codes: NHES:2019**

Outcome code description	Outcome code number
Complete (screener with eligible children or completed topical questionnaire)	01
Blank	03
Duplicate	04
Soft refusal	05
Hard refusal	06
Refer to ADDP	07
Switcher	08
Out of scope	10
Non-vacant UAA	11
Vacant	12
Deceased	33
No web access	80
Requests paper/mail	81
Web refusal (mode refusal, not study refusal)	82
Web technical difficulties	83
Web study refusal (hard refusal)	84
Complete (screener with no eligible children - Screener code only)	91
UAA not assigned	97
Mailed, not yet returned	99

NOTE: ADDP is the Associates Directorate for Demographics Program at the Census Bureau. UAA is “undeliverable as addressed.”

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019.

Screener questionnaires completed over the Internet by telephone center staff and screener questionnaires completed via the web instrument were not sent to the check-in staff; the data were processed directly by Census Bureau headquarters analysts without going through the clerical review procedures. More information regarding data capture and imaging can be found in Chapter 4. Data Processing.

## **Chapter 4. Data Processing**

Data from the National Household Education Surveys Program of 2019 (NHES:2019) went through a series of processing procedures after respondents returned questionnaires and before the resulting data were made available to the public. These procedures were data capture and imaging; the deduplication of cases; the merging of paper data and web data; the reformatting of keyed data; a preliminary interview status classification; the implementation of disclosure prevention procedures; a series of computer edits (to check that the data are in range, are consistent throughout a questionnaire record, and follow the correct skip pattern); school coding (where applicable); a final interview status classification; and a set of imputation procedures used to generate values for all appropriate questionnaire items with missing information. After imputation was completed, the editing procedures were repeated to ensure that no errors were introduced during imputation.

### **4.1 Data Capture and Imaging**

#### **4.1.1 Paper Questionnaire Data Capture**

The NHES:2019 paper questionnaire data were captured (converted from paper to electronic format) using a combination of imaging technology and manual data keying, both of which were facilitated by the Census Bureau's Integrated Computer Assisted Data Entry (iCADE) system. After the questionnaires were received at the Census Bureau's National Processing Center (NPC), the questionnaires were checked in by Census Bureau clerical processing staff using the bar code on the back page that identified the case. Questionnaires were entered into the ATAC system for tracking purposes and grouped into batches by questionnaire type (screener, ECPP, and PFI) for imaging and data capture. Before the imaging process, each questionnaire was disassembled using a guillotine machine that cuts off the stapled edge, and both sides of each page were scanned simultaneously using duplex scanning equipment. During the imaging process, the questionnaire forms were scanned and images of each page were saved. At the conclusion of the imaging process, the iCADE system matched the number of imaged pages with the number of pages expected for each questionnaire type. If the actual and expected number of imaged pages matched for all forms in the batch, then the batch was accepted and could proceed to the next stages of processing. If the actual and expected number of imaged pages did not match for all cases in a batch, then the batch was sent through a manual registration process (described later in this section).

The batches that were accepted proceeded to the next stages of data capture: auto-registration, including optical mark recognition (OMR) and optical character recognition (OCR); and manual registration. Prior to the data capture process, a data capture template was created, which was used to program the iCADE system on where to look for answer marks on the forms and how to code those marks. OMR was used to capture responses to items where the respondent answered by writing an "x" in the box next to a categorical response option. OCR was used to capture numeric or alphanumeric responses. During auto-registration, all

of the scanned images were matched to the data capture template using the page identifier bar code. The page identifier bar code told the iCADE system what page of the questionnaire was being scanned. Once a page was identified, the iCADE system could read answer marks in the answer boxes next to precoded, categorical items. Software in the iCADE system then converted the data from the paper form for that questionnaire into electronic format.

During auto-registration, a number of things could potentially go wrong. For example, if the iCADE system was unable to read a bar code, then it could not identify the questionnaire ID. If the system was unable to recognize a page corner point, then it sometimes could not register the page correctly. Additionally, checkbox ambiguities could result from marks outside a checkbox, scratch-outs, or random marks on a page. If any of these problems occurred, then the problem pages went through manual registration, which involved presenting scanned pages to clerical staff, who then resolved the issue. If there were no problems during auto-registration, OMR, and OCR, then manual registration was skipped.

After the OMR and OCR data were captured, the open-ended questions or write-in responses to “other, specify” items were captured by a process called “keyed from image” (KFI). Prior to data capture, keying systems were programmed for each NHES screener and topical questionnaire. These keying programs provided the location of answer marks for items that could not be captured by OMR or OCR. In the KFI process, clerks were presented with fields to key when the iCADE system detected the presence of data in an answer field. The clerk either keyed the data present in the field or indicated that the field was actually blank.

Responses from both the OCR and KFI process were then verified. Depending on the item, a different verification rate was set. For example, the number of children reported in the first item in the screener was verified at a rate of 10 percent, while 100 percent of responses to the child’s name, birth date, and grade were verified because of their importance for identifying the child for sampling. The OCR and KFI data file was then sent to a second keyer to verify the output. The second keyer entered responses from the questionnaire image independently of the original keyer. The OCR and KFI clerk’s entry and the verification clerk’s entry were compared; fields with differences were flagged. When differences were found, they were forwarded to an adjudicator for resolution. The adjudicator could (1) agree with the keyer, (2) agree with the verifier, or (3) provide his or her own interpretation of the respondent’s answer. The adjudicator then classified the discrepancy into one of a number of categories based on the keying issue and adjusted the data as necessary. The system also computed coding discrepancy rates for the nonblank fields. An error rate of greater than or equal to 1 percent within a batch triggered 100 percent of the batch to be verified. Each batch was then marked as finished and was ready to be transmitted to Census Bureau experts for further processing.

### **4.1.2 Web Questionnaire Data Capture**

Census Bureau programming staff retrieved data from online questionnaires daily. Data from the online questionnaires were saved by the instrument in an electronic format, so they did not require a separate data capture process.

## **4.2 Reformatting and Deduplication**

All NHES paper questionnaire data were captured in ASCII files, which were sent to Census headquarters, where they were reformatted into SAS datasets. The reformatted files were delivered to AIR for editing and imputation. Web data were exported directly from the web capture system described above by Census and converted into SAS data files. The web and paper data were then combined as described in section 4.4.1, edited as discussed throughout section 4.4 of this chapter, and imputed as discussed in chapter 6. Two separate keyed files were produced, one for each topical questionnaire: Early Childhood Program Participation (ECPP) and Parent and Family Involvement in Education (PFI).

### **4.2.1 Deduplication of Cases**

As outlined in chapter 3, multiple attempts were made to solicit a response from sampled households. If sample members did not respond to the initial request to complete the survey (either by web or by paper), they were contacted up to three additional times in order to ensure that the responding sample was as representative as possible of the target population. This contact protocol was followed at both the screener and topical phases. While every attempt was made not to send follow-up mailings to cases that had already responded, multiple responses were occasionally received from a single sampled address or case. Additionally, since cases sampled for the web survey were sent follow-up mailings that included a paper questionnaire, there were a small number of cases that completed the questionnaire by both web and paper. Deduplication was handled differently depending on whether the duplication was of the screener or the topical questionnaire, but screener deduplication occurred prior to topical deduplication. The following rules were followed in order to select a single completed questionnaire for each case.

- The first screener received with enough information to conduct within-household sampling was retained. This screener could have been completed by web or by paper (or from two completed paper screeners).
- For the topical questionnaires, if Census received two paper topical forms for the same case, the form with more completed data was retained. If the same number of variables was answered on both forms, one form was selected randomly.
- If both paper and web topical questionnaires were completed by the same sampled household, but each was linked to a different screener questionnaire (e.g., if a web screener and topical form were completed as well as a paper screener and separate paper topical form), then the topical version was

retained that corresponded to the screener that was retained after the screener deduplication. This was done to ensure that the topical form always corresponded to the correct sampled individual based on the screener data.

- For the topical questionnaires, if both web and paper topical forms were received for the same case and both forms were based on the same web screener,<sup>18</sup> the questionnaire with more complete data was retained. There were no questionnaires in which the same number of variables had been answered.

### **4.3 Preliminary Interview Status Recode Classification**

The preliminary interview status recode (ISR) was an initial determination of whether a topical case would be classified as an interview, a noninterview, or out of scope. Cases with any data were classified as an interview (ISR = 1); cases with no data or that arrived after September 3, 2019, were classified as a noninterview (ISR = 2). Because topical questionnaires were only sent to cases that responded to the screener, topical cases coded as out of scope or ineligible were a rarity. Only one case was classified as out of scope for the topical questionnaire (ISR = 3), and none were coded as ineligible for the topical questionnaire.<sup>19</sup> The subsequent data editing procedures were run only on cases classified at this stage as an interview (ISR = 1). After these data editing procedures were complete, each case was given a final ISR classification, which is discussed in section 4.5.

### **4.4 Computer Edits**

After the preliminary ISR classification, cases classified as interviews in all data files were submitted to a series of computer edits: range checks, consistency edits, and skip pattern edits. In addition, a school coding operation was performed for PFI respondents who did not select a school from the provided list but provided information about the school the sampled child attended, including the school name and/or address.

#### **4.4.1 Combining Web and Paper Questionnaire Data**

To ensure consistent processing, the NHES:2019 web and paper data were merged into a single data file prior to undergoing data processing. One reason for doing this was that the web instrument collected certain questionnaire items in a different manner than the paper questionnaire. In addition, some items existed in one mode but not the other because of differences in how respondents navigated through the paper and web questionnaires. To resolve these differences, the web and paper items were consolidated during data processing.

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<sup>18</sup> Cases could only complete a web topical questionnaire if they had completed the screener online. However, cases that completed a screener online and then did not respond to a web topical questionnaire were mailed a paper topical questionnaire in the third and fourth mailings.

<sup>19</sup> Cases that were discovered to be out of scope during the screener operation were not included in the topical sample.

In some instances, data editing was required to merge the web and paper variables. For example, the web instrument asked respondents to confirm the child's screener-provided grade and date of birth, while the paper questionnaire asked respondents to write in the child's grade and date of birth. In these instances, the web cases were edited, using screener data, to include the child's grade and date of birth in the same manner as the paper cases. The full list of items that were edited in order to merge the web and paper data is presented in table 4-1.

**Table 4-1. Variables edited during the merging of paper and web cases and description of edit, by survey: NHES:2019**

Variable name	Survey(s)	Variable label	Description of edit
CDOBYY	ECPP, PFI	Year child born	The item was not asked in the web instrument. Web responses were filled with the reported screener year of birth.
CDOBMM	ECPP, PFI	Month child born	The item was not asked in the web instrument. Web responses were filled with the reported screener month of birth.
CSEX	ECPP, PFI	Child sex	The item was not asked in the web instrument. Web responses were filled with the reported screener sex.
RELATION	ECPP, PFI	Relation to child	Web respondents were asked their relation to the child at the end of the screener (and this question was not asked during the topical stage), while paper respondents were asked this question during the topical stage. Web responses were filled with the reported relationship from the screener.
CMOVEAGE/ PIAGEMV/ P2AGEMV	ECPP, PFI	Age of child/first parent/guardian; second parent/guardian when first moved to US	This item was skipped in the web instrument if the preceding question CPLCBRTH/P1PLCBRTH/P2PLCBRTH (place of birth for children, first and second parent guardian) was not answered, on the assumption of a U.S. birth. Paper responses received the same skip as in the web instrument.
CCPY/MAINRESN	ECPP	Care arrangement in the past year/Reason for wanting care	CCPY was not asked in the web instrument. Web cases were routed using MAINRESN, which included a “Did not have care in the past year” response. Paper cases received both MAINRESN and CCPY. For paper respondents, there were inconsistencies in these two variables. A consistency edit was applied to mark anyone who indicated “Did not have care in the past year” in MAINRESN as not having a care arrangement in CCPY.
HDDLRSK	ECPP	At-risk for delay	The web instrument only had two response options (Yes/No), while the paper had three response options (Yes/No/Child is age 3 or older). Web respondents were recoded to the third category based on child’s reported age.

See notes at end of table.

**Table 4-1. Variables edited during the merging of paper and web cases and description of edit, by survey: NHES:2019–Continued**

Variable name	Survey(s)	Variable label	Description of edit
DPIAGE	ECPP	Child older or younger than 2 years	This item was not asked in the web instrument. Web responses were filled based on the reported screener age.
FOREADTOX	ECPP	Time spent reading to child	The paper questionnaire collected this information from two variables (checkbox for not-at-all and write-in for minutes), while the web instrument only used one item (write-in for minutes). The paper responses were combined into one variable, following the web response format.
HDCHDCARE	ECPP	Condition interferes with ability to attend care	This item was skipped in the web instrument if the child was reported as not attending a care arrangement outside of his or her own home. Paper responses were programmed to follow the same skip edit. Additionally, this web edit was programmed wrong in the web instrument. Because of this, cases that should have received this item were incorrectly skipped and had to be addressed in imputation.
RCCSTHNX/ NCCSTHNX/ CPCSTHNX	ECPP	Number of children in household amount covers for relative/non-relative/program	These items were not asked in the web instrument if only one child under the age of 18 was reported in the screener. Web and paper responses were filled to follow this logic.
ALLGRADEX	PFI	Current grade	This item was skipped in the web instrument if the screener grade was reported. It was not asked if respondents indicated participating in full- or part-time kindergarten. The web responses were filled based on the screener grade and any indication of full- or part-time kindergarten.
HSIMPONLI/ MOSTIMPT	PFI	Most important reason for online, virtual or cyber enrollment in homeschooling/schooling section	These items were not asked in the web instrument if only one item was marked “yes” or if all items were marked “no” in the previous series (ONLNAP-ONLNOTH in the homeschooling section, ADVCCRSE-ONLINEOTH in the schooling section) (reasons for online, virtual, or cyber schooling). In cases where respondents marked “yes” to one item, web responses were filled with the selected item. In cases where all items were marked “no,” HSIMPONLI and MOSTIMPT were set to a valid skip.

See notes at end of table.

**Table 4-1. Variables edited during the merging of paper and web cases and description of edit, by survey: NHES:2019–Continued**

Variable name	Survey(s)	Variable label	Description of edit
HSINTREL	PFI	Online, virtual or cyber resources - Affiliated with a particular religion	This item was not asked in the web instrument unless “yes” was selected for HSINTCAT (Online, virtual or cyber resources - Specialized provider of homeschooling materials). Paper responses were programmed to follow the same web skip.
HSCHSPUBX	PFI	Homeschool physical curriculum source - Homeschool catalog	This item was not asked in the web instrument unless “yes” was selected for HSCHSRELX (Homeschool physical curriculum source - Catalog affiliation ). Paper responses were programmed to follow the same web skip.
HOMEKX-HOME12	PFI	Homeschooled grades (items 21A - 21M)	The response options were not shown in the web instrument for homeschooled grades higher than the child’s reported grade. Paper responses in this series were set as a valid skip for homeschooled grades higher than the child’s reported grade.
HSMOSTX	PFI	Most important reason to homeschool	This item was not asked if only one item was marked “yes” or if all items were marked “no” in the previous series (HSSAFETYX-HSOTHERX reasons to homeschool). In cases where respondents marked “yes” to one item, web responses were filled with the selected item. In cases where all items were marked “no,” HSMOSTX was set to a valid skip.
EINTNET-INTHRS	PFI	Online courses-online instructions hours (items 43-49)	These items were not asked in the web instrument if any answer had been provided to HSINTNET (Online courses homeschooled). Paper responses were programmed to follow the same web skip.
SEREPTK-SEREP12	PFI	Which grades repeated (items 56A-56M)	The response options were not shown in the web instrument for repeated grades higher than the child’s reported grade. Paper responses in this series were set as a valid skip for repeated grades higher than the child’s reported grade.
CSPEAKX/CENGLPRG	PFI	Language spoken by child at home/Enrollment in language program	In the web instrument, respondents who marked the response category “Child is not able to speak” for CSPEAKX were skipped out of CENGLPRG, while paper respondents were still routed to it. Paper responses were programmed to follow the same web skip.

See notes at end of table.

**Table 4-1. Variables edited during the merging of paper and web cases and description of edit, by survey: NHES:2019–Continued**

Variable name	Survey(s)	Variable label	Description of edit
SEADPLCX	PFI	Advanced placement enrollment	The web instrument skipped this item if the child’s grade was not 9, 10, 11, or 12. Paper responses were programmed to follow the same web skip.
PIDIFF	PFI	First parent/guardian difficulty participating in child’s school due to language	The web instrument skipped this item if PISPEAK (language spoken most often at home by first parent/guardian) was “English,” “English and Spanish equally,” or “English and another language equally.” Paper respondents were instructed to skip this item only if PISPEAK was “English.” Paper responses were programmed to follow the same web skip.
P2DIFF	PFI	Second parent/guardian difficulty participating in child’s school due to language	The web instrument skipped this item if P2SPEAK (language spoken most often at home by first parent/guardian) was “English,” “English and Spanish equally,” or “English and another language equally.” Paper respondents were instructed to skip this item only if P2SPEAK was “English.” Paper responses were programmed to follow the same web skip.
PISCINT	PFI	Interpreters at school for first parent/guardian	The web instrument skipped this item if PISPEAK (language spoken most often at home by first parent/guardian) was “English,” “English and Spanish equally,” or “English and another language equally.” Paper respondents were instructed to skip this item only if PISPEAK was “English.” Paper responses were programmed to follow the same web skip.
P2SCINT	PFI	Interpreters at school for second parent/guardian	The web instrument skipped this item if P2SPEAK (language spoken most often at home by first parent/guardian) was “English,” “English and Spanish equally,” or “English and another language equally.” Paper respondents were instructed to skip this item only if P2SPEAK was “English.” Paper responses were programmed to follow the same web skip.

See notes at end of table.

**Table 4-1. Variables edited during the merging of paper and web cases and description of edit, by survey: NHES:2019–Continued**

Variable name	Survey(s)	Variable label	Description of edit
PIWRMTL	PFI	Written materials at school in first parent/guardian native language	The web instrument skipped this item if PISPEAK (language spoken most often at home by first parent/guardian) was “English,” “English and Spanish equally,” or “English and another language equally.” Paper respondents were instructed to skip this item only if PISPEAK was “English.” Paper responses were programmed to follow the same web skip.
P2WRMTL	PFI	Written materials at school in second parent/guardian native language	The web instrument skipped this item if P2SPEAK (language spoken most often at home by first parent/guardian) was “English,” “English and Spanish equally,” or “English and another language equally.” Paper respondents were instructed to skip this item only if P2SPEAK was “English.” Paper responses were programmed to follow the same web skip.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019.

#### 4.4.2 Range Checks

The first of the computer edits were the range checks. Range checks were used to delete entries that were outside the range of acceptable values determined prior to the administration of NHES. For example, in both the ECPP and PFI questionnaires, parents were asked the number of hours they worked in a given week (PIHRSWK/P2HRSWK). If the number of reported hours exceeded 80, the data were set to missing. Entries that were classified as out of range were imputed, along with other missing variables, after the edit stages of processing.<sup>20</sup>

#### 4.4.3 Consistency Edits

The consistency edits identified inconsistent entries within each case and, whenever possible, corrected them. If the inconsistencies could not be corrected, then the entries were deleted. These inconsistencies could occur within an item or between items on the same form. For example, a within-item inconsistency would occur if the write-in field within the “Other relationship” part of ECPP questionnaire item 105—the relationship between the respondent and the sampled child— contained text, but no checkbox was marked within the item. In this case, the “Other relationship” variable would be changed to “Yes.” An example of an inconsistency between items on the same form would be if ECPP item 56b indicated that Temporary

<sup>20</sup> Range checks were performed automatically on the NHES:2019 web instrument. If a response violated a range check, a warning message was displayed describing the inconsistency. However, while respondents were encouraged to correct the inconsistency, they were allowed to proceed with the questionnaire without editing an out-of-range response.

Assistance for Needy Families (TANF) helped pay for child care, but item 142a did not indicate that the family received benefits from TANF in the last 12 months. In this case, a “No” answer in item 142a would be changed to “Yes.”

Table 4-2 summarizes the number of changes made to the entries for the variables in the data files for the ECPP and PFI questionnaires, based on the range and consistency edits described above. As can be seen, for both surveys, the largest number of variables were edited for only 1-15 percent of cases. For example, for the PFI survey, 79 variables were edited for 1-15 percent of survey respondents, while 12 variables were edited for more than 30 percent of respondents.

**Table 4-2. Number of changes made to entries for the variables in NHES:2019, by percentage of cases with changes and questionnaire type**

Questionnaire type	Total number of interviews (ISR)	Total number of variables in questionnaire	Number of variables changed, by percentage of cases			
			None	1-15 percent	16-30 percent	More than 30 percent
ECPP	7,092	246	169	59	2	16
PFI	16,446	366	266	79	9	12

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019.

While most of the edits to the NHES:2019 data conform to the skip patterns that a data user can follow by reading the questionnaires, some of the consistency edits are not reflected by skip patterns or simple consistency between items; these edits correct response patterns that deviate from typical response patterns. The following data edits are documented here for the purpose of providing analysts with a full picture of the edits applied to the data files.

#### 4.4.3.1 ECPP unit and cost of care items

Several cases wrote “0” dollars for their child’s relative, nonrelative, or center-based cost of care in the ECPP (RCCOST/NCCOST/CPCOST). Additional write-in information from unit of cost (RCUNIT/NCUNIT/CPUNIT) indicated that in most cases this was because a non-household member paid for the child care. To mitigate these issues, a valid skip (-1) was added to the data file for the unit of cost for cases that reported a cost of “0” because someone else paid for care, as indicated in “other, specify” information.

#### 4.4.3.2 PFI additional parent language barrier items

Edits were applied that assigned non-English-speaking parents of 100 percent homeschoolers who are not also 100 percent virtual school students to a valid skip (-1) for two parent language barrier items: the presence of school interpreters (P1SCINT/P2SCINT) and written materials in parent’s native language (P1WRMTL/P2WRMTL). Note that some respondents whose children are entirely schooled online identify as homeschoolers, while some do not. Both the virtual school students who identify as homeschoolers and

those who do not should have valid responses to these items because school interpreters and the language of written materials are relevant for parents whose students are enrolled in a virtual school.

#### **4.4.3.3 Hours and days of week child receiving care from relative**

In the ECPP, a threshold was implemented to ensure the number of hours per day was not more than 14 hours for non-relative and center-based care. The average number of hours per day was calculated for each case by dividing the number of hours per week the child was receiving care (NCHRS/CPHRS) by the total number of days per week (NCDAYS/CPDAYS) the child was receiving care. This ratio threshold was not applied to relative care, with the assumption that a relative could be providing more child care hours per week than non-relative or center-based care.

#### **4.4.4 Skip Pattern Edits**

The skip pattern edits deleted extraneous entries (errors of commission) and replaced them with the “not applicable” code (i.e., in situations where skip patterns were not followed correctly and a respondent answered a question he or she should have skipped). In addition, the skip pattern edits assigned the “not answered” code to items that should have been answered but were not (errors of omission).

#### **4.4.5 Coding Schools**

For every PFI case for an enrolled student (i.e., a student who was not homeschooled full time), a coding operation was performed to assign a National Center for Education Statistics (NCES) school identification (SID) number. Assigning NCES school IDs allowed school-related data from the NCES Common Core of Data (CCD) and NCES Private School Universe Survey (PSS) to be included in the PFI data file (in addition to the data provided by respondents in the Child’s School section of the PFI questionnaire).

The manner in which PFI respondents identified the child’s school was different in the paper questionnaire and the web instrument. Respondents to the paper questionnaire were provided a list of 15 schools from which to select the child’s school based on the address zip code in the sampling frame. The list was drawn from the 2013-14 CCD and the 2013-14 PSS, using the child’s grade, as provided in the screener, and included both public and private schools. If the grade was not provided in the screener, it was derived from the child’s age. Respondents to the web instrument were provided a list of 25 schools generated from within a geographic radius around the longitude and latitude associated with the child’s address. The web instrument also used additional criteria, including whether the parent indicated the child’s school was public or private. The list for the web instrument was drawn from the 2015-16 CCD and the 2015-16 PSS, using the child’s grade, as provided

in the screener<sup>21</sup>. In both cases, respondents were asked to select the child's school from the list, with write-in boxes available if the school was not included in the list.

Most respondents (11,390) selected a school from the list presented in either the web or the paper instrument. In 3,650 cases, respondents did not select a school from the list provided in the questionnaire. During survey post-processing, an automated matching algorithm was developed for the cases in which a respondent provided the school's name or address in an open-ended question item. The algorithm used the school's name, address, and zip code from the respondent to match to the school's name, address, and zip code from the CCD and the PSS to assign the NCES school ID. Analysts then used the NCES online school search to manually search for the school ID of schools that could not be matched using the automated matching process.<sup>22</sup>

Analysts were able to match schools to approximately 75 percent of the 3,650 cases, leaving 910 cases where an appropriate match could not be found.<sup>23</sup> In 840 cases, school codes were imputed (see chapter 6). School IDs were not imputed for the remaining 70 cases because the parent indicated that the child was in a virtual school or otherwise provided no information about whether the child was enrolled in a public or private school. Table 4-3 provides the results of the coding operation.

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<sup>21</sup> The paper schools are sorted using a variable that was not present on the 2015-16 files, therefore in order to be able to sort the schools, the 2013-14 files were used for paper respondents, while the 2015-16 files were used for web respondents because the list was not sorted on that variable used in the paper listing.

<sup>22</sup> The CCD public school search is available at <https://nces.ed.gov/ccd/schoolsearch/index.asp> and the PSS private school search is available at <https://nces.ed.gov/surveys/pss/privateschoolsearch/>

<sup>23</sup> This includes cases that provided no write-in school information on which to match ( $n = 616$ ) and cases where some write-in information was provided but a match could not be found ( $n = 291$ ).

**Table 4-3. Results of the NHES:2019 Parent and Family Involvement in Education school coding operation, by school type**

School type	Total	Selected from list provided in questionnaire	Matched based on name or address	Imputed <sup>1</sup>
Public	13,300	10,470	2,210	620
Private	1,670	920	540	210
Total	14, 970	11,390	2,740	840

<sup>1</sup>Seventy- cases were not imputed because the parent indicated that the child was enrolled in a virtual school or otherwise provided no information about whether the child was enrolled in a public or private school.

NOTE: School information was only collected from respondents to the PFI questionnaire. Excludes the imputation of an additional 980 cases in which the respondent selected a school from the provided list but the school ID was truncated cases where school ID was deleted due to other editing rules. Detail may not sum to totals due to rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019.

Special imputation procedures were used for an additional 980 cases for which an error in the data output files from the web instrument obscured the responses. In these cases, the respondent chose the school’s name and address from the response option list; however, the web instrument truncated the associated NCES school ID in the stored output by 6 digits. School IDs were imputed for the affected cases by matching the subset of the schools with IDs that matched the first 6 digits of the ID associated with the school selected by the respondent. The matching subset of schools became the donor pool for imputation. (Further detail on imputation is discussed in chapter 6.)

#### **4.4.6 Coding ECPP Main Reason Item**

In an open-ended item (item 68), the ECPP asked parents for the main reason they chose the care arrangement where their child spent the most time. The item asks, “What was the main reason your household chose the care arrangement(s) or program that you chose for this child where this child spends the most time? Please write your response in the box below.” The study team coded these responses to convert the write-in data to quantitative codes in order to facilitate their analysis.

First, a coding taxonomy was developed from previous survey administrations, literature reviews, and a preliminary review of the write-in data. Two coding phases were conducted to refine the taxonomy. In each phase, a small sample of cases were coded by two or more team members, and the inter-coder reliability was reviewed. The team then made four types of updates to the taxonomy and coding procedures: addition or deletion of codes, revision of code names, refinement of definitions, and refinement of coder procedures. The final taxonomy contains 21 codes, including other main reason for care, invalid response, and valid skip.

Team members were provided the write-in data as well as supplemental data (e.g., what types of care the respondent marked) to assist them in assigning the final codes. Almost half of the respondents reported more than one reason for care. Up to five reasons for care were coded and provided in the data file as CCREASN1-CCREASN5.

There were 3,124 respondents that reported any care arrangement in the past year in item 67 (CCPY). The study team assigned codes to 2,652 respondents. These codes are included in the public-use file and the restricted-use file, while the open-ended data are included only in the restricted-use file. When respondents provided responses for less than 5 reasons for care, -6 codes were assigned for the fields that were not used. For example, if a respondent entered only one reason for care, the data file would show a code for CCREASN1 and then CCREASN2-CCREASN5 would be coded as -6.

#### **4.4.7 Coding PFI Homeschool Subject Item**

The PFI questionnaire asked homeschooling parents what subjects they taught their children in an open-ended item (item 24) that collected up to 10 subjects. The item asks, “In the most recent week that this child was homeschooled, what subject areas were taught during his or her home instruction? We have provided spaces for you to tell us about up to 10 subject areas. You may have fewer subject areas to tell us about. Please write only one subject area in each box.” The study team coded these responses to convert the write-in data to quantitative codes in order to facilitate their analysis.

First, a coding taxonomy was developed with input from the 2016 NHES administration and the NCES School Courses for the Exchange of Data (SCED) subject codes, version 6.0,<sup>24</sup> in conjunction with subject-matter knowledge gained from literature reviews, focus groups with homeschooling parents, and consultation with homeschooling researchers. Next, the research team engaged in a preliminary review of the initial 2019 PFI data. Two coding phases were conducted to refine the taxonomy. The final taxonomy contains 54 different subject codes, including several “other” and “not applicable” codes (e.g., cannot determine subject/topic area, nonresponse/left blank) as well as “unspecified” codes that were used when a subject did not have enough information to code it into a more specific subject (e.g., “math” would be coded as “Mathematics, unspecified” rather than “Geometry”). The 10 subject codes are provided in the data file as HSSUBJ1-HSSUBJ10.

The study team assigned codes to 451 respondents out of the 519 respondents who indicated at least some homeschooling in items 2 (EDCHFSL) and 3 (HOMESCHLX). These codes are included in the public-use file and the restricted-use file, while the open-ended data are included only in the restricted-use file. When respondents provided responses for less than 10 subject areas, -6 codes were assigned for the fields that were not used. For example, if a respondent entered only one subject area, the data file would show a subject code for HSSUBJ1 and then HSSUBJ2-HSSUBJ10 would be coded as -6. In a small number of cases, HSSUBJ1 was coded as -9 for “missing” because the response was not applicable. (The verbatim write-in associated with that response is provided on the restricted-use file just like all other verbatim write-in responses). All other subject areas that were not assigned specific subject codes are coded as 900 for “cannot determine subject/topic area.” Data users may wish to apply their own data editing procedures for responses coded as -9 or 900.

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<sup>24</sup> See <https://nces.ed.gov/forum/sced.asp>.

#### 4.4.8 Review of “Other, Specify” Text Items

The “other, specify” responses were reviewed by survey staff and, where appropriate, coded into one of the existing response categories. Additionally, new values were created in some cases. In situations where write-in comments indicated that an additional category would be appropriate, analysts created a new category. In the PFI file, the following variables or values were added:

- For the variables ONLNAP-ONLNHS,<sup>25</sup> four new variables were created: “ONLBULLY–Bullying,” “ONLHLTH–Physical or mental health problem,” “ONLSPNDS–Other special needs,” and “ONLAVDPUB–Concerns about public school.”
- For the variables HSSAFETYX- HSFMLY,<sup>26</sup> one new variable was created: “HSBULLY–Bullying.”
- For the variable HSWHOX,<sup>27</sup> one new value was added: “7–Teacher or tutor not online.”
- For the variable RELATION,<sup>28</sup> three new values were added: “9–Sibling,” “10–Two parents (birth, adoptive, step, foster),” and “11–Parent (birth, adoptive, step, foster), unspecified.”

In the ECPP file, the following changes were made:

- For the variable CPPLACEX,<sup>29</sup> two new values were added: “9–Center, type of location not specified” and “10–A home.”
- For the variable WHYDIFCLT,<sup>30</sup> six new values were added: “7–Not applicable, did not look for care,” “8–Wanted a particular type of program,” “9–Looking for specific hours/schedule,” “10–Challenges receiving financial assistance,” “11–Age requirements,” and “12–Multiple reasons.”
- For the variable RELATION,<sup>31</sup> three new values were added: “9–Sibling,” “10–Two parents (birth, adoptive, step, foster),” and “11–Parent (birth, adoptive, step, foster), unspecified.”

Table 4-4 summarizes the number and percentage of responses to write-in items that were coded into categories for each survey.

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<sup>25</sup> Item 10, PFI questionnaire: “There are many different reasons that homeschooling parents may choose online, virtual, or cyber courses for their children. Is this child enrolled in online virtual, or cyber course because...”

<sup>26</sup> Item 22, PFI questionnaire: “There are many different reasons that parents choose to homeschool their children. Did your family choose to homeschool this child because?”

<sup>27</sup> Item 7, PFI questionnaire: “Who is the person that mainly provides this child’s home instruction?”

<sup>28</sup> Item 94, PFI questionnaire: “How are you related to this child?”

<sup>29</sup> Item 43, ECPP questionnaire: “Where is this program located?”

<sup>30</sup> Item 66, ECPP questionnaire: “What was the main reason for this difficulty finding child care or early childhood programs?”

<sup>31</sup> Item 105, ECPP questionnaire: “How are you related to this child?”

**Table 4-4. NHES:2019 Number and percentage of coded write-in responses, by survey type**

Survey type	Number of responses	Percent of responses
ECPP		
Unit of time for cost of relative care (RCUNITOS)	4	1.3
Unit of time for cost of nonrelative care (NCUNITOS)	2	0.3
Unit of time for cost of program care (CPUNITOS)	21	0.9
Program location (CPPLACEXOS)	188	6.2
Primary reason for difficulty finding care (WHYDIFCLTOS)	201	7.5
Language spoken at home (HHOTHLANGOS)	27	0.4
Relation to child (RELATIONOS)	29	0.4
PFI		
Reason for online, virtual or cyber enrollment - homeschoolers (ONLNOTHOS)	50	19.2
Reason for online, virtual or cyber enrollment - enrolled students (ONLINEOTHOS)	26	2.2
Why homeschool - other (HSOTHERXOS)	8	1.5
Person providing homeschool instruction (HSWHOXOS)	11	2.1
Homeschool instruction provided by - someplace else (HSINTOHOS)	--	--
Online instruction sources - other (HSINTOTHOS)	--	--
Physical instruction sources - other (HSCOTHOS)	--	--
Online instruction provided by - someplace else (SOTHSCHOS)	--	--
Language spoken at home (HHOTHLANGOS)	40	0.2
Relation to child (RELATIONOS)	101	0.6

-- Item was not coded.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019.

#### 4.5 Final Interview Status Recode (ISR) Classification

After the range checks, consistency edits, and blanking edits were completed, each case was put through an edit to make a final determination of whether it was eligible for the survey and, if so, whether sufficient data had been collected for it to be classified as a completed questionnaire. This is referred to as the final interview status recode (ISR). A final ISR value was assigned to each case as a result of this edit. Ultimately, 1,235 cases were classified as noninterviews or as not eligible based on the final ISR coding and were not included in the data files. Table 4-5 summarizes the critical items and criteria used to determine a final ISR classification (many of these critical items are those needed for imputation, which is discussed in chapter 6).

**Table 4-5. NHES:2019 critical items and criteria for final interview status recode classification of completed interview, by questionnaire type**

Questionnaire	Critical items
ECPP	At least two of: Child's sex (CSEX) Parent 1 relation to child (PIREL) Second parent in household (P2GUARD) Parent 1 or parent 2 highest grade completed (P1EDUC or P2EDUC) AND at least one of: Child's age (CDOBYY) Total household income (TTLHHINC) Home ownership status (OWNRNTHB)
PFI	At least two of: Child's sex (CSEX) Parent 1 relation to child (PIREL) Second parent in household (P2GUARD) Parent 1 or parent 2 highest grade completed (P1EDUC or P2EDUC) AND at least one of: Child's grade (ALLGRADEX) Total household income (TTLHHINC) Home ownership status (OWNRNTHB)

NOTE: In addition to the above criteria, 10 percent of the remaining items needed a valid entry for a case to be classified as complete. SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019.

The final ISR counts for the data files for the ECPP and PFI surveys are shown in table 4-6.

**Table 4-6. NHES:2019 final interview status recode counts, by survey type**

Survey type	Final interview status recode	
	Number of interviews	Number of noninterviews
ECPP	7,445	353
PFI	17,328	882
<b>Total</b>	<b>24,773</b>	<b>1,235</b>

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019.

#### **4.6 Data Review**

After the automated edits were run, a manual data review process was initiated. The overall goals of the data review process were to ensure that the final datasets contained clean, accurate data and that there were no “not answered” items that should have had an answer in any record in the final data files. Another component of the manual data review process was to review the “other, specify” text responses to determine whether they should be coded into one of the existing code categories.

During the data review process, analysts looked at the frequencies of the data items in order to observe the changes that occurred in the data throughout the different stages of processing. By reviewing the frequency counts of data items at each stage of processing, analysts were able to make sure that the edit and imputation programs were working correctly. Please see chapter 6 for a complete discussion of the imputation procedures. The data review process also helped to ensure that the imputed values were consistent with the other data in the questionnaire record. In addition, the data review process included a comparison of variable distributions in NHES:2019 and NHES:2016. The process included a comparison of edited and unedited data to confirm that data editing procedures were not introducing unexpected deviations in the NHES:2019 variable distributions.

Another reason for examining the frequencies of data items at each stage of processing was to identify any suspect values (e.g., whether a response was outside the range of possible answer choices or whether an answer seemed unlikely, given the respondent’s other responses in the questionnaire). Occasionally, analysts looked at the image of the questionnaire page to verify that the data were keyed correctly. Appropriate changes were made to the data files when necessary.

#### **4.7 Disclosure Risk Analysis**

Central to NCES’s mission is a commitment to protecting the identity of respondents to its various data collections. Because of this, the questionnaires that make up the NHES are designed to protect respondent identity. All direct respondent identifiers, as well as any characteristics that might lead to identification, are omitted or modified in the public-use dataset to protect the identities of individuals. In addition, an extensive respondent disclosure risk analysis was performed on the NHES dataset prior to its release. As in past NHES

collections, the results from this analysis led to modifications to some data included in the data files. The modifications included coarsening response categories (such as top- and bottom- coding variables as well as grouping rare categories together) and swapping certain data items between respondents. These confidentiality edits modified the respondent data to prevent the positive identification of individual respondents. Tests on the modified data were conducted to ensure that the data remain accurate and useful.

Under law, data collected and distributed by NCES may be used only for statistical purposes. Any effort to determine the identity of any reported case by data users is prohibited by law. Violations are subject to Class E felony penalties including a fine of up to \$250,000, a prison term of up to 5 years, or both. Any intentional identification or disclosure of a person violates the assurances of confidentiality given to the providers of the information.

When using the NHES dataset, users must adhere to the following rules:

- Use the data for statistical purposes only.
- Make no use of the identity of any person discovered inadvertently and advise NCES of any such discovery.
- Do not link the dataset with individually identifiable data from other NCES or non- NCES datasets.

#### **4.8 Data Products**

After all stages of imputation were completed and the blanking and consistency edits were run once again, final data files were created for the ECPP and PFI. Both data files included all variables: operational variables, survey variables, created variables, appended variables, weighting variables, and imputation flags. These files were used as the source files for the restricted-use and public-use files:

- *Early Childhood Program Participation.* The ECPP file includes all items from the Early Childhood Program Participation questionnaire. It also includes several items from the corresponding screener questionnaire for each record and additional derived variables, which were created using data from both outside data sources (for example, the American Community Survey, or ACS) and the ECPP questionnaire itself.
- *Parent and Family Involvement in Education.* The PFI file includes all items from the Parent and Family Involvement in Education questionnaire. It also includes items from the corresponding screener questionnaire for each record and additional derived variables, which were created using data from both outside data sources (the ACS, CCD, and PSS) and the PFI questionnaire itself.

## Chapter 5. Response Rates

This chapter describes the methods used to calculate unit and item response rates for the National Household Education Surveys Program of 2019 (NHES:2019) screener and topical surveys: the Parent and Family Involvement in Education (PFI) survey and the Early Childhood Program Participation (ECP) survey.

The NHES:2019 screener was conducted using an address-based, stratified sample of 205,000 addresses. All U.S. civilian, noninstitutional, occupied addresses were eligible to be sampled for the screener. Every sampled address was sent a short screener questionnaire to determine whether the household was eligible to participate in the ECP survey or the PFI survey. Households were eligible to participate in the ECP survey if they had a child age 6 or younger who was not yet enrolled in kindergarten. Households were eligible to participate in the PFI survey if they had a child or youth age 3 through 20 who was enrolled in kindergarten through grade 12 or who was being homeschooled for the equivalent grades.

For web respondents who completed a screener and reported that any children were eligible for the topical surveys, sampling of one eligible child occurred while the respondent continued with the web survey. After sampling, web respondents with an eligible child were taken to the appropriate topical survey. For screener respondents who returned the questionnaire by mail and reported that any children were eligible for the topical surveys, one topical questionnaire was sent to the household for completion by mail. More details on the NHES:2019 sampling methodology and data collection process can be found in chapters 2 and 3, respectively.

### 5.1 Unit Response Rates

A unit response rate is the ratio of the number of units with completed questionnaires to the number of sampled units eligible for the questionnaire. In some cases, response rates are easily defined and computed, whereas in other cases, the denominator of the ratio must be estimated due to the unknown eligibility status of nonrespondents. For the NHES:2019 screener, a unit was an address or a household. For the PFI and ECP topical surveys, a unit was a child within a household that had completed the screener.

This chapter reports (1) a unit response rate, which measures the percentage of questionnaires that were completed for a specific stage of the survey; and (2) the overall unit response rate, which measures the percentage of questionnaires that were completed, taking all survey stages into account. Specifically, NHES:2019 used a two-phase sampling process. In phase 1, invitations to complete screener questionnaires by web and paper screener questionnaires were mailed to identify whether the sampled households included members eligible for one of the topical questionnaires. The completed screeners were used to sample one child in each household. In phase 2, web respondents received topical questions about one child sampled from the screener instrument that had just been completed, and a topical questionnaire was sent to mail screener respondents whose household had been identified in phase 1 as including an eligible child. If the screener was not completed, then a person could not be sampled for a topical questionnaire.

Based on this design, the unit response rate for the first phase is the estimated percentage of eligible households that completed the screener. The unit response rate for the second phase (PFI or ECPP) is the percentage of sampled children for whom topical questionnaires were completed. The overall unit response rate—calculated independently for the PFI and the ECPP—is the product of the first- and second-phase unit response rates (i.e., the screener unit response rate multiplied by the topical survey unit response rate).

Unit response rates can be either unweighted or weighted. The unweighted rate, computed using the raw number of cases, describes the success of the operational aspects of the survey. The weighted rate, computed by summing the base weights (the reciprocals of the probability of selecting the units) for both the numerator and the denominator, describes the success of the survey with respect to the population sampled because the base weights allow inference of the sample data (including response status) to the population level. In surveys such as the NHES with complex sample designs, the weighted unit response rate may differ from the unweighted unit response rate. All the unit response rates discussed below are weighted by the inverse of the probability of selection unless noted specifically in the text.

The next section discusses the unit response rate for the screener and provides a profile of the characteristics of the respondents.<sup>32</sup> The subsequent sections discuss the topical unit response rates and the overall unit response rates for the ECPP and PFI surveys.

### **5.1.1 NHES Screener Unit Response Rates**

To calculate the screener unit response rate, each sampled address in the screener operation was classified in one of four ways: a response (*R*), a nonresponse (*NR*), an ineligible case (*I*), or a case of unknown eligibility (*U*).

Eligible cases (*E*) in the NHES screener consisted of responses (*R*) and nonresponses (*NR*). A response (*R*) was defined as a completed web or paper screener questionnaire from a household, regardless of whether the household reported persons eligible for a topical survey. For the paper screener, a nonresponse (*NR*) was defined as either a blank screener questionnaire or another clear refusal reply. For the web screener, a nonresponse was defined as a screener questionnaire for which the household logged in but did not complete any items or for which it completed some items but did not reach the end of the screener (and thus did not undergo topical sampling). Nonresponses also included cases that completed a web or paper screener after May 16, which was the cutoff date for the screener data collection.

Ineligible cases (*I*) were those returned by the postmaster with one of the following statuses: unit is vacant, undeliverable as addressed (UAA), insufficient address, unclaimed, no such street, no such street number, illegible address, or no mail receptacle. In addition, the following types of cases were classified as ineligible

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<sup>32</sup> The unit response rate and overall response rate for the screener are the same because there is only one phase of selection (household address) at the screener level.

based on the postmaster’s information (postal workers used U.S. Postal Service (USPS) procedures to assign these classifications): box closed–no forwarding order; forwarding order has expired; deceased; moved, left no address; and moved out of U.S.–no forwarding address. Although the last three ineligibility types are usually thought of as pertaining to individuals and the NHES:2019 screener questionnaires were not addressed to specific individuals, it was decided early on to carry over these dispositions into the NHES processing. This decision was made because these codes are assigned by individual mail carriers rather than a centralized system and are often assigned inconsistently. A small number of addresses were otherwise found to be out of scope and were classified as ineligible (for example, an address would be classified as out of scope if information written on the screener form indicated that it corresponded to a business rather than a residence). Therefore, the term *eligible* at the screener phase refers to the capability of a household to respond to the screener questionnaire because the address was classified as belonging to an occupied household.<sup>33</sup>

Sample addresses for which a response or other communication was never received were identified as being of unknown eligibility (*U*)–neither a response nor a nonresponse–because information was insufficient to determine whether they were valid, occupied households.

One reason that explains why some cases were not returned was that screener questionnaire packages were mailed to a simplified addressee, “City/County Resident.” According to the USPS Domestic Mail Manual (DMM), return service is not required for mailings using this format. However, the USPS informed the Census Bureau’s National Processing Center (NPC) that even though the DMM states that undeliverable mail pieces with a simplified addressee are to be treated as waste, 90 percent of USPS personnel will not discard first-class mail and will return an undeliverable mail piece to the sender. Experience with previous NHES collections, which used the same mailing format, indicated that undeliverable mail addressed to a simplified addressee was often returned to the sender; however, it is not possible to determine how many unreturned cases were discarded as undeliverable. As a result, it is possible that some of the unreturned cases of unknown eligible status were undeliverable and thus ineligible.

Table 5-1 shows the disposition of the 205,000 cases resulting from the NHES:2016 screener operation.

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<sup>33</sup> Cases were classified as ineligible only if one or more mailings were returned with one of the undeliverable or out-of-scope status codes noted here and none of the other mailings were returned as a respondent or nonrespondent.

**Table 5-1. Count and percentage distribution of households sampled for NHES:2019 screener, by response status**

<b>Response status</b>	<b>Count of households</b>	<b>Percent of households</b>
<b>Total</b>	<b>205,000</b>	<b>100.0</b>
Eligible	110,064	53.7
Respondents	108,978	53.2
Nonrespondents	1,086	0.5
Ineligible	17,589	8.6
Unknown eligibility	77,347	37.7

NOTE: All percentages are unweighted. Detail may not sum to totals due to rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019.

For the NHES:2019, the unit response rate was calculated per NCES standard 1-3-2, which corresponds to the American Association for Public Opinion Research (AAPOR) Response Rate 3 (RR3) formula and weighted data:

$$RR3 = \left[ \frac{R}{E + ee * U} \right] * 100$$

where:

$$ee = \frac{E}{T - U}$$

and:

$R$  = sum of base weights of respondents,

$E$  = sum of base weights for eligible sample units:  $E = R + NR$  ( $NR$  = sum of base weights of nonrespondents),

$U$  = sum of base weights for unknown-eligibility cases,

$T$  = sum of base weights over all cases in sample, and

$ee$  = proportion of known eligibility cases that are eligible.

Although the formula is standard, the calculation of unit response rates is complicated by the cases with unknown eligibility, which comprise 37.7 percent of the addresses in the sample (table 5-1). The specific assumptions about the eligibility status of the addresses from which noresponse was received will have an impact on the response rate calculation. Assuming that they are all ineligible would provide a response rate at one end of the spectrum, and assuming that they are all nonresponses would define a conservative response rate at the other end of the spectrum.

To reflect differences in eligibility by the address information provided in the vendor’s sample frame, the eligibility rate, *ee*, was estimated separately for each subgroup formed according to the combinations of address types available in the frame, as presented in table 5-2. Specifically, *ee* was calculated by dividing the number of eligible cases by the difference between the total number of cases in a subgroup (i.e., address type) and the number of unreturned questionnaires in that subgroup. Because this approach uses direct information about likely household occupancy status associated with a particular address, it yields more accurate estimates of eligibility rates than other potential methods.

Table 5-2 presents the proportion of known eligibility cases for five cells of addresses. The weighted eligibility rate varied from a low of 0.07 for addresses in the frame flagged as vacant and for which the type of dwelling was unknown to a high of 0.90 for addresses in the frame identified as not a P.O. box, not vacant, and not a drop point.

**Table 5-2. Proportion of known eligibility screener cases that are eligible (*ee*), by cell**

Cell number	Cell definition <sup>1</sup>	Unweighted eligibility rate	Weighted eligibility rate
<b>Total</b>	<b>All sampled addresses</b>	0.86	0.87
1	Address indicated in the NHES:2019 frame as vacant, and type of dwelling (single or multi-unit) is unknown	0.06	0.07
2	Address indicated in the NHES:2019 frame as vacant, and type of dwelling (single or multi-unit) is known	0.25	0.26
3	Address indicated in the NHES:2019 frame as not vacant, and drop point or augmented drop point	0.74	0.74
4	Address indicated in the NHES:2019 frame as not vacant, an OWGM (only way to get mail) P.O. box, and not a drop point or augmented drop point	0.80	0.80
5	Address indicated in the NHES:2019 frame as not vacant, not a P.O. box, and not a drop point or augmented drop point	0.89	0.90

<sup>1</sup>A drop point is an address that is a single postal delivery point for multiple housing units. An augmented drop point is a drop point that includes a unit designation (i.e., an apartment number) added by the frame vendor. Vacant addresses and drop point/augmented drop point addresses are mutually exclusive in the NHES sample frame.

NOTE: The eligibility rate represents the proportion of screener cases in each cell that are eligible, with cases of unknown eligibility excluded.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019.

To calculate the response rate, a base-weighted response rate was first calculated for each of the mutually exclusive cells described in table 5-2. The *ee* was multiplied by the weighted number of unknown cases in each cell to obtain a count of unknown eligibility cases that were likely eligible per cell. The cell response rate was then calculated as the weighted sum of responding cases divided by the weighted sum of responding and nonresponding cases, plus the weighted sum of the unknown cases deemed eligible. Each cell’s response rate was proportionally represented in the overall response rate by multiplying the rate by the base-weighted

number of records corresponding to the cell (excluding known ineligible cases). These products were summed and divided by the base-weighted number of records for the screener survey (excluding known ineligible cases).

With this method, the weighted NHES:2019 screener unit response rate was 62.9 percent, as shown in table 5-3. The table also presents two other response rates, based on different eligibility assumptions. The response rate labeled “conservative” assumes that 100 percent of the unknown eligible cases would have been eligible and yielded a weighted response rate of 59.9 percent. The single-eligibility weighted unit response rate of 63.1 percent was calculated using the proportion of known-eligibility screener cases that were eligible. That proportion, *ee*, was applied overall to the unknown-eligibility cases in the entire screener sample. This response rate method assumed that the unknown-eligibility screener cases were all eligible at the same rate as the known-eligibility screener cases. Because the calculations for the weighted frame-assisted unit response rate and the weighted single-eligibility unit response rate were very similar, the single-eligibility unit response rate was used for the response rate calculations in the rest of the screener unit response rate section since it is a simpler calculation and more easily replicated than the frame-assisted method.

**Table 5-3. Unweighted and weighted screener unit response rates**

Screener response rate	Unweighted	Weighted
Frame-assisted rate ( <i>ee</i> varies by cell)	61.4	62.9
Single-eligibility rate ( <i>ee</i> = 0.862 unweighted, 0.871 weighted)	61.7	63.1
Conservative rate ( <i>ee</i> = 1.0)	58.1	59.9

NOTE: Weighted unit response rates weight the numerator and denominator by the inverse of the probability of selection associated with each case considered eligible. Unweighted unit response rates include the same cases in the numerator and denominator as the weighted estimates but without weights applied. For the frame-assisted rate, the eligibility rate (*ee*) varies by the cells listed in table 5-2. A separate *ee* and response rate is calculated for each subgroup listed in table 5-2, and then the five response rates are combined to form the frame-assisted unit response rate. For the single-eligibility rate, a single *ee* is used for the entire sample, consistent with NCES statistical standard 1-3-2. For the conservative rate, *ee* is set equal to 1.  
 SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019.

Table 5-4 presents the screener unit response rate by selected address characteristics. These characteristics were chosen because they were available for most or all addresses and were associated with response propensity in prior NHES collections. Screener unit response rates were significantly lower (at a .05 statistical significance level) for the following demographic groups:

- Addresses in Census tracts where at least 25 percent of the population was Black or where at least 40 percent of the population was Hispanic, compared to tracts with lower percentages of Black and Hispanic residents;
- Addresses in Census tracts with a higher poverty rate (where at least 20 percent of families had incomes below the poverty line) compared to those with a lower poverty rate;
- Addresses in the Northeast, South, and West, compared to addresses in the Midwest;
- Addresses in high-rise buildings compared to other address route types (i.e., street or P.O. box or rural

route addresses);

- Addresses classified as drop point addresses compared to non-drop point addresses;
- Multi-unit addresses compared to single-unit addresses;
- Addresses with only one resident adult or for which the number of adults was unknown compared to those addresses with more than one resident adult;
- Addresses flagged in the sampling frame as having children present in the household compared to addresses that were not;
- Addresses without a matched phone number compared to those with a matched phone number;
- Addresses at which the home is rented or for which the home tenure is unknown compared to addresses at which the home is owned; and
- Addresses with a household income under \$50,000 or for which the income was unknown compared to addresses with higher incomes.

Additionally, screener response rates differed significantly among the experimental treatment groups incorporated into the NHES:2019 sample. Refer to chapter 2 for a detailed description of the experimental treatments. The following experimental treatment groups had significantly *higher* response rates than the baseline treatment: the opt-out screener treatment; both choice plus treatments (\$10 and \$20 bonus incentive); the modeled mode treatment; and the random paper-only treatment. The following experimental treatment groups had significantly *lower* response rates than the baseline treatment: the treatment group receiving no advance letter and FedEx at the fourth mailing; the treatment group receiving an advance letter and FedEx at the fourth mailing; and the treatment receiving no advance letter and for which the timing of the FedEx mailing was determined using a model.

**Table 5-4. Count of sampled households by response status, and weighted screener response rate, by selected address characteristics**

Household characteristic	Count of sampled households					Weighted screener response rate
	Total	Responded	Refused	Ineligible	Unknown eligibility	
<b>Total</b>	205,000	108,978	1,086	17,589	77,347	63.1
<b>Frame variables</b>						
Sampling stratum						
Tracts with 25% or more Black persons	41,000	16,823	195	5,267	18,715	53.7
Tracts with 40% or more Hispanic persons	30,750	12,590	182	2,692	15,286	49.6
All other tracts	133,250	79,565	709	9,630	43,346	66.9
Tract poverty rate						
20 percent or higher	61,980	25,092	318	8,056	28,514	54.4
Below 20 percent	143,020	83,886	768	9,533	48,833	66.2
Census region <sup>1</sup>						
Northeast	34,921	19,131	214	2,574	13,002	63.7
South	83,110	41,187	415	8,161	33,347	60.5
Midwest	42,406	24,639	211	3,851	13,705	68.1
West	44,563	24,021	246	3,003	17,293	62.2
Route type						
City style / street	154,058	88,417	845	10,010	54,786	65.2
P.O. box or rural route	2,243	754	7	878	604	73.4
High rise	48,699	19,807	234	6,701	21,957	55.5
Delivery point is a drop point						
Yes	3,438	1,345	23	483	1,587	55.0
No	201,562	107,633	1,063	17,106	75,760	63.2
Dwelling type						
Single family	149,454	86,784	820	9,442	52,408	65.7
Multi-unit	53,409	21,482	260	7,292	24,375	55.0
Dwelling type unknown	2,137	712	6	855	564	74.0
Number of adults in household						
1	97,503	47,740	486	8,217	41,060	58.7
2	54,130	36,025	322	1,612	16,171	70.7
3 to 4	18,572	12,640	106	387	5,439	71.5
5 or more	1,007	598	10	33	366	64.8
Number of adults unknown	33,788	11,975	162	7,340	14,311	58.1
Household flagged in the sampling frame as having children <sup>2</sup>						
Yes	38,013	21,179	249	1,795	14,790	61.8
No/unknown	166,987	87,799	837	15,794	62,557	63.4
Phone number matched						
Yes	134,023	78,828	743	7,600	46,852	65.9
No	70,977	30,150	343	9,989	30,495	57.7

See notes at the end of the table

**Table 5-4. Count of sampled households by response status, and weighted screener response rate, by selected address characteristics—Continued**

Household characteristic	Count of sampled households					Weighted screener response rate
	Total	Responded	Refused	Ineligible	Unknown eligibility	
<b>Home tenure</b>						
Rent	43,614	17,635	222	4,829	20,928	52.6
Own	126,069	79,547	696	5,319	40,507	68.5
Home tenure unknown	35,317	11,796	168	7,441	15,912	55.3
<b>Income</b>						
\$49,999 or less	84,465	42,173	415	7,553	34,324	60.3
\$50,000-\$74,999	31,243	17,967	143	1,851	11,282	64.8
\$75,000-\$99,999	24,665	15,170	140	1,030	8,325	67.0
\$100,000-\$124,999	6,662	3,765	50	435	2,412	63.9
\$125,000 or more	37,013	23,458	247	1,350	11,958	68.0
Income unknown	20,952	6,445	91	5,370	9,046	57.2
<b>Treatment variables<sup>3</sup></b>						
Baseline	40,000	20,980	224	3,302	15,494	62.1
<b>Targeted mailing<sup>4</sup></b>						
Likely Hispanic	3,370	1,154	17	449	1,750	47.6
Not likely Hispanic	11,630	6,463	52	1,067	4,048	65.4
<b>Updated sequential mixed mode</b>						
<b>Opt-out screener</b>						
No advance letter*FedEx 2nd	7,778	3,998	46	649	3,085	61.3
Advance letter*FedEx 2nd	7,778	4,029	32	706	3,011	62.2
Advance mailing campaign*FedEx 2nd	7,778	4,001	50	700	3,027	61.8
No advance letter*FedEx 4th	7,778	3,930	32	614	3,202	60.1
Advance letter*FedEx 4th	7,778	3,928	43	675	3,132	60.4
Advance mailing campaign*FedEx 4th	7,777	4,002	32	702	3,041	61.9
No advance letter*FedEx modeled	7,777	3,921	48	658	3,150	60.4
Advance letter*FedEx modeled	7,778	4,118	39	695	2,926	62.9
Advance mailing campaign*FedEx modeled	7,778	4,012	58	702	3,006	62.0
<b>Choice plus</b>						
\$10	24,000	13,914	132	1,962	7,992	67.4
\$20	6,000	3,555	46	471	1,928	68.5
<b>Modeled mode</b>						
Modeled mixed mode	30,600	15,273	156	2,769	12,402	60.4
Modeled paper-only	5,400	4,068	17	257	1,058	80.9
Random paper-only	4,000	2,313	6	319	1,362	67.0

<sup>1</sup>The Northeast includes Pennsylvania, New York, New Jersey, Connecticut, Rhode Island, Massachusetts, Vermont, New Hampshire, and Maine. The South includes Florida, Georgia, South Carolina, North Carolina, Virginia, the District of Columbia, Maryland, Delaware, West Virginia, Alabama, Mississippi, Tennessee, Kentucky, Arkansas, Louisiana, Texas, and Oklahoma. The Midwest includes North Dakota, South Dakota, Nebraska, Kansas, Missouri, Iowa, Minnesota, Wisconsin, Illinois, Indiana, Michigan, and Ohio. The West includes New Mexico, Colorado, Wyoming, Montana, Idaho, Utah, Arizona, Nevada, Washington, Oregon, California, Hawaii, and Alaska.

<sup>2</sup>This estimate is based on a flag appended by the sample frame vendor, which may differ from whether a responding household reports NHES-eligible children on the screener.

<sup>3</sup>A detailed discussion of the NHES:2019 experimental treatments is provided in chapter 2.

<sup>4</sup>Within the targeted mailing treatment, addresses identified as likely Hispanic households based on frame information received a specially tailored set of mailing materials, while all other addresses received the same mailing materials as the baseline treatment. Additional detail is provided in chapter 2.

NOTE: The weighted screener response rate is calculated using the single-eligibility formula (NCES statistical standard 1-3-2).

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019.

### 5.1.2 NHES Topical Survey Unit Response Rates

For the ECPP and PFI topical surveys, the unit response rate was calculated as the ratio of responses to eligible cases. Topical sample cases were all cases in the screener sample for which a completed questionnaire was received and the household had one or more persons eligible for a topical survey. If correspondence or information provided in the topical questionnaire indicated that a person was ineligible for the topical survey that they received but eligible for a different topical survey, then the case was classified as a nonrespondent to the survey for which it was actually eligible. A small number of cases were classified as ineligible at the topical phase; these cases included those that were assigned an out-of-scope outcome code by the Census Bureau<sup>34</sup> or that were determined (based on correspondence or information provided in the topical questionnaire) to be eligible neither for the survey to which they were initially assigned nor for the other survey.

For the topical surveys, completed cases were those that had valid answers to at least two of the following questionnaire items: gender of child, relationship of “parent 1” to child, presence of a second parent or guardian in the household, or highest level of education of either “parent 1” or “parent 2.”<sup>35</sup> Additionally, to be considered complete as an ECPP case, at least one of the following additional questions had to have a valid answer: child’s year of birth, total household income, or home ownership status. To be considered complete as a PFI case, at least one of the following additional questions had to have a valid answer: child’s grade or grade equivalent, total household income, or home ownership status. Finally, for both topical surveys, at least 10 percent of the remaining questionnaire items were required to have valid answers to be classified as a complete. Cases that completed a topical questionnaire after September 3, the cutoff for the topical data collection, were classified as nonrespondents regardless of the number of items completed.

Calculation of the topical unit response rates differs from the screener unit response rate because it does not include unknown eligible cases in the denominator or take into account the number of known eligibility cases that are actually eligible. The topical surveys had no unresolved cases because all households in the topical samples had already responded to the screener and were known to be eligible for the topical survey that they were sent (with the exception of the small number of cases whose eligibility changed or that were classified as ineligible, as described above). For overall response rates, the topical unit response rate was multiplied by the screener unit response rate.

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<sup>34</sup> The out-of-scope outcome code was assigned at the topical phase if a case completed a screener and was sent a topical questionnaire but was then determined (e.g., on the basis of a call to the questionnaire assistance hotline) to be a nonresidential address (e.g., a business or a fraternity house).

<sup>35</sup> Parent 1 refers to the child’s parent or guardian living in the household and is usually the person who answered the topical questionnaire. If the person who answered the questionnaire is not the child’s parent or guardian, then parent 1 can refer to either of the child’s parents or guardians who live in the household. Parent 2 refers to the child’s other parent or guardian who lives in the household, if applicable.

The number of children sampled and the number of children with completed questionnaires (respondents) for each NHES:2019 survey are presented in table 5-5. Of the children enumerated in the screener and eligible for the PFI survey, a sample of 19,473 children was selected. Of the children enumerated in the screener and eligible for the ECPP survey, a sample of 8,245 children was selected. Less than 0.1 percent of the PFI sampled children ( $n = 1$ ) and ECPP sampled children ( $n = 8$ ) were classified as ineligible because they were enumerated in error (i.e., children who appeared to be in the topical survey population based on screener information but were later determined to be outside of the population based on topical information) or were assigned an out-of-scope outcome code by the Census Bureau. PFI responses were obtained for 16,466 of the sampled children for an estimated 83.4 percent single-stage response rate and an overall response rate of 52.6 percent. ECPP responses were obtained for 7,092 of the sampled children for an estimated 85.5 percent single-stage response rate and an overall response rate of 54.0 percent.

**Table 5-5. Count of sampled children, unweighted topical response rate, weighted topical response rate, and weighted overall response rate, by topical questionnaire**

Topical questionnaire <sup>1</sup>	Count of sampled children	Unweighted topical response rate	Weighted topical response rate	Weighted overall response rate
PFI	-	84.5	83.4	52.6
Sampled	19,473	-	-	-
Ineligible (ISR = 3)	1	-	-	-
Did not respond (ISR = 2)	3,026	-	-	-
Total respondents (ISR = 1)	16,446	-	-	-
Sampled as ECPP, responded as PFI	0	-	-	-
Sampled as PFI, responded as PFI	16,466	-	-	-
ECPP	-	86.1	85.5	54.0
Sampled	8,245	-	-	-
Ineligible (ISR = 3)	8	-	-	-
Did not respond (ISR = 2)	1,145	-	-	-
Total respondents (ISR = 1)	7,092	-	-	-
Sampled as PFI, responded as ECPP	0	-	-	-
Sampled as ECPP, responded as ECPP	7,092	-	-	-

<sup>1</sup>PFI is Parent and Family Involvement in Education. ECPP is Early Childhood Program Participation.

NOTE: The weighted topical response rate is calculated following NCES statistical standard 1-3-2. There were no unknown eligible cases at the topical stage. Per NCES statistical standard 1-3-3, the weighted overall response rate is equal to the weighted topical response rate multiplied by the weighted single-eligibility screener response rate.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019.

Tables 5-6 and 5-7 show the unit response rates for the ECPP and PFI surveys by selected household characteristics and other variables that were available for both respondents and nonrespondents in the sampling frame, randomly assigned treatment flags, and variables available in the screener. The

household characteristics that were measured based upon sampling frame data from the vendor MSG rather than from survey responses include sampling stratum, tract-level poverty rate, Census region, route type, drop point status, dwelling type, number of adults in the household, the presence of children in the household, phone match status, home tenure, and income. Response rates are also shown across assigned experimental treatment group. In addition, screener variables are shown for the number of children eligible for the assigned topical survey, the presence of children eligible for the other topical survey, and the age, gender, enrollment status, and (for the PFI) grade of the sampled person.

For the following sampling frame and treatment variables, PFI and ECPP topical response rates differed significantly (at the .05 level) between at least two categories of the variable: stratum, tract-level poverty rate, route type, dwelling type, number of adults in the household, home tenure (own or rent), income, and experimental treatment group. For example, considering the tract-level poverty rate: the PFI topical response rate was significantly lower among addresses located in tracts with a poverty rate of 20 percent or higher than those located in tracts with a poverty rate below 20 percent; and the same was true of the ECPP topical response rate. For the PFI, two other sampling frame variables (rather than variables based on survey responses) showed statistically significant differences in response rates between at least two categories of the variable: Census region and the presence of children in the household.

For both surveys, screener variables for the number of children in the household eligible for the assigned survey, the presence of children eligible for the other topical survey, and the age, gender, and enrollment status of the sampled child also showed statistically significant response rate differences between at least two categories of the variable. For the PFI, statistically significant response rate differences were additionally observed by the grade level of the sampled child.

**Table 5-6. Count of Parent and Family Involvement in Education children by response status, and weighted Parent and Family Involvement in Education response rate, by selected address, household, and child characteristics**

Characteristic	Count of PFI children				Weighted PFI response rate
	Sampled	Respondents	Refused or did not respond	Ineligible	
<b>Total</b>	19,473	16,446	3,026	1	83.4
<b>Frame variables</b>					
Sampling stratum					
Tracts with 25% or more Black persons	2,861	2,287	574	0	77.4
Tracts with 40% or more Hispanic persons	2,718	2,176	542	0	79.2
All other tracts	13,894	11,983	1,910	1	85.0
Tract poverty rate					
20 percent or higher	4,249	3,403	846	0	78.0
Below 20 percent	15,224	13,043	2,180	1	84.9
Census region <sup>1</sup>					
Northeast	3,310	2,752	557	1	82.4
South	7,285	6,060	1,225	0	82.1
Midwest	4,288	3,712	576	0	85.3
West	4,590	3,922	668	0	84.3
Route type					
City style / street	17,185	14,615	2,569	1	84.0
P.O. box or rural route	109	90	19	0	73.4
High rise	2,179	1,741	438	0	79.3
Delivery point is a drop point					
Yes	228	181	47	0	80.5
No	19,245	16,265	2,979	1	83.5
Dwelling type					
Single family	16,867	14,352	2,514	1	84.0
Multi-unit	2,504	2,009	495	0	79.8
Dwelling type unknown	102	85	17	0	73.6
Number of adults in household					
1	7,880	6,435	1,445	0	80.2
2	7,866	6,860	1,005	1	86.8
3 or 4	1,979	1,713	266	0	86.8
5 or more	101	83	18	0	78.1
Number of adults unknown	1,647	1,355	292	0	80.4

See notes at end of table.

**Table 5-6. Count of Parent and Family Involvement in Education children by response status, and weighted Parent and Family Involvement in Education response rate, by selected address, household, and child characteristics—Continued**

Characteristic	Count of PFI children				Weighted PFI response rate
	Sampled	Respondents	Refused or did not respond	Ineligible	
Household flagged in the sampling frame as having children <sup>2</sup>					
Yes	7,924	6,829	1,094	1	85.2
No/Unknown	11,549	9,617	1,932	0	82.2
Phone number matched					
Yes	14,308	12,136	2,171	1	83.7
No	5,165	4,310	855	0	82.6
Home tenure					
Rent	3,246	2,603	643	0	78.9
Own	14,549	12,503	2,045	1	85.2
Home tenure unknown	1,678	1,340	338	0	77.9
Income					
\$49,999 or less	6,083	4,954	1,129	0	80.1
\$50,000-\$74,999	2,959	2,475	484	0	82.4
\$75,000-\$99,999	3,149	2,717	432	0	86.1
\$100,000-\$124,999	519	435	84	0	82.1
\$125,000 or more	5,940	5,204	735	1	87.1
Income unknown	823	661	162	0	77.1
<b>Treatment variables<sup>3</sup></b>					
Baseline	3,737	3,121	616	0	81.6
Targeted mailing <sup>4</sup>	1,308	1,102	206	0	83.5
Likely Hispanic	275	216	59	0	73.4
Not likely Hispanic	1,033	886	147	0	86.1
Updated sequential mixed mode					
Opt-out screener	936	824	112	0	85.9
No advance letter*FedEx 2nd	750	654	96	0	86.3
Advance letter*FedEx 2nd	708	623	85	0	87.5
Advance mailing campaign*FedEx 2nd	709	623	86	0	87.7

See notes at end of table.

**Table 5-6. Count of Parent and Family Involvement in Education children by response status, and weighted Parent and Family Involvement in Education response rate, by selected address, household, and child characteristics—Continued**

Characteristic	Count of PFI children				Weighted PFI response rate
	Sampled	Respondents	Refused or did not respond	Ineligible	
No advance letter*FedEx 4th	677	567	110	0	82.5
Advance letter*FedEx 4th	734	622	112	0	84.1
Advance mailing campaign*FedEx 4th	693	580	112	1	82.4
No advance letter*FedEx modeled	714	629	85	0	87.0
Advance letter*FedEx modeled	730	623	107	0	85.1
Advance mailing campaign*FedEx modeled	704	604	100	0	83.2
Choice plus					
\$10	2,570	2,174	396	0	83.4
\$20	671	584	87	0	87.8
Modeled mode	3,418	2,815	603	0	82.1
Modeled mixed-mode	3,119	2,605	514	0	83.2
Modeled paper-only	299	210	89	0	68.0
Random paper-only	414	301	113	0	73.0
<b>Data reported in household screener</b>					
Number of PFI-eligible children					
0-1 <sup>5</sup>	9,605	8,144	1,460	1	84.6
2	6,991	5,921	1,070	0	84.0
3	2,187	1,831	356	0	82.6
4 or more	690	550	140	0	78.2
Household has ECPP-eligible children					
Yes	1,635	1,333	302	0	81.1
No	17,838	15,113	2,724	1	84.0

See notes at end of table.

**Table 5-6. Count of Parent and Family Involvement in Education children by response status, and weighted Parent and Family Involvement in Education response rate, by selected address, household, and child characteristics—Continued**

Characteristic	Count of PFI children				Weighted PFI response rate
	Sampled	Respondents	Refused or did not respond	Ineligible	
Age of sampled child (as of December 31, 2018)					
0 to 4 years	70	36	34	0	56.9
5 to 6 years	1,944	1,668	276	0	86.0
7 to 8 years	2,329	1,986	343	0	83.8
9 to 10 years	2,585	2,133	452	0	81.0
11 to 12 years	2,882	2,431	451	0	83.8
13 to 14 years	3,073	2,621	452	0	84.0
15 to 16 years	3,645	3,089	556	0	83.5
17 to 20 years	2,771	2,364	407	0	84.4
Not reported	174	118	55	1	67.8
Reported enrollment status of sampled child					
Homeschooled <sup>6</sup>	919	703	216	0	76.0
Public or private school, or preschool	18,357	15,643	2,714	0	84.1
College, university or vocational school, or not in school	34	13	21	0	34.0
Not reported	163	87	75	1	53.9
Reported grade of sampled child					
Kindergarten/pre-K	1,223	1,036	186	1	84.1
1st grade	1,178	1,011	167	0	86.7
2nd grade	1,152	971	181	0	82.0
3rd grade	1,204	1,030	174	0	83.4
4th grade	1,263	1,040	223	0	81.3
5th grade	1,359	1,131	228	0	82.4
6th grade	1,426	1,206	220	0	84.4
7th grade	1,462	1,237	225	0	83.3
8th grade	1,511	1,299	212	0	85.2
9th grade	1,618	1,369	249	0	83.2
10th grade	1,813	1,559	254	0	85.0
11th grade	1,866	1,601	265	0	85.3
12th grade	1,988	1,707	281	0	84.8
College or none of these	26	13	13	0	50.0
Not reported	384	236	148	0	60.5

See notes at end of table.

**Table 5-6. Count of Parent and Family Involvement in Education children by response status, and weighted Parent and Family Involvement in Education response rate, by selected address, household, and child characteristics—Continued**

Characteristic	Count of PFI children				Weighted PFI response rate
	Sampled	Respondents	Refused or did not respond	Ineligible	
Gender of sampled child					
Male	10,049	8,484	1,565	0	83.7
Female	9,326	7,907	1,419	0	83.5
Not reported	98	55	42	1	52.7

<sup>1</sup>The Northeast includes Pennsylvania, New York, New Jersey, Connecticut, Rhode Island, Massachusetts, Vermont, New Hampshire, and Maine. The South includes Florida, Georgia, South Carolina, North Carolina, Virginia, District of Columbia, Maryland, Delaware, West Virginia, Alabama, Mississippi, Tennessee, Kentucky, Arkansas, Louisiana, Texas, and Oklahoma. The Midwest includes North Dakota, South Dakota, Nebraska, Kansas, Missouri, Iowa, Minnesota, Wisconsin, Illinois, Indiana, Michigan, and Ohio. The West includes New Mexico, Colorado, Wyoming, Montana, Idaho, Utah, Arizona, Nevada, Washington, Oregon, California, Hawaii, and Alaska.

<sup>2</sup>This estimate is based on a flag appended by the sample frame vendor, which may differ from whether a responding household reports NHES-eligible children in the screener. Only households reporting NHES-eligible children in the screener are sampled for a topical survey.

<sup>3</sup>A detailed discussion of the NHES:2019 experimental treatments is provided in chapter 2.

<sup>4</sup>Within the targeted mailing treatment, addresses identified as likely Hispanic households based on frame information received a specially tailored set of mailing materials, while all other addresses received the same mailing materials as the baseline treatment. Additional detail is provided in chapter 2.

<sup>5</sup>The "O" instances category consists of children who were sampled for the ECPP but later determined to be PFI-eligible.

<sup>6</sup>The "homeschooled" category includes all children who were indicated in the screener as being homeschooled, regardless of whether they were ultimately classified as homeschooled for the purpose of producing national estimates of homeschooling. NCES uses multiple topical survey items to determine whether a child meets the NCES definition of a homeschooler. Therefore, some children who were reported as homeschooled in the screener were ultimately not classified as homeschoolers in producing national estimates, while others who were not reported as homeschooled in the screener were classified as homeschoolers based on responses to topical items.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019.

**Table 5-7. Count of Early Childhood Program Participation children by response status, and weighted Early Childhood Program Participation response rate, by selected address, household, and child characteristics**

Characteristic	Count of ECPP children				Weighted ECPP response rate
	Sampled	Respondents	Refused or did not respond	Ineligible	
<b>Total</b>	8,245	7,092	1,145	8	85.5
<b>Frame variables</b>					
Sampling stratum					
Tracts with 25% or more Black persons	1,251	1,043	207	1	82.4
Tracts with 40% or more Hispanic persons	1,177	980	197	0	82.4
All other tracts	5,817	5,069	741	7	86.5
Tract poverty rate					
20 percent or higher	1,900	1,584	315	1	81.6
Below 20 percent	6,345	5,508	830	7	86.7
Census region <sup>1</sup>					
Northeast	1,369	1,183	186	0	86.4
South	2,985	2,541	440	4	84.7
Midwest	1,916	1,650	263	3	85.0
West	1,975	1,718	256	1	86.7
Route type					
City style / street	6,969	6,021	942	6	85.8
P.O. box or rural route	31	28	3	0	92.9
High rise	1,245	1,043	200	2	83.7
Delivery point is drop point					
Yes	91	75	16	0	82.7
No	8,154	7,017	1,129	8	85.6
Dwelling type					
Single family	6,800	5,881	913	6	85.9
Multi-unit	1,415	1,184	229	2	83.5
Dwelling type unknown	30	27	3	0	92.5
Number of adults in household					
1	4,075	3,470	602	3	84.4
2	2,749	2,438	308	3	88.4
3 or 4	516	424	91	1	82.6
5 or more	26	20	6	0	67.3
Number of adults unknown	879	740	138	1	83.8

See notes at end of table.

**Table 5-7. Count of Early Childhood Program Participation children by response status, and weighted Early Childhood Program Participation response rate, by selected address, household, and child characteristics—Continued**

Characteristic	Count of ECPP children				Weighted ECPP response rate
	Sampled	Respondents	Refused or did not respond	Ineligible	
Household flagged on the sampling frame as having children <sup>2</sup>					
Yes	1,856	1,592	261	3	85.6
No/Unknown	6,389	5,500	884	5	85.5
Phone number matched					
Yes	5,102	4,389	708	5	85.9
No	3,143	2,703	437	3	85.0
Home tenure					
Rent	1,634	1,379	255	0	83.4
Own	5,629	4,893	729	7	86.8
Home tenure unknown	982	820	161	1	81.8
Income					
\$49,999 or less	2,958	2,484	472	2	83.6
\$50,000-\$74,999	1,218	1,054	164	0	86.9
\$75,000-\$99,999	1,149	1,014	131	4	87.4
\$100,000-\$124,999	390	339	51	0	83.5
\$125,000 or more	2,049	1,798	250	1	87.6
Income unknown	481	403	77	1	83.0
<b>Treatment variables<sup>3</sup></b>					
Baseline	1,627	1,382	241	4	84.0
Targeted mailing <sup>4</sup>	546	467	79	0	83.7
Likely Hispanic	103	83	20	0	79.0
Not likely Hispanic	443	384	59	0	84.6
Updated sequential mixed mode					
Opt-out screener	400	354	46	0	89.2
No advance letter*FedEx 2nd	286	252	34	0	90.0
Advance letter*FedEx 2nd	292	263	29	0	89.8
Advance mailing campaign*FedEx 2nd	275	242	33	0	87.1

See notes at end of table.

**Table 5-7. Count of Early Childhood Program Participation children by response status, and weighted Early Childhood Program Participation response rate, by selected address, household, and child characteristics—Continued**

Characteristic	Count of ECPP children				Weighted ECPP response rate
	Sampled	Respondents	Refused or did not respond	Ineligible	
No advance letter*FedEx 4th	273	228	45	0	78.7
Advance letter*FedEx 4th	302	267	34	1	88.3
Advance mailing campaign*FedEx 4th	350	304	46	0	86.6
No advance letter*FedEx modeled	295	260	35	0	88.0
Advance letter*FedEx modeled	328	291	37	0	88.4
Advance mailing campaign*FedEx modeled	324	288	36	0	89.4
Choice plus					
\$10	1,137	981	156	0	85.5
\$20	285	254	31	0	90.1
Modeled mode	1,378	1,151	224	3	83.4
Modeled mixed-mode	1,289	1,092	194	3	84.9
Modeled paper-only	89	59	30	0	60.2
Random paper-only	147	108	39	0	72.1
<b>Data reported in household screener</b>					
Number of ECPP-eligible children in household					
0-1 <sup>5</sup>	5,869	5,071	790	8	86.4
2	2,107	1,795	312	0	84.6
3	244	208	36	0	85.1
4 or more	25	18	7	0	72.8
Household has PFI-eligible children (Enrolled or Homeschooled)					
Yes	3,344	2,853	487	4	84.4
No	4,901	4,239	658	4	86.5
Age of sampled child (as of December 31, 2018)					
0 years	1,592	1,392	197	3	87.0
1 year	1,503	1,279	224	0	84.3
2 years	1,515	1,308	207	0	86.8
3 years	1,556	1,324	232	0	84.1
4 years	1,494	1,306	188	0	86.7
5-6 years	524	450	74	0	84.9
Not reported	61	33	23	5	62.8

See notes at end of table.

**Table 5-7. Count of Early Childhood Program Participation children by response status, and weighted Early Childhood Program Participation response rate, by selected address, household, and child characteristics—Continued**

Characteristic	Count of ECPP children				Weighted ECPP response rate
	Sampled	Respondents	Refused or did not respond	Ineligible	
Reported enrollment status of sampled child					
Homeschooled <sup>6</sup>	66	55	10	1	82.5
Public or private school, or preschool	2,773	2,391	382	0	85.9
College, university or vocational school, or not reported	140	71	66	3	48.9
Not in school	5,266	4,575	687	4	86.4
Gender of sampled child					
Male	4,208	3,625	578	5	85.7
Female	3,989	3,440	546	3	85.7
Not reported	48	27	21	0	61.2

<sup>1</sup>The Northeast includes Pennsylvania, New York, New Jersey, Connecticut, Rhode Island, Massachusetts, Vermont, New Hampshire, and Maine. The South includes Florida, Georgia, South Carolina, North Carolina, Virginia, the District of Columbia, Maryland, Delaware, West Virginia, Alabama, Mississippi, Tennessee, Kentucky, Arkansas, Louisiana, Texas, and Oklahoma. The Midwest includes North Dakota, South Dakota, Nebraska, Kansas, Missouri, Iowa, Minnesota, Wisconsin, Illinois, Indiana, Michigan, and Ohio. The West includes New Mexico, Colorado, Wyoming, Montana, Idaho, Utah, Arizona, Nevada, Washington, Oregon, California, Hawaii, and Alaska.

<sup>2</sup>This estimate is based on a flag appended by the sample frame vendor, which may differ from whether a responding household reports NHES-eligible children on the screener. Only households reporting NHES-eligible children on the screener are sampled for a topical survey.

<sup>3</sup>A detailed discussion of the NHES:2019 experimental treatments is provided in chapter 2.

<sup>4</sup>Within the targeted mailing treatment, addresses identified as likely Hispanic households based on frame information received a specially tailored set of mailing materials, while all other addresses received the same mailing materials as the baseline treatment. Additional detail is provided in chapter 2.

<sup>5</sup>The "O" instances category consists of children who switched from the PFI to the ECPP on the web instrument but were later determined to be outside of the eligible age range of the ECPP.

<sup>6</sup>The "Homeschooled" category includes all children who were indicated on the screener as being homeschooled, regardless of whether they were ultimately classified as homeschooled for the purpose of producing national estimates of homeschooling. NCES uses multiple topical survey items to determine whether a child meets the NCES definition of a homeschooler. Therefore, some children who were reported as homeschooled on the screener were ultimately not classified as homeschoolers in producing national estimates; while others who were not reported as homeschooled on the screener were classified as homeschoolers based on responses to topical items.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019.

## 5.2 Item Response Rates

For most of the items collected in the NHES:2019 surveys, the item response rates were very high. The tables in this section show the item response rates for a representative group of items from each topical survey. These items were selected to represent key items considered in the sample design and to represent the range of item response rates. The number of cases for which each item was attempted and the percentage of cases for which a valid response was obtained are shown.

Item response rates for the NHES topical surveys are calculated using the imputation flag for each variable.<sup>36</sup> Cases with an imputation flag of 0 are item respondents, whereas those with an imputation flag of greater than 0 are item nonrespondents.<sup>37</sup> Because imputation takes place after data editing (see chapter 4 on data processing and chapter 6 on imputation), item response rates account for all edits to the data. For example, respondents whose original responses to a given item were deleted due to a consistency edit are counted as item nonrespondents in the calculation of the item response rate for that item.

As described in chapter 6, certain items were imputed using logic-based imputation, in which the likely response to a missing item was inferred based on the same respondent's responses to other items. In NHES:2012, logic-based imputation was treated as an editing step rather than an imputation step, and values that were filled in using these procedures were therefore not flagged as having been imputed. Beginning with NHES:2016, values filled in using logic-based imputation have been flagged as having been imputed. Because of this change, the reported response rate for some items that used logic-based imputation appears to be lower for NHES:2016 and NHES:2019 than for NHES:2012. Data users who wish to calculate item response rates that are comparable with NHES:2012 may do so by treating cases with an imputation flag of 1 (which denotes logic-based imputation) as item respondents. For additional details on these procedures, see chapter 6.

Tables 5-8 and 5-9 show the item response rates and total response rates (the product of the item response rate and the overall unit response rate for the survey) for a representative group of items from the PFI and ECPP questionnaire, respectively. The item response rates were calculated using the sample base weights (i.e., the inverse of the probability of selection). For the PFI and ECPP surveys, the median weighted item response rates across all items were 98.4 percent and 98.4 percent, respectively, and the median total response rates were 51.8 percent and 53.1 percent, respectively.

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<sup>36</sup> A small number of variables were not imputed; for these variables, item response rates are calculated using the reserve code for invalid missing data (-9).

<sup>37</sup> Cases for which an item was validly skipped due to survey routing rules have an imputation flag of -1 for that item and are excluded from the denominator of the item response rate.

**Table 5-8. Unweighted and weighted item response rates and total response rate, by selected Parent and Family Involvement in Education items**

<b>PFI item</b>	<b>Number eligible to respond to item<sup>1</sup></b>	<b>Unweighted item response rate</b>	<b>Weighted item response rate</b>	<b>Total item response rate</b>
Demographic characteristics of child				
Child's birth month	16,446	98.7	98.8	52.0
Child's birth year	16,446	98.8	98.8	52.0
Child's sex	16,446	99.8	99.8	52.5
Language child speaks most at home	16,446	99.4	99.4	52.3
State, country, or territory of birth	16,446	99.2	99.3	52.3
Whether child is of Hispanic origin	16,446	98.8	99.0	52.1
Race of child <sup>2</sup>	16,446	98.7	98.8	52.0
Child's schooling				
Child attends public school	16,446	92.5	92.8	48.8
Child attends Catholic school	16,446	55.4	57.2	30.1
Child attends private, religious, but not Catholic school	16,446	55.3	57.5	30.3
Child attends private, not religious school	16,446	54.6	56.4	29.7
Child is enrolled in full-time online, virtual, cyber school	16,446	53.6	55.5	29.2
Child is enrolled in online college, community college, or university	16,446	52.9	54.9	28.9
Child attends college, community college, or university	16,446	52.9	54.8	28.9
Child is homeschooled	16,446	100.0	100.0	52.6
Child's grade in school	16,446	99.1	99.2	52.2
Homeschooling				
Child enrolls in virtual/online/cyber classes <sup>3</sup>	519	96.9	95.8	50.4
The most important reason for homeschooling	515	92.4	93.5	49.2
Child's school				
Child is enrolled in a district-assigned school	14,120	99.3	99.3	52.3
Child's school is a charter school	14,293	98.3	98.2	51.7
Allowed to choose school in any district	15,990	99.5	99.5	52.4
Child enrolls in virtual/online/cyber classes <sup>4</sup>	15,922	99.5	99.5	52.4
Other schools considered for child	15,990	99.5	99.5	52.4
Child's grades across all subjects	15,990	99.3	99.3	52.3
Child enrolled in advanced classes	6,264	99.2	99.3	52.3

See notes at end of table.

**Table 5-8. Unweighted and weighted item response rates and total response rate, by selected Parent and Family Involvement in Education items—Continued**

<b>PFI item</b>	<b>Number eligible to respond to item<sup>1</sup></b>	<b>Unweighted item response rate</b>	<b>Weighted item response rate</b>	<b>Total item response rate</b>
Family/school involvement and school practices				
Attend general school meeting	15,783	98.2	98.3	51.7
Participate in fundraising for school	15,783	97.7	97.7	51.5
Family involvement in schoolwork				
How often homework done outside school	16,020	99.1	99.2	52.2
Family involvement outside of school				
Visited a library in the past month	16,446	98.6	98.6	51.9
Number of days family ate dinner together in past week	16,446	99.2	99.3	52.3
Visited zoo/aquarium in past month	16,446	97.6	97.7	51.4
Health and disability				
Rating of child's health	16,446	99.5	99.6	52.4
Child receives any IEP services	4,045	99.4	99.2	52.2
Characteristics of parent/guardian 1				
Marital status	16,446	99.3	99.3	52.3
Country where born	16,446	99.1	99.1	52.2
Highest educational attainment	16,446	99.2	99.1	52.2
Relationship to child	16,446	99.6	99.6	52.4
Characteristics of parent/guardian 2				
Presence of parent/guardian 2	16,446	100.0	100.0	52.6
Highest educational attainment	12,166	98.6	98.7	52.0
Household characteristics				
Household size	16,446	99.6	99.7	52.5
Receives WIC benefits	16,446	96.0	95.8	50.5
Received Food Stamps in past month	16,446	96.9	96.8	51.0
Received Section 8 housing assistance	16,446	95.9	95.6	50.3
Home tenure	16,446	97.6	97.6	51.4
Total household income	16,446	95.6	95.7	50.4

<sup>1</sup>Refers to the number of unit respondents who, based on their questionnaire type and/or responses to previous items, were eligible to answer the specified item.

<sup>2</sup>Race is a choose-all-that-apply item in which respondents could choose more than one race. The response rate was determined by whether respondents selected at least one race.

<sup>3</sup>Refers to the virtual school item HSINTNET in the homeschooling section of the questionnaire.

<sup>4</sup>Refers to the virtual school item EINTNET in the schooling section of the questionnaire.

NOTE: The total item response rate is equal to the weighted item response rate multiplied by the Parent and Family Involvement in Education response rate.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019.

**Table 5-9. Unweighted and weighted item response rates and total response rate, by selected Early Childhood Program Participation items**

<b>ECPP item</b>	<b>Number eligible to respond to item<sup>1</sup></b>	<b>Unweighted item response rate</b>	<b>Weighted item response rate</b>	<b>Total item response rate</b>
Demographic characteristics of child				
Child's birth month	7,092	99.1	99.1	53.5
Child's birth year	7,092	99.1	99.0	53.4
Child's sex	7,092	99.9	99.8	53.9
Language child speaks most at home	7,092	99.6	99.6	53.8
State, country, or territory of birth	7,092	99.5	99.5	53.7
Whether child is of Hispanic origin	7,092	99.1	99.2	53.5
Race of child <sup>2</sup>	7,092	99.2	99.2	53.5
Childhood care and programs				
Child receiving regular care from relative other than parent/guardian	7,092	99.5	99.6	53.8
How long it took to go from the child's home to a relative's home to receive regular care	884	98.5	98.2	53.0
Child receiving regular care from nonrelative	7,092	99.5	99.6	53.7
How long it took to go from the child's home to a nonrelative's home to receive regular care	627	96.8	97.3	52.5
Child attending daycare center, preschool, or pre-K	7,092	99.5	99.5	53.7
How long it took to go from the child's home to daycare center/ preschool, or pre-K to receive regular care	3,035	98.8	98.7	53.3
Finding and choosing care for child				
Good choices for child care	7,092	99.5	99.4	53.7
Main reason household wanted a care arrangement	7,092	98.7	98.6	53.2
Family activities				
Number of books child owns	7,092	99.3	99.3	53.6
Times read to child in past week	7,092	92.6	92.6	50.0
Number of days family ate dinner together in past week	7,092	99.4	99.4	53.6
Visited a library in the past month	7,092	99.4	99.4	53.6

See notes at end of table.

**Table 5-9. Unweighted and weighted item response rates and total response rate, by selected Early Childhood Program Participation items—Continued**

<b>ECPP item</b>	<b>Number eligible to respond to item<sup>1</sup></b>	<b>Unweighted item response rate</b>	<b>Weighted item response rate</b>	<b>Total item response rate</b>
Early learning				
Child explain things he or she has seen or done	4,636	97.4	97.5	52.6
Health and disability				
Rating of child's health	7,092	99.6	99.6	53.8
Child has specific learning disability	7,092	100.0	100.0	54.0
Child has Pervasive Developmental Disorder (PDD)	7,092	100.0	100.0	54.0
Characteristics of parent/guardian 1				
Marital status	7,092	99.5	99.5	53.7
Country where born	7,092	99.5	99.4	53.7
Highest educational attainment	7,092	99.3	99.3	53.6
Relationship to child	7,092	99.8	99.7	53.8
Characteristics of parent/guardian 2				
Presence of parent/guardian 2	7,092	100.0	100.0	54.0
Highest educational attainment	5,897	99.3	99.3	53.6
Household characteristics				
Household size	7,092	99.7	99.7	53.8
Receives WIC benefits	7,092	96.7	96.5	52.1
Received Food Stamps in past month	7,092	96.4	96.5	52.1
Received Section 8 housing assistance	7,092	94.9	95.0	51.3
Home tenure	7,092	98.2	98.2	53.0
Total household income	7,092	96.5	96.7	52.2

<sup>1</sup>Refers to the number of unit respondents who, based on their questionnaire type and/or responses to previous items, were eligible to answer the specified item.

<sup>2</sup>Race is a choose-all-that-apply item in which respondents could choose more than one race. The response rate was determined by whether respondents selected at least one race.

NOTE: The total item response rate is equal to the weighted item response rate multiplied by the Early Childhood Program Participation response rate.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019.

Most items in the public-use data file have item response rates over 90 percent. Many item response rates of less than 90 percent are for items that apply to only a small number of cases.<sup>38</sup> Tables 5-10 and 5-11 show items with response rates below 90 percent in the PFI and ECPP surveys, respectively. As shown in these tables, several of the variables with response rates below 90 percent are “other specify” items. Nonresponse occurs for these items when respondents mark “other” as their response and then do not write a more specific answer in the “other specify” box.

Among the PFI items with response rates below 90 percent are most categories of item 2 (type of school). In item 2, respondents were asked to provide an explicit “Yes” or “No” response for each school type. However, many respondents who responded “Yes” to one school type then left other school types blank. For example, of those who responded “Yes” to EDCPUB (public school), 45 percent left EDCCAT (private Catholic), EDCREL (private religious not Catholic), EDCPRI (private not religious), EDCINTK12 (full time online, virtual or cyber), EDCINTCOL (online college or university), and EDCCOL (regular college or university) blank. Altogether, for each of the school types listed in table 5-10, approximately 97 percent of those missing the item provided a “Yes” response to at least one other school type. As part of the imputation of item 2, respondents who provided a “Yes” response for at least one school type, and did not provide an explicit “No” response to any, were imputed with “No” for all unanswered school types.

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<sup>38</sup> For items that were asked of only a small subgroup of respondents, a small number of missing values could result in a low item response rate.

**Table 5-10. Parent and Family Involvement in Education items with weighted response rates below 90 percent**

<b>Variable name</b>	<b>Variable description</b>	<b>Number eligible<sup>1</sup></b>	<b>Unweighted item response rate</b>	<b>Weighted item response rate</b>
EDCCAT	Type of school-private Catholic	16,446	55.4	57.2
EDCREL	Type of school-private religious not Catholic	16,446	55.3	57.5
EDCPRI	Type of school-private not religious	16,446	54.6	56.4
EDCINTK12	Type of school-full time online, virtual, or cyber school	16,446	53.6	55.5
EDCINTCOL	Type of school-online college or university	16,446	52.9	54.9
EDCCOL	Type of school-regular college or university	16,446	52.9	54.8
HSWHOOSX	Who provides child's home instruction-specify (write-in)	11	72.7	70.6
ONLNAP	Why online, virtual or cyber enrollment-advanced placement, for homeschoolers	208	86.1	86.9
ONLNSC	Why online, virtual or cyber enrollment-specialized course, for homeschoolers	208	86.5	87.8
ONLNEH	Why online, virtual or cyber enrollment-extra help, for homeschoolers	208	88.0	88.4
ONLNLS	Why online, virtual or cyber enrollment-learning style, for homeschoolers	208	87.5	87.9
ONLNPR	Why online, virtual or cyber enrollment-prefers online/virtual, for homeschoolers	208	88.9	89.3
ONLNHS	Why online, virtual or cyber enrollment-began homeschooling to enroll in online/virtual, for homeschoolers	208	85.6	87.5
ONLNOTHOS	Why online, virtual or cyber enrollment-specify (write-in), for homeschoolers	39	89.7	84.9
HSINTPUB	Child's public school provides online/virtual/cyber courses, for homeschoolers	208	82.7	82.3
HSINTPRI	Child's private school provides online/virtual/cyber courses, for homeschoolers	208	82.2	81.6
HSINTCOL	College or university provides online/virtual/cyber courses, for homeschoolers	208	80.8	79.4
HSINTVRT	Online academy provides online/virtual/cyber courses, for homeschoolers	208	87.0	86.4
HSINTCMP	Online/virtual/cyber courses purchased online, for homeschoolers	208	86.1	86.1
HSINTK12	Other K-12 public or private school provides online/virtual/cyber courses, for homeschoolers	208	80.8	80.2
HSINTIND	Independent instructor provides online/virtual/cyber courses, for homeschoolers	208	84.6	83.8
HSINTOH	Someone else provides online/virtual/cyber courses, for homeschoolers	208	63.9	64.2
HSINTOHOS	Someone else provides online/virtual/cyber courses-specify (write-in), for homeschoolers	27	77.8	85.7
HSINTLIB	Online resources from public library, for homeschoolers	519	88.6	89.5
HSINTCAT	Online resources from catalog/institution that provides materials to homeschooling families, for homeschoolers	519	87.7	88.7
HSINTSCH	Online resources from local public school, for homeschoolers	519	86.5	87.3
HSINTFRWB	Online resources from free websites, for homeschoolers	519	88.6	89.3
HSINTWEB	Online resources from organized cyber educational resources, for homeschoolers	519	88.4	89.0
HSINTOTH	Online resources from other sources, for homeschoolers	519	62.0	62.2
HSINTOTHOS	Online resources from other sources-specify (write-in), for homeschoolers	128	64.8	64.8

See notes at end of table.

**Table 5-10. Parent and Family Involvement in Education items with weighted response rates below 90 percent—Continued**

<b>Variable name</b>	<b>Variable description</b>	<b>Number eligible<sup>1</sup></b>	<b>Unweighted item response rate</b>	<b>Weighted item response rate</b>
HSCLIBRX	Materials from public library	519	87.9	89.0
HSCHSPUBX	Materials from a catalog	519	87.3	88.4
HSCHSRELX	Catalog affiliation	394	85.8	86.7
HSCPUBLX	Materials from local public school	519	86.9	87.4
HSCCNVX	Materials from homeschooling convention	519	85.0	86.0
HSCVCTX	Materials from a used curriculum swap/exchange	519	85.5	86.8
HSCFMLY	Materials from other homeschool families	519	86.3	87.8
HSCOTH	Materials from other sources	519	66.3	66.1
HSCOTHOS	Materials from other sources-specify (write-in)	192	63.0	60.9
HSDISSATX	Reason to homeschool-dissatisfied with academic instruction	519	88.8	89.9
HSILLX	Reason to homeschool-temporary illness	519	87.7	89.3
HSALTX	Reason to homeschool-nontraditional approach to education	519	88.1	89.3
HSFMLY	Reason to homeschool-emphasize family life together	519	84.4	86.7
HSOTHERXOS	Reason to homeschool-specify (write-in)	161	67.1	64.9
ADVCCRSE	Why online, virtual or cyber enrollment-advanced placement or college courses, for non-homeschoolers	1,167	87.6	86.9
SPCLCRSE	Why online, virtual or cyber enrollment-specialized courses, for non-homeschoolers	1,167	86.2	85.9
MKUPCRSE	Why online, virtual or cyber enrollment-make-up course, for non-homeschoolers	1,167	87.1	86.7
ADDCRSE	Why online, virtual or cyber enrollment-earn additional credits, for non-homeschoolers	1,167	86.7	85.8
HELP	Why online, virtual or cyber enrollment-extra help in a course or subject, for non-homeschoolers	1,167	86.0	85.6
CONFLCT	Why online, virtual or cyber enrollment-schedule conflict with the in-person courses, for non-homeschoolers	1,167	86.0	85.3
DISABLX	Why online, virtual or cyber enrollment-physical/mental health problem, for non-homeschoolers	1,167	86.6	86.2
TEMPILL	Why online, virtual or cyber enrollment-temporary illness, for non-homeschoolers	1,167	85.9	85.7
SPCLND	Why online, virtual or cyber enrollment-other special needs, for non-homeschoolers	1,167	86.5	86.1
LRNSTYLE	Why online, virtual or cyber enrollment-learning style, for non-homeschoolers	1,167	87.3	86.7
NOCHOICE	Why online, virtual or cyber enrollment-was required, for non-homeschoolers	1,167	88.5	89.5
SCHLPLCE	Why online, virtual or cyber enrollment-school placed child, for non-homeschoolers	1,167	85.8	85.2
ONLINEPREF	Why online, virtual or cyber enrollment-parent prefers online, for non-homeschoolers	1,167	85.9	85.3
SPRIVT	Child's private school provides online/virtual/cyber courses, for non-homeschoolers	1,167	81.7	82.9
SUNIVSCH	College or university provides online/virtual/cyber courses, for non-homeschoolers	1,167	81.3	82.9
SCYBER	Online academy provides online/virtual/cyber courses, for non-homeschoolers	1,167	81.7	82.6

See notes at end of table.

**Table 5-10. Parent and Family Involvement in Education items with weighted response rates below 90 percent—Continued**

<b>Variable name</b>	<b>Variable description</b>	<b>Number eligible<sup>1</sup></b>	<b>Unweighted item response rate</b>	<b>Weighted item response rate</b>
SCOMPANY	Online/virtual/cyber courses purchased online, for non-homeschoolers	1,167	80.1	81.8
SOTHRSCH	Other K-12 public or private school provides online/virtual/cyber courses, for non-homeschoolers	1,167	80.1	81.8
STUTR	Independent instructor provides online/virtual/cyber courses, for non-homeschoolers	1,167	79.8	81.4
SOTHSCH	Someone else provides online/virtual/cyber courses, for non-homeschoolers	1,167	55.2	56.6
SOTHSCHOS	Someone else provides online/virtual/cyber courses-specify (write-in), for non-homeschoolers	32	68.8	74.9
INTNUM	Number of online courses	1,167	87.7	87.6
LRNTAB	Learning activities on tablet	15,699	88.9	89.5

<sup>1</sup>Refers to the number of unit respondents who, based on their questionnaire type or responses to previous items, were eligible to answer the specified item.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019.

**Table 5-11. Early Childhood Program Participation items with weighted response rates below 90 percent**

<b>Variable name</b>	<b>Variable description</b>	<b>Number eligible<sup>1</sup></b>	<b>Unweighted item response rate</b>	<b>Weighted item response rate</b>
RCSTRTY	Child's age when relative care began (Years)	1,689	78.2	78.8
RCSTRTM	Child's age when relative care began (Months)	1,689	84.3	84.2
RCCOST	Amount paid for relative care	331	87.3	87.5
NCSTRTY	Child's age when care from non-relative began (Years)	885	77.9	79.6
NCSTRTM	Child's age when care from non-relative began (Months)	885	88.4	89.0
CPSTRTM	Age of child when starting program (Months)	3,035	85.7	85.2
CPUNITOS	Amount spent-specify (write-in)	34	79.4	80.9
CPPLACEXOS	Location of program-specify (write-in)	5	0.0	35.8
HDCHDCARE <sup>2</sup>	Condition interferes with ability to attend care	493	50.5	51.1
RELATIONOS	Relation to child-specify (write-in)	35	62.9	61.8
LRNCOMP	Use computer for learning	4,220	83.4	83.6

<sup>1</sup>Refers to the number of unit respondents who, based on their questionnaire type and/or responses to previous items, were eligible to answer the specified item.

<sup>2</sup>The item response rate to HDCHDCARE was depressed due to a routing error on the web instrument that required an unexpectedly large number of cases to be imputed for this item.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019.

## Chapter 6. Imputation

In the National Household Education Surveys Program of 2019 (NHES:2019), as in most surveys, responses were not obtained for some question items in the questionnaire. There are numerous reasons for item nonresponse. Some respondents may not know the answer to a question or simply do not wish to respond. Some respondents may run out of time and leave items at the end of the questionnaire blank. Item nonresponse also may occur because a respondent's responses are not internally consistent; thus, data processing to resolve these internal inconsistencies sometimes results in items being set to "missing" during the editing stage. The NHES:2019 items that were set to missing during editing or that were missing due to nonresponse were imputed.

Item imputation was typically needed for only a small proportion of cases for any given survey item in NHES:2019. The median weighted item response rates for the NHES:2019 Early Childhood Program Participation (ECPP) survey and the Parent and Family Involvement in Education (PFI) survey were 98.4 percent and 98.3 percent, respectively. The ECPP had a maximum of 246 questions, and only 3 of these items had a response rate below 70 percent.<sup>39</sup> The PFI had a maximum of 366 questions, and 13 of these items had response rates below 70 percent.<sup>40</sup>

Numeric and categorical data items with missing data were imputed; character string variables (such as country of origin or "other/specify" responses) were not imputed. In the ECPP, the main reason for choosing the child's care arrangement codes (which were based on the main reason character string variable) was not imputed. Similarly, the homeschool subject codes in the PFI (based on homeschool subject character strings) were not imputed.

Imputation was done for two reasons. First, complete responses were needed for the variables used in developing the sampling weights. Second, users will be computing estimates employing a variety of methods, and complete responses should aid their analyses. For each data item for which any values were imputed, an imputation flag variable was created in the data file. Users can use the imputation flag to delete the imputed values, use alternative imputation procedures, or account for the imputation

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<sup>39</sup> The three ECPP questions with response rates below 70 percent were CPPLACEXOS (location of program-specify [write-in]), HDCHDCARE (condition interferes with ability to attend care), and RELATIONOS (relation to child-specify [write-in]). Write-in variables CPPLACEXOS and RELATIONOS were not imputed.

<sup>40</sup> The 13 PFI questions with response rates below 70 percent were EDCCAT (type of school-private Catholic), EDCREL (type of school-private religious not Catholic), EDCPRI (type of school-private not religious), EDCINTK12 (type of school-full time online, virtual, or cyber school), EDCINTCOL (type of school-online college or university), EDCCOL (type of school-regular college or university), HSINTOH (someone else provides online/virtual/cyber courses, for homeschoolers), HSINTOTH (online resources from other sources, for homeschoolers), HSINTOTHOS (online resources from other sources-specify [write-in], for homeschoolers), HSCOTH (materials from other sources), HSCOTHOS (materials from other sources-specify [write-in]), HSOTHERXOS (reason to homeschool-specify [write-in]), SOTHSC (someone else provides online/virtual/cyber courses, for non-homeschoolers). Write-in variables HSINTOTHOS and HSOTHERXOS were not imputed.

in computations of the reliability of the estimates produced from the dataset. More information on these flags is provided in section 6.3.

## **6.1 Imputation Methodology**

Four approaches to imputation were used in the NHES:2019: logic-based imputation, which was used as the first method of imputation whenever possible and for the majority of the missing data; unweighted sequential hot-deck imputation, which was used for the remaining unanswered items; weighted random imputation, which was only used to impute the NCES school ID (SID); and manual imputation, which was used in a very small number of cases for a small number of variables. Boundary variables (i.e., variables used to identify respondents considered similar enough to use as donors for imputation) were imputed using logic-based imputation and hot-deck imputation.

Each of these approaches is described in the following sections.

### **6.1.1 Logic-Based Imputation**

In logic-based imputation, items for which a respondent is missing data are imputed using other data available for the same respondent. Specifically, for NHES:2019, the imputed value was derived using data reported by the respondent in other topical items and data reported in the respondent's household screener.

Logic-based imputation was used for the following:

- To impute a value to missing gate questions based on the presence of “Yes” or valid data in follow-up items. Gate questions are defined as survey questions whose answers determine the subsequent routing of the respondent through the questionnaire. For example, respondents who answered “No” to item 88 in the ECPP (HDIFSPIEP) were instructed to skip item 89 and proceed to item 90. Item 89 was coded as a “valid skip” for those who answered “No” to item 88. If, however, item 88 was left blank but the respondent answered anything other than “Does not apply” to item 89, then item 88 was logically imputed as “Yes.”
- To impute “No” answers to grid items when only “Yes” answers have been marked. This common practice was used during the NHES:2019 due to the presence of a number of cases where respondents marked “Yes” for some grid items and left the others blank. Logic-based imputation is the first stage of imputation for these types of items.
- To impute a value to missing items for which data are available in the screener. For example, missing information about a sampled child's birth date, sex, and grade level was imputed using information collected in the screener (when available).

### 6.1.2 Hot-Deck Imputation

Unweighted sequential hot-deck imputation was used for most variables in the NHES. In this procedure, a nonmissing value for an item from one respondent was donated to a respondent with similar characteristics for whom the value for the item was missing. Boundary variables were used to identify respondents considered similar enough to group donors for imputation. All respondents were placed into homogeneous cells based on the values of the boundary variables. Within each cell, the respondents were matched to donors who were randomly selected for respondents with missing values. It is important to use the fewest number of boundary variables possible in order to generate enough similar donor cases for reliable imputation.

To maintain consistency with past procedures, the boundary and sort variables used in previous NHES cycles were considered for the final set of standard imputation variables for the NHES:2019. Total household income was used as a sort variable in the 2012 imputation and was thus considered a good boundary variable to use for 2019. The additional boundary variables chosen for 2019 were those that most closely matched the imputation results from 2016 and allowed for a sufficiently sized donor pool. These boundary variables were chosen because they represent characteristics of households or children that are likely to be associated with differences in item response propensities, such as the child's sex, total household income, and parent(s) educational attainment, or are key variables in skip patterns. For example, ALLGRADEX, a variable in the PFI that indicates the child's grade or grade equivalent, was used as a boundary variable for some variables, such as month and year of birth.

The preceding paragraph indicated that the NHES:2016 boundary and sort variables were considered for use in NHES:2019, however the boundary variables used in the NHES:2019 PFI and ECPP surveys were different from those used in NHES:2016 and were chosen to ensure a sufficient donor pool. These variables are the following:

- CSEX (boundary)—sex of the sampled child
- TINC (boundary)—a derived variable that indicates total household income
- PEDU (boundary)—a derived variable that indicates the highest education level attained by the first parent in the household

The boundary variables listed above were either variables used as part of the final Interview Status Recode (ISR) classification (CSEX) or derived from variables used as part of the final ISR classification (TINC, PEDU). The variable TINC is derived from TTLHHINC (total household income). The variable PEDU is derived from PIEDUC (the first parent's highest level of education). Please see table 4-4 which identifies which variables were used for final ISR.

The variables TINC and PEDU were collapsed for imputation purposes. TINC was collapsed into four categories: “No more than \$30,000,” “More than \$30,000 but no more than \$60,000,” “More than \$60,000 but no more than \$150,000,” and more than \$150,000.” Similarly, PEDU was also collapsed into four categories: “high school diploma or equivalent (GED), or less,” “some college, including vocational/technical,” “bachelor’s or master’s degree,” and “doctorate or professional degree beyond bachelor’s degree.”

In cases where an item succeeded a gate question, the gate question was used as a boundary variable to ensure that all possible donors had valid (i.e., no “valid skip”) values. For certain variables, additional boundary variables were used to ensure consistency within a case. These variables were related to the child’s and parent’s age at the time of certain events. In these cases, we used the age of the child or parent at the time of interview as a sort variable. These additional sort variables are listed below, followed by the variables for which they were used to sort donors:

- Child’s age:
  - Age when child moved to the United States
  - Age when child began relative care
  - Age when child began nonrelative care
  - Age when child began center-based care
- Parent’s age:
  - Age when parent moved to the United States

After values had been imputed for all observations with missing values, the distribution of the item prior to imputation (i.e., the respondents’ distribution) was compared to the post-imputation distributions of the imputed values alone and of the imputed values together with the observed values. For most items, the comparison revealed similar item distributions both before and after imputation.<sup>41</sup> This comparison is an important step in assessing the potential impact of item nonresponse bias and ensuring that the imputation procedure reduces this bias, particularly for items with relatively low response rates (less than 85 percent).<sup>42</sup>

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<sup>41</sup> Generally, any impact outside of 1 or 2 percentage points was investigated further, based on the discretion of the analyst.

<sup>42</sup> For the PFI, these variables were EDCCAT, EDCREL, EDCPRI, EDCINTK12, EDCINTCOL, EDCCOL, HSWHOOSX, ONLNTHOS, HSINTPUB, HSINTPRI, HSINTCOL, HSINTK12, HSINTIND, HSINTOH, HSINTOTH, HSINTOTHOS, HSCOTH, HSCOTHOS, HSOTHERXOS, SPRIVT, SUNIVSCH, SCYBER, SCOMPANY, SOTHRSCH, STUTR, SOTHSCH, and SOTHSCHOS. For the ECPP, these variables were RCSTRTY, RCSTRTM, NCSTRTY, CPUNITOS, CPPLACEXOS, HDCHDCARE2, RELATIONOS, and LRNCOMP.

### **6.1.3 Manual Imputation**

For some items, missing values were imputed manually rather than by using either the logic or hot-deck procedure. In the NHES:2019 ECPP, manual imputation was performed in one instance: To impute the amount a household pays for care by a non-relative (NCCOST and NCUNIT), the donor must have regularly scheduled care from a non-relative (NCWEEK=1), have a fee for care by a non-relative (NCFEE=1), and have equal value of days and hours a week (NCDAYS and NCHRS) the child receives non-relative care. One missing case did not have any donors that met these requirements. A donor with the closest hours a week child receives non-relative care while satisfying other requirements was picked for the missing case.

In the NHES:2019 PFI, manual imputation was performed when a lack of donors prohibited the incorporation of the necessary boundary variables to ensure consistency between items. This occurred in two instances. In the first instance, the most important reason for selecting online, virtual, or cyber schooling (MOSTIMPT) was randomly chosen from the respondent's selected reasons (ADVCCRSE-ONLINEOTH). In the second instance, a donor could not be found for the item pertaining to which family member responded to the questionnaire (RELATION) for a household which listed two fathers and no mother in the household composition variables (HHBROXSX-HHONRELSX). Father was imputed for RELATION for this case.

Manual imputation also was used to correct for inconsistent values following post-imputation data editing. After imputation, edit programs were run to ensure that the imputed responses did not violate edit rules. When violations or inconsistencies were detected, manual imputation was used to re-impute the response. Typically, a modal value was imputed. In some cases, the overall mode was imputed, and in other cases, a modal value for a subgroup was imputed.

### **6.1.4 Imputation of School Identification Number (School ID)**

The procedures used to assign the school identification variable—the NCES school identification number, from the 2017-18 Common Core of Data (CCD) or 2017-18 Private School Universe Survey (PSS)<sup>43</sup>—to respondents based on write-in information (school name, address, etc.) are discussed in Chapter 4. Data Processing. For cases where a school ID could not be determined, either because the write-in information was not sufficient or because there was no write-in information at all, an imputation procedure similar to random weighted imputation was used to assign a school ID from one of the 25 schools presented in the web tool or the 15 schools printed on the respondent's questionnaire.

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<sup>43</sup> In a small number of cases, the respondent wrote in a school name that could not be matched to the 2017-18 CCD or 2017-18 PSS but could be matched to the 2016-17 CCD or 2015-16 PSS. In these instances, the 2016-17 CCD and 2015-16 PSS data were used to derive school-level variables.

The schools presented in the web tool were determined by the longitude and latitude of the household address and other information included within the PFI questionnaire, such as whether the child attended a public or private school and the child's grade level. The list of schools presented to the respondent in the web instrument was drawn from the 2015-16 CCD and the 2015-16 PSS.

The schools printed on each paper questionnaire were determined by the zip code of the sampled address and the age of the sampled child. The schools were ordered starting with the school that was the closest to the zip code centroid of the sampled address. For the paper questionnaires, the list was drawn from the 2013-14 CCD and the 2013-14 PSS.

The probability of each school being selected for imputation was determined by the frequency distribution of valid cases across the list of schools. For example, if 47 percent of respondents selected the first school on the list, and 15 percent selected the second school, the probability of selection for those schools was set proportionally. The survey variables EDCPUB, EDCCAT, EDCREL, and EDCPRI, which indicate whether the sampled child attends private or public school, were used to remove schools from the list that did not match the survey data. For example, if EDCPUB indicated the sampled child was in public school and EDCAT, EDREL, and EDCPRI were marked "no," any private schools in the list were removed during imputation.

Additional variables were used (HSENRL, EINTNET, DISTASSI, and SCHLMOSTHRS) for cases that did not select "yes" to any of EDCPUB, EDCCAT, EDCREL, or EDCPRI to determine if they were enrolled in a public or private school. If a respondent selected "no" for HSENRL, indicating that they were exclusively homeschooled, then they were marked as a valid skip and ineligible for imputation. For paper cases, a routing variable not released in the data file was used to inform imputation. If they had selected either a public or private school, they were imputed with a public or private school, respectively. If DISTASSI indicated that the respondent was in a district-assigned school, then a public school was imputed. Finally, if EINTNET indicated that the respondent was exclusively an online student and they did not select a school, then school ID was marked as a valid skip and was not imputed. There were 77 schools that were not imputed due to the lack of location identifiers for virtual schools or a lack of information in the other variables used to derive the eligible school list. The 77 cases with missing school information are marked as a valid skip for the school ID variable in the PFI file.

In 2019, an error in the school lookup file in the web instrument occurred during the beginning of data collection, affecting 990 cases (8.3 percent of the web PFI cases and 6 percent of all PFI cases). The error caused the truncation of some selected school IDs by 6 digits in the web output. The error only occurred if the respondent selected a public school (listed in the CCD file). To impute schools for the cases with truncated school ID numbers, a series of steps was followed systematically. An initial

operation removed schools from the generated list that did not match the first 6 digits of the selected ID. If only one school remained, the truncated school ID was replaced with the selected school ID. If more than one school ID remained, these cases were marked for imputation. Schools with truncated IDs were imputed the same way as schools without truncated IDs using only the remaining school IDs that matched the truncated ID. For more information on the truncated school IDs, see Chapter 4. Data Processing.

### **6.1.5 Imputation of Boundary Variables**

For some respondents, the boundary variables CSEX (child sex), TTLHHINC (total household income), and OWNRENTHB (home ownership status) were missing and were imputed using a modified version of the hot-deck procedure described above. The income and home ownership status provided by the sample vendor in the sample frame were used as boundary variables for these cases.

### **6.1.6 Imputation of Conditions Interfering With Child Attending Care**

In 2019, an error occurred in the web instrument that erroneously skipped a small number of cases out of an applicable item. Item 92 (HDCHDCARE) asks parents of children with a disability or at risk of significant delay, “If your child goes to a care arrangement outside of your home, does this child’s condition interfere with his or her ability to attend child care?” The web instrument erroneously skipped 224 cases receiving care outside of the home out of this question. These cases were imputed with a valid category using hot-deck imputation.

## **6.2 Post-imputation Processing**

After the imputation was completed, the edit programs described in chapter 4 were run on the data to ensure that the imputed responses did not violate skip patterns or edit rules. If any violations occurred, the imputation program was adjusted and the imputation was rerun, or if only a few cases were affected, they were manually imputed. For some items, specific edit programs were run immediately after imputation. For example, if a filter question was imputed with a value that made follow-up questions inapplicable, these edits set the subsequent items to “-1” (not applicable) to ensure that they were not imputed. For example, RCNOW in ECPP indicated whether a child was in a relative care arrangement. If it was imputed as “no,” then the follow-up questions about characteristics of the relative care arrangement were not applicable and the responses to these items were set to “-1”.

## **6.3 Imputation Flags**

For each data item for which any values were imputed, an imputation flag variable was created. These flags are named F\_<variable>. If the response for the item was not imputed, then the imputation flag was set equal to 0. If the response was imputed, then the flag was set to 1, 2, 3, or 4. The value of the

imputation flag indicates the specific procedure used to impute the missing value. The imputation flag was set to 1 if the missing value was imputed using logic-based imputation. If an item was imputed using weighted random imputation (which only occurred for F\_SID), then the flag was set to 2. The imputation flag was set to 3 for cases that were imputed using the standard hot-deck approach. The imputation flag was set to 4 for cases that were imputed manually. Variables that were set to “valid skip” based on responses (reported or imputed) to gate items have an imputation flag value of -1.

The imputation flags were created to enable users to identify imputed values. Users can employ the imputation flag to delete the imputed values, use alternative imputation procedures, or account for the imputation in computations of the reliability of the estimates produced from the dataset. For example, some users might wish to analyze the data with the missing values rather than the imputed values. If the imputation flag corresponding to the variable is equal to 1, 2, 3, or 4, then the user can replace the imputed response with a missing value to accomplish this goal. This method also can be used to replace the imputed value with a value imputed by a user-defined imputation approach.

Imputation can affect the precision of survey estimates, especially when large numbers of cases are imputed for a given measure (this is generally not the case in NHES surveys; see chapter 8, which includes an item nonresponse bias analysis). If the user wishes to account for the fact that some of the data were imputed when computing sampling errors for the estimates, then the missing values can be imputed using multiple imputation methods or flagged so that variance procedures that reflect the imputation variance can be used.

## Chapter 7. Weighting and Standard Error Calculation

### 7.1 Weighting Methodology

The objective of the National Household Education Surveys Program of 2019 (NHES:2019) is to make inferences about the entire civilian, noninstitutionalized population for the two target populations described below. Weighting is necessary to account for differential probabilities of selection and to reduce potential bias owing to nonresponse and differential coverage of subpopulations. Although these weighting adjustments reduce bias, they increase the variances of survey estimates when applied.<sup>44</sup> The weighting methodology developed for the NHES:2019 carefully balanced the reductions in bias against the potential increases in variance.

The target populations for the NHES:2019 surveys are:

- the U.S. noninstitutionalized population age 6 or younger and not yet enrolled in kindergarten (for the Early Childhood Program Participation, or ECPP, survey); and
- the U.S. noninstitutionalized population age 20 or younger and enrolled in kindergarten through 12th grade or being homeschooled for the equivalent grades (for the Parent and Family Involvement in Education, or PFI, survey).

The weights were constrained such that the distribution of the NHES ECPP and PFI estimates matched selected population estimates from the 2018 American Community Survey (ACS). Although NHES used Current Population Survey (CPS) estimates for control totals in administrations prior to 2012, the ACS was used beginning with NHES:2012 because it has a larger sample size than the CPS, allowing for more accurate control totals and greater precision in the NHES person-level estimates.

The following sections describe the weighting and variance estimation methodologies used for the NHES:2019. Section 7.2 below describes the computation of household-level weights used in computing person-level weights. Sections 7.3 and 7.4 then describe the computation of the person-level weights used in analyzing the survey data and the procedures used for computing sampling errors, respectively.

### 7.2 Household-Level Weights

The NHES:2019 had two sequential phases: in the first phase (called the “screener”), households were asked several questions to determine whether they had any eligible children; in the second phase, households with eligible children were asked to complete more in-depth topical questionnaires. (These phases are described in chapter 2.) Information from the first phase was used to create the household-level weights. Because the NHES:2019 is primarily concerned with information about eligible children,

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<sup>44</sup> See Kish (1965) for a discussion of these aspects of weighting.

the household-level weights were calculated specifically as a basis for computing the person-level weights.

The household base weight (*HBW<sub>i</sub>*) was calculated first to account for the differential sampling of addresses based on the race/ethnicity stratum of the frame. The household-level base weight was then adjusted for screener nonresponse using the screener noninterview adjustment factor (*SNI AF<sub>i</sub>*). The procedures for computing the household-level weights are discussed next.

The first step was to compute a base weight for each sample address. For NHES:2019, the addresses were first stratified into three race/ethnicity strata to facilitate the oversampling of Black and Hispanic households. A sample of 225,500 addresses was drawn first, which was then subsampled to achieve the final sample of 205,000 addresses (the remaining addresses were held in reserve to protect respondent confidentiality). Each address’s overall probability of selection was therefore the product of two probabilities: the probability of being selected for the initial sample and the probability of being subsampled conditional on selection for the initial sample. Refer to chapter 2 for full details on the sampling methodology, including stratification and sorting variables. The base weight, as shown in table 7-1, is the reciprocal of the address’s overall probability of selection (the sampling fraction).

**Table 7-1. Sampling fractions for screener sample, and household-level base weights, by stratum: NHES:2019**

Stratum	Sampling fraction for initial sample	Subsampling fraction for final screener sample	Household-level base weight
(1) 25 percent or more Black	45,100 / 19,795,756	41,000 / 45,098	482.80
(2) 40 percent or more Hispanic	33,825 / 13,500,843	30,750 / 33,817	438.95
(3) Other	146,575 / 97,756,438	133,250 / 146,555	733.53

NOTE: The household-level base weight is the product of the inverse sampling fraction for the initial sample and the inverse subsampling fraction for the final screener sample. The numerator of the initial sampling fraction differs from the denominator of the subsampling fraction because 30 addresses were flagged as invalid and removed from the initial sample prior to subsampling.

The second step was to calculate the screener phase household nonresponse adjustment. Each sampled address was classified as a respondent (*R*), a nonrespondent (*NR*), an ineligible case (*I*), or a case of unknown eligibility (*U*).

Ineligible cases (*I*) were those returned by the postmaster with one of the following statuses: unit is vacant, undeliverable as addressed (*UAA*), insufficient address, unclaimed, no such street, no such street number, illegible address, attempted and not known, and no mail receptacle. The following types of cases were classified as ineligible on the basis of the postmaster’s information: box closed–no order; forwarding order has expired; deceased; moved, left no address; and moved out of U.S.–no forwarding address. Although the latter ineligibility types are usually thought of as pertaining to individuals and NHES:2019 questionnaires were not addressed to specific individuals, these types were assigned by postal workers using United States Postal Service procedures. Even though these dispositions did not exactly apply to households, it was decided early in the NHES planning to carry over these dispositions

into the NHES processing. A small number of addresses were also found to be out of scope and were classified as ineligible: for example, an address would be classified as out of scope if information written on the screener form indicated that it corresponded to a business rather than a residence. Therefore, the term *eligible* at the screener phase refers to the capability of a household to respond to the screener questionnaire, such as the address belonging to an occupied, residential household.<sup>45</sup>

The unknown eligibility cases (U) are different from the nonrespondent cases (NR) in that no information about the validity of the address was obtained for unknown eligibility cases—no form was returned, and it is not known whether the address was eligible. For cases classified as nonrespondents at the screener level, some type of response was received, such as a blank form or a note that the household would not participate. Screener nonrespondents also included cases that opened the web screener instrument but did not complete any items; cases that began the web screener but broke off prior to undergoing topical sampling; and cases that completed a web or paper screener after May 16, 2019, which was the cutoff for the screener data collection.

To adjust the weights for screener nonresponse, the base weights of the nonrespondent cases and a portion of the unknown eligible cases were distributed to the base weights of the respondent cases within a nonresponse adjustment cell. Chi-square automatic interaction detection (CHAID) analysis was used to identify the characteristics most associated with screener nonresponse, which were then used to define the adjustment cells.<sup>46</sup> Cases of unknown eligibility within each cell were assumed to be eligible at the same rate as the known eligibility cases within the same cell. The proportion of eligible cases ( $R + NR$ ) to total cases identified as eligible or ineligible ( $T - U$ ) (where  $T$  is the weighted size of the nonresponse adjustment cell) is referred to as  $ee$  in the response rate formula from NCES statistical standard 1-3-2 and the American Association for Public Opinion Research (AAPOR) Response Rate 3.

The characteristics used to form the adjustment cells had to be available for both respondents and nonrespondents. These variables and their definitions are listed in table 7-2. They include variables available in the vendor's frame, experimental treatment flags, and block group-level estimates linked to the sample from the Census Bureau's Planning Database (PDB).<sup>47</sup>

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<sup>45</sup> Cases were classified as ineligible only if one or more of the mailings was returned with one of the undeliverable or out-of-scope status codes noted here and none of the other mailings was returned as a respondent or nonrespondent.

<sup>46</sup> CHAID is a categorical search algorithm that identifies characteristics associated with response propensity.

<sup>47</sup> The Planning Database (PDB) assembles a range of housing, demographic, socioeconomic, and Census operational data that can be used for survey planning. Data are provided at both the Census block group and tract levels of geography. The PDB uses selected Census and selected American Community Survey (ACS) estimates. Information about the PDB can be found at <https://www.census.gov/topics/research/guidance/planning-databases.html>.

**Table 7-2. Independent variables for NHES:2019 household-level CHAID analysis**

Variable	Definition	Response categories	Source	Selected <sup>1</sup>
Address vacancy status	Whether the address is vacant	1=vacant; 2=not vacant	Sampling frame	No
Mailing address type	Whether the address is a street address, P.O. box address, high-rise building address, or rural-route address	1=street; 2=P.O. box; 3=high rise; 4=rural route	Sampling frame	No
Drop point	Whether the address is a single postal delivery point for multiple housing units	1=drop point; 2=not a drop point	Sampling frame	No
Seasonal address	Whether the address is seasonal	1=seasonal; 2=not seasonal; 3=educational seasonal	Sampling frame	No
Dwelling type	Whether the address is a single-family or multi-unit structure	0=dwelling type missing from frame; 1=single-family; 2=multi-unit	Sampling frame	Yes
Home tenure	Whether the address was owned or rented by the household	0=tenure information missing from frame; 1=owned; 2=rented	Sampling frame	Yes
Educational attainment	Highest educational attainment of the head of household	0=educational information missing in sampling frame; 1=High school credential; 2=Some college; 3=Bachelor's degree; 4=Graduate degree; 5= Less than high school credential	Sampling frame	Yes
Race/ethnicity	Race or ethnicity of the head of household	0=race information missing in sampling frame; 1=White; 2=Black; 3=Hispanic; 4=Asian or Pacific Islander; 5=Other	Sampling frame	Yes
Marital status	Marital status of the head of household	0=marital status information missing in sampling frame; 1=single; 2=married	Sampling frame	Yes
Age	Age of the head of household	0=age information missing in sampling frame; 1=0-17 years; 2=18-24 years; 3=25-34 years; 4=35-44 years; 5=45-54 years; 6 = 55-64 years; 7=65+ years	Sampling frame	Yes
Gender	Gender of the head of household	0 = gender information missing in sampling frame; 1=male; 2=female	Sampling frame	No

See notes at end of table.

**Table 7-2. Independent variables for NHES:2019 household-level CHAID analysis—Continued**

Variable	Definition	Response categories	Source	Selected <sup>1</sup>
Phone number	Existence of a telephone number in the sampling frame for the household	0=no phone number exists in sampling frame; 1=phone number exists	Sampling frame	No
Income	Household income	0=income information missing from sampling frame; 1=under \$50,000; 2=\$50,000 to \$74,999; 3=\$75,000 to \$99,999; 4=\$100,000 to \$124,999; 5=\$125,000 or higher	Sampling frame	Yes
Number of adults	Number of adults in the household	0=information missing in sampling frame; 1=1 adult in the household; 2=2 adults in the household; ...	Sampling frame	Yes
Number of children	Number of children in the household	0=no children or information missing in sampling frame; 1=1 child in the household; 2=2 children in the household; ...	Sampling frame	No
Language	Primary language spoken in household	0=language information missing in sampling frame; 1=English; 2=Spanish; 3=other non-English	Sampling frame	No
Country of origin	Household country or territory of origin	0=country of origin missing in sampling frame; 1=U.S.; 2=Mexico; 3=Puerto Rico; 4=other	Sampling frame	No
ECPP child flag	Household has at least one child in ECPP age range	0=no or missing from frame; 1=yes	Sampling frame	No
PFI child flag	Household has at least one child in PFI age range	0=no or missing from frame; 1=yes	Sampling frame	No

See notes at end of table.

**Table 7-2. Independent variables for NHES:2019 household-level CHAID analysis—Continued**

Variable	Definition	Response categories	Source	Selected <sup>1</sup>
Treatment group flag	Assigned NHES:2019 treatment group	0=baseline; 1=targeted mailing; 2=opt-out; 3=no advance and FedEx 2 <sup>nd</sup> ; 4=advance and FedEx 2 <sup>nd</sup> ; 5=campaign and FedEx 2 <sup>nd</sup> ; 6=no advance and FedEx 4 <sup>th</sup> ; 7=advance and FedEx 4 <sup>th</sup> ; 8=campaign and FedEx 4 <sup>th</sup> ; 9=no advance and modeled FedEx; 10=advance and modeled FedEx; 11=campaign and modeled FedEx; 12=\$10 choice plus; 13=\$20 choice plus; 14=modeled mode; 15=paper-only	Experimental condition	Yes
Low Response Score <sup>2,3</sup>	ACS Low Response Score (LRS) (categorized into quartiles)	0=LRS missing for block group; 1=1 <sup>st</sup> quartile; 2=2 <sup>nd</sup> quartile; 3=3 <sup>rd</sup> quartile; 4=4 <sup>th</sup> quartile	Census Planning Database <sup>4</sup>	Yes
Percent without high school diploma <sup>3</sup>	ACS percent of persons in block group without a high school diploma (categorized into quartiles)	0=missing for block group; 1=1 <sup>st</sup> quartile; 2=2 <sup>nd</sup> quartile; 3=3 <sup>rd</sup> quartile; 4=4 <sup>th</sup> quartile	Census Planning Database <sup>4</sup>	Yes
Percent Black <sup>3</sup>	ACS percent of persons in block group who are Black (categorized into quartiles)	0=missing for block group; 1=1 <sup>st</sup> quartile; 2=2 <sup>nd</sup> quartile; 3=3 <sup>rd</sup> quartile; 4=4 <sup>th</sup> quartile	Census Planning Database <sup>4</sup>	Yes

<sup>1</sup>Indicates whether the specified variable was selected by the NHES:2019 screener CHAID analysis.

<sup>2</sup>The Census Low Response Score is a derived variable that identifies block groups with characteristics associated with low mail return rates to the 2010 Decennial Census. A higher Low Response Score corresponds to a lower expected mail return rate.

<sup>3</sup>The Census Low Response Score and ACS percentage variables were treated as nominal variables in the CHAID procedure, due to the presence of missing values for a small number of cases.

<sup>4</sup>The Planning Database (PDB) assembles a range of housing, demographic, socioeconomic, and Census operational data that can be used for survey planning. Data are provided at both the Census block group and tract levels of geography. The PDB uses selected Census and selected American Community Survey (ACS) estimates. Information about the PDB can be found at <https://www.census.gov/topics/research/guidance/planning-databases.html>.

NOTE: ACS = American Community Survey. LRS = low response score. PFI = Parent and Family Involvement in Education. ECPP = Early Childhood Program Participation.

The screener noninterview adjustment factor,  $SNIAF_{j(c)}$ , applied to each responding household  $j$  in adjustment cell  $c$ , is

$$SNIAF_j = \frac{\sum_{j \in R_c} HBW_j + \sum_{j \in NR_c} HBW_j + ee_c \sum_{j \in U_c} HBW_j}{\sum_{j \in R_c} HBW_j}$$

$$\text{where } ee_c = \frac{\sum_{j \in R_c} HBW_j + \sum_{j \in NR_c} HBW_j}{\sum_{j \in T_c} HBW_j - \sum_{j \in U_c} HBW_j}$$

The screener nonresponse adjustment cells and response rates within the cells are shown in appendix D.

The final household-level weight for household  $j$ ,  $HHW_j$ , is given by

$$HHW_j = HBW_j * SNIAF_j$$

where  $HBW_j$  is the household-level base weight for household  $j$ .

### 7.3 Person-Level Weights for the ECPP and PFI

A sampling algorithm was used to select one child from each household, based on information collected in the screener questionnaire from the household member who responded to the screener. The eligibility of the sampled child was verified or updated when the parent/guardian who knew about the child responded to the ECPP or PFI questionnaire or otherwise provided updated eligibility information to the Census Bureau. A total of 31 cases had their eligibility updated: 21 from the ECPP to the PFI, 1 from the PFI to the ECPP, 4 from the ECPP to ineligible, and 5 from the PFI to ineligible.<sup>48</sup> For cases whose eligibility was updated at the topical phase, the original probability of selection from the screener phase was used to calculate person-level weights. If the weights had been modified to reflect the hypothetical probability of sampling for the survey for which the case should have been sampled, they would no longer reflect the case's actual sampling probability and would therefore lead to biased estimates.

The household-level weight was used as the base weight for each of the person-level (ECPP and PFI) weights. The person-level weight for sampled person  $k$  in household  $j$ ,  $FEWT_{jk}$  for the ECPP survey and  $FPWT_{jk}$  for the PFI survey, is the product of the final household weight and five weight adjustment factors:

- the weight associated with sampling the person's domain (ECPP, PFI-Enrolled, or PFI-Homeschooled) in the given household,  $A_{jk}$ ;

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<sup>48</sup> These 31 cases are accounted for as follows. One case had its eligibility updated from ECPP to PFI because, after being sampled for the ECPP, the household contacted the Census Bureau and provided information indicating that the sampled child was actually eligible for the PFI. An additional 20 cases had their eligibility reclassified from ECPP to PFI, and one had its eligibility reclassified from PFI to ECPP, because the grade or age reported in the topical questionnaire was outside the eligible range for the survey that was completed but within the eligible range for the other survey. Seven cases were reclassified as ineligible because the age and/or grade reported in the survey that was completed was outside the eligible range for either survey. Finally, two cases were reclassified as ineligible based on information provided to the Census Bureau.

- the weight associated with sampling the person from among all eligible persons in the given domain in the household,  $B_{jk}$ ;
- the weight associated with sampling a child in a joint custody arrangement at both parents' addresses,  $C_{jk}$ ;
- the weight associated with the topical questionnaire (ECP or PFI) unit nonresponse,  $NIAF_k$  (noninterview adjustment factor); and
- the adjustment associated with raking the person-level weights to Census Bureau estimates of the number of persons in the target population,  $RAF_k$  (ratio adjustment factor).

For every completed household screener on which at least one eligible child was reported, every eligible child was classified into one of three mutually exclusive domains: ECP-eligible children (the ECP domain); PFI-eligible children enrolled in grades K-12 (the PFI-Enrolled domain); and PFI-eligible children homeschooled for the equivalent of grades K-12 (the PFI-Homeschooled domain).<sup>49</sup> The topical sampling procedure then selected one of these domains to be the subject of the topical survey.

The probability with which each domain was selected depended on the combination of domains for which the household had eligible children. If a household only had children in a single domain, then that domain was automatically selected. Otherwise, if a household had children in multiple domains, randomly predesignated sampling flags were used to select one of them. The flags were applied sequentially, as follows. First, if the household had homeschooled children eligible for the PFI, a preassigned flag determined whether the PFI-Homeschooled domain would be selected (with 0.8 probability) or a different domain would be selected (with 0.2 probability). Second, if the household had no PFI-homeschooled children, or if the household had homeschooled PFI children but this domain was not selected in the prior step, the second flag determined whether the PFI-Enrolled domain would be selected (with 0.3 probability) or the ECP domain would be selected (with 0.7 probability). This second flag was used only if the household had children in both the ECP and PFI-Enrolled domains and if the PFI-Homeschooled domain had not already been selected. The differential sampling probabilities were chosen to ensure sufficient sample sizes of PFI-homeschooled children and ECP children, both of which are relatively small populations.

Accordingly, the first step in developing the person-level weights was to account for the probability of sampling the person's domain (i.e., ECP, PFI-Enrolled, or PFI-Homeschooled) in the given household. The weighting factor  $A_{jk}$  was used to adjust for the probability with which the chosen domain was

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<sup>49</sup> Children sampled from the PFI-Enrolled and PFI-Homeschooled domains ultimately received the same topical questionnaire; however, enrolled and homeschooled children were treated as separate domains for sampling purposes to allow homeschooled children to be oversampled for the PFI.

selected.  $A_{jk}$  is equal to 1 for households with children in only one domain because, in such households, that domain was always selected. If the household had children eligible for multiple domains,  $A_{jk}$  was equal to the inverse of the probability with which the chosen domain was selected. Table 7-3 shows  $A_{jk}$  for each of the three possible domains<sup>50</sup> based on the combination of domains for which the household had eligible members.<sup>51</sup>

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<sup>50</sup> For topical respondents that were later determined (based on topical data) to be members of a different domain than was originally selected,  $A_{jk}$  was determined by the originally selected domain in order to preserve the original probability of selection.

<sup>51</sup> During data review, a programming error was discovered in the web version of the NHES:2019 screener that caused a total of 67 sampled children to have a different probability of selection than was originally expected given their households' domain combinations. For these 67 cases,  $A_{jk}$  was manually updated to reflect the actual probability of selection implied by the sampling logic that was implemented by the web screener. This adjustment allowed unbiased estimates to be obtained despite the programming error.

**Table 7-3. Domain adjustment factor ( $A_{jk}$ ) for person-level weighting, by domains present in household and selected domain**

Domains present in household	Selected domain		
	PFI-Enrolled	PFI-Homeschooled	ECPP
PFI-Enrolled only	1	†	†
PFI-Enrolled and PFI-Homeschooled	5	5/4	†
PFI-Enrolled and ECPP	10/3	†	10/7
PFI-Enrolled, PFI-Homeschooled, and ECPP	50/3	5/4	50/7
PFI-Homeschooled only	†	1	†
PFI-Homeschooled and ECPP	†	5/4	5
ECPP only	†	†	1
None	†	†	†

†Not applicable; the specified domain cannot be selected from households with the specified composition.

NOTE: ECPP = Early Childhood Program Participation. PFI-Enrolled = Parent and Family Involvement in Education-Enrolled. PFI- Homeschooled = Parent and Family Involvement in Education-Homeschooled.

After a domain was selected, a single child within that domain was randomly selected to be the subject of the topical survey. Accordingly, the second adjustment factor  $B_{jk}$ , which accounted for the probability of sampling child  $k$  from among all eligible children (as reported by the respondent) in the selected domain in household  $j$ , is defined as

$$B_{jk} = N_{jk}$$

where  $N_{jk}$  is the number of eligible children in household  $j$  in the same sampling domain as child  $k$ .<sup>52</sup> Note that, if only a single child was reported in the selected domain, this child was selected with certainty and thus  $N_{jk}$  is equal to 1.

The third step was an adjustment that accounted for the possibility that a child in a joint custody arrangement could be sampled at both parents' addresses. For ECPP and PFI respondents who reported that the sampled child usually lives at another address or spends an equal amount of time at the sampled address and a different address, the weight adjustment was

$$C_{jk} = 1/2$$

$C_{jk}$  was equal to 1 for all other ECPP and PFI respondents. For each sampled child  $k$  in household  $j$ , the person-level base weight (sometimes referred to as the unadjusted person-level weight),  $UPW_{jk}$ , can be written as the product of the final household weight and the adjustments for within-household sampling. That is, for sampled child  $k$  in household  $j$ , the base weight is

$$UPW_{jk} = HHW_j * A_{jk} * B_{jk} * C_{jk}$$

The fourth step was to adjust for persons who did not respond to the topical questionnaire. Each topical questionnaire case was classified as either a respondent ( $R$ ) or a nonrespondent ( $NR$ ), depending on whether or not the topical questionnaire was completed for the sampled person. The definition of

<sup>52</sup> For cases that switched from one topical survey to another,  $N_{jk}$  was the count of persons in the domain to which the case was originally assigned in order to preserve the original probability of selection.

nonrespondent cases differed between the screener and topical levels. At the topical level, nonrespondents included both refusal cases and cases that did not return the topical questionnaire. Topical nonrespondents also included cases that did not complete a sufficient number of critical items (refer to the description of Interview Status Recoding in chapter 4 for a list of the critical items for each survey) or that completed the topical survey after September 3, 2019, the cutoff for topical data collection.

As described previously, cases that, based on information provided in the topical questionnaire, appeared to be eligible for a different topical survey than the one they completed were treated as nonrespondents to the survey for which they should have been sampled. There were no cases of unknown eligibility at the topical phase because eligibility was determined based on the completed screener questionnaire. A small number of cases were classified as ineligible at the topical phase. These included cases that were assigned an out-of-scope outcome code by the Census Bureau<sup>53</sup> and cases that were later determined (based on information provided in the questionnaire or in follow-up communications with the Census Bureau) to be eligible neither for the survey to which they were initially assigned nor for the other survey.

The unadjusted person-level weights (*UPW*) of the nonrespondents were distributed to the unadjusted person-level weights of the respondents within a nonresponse adjustment cell. The characteristics used to form the adjustment cells were those for which information was available for both respondents and nonrespondents. The adjustment cells were determined by a separate CHAID analysis for each topical survey. The analysis identified combinations of characteristics (taken from the sample frame and the screener) associated with response propensity. For the ECPP and PFI, the variables used are listed in table 7-4.

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<sup>53</sup> The out-of-scope outcome code was assigned at the topical phase if a case completed a screener and was sent a topical questionnaire but was then determined (e.g., on the basis of a call to the questionnaire assistance hotline) to be a nonresidential address (e.g., a business or a fraternity house).

**Table 7-4. Independent variables for NHES:2019 person-level CHAID analysis**

Variable <sup>1</sup>	Definition	Response categories	Source	Selected <sup>2</sup>
Stratum	Race/ethnicity stratum	1 = Black stratum; 2 = Hispanic stratum; 3 = Other stratum	Sampling frame	Yes
Topical mode	Mode of initial topical contact	1 = proceeded directly from web or TQA screener to web topical; 2 = completed web or TQA screener, received web topical mailing; 3 = offered web screener, completed paper screener, and received paper topical; 4 = not offered web screener and completed paper screener	Operational condition	Yes
Topical noncontingent incentive <sup>3</sup>	Noncontingent incentive amount at first topical mailing	0 = no topical mailings received; 5 = \$5; 15 = \$15	Operational condition	Yes
Topical contingent incentive	Contingent incentive amount offered for web topical completion	1 = no contingent incentive, 2 = \$10; 3 = \$20	Experimental condition	No
ECPP children	Number of ECPP-eligible children in the household	0 = no children; 1 = 1 child; ...; 5 = 5 or more children	Screener data	Yes
PFI children	Number of PFI-eligible children in the household	0 = no children; 1 = 1 child; ...; 5 = 5 children	Screener data	Yes
Ineligible or unknown	Number of children reported in the screener who are ineligible for any topical survey or for whom eligibility status cannot be determined due to missing or inconsistent information	0 = no children; 1 = 1 child; 2 = 2 or more children	Screener data	Yes
Sex	Sex of sampled child	1 = male; 2 = female; 3 = not reported	Screener data	Yes
Enrollment	Reported enrollment of sampled child	1 = homeschooled, 2 = public/private school or preschool; 3 = college; 4 = not in school; 5 = not reported	Screener data	Yes
Grade	Reported grade of sampled child	1 = pre-K; 2 = K; 3 = 1-2; 4 = 3-4; 5 = 5-6; 6 = 7-8; 7 = 9-10; 8 = 11-12; 9 = missing, college, or none	Screener data	No
Age (ECPP)	Age of sampled child (ECPP categories)	0 = 0 years; 1 = 1 year; ...; 5 = 5 or 6 years; 6 = not reported	Screener data	Yes
Age (PFI)	Age of sampled child (PFI categories)	1 = 0-4 years; 2 = 5-6 years; 3 = 7-8 years; 4 = 9-10 years; 5 = 11-12 years; 6 = 13-14 years; 7 = 15-16 years; 8 = 17-18 years; 9 = 19-20 years; 10 = not reported	Screener data	Yes

<sup>1</sup>Parentheses indicate the topical survey for which the variable was used in the CHAID analysis. If no survey is listed in parentheses, the variable was used in the CHAID analysis for both topical surveys.

<sup>2</sup>Indicates whether the specified variable was selected by the NHES:2019 topical CHAID analysis for use in defining the nonresponse adjustment cells for one or more topical surveys.

<sup>3</sup>Households that completed a web screener and proceeded directly to the web topical survey did not receive a topical incentive. All other households received \$5 with the first topical mailing, unless they responded to the screener after the third or fourth mailing wave, in which case they received \$15 with the first topical mailing.

NOTE: CHAID = chi-square automatic interaction detection. ECPP = Early Childhood Program Participation. PFI = Parent and Family Involvement in Education. TQA = toll-free questionnaire assistance.

Appendixes E and F show the nonresponse adjustment cells and response rates within the cells for the ECPP and PFI, respectively. The nonresponse adjustment factor,  $NIAF_k$ , to be applied to each respondent  $k$  in adjustment cell  $c$  is as follows:

$$NIAF_k = \frac{\sum_{k \in R_c} UPW_k + \sum_{k \in NR_c} UPW_k}{\sum_{k \in R_c} UPW_k}$$

Thus, for sampled person  $k$  in household  $j$ , the nonresponse-adjusted person-level weight,  $NPW_{jk}$ , can be written as

$$NPW_{jk} = UPW_{jk} * NIAF_k$$

The final stage of person-level weighting was to rake the nonresponse adjusted person-level weights,  $NPW$ , to national control totals. Raking was proposed by Deming and Stephan (1940) as a way to ensure consistency between complete counts and population data (Deming and Stephan used sample data from the 1940 U.S. Census of Population). The raking procedure typically improves the reliability of survey estimates and corrects for the bias that results from households or persons not covered by the survey. The raking procedure was carried out in a sequence of adjustments: First, the weights were adjusted to one marginal distribution (or dimension) and then to the second marginal distribution, and so on. One sequence of adjustments to the marginal distributions is known as a cycle or iteration. Then, the procedure was repeated until the convergence of the weighted totals to all sets of marginal distributions was achieved. (See Deming and Stephan, 1940, for further details on raking and the convergence process.)

The raking of the person-level weights was required in order to align the person-level weights with the person-level control totals and adjust for differential coverage rates at the person level. The raking procedure for the ECPP and PFI involved raking the nonresponse-adjusted person-level weights to national totals obtained using the number of children and adults from the 2018 annual ACS estimates. The CPS was used for raking in NHES administrations prior to 2012, but the ACS has been used since NHES:2012 because it has a larger sample size than the CPS, allowing for more accurate control totals and greater precision in estimates. The raking dimensions for the ECPP and PFI, which are the same as those used for the NHES:2012 and NHES:2016, were as follows:

- a cross of the child's race/ethnicity (Hispanic, Non-Hispanic Black only, Other) and household income (\$10,000 or less, \$10,001-\$20,000, \$20,001-\$30,000, \$30,001-\$40,000, \$40,001-\$50,000, \$50,001-\$60,000, \$60,001-\$75,000, \$75,001-\$100,000, \$100,001-\$150,000, and \$150,001 or more);

- a cross of household size (1 or 2, 3 or 4, 5+ persons) and child’s age (0-2 or 3-6) for the ECPP; a cross of household size and child’s age (age 5 and under, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, and 19-20) for the PFI; and
- a cross of home tenure (rent, own or other) and either parent’s highest educational attainment (less than high school credential, high school credential or equivalent, some college up to and including a bachelor’s degree, and higher than a bachelor’s degree)

These raking dimensions were proposed because they included important analysis variables, and preliminary research showed that NHES distributions for these dimensions had a fair amount of variation compared with the ACS distributions for the same variables. Of the variables examined as part of the raking research (household income, household size, home tenure, highest educational attainment of either parent, Census region, and child’s race/ethnicity, sex, and age), those chosen showed the most variability across their categories when each was examined alone. The variables also were crossed with each other and, again, the pairs that showed the most variability were chosen for the raking dimensions. Several of the variables and variable pairings were included in the preliminary analysis because they were used for raking in past NHES administrations. These included the race/ethnicity of child by household income and home tenure by educational attainment. It was decided not to rake on several variables and dimensions that had limited variation across the categories. Tables 7-5 and 7-6 show the final dimensions chosen for raking for the ECPP and PFI, respectively.

The race and ethnicity categories used for raking were Hispanic (regardless of race), non-Hispanic Black only, and Other non-Hispanic. The ACS race and Hispanic origin variables were recoded into these same three raking categories (ACS has hundreds of categories for the variables race and Hispanic origin<sup>54</sup>).

One issue that arose in raking the data from the NHES:2019 was the inconsistent definitions of the age variables available for NHES and ACS respondents. Age groups in the NHES had to be compared with equivalent age groups in the ACS; however, each survey collected age information differently and used different reference points. It was important that NHES subpopulations be consistent with the ACS subpopulation to which the weights were raked. Otherwise, inconsistencies in the definitions of the subpopulations would result in large weighting adjustments and inaccurate estimates. The ECPP and PFI collected month and year of birth for each sampled child. In the ACS, age was collected in reference to the date of the particular interview; there is no single reference date for the age variable that is present in the ACS data files. However, the ACS weights were calibrated to the estimated age distribution of the population as of July 1, 2018, the midpoint of the ACS data collection year. When control totals were calculated for the NHES raking, the ACS age variable had to be used as is because using ACS date of birth

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<sup>54</sup> American Community Survey and Puerto Rico Community Survey  
[https://www2.census.gov/programs-surveys/acs/tech\\_docs/code\\_lists/2018\\_ACS\\_Code\\_Lists.pdf?#](https://www2.census.gov/programs-surveys/acs/tech_docs/code_lists/2018_ACS_Code_Lists.pdf?#).

to “age” the ACS cases to a different month would imply that the ACS weights (and thus the calculated control totals) would no longer be valid.<sup>55</sup> For these reasons, the month and year of birth were used to calculate each ECPP and PFI respondent’s age as of July 1, 2019, to be comparable with the ACS age distribution as of July 1, 2018.

The month and year of birth reported (or imputed) in the topical surveys were used to calculate the child’s age in years as of July 1, 2019 (AGE\_R). For the purpose of calculating age, the child was assumed to have been born on the 15th of the reported month of birth. Because the zero-year category of the NHES ECPP contained relatively few cases after aging, this category was collapsed with the 1- and 2-year categories. Also, after aging, the ages of some children were greater than the age limit for the surveys: six ECPP children’s ages were changed to 7, over the age limit of 6, and seven PFI youths’ ages were changed to 21, over the age limit of 20. These records were placed in the age 3-6 category for the ECPP and the age 19-20 category for the PFI for the purposes of raking. This adjusted age variable was then used to rake the ECPP and PFI weights to the control totals by the cross of household size and age.

The aged ages were derived only for the purposes of raking and comparing NHES age distributions with ACS age distributions and are not included in the data files.<sup>56</sup>

Prior to raking, all variables used in the raking procedure were fully imputed (see chapter 6 for information on imputation procedures). Raked weights were formed by iteratively modifying the nonresponse-adjusted person-level weights (*NPW*) so that they corresponded to the control totals. A table of estimates was formed using the nonresponse adjusted person-level weights. These weights were multiplied by the constant that forced the sum of the table values to equal the control totals along the first dimension. The revised table estimates were then multiplied by the constant required to obtain the second dimension control totals, and the same process was repeated for all higher dimensions. When the last dimension was done, one iteration of raking was complete. Further iterations were employed until the estimates converged to within two of the control totals across all the dimensions.

The final ECPP person-level weight for sampled person *k* in household *j* is

$$FEWT_{jk} = NPW_{jk} * RAF_k$$

where  $RAF_k$  is the raking adjustment factor for person *k*, where person *k* has the attributes corresponding to each of the raking cells to which they are assigned.

The final PFI person-level weight for sampled person *k* in household *j* is

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<sup>55</sup> A full description of the ACS weighting procedure can be found in chapter 11 of the ACS design and methodology report, which is available at [https://www2.census.gov/programs-surveys/acs/methodology/design\\_and\\_methodology/acs\\_design\\_methodology\\_report\\_2014.pdf](https://www2.census.gov/programs-surveys/acs/methodology/design_and_methodology/acs_design_methodology_report_2014.pdf).

<sup>56</sup> In some prior NHES administrations, the approach involved aging all cases in the CPS and NHES sample to bring them to the same month in age. This approach is described in the NHES:2007 methodology report (Hagedorn et al. 2009).

$$FPWT_{jk} = NPW_{jk} * RAF_k$$

After the raking was completed, the distributions of the weights were examined for excessive variability. A high level of weighting variability can inflate the variances of estimates and thus reduce the effective sample size.<sup>57</sup> This effect can potentially be mitigated by constraining the weights to a specified maximum value in a process known as “trimming.” However, trimming raises the risk of introducing bias into the estimates or preventing convergence to the specified control totals. For the NHES:2019, the variability of the final ECPP and PFI person-level weights was found to be comparable to that in prior NHES cycles, in which trimming had been deemed unnecessary. Accordingly, trimming was deemed to be unnecessary for the NHES:2019.

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<sup>57</sup> The effective sample size is the actual sample size divided by the design effect. The design effect is the factor by which the variance of an estimate is increased due to departures from simple random sampling.

**Table 7-5. American Community Survey control totals, by raking dimension for the NHES:2019 Early Childhood Program Participation Survey**

Raking dimension	Control total
Race/ethnicity by household income	
Hispanic	
\$10,000 or less	332,280
\$10,001 to \$20,000	432,663
\$20,001 to \$30,000	630,189
\$30,001 to \$40,000	615,284
\$40,001 to \$50,000	542,917
\$50,001 to \$60,000	460,682
\$60,001 to \$75,000	570,395
\$75,001 to \$100,000	631,697
\$100,001 to \$150,000	728,401
\$150,001 or more	492,894
Black only, non-Hispanic	
\$10,000 or less	383,945
\$10,001 to \$20,000	328,741
\$20,001 to \$30,000	342,216
\$30,001 to \$40,000	283,167
\$40,001 to \$50,000	245,565
\$50,001 to \$60,000	183,971
\$60,001 to \$75,000	238,629
\$75,001 to \$100,000	268,968
\$100,001 to \$150,000	268,652
\$150,001 or more	178,405
Other, non-Hispanic	
\$10,000 or less	429,802
\$10,001 to \$20,000	514,200
\$20,001 to \$30,000	698,663
\$30,001 to \$40,000	832,248
\$40,001 to \$50,000	887,414
\$50,001 to \$60,000	878,984
\$60,001 to \$75,000	1,333,713
\$75,001 to \$100,000	1,951,403
\$100,001 to \$150,000	2,717,937
\$150,001 or more	2,838,019

See notes at end of table.

**Table 7-5. American Community Survey control totals, by raking dimension for the NHES:2019 Early Childhood Program Participation Survey—Continued**

Raking dimension	Control total
Household size by age	
1 or 2 persons	
Age 0-2	376,876
Age 3-6	363,729
3 or 4 persons	
Age 0-2	6,574,043
Age 3-6	5,168,247
5 persons or more	
Age 0-2	4,500,338
Age 3-6	4,258,811
Home tenure by parents' highest educational attainment	
Rent	
Less than high school diploma	1,241,242
High school diploma or equivalent	2,454,752
Some college or bachelor's degree	4,319,589
Higher than a bachelor's degree	856,208
Own or other	
Less than high school diploma	651,472
High school diploma or equivalent	1,565,100
Some college or bachelor's degree	6,746,274
Higher than a bachelor's degree	3,407,407

NOTE: Control totals are population totals within the eligible universe for each survey, obtained from the 2018 American Community Survey (ACS) 1-year Public Use Microdata Sample (PUMS) file.

**Table 7-6. American Community Survey control totals, by raking dimension for the NHES:2019 Parent and Family Involvement in Education Survey**

Raking dimension	Control total
Race/ethnicity by household income	
Hispanic	
\$10,000 or less	664,044
\$10,001 to \$20,000	1,012,182
\$20,001 to \$30,000	1,492,361
\$30,001 to \$40,000	1,523,464
\$40,001 to \$50,000	1,330,179
\$50,001 to \$60,000	1,186,379
\$60,001 to \$75,000	1,448,255
\$75,001 to \$100,000	1,648,552
\$100,001 to \$150,000	1,818,248
\$150,001 or more	1,280,592
Black only, non-Hispanic	
\$10,000 or less	722,310
\$10,001 to \$20,000	807,566
\$20,001 to \$30,000	873,232
\$30,001 to \$40,000	762,590
\$40,001 to \$50,000	637,095
\$50,001 to \$60,000	543,676
\$60,001 to \$75,000	678,215
\$75,001 to \$100,000	814,801
\$100,001 to \$150,000	811,032
\$150,001 or more	560,280
Other, non-Hispanic	
\$10,000 or less	874,328
\$10,001 to \$20,000	1,150,102
\$20,001 to \$30,000	1,527,442
\$30,001 to \$40,000	1,826,475
\$40,001 to \$50,000	1,928,752
\$50,001 to \$60,000	1,953,934
\$60,001 to \$75,000	3,008,618
\$75,001 to \$100,000	4,669,426
\$100,001 to \$150,000	7,088,292
\$150,001 or more	8,459,616

See notes at end of table.

**Table 7-6. American Community Survey control totals, by raking dimension for the NHES:2019 Parent and Family Involvement in Education Survey—Continued**

Raking dimension	Control total
Household size by age	
1 or 2 persons	
Age 5 or under	88,773
Age 6	136,884
Age 7	139,608
Age 8	139,756
Age 9	142,617
Age 10	152,679
Age 11	171,816
Age 12	181,793
Age 13	180,931
Age 14	207,496
Age 15	216,937
Age 16	264,359
Age 17	290,331
Age 18	177,778
Age 19 or older	38,195
3 or 4 persons	
Age 5 or under	1,129,434
Age 6	1,831,130
Age 7	1,846,764
Age 8	1,878,876
Age 9	1,937,838
Age 10	2,027,566
Age 11	2,031,710
Age 12	2,036,894
Age 13	2,091,575
Age 14	2,105,053
Age 15	2,134,597
Age 16	2,135,303
Age 17	2,130,738
Age 18	1,149,053
Age 19 or older	197,650
5 persons or more	
Age 5 or under	1,110,047
Age 6	1,765,658

See notes at end of table.

**Table 7-6. American Community Survey control totals, by raking dimension for the NHES:2019 Parent and Family Involvement in Education Survey—Continued**

Raking dimension	Control total
Age 7	1,830,777
Age 8	1,918,893
Age 9	1,977,262
Age 10	2,056,562
Age 11	2,027,912
Age 12	1,970,220
Age 13	1,890,932
Age 14	1,819,109
Age 15	1,667,459
Age 16	1,564,570
Age 17	1,426,670
Age 18	717,995
Age 19 or older	163,838
Home tenure by parents' highest educational attainment	
Rent	
Less than high school diploma	3,295,604
High school diploma or equivalent	5,024,490
Some college or bachelor's degree	8,819,521
Higher than a bachelor's degree	1,375,095
Own or other	
Less than high school diploma	2,162,983
High school diploma or equivalent	4,996,593
Some college or bachelor's degree	18,721,655
Higher than a bachelor's degree	8,706,097

NOTE: Control totals are population totals within the eligible universe for each survey, obtained from the 2018 American Community Survey (ACS) 1-year Public Use Microdata Sample (PUMS) file.

## 7.4 Methods for Computing Sampling Errors

Sampling error, the difference between the estimate from a sample and the true population parameter, occurs when data are collected from a sample rather than from a full population. In surveys with complex sample designs, such as NHES:2019, direct estimates of sampling errors, which assume a simple random sample, typically underestimate the variability in the estimates (Wolter 1985). The NHES:2019 sample design and weighting included procedures that deviated from the assumption of simple random sampling, such as oversampling in areas with higher concentrations of Blacks and Hispanics,

oversampling homeschooled students, sampling persons within households with differential sampling probabilities, adjusting for survey nonresponse, and raking to control totals.

#### 7.4.1 Replication Sampling Errors

One method for computing sampling errors to reflect these aspects of the sample design and weighting is the replication method. Replication involves splitting the entire sample into a set of groups, or replicates, based on the actual sample design of the survey. The survey estimates can then be computed for each replicate by creating replicate weights that mimic the actual sample design and estimation procedures used in the full sample. The variation in the estimates computed from the replicate weights can then be used to estimate the sampling errors of the estimates from the full sample.

As for past NHES surveys, a total of 80 replicates were defined for NHES:2019. Eighty replicates were chosen to provide reliable estimates of sampling errors with reasonable data processing costs. The specific replication procedure used for NHES:2019 was jackknife replication (Wolter 1985), which involved dividing the sample into 80 random subsamples (replicates) for the computation of the replicate weights. Before the replicate weighting began, the sample records were sorted by the race/ethnicity strata and sampling order of the addresses (tract-level poverty rate and ZIP code plus 4-digit ZIP suffix) within each stratum. In each replicate, a replicate weight was developed using the same weighting procedures used to develop the full sample weight (described in sections 7.2 and 7.3 above).

The jackknife variance estimator has the form

$$v(\hat{\theta}) = \frac{G-1}{G} \sum_{k=1}^G (\hat{\theta}_{(k)} - \hat{\theta})^2$$

where  $\theta$  is the population parameter of interest,  $\hat{\theta}$  is the estimate of  $\theta$  based on the full sample,  $\hat{\theta}_{(k)}$  is the estimate of  $\theta$  based on the observations included in the  $k$ th replicate, and  $G$  is the total number of replicates ( $G = 80$ ).

Replicate weights were created for both the NHES:2019 ECPP and PFI topical surveys. The replicate final weights were included in the ECPP file as *FEWT1-FEWT80* and in the PFI file as *FPWT1-FPWT80*. The final replicate base weights were computed in several steps, using the approach described in Kim, Navarro, and Fuller (2000). The procedures for forming the replicate weights for each of these surveys are described next. For more details about the replication methodology used to reflect the two-phase sampling, refer to Kim, Navarro, and Fuller (2000).

The 205,000 addresses sampled for the screener were divided into the three race/ethnicity strata used in the first phase of sampling. Within each of these strata, the addresses were sorted in the same order used in the selection of the screener sample.

Eighty groups were formed using all sampled addresses. This was done by assigning the 1st, 81st, 161st, and so on, addresses in the list to group 1; the 2nd, 82nd, 162nd, and so on, addresses in the list to group 2; and the 80th, 160th, 240th, and so on, addresses in the list to group 80. Eighty replicates were then formed by leaving out exactly one of these groups. For example, replicate 1 contained all groups except group 1, replicate 2 contained all groups except group 2, and replicate 80 contained all groups except group 80.

The addresses were then assigned 80 replicate base weight variables (*REPBW1-REPBW80*) on the basis of the following procedures. The replicate phase 1 base weights were assigned to all sampled addresses by multiplying the full-sample base weight by either zero (for addresses left out of replicate 1) or 80/79 (for addresses retained in replicate 1). This procedure is the standard jackknife method of dropping one unit (in this case, a group of residential households with the same group number) and weighting up the remaining units to account for the dropped unit. For example, to construct *REPBW1*, a replicate base weight of 0 was assigned to residential households from group 1, and the base weights of all residential households in groups 2 through 80 were multiplied by a factor of 80/79.

The sampled households were allocated to the same household-level nonresponse adjustment cells used to generate the final full-sample *SNIAFs*. Within each cell, the replicate *SNIAF* was calculated using the same formula as with the full sample but using the sums of the replicate base weights, rather than the full-sample weights. The replicate base weight was then multiplied by the replicate *SNIAF*. This step generated replicate household-level nonresponse-adjusted weights (*HHW1-HHW80*) for screener respondent households.

For screener respondent households sampled for a topical survey, the replicate household-level nonresponse-adjusted weights were multiplied by the same three adjustment factors used in the full-sample weighting ( $A_{jk}$ ,  $B_{jk}$ , and  $C_{jk}$ ) to generate replicate person-level base weights (*UPW1-UPW80*).

For both topical surveys, sampled persons were allocated to the same person-level nonresponse adjustment cells used to calculate the final full-sample *NIAFs*. Within each cell, the replicate *NIAF* was calculated using the same formula as with the full sample, but using the sums of the replicate person-level base weights, rather than the full-sample weights. The replicate person-level base weight was then multiplied by the replicate *NIAF*. This step generated replicate person-level nonresponse-adjusted weights (*NPW1-NPW80*) for topical respondent households.

The replicate person-level nonresponse-adjusted weights were raked to the same control totals using the same convergence criteria used to generate replicate final weights (*FEWT1-FEWT80* for the ECPP and *FPWT1-FPWT80* for the PFI).

Thus, the replication procedure for NHES:2019 involved the calculation of the full sample weight and 80 replicate weights. The variation in the estimates can be calculated by computing the estimate of interest once for each of these 81 weights. This variation can then be used to estimate the sampling errors of the estimates from the full sample.

The computation of the sampling errors, using these replicate weights, can be done easily using any of several software packages:

- SUDAAN (<https://www.rti.org/impact/sudaan-statistical-software-analyzing-correlated-data>);
- the Stata “svy” commands (<http://www.stata.com>);
- the survey data analysis procedures in SAS ([http://www.sas.com/en\\_us/software/all-products.html](http://www.sas.com/en_us/software/all-products.html));
- WesVar (<https://www.westat.com/capability/information-technology/wesvar>);
- the R survey package (<https://cran.r-project.org/web/packages/survey/index.html>); or
- AM statistical software (<http://am.air.org>).

The replication method should be specified as JK1.

For subdomains with very small sample sizes, a particular replicate may not contain any cases in the subdomain, which precludes the calculation of standard errors using the jackknife method (the software will give an error). In this situation, the subdomain of interest could be collapsed or combined with another subdomain in order to have a sufficient sample size for computing standard errors.

#### **7.4.2 Taylor Series Approximation**

Another approach to the valid estimation of sampling errors for complex sample designs is to use a Taylor series approximation. To produce standard errors using a Taylor series program, such as SUDAAN, Stata, SAS, the IBM SPSS complex samples module (<https://www.ibm.com/us-en/marketplace/spss-complex-samples>), the R survey package, or AM, two variables are required in order to identify the stratum and the primary sampling unit (PSU). The stratum-level variable is the indicator of the variance estimation stratum from which the unit (address or sampled person) was selected. The PSU is an arbitrary numeric identification number for the address within the stratum. For NHES:2019, the stratum variable signifies the race/ethnicity stratum that was used in the first phase of sampling; the PSU variable is unique for each address within the race/ethnicity stratum because the addresses were sampled directly in a single stage.

Software packages that use Taylor series linearization for variance estimation, such as SUDAAN, do not currently have the capability to compute variance estimates that reflect the effect that two-phase sampling has on the precision of the estimates. Furthermore, Taylor series linearization cannot fully account for the impact of nonresponse adjustments on the precision of the estimates. Thus, variance estimates computed using these Taylor series linearization packages are likely to be less accurate than those computed using the jackknife replicate weights.

The PSU (EPSU for the ECPP and PPSU for the PFI) and stratum (ESTRATUM for the ECPP and PSTRATUM for the PFI) variables appear in each of the topical survey files. Data users should be aware that using different approaches or software packages in the calculation of standard errors may result in slightly different standard errors. Thus, estimates of standard errors computed using the replication method and the Taylor series method are similar but not identical. For a discussion of this issue, see Broene and Rust (2000).

#### **7.4.3 Software Examples for Replication Sampling Errors and Taylor Series Approximation**

Table 7-7 summarizes the weight and variance estimation variables and provides example syntax to use them in selected software packages that allow for Taylor series variance estimation (SUDAAN, Stata, SAS, IBM SPSS complex samples, and the R survey package) and jackknife variance estimation (SUDAAN, Stata, SAS, WesVar, and the R survey package). The example syntax provided in the table uses the weight and variance estimation variables applicable to the PFI data files; however, the table note gives the names of the corresponding variables in the ECPP data files.

**Table 7-7. Use of analysis weights, replicate weights, and variance estimation strata and primary sampling unit (PSU) variables available from the NHES:2019 Parent and Family Involvement in Education Survey, by variance estimation method and selected survey data analysis software**

Variance estimation method and survey data analysis software	Sample syntax elements using the NHES:2019 Parent and Family Involvement in Education variables
<b>Jackknife variance estimation</b>	
SUDAAN	DESIGN = JACKKNIFE WEIGHT FPWT; JACKWGTS FPWT1-FPWT80 / ADJJACK = 0.9875;
Stata	svyset [pweight=FPWT], vce(jackknife) jkrweight(FPWT1-FPWT80, multiplier(0.9875)) mse
SAS survey data analysis procedures	VARMETHOD = JACKKNIFE; REPWEIGHTS FPWT1-FPWT80 / JKCOEFS = 0.9875; WEIGHT FPWT; Method: JK1
WesVar	Full sample weight: FPWT Replicate weights: FPWT1-FPWT80
R Survey package <sup>1</sup>	mydesign<- svrepdesign(data=pfi,repweights=subset(pfi,select=FPWT1:FPWT80),weights=-FPWT,type="JK1",mse=TRUE,combined.weights=TRUE,scale=79/80)
<b>Taylor series variance estimation</b>	
SUDAAN	DESIGN = WR WEIGHT FPWT; NEST PSTRATUM PPSU;
Stata	svyset PPSU [pweight=FPWT], vce(linearized) strata(PSTRATUM) VARMETHOD = TAYLOR;
SAS survey data analysis procedures	WEIGHT FPWT; STRATA PSTRATUM; CLUSTER PPSU; Method: WR
IBM SPSS Complex Samples	Weight: FPWT Strata: PSTRATUM Clusters: PPSU
R survey package <sup>1</sup>	mydesign<-svydesign(data=pfi,id=-PPSU,strata=-PSTRATUM,weights=-FPWT,nest=TRUE)

<sup>1</sup>For the R survey package, “mydesign” can be renamed to any name for an R object to hold the specification of the survey design.

NOTE: The sample syntax elements use weighting and variance estimation variables for the Parent and Family Involvement in Education survey (FPWT, FPWT1-FPWT80, PSTRATUM, and PPSU). The weighting and variance estimation variables for the Early Childhood Program Participation survey are FEWT, FEWT1-FEWT80, ESTRATUM, and EPSU.

#### **7.4.4 Root Design Effects**

The root design effect (DEFT) is the factor by which a complex sample design inflates the standard error of an estimate, relative to the standard error that would have been attained from a simple random sample of the same size. The DEFT is estimate-specific and can vary widely between estimates depending on correlations between the survey variables used to produce the estimate and the auxiliary variables used in sampling and weighting. However, a summary measure of the impact of the complex sample design can be obtained by estimating the DEFT for a number of estimates and then averaging.

For the ECPP file estimates, the average DEFT was 1.39 overall. For the PFI file estimates, the average DEFT was 1.60 overall. Accordingly, the use of formulas that assume a simple random sample would significantly underestimate the standard error of most ECPP and PFI estimates.

As noted in section 7.4.3, a wide range of statistical software can implement the replication and/or Taylor series variance estimation methods. All users of ECPP and PFI data are therefore advised to use one of these two methods (with the replication method being preferred) to obtain standard errors that are appropriately adjusted for the complex sampling and weighting procedures used for the NHES.

## Chapter 8. Nonresponse Bias Analysis

The theory of sampling that is the basis for the majority of surveys conducted for the federal government assumes that accurate responses are obtained for all the sampled units. However, surveys have always had some level of nonresponse, thus violating this assumption; moreover, the level of nonresponse has been increasing (National Research Council 2013). To the extent that those who respond to surveys and those who do not are different in important ways, a potential exists for nonresponse biases in estimates from survey data, and understanding the relationship between response rates and nonresponse bias has become even more important. One approach to understanding the relationship is to conduct nonresponse bias studies.

This chapter documents the nonresponse bias analyses conducted for the National Household Education Surveys Program of 2019 (NHES:2019). The goal of the research is to investigate the potential for nonresponse bias in estimates from the NHES:2019 surveys. This analysis is similar to analyses undertaken to evaluate the potential for nonresponse bias in the NHES:2016 and prior cycles of the NHES.

This chapter discusses the relationship between unit and item response rates and nonresponse bias and includes an analysis of characteristics associated with unit response propensities, a comparison of base-weighted estimates between early and late responders, a comparison of estimates based on final weights and base weights, a comparison of the NHES:2019 estimates to those from external data sources, a discussion of using extreme assumptions to assess the potential for item nonresponse bias, and an assessment of means or distributions for items with and without imputed values. A summary of the findings is provided in section 8.4.

### 8.1 Relationship Between Response Rates and Nonresponse Bias

The estimates from the NHES:2019 surveys are subject to potential bias because of unit nonresponse to the screener and the topical surveys—the Early Childhood Program Participation (ECP) Survey and the Parent and Family Involvement in Education (PFI) Survey—as well as nonresponse to specific items. Generally speaking, the primary approach to minimizing nonresponse bias is to plan and implement data collection procedures aimed at achieving high cooperation rates. For the NHES:2019, such procedures included advance mailings to the respondents, recontacting households by mail using alternative strategies, and monetary incentives. However, because some unit nonresponse occurs even with the best strategies, weighting adjustments are necessary to minimize potential unit nonresponse bias.

The term *bias* has a specific technical definition in the survey context. Bias is the expected difference between an estimate of a characteristic from the survey and the actual population value. For example, if all households were included in the survey's sample and all responded, the survey estimate would equal

the population value.<sup>58</sup> However, if all households were included in the sample, but some did not respond (unit nonresponse is nonzero), the difference between the estimate from the survey and the actual population value would be the bias caused by unit nonresponse. Because the NHES is based on a sample, the bias is defined as the expected or average value of this difference over all possible samples.

As outlined in the *NCES Statistical Standards* (U.S. Department of Education 2012), the degree of nonresponse bias is a function of two factors: the nonresponse rate and how much the respondents and nonrespondents differ on survey variables of interest. The mathematical formula to estimate bias for a sample mean of variable  $y$  is as follows:

$$B(\bar{y}_R) = \bar{y}_R - \bar{y}_T = \left( \frac{n_M}{n_T} \right) (\bar{y}_R - \bar{y}_M)$$

where

$\bar{y}_T$  is the estimated mean based on all base-weighted eligible sample cases.

$\bar{y}_R$  is the estimated mean based only on base-weighted respondent cases.

$\bar{y}_M$  is the estimated mean based only on base-weighted nonrespondent cases.

$n_M$  is the base-weighted number of nonrespondents.

$n_R$  is the base-weighted number of respondents.

$n_T$  is the base-weighted number of eligible cases (i.e.,  $n_T = n_R + n_M$ ).

If the nonresponding units (households or people) are highly similar to the responding units, the unit nonresponse bias might be very small and be deemed insignificant for the purpose of the study. For example, consider a sample of kindergarteners drawn from two kindergarten classrooms. When the survey taker arrives, one class is in its classroom, and the other class is on a field trip. If the children are randomly assigned to one of the two classes, then the group that is absent is highly similar to the group that is present. On the other hand, if the nonresponding units are different in their characteristics from the responding units, the impact on the study can be substantial. For example, if the children were divided into the two classes based on their reading and mathematical ability, then the nonrespondents (the children on the field trip) would be substantially different from the children present in the classroom.

If the unit nonresponse rate is low relative to the magnitude of the estimates, then the unit nonresponse bias in the estimates might be small, even if the differences in the characteristics between respondents and nonrespondents are relatively large. In the example above, if rather than a whole class being absent, only a few students are absent, the impact on the estimates produced from the responding sample may be minimal, even if the nonresponding students were notably different from those responding. However,

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<sup>58</sup>This chapter does not discuss other types of error, such as measurement error. These errors could cause the estimate to differ from the population value even if all the households were in the sample and all responded.

if the estimate is for a small domain or subgroup (of about 5 percent or 10 percent of the population), then even a relatively low overall rate of nonresponse can result in important biases if the differences between respondents and nonrespondents are large.

As the absent student example illustrates, nonresponse bias could have a substantial impact on the study if either the difference between respondents and nonrespondents or the nonresponse rate is relatively large. To compare the bias across all variables, the estimates of bias can be transformed into estimates of relative bias, a ratio of the bias to the mean characteristic estimate. Relative bias is independent of the distributions of particular variables. The relative bias for an estimated mean is calculated using the following formula:

$$RelB(\bar{y}_R) = \frac{B(\bar{y}_R)}{\bar{y}_R}$$

Relative bias can be estimated for characteristics available for both respondents and nonrespondents.

## **8.2 Unit Nonresponse Bias Analysis**

NCES Statistical Standard 4-4 requires analysis of unit nonresponse bias for any survey stage with a base-weighted response rate of less than 85 percent. Section 8.2.1 of the unit bias analysis includes comparisons between characteristics of the full sample population and those of the respondent population. Section 8.2.2 presents comparisons of estimates between respondents who returned a questionnaire in earlier mailing waves to those who returned a questionnaire in later mailing waves. Section 8.2.3 presents comparisons of estimates using the weights before and after weighting adjustments to evaluate the extent to which the adjustments may have reduced nonresponse bias. Section 8.2.4 includes a comparison of the NHES:2019 estimates with estimates from the 2018 Current Population Survey (CPS), the 2018 American Community Survey (ACS), and prior NHES collections to evaluate the reasonableness of the NHES:2019 estimates.

### **8.2.1 Analysis of Characteristics Associated With Unit Response Propensities**

In this section, the characteristics of respondents to the screener and topical surveys are compared with the characteristics of the eligible sample for each survey. This analysis allows unit nonresponse bias to be measured directly for any characteristics that are known for both respondents and nonrespondents. To the extent that these characteristics are associated with characteristics measured by the NHES questionnaires (which are known only for respondents), bias in these characteristics may indicate a risk of bias in key NHES estimates.

The available characteristics for this analysis differ between the screener- and topical-level analyses. For the screener, characteristics known for the entire sample consist of NHES sampling frame variables plus

variables from sources that can be linked to the frame. The variables used in the screener analysis are listed in table 8-1. The address type information on the sample frame is primarily from the U.S. Postal Service Computerized Delivery Sequence File. Household demographic information was derived from a variety of sources that the sample frame vendor used to match the household's address to the characteristics of the residents of the address. The block group-level Low Response Score and percentages were obtained from the Census Planning Database.

Although the screener unit of analysis was addresses, the topical PFI and ECPP surveys use eligible persons as the unit of analysis. Only cases that complete the household screener can be sampled for a topical survey; thus, at the topical level, some information from the screener is also available for all sampled cases, in addition to the variables available in or linked to the frame. The variables used for the topical survey unit nonresponse bias analysis are presented in table 8-2.

**Table 8-1. Sampling frame and Census variables used in the NHES:2019 screener-level unit nonresponse bias analysis**

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**Sampling frame and Census variables**

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**Household-level variables from U.S. Postal Service files**

Route type  
 Dwelling type\*  
 Vacancy status  
 Seasonal address type  
 Drop point address type

**Variables obtained from sample vendor**

Ability to match address to phone number  
 Census region

**Block group-level American Community Survey 2012-16 estimates obtained from the 2018 Census Planning Database**

Census Low Response Score<sup>1</sup>  
 Percent of persons without a high school diploma\*  
 Percent of persons who are Black\*

**Experimental treatments and operational variables**

Race/ethnicity stratum  
 Tract poverty rate  
 Bilingual screener package mailed at any mailing  
 Experimental treatment flag\*

**Household-level variables appended by sample vendor from external data source**

Gender of head of household  
 Age of head of household\*  
 Marital status of head of household\*  
 Race/ethnicity of head of household\*  
 Education of head of household\*  
 Household income\*  
 Home tenure\*  
 Number of adults in household\*  
 Household flagged on frame as having children in the ECPP-eligible age range  
 Household flagged on frame as having children in the PFI-eligible age range  
 Language spoken at home  
 Country or territory of origin

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<sup>1</sup>The Low Response Score is a derived variable in the Census Planning Database that identifies block groups with characteristics associated with low mail return rates to the Decennial Census. A higher Low Response Score corresponds to a lower expected mail return rate.  
 NOTE: Asterisks (\*) indicate variables included in screener-level nonresponse weighting adjustments.

**Table 8-2. Screener and sampling frame variables used in the NHES:2019 topical-level unit nonresponse bias analysis**

<b>Screener and sampling frame variables</b>
<b>Variables reported on household screener</b>
Age of sampled child*
Sex of sampled child*
Enrollment status of sampled child*
Grade of sampled child
Number of persons age 20 or younger in household
Household reported ECPP-eligible child(ren)*
Household reported PFI-eligible child(ren)*
Household reported homeschooled child(ren)
<b>Variables obtained from sample vendor</b>
Ability to match address to phone number
Census region
<b>Experimental treatments and operational variables</b>
Race/ethnicity stratum*
Tract poverty rate
Language of screener response
Topical incentive level (noncontingent)*
Experimental treatment flag
Mode of screener response and initial topical contact*
<b>Household-level variables appended by sample vendor from external data source</b>
Marital status of head of household
Ethnicity of head of household
Education of head of household
Household income
Home tenure

NOTE: Asterisks (\*) indicate variables included in topical-level nonresponse weighting adjustments for the PFI and/or ECPP. The nonresponse adjustments used counts of ECPP- and PFI-eligible children reported on the screener, whereas the nonresponse bias analysis used binary indicators of whether at least one ECPP- or PFI-eligible child was reported on the screener.

The first step in the unit nonresponse bias analysis was to determine whether the percentages of respondents for the variables listed in table 8-1 (for the screener analysis) and 8-2 (for the topical analysis) differ from the percentages of the eligible sample. For the screener analysis, the eligible sample consists of all addresses sampled for the screener, excluding those found during data collection to be undeliverable or nonresidential. For the topical analysis, the eligible sample consists of all households that responded to the screener, reported one or more PFI- or ECPP-eligible children, and were sampled for the specified topical questionnaire.

Specifically, a significance test was used to estimate whether the difference between the base-weighted respondent percentage and the base-weighted eligible sample percentage was different from zero at the 5 percent level of significance. Base weights are weights that adjust only for the sampled unit's probability of selection. These estimates were not yet adjusted for nonresponse. The standard error of the difference was computed directly using the NHES:2019 replicate base weights. The resulting standard errors take

into account the correlations between the two estimates. Specifically, the standard error of the difference between the respondent percentage and the eligible sample percentage is calculated as follows:

$$se(p_r - p_s) = \sqrt{\frac{79}{80} \sum_{i=1}^{80} [(p_{ri} - p_{si}) - (p_r - p_s)]^2}$$

where

$\sum_{i=1}^{80}$  is the sum of the 80 replicate weights.

$p_{ri}$  is the proportion among respondents, calculated using the  $i$ th replicate weight.

$p_{si}$  is the proportion over the eligible sample, calculated using the  $i$ th replicate weight.

$p_r$  is the proportion among respondents, calculated using the full-sample weight.

$p_s$  is the proportion over the eligible sample, calculated using the full-sample weight.

The relative bias was computed for every category of the variables in the nonresponse bias analysis, using the difference between the base-weighted respondent percentage and the base-weighted eligible sample percentage. The absolute and relative bias before nonresponse adjustment is presented on the left-hand side of tables 8-3 through 8-7, which will be presented later.

The second step was to compute the nonresponse adjustments. The screener and topical nonresponse adjustments included a subset of the variables used for the bias analysis as noted in tables 8-1 and 8-2 (respectively). The nonresponse adjustments, which are included in the final analytic weights (see chapter 7 on weighting), are designed to significantly reduce unit nonresponse bias for the variables included in the models. To the extent that questionnaire variables are associated with the variables included in the models, the end result should be a reduction in bias in estimates for these questionnaire variables.

Third, after computing the nonresponse adjustment, any remaining bias was estimated for the same set of variables, and statistical tests were performed to check the significance of the remaining nonresponse bias. Again, the relative bias was computed for all categories of all variables, this time using the difference between the nonresponse-adjusted respondent percentage and the base-weighted eligible sample percentage as the numerator and the nonresponse-adjusted respondent percentage as the denominator. These figures are displayed on the right-hand side of tables 8-3 through 8-7.

The bias was summarized by calculating the mean and median of the relative bias figures across all variables; these summary statistics are displayed in table 8-3. The absolute value of the relative bias was

used to calculate these summary statistics, because otherwise the means and medians could be distorted by the relative prevalence of positive or negative values.

In this analysis, the large sample size and correlated variances between the responding sample and eligible sample may lead to even small differences testing statistically significant. Therefore, a practical significance threshold was also used in assessing the extent of nonresponse bias. Specifically, statistically significant differences of at least 1 percentage point between the eligible sample and respondent percentages were judged to be meaningful (i.e., of practical significance)<sup>59</sup>.

The nonresponse-adjusted weights used for this analysis were not raked. In the weighting process, raking adjustments are performed after the nonresponse adjustments. This analysis was performed using unraked, nonresponse-adjusted weights. Examining the estimates using weights just before and just after nonresponse adjustment provides focused analysis on the extent to which the nonresponse adjustment reduced bias. Because the raking adjustment may reduce the residual nonresponse bias, the analysis of summary statistics provided in table 8-3, and the detailed results provided in tables 8-4 through 8-7, may understate the net bias reduction accomplished in the weighting process. Additional analyses could be performed to examine the full reduction of bias resulting from all weighting steps.

Overall, much of the potential nonresponse bias was reduced through the weighting procedures. The nonresponse weighting adjustments reduced the amount of potential bias in the estimates of the survey respondents (table 8-3). In the preadjustment screener estimates, 61 out of 110 of the estimates analyzed (55.5 percent) showed statistically significant as well as meaningful differences between the base-weighted respondents and the base-weighted eligible sample population. In the postadjusted screener estimates, the number of estimates with significant as well as meaningful differences was reduced to 48 (43.6 percent), which, while still notable, represents a reduction of over 21 percent. The median relative bias after adjustment was 4.6 percent for the screener.

Table 8-3 shows similar reductions for the estimates in the topical surveys after the nonresponse adjustments. The number of estimates with statistically significant differences greater than 1 percentage point was reduced from 13 (14.0 percent) to 1 (1.1 percent) for the PFI (a reduction of 92 percent); and from 8 (9.8 percent) to 1 (1.2 percent) for the ECPP (a reduction of 88 percent). The median relative bias after adjustment was 1.2 percent and 0.9 percent, respectively. Therefore, the summary measures of bias were generally lower at the topical than at the screener level, both before and after adjustment. This is likely attributable in part to the fact that the screener response rate is substantially lower than the topical response rates conditional on screener response (see chapter 5 on response rates). It may also partially reflect parameters of the nonresponse adjustment procedure itself, such as the user-defined maximum

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<sup>59</sup> Tables 8-4 through 8-7 flag all statistically significant bias estimates for reference. However, as noted above, only those with practical significance (estimates of bias greater than or equal to one percentage point) are considered meaningful and discussed in the text here.

adjustment factor, which controls variance inflation at the expense of limiting bias reduction (see chapter 7 on weighting).<sup>60</sup> Finally, the availability of screener data for the sampled child at the topical phase may make the topical nonresponse adjustments more effective than the screener nonresponse adjustments.

**Table 8-3. Summary of bias in NHES:2019 sampling frame characteristics, before and after weighting adjustments for nonresponse**

Survey	Before weighting adjustments for nonresponse			After weighting adjustments for nonresponse		
	Mean estimated absolute relative bias (percent)	Median estimated absolute relative bias (percent)	Percent of estimates with practically and statistically significant bias	Mean estimated absolute relative bias (percent)	Median estimated absolute relative bias (percent)	Percent of estimates with practically and statistically significant bias
Screener	11.8	8.3	55.5	6.0	4.6	43.6
PFI	9.5	2.5	14.0	5.1	1.2	1.1
ECPP	10.7	1.8	9.8	6.5	0.9	1.2

NOTE: ECPP = Early Childhood Program Participation. PFI = Parent and Family Involvement in Education. Bias is considered statistically significant if  $p < .05$  (Student's  $t$  test). Bias is considered practically significant if its absolute value exceeds 1 percentage point. The estimates in this table were produced solely for the purpose of evaluating nonresponse bias and are not official statistics.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Survey Program (NHES) of 2019.

Tables 8-4 through 8-7 show the relative bias in estimates between the respondent and the eligible sample populations for every category of the variables in the unit nonresponse bias analysis. Although absolute values were used to calculate the summary statistics shown in table 8-3, tables 8-4 through 8-7 show the original positive or negative values. A positive bias indicates that a particular category is overrepresented among respondents relative to its share of the eligible sample. A negative bias indicates that that category is underrepresented among respondents.

Table 8-4 shows relative bias for every category of the variables used in the unit nonresponse bias analysis for the screener. All addresses sampled for the screener, except those found to be undeliverable or otherwise ineligible, are included in table 8-4.<sup>61</sup>

Tables 8-5 and 8-6 show the results for the PFI. Because of the importance of the homeschooling estimate produced by the PFI, bias in the percentage of PFI-sampled households that reported one or more

<sup>60</sup> To limit variance inflation due to weighting, the nonresponse adjustment procedure is constrained such that the maximum nonresponse adjustment factor does not exceed a predefined threshold. This constraint implies that the nonresponse-adjusted weights are not optimized to exactly match the distribution of the sampling frame with respect to the nonresponse adjustment variables. Therefore, this constraint has the tradeoff of limiting the bias reduction that can be achieved by the nonresponse adjustment procedure.

<sup>61</sup> At the screener level, addresses are classified as ineligible if no completed screener or explicit refusal was received from the address from any mailing and if, for at least one of the mailings, the Census Bureau received information indicating that the address was undeliverable or nonresidential (e.g., the package was returned as undeliverable by the U.S. Postal Service).

homeschooled children is presented separately (in table 8-6).<sup>62</sup> Finally, table 8-7 shows results for the ECPP. Tables 8-5 through 8-7 include all households that responded to the screener and were sampled for the specified topical survey, except those found to be ineligible at the topical phase.

At the screener level (table 8-4), the following are the variables showing the greatest bias prior to adjustment. In general, these same variables also show the greatest bias after adjustment, but the bias is smaller in magnitude, as expected.

- Race/ethnicity stratum: addresses in the “Other” stratum are overrepresented by 5.6 percentage points before adjustment and 3.1 percentage points after adjustment.
- Tract poverty rate: addresses in tracts with poverty rates below 20 percent are overrepresented by 5.0 percentage points before adjustment and 2.5 percentage points after adjustment.
- Ability to match address to phone number: addresses with matched phone numbers are overrepresented by 4.7 percentage points before adjustment and 2.4 percentage points after adjustment.
- Age of head of household: the “Over 65” category is overrepresented by 5.8 percentage points before adjustment (reduced to 1.3 percentage points after adjustment), while the “Missing” category is underrepresented by 6.3 percentage points before adjustment (reduced to 2.9 percentage points after adjustment).
- Marital status of head of household: the “Married” category is overrepresented by 6 percentage points before adjustment and 3 percentage points after adjustment.
- Race/ethnicity of head of household: the “White” category is overrepresented by 6.7 percentage points before adjustment and 3.3 percentage points after adjustment.
- Home tenure: addresses that are owned are overrepresented by 8 percentage points before adjustment and 4.4 percentage points after adjustment.
- Number of adults in household: addresses with two adults are overrepresented by 4.8 percentage points before adjustment and 2.0 percentage points after adjustment.

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<sup>62</sup> Table 8-5 includes the percentage distribution of sampled children by the enrollment status of the specific child who was sampled, which includes a category for homeschoolers. In contrast, Table 8-6 shows the percentage distribution by the presence of *any* homeschooled children in the household (regardless of whether the specific sampled child is homeschooled). Therefore, the estimates shown in Table 8-6 differ from the percentage in the “homeschooled” category of the enrollment status variable in Table 8-5.

- Dwelling type: single-unit addresses are overrepresented by 4.6 percentage points before adjustment and 2.4 percentage points after adjustment.
- Country or territory of origin: households flagged as being of U.S. origin are overrepresented by 4.6 percentage points before adjustment and 2.4 percentage points after adjustment.
- Low Response Score: addresses located in block groups in the lowest quartile of the Census Low Response Score are overrepresented by 5.0 percentage points after adjustment and 2.0 percentage points after adjustment.

At the topical level, for the PFI, the greatest bias prior to adjustment was observed in categories of the following variables: race/ethnicity stratum, tract poverty rate, topical noncontingent incentive level, marital status of the head of household, race/ethnicity of the head of household, educational attainment of the head of household, household income, home tenure, and the mode of screener response and initial topical contact (table 8-5). The topical nonresponse adjustment reduced the observed bias in all of these variables. Notably, households with homeschooled children were underrepresented by only about 0.4 percentage points prior to adjustment (below the threshold for practical significance), and this bias was nearly eliminated by the topical nonresponse adjustment (table 8-6). For the ECPP, the same set of variables as the PFI, as well as the screener variables for the number of persons 20 or younger and the presence of PFI-eligible children in the household, showed relatively high bias prior to adjustment; again, however, the adjustments generally had the expected effect of reducing or eliminating bias in these variables (table 8-7).

In rare instances, the estimated bias in a category increased as a result of the nonresponse adjustment. For example, at the screener level (table 8-4), the “45 - 54” category of the age of the head of household did not show statistically significant bias prior to adjustment but showed statistically significant bias of 0.6 percentage points after adjustment. In most instances, the bias after nonresponse adjustment remained below 1 percentage point in absolute value terms and thus was not considered meaningful. While the cell-based nonresponse adjustment procedure used for the NHES (see chapter 7 on weighting) is expected to reduce bias for most categories, an increase in bias for some categories is a theoretical possibility, because not every category of every variable is used to define a given nonresponse adjustment cell.

**Table 8-4. Estimates of unit nonresponse bias for various sample characteristics from the NHES:2019 screener**

Characteristic	Unweighted counts		Percentages estimated with base weights					Percentages estimated with nonresponse-adjusted weights						
	Respondents	Eligible sample	Percent of respondents	Percent of eligible sample	Estimated bias	Percent relative bias	Standard error of bias	Percent of respondents	Estimated bias	Percent relative bias	Standard error of bias	Percent change in bias		
<b>Total</b>														
Race/ethnicity stratum														
25% or more Black	16,823	35,733	11.3	14.3	-3.1	-27.2	0.06	*	12.5	-1.9	-15.2	0.06	*	-38.3
40% or more Hispanic and not 25% or more Black	12,590	28,058	7.7	10.2	-2.6	-33.5	0.05	*	9.0	-1.2	-13.7	0.05	*	-51.9
Other	79,565	123,620	81.0	75.4	5.6	7.0	0.08	*	78.5	3.1	4.0	0.07	*	-44.5
Tract poverty rate														
20 percent or higher	25,092	53,924	19.8	24.8	-5.0	-25.0	0.08	*	22.3	-2.5	-11.1	0.07	*	-49.9
Below 20 percent	83,886	133,487	80.2	75.2	5.0	6.2	0.08	*	77.7	2.5	3.2	0.07	*	-49.9
Bilingual screener package mailed at any mailing														
Yes	76,613	137,707	68.6	71.5	-3.0	-4.3	0.09	*	69.9	-1.6	-2.3	0.09	*	-45.9
No	32,365	49,704	31.4	28.5	3.0	9.5	0.09	*	30.1	1.6	5.3	0.09	*	-45.9
Census region <sup>1</sup>														
Northeast	19,131	32,347	18.2	17.9	0.3	1.8	0.08	*	18.0	0.1	0.8	0.07		-54.6
South	41,187	74,949	36.2	38.3	-2.1	-5.9	0.09	*	36.7	-1.6	-4.4	0.09	*	-25.1
Midwest	24,639	38,555	23.8	21.9	1.9	8.1	0.08	*	23.2	1.3	5.4	0.08	*	-35.0
West	24,021	41,560	21.8	21.9	-0.1	-0.5	0.08		22.1	0.2	1.0	0.08	*	108.0
Ability to match address to phone number														
Phone number available	78,828	126,423	72.6	67.9	4.7	6.4	0.09	*	70.3	2.4	3.4	0.09	*	-49.5
No phone number available	30,150	60,988	27.4	32.1	-4.7	-17.1	0.09	*	29.7	-2.4	-7.9	0.09	*	-49.5

See notes at end of table

**Table 8-4. Estimates of unit nonresponse bias for various sample characteristics from the NHES:2019 screener—Continued**

Characteristic	Unweighted counts		Percentages estimated with base weights					Percentages estimated with nonresponse-adjusted weights						
	Respondents	Eligible sample	Percent of respondents	Percent of eligible sample	Estimated bias	Percent relative bias	Standard error of bias	Percent of respondents	Estimated bias	Percent relative bias	Standard error of bias	Percent change in bias		
Gender of head of household														
Male	39,363	63,298	36.6	34.4	2.2	6.1	0.08	*	35.1	0.7	2.0	0.08	*	-67.6
Female	33,412	55,654	30.5	29.6	0.9	2.9	0.09	*	29.9	0.3	1.2	0.10	*	-60.4
Missing	36,203	68,459	32.9	36.0	-3.1	-9.4	0.09	*	35.0	-1.1	-3.1	0.09	*	-65.5
Age of head of household														
Under 25	1,223	2,546	1.1	1.3	-0.2	-20.5	0.02	*	1.3	#	-3.2	0.02		-81.8
25-34	6,857	13,521	6.2	7.1	-0.9	-14.1	0.05	*	7.2	#	0.4	0.05		-96.5
35-44	11,986	22,682	11.0	12.1	-1.1	-10.3	0.07	*	12.3	0.1	0.9	0.05	*	-90.3
45-54	15,757	27,101	14.5	14.6	#	-0.3	0.07		15.2	0.6	4.0	0.03	*	1263.7
55-65	22,095	32,574	20.4	17.6	2.8	13.5	0.06	*	18.6	0.9	5.0	0.02	*	-66.1
Over 65	27,954	36,800	26.0	20.1	5.8	22.4	0.08	*	21.4	1.3	5.9	0.02	*	-78.3
Missing	23,106	52,187	20.8	27.1	-6.3	-30.3	0.09	*	24.2	-2.9	-12.0	0.04	*	-53.8
Marital status of head of household														
Single	32,735	61,646	29.0	31.7	-2.7	-9.3	0.08	*	30.7	-1.0	-3.4	0.09	*	-61.4
Married	62,318	95,311	58.4	52.4	6.0	10.3	0.10	*	55.4	3.0	5.5	0.08	*	-49.3
Missing	13,925	30,454	12.6	15.9	-3.3	-26.3	0.08	*	13.9	-2.0	-14.4	0.07	*	-39.4

See notes at end of table

**Table 8-4. Estimates of unit nonresponse bias for various sample characteristics from the NHES:2019 screener—Continued**

Characteristic	Unweighted counts		Percentages estimated with base weights					Percentages estimated with nonresponse-adjusted weights						
	Respondents	Eligible sample	Percent of respondents	Percent of eligible sample	Estimated bias	Percent relative bias	Standard error of bias	Percent of respondents	Estimated bias	Percent relative bias	Standard error of bias	Percent change in bias		
Race/ethnicity of head of household														
White	61,165	91,246	59.2	52.4	6.7	11.4	0.11	*	55.7	3.3	5.9	0.09	*	-51.6
Black	10,023	20,624	7.5	9.1	-1.6	-21.3	0.05	*	8.2	-0.9	-11.2	0.06	*	-42.8
Hispanic	9,770	21,807	7.6	9.8	-2.3	-30.0	0.05	*	8.7	-1.1	-13.1	0.05	*	-50.0
Asian or Pacific Islander	4,143	7,015	3.8	3.8	#	0.2	0.04		3.9	0.1	1.7	0.04		949.3
Other	206	370	0.2	0.2	#	-7.2	0.01		0.2	#	-6.3	0.01		-12.0
Missing	23,671	46,349	21.7	24.6	-2.9	-13.1	0.09	*	23.3	-1.3	-5.4	0.07	*	-55.8
Education of head of household														
Less than high school diploma	9,424	20,070	8.0	9.7	-1.8	-21.9	0.06	*	8.6	-1.1	-12.8	0.06	*	-37.1
High school diploma	24,931	41,243	22.7	22.0	0.8	3.3	0.08	*	21.9	-0.1	-0.3	0.08		-90.6
Some college	23,669	40,228	21.7	21.6	0.1	0.4	0.08		22.0	0.4	1.6	0.08	*	304.7
Bachelor's degree	17,994	26,596	17.0	14.8	2.2	12.9	0.08	*	16.1	1.3	8.1	0.07	*	-40.3
Graduate degree	11,734	16,842	11.2	9.5	1.7	15.2	0.05	*	10.4	0.8	8.2	0.05	*	-50.2
Missing	21,226	42,432	19.4	22.4	-3.0	-15.4	0.09	*	21.0	-1.3	-6.4	0.07	*	-55.1
Household income														
Under \$50,000	42,173	76,912	37.6	39.8	-2.2	-5.7	0.09	*	38.4	-1.3	-3.5	0.09	*	-38.3
\$50,000 to \$74,999	17,967	29,392	16.5	15.7	0.7	4.5	0.07	*	16.3	0.6	3.7	0.07	*	-19.1
\$75,000 to \$99,999	15,170	23,635	14.2	12.9	1.2	8.8	0.06	*	13.7	0.8	5.7	0.06	*	-37.1
\$100,000 to \$124,999	3,765	6,227	3.5	3.4	0.1	2.7	0.04	*	3.5	#	1.0	0.04		-64.4
\$125,000 or higher	23,458	35,663	22.4	20.1	2.3	10.5	0.07	*	21.3	1.2	5.8	0.07	*	-47.6
Missing	6,445	15,582	5.8	8.1	-2.3	-39.3	0.06	*	6.7	-1.3	-19.5	0.06	*	-42.0

See notes at end of table

**Table 8-4. Estimates of unit nonresponse bias for various sample characteristics from the NHES:2019 screener—Continued**

Characteristic	Unweighted counts		Percentages estimated with base weights					Percentages estimated with nonresponse-adjusted weights						
	Respondents	Eligible sample	Percent of respondents	Percent of eligible sample	Estimated bias	Percent relative bias	Standard error of bias	Percent of respondents	Estimated bias	Percent relative bias	Standard error of bias	Percent change in bias		
Home tenure														
Own	79,547	120,750	74.2	66.1	8.0	10.9	0.11	*	70.5	4.4	6.2	0.08	*	-45.9
Rent	17,635	38,785	15.2	19.4	-4.2	-27.5	0.08	*	17.2	-2.2	-12.7	0.07	*	-47.7
Missing	11,796	27,876	10.6	14.5	-3.9	-36.4	0.08	*	12.3	-2.2	-17.6	0.07	*	-44.0
Number of adults in household														
1	47,740	89,286	43.2	46.9	-3.7	-8.6	0.10	*	45.7	-1.2	-2.6	0.07	*	-67.5
2	36,025	52,518	33.7	28.9	4.8	14.3	0.09	*	30.9	2.0	6.5	0.07	*	-58.6
3	10,022	14,400	9.3	7.8	1.5	15.7	0.06	*	8.4	0.6	6.8	0.04	*	-61.0
4 or more	3,216	4,759	2.9	2.5	0.4	13.5	0.03	*	2.7	0.2	5.8	0.03	*	-60.8
Missing	11,975	26,448	10.9	13.9	-3.0	-27.2	0.07	*	12.4	-1.5	-12.2	0.06	*	-49.0
Household flagged on frame as having children in the ECPP-eligible age range <sup>2</sup>														
No	96,646	165,654	88.8	88.6	0.2	0.2	0.06	*	88.6	#	#	0.06		-79.7
Yes	12,332	21,757	11.2	11.4	-0.2	-1.9	0.06	*	11.4	#	-0.4	0.06		-79.7
Household flagged on frame as having children in the PFI-eligible age range <sup>3</sup>														
No	86,639	146,562	79.8	78.7	1.1	1.4	0.07	*	79.2	0.5	0.6	0.07	*	-56.4
Yes	22,339	40,849	20.2	21.3	-1.1	-5.4	0.07	*	20.8	-0.5	-2.3	0.07	*	-56.4

See notes at end of table

**Table 8-4. Estimates of unit nonresponse bias for various sample characteristics from the NHES:2019 screener—Continued**

Characteristic	Unweighted counts		Percentages estimated with base weights					Percentages estimated with nonresponse-adjusted weights				
	Respondents	Eligible sample	Percent of respondents	Percent of eligible sample	Estimated bias	Percent relative bias	Standard error of bias	Percent of respondents	Estimated bias	Percent relative bias	Standard error of bias	Percent change in bias
Language spoken at home												
English	82,865	133,238	77.6	73.3	4.3	5.6	0.10 *	75.5	2.3	3.0	0.09 *	-48.1
Spanish	7,494	17,256	5.5	7.4	-1.9	-34.0	0.05 *	6.4	-1.0	-15.1	0.05 *	-48.4
A language other than English or Spanish	4,248	7,293	4.0	4.0	#	-0.7	0.04	4.0	#	0.2	0.04	-76.5
Missing	14,371	29,624	12.9	15.4	-2.4	-18.9	0.08 *	14.1	-1.3	-9.2	0.08 *	-47.1
Route type												
Street	88,417	144,048	81.8	77.8	4.0	4.9	0.08 *	79.8	2.0	2.5	0.09 *	-50.7
P.O. Box	712	1,282	0.7	0.7	#	-4.9	0.01 *	0.7	#	-1.8	0.02	-62.1
Rural route	42	83	#	#	#	-16.6	#	#	#	-14.4	#	-11.4
High rise	19,807	41,998	17.5	21.5	-4.0	-22.8	0.08 *	19.5	-2.0	-10.1	0.09 *	-50.6
Dwelling type												
Single unit	86,784	140,012	80.4	75.8	4.6	5.8	0.09 *	78.1	2.4	3.0	0.09 *	-49.1
Multi-unit	21,482	46,117	18.9	23.5	-4.6	-24.2	0.09 *	21.2	-2.3	-11.0	0.09 *	-49.0
Missing	712	1,282	0.7	0.7	#	-4.9	0.01 *	0.7	#	-1.8	0.02	-62.1
Vacancy status												
Flagged as vacant	962	2,213	0.8	1.1	-0.3	-33.2	0.02 *	1.0	-0.2	-17.0	0.03 *	-41.7
Not flagged as vacant	108,016	185,198	99.2	98.9	0.3	0.3	0.02 *	99.0	0.2	0.2	0.03 *	-41.7

See notes at end of table

**Table 8-4. Estimates of unit nonresponse bias for various sample characteristics from the NHES:2019 screener—Continued**

Characteristic	Unweighted counts		Percentages estimated with base weights					Percentages estimated with nonresponse-adjusted weights						
	Respondents	Eligible sample	Percent of respondents	Percent of eligible sample	Estimated bias	Percent relative bias	Standard error of bias	Percent of respondents	Estimated bias	Percent relative bias	Standard error of bias	Percent change in bias		
Seasonal address type														
Seasonal delivery	778	987	0.8	0.6	0.2	24.5	0.01	*	0.7	0.2	22.1	0.01	*	-12.3
Educational seasonal delivery	75	154	0.1	0.1	#	-22.4	0.01	*	0.1	#	-3.0	0.01		-84.0
No seasonal delivery	108,125	186,270	99.2	99.3	-0.2	-0.2	0.01	*	99.2	-0.2	-0.2	0.01	*	-5.1
Drop point address type														
Drop point or augmented drop point	1,345	2,955	1.2	1.5	-0.3	-26.0	0.02	*	1.2	-0.2	-19.7	0.02	*	-20.3
Not a drop point	107,633	184,456	98.8	98.5	0.3	0.3	0.02	*	98.8	0.2	0.2	0.02	*	-20.3
Country or territory of origin														
U.S	83,890	134,429	78.7	74.1	4.6	5.9	0.09	*	76.5	2.4	3.2	0.08	*	-47.7
Mexico	6,983	15,588	5.3	6.9	-1.6	-29.8	0.05	*	6.1	-0.8	-13.4	0.05	*	-48.3
Puerto Rico	1,392	2,793	1.2	1.4	-0.2	-16.8	0.02	*	1.3	-0.1	-7.6	0.02	*	-51.1
Other	2,341	4,975	1.9	2.3	-0.4	-22.2	0.03	*	2.1	-0.2	-10.6	0.03	*	-47.1
Missing	14,372	29,626	12.9	15.4	-2.4	-18.9	0.08	*	14.1	-1.3	-9.2	0.08	*	-47.1

See notes at end of table

**Table 8-4. Estimates of unit nonresponse bias for various sample characteristics from the NHES:2019 screener—Continued**

Characteristic	Unweighted counts		Percentages estimated with base weights					Percentages estimated with nonresponse-adjusted weights						
	Respondents	Eligible sample	Percent of respondents	Percent of eligible sample	Estimated bias	Percent relative bias	Standard error of bias	Percent of respondents	Estimated bias	Percent relative bias	Standard error of bias	Percent change in bias		
Experimental treatments <sup>a</sup>														
Baseline	20,980	36,698	19.3	19.6	-0.3	-1.7	0.07	*	19.3	-0.3	-1.5	0.07	*	-12.5
Targeted mailing	7,617	13,484	7.0	7.2	-0.2	-2.7	0.05	*	7.0	-0.2	-2.8	0.05	*	4.6
Updated sequential mixed mode														
Opt-out screener	5,319	9,108	4.9	4.9	#	0.5	0.04		4.9	#	0.7	0.04		22.7
No advance letter*FedEx 2nd	3,998	7,129	3.7	3.8	-0.1	-3.3	0.04	*	3.7	-0.1	-3.1	0.04	*	-7.2
Advance letter*FedEx 2nd	4,029	7,072	3.7	3.8	-0.1	-2.1	0.04	*	3.7	-0.1	-2.1	0.04	*	-2.5
Advance mailing campaign*FedEx 2nd	4,001	7,078	3.7	3.8	-0.1	-2.7	0.04	*	3.7	-0.1	-2.7	0.04	*	-0.7
No advance letter*FedEx 4th	3,930	7,164	3.6	3.8	-0.2	-5.5	0.03	*	3.6	-0.2	-5.5	0.03	*	-0.4
Advance letter*FedEx 4th	3,928	7,103	3.6	3.8	-0.2	-5.1	0.03	*	3.6	-0.2	-5.5	0.04	*	5.8
Advance mailing campaign*FedEx 4th	4,002	7,075	3.7	3.8	-0.1	-2.7	0.04	*	3.7	-0.1	-2.7	0.04	*	3.1
No advance letter*FedEx modeled	3,921	7,119	3.6	3.8	-0.2	-5.1	0.04	*	3.6	-0.2	-5.1	0.04	*	0.2
Advance letter*FedEx modeled	4,118	7,083	3.7	3.8	#	-0.7	0.03		3.7	#	-0.8	0.04		12.3
Advance mailing campaign*FedEx modeled	4,012	7,076	3.7	3.8	-0.1	-2.3	0.04	*	3.7	-0.1	-2.2	0.04	*	-2.6
Choice plus														
\$10 incentive for web or phone response	13,914	22,038	12.7	11.8	1.0	7.5	0.05	*	12.7	1.0	7.8	0.05	*	4.1
\$20 incentive for web or phone response	3,555	5,529	3.3	2.9	0.3	9.3	0.03	*	3.3	0.3	10.0	0.03	*	8.6
Modeled mode	19,341	32,974	17.8	17.6	0.2	0.9	0.07	*	17.7	0.1	0.3	0.08		-65.7
Paper only	2,313	3,681	2.1	2.0	0.1	6.9	0.03	*	2.1	0.2	7.1	0.03	*	3.2

See notes at end of table

**Table 8-4. Estimates of unit nonresponse bias for various sample characteristics from the NHES:2019 screener—Continued**

Characteristic	Unweighted counts		Percentages estimated with base weights					Percentages estimated with nonresponse-adjusted weights						
	Respondents	Eligible sample	Percent of respondents	Percent of eligible sample	Estimated bias	Percent relative bias	Standard error of bias	Percent of respondents	Estimated bias	Percent relative bias	Standard error of bias	Percent change in bias		
Census Low Response Score (block group, ACS 2012-2016) <sup>5</sup>														
First quartile	32,882	46,752	32.7	27.7	5.0	15.3	0.08	*	29.7	2.0	6.8	0.07	*	-59.3
Second quartile	30,257	47,156	29.2	27.1	2.2	7.4	0.08	*	28.4	1.3	4.6	0.07	*	-39.9
Third quartile	25,334	45,964	22.5	24.1	-1.6	-7.0	0.10	*	23.5	-0.5	-2.2	0.10	*	-67.6
Fourth quartile	19,934	46,535	15.1	20.7	-5.6	-37.0	0.08	*	17.8	-2.8	-15.8	0.07	*	-49.5
Missing	571	1,004	0.5	0.5	#	-2.3	0.01		0.5	#	-1.8	0.01		-22.2
Percent of persons without a high school diploma (block group, ACS 2012-2016)														
First quartile	31,401	46,926	31.1	27.6	3.5	11.1	0.08	*	28.8	1.2	4.1	0.05	*	-66.1
Second quartile	29,452	46,823	28.2	26.5	1.7	6.0	0.09	*	27.1	0.6	2.0	0.07	*	-67.4
Third quartile	26,584	46,759	24.1	24.8	-0.8	-3.1	0.08	*	24.7	-0.1	-0.6	0.06	*	-80.6
Fourth quartile	21,504	46,831	16.6	21.0	-4.4	-26.5	0.07	*	19.4	-1.6	-8.1	0.05	*	-64.1
Missing	37	72	#	#	#	-13.1	#		#	#	-12.4	#		-5.2

See notes at end of table

**Table 8-4. Estimates of unit nonresponse bias for various sample characteristics from the NHES:2019 screener—Continued**

Characteristic	Unweighted counts		Percentages estimated with base weights					Percentages estimated with nonresponse-adjusted weights						
	Respondents	Eligible sample	Percent of respondents	Percent of eligible sample	Estimated bias	Percent relative bias	Standard error of bias	Percent of respondents	Estimated bias	Percent relative bias	Standard error of bias	Percent change in bias		
Percent of persons who are Black (block group, ACS 2012-2016)														
First quartile	30,176	46,986	29.4	26.9	2.5	8.5	0.08	*	28.2	1.3	4.6	0.08	*	-48.1
Second quartile	29,436	46,723	28.4	26.5	1.9	6.8	0.09	*	27.6	1.2	4.2	0.09	*	-40.3
Third quartile	26,815	46,815	25.1	25.7	-0.6	-2.4	0.09	*	25.5	-0.2	-0.8	0.09	*	-65.9
Fourth quartile	22,514	46,819	17.1	20.9	-3.8	-22.5	0.08	*	18.7	-2.3	-12.1	0.08	*	-41.4
Missing	37	68	#	#	#	-7.4	#	#	#	#	-6.7	#	#	-9.2

\* Indicates a statistically significant difference ( $p < .05$ , Student's  $t$  test).

# Rounds to zero.

<sup>1</sup>Northeast includes Pennsylvania, New York, New Jersey, Connecticut, Rhode Island, Massachusetts, Vermont, New Hampshire, and Maine. South includes Florida, Georgia, South Carolina, North Carolina, Virginia, District of Columbia, Maryland, Delaware, West Virginia, Alabama, Mississippi, Tennessee, Kentucky, Arkansas, Louisiana, Texas, and Oklahoma. Midwest includes North Dakota, South Dakota, Nebraska, Kansas, Missouri, Iowa, Minnesota, Wisconsin, Illinois, Indiana, Michigan, and Ohio. West includes New Mexico, Colorado, Wyoming, Montana, Idaho, Utah, Arizona, Nevada, Washington, Oregon, California, Hawaii, and Alaska.

<sup>2</sup>Indicates whether the household contains children ages 6 or under, based on flags available on the vendor frame.

<sup>3</sup>Indicates whether the household contains children ages 4 through 18, based on flags available on the vendor frame.

<sup>4</sup>For additional information on the NHES:2019 experimental treatments, refer to chapter 2 (sample design).

<sup>5</sup>The Low Response Score is a variable assigned by the U.S. Census Bureau that indicates the expected difficulty of obtaining responses from a given neighborhood, based on response behavior to the 2010 Decennial Census. Higher values of the Low Response Score correspond to lower expected response rates.

NOTE: Details may not sum to totals because of rounding. The eligible sample for the screener consists of all sampled addresses except those found to be undeliverable or nonresidential. The estimates in this table were produced solely for the purpose of evaluating nonresponse bias and are not official statistics. ACS is American Community Survey.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Survey Program (NHES) of 2019.

**Table 8-5. Estimates of unit nonresponse bias for various sample characteristics from the NHES:2019 PFI topical survey**

Characteristic	Unweighted counts		Percentages estimated with base weights					Percentages estimated with nonresponse-adjusted weights						
	Respondents	Eligible sample	Percent of respondents	Percent of eligible sample	Estimated bias	Percent relative bias	Standard error of bias	Percent of respondents	Estimated bias	Percent relative bias	Standard error of bias	Percent change in bias		
<b>Total</b>														
Race/ethnicity stratum														
25% or more Black	2,287	2,861	10.8	11.7	-0.8	-7.8	0.15	*	11.5	-0.2	-1.5	0.08	*	-79.7
40% or more Hispanic and not 25% or more Black	2,176	2,718	11.1	11.7	-0.6	-5.4	0.15	*	11.6	-0.1	-0.7	0.16		-86.4
Other	11,983	13,893	78.1	76.6	1.4	1.9	0.21	*	76.9	0.3	0.3	0.16		-82.5
Tract poverty rate														
20 percent or higher	3,403	4,249	20.3	21.6	-1.4	-6.9	0.20	*	21.0	-0.6	-3.1	0.21	*	-54.0
Below 20 percent	13,043	15,223	79.7	78.4	1.4	1.8	0.20	*	79.0	0.6	0.8	0.21	*	-54.0
Language of screener response														
English	15,958	18,797	96.7	96.1	0.6	0.6	0.10	*	96.2	0.1	0.1	0.11		-91.0
Spanish	488	675	3.3	3.9	-0.6	-17.4	0.10	*	3.8	-0.1	-1.4	0.11		-91.0
Census region <sup>1</sup>														
Northeast	2,752	3,309	17.1	17.3	-0.2	-1.3	0.18		17.3	#	-0.1	0.19		-91.4
South	6,060	7,285	35.6	36.2	-0.6	-1.6	0.21	*	35.9	-0.3	-0.8	0.23		-46.1
Midwest	3,712	4,288	24.0	23.4	0.5	2.2	0.20	*	23.6	0.2	0.7	0.21		-70.5
West	3,922	4,590	23.4	23.1	0.2	1.1	0.19		23.3	0.2	0.7	0.20		-33.7
Topical incentive level (noncontingent) <sup>2</sup>														
\$0	12,172	12,972	74.1	66.4	7.7	10.4	0.27	*	66.4	#	#	#		-100.0
\$5	928	1,284	5.5	6.4	-0.9	-15.7	0.11	*	6.4	#	#	#		-100.0
\$15	3,346	5,216	20.3	27.2	-6.8	-33.6	0.27	*	27.2	#	#	#		-100.0

See notes at end of table

**Table 8-5. Estimates of unit nonresponse bias for various sample characteristics from the NHES:2019 PFI topical survey—Continued**

Characteristic	Unweighted counts		Percentages estimated with base weights					Percentages estimated with nonresponse-adjusted weights				
	Respondents	Eligible sample	Percent of respondents	Percent of eligible sample	Estimated bias	Percent relative bias	Standard error of bias	Percent of respondents	Estimated bias	Percent relative bias	Standard error of bias	Percent change in bias
Ability to match address to phone number												
Phone number available	12,136	14,307	72.2	71.9	0.3	0.4	0.22	72.1	0.2	0.2	0.22	-40.6
No phone number available	4,310	5,165	27.8	28.1	-0.3	-1.0	0.22	27.9	-0.2	-0.6	0.22	-40.6
Marital status of head of household												
Single	3,621	4,488	21.8	22.9	-1.1	-5.2	0.18 *	22.2	-0.7	-3.2	0.20 *	-37.3
Married	11,375	13,219	68.9	67.4	1.5	2.2	0.21 *	68.4	1.0	1.4	0.22 *	-35.4
Missing	1,450	1,765	9.3	9.7	-0.4	-3.9	0.15 *	9.4	-0.3	-2.7	0.16	-29.6
Ethnicity of head of household												
White	8,898	10,287	54.2	52.8	1.4	2.5	0.22 *	53.6	0.8	1.5	0.22 *	-41.4
Black	1,478	1,839	7.9	8.5	-0.5	-6.5	0.14 *	8.2	-0.3	-3.1	0.14	-50.1
Hispanic	2,193	2,733	13.6	14.2	-0.6	-4.5	0.17 *	14.0	-0.2	-1.7	0.17	-62.0
Asian or Pacific Islander	905	1,046	5.3	5.2	0.2	3.0	0.08 *	5.3	0.1	2.1	0.09	-30.6
Other	32	40	0.2	0.2	#	-7.0	0.02	0.2	#	4.2	0.03	-33.9
Missing	2,940	3,527	18.7	19.1	-0.4	-2.1	0.19 *	18.7	-0.4	-2.3	0.20 *	10.6

See notes at end of table

**Table 8-5. Estimates of unit nonresponse bias for various sample characteristics from the NHES:2019 PFI topical survey—Continued**

Characteristic	Unweighted counts		Percentages estimated with base weights					Percentages estimated with nonresponse-adjusted weights						
	Respondents	Eligible sample	Percent of respondents	Percent of eligible sample	Estimated bias	Percent relative bias	Standard error of bias	Percent of respondents	Estimated bias	Percent relative bias	Standard error of bias	Percent change in bias		
Education of head of household														
Less than high school diploma	1,577	1,990	10.5	11.3	-0.7	-6.9	0.13	*	10.8	-0.4	-3.9	0.15	*	-41.7
High school diploma	2,844	3,435	15.9	16.2	-0.3	-1.7	0.15		16.2	#	0.3	0.16		-82.1
Some college	4,132	4,901	25.4	25.3	#	0.1	0.21		25.3	#	-0.1	0.23		-1.3
Bachelor's degree	3,416	3,896	20.8	19.9	0.9	4.3	0.15	*	20.4	0.5	2.5	0.16	*	-43.1
Graduate degree	1,939	2,197	11.2	10.7	0.5	4.1	0.12	*	11.0	0.3	2.6	0.13	*	-37.5
Missing	2,538	3,053	16.3	16.6	-0.4	-2.3	0.18	*	16.3	-0.4	-2.4	0.19	*	2.1
Household income														
Under \$50,000	4,954	6,083	30.2	31.5	-1.2	-4.1	0.22	*	31.0	-0.5	-1.5	0.23	*	-62.2
\$50,000 to \$74,999	2,475	2,959	15.1	15.3	-0.2	-1.2	0.12		15.0	-0.2	-1.6	0.13		33.2
\$75,000 to \$99,999	2,717	3,149	16.7	16.2	0.5	3.1	0.15	*	16.5	0.4	2.3	0.16	*	-26.0
\$100,000 to \$124,999	435	519	2.8	2.9	#	-1.6	0.08		2.8	-0.1	-3.6	0.08		115.9
\$125,000 or higher	5,204	5,939	31.0	29.7	1.3	4.2	0.18	*	30.4	0.7	2.4	0.19	*	-44.7
Missing	661	823	4.2	4.6	-0.3	-8.2	0.12	*	4.3	-0.3	-6.7	0.12	*	-17.0

See notes at end of table

**Table 8-5. Estimates of unit nonresponse bias for various sample characteristics from the NHES:2019 PFI topical survey—Continued**

Characteristic	Unweighted counts		Percentages estimated with base weights					Percentages estimated with nonresponse-adjusted weights				
	Respondents	Eligible sample	Percent of respondents	Percent of eligible sample	Estimated bias	Percent relative bias	Standard error of bias	Percent of respondents	Estimated bias	Percent relative bias	Standard error of bias	Percent change in bias
Home tenure												
Own	12,503	14,548	74.3	72.7	1.6	2.1	0.21 *	73.7	1.0	1.4	0.20 *	-35.8
Rent	2,603	3,246	17.0	17.9	-1.0	-5.7	0.18 *	17.4	-0.5	-2.7	0.19 *	-50.7
Missing	1,340	1,678	8.8	9.4	-0.6	-7.1	0.15 *	8.8	-0.5	-6.1	0.16 *	-12.4
Age of sampled child (reported on screener)												
0 to 4 years	36	70	0.3	0.4	-0.1	-46.6	0.04 *	0.3	-0.1	-44.2	0.04 *	-3.5
5-6 years	1,675	1,951	12.1	11.7	0.4	3.1	0.12 *	12.0	0.3	2.5	0.14 *	-18.9
7-8 years	1,993	2,336	14.7	14.6	0.1	0.5	0.17	14.6	#	0.1	0.19	-86.8
9-10 years	2,145	2,599	14.8	15.2	-0.4	-3.0	0.15 *	15.0	-0.3	-1.7	0.16	-43.1
11-12 years	2,436	2,890	15.8	15.7	0.1	0.3	0.15	15.8	0.1	0.4	0.18	18.5
13-14 years	2,629	3,083	15.3	15.2	0.1	0.7	0.15	15.3	#	0.2	0.16	-63.9
15-16 years	3,093	3,649	15.7	15.7	#	0.1	0.15	15.7	#	#	0.17	-90.1
17-18 years	2,309	2,696	10.6	10.5	0.2	1.6	0.10	10.6	0.2	1.4	0.11	-10.2
19-20 years	66	88	0.3	0.4	#	-12.2	0.02	0.3	#	-11.3	0.02	-6.4
Not reported	64	110	0.4	0.6	-0.2	-47.6	0.05 *	0.4	-0.2	-38.1	0.05 *	-14.4
Gender of sampled child (reported on screener)												
Male	8,484	10,049	51.2	51.0	0.2	0.4	0.22	51.2	0.1	0.3	0.24	-25.8
Female	7,907	9,326	48.4	48.3	0.1	0.1	0.21	48.3	#	0.1	0.25	-25.3
Not reported	55	97	0.4	0.6	-0.2	-58.3	0.06 *	0.5	-0.2	-37.7	0.06 *	-25.7

See notes at end of table

**Table 8-5. Estimates of unit nonresponse bias for various sample characteristics from the NHES:2019 PFI topical survey—Continued**

Characteristic	Unweighted counts		Percentages estimated with base weights					Percentages estimated with nonresponse-adjusted weights						
	Respondents	Eligible sample	Percent of respondents	Percent of eligible sample	Estimated bias	Percent relative bias	Standard error of bias	Percent of respondents	Estimated bias	Percent relative bias	Standard error of bias	Percent change in bias		
Enrollment status of sampled child (reported on screener)														
Homeschooled	703	919	3.8	4.2	-0.4	-9.8	0.08	*	4.1	-0.1	-2.7	0.08	-70.7	
Public or private school, or preschool	15,643	18,357	95.5	94.6	0.8	0.9	0.10	*	95.0	0.4	0.4	0.11	*	-56.9
Other, not in school, or not reported	100	196	0.7	1.2	-0.4	-60.5	0.07	*	0.9	-0.2	-25.9	0.07	*	-45.4
Grade of sampled child (reported on screener)														
Kindergarten/pre-K	1,036	1,222	7.3	7.3	0.1	0.8	0.10		7.2	#	-0.4	0.11	-55.7	
1st-2nd grade	1,982	2,330	14.7	14.5	0.2	1.1	0.16		14.6	0.1	0.6	0.18	-48.4	
3rd-4th grade	2,070	2,467	14.9	15.0	-0.2	-1.3	0.14		15.0	-0.1	-0.6	0.13	-53.4	
5th-6th grade	2,337	2,785	15.2	15.2	#	#	0.17		15.2	#	0.3	0.18	1517.5	
7th-8th grade	2,536	2,973	15.4	15.2	0.2	1.0	0.17		15.2	#	#	0.17	-98.7	
9th-10th grade	2,928	3,431	15.6	15.5	0.1	0.8	0.16		15.5	#	-0.1	0.18	-85.0	
11th-12th grade	3,308	3,854	15.4	15.1	0.3	1.9	0.13	*	15.2	0.2	1.2	0.14	-38.2	
Other or not reported	249	410	1.6	2.2	-0.6	-38.8	0.09	*	2.0	-0.2	-8.9	0.11	-70.9	
Number of persons age 20 or younger in household (reported on screener)														
0	49	84	0.3	0.4	-0.1	-49.2	0.05	*	0.3	-0.1	-44.9	0.04	*	-6.0
1	5,771	6,853	17.8	17.7	0.1	0.4	0.12		17.9	0.2	1.0	0.13	163.7	
2	6,995	8,181	41.6	40.8	0.7	1.8	0.19	*	41.1	0.3	0.7	0.19	-62.4	
3	2,630	3,117	25.1	24.9	0.1	0.5	0.17		25.2	0.2	0.9	0.19	106.8	
4 or more	1,001	1,237	15.3	16.1	-0.8	-5.1	0.27	*	15.5	-0.6	-3.6	0.29	-28.3	

See notes at end of table

**Table 8-5. Estimates of unit nonresponse bias for various sample characteristics from the NHES:2019 PFI topical survey—Continued**

Characteristic	Unweighted counts		Percentages estimated with base weights					Percentages estimated with nonresponse-adjusted weights				
	Respondents	Eligible sample	Percent of respondents	Percent of eligible sample	Estimated bias	Percent relative bias	Standard error of bias	Percent of respondents	Estimated bias	Percent relative bias	Standard error of bias	Percent change in bias
Household reported ECPP-eligible child(ren) on screener												
No	15,113	17,837	80.1	79.5	0.6	0.7	0.25 *	79.8	0.3	0.4	0.26	-46.8
Yes	1,333	1,635	19.9	20.5	-0.6	-2.9	0.25 *	20.2	-0.3	-1.5	0.26	-46.8
Experimental treatments <sup>3</sup>												
Baseline	3,121	3,737	19.1	19.5	-0.4	-2.2	0.18 *	19.5	#	-0.3	0.20	-88.3
Targeted mailing	1,102	1,308	6.7	6.7	#	#	0.10	6.8	0.1	0.8	0.11	1544.9
Updated sequential mixed mode												
Opt-out screener	824	936	5.0	4.9	0.1	2.9	0.09	4.8	-0.1	-1.3	0.10	-58.2
No advance letter*FedEx 2nd	654	750	3.8	3.7	0.1	3.3	0.08	3.7	#	-0.2	0.09	-94.3
Advance letter*FedEx 2nd	623	708	3.9	3.7	0.2	4.7	0.07 *	3.7	#	-0.3	0.07	-94.8
Advance mailing campaign*FedEx 2nd	623	709	4.0	3.8	0.2	4.9	0.07 *	3.8	#	0.4	0.08	-92.1
No advance letter*FedEx 4th	567	677	3.5	3.5	#	-1.2	0.08	3.5	#	#	0.09	-98.6
Advance letter*FedEx 4th	622	734	3.8	3.8	#	0.8	0.08	3.8	#	0.4	0.08	-49.7
Advance mailing campaign*FedEx 4th	580	692	3.6	3.7	#	-1.3	0.10	3.6	#	-1.3	0.11	#
No advance letter*FedEx modeled	629	714	3.8	3.7	0.2	4.1	0.07 *	3.8	0.1	2.6	0.08	-36.9
Advance letter*FedEx modeled	623	730	3.8	3.7	0.1	1.9	0.07	3.7	#	-0.9	0.07	-56.3
Advance mailing campaign*FedEx modeled	604	704	3.5	3.5	#	-0.3	0.07	3.4	-0.1	-3.0	0.07	884.7

See notes at end of table

**Table 8-5. Estimates of unit nonresponse bias for various sample characteristics from the NHES:2019 PFI topical survey—Continued**

Characteristic	Unweighted counts		Percentages estimated with base weights					Percentages estimated with nonresponse-adjusted weights						
	Respondents	Eligible sample	Percent of respondents	Percent of eligible sample	Estimated bias	Percent relative bias	Standard error of bias	Percent of respondents	Estimated bias	Percent relative bias	Standard error of bias	Percent change in bias		
Experimental treatments														
Choice plus														
\$10 incentive for web or phone response	2,174	2,570	12.9	12.9	#	-0.1	0.13	12.8	-0.1	-0.4	0.12	480.3		
\$20 incentive for web or phone response	584	671	3.6	3.4	0.2	5.0	0.06	*	3.5	0.1	2.2	0.06	-57.0	
Modeled mode	2,815	3,418	17.1	17.4	-0.3	-1.6	0.14		17.5	0.1	0.8	0.18	-50.9	
Paper only	301	414	2.0	2.3	-0.3	-14.4	0.08	*	2.2	#	-1.2	0.07	-90.4	
Mode of screener response and initial topical contact <sup>4</sup>														
Responded to screener by web or phone, did not receive topical mailings	12,172	12,956	74.1	66.4	7.8	10.5	0.27	*	66.4	0.1	0.1	0.02	*	-99.1
Responded to screener by web or phone, received topical mailing(s)	10	40	0.1 <sup>!</sup>	0.2	-0.1	-208.7	0.03	*	0.1 <sup>!</sup>	-0.1	-149.1	0.03	*	-11.5
Offered web screener, responded to screener by paper, received topical mailing(s)	3,755	5,765	22.8	29.9	-7.1	-31.3	0.28	*	30.1	0.2	0.7	0.08	*	-97.0
Not offered a web screener, responded to screener by paper, received topical mailing(s)	509	711	3.0	3.6	-0.5	-17.3	0.10	*	3.4	-0.2	-4.7	0.08	*	-69.6

\* Indicates a statistically significant difference ( $p < .05$ , Student's  $t$  test).

# Rounds to zero.

! Interpret data with caution; coefficient of variation is between 30 and 50 percent.

<sup>1</sup> Northeast includes Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont. South includes Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia. Midwest includes Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin. West includes Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington and Wyoming.

<sup>2</sup> Households that completed a web screener and proceeded directly to the web topical did not receive a noncontingent topical incentive. All other households received \$5 with the first topical mailing, unless they responded to the screener after the third or fourth mailing wave, in which case they received \$15 with the first topical mailing.

<sup>3</sup> For additional information on the NHES:2019 experimental treatments, refer to chapter 2 (sample design).

<sup>4</sup> Households that responded to the screener by web or phone, and then completed the topical by web or phone, did not receive topical mailings. Households that responded to the screener by web, but did not immediately complete the web topical, received up to two topical mailings encouraging web response, followed by up to two mailings containing the paper version of the topical. Households that responded to the screener by paper, as well as those that responded to the screener by phone and did not immediately complete the topical over the phone, received up to four mailings containing the paper version of the topical.

NOTE: Details may not sum to totals because of rounding. The eligible PFI sample consists of children whose households responded to the screener and who were sampled for the PFI, except those who were later found to be outside the target population for the PFI. The estimates in this table were produced solely for the purpose of evaluating nonresponse bias and are not official statistics. PFI = Parent and Family Involvement in Education.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Survey Program (NHES) of 2019.

**Table 8-6. Percentage of households reporting homeschooled children on the screener, eligible PFI sample vs. PFI respondents**

Characteristic	Unweighted counts		Percentages estimated with base weights					Percentages estimated with nonresponse-adjusted weights					
	Respondents	Eligible sample	Percent of respondents	Percent of eligible sample	Estimated bias	Percent relative bias	Standard error of bias	Percent of respondents	Estimated bias	Percent relative bias	Standard error of bias	Percent change in bias	
Household reported homeschooled child(ren) on screener													
No	15,688	18,488	95.5	95.1	0.4	0.4	0.09	*	95.2	0.1	0.1	0.10	-72.8
Yes	758	984	4.5	4.9	-0.4	-8.3	0.09	*	4.8	-0.1	-2.1	0.10	-72.8

\* Indicates a statistically significant difference ( $p < .05$ , Student's  $t$  test).

NOTE: Details may not sum to totals because of rounding. The eligible PFI sample consists of children whose households responded to the screener and who were sampled for the PFI, except those who were later found to be outside the target population for the PFI. The estimates in this table were produced solely for the purpose of evaluating nonresponse bias and are not official statistics. PFI = Parent and Family Involvement in Education.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Survey Program (NHES) of 2019.

**Table 8-7. Estimates of unit nonresponse bias for various sample characteristics from the NHES:2019 ECPP topical survey**

Characteristic	Unweighted counts		Percentages estimated with base weights					Percentages estimated with nonresponse-adjusted weights				
	Respondents	Eligible sample	Percent of respondents	Percent of eligible sample	Estimated bias	Percent relative bias	Standard error of bias	Percent of respondents	Estimated bias	Percent relative bias	Standard error of bias	Percent change in bias
<b>Total</b>												
Race/ethnicity stratum												
25% or more Black	1,043	1,250	11.6	12.0	-0.4	-3.8	0.18 *	12.2	0.2	1.4	0.14	-60.7
40% or more Hispanic and not 25% or more Black	980	1,177	10.7	11.1	-0.4	-3.8	0.15 *	11.1	#	-0.1	0.17	-96.5
Other	5,069	5,810	77.7	76.9	0.8	1.1	0.22 *	76.7	-0.2	-0.2	0.16	-81.3
Tract poverty rate												
20 percent or higher	1,584	1,899	21.3	22.4	-1.0	-4.9	0.25 *	22.0	-0.4	-1.8	0.25	-62.8
Below 20 percent	5,508	6,338	78.7	77.6	1.0	1.3	0.25 *	78.0	0.4	0.5	0.25	-62.8
Language of screener response												
English	6,897	7,987	97.2	97.0	0.2	0.2	0.09 *	96.7	-0.3	-0.3	0.14 *	33.7
Spanish	195	250	2.8	3.0	-0.2	-8.7	0.09 *	3.3	0.3	9.7	0.14 *	33.7
Census region <sup>1</sup>												
Northeast	1,183	1,369	17.0	16.8	0.2	1.0	0.17	17.1	0.3	1.6	0.21	60.4
South	2,541	2,981	34.6	34.9	-0.4	-1.0	0.29	34.9	#	-0.1	0.32	-93.8
Midwest	1,650	1,913	24.2	24.3	-0.2	-0.6	0.24	23.7	-0.6	-2.5	0.28 *	280.2
West	1,718	1,974	24.3	23.9	0.3	1.4	0.22	24.3	0.3	1.4	0.26	-0.2

See notes at end of table

**Table 8-7. Estimates of unit nonresponse bias for various sample characteristics from the NHES:2019 ECPP topical survey—Continued**

Characteristic	Unweighted counts		Percentages estimated with base weights					Percentages estimated with nonresponse-adjusted weights						
	Respondents	Eligible sample	Percent of respondents	Percent of eligible sample	Estimated bias	Percent relative bias	Standard error of bias	Percent of respondents	Estimated bias	Percent relative bias	Standard error of bias	Percent change in bias		
Topical incentive level (noncontingent) <sup>2</sup>														
\$0	5,463	5,792	76.8	69.8	7.1	9.2	0.31	*	69.7	#	-0.1	0.02	-99.4	
\$5	281	431	3.7	5.0	-1.2	-32.5	0.13	*	4.8	-0.1	-2.5	0.17	-90.2	
\$15	1,348	2,014	19.4	25.3	-5.9	-30.2	0.32	*	25.4	0.2	0.6	0.18	-97.3	
Ability to match address to phone number														
Phone number available	4,389	5,097	61.7	61.5	0.2	0.4	0.26		62.1	0.6	1.0	0.27	*	144.0
No phone number available	2,703	3,140	38.3	38.5	-0.2	-0.6	0.26		37.9	-0.6	-1.6	0.27	*	144.0
Marital status of head of household														
Single	2,044	2,407	28.3	28.8	-0.5	-1.7	0.24	*	28.5	-0.3	-0.9	0.27		-44.7
Married	4,183	4,816	59.8	59.2	0.6	1.1	0.26	*	59.7	0.5	0.8	0.29		-26.3
Missing	865	1,014	11.9	12.0	-0.2	-1.3	0.16		11.8	-0.2	-1.7	0.18		29.9
Ethnicity of head of household														
White	3,728	4,255	53.7	52.8	0.9	1.7	0.25	*	53.1	0.3	0.5	0.28		-68.3
Black	597	720	7.6	8.0	-0.3	-4.5	0.14	*	7.9	-0.1	-1.4	0.17		-67.7
Hispanic	919	1,101	12.5	13.0	-0.5	-3.8	0.18	*	13.0	#	0.3	0.21		-91.4
Asian or Pacific Islander	419	485	5.9	5.8	0.1	1.1	0.12		5.8	#	-0.2	0.13		-85.5
Other	18	22	0.3	0.3	#	1.6	0.03		0.3	#	8.6	0.04		461.3
Missing	1,411	1,654	20.0	20.2	-0.2	-0.8	0.19		19.9	-0.2	-1.2	0.22		54.7

See notes at end of table

**Table 8-7. Estimates of unit nonresponse bias for various sample characteristics from the NHES:2019 ECPP topical survey—Continued**

Characteristic	Unweighted counts		Percentages estimated with base weights					Percentages estimated with nonresponse-adjusted weights				
	Respondents	Eligible sample	Percent of respondents	Percent of eligible sample	Estimated bias	Percent relative bias	Standard error of bias	Percent of respondents	Estimated bias	Percent relative bias	Standard error of bias	Percent change in bias
Education of head of household												
Less than high school diploma	755	904	10.7	11.0	-0.3	-2.4	0.17	11.0	#	0.3	0.19	-87.1
High school diploma	1,170	1,372	16.3	16.7	-0.3	-1.9	0.25	16.6	-0.1	-0.4	0.22	-78.2
Some college	1,774	2,071	25.3	25.5	-0.2	-0.8	0.25	25.3	-0.2	-1.0	0.27	17.7
Bachelor's degree	1,358	1,523	19.2	18.5	0.7	3.8	0.16 *	18.9	0.4	2.2	0.20 *	-43.7
Graduate degree	798	918	10.8	10.7	0.1	1.1	0.14	10.7	#	-0.1	0.16	-95.3
Missing	1,237	1,449	17.6	17.7	-0.1	-0.4	0.18	17.6	-0.1	-0.7	0.19	79.1
Household income												
Under \$50,000	2,484	2,956	35.6	36.4	-0.8	-2.3	0.24 *	35.9	-0.6	-1.6	0.26 *	-31.5
\$50,000 to \$74,999	1,054	1,218	14.4	14.2	0.2	1.5	0.17	14.4	0.2	1.2	0.18	-22.1
\$75,000 to \$99,999	1,014	1,145	14.2	13.9	0.3	2.2	0.17	14.2	0.3	2.1	0.21	-3.6
\$100,000 to \$124,999	339	390	4.9	5.0	-0.1	-2.4	0.16	4.9	-0.1	-2.9	0.17	19.2
\$125,000 or higher	1,798	2,048	25.2	24.6	0.6	2.3	0.20 *	25.0	0.4	1.7	0.24	-27.4
Missing	403	480	5.7	5.9	-0.2	-3.1	0.14	5.7	-0.2	-3.3	0.15	7.7

See notes at end of table

**Table 8-7. Estimates of unit nonresponse bias for various sample characteristics from the NHES:2019 ECPP topical survey—Continued**

Characteristic	Unweighted counts		Percentages estimated with base weights					Percentages estimated with nonresponse-adjusted weights						
	Respondents	Eligible sample	Percent of respondents	Percent of eligible sample	Estimated bias	Percent relative bias	Standard error of bias	Percent of respondents	Estimated bias	Percent relative bias	Standard error of bias	Percent change in bias		
Home tenure														
Own	4,893	5,622	68.4	67.3	1.0	1.5	0.25	*	68.4	1.1	1.6	0.28	*	7.5
Rent	1,379	1,634	19.9	20.4	-0.5	-2.5	0.22	*	19.9	-0.5	-2.5	0.23	*	-0.4
Missing	820	981	11.7	12.2	-0.5	-4.6	0.22	*	11.6	-0.6	-5.3	0.23	*	14.9
Age of sampled child (reported on screener)														
0 years	1,392	1,589	19.3	19.0	0.3	1.7	0.17		19.1	0.2	0.9	0.19		-45.3
1 year	1,280	1,506	17.1	17.4	-0.3	-1.5	0.20		17.3	#	-0.1	0.21		-95.9
2 years	1,312	1,520	18.9	18.7	0.3	1.4	0.18		18.6	#	-0.1	0.19		-94.5
3 years	1,331	1,567	19.0	19.4	-0.3	-1.8	0.24		19.5	0.1	0.7	0.20		-58.2
4 years	1,310	1,499	18.9	18.7	0.2	1.3	0.20		18.6	-0.1	-0.4	0.18		-67.9
5-6 years	453	528	6.6	6.7	#	-0.7	0.14		6.6	-0.1	-0.8	0.14		22.5
Not reported	14	28	0.2	0.3	-0.2	-95.3	0.07	*	0.2	-0.2	-88.1	0.06	*	-4.0
Sex of sampled child (reported on screener)														
Male	3,625	4,203	51.4	51.3	0.1	0.2	0.27		51.5	0.1	0.3	0.31		50.4
Female	3,440	3,986	48.1	48.0	0.1	0.2	0.28		48.0	#	-0.1	0.31		-42.1
Not reported	27	48	0.5	0.6	-0.2	-39.7	0.06	*	0.5	-0.1	-17.9	0.07		-46.6

See notes at end of table

**Table 8-7. Estimates of unit nonresponse bias for various sample characteristics from the NHES:2019 ECPP topical survey—Continued**

Characteristic	Unweighted counts		Percentages estimated with base weights					Percentages estimated with nonresponse-adjusted weights				
	Respondents	Eligible sample	Percent of respondents	Percent of eligible sample	Estimated bias	Percent relative bias	Standard error of bias	Percent of respondents	Estimated bias	Percent relative bias	Standard error of bias	Percent change in bias
Enrollment status of sampled child (reported on screener)												
Homeschooled	55	65	1.5	1.6	-0.1	-3.6	0.12	1.5	#	-3.1	0.13	-13.4
Public or private school, or preschool	2,391	2,773	33.4	33.2	0.2	0.5	0.25	33.0	-0.2	-0.7	0.28	49.4
Other, not in school, or not reported	4,646	5,399	65.1	65.2	-0.1	-0.2	0.25	65.5	0.3	0.4	0.28	173.5
Grade of sampled child (reported on screener)												
Pre-K	2,358	2,745	33.5	33.7	-0.2	-0.5	0.24	33.3	-0.3	-0.9	0.27	83.5
Other or not reported	4,734	5,492	66.5	66.3	0.2	0.3	0.24	66.7	0.3	0.5	0.27	83.5
Number of persons age 20 or younger in household (reported on screener)												
0	9	19	0.1	0.2	-0.1	-126.2	0.04 *	0.1	-0.1	-101.8	0.04 *	-9.6
1	2,684	3,083	24.2	23.8	0.4	1.6	0.18 *	24.0	0.2	0.7	0.18	-56.4
2	2,699	3,126	41.8	41.3	0.4	1.1	0.22 *	41.5	0.2	0.4	0.23	-65.8
3	1,108	1,289	20.6	20.7	-0.1	-0.6	0.22	21.0	0.2	1.1	0.25	106.3
4 or more	592	720	13.3	13.9	-0.6	-4.6	0.24 *	13.5	-0.5	-3.4	0.23 *	-25.0

See notes at end of table

**Table 8-7. Estimates of unit nonresponse bias for various sample characteristics from the NHES:2019 ECPP topical survey—Continued**

Characteristic	Unweighted counts		Percentages estimated with base weights					Percentages estimated with nonresponse-adjusted weights					
	Respondents	Eligible sample	Percent of respondents	Percent of eligible sample	Estimated bias	Percent relative bias	Standard error of bias	Percent of respondents	Estimated bias	Percent relative bias	Standard error of bias	Percent change in bias	
Household reported PFI-eligible child(ren) on screener													
No	4,239	4,897	53.6	53.0	0.6	1.1	0.28	*	53.2	0.3	0.5	0.18	-57.0
Yes	2,853	3,340	46.4	47.0	-0.6	-1.3	0.28	*	46.8	-0.3	-0.5	0.18	-57.0
Experimental treatments <sup>3</sup>													
Baseline	1,382	1,623	19.7	20.0	-0.4	-1.8	0.22		20.0	#	#	0.24	-98.5
Targeted mailing	467	546	6.6	6.7	-0.1	-2.2	0.14		6.8	#	0.4	0.16	-81.3
Updated sequential mixed mode													
Opt-out screener	354	400	5.4	5.1	0.2	4.1	0.12		5.1	#	-0.2	0.11	-95.3
No advance letter*FedEx 2nd	252	286	3.6	3.4	0.2	4.9	0.07	*	3.5	0.1	1.7	0.09	-67.4
Advance letter*FedEx 2nd	263	292	3.5	3.3	0.2	4.7	0.07	*	3.4	#	1.3	0.08	-74.2
Advance mailing campaign*FedEx 2nd	242	275	3.5	3.4	0.1	1.8	0.10		3.3	-0.1	-1.8	0.11	-4.5
No advance letter*FedEx 4th	228	273	3.0	3.3	-0.3	-8.7	0.18		3.1	-0.2	-7.0	0.19	-18.4
Advance letter*FedEx 4th	267	301	3.8	3.7	0.1	3.1	0.09		3.8	0.1	2.5	0.10	-19.1
Advance mailing campaign*FedEx 4th	304	350	4.3	4.3	0.1	1.3	0.09		4.3	#	0.7	0.12	-47.1
No advance letter*FedEx modeled	260	295	3.6	3.5	0.1	2.8	0.09		3.5	#	-0.3	0.10	-88.1
Advance letter*FedEx modeled	291	328	4.1	3.9	0.1	3.3	0.09		3.9	#	-0.2	0.10	-94.4
Advance mailing campaign*FedEx modeled	288	324	4.3	4.2	0.2	4.3	0.09	*	4.2	0.1	1.6	0.10	-64.2
Choice plus													
\$10 incentive for web or phone response	981	1,137	13.7	13.7	#	#	0.18		13.4	-0.4	-2.7	0.19	22498.4
\$20 incentive for web or phone response	254	285	3.8	3.6	0.2	5.1	0.08	*	3.7	0.1	2.0	0.09	-62.1
Modeled mode	1,151	1,375	15.6	16.0	-0.4	-2.5	0.20		16.2	0.1	0.8	0.24	-67.4
Paper only	108	147	1.4	1.6	-0.3	-18.6	0.08	*	1.8	0.1	8.0	0.10	-44.4

See notes at end of table

**Table 8-7. Estimates of unit nonresponse bias for various sample characteristics from the NHES:2019 ECPP topical survey—Continued**

Characteristic	Unweighted counts		Percentages estimated with base weights					Percentages estimated with nonresponse-adjusted weights						
	Respondents	Eligible sample	Percent of respondents	Percent of eligible sample	Estimated bias	Percent relative bias	Standard error of bias	Percent of respondents	Estimated bias	Percent relative bias	Standard error of bias	Percent change in bias		
Mode of screener response and initial topical contact <sup>1</sup>														
Responded to screener by web or phone, did not receive topical mailings	5,463	5,789	76.8	69.7	7.1	9.3	0.32	*	69.7	#	#	#	-100.0	
Responded to screener by web or phone, received topical mailing(s)	5	26	0.1 <sup>!</sup>	0.3	-0.2	-303.5	0.05	*	0.1 <sup>!</sup>	-0.2	-204.9	0.06	*	-10.7
Offered web screener but responded to screener by paper, received topical mailing(s)	1,458	2,187	21.1	27.4	-6.4	-30.2	0.32	*	27.6	0.1	0.5	0.14		-97.9
Not offered a web screener, responded to screener by paper, received topical mailing(s)	166	235	2.0	2.6	-0.5	-26.5	0.11	*	2.6	0.1	2.0	0.13		-90.4

\* Indicates a statistically significant difference ( $p < .05$ , Student's  $t$  test).

# Rounds to zero.

! Interpret data with caution; coefficient of variation is between 30 and 50 percent.

<sup>1</sup> Northeast includes Pennsylvania, New York, New Jersey, Connecticut, Rhode Island, Massachusetts, Vermont, New Hampshire, and Maine. South includes Florida, Georgia, South Carolina, North Carolina, Virginia, District of Columbia, Maryland, Delaware, West Virginia, Alabama, Mississippi, Tennessee, Kentucky, Arizona, Louisiana, Texas, and Oklahoma. Midwest includes North Dakota, South Dakota, Nebraska, Kansas, Missouri, Iowa, Minnesota, Wisconsin, Illinois, Indiana, Michigan, and Ohio. West includes New Mexico, Colorado, Wyoming, Montana, Idaho, Utah, Arizona, Nevada, Washington, Oregon, California, Hawaii, and Alaska.

<sup>2</sup> Households that completed a web screener and proceeded directly to the web topical did not receive a noncontingent topical incentive. All other households received \$5 with the first topical mailing, unless they responded to the screener after the third or fourth mailing wave, in which case they received \$15 with the first topical mailing.

<sup>3</sup> For additional information on the NHES:2019 experimental treatments, refer to chapter 2 (sample design).

<sup>4</sup> Households that responded to the screener by web or phone, and then completed the topical by web or phone, did not receive topical mailings. Households that responded to the screener by web, but did not immediately complete the web topical, received up to two topical mailings encouraging web response, followed by up to two mailings containing the paper version of the topical. Households that responded to the screener by paper, as well as those that responded to the screener by phone and did not immediately complete the topical over the phone, received up to four mailings containing the paper version of the topical.

NOTE: Details may not sum to totals because of rounding. The eligible ECPP sample consists of children whose households responded to the screener and who were sampled for the ECPP, except those who were later found to be outside the target population for the ECPP. The estimates in this table were produced solely for the purpose of evaluating nonresponse bias and are not official statistics. ECPP = Early Childhood Program Participation.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019.

## 8.2.2 Comparison of Estimates Between Early and Late Responders

Under the continuum of resistance model of survey nonresponse (Olson 2013), households that respond after a small number of contact attempts are thought of as easy-to-reach households, whereas those that require a larger number of contact attempts are thought of as harder-to-reach households, and those that do not respond at all are thought of as the hardest-to-reach households. Under this framework, if significant differences occurred between easy-to-reach respondents and harder-to-reach respondents for a survey estimate, it suggests a relationship between the ease of contact and the estimate. This, in turn, suggests that additional differences in the estimate would be observed among the hardest-to-reach households—the nonrespondents—implying that the estimate is subject to unit nonresponse bias. The implicit assumption is that, because harder-to-reach households would likely have been nonrespondents had the additional contact attempts not been made, harder-to-reach households are more similar to nonresponding households than are easy-to-reach households (Lin and Schaeffer 1995).

The continuum of resistance model therefore implies that differences in an estimate between easy-to-reach and harder-to-reach respondents may be indicative of nonresponse bias in that estimate. As part of the NHES:2019 nonresponse bias analysis, base-weighted key survey estimates for each topical survey were compared between early screener responders and late screener responders, and between early topical responders and late topical responders. For the purpose of this analysis, early responders were defined as those that responded after the initial mailing or the first follow-up mailing. Late responders were defined as those that responded after the second or third follow-up mailing. Early topical responders included those who did not receive any topical mailings because they proceeded directly from the web screener to the web topical questionnaire.

A statistically significant difference of at least 1 percentage point in an estimate between early and late screener responders (i.e., between topical respondents who had responded to one of the first two screener mailings and those who had responded to one of the last two screener mailings) is interpreted as suggesting the potential for bias resulting from screener nonresponse. Similarly, a statistically significant difference of at least 1 percentage point between early and late topical responders (i.e., between topical respondents who had responded to one of the first two topical mailings and those who had responded to one of the last two topical mailings) is interpreted as suggesting the potential for bias resulting from topical nonresponse. Note that, under the two-phase mailing strategy used for the NHES, the timing of the topical response is independent of the timing of the screener response; a given respondent can be an early screener respondent but a late topical respondent, and vice versa.

Unlike the analysis discussed in section 8.2.1, this analysis uses only respondents to the NHES:2019 topical surveys; it does not require any information about nonrespondents. Thus, this analysis allows bias to be evaluated for key survey estimates, although its validity rests on the assumption that harder-to-reach respondents are similar to nonrespondents. It should be noted that the pool of late responders is relatively small for the topical surveys because completion of the screener and topical questionnaire

occurred at the same sitting for most web respondents, and the NHES:2019 collection invited most sample members to complete the questionnaire by web in the first and second survey contacts. Therefore, for some estimates, true differences between early and late responders may not be detected because of limited statistical power. On a related note, because a sequential mixed-mode data collection approach was used for the majority of households sampled for NHES:2019 (see chapter 3 on data collection), observed differences between early and late responders may partially reflect mode effects, rather than underlying differences between easy- and hard-to-reach responders. A final limitation of this analysis is that, although significant differences between early and late responders may be indicative of bias, the magnitude of the potential bias remains unknown.

For each estimate, the percentage relative difference (PRD) was calculated to provide a measure of the difference between early and late responders that is independent of the distribution of a particular variable:

$$PRD = \frac{p_l - p_e}{p_e}$$

where

$p_l$  is the estimate among late responders.

$p_e$  is the estimate among early responders.

For each topical survey, table 8-8 shows the mean and median PRD between early and late screener respondents, the percentage of estimates showing statistically significant differences greater than 1 percentage point between early and late screener respondents, and the same measures for differences between early and late topical respondents. Overall, the results suggest some risk of bias resulting from screener and topical nonresponse in the base-weighted key survey estimates. For the PFI, 38 out of 81 estimates (46.9 percent) showed significant and meaningful differences between early and late screener respondents, and 24 out of 81 (29.6 percent) showed significant and meaningful differences between early and late topical respondents. For the ECPP, 20 out of 75 estimates (26.7 percent) showed significant and meaningful differences between early and late screener respondents, and 14 out of 75 (18.7 percent) showed significant and meaningful differences between early and late topical respondents.

Tables 8-9 and 8-10 show differences in key PFI estimates between early and late responders. Because of the substantive importance of the homeschooling rate produced by the PFI, the results for the estimated homeschooling rate are shown separately (in table 8-10).<sup>63</sup> Table 8-11 shows differences in key ECPP estimates between early and late responders.

For the PFI (tables 8-9 and 8-10), estimates with particularly large percentage point differences between early and late screener responders include the race/ethnicity of the child, the highest educational

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<sup>63</sup> Although table 8-9 includes the percentage distribution by homeschooling status, this distribution is shown over all PFI respondents regardless of age, as is the case for the other variables in table 8-9. In contrast, table 8-10 shows the homeschooling rate among children ages 5 through 17, the population for which official NCES homeschooling estimates have historically been produced (cf. McQuiggan and Megra 2017).

attainment of either parent, the language spoken by the parents, family structure, household income, whether the child is enrolled in a school district that allows school choice, whether the child visited a zoo or aquarium in the last week, whether the child went to a sporting event in the last week, and whether the child's parents considered a different school for the child. These same PFI estimates also showed particularly large percentage point differences between early and late topical responders.

For the ECPP (table 8-11), estimates with particularly large percentage point differences between early and late screener responders include the race/ethnicity of the child, the highest educational attainment of either parent, the language spoken by the parents, family structure, household income, whether the parent believes they have good choices for early childhood care, and how often someone in the family taught letters, words, or numbers to the child in the last week. Estimates with particularly large percentage point differences between early and late topical responders include the race/ethnicity of the child, the gender of the child, whether the child knows all letters, whether the child can write his or her own name, and how often someone in the family taught letters, words, or numbers to the child in the last week.

**Table 8-8. Summary of differences in NHES:2019 estimates by mailing wave**

Survey	Comparison by screener wave			Comparison by topical wave		
	Mean absolute relative difference between early and late respondents (percent)	Median absolute relative difference between early and late respondents (percent)	Percent of estimates showing statistically and practically significant difference between early and late respondents	Mean absolute relative difference between early and late respondents (percent)	Median absolute relative difference between early and late respondents (percent)	Percent of estimates showing statistically and practically significant difference between early and late respondents
PFI	17.2	8.5	46.9	18.2	10.6	29.6
ECPP	15.1	6.3	26.7	18.0	12.0	18.7

NOTE: A statistically significant difference is one with  $p < .05$  (Student's t test). A practically significant difference is one with an absolute value greater than 1 percentage point. Early respondents are those who completed or returned the first or second mailing wave, and late respondents are those who completed or returned the third or fourth mailing wave. The estimates in this table were produced solely for the purpose of evaluating nonresponse bias and are not official statistics. PFI = Parent and Family Involvement in Education. ECPP = Early Childhood Program Participation.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019.

**Table 8-9. PFI child and household demographic characteristics, and key survey estimates, by mailing wave completed or returned**

Characteristic	Screener mailing wave completed or returned					Topical mailing wave completed or returned						
	Early (first 2)		Late (last 2)		Percent relative difference	Early (first 2)		Late (last 2)		Percent relative difference		
	Percent	s.e.	Percent	s.e.		Percent	s.e.	Percent	s.e.			
<b>Child and household demographic characteristics</b>												
Race/ethnicity of child												
White, non-Hispanic	58.8	0.59	50.8	0.92	*	-13.7	57.4	0.52	48.3	1.77	*	-15.8
Black, non-Hispanic	8.3	0.33	9.1	0.60		9.6	8.5	0.30	9.8	1.32		15.3
Hispanic	19.5	0.48	25.4	0.74	*	30.7	20.6	0.41	25.3	1.56	*	22.7
Asian/Pacific Islander, non-Hispanic	6.8	0.32	7.0	0.59		3.1	6.8	0.27	8.3	1.26		23.4
Other, non-Hispanic	6.6	0.23	7.6	0.63		16.2	6.7	0.22	8.3	0.99		22.8
Gender of child												
Male	51.5	0.55	51.4	1.23		-0.2	51.8	0.48	47.7	2.21		-7.9
Female	48.5	0.55	48.6	1.23		0.2	48.2	0.48	52.3	2.21		8.5
Age of child												
0 to 4 years	0.3	0.07	0.4	0.13		30.3	0.3	0.06	‡	†		†
5-6 years	12.4	0.41	11.5	0.68		-7.0	12.2	0.38	12.0	1.41		-1.5
7-8 years	14.6	0.43	15.2	0.87		3.7	14.7	0.38	16.6	1.75		13.1
9-10 years	15.0	0.42	14.3	0.74		-5.0	14.9	0.36	14.2	1.70		-4.5
11-12 years	15.6	0.40	16.4	0.70		5.2	15.9	0.36	14.5	1.15		-8.9
13-14 years	15.5	0.46	14.9	0.74		-3.7	15.3	0.39	15.1	1.34		-1.8
15-16 years	15.7	0.37	16.2	0.61		3.4	15.8	0.33	16.4	1.35		4.1
17-18 years	10.6	0.26	10.9	0.51		2.4	10.7	0.24	10.6	0.91		-0.8
19-20 years	0.3	0.06	0.3	0.08		-16.8	0.3	0.05	0.2	0.10		-37.7

See notes at end of table

**Table 8-9. PFI child and household demographic characteristics, and key survey estimates, by mailing wave completed or returned—Continued**

Characteristic	Screener mailing wave completed or returned					Topical mailing wave completed or returned						
	Early (first 2)		Late (last 2)		Percent relative difference	Early (first 2)		Late (last 2)		Percent relative difference		
	Percent	s.e.	Percent	s.e.		Percent	s.e.	Percent	s.e.			
Highest educational attainment of either parent												
Less than high school diploma	4.6	0.28	8.9	0.65	*	92.5	5.4	0.27	9.8	1.22	*	81.6
High school diploma or GED	10.6	0.35	15.8	0.83	*	48.7	11.5	0.32	17.4	1.41	*	51.3
Vocational/some college	26.9	0.51	29.9	0.85	*	11.1	27.6	0.42	27.7	1.89		0.4
Bachelor's degree	28.3	0.51	23.6	0.79	*	-16.5	27.3	0.46	24.9	1.74		-8.9
Graduate or professional degree	29.6	0.46	21.8	0.80	*	-26.4	28.2	0.40	20.2	1.69	*	-28.4
Parents' language												
Both parents speak English	89.7	0.29	83.4	0.77	*	-7.1	88.5	0.31	82.7	1.53	*	-6.6
One parent speaks English	2.8	0.18	4.2	0.53	*	48.5	3.1	0.20	5.1	1.03	*	67.9
Neither parent speaks English	7.4	0.25	12.4	0.61	*	67.2	8.4	0.26	12.2	1.34	*	45.3
Family structure												
Two parents and sibling(s)	66.5	0.59	61.3	0.95	*	-7.7	65.5	0.54	61.0	1.83	*	-6.9
Two parents, no siblings	9.1	0.24	9.3	0.38		1.9	9.2	0.21	8.3	0.67		-9.5
One parent and sibling(s)	15.5	0.49	18.9	0.83	*	21.7	16.2	0.45	18.3	1.57		12.6
One parent, no sibling	5.7	0.17	7.3	0.39	*	28.8	5.9	0.15	8.9	0.88	*	50.8
Other	3.2	0.19	3.2	0.26		-1.0	3.2	0.16	3.5	0.54		11.8

See notes at end of table

**Table 8-9. PFI child and household demographic characteristics, and key survey estimates, by mailing wave completed or returned—Continued**

Characteristic	Screener mailing wave completed or returned					Topical mailing wave completed or returned					
	Early (first 2)		Late (last 2)		Percent relative difference	Early (first 2)		Late (last 2)		Percent relative difference	
	Percent	s.e.	Percent	s.e.		Percent	s.e.	Percent	s.e.		
Household income											
\$10,000 or less	3.9	0.24	6.6	0.60	*	69.1	4.5	0.27	5.7	0.93	28.5
\$10,001 to \$20,000	4.6	0.27	6.8	0.64	*	46.5	4.9	0.25	9.1	1.38	* 84.8
\$20,001 to \$30,000	6.7	0.27	9.7	0.73	*	44.1	7.3	0.29	9.3	1.23	27.4
\$30,001 to \$40,000	6.9	0.30	8.4	0.50	*	22.0	7.1	0.27	8.6	1.15	20.7
\$40,001 to \$50,000	6.2	0.32	8.1	0.60	*	29.6	6.6	0.28	7.4	1.14	12.1
\$50,001 to \$60,000	6.6	0.26	6.3	0.49		-4.5	6.6	0.25	5.8	0.84	-12.3
\$60,001 to \$75,000	8.5	0.28	9.1	0.57		6.8	8.6	0.27	9.9	1.11	15.3
\$75,001 to \$100,000	14.3	0.35	11.8	0.65	*	-17.8	13.7	0.32	12.8	1.33	-6.8
\$100,001 to \$150,000	18.6	0.44	15.2	0.66	*	-18.5	17.9	0.38	15.7	1.45	-12.5
Over \$150,000	23.6	0.52	18.2	0.73	*	-23.1	22.7	0.42	15.7	1.34	* -31.0
Household Internet access											
Yes	99.2	0.11	97.7	0.42	*	-1.5	98.9	0.13	97.9	0.68	-1.0
No	0.8	0.11	2.3	0.42	*	193.4	1.1	0.13	2.1	0.68	89.0
<b>Key estimates</b>											
Child is homeschooled <sup>1</sup>											
Yes—full time	2.7	0.18	2.7	0.31		-2.5	2.8	0.18	2.3	0.70	-18.3
Yes—part time	0.2	0.05	0.2	0.06		-20.7	0.2	0.04	‡	†	†
No	97.0	0.19	97.2	0.32		0.1	97.0	0.19	97.6	0.71	0.6
Child is enrolled in any virtual/online/cyber course											
Yes <sup>2</sup>	7.3	0.27	7.4	0.55		1.3	7.4	0.26	6.9	1.09	-6.7
No	92.7	0.27	92.6	0.55		-0.1	92.6	0.26	93.1	1.09	0.5

See notes at end of table

**Table 8-9. PFI child and household demographic characteristics, and key survey estimates, by mailing wave completed or returned—Continued**

Characteristic	Screener mailing wave completed or returned					Topical mailing wave completed or returned						
	Early (first 2)		Late (last 2)		Percent relative difference	Early (first 2)		Late (last 2)		Percent relative difference		
	Percent	s.e.	Percent	s.e.		Percent	s.e.	Percent	s.e.			
Child's school is a charter school												
Yes	8.4	0.38	9.4	0.68	11.9	8.7	0.33	7.9	0.98		-9.5	
No	91.6	0.38	90.6	0.68	-1.1	91.3	0.33	92.1	0.98		0.9	
School district allows school choice												
Yes	36.3	0.6	31.1	1.0	*	-14.4	35.3	0.5	30.8	2.0	*	-12.7
No	63.7	0.6	68.9	1.0	*	8.2	64.7	0.5	69.2	2.0	*	6.9
Child's parents participate in 3 or more activities in child's school												
Yes	83.2	0.4	83.2	0.7		0.1	83.2	0.4	83.2	1.4		#
No	16.8	0.4	16.8	0.7		-0.4	16.8	0.4	16.8	1.4		-0.1
School tells family how child is doing in school												
Yes-does very well	58.7	0.59	59.1	0.99		0.6	58.7	0.53	59.6	1.71		1.6
Yes-does just okay	29.3	0.58	28.3	0.92		-3.2	29.0	0.51	30.0	1.88		3.5
Yes-does not very well	5.8	0.27	6.7	0.54		15.7	6.0	0.27	6.2	1.00		3.5
No	6.3	0.28	5.9	0.49		-5.8	6.3	0.26	4.2	0.68	*	-33.9
School provides information about how to help child with homework												
Yes-does very well	43.6	0.56	44.1	0.99		1.1	43.6	0.52	46.1	1.72		5.8
Yes-does just okay	31.8	0.50	31.3	1.11		-1.7	31.8	0.53	30.6	1.82		-3.8
Yes-does not very well	10.6	0.33	11.1	0.74		4.3	10.7	0.31	11.0	0.92		2.2
No	13.9	0.36	13.5	0.75		-2.7	13.9	0.35	12.4	1.29		-11.2

See notes at end of table

**Table 8-9. PFI child and household demographic characteristics, and key survey estimates, by mailing wave completed or returned—Continued**

Characteristic	Screener mailing wave completed or returned					Topical mailing wave completed or returned					
	Early (first 2)		Late (last 2)		Percent relative difference	Early (first 2)		Late (last 2)		Percent relative difference	
	Percent	s.e.	Percent	s.e.		Percent	s.e.	Percent	s.e.		
Child's parents told child a story in the last week											
Yes	62.8	0.53	58.6	1.00	*	-6.7	61.9	0.47	59.8	1.86	-3.4
No	37.2	0.53	41.4	1.00	*	11.3	38.1	0.47	40.2	1.86	5.5
Child's parents and child visited a zoo/aquarium in the last week											
Yes	16.1	0.44	23.6	0.75	*	46.6	17.3	0.40	27.3	1.65	* 57.7
No	83.9	0.44	76.4	0.75	*	-8.9	82.7	0.40	72.7	1.65	* -12.0
Child's parents and child went to a sporting event in the last week											
Yes	36.4	0.51	42.3	1.06	*	16.5	37.4	0.51	44.4	1.92	* 18.8
No	63.6	0.51	57.7	1.06	*	-9.4	62.6	0.51	55.6	1.92	* -11.2
Parents check to see that child's homework gets done											
Never	4.1	0.20	4.1	0.37		-0.4	4.1	0.17	4.0	0.62	-2.2
Rarely	10.3	0.34	8.7	0.48	*	-15.4	10.1	0.30	7.8	0.85	* -22.9
Sometimes	24.6	0.49	26.9	0.93	*	9.3	25.3	0.42	23.3	1.41	-7.7
Always	61.0	0.56	60.3	1.08		-1.1	60.6	0.50	64.9	1.67	* 7.2
Parents expect child to earn a college degree or higher											
Yes	73.2	0.50	69.3	0.74	*	-5.3	72.4	0.47	69.3	1.75	-4.3
No	26.8	0.50	30.7	0.74	*	14.6	27.6	0.47	30.7	1.75	11.2
Child has a disability											
Yes	24.0	0.44	23.5	0.98		-2.1	23.9	0.42	22.9	1.47	-4.3
No	76.0	0.44	76.5	0.98		0.7	76.1	0.42	77.1	1.47	1.3

See notes at end of table

**Table 8-9. PFI child and household demographic characteristics, and key survey estimates, by mailing wave completed or returned—Continued**

Characteristic	Screener mailing wave completed or returned					Topical mailing wave completed or returned					
	Early (first 2)		Late (last 2)		Percent relative difference	Early (first 2)		Late (last 2)		Percent relative difference	
	Percent	s.e.	Percent	s.e.		Percent	s.e.	Percent	s.e.		
School type <sup>3</sup>											
Public	85.9	0.38	85.2	0.79	-0.9	85.8	0.38	85.6	1.21	-0.2	
Private	10.4	0.33	9.9	0.72	-5.1	10.3	0.33	9.2	1.06	-10.6	
Homeschooled	2.5	0.18	2.7	0.34	8.9	2.6	0.18	2.3 <sup>!</sup>	0.76	-8.9	
Other	1.2	0.11	2.3	0.26	* 92.1	1.4	0.11	2.8	0.54	* 107.8	
Parent considered other schools for child											
Yes	38.1	0.64	32.2	0.91	* -15.5	37.0	0.56	31.4	1.78	* -15.2	
No	61.9	0.64	67.8	0.91	* 9.5	63.0	0.56	68.6	1.78	* 8.9	

\* Indicates a statistically significant difference ( $p < .05$ , Student's  $t$  test).

# Rounds to zero.

† Not applicable.

‡ Reporting standards not met. There were too few cases for a reliable estimate or the coefficient of variation was 50 percent or higher.

! Interpret data with caution; coefficient of variation is between 30 and 50 percent.

<sup>1</sup> Homeschoolers are defined as children whose parents indicated that the child is homeschooled for some or all classes. Children in public/private school for more than 25 hours per week, or whose parents indicated that they are homeschooled only because of a temporary illness, are excluded. Full-time homeschoolers are those who do not spend any time in public/private school. Part-time homeschoolers are those who spend up to 25 hours per week in public/private school.

<sup>2</sup> Includes children who were taking any virtual, online, or cyber courses, regardless of the reason and regardless of whether the parent reported the child as being enrolled in school or homeschooled.

<sup>3</sup> For this estimate, children are classified as public school students if the respondent stated that the child attends a public school; otherwise, as private school students if the child attends a private school; and otherwise, as homeschooled students if the child is homeschooled. All other students (including virtual school students who do not fall into one of the prior categories) are included in the "Other" category. The homeschooled category of this derived variable is not adjusted to match the NCES definition of homeschoolers; therefore, the homeschooling percentage differs from the homeschooling rates shown separately in this table and in Table 8-10. For this estimate, school type was derived without reference to whether the child was reported as attending a charter school.

NOTE: s.e. is standard error. Details may not sum to totals because of rounding. Percentages are estimated using person-level base weights. Early respondents are those who completed or returned the first or second mailing wave, and late respondents are those who completed or returned the third or fourth mailing wave. The estimates in this table were produced solely for the purpose of evaluating nonresponse bias and are not official statistics. PFI = Parent and Family Involvement in Education.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019.

**Table 8-10. Estimated homeschooling rate among children ages 5-17, by mailing wave completed or returned: PFI-NHES:2019**

Mailing wave completed or returned	Estimated homeschooling rate	
	Percent	s.e.
Screener wave		
Early (first 2)	3.0	0.20
Late (last 2)	2.7	0.30
Percent relative difference	-8.5	†
Topical wave		
Early (first 2)	3.0	0.19
Late (last 2)	2.2	0.65
Percent relative difference	-24.5	†

† Not applicable.

NOTE: s.e. is standard error. The homeschooling rate is the number of homeschooled students ages 5 through 17 divided by the number of enrolled and homeschooled students ages 5 through 17. The definition of homeschoolers excludes students who are homeschooled only due to a temporary illness and students who are in public or private school for more than 25 hours per week. Early respondents are those who completed or returned the first or second mailing wave, and late respondents are those who completed or returned the third or fourth mailing wave. Estimates in this table include only students ages 5 through 17 and therefore differ from the homeschooling-related estimates shown in Table 8-9. The estimates in this table were produced solely for the purpose of evaluating nonresponse bias and are not official statistics. PFI = Parent and Family Involvement in Education.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019.

**Table 8-11. ECPP child and household demographic characteristics and key survey estimates by mailing wave completed or returned**

Characteristic	Screener mailing wave completed or returned					Topical mailing wave completed or returned						
	Early (first 2)		Late (last 2)		Percent relative difference	Early (first 2)		Late (last 2)		Percent relative difference		
	Percent	s.e.	Percent	s.e.		Percent	s.e.	Percent	s.e.			
<b>Child and household demographic characteristics</b>												
Race/ethnicity of child												
White, non-Hispanic	58.8	0.73	54.2	1.44	*	-7.8	58.1	0.71	49.0	2.96	*	-15.6
Black, non-Hispanic	7.6	0.36	6.5	0.55		-15.2	7.4	0.31	6.4	1.59		-13.3
Hispanic	19.2	0.61	24.4	1.11	*	27.1	20.2	0.54	26.9	2.65	*	33.7
Asian/Pacific Islander, non-Hispanic	6.8	0.43	6.8	0.76		0.9	6.6	0.36	10.1	1.54	*	52.2
Other, non-Hispanic	7.6	0.46	8.1	0.89		6.3	7.7	0.44	7.5	1.32		-2.7
Gender of child												
Male	51.7	0.71	51.8	1.55		0.3	51.4	0.74	58.2	3.06	*	13.2
Female	48.3	0.71	48.2	1.55		-0.4	48.6	0.74	41.8	3.06	*	-13.9
Age of child												
0 years	18.7	0.50	20.0	1.00		7.1	19.0	0.49	19.1	2.15		0.5
1 year	17.9	0.53	16.2	1.03		-9.6	17.6	0.49	16.1	2.23		-8.1
2 years	19.3	0.62	18.3	1.16		-5.2	19.0	0.61	18.9	2.39		-0.7
3 years	19.0	0.58	19.3	1.12		1.8	19.2	0.60	17.1	2.13		-10.8
4 years	18.8	0.57	19.2	0.97		1.9	18.7	0.47	22.9	2.40		22.2
5-6 years	6.3	0.34	7.0	0.74		11.4	6.5	0.33	5.9	1.23		-9.5
Highest educational attainment of either parent												
Less than high school diploma	3.2	0.29	7.2	0.85	*	125.9	4.0	0.28	6.8	1.55		67.5
High school diploma or GED	10.2	0.49	13.5	1.00	*	33.3	11.0	0.41	11.3	2.03		2.8
Vocational/some college	24.4	0.64	28.3	1.23	*	16.3	25.3	0.59	26.9	2.35		6.3
Bachelor's degree	31.1	0.59	26.5	1.27	*	-14.8	30.0	0.54	28.5	2.90		-5.1
Graduate or professional degree	31.2	0.71	24.5	1.17	*	-21.6	29.7	0.60	26.6	2.96		-10.4

See notes at end of table

**Table 8-11. ECPP child and household demographic characteristics and key survey estimates by mailing wave completed or returned—Continued**

Characteristic	Screener mailing wave completed or returned					Topical mailing wave completed or returned					
	Early (first 2)		Late (last 2)		Percent relative difference	Early (first 2)		Late (last 2)		Percent relative difference	
	Percent	s.e.	Percent	s.e.		Percent	s.e.	Percent	s.e.		
Parents' language											
Both parents speak English	90.4	0.46	85.4	0.95	*	-5.5	89.4	0.41	86.1	2.04	-3.7
One parent speaks English	2.4	0.29	3.9	0.55	*	63.7	2.7	0.30	4.0	0.93	48.7
Neither parent speaks English	7.2	0.36	10.6	0.96	*	48.3	7.9	0.35	9.9	1.85	24.9
Family structure											
Two parents and sibling(s)	62.5	0.69	63.6	1.38		1.8	63.0	0.64	58.4	3.29	-7.3
Two parents, no siblings	21.1	0.55	16.5	0.89	*	-21.6	20.0	0.50	18.9	1.83	-5.6
One parent and sibling(s)	9.2	0.37	11.2	0.96		21.5	9.5	0.36	12.4	2.16	30.3
One parent, no sibling	5.2	0.26	6.7	0.53	*	30.5	5.4	0.24	7.9	1.65	45.2
Other	2.0	0.23	2.0	0.27		-3.9	2.0	0.20	2.4	0.76	20.4
Household income											
\$10,000 or less	4.5	0.32	5.6	0.60		24.8	4.7	0.27	5.7	1.51	21.9
\$10,001 to \$20,000	4.3	0.34	7.8	0.82	*	79.5	5.0	0.37	8.6	1.58	* 71.2
\$20,001 to \$30,000	7.1	0.42	8.3	0.84		17.1	7.4	0.38	7.9	1.59	7.4
\$30,001 to \$40,000	6.8	0.39	8.4	0.90		23.7	7.2	0.35	8.2	1.82	14.6
\$40,001 to \$50,000	7.0	0.40	6.8	0.81		-3.8	6.9	0.37	7.6	1.66	10.0
\$50,001 to \$60,000	6.7	0.44	7.8	0.66		17.0	6.9	0.39	7.1	1.45	2.2
\$60,001 to \$75,000	9.8	0.47	8.7	0.71		-10.9	9.6	0.41	7.7	1.33	-19.5
\$75,001 to \$100,000	15.7	0.56	13.9	0.96		-11.3	15.4	0.46	13.1	1.91	-14.9
\$100,001 to \$150,000	18.4	0.54	15.7	1.05	*	-14.9	17.8	0.53	15.4	2.20	-13.7
Over \$150,000	19.7	0.57	17.0	0.99	*	-13.6	19.1	0.48	18.7	2.55	-2.2
Household Internet access											
Yes	98.9	0.18	97.8	0.44	*	-1.1	98.7	0.16	97.5	1.27	-1.3
No	1.1	0.18	2.2	0.44	*	104.5	1.3	0.16	‡	†	†

See notes at end of table

**Table 8-11. ECPP child and household demographic characteristics and key survey estimates by mailing wave completed or returned—Continued**

Characteristic	Screener mailing wave completed or returned					Topical mailing wave completed or returned				
	Early (first 2)		Late (last 2)		Percent relative difference	Early (first 2)		Late (last 2)		Percent relative difference
	Percent	s.e.	Percent	s.e.		Percent	s.e.	Percent	s.e.	
<b>Key estimates</b>										
Child receiving any nonparental care (at least weekly)										
Yes	62.8	0.79	61.3	1.50	-2.4	62.5	0.79	62.5	2.45	#
No	37.2	0.79	38.7	1.50	4.0	37.5	0.79	37.5	2.45	-0.1
Child receiving relative care (at least weekly)										
Yes	21.1	0.64	22.6	1.29	7.3	21.4	0.59	23.0	2.42	7.6
No	78.9	0.64	77.4	1.29	-2.0	78.6	0.59	77.0	2.42	-2.1
How long it took to go from the child's home to a relative's home to receive regular care										
Less than 10 minutes	43.5	2.18	46.2	3.92	6.3	43.6	1.95	56.9	7.52	30.7
About 10 to 20 minutes	32.2	2.37	29.5	3.67	-8.2	31.8	1.99	24.3	6.45	-23.7
About 20 to 30 minutes	16.1	1.37	16.5	2.84	2.0	16.5	1.23	‡	†	†
More than 30 minutes	8.2	1.12	7.8	1.88	-5.1	8.1	1.03	8.6!	4.15	5.6
Child receiving nonrelative care (at least weekly)										
Yes	12.0	0.42	12.3	0.84	2.3	12.1	0.34	12.2	2.17	1.1
No	88.0	0.42	87.7	0.84	-0.3	87.9	0.34	87.8	2.17	-0.2
How long it took to go from the child's home to a non-relative's home to receive regular care										
Less than 10 minutes	49.6	2.43	48.7	4.18	-1.9	48.7	2.24	59.6	10.03	22.4
About 10 to 20 minutes	32.5	2.35	33.2	4.08	2.1	33.5	2.04	20.3!	10.09	-39.2
About 20 to 30 minutes	12.7	1.65	12.9	2.54	1.5	12.5	1.44	16.6!	7.69	32.6
More than 30 minutes	5.2	1.21	5.3!	2.11	1.7	5.3	1.02	‡	†	†

See notes at end of table

**Table 8-11. ECPP child and household demographic characteristics and key survey estimates by mailing wave completed or returned—Continued**

Characteristic	Screener mailing wave completed or returned					Topical mailing wave completed or returned				
	Early (first 2)		Late (last 2)		Percent relative difference	Early (first 2)		Late (last 2)		Percent relative difference
	Percent	s.e.	Percent	s.e.		Percent	s.e.	Percent	s.e.	
Child receiving center-based care (at least weekly)										
Yes	42.3	0.78	40.3	1.26	-4.8	41.8	0.72	41.8	2.65	#
No	57.7	0.78	59.7	1.26	3.5	58.2	0.72	58.2	2.65	#
How long it took to go from the child's home to daycare center/ preschool, or pre-K to receive regular care										
Less than 10 minutes	52.3	1.12	51.1	1.94	-2.4	51.8	0.97	57.2	5.46	10.5
About 10 to 20 minutes	35.2	1.07	33.0	1.91	-6.3	35.0	0.99	28.3	4.37	-19.0
About 20 to 30 minutes	9.3	0.63	11.4	1.36	22.3	9.8	0.57	9.5	2.72	-3.2
More than 30 minutes	3.2	0.41	4.6	1.20	44.0	3.5	0.40	5.0!	1.59	43.8
Can count higher than 10										
Yes	56.4	0.94	56.7	1.88	0.4	56.3	0.90	60.8	3.84	8.1
No	43.6	0.94	43.3	1.88	-0.6	43.7	0.90	39.2	3.84	-10.4
Knows all letters										
Yes	25.4	0.82	28.7	1.78	13.2	25.7	0.81	36.3	3.07 *	41.5
No	74.6	0.82	71.3	1.78	-4.5	74.3	0.81	63.7	3.07 *	-14.3
Can write own name										
Yes	40.4	0.90	42.6	1.85	5.4	40.6	0.82	47.7	3.39 *	17.6
No	59.6	0.90	57.4	1.85	-3.7	59.4	0.82	52.3	3.39 *	-12.0
Child has a disability										
Yes	10.3	0.52	11.8	0.90	14.4	10.7	0.48	10.6	1.67	-0.8
No	89.7	0.52	88.2	0.90	-1.7	89.3	0.48	89.4	1.67	0.1

See notes at end of table

**Table 8-11. ECPP child and household demographic characteristics and key survey estimates by mailing wave completed or returned—Continued**

Characteristic	Screener mailing wave completed or returned					Topical mailing wave completed or returned				
	Early (first 2)		Late (last 2)		Percent relative difference	Early (first 2)		Late (last 2)		Percent relative difference
	Percent	s.e.	Percent	s.e.		Percent	s.e.	Percent	s.e.	
Good choices for child care and early childhood programs										
Yes	61.1	0.74	58.7	1.58	-4.0	60.7	0.74	57.8	2.97	-4.8
No	18.5	0.64	17.4	0.96	-5.7	18.4	0.54	15.6	1.89	-14.9
Don't know	20.4	0.61	23.9	1.30	* 17.3	21.0	0.61	26.6	2.42	* 26.8
Number of times family read to child in past week										
Not at all	6.7	0.36	10.1	0.83	* 49.3	7.5	0.35	9.5	1.65	26.9
1 or 2 times	10.9	0.54	9.0	0.74	-16.8	10.6	0.45	7.3	1.44	* -31.4
3 or more times	82.4	0.58	80.9	0.93	-1.8	82.0	0.48	83.3	2.34	1.6
Someone in family taught letters, words, or numbers										
Not at all	13.4	0.55	9.7	0.82	* -27.8	12.9	0.53	6.0	1.38	* -53.2
1 or 2 times	25.6	0.68	27.2	1.35	6.3	25.9	0.62	27.4	2.40	5.6
3 or more times	61.0	0.75	63.1	1.37	3.5	61.2	0.68	66.6	2.48	* 8.8

\* Indicates a statistically significant difference ( $p < .05$ , Student's  $t$  test).

# Rounds to zero.

† Not applicable.

‡ Reporting standards not met. There were too few cases for a reliable estimate or the coefficient of variation was 50 percent or higher.

! Interpret data with caution; coefficient of variation is between 30 and 50 percent.

NOTE: s.e. is standard error. Details may not sum to totals due to rounding. Percentages are estimated using person-level base weights. Early respondents are those who responded to the first or second mailing wave, and late respondents are those who responded to the third or fourth mailing wave. The estimates in this table were produced solely for the purpose of evaluating nonresponse bias and are not official statistics. ECPP = Early Childhood Program Participation.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019.

### 8.2.3 A Comparison of Survey Estimates Based on Final and Base Weights

In addition to the analysis presented in earlier tables, based on the topical survey responses, selected person and family characteristics were examined to determine the effects of the unit nonresponse and raking adjustments on the PFI and ECPP components of the NHES:2019. This analysis (shown in tables 8-13 and 8-14 for the PFI survey and table 8-15 for the ECPP survey) compares estimates constructed using the final person-level weights and base weights.<sup>64</sup> In addition to estimates over the full PFI and ECPP populations, key survey estimates were computed by race/ethnicity separately for the PFI and ECPP surveys, using the final weights and the base weights. Separate estimates for subgroups formed by race/ethnicity are considered in this analysis because they are key analytic subgroups. Results for both surveys are summarized in table 8-12.

The difference between a base-weighted and a final-weighted estimate provides a measure of the potential reduction in unit nonresponse bias attributable to the nonresponse adjustment and raking procedures. The actual magnitude of the existing bias prior to and after nonresponse adjustment and raking remains unknown. The base weights used for this analysis adjust for household- and person-level selection probabilities but do not include the household-level nonresponse adjustment, the person-level nonresponse adjustment, or the raking adjustment; whereas the final person-level weights include all of these adjustments. Therefore, the difference between the base-weighted and final-weighted estimates reflects the impact of both the household- and person-level nonresponse adjustments as well as the raking adjustment.

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<sup>64</sup> Although table 8-13 includes the percentage distribution by homeschooling status, this distribution is shown over all PFI respondents regardless of age, as is the case for the other variables in table 8-13. In contrast, table 8-14 shows the homeschooling rate among children ages 5 through 17, the population for which official NCES homeschooling estimates have historically been produced (cf. McQuiggan and Megra 2017).

**Table 8-12. Summary of changes in NHES:2019 estimates from use of final raked weights**

Survey	Overall estimates			Estimates by race/ethnicity		
	Mean absolute change in estimates (percentage points)	Median absolute change in estimates (percentage points)	Percent of estimates showing statistically and practically significant change	Mean absolute change in estimates (percentage points)	Median absolute change in estimates (percentage points)	Percent of estimates showing statistically and practically significant change
PFI	1.6	0.9	45.0	1.2	0.8	27.0
ECPP	2.4	1.3	59.5	1.9	1.2	36.4

NOTE: ECPP = Early Childhood Program Participation. PFI = Parent and Family Involvement in Education. Changes are considered statistically significant if  $p < .05$  (Student's  $t$  test). Changes are considered practically significant if the absolute value of the change in the estimate exceeds 1 percentage point. The estimates in this table were produced solely for the purpose of evaluating nonresponse bias and are not official statistics.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019.

For PFI estimates over the entire target population, the combined effect of the nonresponse and raking adjustments changed overall estimates by a median of 0.9 percentage points, and led to a statistically significant change of more than 1 percentage point in 36 out of 80 estimates examined (45.0 percent). For PFI estimates broken out by race/ethnicity, the adjustments changed the estimates by a median of 0.8 percentage points, and led to a statistically significant change of more than 1 percentage point in 82 out of 304 estimates examined (27.0 percent). For ECPP estimates over the entire population, the adjustments changed the estimates by a median of 1.3 percentage points, and led to a statistically significant change of more than 1 percentage point in 44 out of 74 estimates examined (59.5 percent). For ECPP estimates broken out by race/ethnicity, the adjustments changed the estimates by a median of 1.2 percentage points, and led to a statistically significant change of more than 1 percentage point in 102 out of 280 estimates examined (36.4 percent).

Altogether, therefore, the combined adjustments for nonresponse and raking led to significant changes in the NHES:2019 estimates, both overall and broken out by race/ethnicity.

As can be seen in tables 8-13 through 8-15, significant changes were observed both for demographic estimates (e.g., household income for both the PFI and ECPP) and substantive estimates (e.g., parental participation in school activities for the PFI, child participation in care arrangements for the ECPP). For the PFI (tables 8-13 and 8-14), particularly large changes were observed in the estimates for the race/ethnicity of the child (with changes of up to 10.6 percentage points), the child's age (up to 2.8 percentage points), the highest educational attainment of either parent (up to 10.4 percentage points), and household income (up to 4.7 percentage points); all four of these variables are used in raking. Other PFI estimates showing particularly large changes include the language spoken by the parents (up to 4 percentage points), family structure (up to 3.4 percentage points), whether the child visited a zoo or aquarium in the past week (2.4 percentage points), whether the child's parents check to see whether the

child's homework gets done (up to 3.2 percentage points), and whether the child's parents expect the child to earn a college degree or higher (4.0 percentage points).

For the ECPP (table 8-15), particularly large changes were observed in the estimates for the race/ethnicity of the child (up to 10.8 percentage points) and the highest educational attainment of either parent (up to 10.9 percentage points), both of which were used in raking. Other ECPP estimates showing particularly large changes include family structure (up to 4.6 percentage points), whether the child is receiving weekly center-based care (5.6 percentage points), whether the child can count higher than 10 (5.2 percentage points), whether the child can write his or her own name (4.4 percentage points), and whether the parent believes they have good choices for early childhood care (up to 4.9 percentage points).

Because the magnitude and direction of bias prior to adjustment cannot be known with certainty, it cannot be known with certainty whether these adjustments reduced bias for a given estimate, nor how much bias remains in the estimate after adjustment. However, the preponderance of evidence suggests that these adjustments likely reduced bias in most estimates. As was shown in tables 8-3 through 8-7, above, the nonresponse adjustments generally reduced bias as measured by frame and screener variables observable for both respondents and nonrespondents. Furthermore, as discussed in chapter 7 on weighting, the raking adjustments, by design, cause the distributions of key demographic characteristics among NHES respondents (e.g., income and parental education) to match high-quality external benchmarks obtained from the ACS. Finally, there was some overlap between the variables showing the largest changes as a result of weighting adjustments and those that showed the largest differences between early and late responders and thus appeared to be at risk of bias prior to adjustment (section 8.2.2); this includes variables that were not directly used in weighting. Together, these findings indicate that the likely combined effect of the weighting adjustments was a reduction in bias for any estimates that are correlated with the variables used in nonresponse adjustment and raking.

**Table 8-13. PFI child and household demographic characteristics, and key survey estimates, by weighting type**

Characteristic (by race/ethnicity of child)	Final weights <sup>1</sup>	Base weights <sup>2</sup>	Difference		s.e. of difference
<b>Overall estimates</b>					
Race/ethnicity of child					
White, non-Hispanic	48.9	59.5	-10.6	*	0.40
Black, non-Hispanic	13.6	7.9	5.7	*	0.27
Hispanic	25.2	18.8	6.5	*	0.36
Other, non-Hispanic	12.3	13.9	-1.6	*	0.21
Gender of child					
Male	51.6	51.5	0.1		0.42
Female	48.4	48.5	-0.1		0.42
Age of child					
0 to 4 years	1.0	0.3	0.6	*	0.15
5-6 years	14.3	12.0	2.3	*	0.39
7-8 years	14.5	14.6	-0.1		0.33
9-10 years	15.9	14.7	1.2	*	0.30
11-12 years	15.9	15.8	0.1		0.34
13-14 years	15.3	15.4	-0.1		0.29
15-16 years	14.9	16.1	-1.2	*	0.25
17-18 years	8.0	10.9	-2.8	*	0.28
19-20 years	0.3	0.3	#		0.03
Highest educational attainment of either parent					
Less than high school diploma	10.3	4.9	5.4	*	0.23
High school diploma or GED	18.9	11.0	7.9	*	0.31
Vocational/some college	25.4	26.7	-1.3	*	0.32
Bachelor's degree	26.5	28.1	-1.6	*	0.33
Graduate or professional degree	19.0	29.4	-10.4	*	0.40
Parents' language					
Both parents speak English	85.6	89.5	-4.0	*	0.24
One parent speaks English	3.7	2.9	0.8	*	0.13
Neither parent speaks English	10.7	7.6	3.1	*	0.24
Family structure					
Two parents and sibling(s)	62.6	66.0	-3.4	*	0.34
Two parents, no siblings	8.7	9.4	-0.7	*	0.14
One parent and sibling(s)	17.6	15.4	2.2	*	0.27
One parent, no sibling	7.5	5.9	1.6	*	0.16
Other	3.6	3.2	0.4	*	0.11

See notes at end of table

**Table 8-13. PFI child and household demographic characteristics, and key survey estimates, by weighting type—Continued**

Characteristic (by race/ethnicity of child)	Final weights <sup>1</sup>	Base weights <sup>2</sup>	Difference		s.e. of difference
<b>Overall estimates (continued)</b>					
Household income					
\$10,000 or less	4.3	3.9	0.3		0.22
\$10,001 to \$20,000	5.6	4.6	1.0	*	0.23
\$20,001 to \$30,000	7.3	6.7	0.6	*	0.23
\$30,001 to \$40,000	7.7	6.7	1.0	*	0.24
\$40,001 to \$50,000	7.3	6.3	1.0	*	0.26
\$50,001 to \$60,000	6.9	6.3	0.6	*	0.22
\$60,001 to \$75,000	9.7	8.6	1.0	*	0.25
\$75,001 to \$100,000	13.4	14.0	-0.6		0.32
\$100,001 to \$150,000	18.3	18.6	-0.3		0.39
Over \$150,000	19.4	24.1	-4.7	*	0.42
Household Internet access					
Yes	98.4	98.9	-0.5	*	0.11
No	1.6	1.1	0.5	*	0.11
Child is homeschooled <sup>3</sup>					
Yes-full time	2.8	2.7	#		0.17
Yes-part time	0.2	0.2	#		0.03
No	97.0	97.1	-0.1		0.17
Child is enrolled in any virtual/online/cyber course <sup>4</sup>					
Yes	7.1	7.3	-0.2		0.16
No	92.9	92.7	0.2		0.16
Child's school is a charter school					
Yes	9.6	8.2	1.4	*	0.22
No	90.4	91.8	-1.4	*	0.22
School district allows school choice					
Yes	34.4	35.0	-0.5		0.30
No	65.6	65.1	0.5		0.30
Child's parents participate in 3 or more activities in child's school					
Yes	82.2	83.8	-1.7	*	0.27
No	17.9	16.2	1.7	*	0.27
School tells family how child is doing in school					
Yes-does very well	59.1	59.2	-0.1		0.37
Yes-does just okay	29.2	28.7	0.5		0.32
Yes-does not very well	6.0	6.0	0.1		0.16
No	5.7	6.2	-0.5	*	0.14

See notes at end of table.

**Table 8-13. PFI child and household demographic characteristics, and key survey estimates, by weighting type—Continued**

Characteristic (by race/ethnicity of child)	Final weights <sup>1</sup>	Base weights <sup>2</sup>	Difference		s.e. of difference
<b>Overall estimates (continued)</b>					
School provides information about how to help child with homework					
Yes-does very well	45.0	43.7	1.3	*	0.39
Yes-does just okay	31.5	31.7	-0.3		0.37
Yes-does not very well	10.7	10.6	0.1		0.20
No	12.8	13.9	-1.1	*	0.20
Child's parents told child a story in the last week					
Yes	61.6	61.8	-0.1		0.33
No	38.4	38.2	0.1		0.33
Child's parents and child visited a zoo/aquarium in the last week					
Yes	19.9	17.4	2.4	*	0.25
No	80.1	82.6	-2.4	*	0.25
Child's parents and child went to a sporting event in the last week					
Yes	37.4	38.3	-0.9	*	0.36
No	62.6	61.7	0.9	*	0.36
Parents check to see that child's homework gets done					
Never	3.3	4.3	-1.0	*	0.10
Rarely	9.0	10.2	-1.2	*	0.21
Sometimes	24.4	25.4	-1.0	*	0.27
Always	63.3	60.1	3.2	*	0.33
Parents expect child to earn a college degree or higher					
Yes	69.2	73.2	-4.0	*	0.33
No	30.8	26.8	4.0	*	0.33
Child has a disability					
Yes	23.1	23.9	-0.8	*	0.25
No	76.9	76.1	0.8	*	0.25
School type <sup>5</sup>					
Public	86.3	85.4	0.9	*	0.26
Private	9.5	10.6	-1.1	*	0.19
Homeschool	2.6	2.6	0.1		0.17
Other	1.6	1.4	0.2	*	0.07
Parent considered other schools for child					
Yes	35.8	36.4	-0.6		0.37
No	64.2	63.6	0.6		0.37

See notes at end of table.

**Table 8-13. PFI child and household demographic characteristics, and key survey estimates, by weighting type—Continued**

Characteristic (by race/ethnicity of child)	Final weights <sup>1</sup>	Base weights <sup>2</sup>	Difference		s.e. of difference
<b>White, non-Hispanic</b>					
Gender of child					
Male	51.7	51.7	#		0.42
Female	48.3	48.3	#		0.42
Age of child					
0 to 4 years	0.4 <sup>!</sup>	0.2 <sup>!</sup>	0.2	*	0.07
5-6 years	13.8	11.6	2.2	*	0.50
7-8 years	14.4	14.6	-0.1		0.39
9-10 years	15.4	14.1	1.3	*	0.41
11-12 years	16.2	15.9	0.4		0.38
13-14 years	16.2	15.8	0.4		0.36
15-16 years	14.9	16.1	-1.2	*	0.31
17-18 years	8.3	11.5	-3.1	*	0.34
19-20 years	0.2	0.2	#		0.03
Highest educational attainment of either parent					
Less than high school diploma	3.6	1.8	1.9	*	0.26
High school diploma or GED	15.7	8.5	7.2	*	0.43
Vocational/some college	24.7	25.0	-0.3		0.38
Bachelor's degree	31.5	31.3	0.2		0.43
Graduate or professional degree	24.4	33.4	-9.0	*	0.49
Parents' language					
Both parents speak English	96.9	97.6	-0.7	*	0.22
One parent speaks English	0.9	0.8	0.1		0.10
Neither parent speaks English	2.2	1.6	0.6	*	0.20
Family structure					
Two parents and sibling(s)	68.9	71.1	-2.2	*	0.43
Two parents, no siblings	9.7	9.9	-0.2		0.18
One parent and sibling(s)	12.0	11.4	0.7	*	0.28
One parent, no sibling	6.5	5.0	1.5	*	0.20
Other	2.9	2.7	0.3	*	0.10

See notes at end of table.

**Table 8-13. PFI child and household demographic characteristics, and key survey estimates, by weighting type—Continued**

Characteristic (by race/ethnicity of child)	Final weights <sup>1</sup>	Base weights <sup>2</sup>	Difference		s.e. of difference
<b>White, non-Hispanic (continued)</b>					
Household income					
\$10,000 or less	2.2	2.0	0.2		0.31
\$10,001 to \$20,000	3.5	2.8	0.6	*	0.21
\$20,001 to \$30,000	4.3	4.4	-0.1		0.28
\$30,001 to \$40,000	5.1	4.7	0.3		0.28
\$40,001 to \$50,000	5.5	5.2	0.3		0.27
\$50,001 to \$60,000	6.0	5.9	0.1		0.27
\$60,001 to \$75,000	9.1	8.3	0.8	*	0.36
\$75,001 to \$100,000	14.5	15.5	-0.9	*	0.45
\$100,001 to \$150,000	23.0	22.2	0.8		0.52
Over \$150,000	26.8	29.0	-2.2	*	0.59
Household Internet access					
Yes	98.1	98.9	-0.9	*	0.22
No	1.9	1.1	0.9	*	0.22
Child is homeschooled <sup>3</sup>					
Yes-full time	3.8	3.6	0.2		0.17
Yes-part time	0.2	0.2	#		0.03
No	96.0	96.2	-0.2		0.17
Child is enrolled in any virtual/online/cyber course <sup>4</sup>					
Yes	7.4	7.3	0.1		0.20
No	92.6	92.7	-0.1		0.20
Child's school is a charter school					
Yes	5.5	5.3	0.2		0.18
No	94.5	94.7	-0.2		0.18
School district allows school choice					
Yes	32.94	34.52	-1.58	*	0.33
No	67.06	65.48	1.58	*	0.33
Child's parents participate in 3 or more activities in child's school					
Yes	85.65	86.44	-0.79	*	0.29
No	14.35	13.56	0.79	*	0.29
School tells family how child is doing in school					
Yes-does very well	59.7	59.7	#		0.43
Yes-does just okay	28.0	27.7	0.2		0.40
Yes-does not very well	6.1	5.9	0.1		0.17
No	6.3	6.6	-0.4		0.19

See notes at end of table.

**Table 8-13. PFI child and household demographic characteristics, and key survey estimates, by weighting type—Continued**

Characteristic (by race/ethnicity of child)	Final weights <sup>1</sup>	Base weights <sup>2</sup>	Difference		s.e. of difference
<b>White, non-Hispanic (continued)</b>					
School provides information about how to help child with homework					
Yes-does very well	44.1	42.9	1.2	*	0.45
Yes-does just okay	31.0	31.4	-0.4		0.38
Yes-does not very well	11.2	11.0	0.2		0.23
No	13.7	14.7	-1.0	*	0.26
Child's parents told child a story in the last week					
Yes	64.1	63.4	0.8		0.39
No	35.9	36.6	-0.8		0.39
Child's parents and child visited a zoo/aquarium in the last week					
Yes	16.7	15.1	1.6	*	0.30
No	83.3	84.9	-1.6	*	0.30
Child's parents and child went to a sporting event in the last week					
Yes	39.4	40.3	-0.8	*	0.38
No	60.6	59.7	0.8	*	0.38
Parents check to see that child's homework gets done					
Never	3.9	4.7	-0.8	*	0.14
Rarely	10.7	11.4	-0.8	*	0.29
Sometimes	24.8	25.6	-0.9	*	0.33
Always	60.7	58.2	2.5	*	0.51
Parents expect child to earn a college degree or higher					
Yes	67.1	72.0	-5.0	*	0.36
No	32.9	28.0	5.0	*	0.36
Child has a disability					
Yes	25.2	25.6	-0.4		0.30
No	74.8	74.4	0.4		0.30
School type <sup>5</sup>					
Public	82.9	83.0	-0.1		0.31
Private	12.1	12.4	-0.2		0.27
Homeschool	3.5	3.4	0.1		0.14
Other	1.4	1.3	0.2		0.09
Parent considered other schools for child					
Yes	33.3	34.7	-1.4	*	0.35
No	66.7	65.3	1.4	*	0.35

See notes at end of table.

**Table 8-13. PFI child and household demographic characteristics, and key survey estimates, by weighting type—Continued**

Characteristic (by race/ethnicity of child)	Final weights <sup>1</sup>	Base weights <sup>2</sup>	Difference	s.e. of difference
<b>Black, non-Hispanic</b>				
Gender of child				
Male	51.5	51.8	-0.2	1.15
Female	48.5	48.2	0.2	1.15
Age of child				
0 to 4 years	3.0!	1.1!	1.9 *	0.91
5-6 years	15.7	13.7	2.0 *	0.89
7-8 years	14.5	14.4	#	0.66
9-10 years	15.4	14.3	1.0	0.61
11-12 years	16.1	16.0	0.1	0.56
13-14 years	12.9	13.8	-0.9	0.58
15-16 years	14.6	16.1	-1.5 *	0.70
17-18 years	7.1	9.7	-2.7 *	0.51
19-20 years	0.7!	0.7!	#	0.11
Highest educational attainment of either parent				
Less than high school diploma	10.3	6.4	3.9 *	0.91
High school diploma or GED	22.5	16.0	6.5 *	1.16
Vocational/some college	33.4	38.1	-4.7 *	0.98
Bachelor's degree	22.4	22.1	0.3	0.86
Graduate or professional degree	11.4	17.5	-6.0 *	0.74
Parents' language				
Both parents speak English	94.6	95.0	-0.4	0.55
One parent speaks English	1.8!	1.9!	-0.1	0.22
Neither parent speaks English	3.6!	3.1	0.5	0.50
Family structure				
Two parents and sibling(s)	37.9	37.6	0.3	1.30
Two parents, no siblings	7.1	7.0	0.1	0.41
One parent and sibling(s)	34.2	34.8	-0.5	1.19
One parent, no sibling	12.5	11.6	0.9	0.62
Other	8.2	9.0	-0.8	0.54

See notes at end of table.

**Table 8-13. PFI child and household demographic characteristics, and key survey estimates, by weighting type—Continued**

Characteristic (by race/ethnicity of child)	Final weights <sup>1</sup>	Base weights <sup>2</sup>	Difference	s.e. of difference
<b>Black, non-Hispanic (continued)</b>				
Household income				
\$10,000 or less	10.0	12.5	-2.5 *	1.20
\$10,001 to \$20,000	11.2	10.0	1.2	0.91
\$20,001 to \$30,000	12.1	13.1	-1.0	1.13
\$30,001 to \$40,000	10.6	12.1	-1.6	0.95
\$40,001 to \$50,000	8.8	8.4	0.4	0.91
\$50,001 to \$60,000	7.5	6.6	0.9	0.81
\$60,001 to \$75,000	9.4	9.5	-0.1	1.01
\$75,001 to \$100,000	11.3	10.5	0.8	0.92
\$100,001 to \$150,000	11.2	8.2	3.0 *	0.82
Over \$150,000	7.8	8.9	-1.2	0.81
Household Internet access				
Yes	98.0	97.8	0.2	0.23
No	2.0	2.2	-0.2	0.23
Child is homeschooled <sup>3</sup>				
Yes-full time	‡	‡	†	†
Yes-part time	‡	‡	†	†
No	97.5	98.5	-0.9	0.99
Child is enrolled in any virtual/online/cyber course <sup>4</sup>				
Yes	6.9	7.6	-0.8	0.41
No	93.1	92.4	0.8	0.41
Child's school is a charter school				
Yes	14.6	13.2	1.4	0.75
No	85.4	86.8	-1.4	0.75
School district allows school choice				
Yes	35.3	36.1	-0.9	0.91
No	64.8	63.9	0.9	0.91
Child's parents participate in 3 or more activities in child's school				
Yes	80.4	81.0	-0.6	0.80
No	19.6	19.0	0.6	0.80
School tells family how child is doing in school				
Yes-does very well	64.4	61.1	3.3 *	1.08
Yes-does just okay	24.1	26.9	-2.8 *	0.86
Yes-does not very well	5.6	6.2	-0.7	0.47
No	6.0	5.7	0.2	0.49

See notes at end of table.

**Table 8-13. PFI child and household demographic characteristics, and key survey estimates, by weighting type—Continued**

Characteristic (by race/ethnicity of child)	Final weights <sup>1</sup>	Base weights <sup>2</sup>	Difference	s.e. of difference
<b>Black, non-Hispanic (continued)</b>				
School provides information about how to help child with homework				
Yes-does very well	50.7	49.0	1.7	1.08
Yes-does just okay	26.7	27.8	-1.1	0.94
Yes-does not very well	7.9	8.5	-0.6	0.58
No	14.6	14.7	-0.1	0.72
Child's parents told child a story in the last week				
Yes	58.9	58.8	0.1	1.21
No	41.1	41.2	-0.1	1.21
Child's parents and child visited a zoo/aquarium in the last week				
Yes	24.1	21.0	3.1 *	1.01
No	75.9	79.0	-3.1 *	1.01
Child's parents and child went to a sporting event in the last week				
Yes	41.2	42.3	-1.1	0.92
No	58.8	57.7	1.1	0.92
Parents check to see that child's homework gets done				
Never	1.5	1.9	-0.3	0.24
Rarely	5.4	6.1	-0.7	0.63
Sometimes	21.5	22.5	-1.0	0.81
Always	71.6	69.6	2.0 *	0.98
Parents expect child to earn a college degree or higher				
Yes	67.3	69.9	-2.5 *	1.27
No	32.7	30.1	2.5 *	1.27
Child has a disability				
Yes	24.2	25.4	-1.2	0.83
No	75.8	74.6	1.2	0.83
School type <sup>5</sup>				
Public	88.2	89.7	-1.5	1.12
Private	7.4	7.2	0.2	0.64
Homeschool	‡	‡	†	†
Other	2.0	1.7	0.2	0.22
Parent considered other schools for child				
Yes	42.1	42.6	-0.5	0.97
No	57.9	57.4	0.5	0.97

See notes at end of table.

**Table 8-13. PFI child and household demographic characteristics, and key survey estimates, by weighting type—Continued**

Characteristic (by race/ethnicity of child)	Final weights <sup>1</sup>	Base weights <sup>2</sup>	Difference		s.e. of difference
<b>Hispanic</b>					
Gender of child					
Male	53.3	52.7	0.5		0.76
Female	46.7	47.3	-0.5		0.76
Age of child					
0 to 4 years	1.0	0.4 <sup>1</sup>	0.6	*	0.18
5-6 years	13.4	11.4	2.0	*	0.72
7-8 years	14.6	14.4	0.2		0.55
9-10 years	16.0	15.1	0.9		0.59
11-12 years	15.7	15.7	#		0.51
13-14 years	15.1	14.9	0.2		0.55
15-16 years	15.0	16.5	-1.5	*	0.47
17-18 years	8.8	11.0	-2.2	*	0.45
19-20 years	0.3	0.5	-0.1		0.08
Highest educational attainment of either parent					
Less than high school diploma	23.1	14.3	8.8	*	0.92
High school diploma or GED	25.5	18.8	6.7	*	0.83
Vocational/some college	24.5	30.6	-6.0	*	0.61
Bachelor's degree	18.0	20.8	-2.7	*	0.48
Graduate or professional degree	8.9	15.6	-6.7	*	0.54
Parents' language					
Both parents speak English	60.6	66.5	-5.9	*	0.76
One parent speaks English	9.8	8.9	0.9	*	0.40
Neither parent speaks English	29.6	24.6	5.0	*	0.82
Family structure					
Two parents and sibling(s)	64.1	62.9	1.1		0.67
Two parents, no siblings	6.8	7.5	-0.8	*	0.24
One parent and sibling(s)	19.2	20.0	-0.8		0.56
One parent, no sibling	7.1	6.5	0.6		0.32
Other	2.8	3.0	-0.2		0.22

See notes at end of table.

**Table 8-13. PFI child and household demographic characteristics, and key survey estimates, by weighting type—Continued**

Characteristic (by race/ethnicity of child)	Final weights <sup>1</sup>	Base weights <sup>2</sup>	Difference	s.e. of difference
<b>Hispanic (continued)</b>				
Household income				
\$10,000 or less	5.0	7.0	-2.1 *	0.58
\$10,001 to \$20,000	7.6	8.6	-1.1	0.64
\$20,001 to \$30,000	11.1	11.8	-0.7	0.84
\$30,001 to \$40,000	11.4	10.9	0.4	0.68
\$40,001 to \$50,000	9.9	8.1	1.9 *	0.59
\$50,001 to \$60,000	8.9	7.8	1.0	0.67
\$60,001 to \$75,000	10.8	9.5	1.3 *	0.57
\$75,001 to \$100,000	12.3	10.8	1.5 *	0.69
\$100,001 to \$150,000	13.6	12.7	0.9	0.73
Over \$150,000	9.6	12.8	-3.2 *	0.68
Household Internet access				
Yes	98.8	98.9	-0.1	0.15
No	1.2	1.1	0.1	0.15
Child is homeschooled <sup>3</sup>				
Yes-full time	1.8	1.6	0.2	0.16
Yes-part time	0.3!	0.2!	0.1	0.07
No	97.9	98.2	-0.3	0.17
Child is enrolled in any virtual/online/cyber course <sup>4</sup>				
Yes	6.9	7.1	-0.2	0.36
No	93.1	92.9	0.2	0.36
Child's school is a charter school				
Yes	13.9	13.7	0.2	0.50
No	86.1	86.3	-0.2	0.50
School district allows school choice				
Yes	38.5	37.7	0.8	0.74
No	61.5	62.3	-0.8	0.74
Child's parents participate in 3 or more activities in child's school				
Yes	77.3	78.2	-0.9	0.63
No	22.7	21.8	0.9	0.63
School tells family how child is doing in school				
Yes-does very well	56.3	57.9	-1.6 *	0.74
Yes-does just okay	32.6	31.1	1.5 *	0.76
Yes-does not very well	6.4	6.1	0.3	0.39
No	4.7	4.9	-0.2	0.25

See notes at end of table.

**Table 8-13. PFI child and household demographic characteristics, and key survey estimates, by weighting type—Continued**

Characteristic (by race/ethnicity of child)	Final weights <sup>1</sup>	Base weights <sup>2</sup>	Difference	s.e. of difference
<b>Hispanic (continued)</b>				
School provides information about how to help child with homework				
Yes-does very well	44.5	44.8	-0.4	0.70
Yes-does just okay	34.1	33.0	1.1	0.74
Yes-does not very well	11.6	11.3	0.3	0.48
No	9.9	10.9	-1.1 *	0.43
Child's parents told child a story in the last week				
Yes	57.5	58.5	-1.0	0.69
No	42.5	41.5	1.0	0.69
Child's parents and child visited a zoo/aquarium in the last week				
Yes	23.1	21.6	1.6 *	0.62
No	76.9	78.4	-1.6 *	0.62
Child's parents and child went to a sporting event in the last week				
Yes	34.2	34.4	-0.2	0.72
No	65.8	65.6	0.2	0.72
Parents check to see that child's homework gets done				
Never	2.7	3.5	-0.8 *	0.24
Rarely	7.3	8.2	-0.9 *	0.31
Sometimes	24.3	24.7	-0.4	0.56
Always	65.7	63.6	2.2 *	0.66
Parents expect child to earn a college degree or higher				
Yes	71.4	72.5	-1.1	0.77
No	28.6	27.5	1.1	0.77
Child has a disability				
Yes	20.1	21.2	-1.1 *	0.50
No	79.9	78.8	1.1 *	0.50
School type <sup>5</sup>				
Public	90.4	89.8	0.6	0.43
Private	6.1	7.1	-0.9 *	0.36
Homeschool	1.7	1.5	0.2	0.16
Other	1.7	1.6	0.1	0.16
Parent considered other schools for child				
Yes	36.9	38.4	-1.5 *	0.70
No	63.1	61.6	1.5 *	0.70

See notes at end of table.

**Table 8-13. PFI child and household demographic characteristics, and key survey estimates, by weighting type—Continued**

Characteristic (by race/ethnicity of child)	Final weights <sup>1</sup>	Base weights <sup>2</sup>	Difference		s.e. of difference
<b>Other, non-Hispanic</b>					
Gender of child					
Male	47.6	48.3	-0.7		1.06
Female	52.4	51.7	0.7		1.06
Age of child					
0 to 4 years	1.0 <sup>!</sup>	0.3 <sup>!</sup>	0.7	*	0.33
5-6 years	16.2	13.6	2.6	*	0.81
7-8 years	14.7	15.1	-0.4		0.63
9-10 years	17.9	16.5	1.5		0.89
11-12 years	14.4	15.1	-0.7		0.67
13-14 years	14.5	15.3	-0.8		0.51
15-16 years	14.9	15.2	-0.3		0.71
17-18 years	6.0	8.7	-2.6	*	0.36
19-20 years	‡	‡	†		†
Highest educational attainment of either parent					
Less than high school diploma	10.4	4.6	5.9	*	0.90
High school diploma or GED	13.9	8.3	5.6	*	0.83
Vocational/some college	20.7	21.9	-1.2		0.64
Bachelor's degree	28.6	27.9	0.7		0.68
Graduate or professional degree	26.4	37.3	-10.9	*	0.68
Parents' language					
Both parents speak English	81.7	82.7	-1.0		0.96
One parent speaks English	4.4	4.1	0.3		0.45
Neither parent speaks English	13.9	13.2	0.7		0.85
Family structure					
Two parents and sibling(s)	62.2	64.8	-2.6	*	0.84
Two parents, no siblings	10.3	10.9	-0.5		0.31
One parent and sibling(s)	17.9	15.7	2.2	*	0.90
One parent, no sibling	6.8	5.9	0.9	*	0.35
Other	2.7	2.7	0.1		0.21

See notes at end of table.

**Table 8-13. PFI child and household demographic characteristics, and key survey estimates, by weighting type—Continued**

Characteristic (by race/ethnicity of child)	Final weights <sup>1</sup>	Base weights <sup>2</sup>	Difference		s.e. of difference
<b>Other, non-Hispanic (continued)</b>					
Household income					
\$10,000 or less	4.5	3.4	1.2	*	0.48
\$10,001 to \$20,000	3.9	3.9	#		0.35
\$20,001 to \$30,000	6.2	5.9	0.3		0.64
\$30,001 to \$40,000	7.7	6.4	1.3		0.69
\$40,001 to \$50,000	7.9	7.5	0.4		0.54
\$50,001 to \$60,000	6.1	5.8	0.3		0.47
\$60,001 to \$75,000	9.8	8.4	1.4	*	0.64
\$75,001 to \$100,000	13.7	14.2	-0.4		0.64
\$100,001 to \$150,000	17.2	17.3	-0.1		0.55
Over \$150,000	23.0	27.3	-4.3	*	0.67
Household Internet access					
Yes	99.7	99.6	#		0.06
No	0.3!	0.4!	#		0.06
Child is homeschooled <sup>3</sup>					
Yes-full time	1.4	1.5	-0.1		0.13
Yes-part time	‡	‡	†		†
No	98.3	98.3	#		0.14
Child is enrolled in any virtual/online/cyber course <sup>4</sup>					
Yes	6.4	7.1	-0.8	*	0.32
No	93.6	92.9	0.8	*	0.32
Child's school is a charter school					
Yes	10.1	9.3	0.8		0.55
No	89.9	90.7	-0.8		0.55
School district allows school choice					
Yes	31.0	32.4	-1.4	*	0.73
No	69.0	67.6	1.4	*	0.73
Child's parents participate in 3 or more activities in child's school					
Yes	80.5	82.0	-1.5		0.88
No	19.5	18.0	1.5		0.88
School tells family how child is doing in school					
Yes-does very well	56.4	57.7	-1.3		1.02
Yes-does just okay	32.4	30.3	2.1	*	1.03
Yes-does not very well	5.6	5.6	#		0.30
No	5.5	6.4	-0.9	*	0.26

See notes at end of table.

**Table 8-13. PFI child and household demographic characteristics, and key survey estimates, by weighting type—Continued**

Characteristic (by race/ethnicity of child)	Final weights <sup>1</sup>	Base weights <sup>2</sup>	Difference	s.e. of difference
<b>Other, non-Hispanic (continued)</b>				
School provides information about how to help child with homework				
Yes-does very well	43.1	42.7	0.4	0.96
Yes-does just okay	33.3	33.8	-0.4	0.89
Yes-does not very well	9.9	9.4	0.5	0.67
No	13.7	14.1	-0.4	0.61
Child's parents told child a story in the last week				
Yes	63.3	61.1	2.2 *	0.87
No	36.7	38.9	-2.2 *	0.87
Child's parents and child visited a zoo/aquarium in the last week				
Yes	20.9	19.9	1.0	0.64
No	79.1	80.1	-1.0	0.64
Child's parents and child went to a sporting event in the last week				
Yes	31.8	32.8	-1.1	0.99
No	68.2	67.2	1.1	0.99
Parents check to see that child's homework gets done				
Never	4.0	4.7	-0.7 *	0.25
Rarely	10.1	10.2	-0.1	0.78
Sometimes	26.2	26.9	-0.7	0.92
Always	59.7	58.1	1.6	0.90
Parents expect child to earn a college degree or higher				
Yes	75.6	81.1	-5.5 *	0.88
No	24.4	18.9	5.5 *	0.88
Child has a disability				
Yes	19.3	19.1	0.2	0.86
No	80.7	80.9	-0.2	0.86
School type <sup>5</sup>				
Public	89.1	87.5	1.6 *	0.40
Private	8.4	9.8	-1.4 *	0.34
Homeschool	1.3	1.3	-0.1	0.13
Other	1.3	1.4	-0.1	0.13

See notes at end of table.

**Table 8-13. PFI child and household demographic characteristics, and key survey estimates, by weighting type—Continued**

Characteristic (by race/ethnicity of child)	Final weights <sup>1</sup>	Base weights <sup>2</sup>	Difference	s.e. of difference
<b>Other, non-Hispanic (continued)</b>				
Parent considered other schools for child				
Yes	36.5	37.5	-1.0	1.01
No	63.5	62.5	1.0	1.01

\* Indicates a statistically significant difference ( $p < .05$ , Student's  $t$  test).

# Rounds to zero.

† Not applicable.

‡ Reporting standards not met. There were too few cases for a reliable estimate or the coefficient of variation was 50 percent or higher.

! Interpret data with caution; coefficient of variation is between 30 and 50 percent.

<sup>1</sup>Final weights include household- and person-level nonresponse adjustments as well as raking adjustments.

<sup>2</sup>Base weights account only for the probability of selection at the screener and topical phases.

<sup>3</sup>Homeschoolers are defined as children whose parents indicated that the child is homeschooled for some or all classes. Children in public/private school for more than 25 hours per week, or whose parents indicated that they are homeschooled only because of a temporary illness, are excluded. Full-time homeschoolers are those who do not spend any time in public/private school. Part-time homeschoolers are those who spend up to 25 hours per week in public/private school.

<sup>4</sup>Includes children who were taking any virtual, online, or cyber courses, regardless of the reason and regardless of whether the parent reported the child as being enrolled in school or homeschooled.

<sup>5</sup>For this estimate, children are classified as public school students if the respondent stated that the child attends a public school; otherwise, as private school students if the child attends a private school; and otherwise, as homeschooled students if the child is homeschooled. All other students (including virtual school students who do not fall into one of the prior categories) are included in the "Other" category. The homeschooled category of this derived variable is not adjusted to match the NCES definition of homeschoolers; therefore, the homeschooling percentage differs from the homeschooling rates shown separately in this table and in table 8.14. For this estimate, school type was derived without reference to whether the child was reported as attending a charter school.

NOTE: s.e. is standard error. GED = general equivalency diploma. Details may not sum to total because of rounding. The estimates in this table were produced solely for the purpose of evaluating nonresponse bias and are not official statistics. PFI = Parent and Family Involvement in Education.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019.

**Table 8-14. Estimated homeschooling rate among children ages 5-17, by weighting type: PFI-NHES:2019**

Characteristic	Estimated homeschooling rate			
	Final weights <sup>1</sup>	Base weights <sup>2</sup>	Difference	s.e. of difference
Overall	2.8	2.9	-0.1	0.10
Race/ethnicity of child				
White, non-Hispanic	4.0	3.8	0.2	0.17
Black, non-Hispanic	1.2	1.2	#	0.16
Hispanic	1.9	1.7	0.2	0.16
Other, non-Hispanic	1.7	1.7	#	0.15
Gender of child				
Male	2.7	2.9	-0.1	0.13
Female	2.9	3.0	#	0.12

\* Indicates a statistically significant difference ( $p < .05$ , Student's  $t$  test).

# Rounds to zero.

<sup>1</sup> Final weights include household- and person-level nonresponse adjustments as well as raking adjustments.

<sup>2</sup> Base weights account only for the probability of selection at the screener and topical phases.

NOTE: s.e. is standard error. The homeschooling rate is the number of homeschooled students ages 5 through 17 divided by the number of enrolled and homeschooled students ages 5 through 17. The definition of homeschoolers excludes students who are homeschooled only due to a temporary illness and students who are in public or private school for more than 25 hours per week. Estimates in this table include only students ages 5 through 17 and therefore differ from the homeschooling-related estimates shown in table 8-13. The estimates in this table were produced solely for the purpose of evaluating nonresponse bias and are not official statistics. PFI = Parent and Family Involvement in Education.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019.

**Table 8-15. ECPP child and household demographic characteristics and key survey estimates by weighting type**

Characteristic (by race/ethnicity of child)	Final weights <sup>1</sup>	Base weights <sup>2</sup>	Difference		s.e. of difference
<b>Overall estimates</b>					
Race/ethnicity of child					
White, non-Hispanic	49.1	60.0	-10.8	*	0.50
Black, non-Hispanic	12.8	6.8	6.0	*	0.30
Hispanic	25.6	18.6	7.0	*	0.50
Other, non-Hispanic	12.4	14.7	-2.2	*	0.28
Gender of child					
Male	51.9	51.7	0.2		0.44
Female	48.1	48.3	-0.2		0.44
Age of child					
0 years	21.8	18.8	2.9	*	0.45
1 year	20.7	17.4	3.4	*	0.39
2 years	18.9	19.1	-0.2		0.35
3 years	17.3	19.1	-1.8	*	0.40
4 years	16.0	19.0	-3.0	*	0.34
5-6 years	5.2	6.5	-1.3	*	0.16
Highest educational attainment of either parent					
Less than high school diploma	8.9	3.7	5.2	*	0.26
High school diploma or GED	18.9	10.3	8.7	*	0.40
Vocational/some college	23.9	24.4	-0.5		0.40
Bachelor's degree	28.2	30.7	-2.4	*	0.52
Graduate or professional degree	20.1	31.0	-10.9	*	0.60
Parents' language					
Both parents speak English	86.9	90.1	-3.2	*	0.41
One parent speaks English	3.3	2.5	0.9	*	0.23
Neither parent speaks English	9.8	7.4	2.4	*	0.36
Family structure					
Two parents and sibling(s)	58.9	63.5	-4.6	*	0.50
Two parents, no siblings	19.3	20.0	-0.7		0.35
One parent and sibling(s)	11.3	9.1	2.2	*	0.40
One parent, no sibling	8.1	5.4	2.7	*	0.26
Other	2.4	2.0	0.4	*	0.12

See notes at end of table.

**Table 8-15. ECPP child and household demographic characteristics and key survey estimates by weighting type—Continued**

Characteristic (by race/ethnicity of child)	Final weights <sup>1</sup>	Base weights <sup>2</sup>	Difference	s.e. of difference
<b>Overall estimates (continued)</b>				
Household income				
\$10,000 or less	5.4	4.2	1.2 *	0.24
\$10,001 to \$20,000	6.0	4.8	1.2 *	0.36
\$20,001 to \$30,000	7.9	6.8	1.1 *	0.35
\$30,001 to \$40,000	8.1	6.8	1.4 *	0.34
\$40,001 to \$50,000	7.9	6.7	1.2 *	0.33
\$50,001 to \$60,000	7.2	6.7	0.4	0.37
\$60,001 to \$75,000	10.1	9.5	0.6	0.39
\$75,001 to \$100,000	13.4	15.6	-2.2 *	0.47
\$100,001 to \$150,000	17.5	18.4	-1.0	0.54
Over \$150,000	16.5	20.5	-4.0 *	0.51
Household Internet access				
Yes	98.0	98.8	-0.8 *	0.23
No	2.0	1.2	0.8 *	0.23
Child receiving any nonparental care (at least weekly)				
Yes	59.4	63.0	-3.6 *	0.59
No	40.6	37.0	3.6 *	0.59
Child receiving relative care (at least weekly)				
Yes	22.5	21.3	1.2 *	0.44
No	77.5	78.7	-1.2 *	0.44
How long it took to go from the child's home to a relative's home to receive regular care				
Less than 10 minutes	43.8	43.9	-0.1	1.33
About 10 to 20 minutes	31.3	31.6	-0.3	1.11
About 20 to 30 minutes	16.9	16.0	0.9	1.48
More than 30 minutes	7.9	8.4	-0.5	0.68
Child receiving nonrelative care (at least weekly)				
Yes	11.7	12.3	-0.6 *	0.29
No	88.3	87.7	0.6 *	0.29
How long it took to go from the child's home to a non-relative's home to receive regular care				
Less than 10 minutes	48.7	49.0	-0.3	1.32
About 10 to 20 minutes	34.0	33.0	1.0	1.38
About 20 to 30 minutes	13.0	12.7	0.3	1.01
More than 30 minutes	4.3	5.3	-1.0 *	0.40

See notes at end of table.

**Table 8-15. ECPP child and household demographic characteristics and key survey estimates by weighting type—Continued**

Characteristic (by race/ethnicity of child)	Final weights <sup>1</sup>	Base weights <sup>2</sup>	Difference		s.e. of difference
<b>Overall estimates (continued)</b>					
Child receiving center-based care (at least weekly)					
Yes	37.1	42.7	-5.6	*	0.58
No	62.9	57.3	5.6	*	0.58
How long it took to go from the child's home to daycare center/ preschool, or pre-K to receive regular care					
Less than 10 minutes	50.7	52.3	-1.6	*	0.71
About 10 to 20 minutes	35.2	34.5	0.7		0.67
About 20 to 30 minutes	10.5	9.6	0.8		0.51
More than 30 minutes	3.6	3.6	#		0.25
Can count higher than 10					
Yes	52.0	57.2	-5.2	*	0.57
No	48.0	42.8	5.2	*	0.57
Knows all letters					
Yes	23.1	26.7	-3.6	*	0.46
No	76.9	73.3	3.6	*	0.46
Can write own name					
Yes	37.1	41.5	-4.4	*	0.58
No	62.9	58.5	4.4	*	0.58
Child has a disability					
Yes	10.5	10.5	#		0.29
No	89.5	89.5	#		0.29
Good choices for child care and early childhood programs					
Yes	56.8	61.7	-4.9	*	0.50
No	18.4	17.8	0.6		0.33
Don't know	24.8	20.5	4.3	*	0.42
Number of times family read to child in past week					
Not at all	9.3	7.3	2.0	*	0.25
1 or 2 times	11.8	9.9	1.9	*	0.33
3 or more times	79.0	82.8	-3.9	*	0.37
Someone in family taught letters, words, or numbers					
Not at all	13.2	12.5	0.6		0.37
1 or 2 times	25.7	25.9	-0.1		0.47
3 or more times	61.1	61.6	-0.5		0.49

See notes at end of table.

**Table 8-15. ECPP child and household demographic characteristics and key survey estimates by weighting type—Continued**

<b>Characteristic (by race/ethnicity of child)</b>	<b>Final weights<sup>1</sup></b>	<b>Base weights<sup>2</sup></b>	<b>Difference</b>	<b>s.e. of difference</b>
<b>White, non-Hispanic</b>				
Gender of child				
Male	51.1	51.5	-0.3	0.49
Female	48.9	48.5	0.3	0.49
Age of child				
0 years	22.1	19.2	2.9 *	0.48
1 year	20.5	17.1	3.4 *	0.44
2 years	19.2	18.9	0.3	0.42
3 years	16.6	18.6	-2.0 *	0.44
4 years	15.6	19.1	-3.5 *	0.40
5-6 years	6.0	7.1	-1.1 *	0.19
Highest educational attainment of either parent				
Less than high school diploma	4.2	1.9	2.3 *	0.41
High school diploma or GED	14.8	7.5	7.2 *	0.46
Vocational/some college	21.5	21.5	0.1	0.44
Bachelor's degree	34.9	35.0	-0.1	0.58
Graduate or professional degree	24.6	34.1	-9.5 *	0.72
Parents' language				
Both parents speak English	97.0	97.6	-0.6 *	0.26
One parent speaks English	0.7	0.5	0.1	0.08
Neither parent speaks English	2.3	1.8	0.5	0.25
Family structure				
Two parents and sibling(s)	64.7	68.4	-3.7 *	0.50
Two parents, no siblings	21.3	20.6	0.7	0.39
One parent and sibling(s)	6.6	5.7	0.9 *	0.36
One parent, no sibling	5.7	3.7	1.9 *	0.34
Other	1.7	1.6	0.1	0.12

See notes at end of table.

**Table 8-15. ECPP child and household demographic characteristics and key survey estimates by weighting type—Continued**

Characteristic (by race/ethnicity of child)	Final weights <sup>1</sup>	Base weights <sup>2</sup>	Difference		s.e. of difference
<b>White, non-Hispanic (continued)</b>					
Household income					
\$10,000 or less	3.0	2.2	0.8	*	0.23
\$10,001 to \$20,000	4.1	3.3	0.8	*	0.34
\$20,001 to \$30,000	4.9	4.3	0.5		0.35
\$30,001 to \$40,000	6.0	5.1	0.9	*	0.39
\$40,001 to \$50,000	6.6	5.5	1.0	*	0.41
\$50,001 to \$60,000	7.3	6.9	0.4		0.47
\$60,001 to \$75,000	10.5	9.9	0.5		0.51
\$75,001 to \$100,000	15.5	18.1	-2.6	*	0.62
\$100,001 to \$150,000	21.2	21.2	#		0.64
Over \$150,000	20.9	23.5	-2.6	*	0.68
Household Internet access					
Yes	97.9	98.9	-1.0	*	0.31
No	2.1	1.1	1.0	*	0.31
Child receiving any nonparental care (at least weekly)					
Yes	61.0	65.2	-4.2	*	0.61
No	39.0	34.8	4.2	*	0.61
Child receiving relative care (at least weekly)					
Yes	20.6	20.8	-0.2		0.37
No	79.4	79.2	0.2		0.37
How long it took to go from the child's home to a relative's home to receive regular care					
Less than 10 minutes	45.0	46.1	-1.1		1.13
About 10 to 20 minutes	33.1	31.2	1.9		1.13
About 20 to 30 minutes	14.9	14.9	#		0.67
More than 30 minutes	7.0	7.8	-0.8		0.47
Child receiving nonrelative care (at least weekly)					
Yes	14.2	14.5	-0.3		0.29
No	85.8	85.5	0.3		0.29
How long it took to go from the child's home to a non-relative's home to receive regular care					
Less than 10 minutes	51.2	50.5	0.7		1.38
About 10 to 20 minutes	34.5	33.8	0.7		1.35
About 20 to 30 minutes	9.4	10.3	-0.9		0.55
More than 30 minutes	5.0	5.4	-0.5		0.47

See notes at end of table.

**Table 8-15. ECPP child and household demographic characteristics and key survey estimates by weighting type—Continued**

Characteristic (by race/ethnicity of child)	Final weights <sup>1</sup>	Base weights <sup>2</sup>	Difference		s.e. of difference
<b>White, non-Hispanic (continued)</b>					
Child receiving center-based care (at least weekly)					
Yes	39.9	45.3	-5.4	*	0.67
No	60.1	54.7	5.4	*	0.67
How long it took to go from the child's home to daycare center/ preschool, or pre-K to receive regular care					
Less than 10 minutes	54.8	55.9	-1.1		0.67
About 10 to 20 minutes	33.1	32.9	0.2		0.69
About 20 to 30 minutes	9.5	8.8	0.7		0.44
More than 30 minutes	2.6	2.4	0.2		0.15
Can count higher than 10					
Yes	54.6	59.3	-4.8	*	0.64
No	45.4	40.7	4.8	*	0.64
Knows all letters					
Yes	24.2	26.8	-2.7	*	0.52
No	75.8	73.2	2.7	*	0.52
Can write own name					
Yes	38.9	43.1	-4.2	*	0.56
No	61.1	56.9	4.2	*	0.56
Child has a disability					
Yes	10.2	10.3	-0.1		0.37
No	89.8	89.7	0.1		0.37
Good choices for child care and early childhood programs					
Yes	63.0	67.0	-4.0	*	0.59
No	17.3	16.1	1.2	*	0.40
Don't know	19.7	16.9	2.8	*	0.50
Number of times family read to child in past week					
Not at all	6.5	5.2	1.3	*	0.31
1 or 2 times	7.6	7.1	0.5		0.26
3 or more times	85.9	87.7	-1.8	*	0.39
Someone in family taught letters, words, or numbers					
Not at all	14.6	13.7	0.9	*	0.35
1 or 2 times	24.3	24.7	-0.3		0.53
3 or more times	61.1	61.7	-0.6		0.56

See notes at end of table.

**Table 8-15. ECPP child and household demographic characteristics and key survey estimates by weighting type—Continued**

Characteristic (by race/ethnicity of child)	Final weights <sup>1</sup>	Base weights <sup>2</sup>	Difference	s.e. of difference
<b>Black, non-Hispanic</b>				
Gender of child				
Male	50.8	50.8	#	1.60
Female	49.2	49.2	#	1.60
Age of child				
0 years	25.4	20.9	4.5 *	1.54
1 year	19.2	16.6	2.6 *	1.10
2 years	17.6	20.4	-2.8 *	1.04
3 years	17.6	19.1	-1.5	1.11
4 years	15.6	17.7	-2.1 *	1.00
5-6 years	4.6	5.3	-0.7	0.46
Highest educational attainment of either parent				
Less than high school diploma	13.0	6.7	6.3 *	1.64
High school diploma or GED	25.5	18.1	7.3 *	1.87
Vocational/some college	30.9	35.7	-4.8 *	1.48
Bachelor's degree	17.6	19.3	-1.7	1.01
Graduate or professional degree	13.1	20.2	-7.1 *	1.39
Parents' language				
Both parents speak English	94.3	93.7	0.6	0.92
One parent speaks English	2.1!	2.4!	-0.3	0.27
Neither parent speaks English	3.6!	3.9!	-0.3	0.85
Family structure				
Two parents and sibling(s)	41.2	42.0	-0.8	1.85
Two parents, no siblings	10.8	11.3	-0.4	0.78
One parent and sibling(s)	26.0	25.2	0.8	1.33
One parent, no sibling	16.3	15.1	1.2	1.08
Other	5.6	6.5	-0.8	0.69

See notes at end of table.

**Table 8-15. ECPP child and household demographic characteristics and key survey estimates by weighting type—Continued**

Characteristic (by race/ethnicity of child)	Final weights <sup>1</sup>	Base weights <sup>2</sup>	Difference	s.e. of difference
<b>Black, non-Hispanic (continued)</b>				
Household income				
\$10,000 or less	14.1	14.4	-0.3	1.78
\$10,001 to \$20,000	12.1	13.0	-0.9	1.54
\$20,001 to \$30,000	12.6	13.5	-0.9	1.85
\$30,001 to \$40,000	10.4	11.4	-1.0	1.38
\$40,001 to \$50,000	9.0	6.7	2.4 *	1.08
\$50,001 to \$60,000	6.8	5.9	0.8	1.17
\$60,001 to \$75,000	8.8	7.6	1.2	1.36
\$75,001 to \$100,000	9.9	9.4	0.5	1.30
\$100,001 to \$150,000	9.9	10.6	-0.8	1.52
Over \$150,000	6.6	7.4	-0.8	1.13
Household Internet access				
Yes	97.4	96.6	0.8	0.47
No	2.6	3.4	-0.8	0.47
Child receiving any nonparental care (at least weekly)				
Yes	63.0	65.1	-2.1	2.00
No	37.0	34.9	2.1	2.00
Child receiving relative care (at least weekly)				
Yes	28.8	26.7	2.1	1.95
No	71.2	73.3	-2.1	1.95
How long it took to go from the child's home to a relative's home to receive regular care				
Less than 10 minutes	44.8	43.1	1.7	5.06
About 10 to 20 minutes	26.2	33.6	-7.4 *	3.33
About 20 to 30 minutes	23.6!	17.7!	5.9	6.08
More than 30 minutes	5.3!	5.5!	-0.2	1.39
Child receiving nonrelative care (at least weekly)				
Yes	8.5	8.1	0.4	1.13
No	91.5	91.9	-0.4	1.13
How long it took to go from the child's home to a non-relative's home to receive regular care				
Less than 10 minutes	40.9	41.1	-0.2	6.25
About 10 to 20 minutes	37.7	35.4	2.3	6.27
About 20 to 30 minutes	17.9!	19.4!	-1.5	4.01
More than 30 minutes	‡	‡	†	†

See notes at end of table.

**Table 8-15. ECPP child and household demographic characteristics and key survey estimates by weighting type—Continued**

<b>Characteristic (by race/ethnicity of child)</b>	<b>Final weights<sup>1</sup></b>	<b>Base weights<sup>2</sup></b>	<b>Difference</b>	<b>s.e. of difference</b>
<b>Black, non-Hispanic (continued)</b>				
Child receiving center-based care (at least weekly)				
Yes	37.1	41.9	-4.9 *	1.29
No	62.9	58.1	4.9 *	1.29
How long it took to go from the child's home to daycare center/ preschool, or pre-K to receive regular care				
Less than 10 minutes	45.1	44.4	0.7	1.84
About 10 to 20 minutes	37.6	37.5	0.1	1.79
About 20 to 30 minutes	12.3	12.5	-0.1	1.42
More than 30 minutes	4.9	5.6	-0.7	0.74
Can count higher than 10				
Yes	55.8	59.9	-4.1 *	1.88
No	44.2	40.1	4.1 *	1.88
Knows all letters				
Yes	26.5	30.5	-4.1 *	1.16
No	73.5	69.5	4.1 *	1.16
Can write own name				
Yes	36.0	37.8	-1.8	1.75
No	64.0	62.2	1.8	1.75
Child has a disability				
Yes	11.7	11.7	#	0.96
No	88.3	88.3	#	0.96
Good choices for child care and early childhood programs				
Yes	53.8	55.7	-1.9	1.97
No	21.2	22.4	-1.2	1.23
Don't know	25.0	21.9	3.1	1.73
Number of times family read to child in past week				
Not at all	12.2	10.8	1.4	1.09
1 or 2 times	20.2	18.4	1.8	1.46
3 or more times	67.6	70.8	-3.2 *	1.49
Someone in family taught letters, words, or numbers				
Not at all	12.5	9.6	2.9	1.69
1 or 2 times	22.0	22.8	-0.7	1.55
3 or more times	65.5	67.6	-2.1	1.60

See notes at end of table.

**Table 8-15. ECPP child and household demographic characteristics and key survey estimates by weighting type—Continued**

<b>Characteristic (by race/ethnicity of child)</b>	<b>Final weights<sup>1</sup></b>	<b>Base weights<sup>2</sup></b>	<b>Difference</b>	<b>s.e. of difference</b>
<b>Hispanic</b>				
Gender of child				
Male	53.3	51.9	1.4	0.96
Female	46.7	48.1	-1.4	0.96
Age of child				
0 years	19.6	17.3	2.3 *	0.81
1 year	21.1	17.8	3.3 *	0.90
2 years	19.6	19.5	0.1	0.85
3 years	17.6	19.1	-1.5	0.84
4 years	17.4	19.9	-2.4 *	0.75
5-6 years	4.7	6.4	-1.7 *	0.34
Highest educational attainment of either parent				
Less than high school diploma	17.3	10.1	7.2 *	1.11
High school diploma or GED	27.3	19.6	7.7 *	0.97
Vocational/some college	26.4	33.2	-6.8 *	0.90
Bachelor's degree	19.6	22.3	-2.7 *	0.80
Graduate or professional degree	9.3	14.8	-5.4 *	0.80
Parents' language				
Both parents speak English	67.4	72.4	-5.0 *	1.21
One parent speaks English	8.8	7.3	1.5	0.80
Neither parent speaks English	23.8	20.3	3.5 *	1.09
Family structure				
Two parents and sibling(s)	58.6	59.0	-0.3	1.05
Two parents, no siblings	16.5	17.3	-0.8	0.69
One parent and sibling(s)	13.5	14.5	-0.9	0.85
One parent, no sibling	9.4	7.5	1.9 *	0.78
Other	2.0	1.8	0.2	0.19

See notes at end of table.

**Table 8-15. ECPP child and household demographic characteristics and key survey estimates by weighting type—Continued**

Characteristic (by race/ethnicity of child)	Final weights <sup>1</sup>	Base weights <sup>2</sup>	Difference	s.e. of difference
<b>Hispanic (continued)</b>				
Household income				
\$10,000 or less	6.1	8.0	-1.9 *	0.74
\$10,001 to \$20,000	8.0	8.5	-0.6	1.01
\$20,001 to \$30,000	11.6	12.2	-0.6	1.07
\$30,001 to \$40,000	11.3	10.8	0.5	0.97
\$40,001 to \$50,000	10.0	10.6	-0.6	0.93
\$50,001 to \$60,000	8.5	8.6	-0.1	0.81
\$60,001 to \$75,000	10.5	8.2	2.3 *	0.84
\$75,001 to \$100,000	11.6	11.1	0.5	0.95
\$100,001 to \$150,000	13.4	12.1	1.3	0.98
Over \$150,000	9.1	9.8	-0.8	0.75
Household Internet access				
Yes	98.0	98.6	-0.6	0.49
No	2.0†	1.4	0.6	0.49
Child receiving any nonparental care (at least weekly)				
Yes	55.8	56.9	-1.2	1.02
No	44.2	43.1	1.2	1.02
Child receiving relative care (at least weekly)				
Yes	24.5	22.8	1.7 *	0.78
No	75.5	77.2	-1.7 *	0.78
How long it took to go from the child's home to a relative's home to receive regular care				
Less than 10 minutes	41.7	38.6	3.1	2.56
About 10 to 20 minutes	30.6	32.7	-2.1	1.92
About 20 to 30 minutes	17.2	18.1	-0.9	1.85
More than 30 minutes	10.5‡	10.6	-0.1	1.39
Child receiving nonrelative care (at least weekly)				
Yes	9.1	8.4	0.7	0.64
No	90.9	91.6	-0.7	0.64
How long it took to go from the child's home to a non-relative's home to receive regular care				
Less than 10 minutes	44.5	45.4	-0.9	4.16
About 10 to 20 minutes	36.7	35.2	1.5	4.86
About 20 to 30 minutes	16.7	16.1	0.6	2.56
More than 30 minutes	‡	‡	†	†

See notes at end of table.

**Table 8-15. ECPP child and household demographic characteristics and key survey estimates by weighting type—Continued**

Characteristic (by race/ethnicity of child)	Final weights <sup>1</sup>	Base weights <sup>2</sup>	Difference	s.e. of difference
<b>Hispanic (continued)</b>				
Child receiving center-based care (at least weekly)				
Yes	31.9	34.9	-3.0 *	1.13
No	68.1	65.1	3.0 *	1.13
How long it took to go from the child's home to daycare center/ preschool, or pre-K to receive regular care				
Less than 10 minutes	47.5	49.5	-2.1	2.39
About 10 to 20 minutes	35.3	31.9	3.4	1.86
About 20 to 30 minutes	12.1	11.9	0.3	1.32
More than 30 minutes	5.1	6.7	-1.6	1.33
Can count higher than 10				
Yes	43.2	47.7	-4.5 *	1.26
No	56.8	52.3	4.5 *	1.26
Knows all letters				
Yes	16.2	19.0	-2.8 *	0.79
No	83.8	81.0	2.8 *	0.79
Can write own name				
Yes	33.2	36.5	-3.3 *	1.27
No	66.8	63.5	3.3 *	1.27
Child has a disability				
Yes	10.9	11.5	-0.5	0.55
No	89.1	88.5	0.5	0.55
Good choices for child care and early childhood programs				
Yes	47.8	50.1	-2.3 *	1.12
No	19.5	20.6	-1.1	0.85
Don't know	32.7	29.3	3.4 *	1.08
Number of times family read to child in past week				
Not at all	11.3	10.0	1.3 *	0.61
1 or 2 times	16.2	15.6	0.7	0.68
3 or more times	72.4	74.4	-2.0 *	0.95
Someone in family taught letters, words, or numbers				
Not at all	11.5	10.9	0.6	0.62
1 or 2 times	30.1	30.7	-0.6	0.94
3 or more times	58.4	58.4	0.1	0.98

See notes at end of table.

**Table 8-15. ECPP child and household demographic characteristics and key survey estimates by weighting type—Continued**

<b>Characteristic (by race/ethnicity of child)</b>	<b>Final weights<sup>1</sup></b>	<b>Base weights<sup>2</sup></b>	<b>Difference</b>	<b>s.e. of difference</b>
<b>Other, non-Hispanic</b>				
Gender of child				
Male	53.2	52.7	0.5	1.14
Female	46.8	47.3	-0.5	1.14
Age of child				
0 years	21.0	18.1	2.9 *	0.79
1 year	22.5	18.1	4.4 *	1.02
2 years	17.8	19.0	-1.3 *	0.59
3 years	19.4	21.4	-2.0 *	1.00
4 years	15.3	18.4	-3.1 *	0.62
5-6 years	3.9	4.9	-0.9 *	0.36
Highest educational attainment of either parent				
Less than high school diploma	6.0	1.7	4.3 *	1.24
High school diploma or GED	11.2	6.0	5.2 *	0.86
Vocational/some college	20.8	20.0	0.7	0.78
Bachelor's degree	30.5	28.9	1.7	0.90
Graduate or professional degree	31.4	43.4	-12.0 *	0.89
Parents' language				
Both parents speak English	79.2	80.0	-0.7	1.14
One parent speaks English	4.0	4.4	-0.4	0.53
Neither parent speaks English	16.8	15.6	1.2	1.04
Family structure				
Two parents and sibling(s)	54.8	59.6	-4.7 *	1.08
Two parents, no siblings	25.9	24.8	1.2	0.86
One parent and sibling(s)	10.0	8.8	1.1	0.81
One parent, no sibling	6.5	4.8	1.7 *	0.64
Other	2.8	2.0	0.7	0.47

See notes at end of table.

**Table 8-15. ECPP child and household demographic characteristics and key survey estimates by weighting type—Continued**

Characteristic (by race/ethnicity of child)	Final weights <sup>1</sup>	Base weights <sup>2</sup>	Difference	s.e. of difference
<b>Other, non-Hispanic (continued)</b>				
Household income				
\$10,000 or less	4.4	2.9	1.4 *	0.64
\$10,001 to \$20,000	3.2	2.6	0.6	0.52
\$20,001 to \$30,000	7.1	6.9	0.2	0.77
\$30,001 to \$40,000	7.6	6.3	1.4 *	0.67
\$40,001 to \$50,000	7.7	6.3	1.3	0.85
\$50,001 to \$60,000	4.4	4.2	0.2	0.47
\$60,001 to \$75,000	9.2	10.1	-0.9	0.86
\$75,001 to \$100,000	12.7	13.8	-1.1	0.65
\$100,001 to \$150,000	19.1	19.0	0.1	0.92
Over \$150,000	24.7	27.9	-3.2 *	1.01
Household Internet access				
Yes	99.1	99.7	-0.6	0.47
No	‡	‡	†	†
Child receiving any nonparental care (at least weekly)				
Yes	57.0	61.1	-4.1 *	1.08
No	43.0	38.9	4.1 *	1.08
Child receiving relative care (at least weekly)				
Yes	19.2	18.9	0.3	0.80
No	80.8	81.1	-0.3	0.80
How long it took to go from the child's home to a relative's home to receive regular care				
Less than 10 minutes	41.4	40.9	0.5	2.64
About 10 to 20 minutes	33.8	30.8	3.0	2.30
About 20 to 30 minutes	14.5	18.3	-3.8 *	1.85
More than 30 minutes	10.3!	10.1!	0.2	1.36
Child receiving nonrelative care (at least weekly)				
Yes	10.3	9.9	0.3	0.77
No	89.7	90.1	-0.3	0.77
How long it took to go from the child's home to a non-relative's home to receive regular care				
Less than 10 minutes	50.0	46.8	3.2	5.81
About 10 to 20 minutes	20.4	22.7	-2.4	3.59
About 20 to 30 minutes	23.4!	22.4!	1.0	4.33
More than 30 minutes	‡	‡	†	†

See notes at end of table.

**Table 8-15. ECPP child and household demographic characteristics and key survey estimates by weighting type—Continued**

<b>Characteristic (by race/ethnicity of child)</b>	<b>Final weights<sup>1</sup></b>	<b>Base weights<sup>2</sup></b>	<b>Difference</b>	<b>s.e. of difference</b>
<b>Other, non-Hispanic (continued)</b>				
Child receiving center-based care (at least weekly)				
Yes	36.7	41.9	-5.2 *	0.97
No	63.3	58.1	5.2 *	0.97
How long it took to go from the child's home to daycare center/ preschool, or pre-K to receive regular care				
Less than 10 minutes	44.9	43.3	1.6	1.28
About 10 to 20 minutes	41.4	42.7	-1.3	1.27
About 20 to 30 minutes	9.9	9.6	0.3	0.72
More than 30 minutes	3.8	4.4	-0.6	0.39
Can count higher than 10				
Yes	57.0	59.8	-2.8 *	1.10
No	43.0	40.2	2.8 *	1.10
Knows all letters				
Yes	30.6	34.3	-3.6 *	1.01
No	69.4	65.7	3.6 *	1.01
Can write own name				
Yes	39.4	42.7	-3.3 *	1.20
No	60.6	57.3	3.3 *	1.20
Child has a disability				
Yes	9.5	9.7	-0.2	0.69
No	90.5	90.3	0.2	0.69
Good choices for child care and early childhood programs				
Yes	54.1	57.4	-3.4 *	1.06
No	17.4	18.9	-1.5 *	0.71
Don't know	28.5	23.6	4.9 *	1.21
Number of times family read to child in past week				
Not at all	13.1	10.7	2.3 *	1.00
1 or 2 times	10.2	10.1	0.1	0.72
3 or more times	76.7	79.2	-2.4 *	1.11

See notes at end of table.

**Table 8-15. ECPP child and household demographic characteristics and key survey estimates by weighting type—Continued**

Characteristic (by race/ethnicity of child)	Final weights <sup>1</sup>	Base weights <sup>2</sup>	Difference	s.e. of difference
<b>Other, non-Hispanic (continued)</b>				
Someone in family taught letters, words, or numbers				
Not at all	11.8	11.3	0.4	0.53
1 or 2 times	26.3	26.1	0.2	1.29
3 or more times	62.0	62.6	-0.6	1.21

\* Indicates a statistically significant difference ( $p < .05$ , Student's  $t$  test).

# Rounds to zero.

† Not applicable.

‡ Reporting standards not met. There were too few cases for a reliable estimate or the coefficient of variation was 50 percent or higher.

! Interpret data with caution; coefficient of variation is between 30 and 50 percent.

<sup>1</sup>Final weights include household- and person-level nonresponse adjustments as well as raking adjustments.

<sup>2</sup>Base weights account only for the probability of selection at the screener and topical phases.

NOTE: s.e. is standard error. GED = general equivalency diploma. ECPP = Early Childhood Program Participation. Details may not sum to totals because of rounding. The estimates in this table were produced solely for the purpose of evaluating nonresponse bias and are not official statistics.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019.

#### 8.2.4 A Comparison of NHES:2019 Estimates With Estimates From External Data Sources

In addition to the nonresponse bias analyses presented earlier, the assessment of nonresponse bias also included a comparison of the NHES:2019 estimates with estimates from the CPS:2018 and the ACS:2018, which contain the same or comparable items; and with estimates from prior NHES cycles. Tables displaying these comparisons appear in appendix C. These comparisons were conducted using the final NHES:2019 weights, including adjustments for nonresponse and raking.

All differences discussed in this section are statistically significant differences that are considered to be meaningful (defined as differences of 5 percentage points or more).<sup>65</sup> Using this threshold, most of the comparisons do not show statistically significant and meaningful differences. As in the analysis conducted for prior NHES cycles, the 5 percentage point threshold was used for this analysis because differences between the NHES:2019 estimates and the external estimates could result from factors that are not related to nonresponse bias. In particular, the most recent ECPP and PFI data collections took place 3 years prior to the NHES:2019; therefore, changes in the population across time are likely. In addition, compared to NHES:2016, a much larger proportion of NHES:2019 respondents responded via the Web, which could impact the comparison of estimates in unknown ways. Finally, comparisons between NHES:2019 and the CPS and ACS could be impacted by differences in item wording, the data collection mode, the timing of data collection, weighting methods, and other factors.

As shown in table C-1, the percentage distributions of NHES:2019 respondents by household size, the child's place of birth, the child's race/ethnicity, the child's age, and the number of children in the

<sup>65</sup> When estimates are presented as the number of students or children, numbers were converted to percentages to evaluate differences.

household are similar to the corresponding CPS:2018 distributions, with no categories showing a difference of 5 percentage points or more.

Tables C-2A through C-2D show estimates and standard errors for the NHES and CPS by age and grade. Tables C-2E and C-2F show the differences in percentages, and the standard errors of the differences, between the NHES and CPS estimates. Some differences can be expected in age by grade between the NHES and CPS based on the time of data collection. The NHES ages are calculated as of December 31, 2018 using the child's month and year of birth, and NHES grades were reported in January through September 2019. In contrast, CPS ages and grades are reported in October 2018. Differences in the distribution of age by grade could result from children moving up a year in age from October to December. For example, in the fall term, most 8-year-olds are in third grade and most 9-year-olds are in fourth grade. However, some children who are 8 in October turn 9 by December 31. Therefore, the proportion of 9-year-olds in third grade should be higher on December 31 than in October. This expected pattern is reflected in the difference between the NHES and CPS estimates: the NHES shows about 32 percent of 9-year-olds in third grade as of December 31 (table C-2A), while the CPS shows about 26 percent of 9 year-olds in third grade in October (table C-2C).

In general, table C-2E shows some statistically significant differences of 5 percentage points or more in single year of age by grade; however, as shown in tables C-2A and C-2C, both the NHES and CPS (respectively) report that almost all children are in one of the two expected modal grades for their age. For example, 92 percent of 6-year-olds in the NHES and 91 percent of 6-year-olds in the CPS are in kindergarten or first grade. Moreover, differences between the NHES and CPS mostly follow the expected pattern given the difference in the timing of the collections: for a given age, the NHES typically estimates a higher percentage of children in the lower of the two modal grades.

Table C-3 shows some statistically significant differences between the NHES:2019 PFI and the CPS:2018 in the estimated total number of K-12 children by school type and grade level. However, when these totals are converted to percentage distributions (not shown in table), none of the categories show differences of 5 percentage points or greater.

Comparing the NHES:2019 PFI to the CPS:2018, the estimated percentage of first- and second-graders enrolled in public school was lower in the PFI than in the CPS (table C-4), as was the estimated percentage of Black children enrolled in public schools (table C-5). No other percentages in these tables show statistically significant differences of 5 percentage points or greater. Differences in the distribution of children by school type could be affected in part by measurement differences between the PFI and the CPS. On the PFI, respondents could select more than one school type. For the purpose of these tables, PFI respondents were classified as public school students if they selected the option for public school

(regardless of any other options selected), and “private school or other” students otherwise. On the CPS, respondents must select either public or private school.

Comparing the NHES:2019 PFI to the ACS:2018, the NHES estimated a lower percentage of Asian/Pacific Islander children in the “Over \$150,000” income category (table C-7).

Comparing the NHES:2019 PFI to the NHES:2016 PFI, no statistically significant changes of 5 percentage points or more were observed (tables C-8 through C-11).

Comparing the NHES:2019 ECPP to the ACS:2018, the NHES again estimated a lower percentage of Asian/Pacific Islander children in the “Over \$150,000” income category (table C-13).

Comparing the NHES:2019 ECPP to the NHES:2016 ECPP, the estimated percentage of Black children whose parents were college graduates decreased while the estimated percentage of Other, non-Hispanic children whose parents had a graduate degree increased (table C-14). Although the estimated percentages of children participating in care arrangements did not meaningfully change (table C-16), there were some meaningful changes in the percentages who participated in those arrangements at least once per week. Specifically, among Hispanic and Asian/Pacific Islander children who were reported as participating in a relative care arrangement, the percentage participating in that arrangement at least once per week decreased (table C-17). Finally, the percentage of children below the poverty threshold who were reported as participating in center-based care increased (table C-18). This increase could be driven partially by increases over time in the income levels below which a household is considered to be in poverty (cf. U.S. Census Bureau 2020).

### **8.3 Item Nonresponse Bias Analysis**

In the NHES PFI and ECPP surveys, as in most surveys, the responses to some data items are not obtained for all interviews. Numerous reasons account for item nonresponse. Some respondents do not know the answer for the item or do not wish to respond for other reasons. Item nonresponse also may be encountered because responses provided by the respondent are not internally consistent. In such cases, the items that are not internally consistent are set to missing and imputed. In self-administered web and mail questionnaires (such as those used in the NHES:2019), respondents might inadvertently skip items that should have been answered. NHES:2019 web instruments allowed respondents to skip any questions they wished to skip. This section evaluates the potential for bias resulting from item nonresponse.

Section 8.3.1 examines the potential for item nonresponse bias by imposing extreme assumptions on the item nonrespondents. Because item nonresponse bias may be viewed as a function of both the item nonresponse rate and the extent to which item nonrespondents differ from item respondents, bounds on the item nonresponse bias may be obtained by imposing extreme assumptions on the responses that would have been provided by item nonrespondents. Extreme assumptions are created by imputing

alternative values that fall in the tails of the original distribution (e.g., in the 5<sup>th</sup> or 95<sup>th</sup> percentiles for continuous variables). Section 8.3.2 examines the potential impact of imputation on item nonresponse bias by comparing estimates that include imputed values to those that do not.

### **8.3.1 Comparison of Extreme Imputed and Unimputed Values**

To assess possible nonresponse bias for items from each topical interview, sets of alternative imputed values were generated by imposing extreme assumptions on the item nonrespondents. This analysis was conducted on items for which the item response rate fell below 85 percent, excluding items that required a verbatim text response. Verbatim text responses tend to be too idiosyncratic for a given respondent to act as a donor for an item nonrespondent.

For most items, two sets of alternative imputed values—one based on a low assumption and one based on a high assumption—were created. For continuous variables, a low imputed value variable was created by setting missing values to the value at the 5<sup>th</sup> percentile of the original distribution; a high imputed value variable was created by setting missing values to the value at the 95<sup>th</sup> percentile of the original distribution.<sup>66</sup> For dichotomous and ordered polytomous variables, a low imputed value variable was created by setting missing values to the lowest value in the original distribution, and a high imputed value variable was created by setting missing values to the highest value in the original distribution.<sup>67</sup> For polytomous variables with response options that do not follow a natural order, a low imputed value variable was created by setting missing values to the least common response in the original distribution, and a high imputed value variable was created by setting missing values to the most common response (the modal response) in the original distribution. The means (for continuous variables) and percentage distributions (for dichotomous and polytomous variables) of the low imputed value variables and the high imputed value variables were compared with those of the original variable on the NHES:2019 data file (including the actual imputed values).

The purpose of creating extreme assumption variables and comparing them with the original distributions is to place bounds on the potential for item nonresponse bias in an estimate through the use of worst-case scenarios. For example, the distribution of the low imputed value variable represents the distribution that would result if all item nonrespondents had provided the low response to the item; and thus, the difference between this distribution and the original distribution represents the bias that would exist in the NHES:2019 estimates in that worst-case scenario. Because the distributions of some of the variables included in this evaluation are skewed, the extreme assumptions imposed here may, in some cases, be unrealistic.

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<sup>66</sup> For continuous variables, means rather than percentage distributions are presented in tables 8-16 and 8-17.

<sup>67</sup> Yes/No items are coded as 1 = Yes and 2 = No, meaning that Yes represents the low extreme assumption and No represents the high extreme assumption.

In general, a very high correlation exists between estimates when comparing the extreme imputed value variables to the original variables because these estimates are based on the same sets of cases, and the data for item respondents do not change. Because of the high level of overlap between the response distributions in the alternative versions of variables, the two are highly correlated. As a result, even small differences may be statistically significant, so it is important to also consider the practical significance of such differences. For percentage distributions, a statistically significant difference of 1 percentage point or greater between the extreme imputed value percentage and the original percentage is considered a meaningful difference for the purpose of this analysis. For means, a statistically significant relative difference of 5 percent or greater between the extreme imputed value mean and the original mean is considered to be a meaningful difference for the purpose of this analysis.

Extreme imputed value variables were formulated for all 21 variables from the PFI survey that had weighted item response rates below 85 percent and were not verbatim write-in items. All of these were dichotomous Yes/No items. As shown in table 8-16, statistically significant and meaningful differences between the original imputed value distribution and the high imputed value distribution were observed for some variables (HSINTOTH, HSCOTH, SUNIVSCH, and SCYBER). Statistically significant and meaningful differences between the original imputed value distribution and the low imputed value distribution were observed for all PFI variables tested. However, for many of the PFI variables with item response rates below 85 percent, the original distribution was skewed in such a way that the low imputed value distribution would be highly unrealistic. For these variables in particular, which are noted in table 8-16, the actual amount of nonresponse bias is likely to be substantially lower than implied by this worst-case scenario analysis.

Extreme imputed value variables were created for all five variables from the ECPP survey that had weighted item response rates below 85 percent and were not verbatim write-in items. Comparisons for all variables analyzed for the ECPP are shown in Table 8-17. For the dichotomous variable LRNCOMP, statistically significant and meaningful differences were observed between the original imputed value distribution and the low imputed value distribution; while for the unordered polytomous variable HDCHDCARE, statistically significant and meaningful differences were observed between the original imputed value distribution and both the high and low imputed value distributions. For the continuous variables RCSTRTY, RCSTRTM, and NCSTRTY, meaningful differences were observed between the original means and the means estimated using high extreme assumptions.

The results of the extreme value analysis suggest that, if there were major differences between the responses that were actually imputed for item nonrespondents and those that the nonrespondents would have provided if they had answered the items, estimates derived from NHES:2019 items with response rates less than 85 percent would be susceptible to meaningful bias. However, as noted previously, the low and high extreme value distributions and means represent worst-case scenarios for

item nonresponse bias. For many of the variables analyzed, the original distribution is skewed in a way that makes at least one of the extreme value assumptions unrealistic. The actual amount of item nonresponse bias in these estimates is likely to be lower than the differences shown in tables 8-16 and 8-17.

**Table 8-16. Percentage distribution of PFI-NHES:2019 variables with item response rates below 85 percent, original estimate versus estimate with extreme imputed values**

Variable	Low imputed values			Original estimate		High imputed values		
	Percent		s.e.	Percent	s.e.	Percent		s.e.
EDCCAT <sup>1</sup>								
Yes	47.7	*	0.57	3.6	0.23	3.6		0.23
No	52.3	*	0.57	96.4	0.23	96.4		0.23
EDCREL <sup>1</sup>								
Yes	47.8	*	0.51	4.2	0.29	4.2		0.28
No	52.2	*	0.51	95.8	0.29	95.8		0.28
EDCPRI <sup>1</sup>								
Yes	47.4	*	0.54	2.6	0.17	2.6	*	0.17
No	52.6	*	0.54	97.4	0.17	97.4	*	0.17
EDCINTK12 <sup>1</sup>								
Yes	47.0	*	0.53	1.6	0.16	1.6		0.16
No	53.0	*	0.53	98.4	0.16	98.4		0.16
EDCINTCOL <sup>1</sup>								
Yes	46.6	*	0.53	0.5	0.11	0.5		0.10
No	53.4	*	0.53	99.5	0.11	99.5		0.10
EDCCOL <sup>1</sup>								
Yes	47.0	*	0.54	0.9	0.12	0.9		0.12
No	53.0	*	0.54	99.1	0.12	99.1		0.12
HSINTPUB								
Yes	33.5	*	4.91	17.0	3.90	16.7		3.93
No	66.5	*	4.91	83.0	3.90	83.3		3.93
HSINTPRI <sup>1</sup>								
Yes	29.9	*	5.01	13.1 <sup>!</sup>	4.12	12.7 <sup>!</sup>		4.13
No	70.1	*	5.01	86.9	4.12	87.3		4.13
HSINTCOL <sup>1</sup>								
Yes	26.3	*	4.48	7.9	2.35	7.9		2.35
No	73.7	*	4.48	92.1	2.35	92.1		2.35
HSINTK12								
Yes	36.4	*	4.78	17.3	4.21	17.3		4.21
No	63.6	*	4.78	82.7	4.21	82.7		4.21
HSINTIND								
Yes	33.2	*	4.95	18.9	4.47	18.7		4.48
No	66.8	*	4.95	81.1	4.47	81.3		4.48
HSINTOH								
Yes	49.8	*	4.51	14.6	3.83	13.7	*	3.87
No	50.2	*	4.51	85.4	3.83	86.3	*	3.87

See notes at end of table.

**Table 8-16. Percentage distribution of PFI-NHES:2019 variables with item response rates below 85 percent, original estimate versus estimate with extreme imputed values—Continued**

Variable	Low imputed values			Original estimate		High imputed values		
	Percent		s.e.	Percent	s.e.	Percent		s.e.
HSINTOTH								
Yes	59.7	*	3.71	29.7	5.28	16.5	*	2.21
No	40.3	*	3.71	70.3	5.28	83.5	*	2.21
HSCOTH								
Yes	61.9	*	3.56	38.6	3.05	23.5	*	2.47
No	38.1	*	3.56	61.4	3.05	76.5	*	2.47
SPRIVT <sup>1</sup>								
Yes	28.6	*	1.70	7.9	1.12	7.4		1.05
No	71.4	*	1.70	92.1	1.12	92.6		1.05
SUNIVSCH								
Yes	32.8	*	1.59	12.6	1.23	11.3	*	1.12
No	67.2	*	1.59	87.4	1.23	88.7	*	1.12
SCYBER								
Yes	40.5	*	1.70	20.8	1.76	19.0	*	1.71
No	59.5	*	1.70	79.2	1.76	81.0	*	1.71
SCOMPANY <sup>1</sup>								
Yes	30.9	*	1.84	8.9	1.12	8.2		1.01
No	69.1	*	1.84	91.1	1.12	91.8		1.01
SOTHRSCH <sup>1</sup>								
Yes	30.5	*	1.87	8.2	1.27	8.0		1.27
No	69.5	*	1.87	91.8	1.27	92.0		1.27
STUTR <sup>1</sup>								
Yes	27.7	*	1.75	5.0	0.70	4.9		0.68
No	72.3	*	1.75	95.0	0.70	95.1		0.68
SOTHSCH <sup>1</sup>								
Yes	49.6	*	1.72	2.8	0.75	2.5	*	0.74
No	50.4	*	1.72	97.2	0.75	97.5	*	0.74

\* p < .05

<sup>1</sup> Interpret data with caution; coefficient of variation is between 30 and 50 percent.

<sup>1</sup> Indicates variables for which the only estimate showing a statistically significant difference of at least 1 percentage point from the original estimate is the estimate with low imputed values, and for which 20 percent or fewer of item respondents chose the low value. For these estimates, the low imputed value scenario is highly unrealistic, and therefore this analysis is highly likely to overestimate item nonresponse bias in the original estimate.

NOTE: s.e. is standard error. Estimates shown are percentages. The original estimate includes the original imputed values for the variable. The estimates with low and high imputed values include alternative imputed values using extreme assumptions. The low imputed value is the lowest response option and the high imputed value is the highest response option. Estimates are calculated using final person-level weights. The estimates in this table were produced solely for the purpose of evaluating nonresponse bias and are not official statistics. PFI = Parent and Family Involvement in Education.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019.

**Table 8-17. Percentage distribution or mean of ECPP-NHES:2019 variables with item response rates below 85 percent, original estimate versus estimate with extreme imputed values**

Variable	Low imputed values			Original estimate		High imputed values		
	Percent or mean		s.e.	Percent or mean	s.e.	Percent or mean		s.e.
<b>Categorical variables (percentage distribution)</b>								
LRNCOMP								
Yes	40.7	*	0.94	22.9	0.98	21.9	*	0.99
No	59.3	*	0.94	77.1	0.98	78.1	*	0.99
HDCHDCARE								
Yes	50.6	*	2.67	6.3	1.39	3.7!	*	1.13
No	38.8	*	2.54	73.3	2.32	85.7	*	1.98
Not in care outside the home	10.6	*	1.70	20.4	2.07	10.6	*	1.70
<b>Continuous variables (mean)</b>								
RCSTRTY	0.6	*	0.04	0.6	0.04	1.4	*	0.05
RCSTRTM	3.0	*	0.10	3.2	0.10	4.6	*	0.11
NCSTRTY	0.8	*	0.04	0.8	0.05	1.8	*	0.09

\* p < .05

! Interpret data with caution; coefficient of variation is between 30 and 50 percent.

NOTE: s.e. is standard error. Estimates shown are percentages for categorical variables and means for continuous variables. The original estimate includes the original imputed values for the variable. The estimates with low and high imputed values include alternative imputed values using extreme assumptions. The low imputed value is the lowest response option (for dichotomous and ordered polytomous variables), the least commonly selected response option (for unordered polytomous variables), or the 5th percentile of the original distribution (for continuous variables). The high imputed value is the highest response option (for dichotomous and ordered polytomous variables), the most commonly selected response option (for unordered polytomous variables), or the 95th percentile of the original distribution (for continuous variables). Estimates are calculated using final person-level weights. The estimates in this table were produced solely for the purpose of evaluating nonresponse bias and are not official statistics. ECPP = Early Childhood Program Participation.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019.

### 8.3.2 Comparison of Imputed and Unimputed Distributions

Hot-deck imputation was used to fill in missing data for most NHES:2019 variables. A complete description of the NHES:2019 imputation procedures is provided in chapter 6. Hot-deck imputation can reduce bias resulting from item nonresponse if the variables used to match recipients to donors are correlated with the variable being imputed. The difference between an estimate that includes imputed values and that same estimate that excludes imputed values provides a measure of the potential reduction in item nonresponse bias attributable to imputation. The actual magnitude of the existing bias prior to and after imputation remains unknown.

For the same variables identified in section 8.3.1, tables 8-18 and 8-19 show the mean (for continuous variables) or percentage distribution (for dichotomous and polytomous variables) with and without imputed values. As with the extreme values analysis, a statistically significant change of at least 1 percentage point is considered to be a meaningful change in a percentage estimate, whereas a statistically significant relative change of at least 5 percent is considered to be a meaningful change in a mean estimate.

For the PFI (table 8-18), 17 of the 21 variables considered showed statistically significant changes of at least 1 percentage point as a result of imputation. For the ECPP (table 8-19), the dichotomous variable LRNCOMP showed statistically significant changes of at least 1 percentage point in the percentages for the “Yes” and “No” categories. The means of the continuous variables RCSTRTY, RCSTRTY, and NCSTRTY showed statistically significant changes of at least 5 percent (in relative terms) as a result of imputation.

Therefore, for the majority of variables with response rates less than 85 percent for which imputation could be performed, imputation did lead to meaningful changes in mean or percentage estimates. This suggests that the NHES:2019 imputation procedure may have helped to mitigate item nonresponse bias, although the actual amount of bias is unobservable. Also, it cannot be known definitively that the imputation procedure led to more accurate estimates compared to the unimputed distributions.

Analysts can use the imputation flags described in section 6-3 to identify cases with and without imputed data for any variable, including variables with item response rates of 85 percent or higher that were not included in this analysis.

**Table 8-18. Percentage distribution of PFI-NHES:2019 variables with item response rates below 85 percent, original imputed estimate versus estimate with imputed values excluded**

Variable	Original imputed estimate		Unimputed estimate	
	Percent	s.e.	Percent	s.e.
EDCCAT				
Yes	3.6	0.23	6.4 *	0.41
No	96.4	0.23	93.6 *	0.41
EDCREL				
Yes	4.2	0.29	7.4 *	0.48
No	95.8	0.29	92.6 *	0.48
EDCPRI				
Yes	2.6	0.17	4.7 *	0.30
No	97.4	0.17	95.3 *	0.30
EDCINTK12				
Yes	1.6	0.16	2.9 *	0.29
No	98.4	0.16	97.1 *	0.29
EDCINTCOL				
Yes	0.5	0.11	0.9 *	0.19
No	99.5	0.11	99.1 *	0.19
EDCCOL				
Yes	0.9	0.12	1.6 *	0.23
No	99.1	0.12	98.4 *	0.23
HSINTPUB				
Yes	17.0	3.90	20.1 *	4.60
No	83.0	3.90	79.9 *	4.60
HSINTPRI				
Yes	13.1!	4.12	15.4! *	4.85
No	86.9	4.12	84.6 *	4.85
HSINTCOL				
Yes	7.9	2.35	9.6 *	2.83
No	92.1	2.35	90.4 *	2.83
HSINTK12				
Yes	17.3	4.21	21.4 *	4.93
No	82.7	4.21	78.6 *	4.93
HSINTIND				
Yes	18.9	4.47	21.9 *	4.98
No	81.1	4.47	78.1 *	4.98

See notes at end of table

**Table 8-18. Percentage distribution of PFI-NHES:2019 variables with item response rates below 85 percent, original imputed estimate versus estimate with imputed values excluded—Continued**

Variable	Original imputed estimate		Unimputed estimate	
	Percent	s.e.	Percent	s.e.
HSINTOH				
Yes	14.6	3.83	21.4 *	5.67
No	85.4	3.83	78.6 *	5.67
HSINTOTH				
Yes	29.7	5.28	29.1	3.78
No	70.3	5.28	70.9	3.78
HSCOTH				
Yes	38.6	3.05	38.2	3.50
No	61.4	3.05	61.8	3.50
SPRIVT				
Yes	7.9	1.12	9.4 *	1.29
No	92.1	1.12	90.6 *	1.29
SUNIVSCH				
Yes	12.6	1.23	14.4 *	1.34
No	87.4	1.23	85.6 *	1.34
SCYBER				
Yes	20.8	1.76	24.2 *	1.96
No	79.2	1.76	75.8 *	1.96
SCOMPANY				
Yes	8.9	1.12	10.7 *	1.29
No	91.1	1.12	89.3 *	1.29
SOTHRSCH				
Yes	8.2	1.27	10.3 *	1.60
No	91.8	1.27	89.7 *	1.60
STUTR				
Yes	5.0	0.70	6.3 *	0.87
No	95.0	0.70	93.7 *	0.87
SOTHSCH				
Yes	2.8	0.75	4.8 *	1.37
No	97.2	0.75	95.2 *	1.37

\* p < .05

! Interpret data with caution; coefficient of variation is between 30 and 50 percent.

NOTE: s.e. is standard error. Estimates shown are percentages. Estimates are calculated using person-level final weights. The estimates in this table were produced solely for the purpose of evaluating nonresponse bias and are not official statistics. PFI = Parent and Family Involvement in Education.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019.

**Table 8-19. Percentage distribution or mean of ECPP-NHES:2019 variables with item response rates below 85 percent, original imputed estimate versus estimate with imputed values excluded**

Variable	Original imputed estimate		Unimputed estimate	
	Percent or mean	s.e.	Percent or mean	s.e.
<b>Categorical variables (percentage distribution)</b>				
LRNCOMP				
Yes	22.9	0.98	27.0 *	1.10
No	77.1	0.98	73.0 *	1.10
HDCHDCARE				
Yes	6.3	1.39	6.9!	2.12
No	73.3	2.32	73.0	3.45
Not in care outside the home	20.4	2.07	20.0	2.99
<b>Continuous variables (mean)</b>				
RCSTRTY	0.6	0.04	0.8 *	0.04
RCSTRTM	3.2	0.10	3.7 *	0.10
NCSTRTY	0.8	0.05	1.0 *	0.06

\* p < .05

! Interpret data with caution; coefficient of variation is between 30 and 50 percent.

NOTE: s.e. is standard error. Estimates shown are percentages for categorical variables and means for continuous variables. Estimates are calculated using person-level final weights. The estimates in this table were produced solely for the purpose of evaluating nonresponse bias and are not official statistics. ECPP = Early Childhood Program Participation.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019.

## 8.4 Summary of Nonresponse Bias Findings

The potential for nonresponse bias is an important concern to survey methodologists and data analysts. This chapter has included assessments of the potential for both unit and item nonresponse bias in the NHES:2019 screener and topical (ECPP and PFI) surveys.

At the screener phase, significant differences were observed between respondents and the eligible sample in the distributions of characteristics available in or linked to the sample frame. Similarly, for each topical survey, significant differences were observed between respondents and the eligible sample in the distributions of characteristics available in or linked to the sample frame or collected on the screener. However, this observed bias was reduced by the nonresponse weighting adjustments. The adjustment for household-level nonresponse reduced the percentage of screener-level characteristics with statistically significant bias greater than 1 percentage point from 55.5 percent to 43.6 percent (from 61 to 48 out of 110 estimates examined). The adjustment for person-level nonresponse reduced the percentage of topical-level characteristics with statistically significant bias greater than 1 percentage point from 14.0 percent to 1.1 percent for the PFI (corresponding to a reduction from 13 estimates to 1 estimate showing bias); and 9.8 percent to 1.2 percent for the ECPP (corresponding to a reduction from 8 estimates to 1 estimate showing bias).

For each topical survey, base-weighted key survey estimates were compared between (1) early and late screener respondents to assess the potential for bias resulting from screener-level nonresponse and (2) early and late topical respondents to assess the potential for bias resulting from topical-level nonresponse. For the PFI, 46.9 percent of estimates (38 estimates out of 81 examined) showed statistically significant and meaningful differences between early and late screener respondents, and 29.6 percent (24 estimates out of 81 examined) showed statistically significant and meaningful differences between early and late topical respondents. For the ECPP, 26.7 percent of estimates (20 estimates out of 75 examined) showed statistically significant and meaningful differences between early and late screener respondents, and 18.7 percent (14 estimates out of 75 examined) showed statistically significant and meaningful differences between early and late topical respondents. To the extent that late respondents resemble nonrespondents in the characteristics measured by the NHES questionnaires, differences between early and late respondents suggest a potential for unit nonresponse bias in the estimates.

When key survey estimates generated with base weights were compared to those generated with final weights, many estimates showed statistically significant and meaningful changes. This suggests that the weighting adjustments had a significant impact on potential bias, though the amount of bias remaining after adjustment is unknown.

It also is possible that unit nonresponse bias may still be present in other variables that were not studied. For this reason, it is important to consider other methods of examining unit nonresponse bias. One such method is benchmarking, or comparing final NHES survey estimates to estimates from external sources. Benchmarking is routinely done during the preparation of the NHES data files. When estimates from the NHES:2019 surveys were compared with external estimates—from the CPS, the ACS, and previous administrations of NHES—some meaningful differences were found. However, the majority of the meaningful differences were either expected based on differences between the collections—for example, differences from the CPS in the age-by-grade distribution—or were found in comparisons to NHES:2016, for which changes in the population over time are likely.

The analysis of item nonresponse bias revealed that 35 items (27 from the PFI survey and eight from the ECPP survey) had item response rates below 85 percent.<sup>68</sup> The high item response for almost all the survey items indicates that the potential for item nonresponse bias is extremely low for most estimates.

The comparison of means or distributions based on extreme assumptions to the original means or distributions did reveal some differences. Of the PFI and ECPP items with item response rates below 85 percent, all showed statistically significant and meaningful changes in the estimated percentage distributions or means when extreme low and/or high values were imputed. Thus, if the item nonrespondents are extremely different from the respondents, the potential for bias exists in estimates derived from these items. However, the original distributions of many of these variables are skewed; therefore, some extreme assumptions used in this analysis are likely to be unrealistic. Furthermore, for most items analyzed, the NHES:2019 imputation procedures led to meaningful changes in the distribution or mean, suggesting that item nonresponse bias may have been reduced by imputation.

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<sup>68</sup> Nine of these (six from the PFI and three from the ECPP) were verbatim text items and thus were not included in the analysis of item nonresponse bias.

## **Chapter 9. Data Considerations and Anomalies**

This chapter has two main purposes: first, to bring to data users' attention certain data considerations and data anomalies of the Early Childhood Program Participation (ECP) survey and the Parent and Family Involvement in Education (PFI) survey of the National Household Education Surveys Program of 2019 (NHES:2019); second, to describe the nature of these considerations and anomalies. In addition, where appropriate, the chapter attempts to identify possible means of handling these anomalies when analyzing the data.

As in other surveys, the anomalies, real or apparent, in the NHES data result from questionnaire design issues, outlier cases, variations in respondents' interpretations of the questions, or other factors. The anomalies here were identified during the editing and review of the data and represent those known at the time this manual was prepared; however, others may exist.

### **9.1 Data Considerations**

Data considerations are unusual features of the data file of which users should be aware. In general, these are unusual features of the questionnaire, survey procedures, or data file conventions. NHES:2019 data considerations are documented here for the purpose of bringing them to the attention of analysts.

#### **9.1.1 Change in Data Collection Mode from Prior Years**

From 1991 to 2007, the NHES was conducted by telephone interviewers using list-assisted random-digit-dial and computer-assisted telephone interview (CATI) methodologies. After the 2007 collection, the NHES was redesigned to improve response rates and population coverage. Starting in the next collection, in 2012, the NHES data collection was conducted using an address-based sample and self-administered questionnaire delivered and returned through the mail. In 2016, a small proportion of questionnaires were completed via the Web, while most questionnaires were still completed with paper instruments. In 2019, the majority of questionnaires were completed via the Web, and some questionnaires were completed by paper. Information on the current NHES:2019 sample design and data collection is presented in chapters 2 and 3, respectively. The mode change required revisions to item wording and may affect the comparability of estimates from NHES data from 1991 to 2007 with those from 2012, 2016, and 2019.

In 2016, a mode effects analysis was conducted to assess the prevalence and the extent of selection effects (whether the respondents in each mode differed on the characteristics measured by key topical survey questions) and measurement effects (whether the response mode affected how individuals responded to those key topical survey questions). Some evidence of both types of effects was found in the NHES:2016 data. However, the affected items were scattered throughout the topical

questionnaires, the magnitude of most effects was small, and no clear patterns were found. Data users should take the potential impact of the change in data collection mode into consideration when comparing estimates from the NHES:2019 with estimates from the CATI administration years. Researchers interested in the mode of survey completion for each survey case can use the derived variable MODECOMP to identify the mode by which each case completed the questionnaire.

### **9.1.2 Important Information About School-Level Derived Variables**

Data about all public elementary and secondary schools are collected annually through the NCES Common Core of Data (CCD), and data about almost all private elementary and secondary schools are collected every 2 years through the NCES Private School Universe Survey (PSS). Data from these files are merged into children’s records in NHES to provide information about their schools. At the time that data from the CCD and PSS data files were merged with the NHES:2019 data, CCD and PSS data from the 2017-18 school year were the most recent data available,<sup>69</sup> and it is the data from this year that are included in the PFI data file.

Although the NHES data collection took place during the 2018-19 school year, some of the school-level characteristic information extracted from the 2017-18 CCD or PSS data files may have changed. Therefore, data users might want to use the NCES School ID (SID), available in the PFI restricted-use data file, to merge the NHES data with data from more recent versions of the CCD and PSS data files to re-create some of the school-level derived variables included in the data files.

### **9.1.3 Nonimputation of Common Core of Data and Private School Universe Survey Data**

Unlike data from the NHES survey questionnaires, no imputation was performed for the merged data from the CCD or PSS data files. Therefore, if any inapplicable or missing values in the variables were extracted from the CCD or PSS data files, they remained inapplicable or missing for the school-level derived variables after the data were merged and are coded as “-2 - Inapplicable in CCD/PSS file” or “-9 - Data are missing for school.” The inapplicable or missing data may represent schools with no school membership (e.g., shared-time schools) or may be the result of school misreport or nonresponse. Users interested in identifying the reason for a CCD inapplicable code for a particular case would need to obtain the restricted-use data file, which contains the NCES SID, and match the school to the CCD file for more information.

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<sup>69</sup> For a small number of PFI cases, the private school identified by the parent could not be matched to the 2017-18 CCD or PSS but could be matched to the 2016-17 CCD or 2015-16 PSS. For these cases, the school-level data in the file come from the 2016-17 CCD or 2015-16 PSS. These cases are not identified so as to protect respondent privacy.

#### **9.1.4 Nonimputation of Coded Write-in String Data**

Two open-ended question items were converted from write-in data to quantitative codes: one item from the ECPP file that measured the parent’s main reason for choosing the child’s care arrangement; and one item from the PFI file that measured up to 10 subject areas being taught to a homeschooled child. Unlike data from the remaining items in the ECPP and PFI files, imputation was not performed for these codes. Therefore, any inapplicable or missing values in the variables were coded as “-9 -Missing.” In cases where some but not all subject fields were populated, missing fields were assigned a “-6 -Missing” value. The coded data are included in the public-use file, while the write-in data and the coded data are included in the restricted-use file.

#### **9.1.5 Household Composition Variables**

Consistent with the NHES:2016 data, additional editing procedures were performed on the household composition data collected in the NHES PFI and ECPP surveys. These include the variable HHTOTALX, which is the total number of people living in the household, and the individual relationship variables detailing how each household member is related to the sampled child: brothers (HHBROXS), sisters (HHSISSX), mothers (HHMOM), fathers (HHDAD), aunts (HHAUNTSX), uncles (HHUNCLSX), grandmothers (HHGMASX), grandfathers (HHGPASX), cousins (HHCSNSX), parent’s girlfriend/boyfriend/partner (HHPRTNRSX), other relatives (HHORELSX), and other nonrelatives (HHONRELSX), plus the sampled child. In cases where HHTOTALX did not equal the sum of the individual composition variables, one of two processes was used to address the inconsistency, depending on whether HHTOTALX was greater or less than the sum of the individual composition variables. When HHTOTALX exceeded the sum of the individual composition variables, a new variable—HHUNID (unidentified household members)—was set to the difference so that analysts could see the number of household members that the respondent included in the total that were not identified by type, such as brother, sister, or grandmother. When HHTOTALX was less than the sum of the individual composition variables, HHTOTALX was adjusted to equal the sum of these variables. HHTOTALX also was capped at 10 persons.<sup>70</sup>

#### **9.1.6 Missing Race Data for Hispanic Persons**

In some cases, questionnaire data for the sampled person or one of the sampled child’s parents indicated that the individual was Hispanic, but race was not marked. New variables (CHISPRM, P1HISPRM, P2HISPRM for child, parent 1, and parent 2, respectively) were created to define these

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<sup>70</sup> If HHTOTALX was less than the sum of the individual composition variables, but the sum of the individual composition variables was greater than 10, HHTOTALX was retained and the individual composition variables were blanked and imputed.

individuals as “Hispanic–race not reported.” These individuals have a value of “No” for the five race variables created from the questionnaire race item.

### **9.1.7 Age Considerations**

All parent/guardian age variables have been top-coded at age 90 to protect respondent confidentiality. Also, for some cases, the birth month and year provided for the child in the topical questionnaire made the case out of range for the specific survey or was later than the date at which the NHES questionnaire was received and processed. These cases were marked as topical nonrespondents or ineligible. Their status was determined using date of birth, enrollment status, and in some cases, information about non-sampled children from the screener. For example, 20 cases sampled for the ECPP were marked as topical nonrespondents to the PFI because their reported date of birth was before 2012 and they reported being enrolled in public or private school. Additionally, four cases switched automatically from the PFI to the ECPP via the Web after marking “the child has not yet started kindergarten” (ALLGRADEX=1). However, because they also reported a date of birth prior to 2012, they were considered ineligible for the ECPP. In three cases, screener data on a non-sampled child suggested that they responded about the wrong child in the ECPP; these cases were classified as ECPP nonrespondents.

### **9.1.8 Measuring Homeschoolers**

Since 1999, the PFI survey of the National Household Education Surveys (NHES) has been the only source of national-level homeschooling estimates for the U.S. school-aged population. This section documents issues that need to be considered when calculating homeschooling rates and comparing them over time. From 1999 to 2007, years when the NHES surveys were administered by random digit dial (RDD) computer-assisted telephone interview (CATI), the NHES homeschooling rate consistently rose. The NHES redesign to a mail survey in 2012 and to a sequential multi-mode web and mail survey in 2019 introduced some methodological changes that disrupted this homeschooling time series. Concurrently, the nature of homeschooling changed between 1999 and 2019, with the growth of online learning opportunities and with the dawn of full-time virtual schooling. Virtual schooling has increased opportunities for students being homeschooled by their families as well as expanding options for public and private schools looking to improve educational experiences for their enrolled students. Data analysts interested in homeschooling may wish to consider the evolution of collecting and reporting homeschooling data in NHES before using these data or making comparisons across cycles. A summary of the changes across cycles is provided in exhibit I-1 in appendix I.

#### **9.1.8.1 Collection of homeschooling rates by telephone**

NCES began measuring homeschooling in 1996. When comparing 1996 NHES estimates to those from the October 1994 Current Population Survey, it was found that differences in question wording and data collection approaches yielded differing estimates (Henke and Kaufman 2000). Given these

inconsistencies and no clear way to address them, NCES chose not to publish the 1996 homeschooling estimates. The Current Population Survey did not continue to collect data about homeschooling.

NCES published homeschooling data starting with the NHES Parent and Family Involvement in Education (PFI) survey of 1999. The survey was conducted by landline telephone with about 17,000 parents or guardians of students in kindergarten through grade 12 (or the equivalent grades); 275 of the students were identified as homeschooled. The survey was conducted by a CATI interviewer with skip patterns programmed into the CATI instrument, allowing for the interviewer to help the respondent by clarifying terms like “homeschool.” The survey asked:

Now I'd like to talk with you about (CHILD)'s school experiences. Is (CHILD) attending (or enrolled in) (school/nursery school, kindergarten, or school)?”

Parents who answered “no” but for whom the child was between the ages of 5 and 17 were then asked:

Some parents decide to educate their children at home rather than send them to school. Is (CHILD) being schooled at home?

Those who said “yes” were asked:

So (CHILD) is being schooled at home instead of at school for at least some classes or subjects?

Parents were asked additional homeschool questions when they answered “yes” to both homeschooling questions. The reported 1999 homeschool estimates included students who were homeschooled while also enrolled in school for 25 hours or less per week and excluded students who were homeschooled due to a temporary illness (Bielick, Chandler, and Broughman 2001). Few changes were made to the homeschool question series for the 2003 PFI survey.<sup>71</sup>

Reporting in 2003 and 2007 continued to use the consistent definition established with the 1999 homeschool estimates, where homeschooled estimates included students who were homeschooled while also enrolled in school for 25 hours or less per week and excluded students who were homeschooled due to a temporary illness.

### **9.1.8.2 Homeschooling rates over time**

Three administrations following NHES:2007 utilized mailed survey instruments rather than telephone interviews. The surveys in NHES:2012, NHES:2016, and NHES:2019 were self-administered, with respondents completing questionnaires either on paper forms or (since 2016) through web surveys. In rare cases, respondents called the Census Bureau’s Telephone Questionnaire Assistance (TQA) line and

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<sup>71</sup> In the 2003 PFI, parents of 4-year-olds and 18-year-olds who answered “no” to the question about attendance or enrollment in school were asked homeschooling questions in addition to parents of students ages 5 to 17 (but these 4-year-olds and 18-year-olds students were excluded from reported homeschool estimates).

agreed to complete the survey over the telephone. Table 9-1 shows the homeschooling rates over time from the NHES program along with the data collection modes.

**Table 9-1. National Household Education Survey Program homeschooling rates and data collection modes over time**

Year	Rate	Standard error	Data collection modes
1999	1.7	0.14	Landline telephone interviews
2003	2.2	0.18	Landline telephone interviews
2007	2.9	0.23	Landline telephone interviews
2012--unadjusted	2.1	0.17	Mailed paper questionnaires; screener could be completed by phone
2012--adjusted	3.4	0.23	Mailed paper questionnaires; screener could be completed by phone
2016	3.3	0.23	Mailed paper questionnaires with some web surveys; entire survey (screener and PFI) could be completed by phone
2019	2.8	0.18	Mailed web surveys with some paper questionnaires; entire survey (screener and PFI) could be completed by phone

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Survey Program (NHES) of 1999, 2003, 2007, 2012, 2016, and 2019.

Though the estimates appear to change from year to year, sampling variability leads to estimates where the true population rate for homeschoolers may exist within a range of possible values that overlap. Based on standard t-tests at the 0.05 significance level, table 9-2 summarizes the differences in homeschool estimates across the NHES administration years, including the p-values of the tests. Ignoring the 2012 unadjusted rate, these statistics suggest that the homeschool rate increased from 1999 to 2003, and again from 2003 to 2007, then leveled off over the period from 2007 to 2016. The findings for 2019 are more ambiguous. On one hand, the 2019 homeschool rate is not significantly different from the rates in 2007 and 2016, suggesting a continued level rate. On the other hand, the 2019 rate is significantly lower than the adjusted rate for 2012, suggesting that the rate might be declining from a peak in 2012. But because the 2012 rate is based on post-collection adjustments, it could be considered less reliable than the rates for the other years and should perhaps be used more cautiously.

**Table 9-2. Comparison of homeschool rate estimates with related Student’s t-test p-values**

	Statistically significantly higher than...	Statistically significantly lower than...	Not statistically significantly different from...
1999: 1.7 percent		2003 (p=0.029), 2007 (p<0.001), 2012A (p<0.001), 2016 (p<0.001), 2019 (p<0.001)	2012U (p=0.069)
2003: 2.2 percent	1999 (p=0.029)	2007 (p=0.016), 2012A (p<0.001), 2016 (p<0.001), 2019 (p=0.018)	2012U (p=0.689)
2007: 2.9 percent	1999 (p<0.001), 2003 (p=0.016), 2012U (p=0.005)		2012A (p=0.124), 2016 (p=0.219), 2019 (p=0.734)
2012 unadjusted estimate (2012U) <sup>1</sup> : 2.1 percent		2007 (p=0.005), 2012A (p<0.001), 2016 (p<0.001), 2019 (p=0.005)	1999 (p=0.069), 2003 (p=0.689)
2012 adjusted estimate (2012A) <sup>2</sup> : 3.4 percent	1999 (p<0.001), 2003 (p<0.001), 2012U (p<0.001), 2019 (p=0.040)		2007 (p=0.124), 2016 (p=0.757)
2016: 3.3 percent	1999 (p<0.001), 2003 (p<0.001), 2012U (p<0.001)		2007 (p=0.219), 2012A (p=0.757), 2019 (p=0.087)
2019: 2.8 percent	1999 (p<0.001), 2003 (p=0.018), 2012U (p=0.005)	2012A (p=0.040)	2007 (p=0.734), 2016 (p=0.087)

<sup>1</sup> For ease of presentation, the 2012 unadjusted estimate is shown in the table cells as 2012U.

<sup>2</sup> For ease of presentation, the 2012 adjusted estimate is shown in the table cells as 2012A.

NOTE: The p-values of the Student’s t-tests are shown in parentheses. Change over time is difficult to interpret particularly starting with the 2012 data. As noted, at that point, data collection shifted from interviewer assisted to self-administered methods. The lack of interviewer guidance and interaction might contribute to observed differences between the 1999-2007 estimates and the 2012-2019 estimates. Further, each year that NHES was conducted with self-administered modes of data collection, NCES altered the methodology for collecting and reporting the homeschool estimates in efforts to measure homeschooling more accurately. Given small sample sizes and budget constraints, formal bridge studies were not possible. Data collection and reporting changes are discussed below.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Survey Program (NHES) of 1999, 2003, 2007, 2012, 2016, and 2019.

### 9.1.8.3 Collection and reporting of homeschooling estimates from 2012 to 2016

The NHES:2012 collection marked the first year of collecting homeschool estimates using an address-based sample frame and mailed paper questionnaires in two stages, rather than a random-digit-dial sample frame and telephone interviews conducted in one stage. Starting in 2012, respondents were first mailed a paper screener instrument which asked for information about each child in the household, including school enrollment. The enrollment item asked:

Is this child currently in...

- Public or private school, or preschool,
- Homeschool instead of school for some or all classes, or
- Not in school?

When a household mailed back a screener survey that indicated a child (between the ages of 5 and 17) was homeschooled instead of in school for some or all classes, that child was eligible to be sampled for the PFI survey. If sampled, the household received a PFI-Homeschool questionnaire.

Households that indicated they had a child enrolled in public or private school for grades kindergarten through 12 were eligible to be sampled for the PFI, and if the enrolled child was sampled, the household received a PFI-Enrolled questionnaire. The PFI-Enrolled questionnaire included the question:

Is this child being schooled at home instead of at school for some classes or subjects?

To produce estimates of homeschooling in 2012, NCES applied its standard definition, which excludes students who were enrolled in public or private school more than 25 hours per week and students who were homeschooled only because of temporary illness. Responses to the PFI-Homeschool questionnaire yielded the unadjusted rate of 2.1 percent of the school-aged population being homeschooled.

In order to account for part-time homeschoolers whose parents may have indicated on the screener that the child was enrolled in school and then indicated on the PFI-Enrolled questionnaire that the child was schooled at home for some classes or subjects, NCES computed a statistically adjusted homeschooling rate. The 2012 PFI-Enrolled questionnaire does not allow for a determination of how many hours these students were in school or whether the child was homeschooled because of a temporary illness. Those questions were not included on the questionnaire. Therefore, the statistically adjusted homeschool rate *estimates* the proportion of students on the PFI-Enrolled questionnaire who would meet NCES's definition of a homeschooler, based on responses to the PFI-Homeschool questionnaire about hours enrolled in school and reasons for homeschooling. A weight was developed to adjust homeschooling responses from the PFI-Enrolled questionnaire downward, with the assumption that some of the students who were reported as homeschooling on the 2012 PFI-Enrolled questionnaire meet NCES's definition of being homeschoolers while others likely attend school for too many hours to meet the definition. The adjusted homeschooling rate was computed by combining the responses to the PFI-Homeschool questionnaire and the downward-weighted responses to the PFI-Enrolled questionnaire. This resulted in a statistically adjusted homeschooling rate of 3.4 percent. For more detail on the statistical adjustment and 2012 homeschooling estimates, see Redford, Battle, and Bielick (2017), available from <https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2016096rev>.

The NHES:2016 administration continued using a two-stage design with mailed paper questionnaires. Additionally, 35,000 of the 206,000 screener sample addresses were sent an invitation to complete the survey by web. Homeschooling data collection strategies were altered in NHES:2016 to avoid the ambiguity in the homeschooling estimates found in NHES:2012. Because it is preferable to have part-time homeschoolers listed in the screener as homeschooling rather than enrolled, the enrollment item on the 2016 screener was revised to show the homeschooling response option before the response option for public or private school enrollment. The 2016 administration also enumerated all people in the household, including adults, so that the NHES could field the newly added Adult Training and Education

Survey. Consequently, the screener asked about persons in the household rather than children. The 2016 screener item asked:

Is this person currently in...

- Homeschool instead of attending a public or private school for some or all classes,
- Public or private school, or preschool,
- College, university, or vocational school, or
- Not in school?

As in 2012, a household that mailed back a screener survey with a child who was sampled for the PFI survey received the PFI-Homeschool survey if the parent marked that the child was in homeschool instead of school for some or all classes. In an effort to gain precision in homeschool estimates, NCES oversampled homeschoolers in 2016.<sup>72</sup> In 2016, the response rate for the PFI-Homeschool survey was 61 percent compared to the PFI-Enrolled survey response rate of 75 percent. The 61 percent response rate was also lower than the PFI-Homeschool survey response rate from previous administrations. This relatively low response rate to the 2016 PFI-Homeschool survey suggests that some households who received the PFI-Homeschool questionnaire in 2016 may have deemed it inapplicable and chosen not to respond.

The PFI-Enrolled questionnaire was also revised for NHES:2016 to gather more accurate information about homeschooling from parents who indicated on the screener that the child was enrolled. The PFI-Enrolled questionnaire asked:

Some parents decide to educate their children at home rather than send them to a public or private school. Is this child being schooled at home instead of at school for at least some classes or subjects?

Less than 1 percent of PFI-Enrolled respondents answered “yes” to the first homeschooling item on the PFI-Enrolled questionnaire.<sup>73</sup> They were directed to the question:

Which of the following statements best describes your homeschooling arrangement for this child?

- This child is homeschooled for all classes or subject areas.

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<sup>72</sup> Over-sampling resulted in a 40 percent increase in homeschool cases: In 2012, 507 PFI-Homeschool questionnaires were sent, and 394 were returned; in 2016, 925 PFI-Homeschool questionnaires were sent, 552 were returned.

<sup>73</sup> In 2012, about 2 percent of students who were marked as enrolled on the screener had parents who marked “yes” for the homeschool PFI-Enrolled questionnaire item. In 2016, there was a statistically significant decrease to 0.7 percent of students marked as enrolled on the screener and homeschooled on the PFI-Enrolled questionnaire.

- This child is homeschooled for some classes or subject areas and also attends a public or private school.
- This child is not homeschooled. This child attends a public or private school for all classes or subject areas.<sup>74</sup>

For parents who reported some or all homeschooling for the child, the questionnaire then asked about the hours that the child goes to a public or private school and about the reasons for homeschooling. These new PFI-Enrolled questions allowed for the direct calculation of a homeschooling rate using data across the two PFI surveys, based on the standard definition (excluding students enrolled more than 25 hours per week and students homeschooled only because of a temporary illness). Responses from both the PFI-Homeschool and PFI-Enrolled questionnaires in 2016 yielded a prevalence rate of 3.3 percent.

#### **9.1.8.4 Collection and reporting of homeschooling estimates in NHES:2019**

NCES developed a new method for collecting homeschooling data for the 2019 collection so that all households with children in grades kindergarten through 12 or equivalent would receive the same questionnaire. The new approach provides analysts with choices for reporting about the homeschooling phenomenon.

There were several indications that a new method for collecting information about homeschoolers was needed. Discrepancies between responses to the homeschooling question in the screeners compared to the PFI questionnaires in 2012 and 2016 led NCES to consider approaches to collecting homeschool data that do not rely on the screener enrollment question. There is likely more complexity inherent in measuring students' educational settings than the screener instrument can accommodate. Additionally, qualitative research for NHES item development indicated some confusion among parents of full-time virtual students enrolled in public and private schools about how to respond to the PFI instruments.

NCES redesigned the PFI questionnaire for NHES:2019 to be a combined survey (the "PFI-Combined") meant for all K-12 students, while allowing for the separate identification of homeschooled students, virtual school students, and students enrolled in "brick and mortar" schools. The screener questionnaire enrollment item (which remained unchanged except for the switch back to asking about children/youth rather than all persons, as NHES:2019 did not include an adult education component) allowed NCES to oversample probable homeschoolers but was not used to route respondents to a separate survey

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<sup>74</sup> About 49 percent of students whose parents said "yes" to the homeschool gate question on the PFI-Enrolled questionnaire were homeschooled for some classes, 22 percent were homeschooled for all classes and subject areas, and 29 percent were not homeschooled. This response distribution suggests that there is typically both over-report and under-report of homeschooling to NCES's legacy homeschooling question when asked in a self-administered survey. It also suggests that some parents may not fully understand the concept of homeschooling and that the follow-up question is important for clarifying responses in self-administered instruments, where discussion with an interviewer to correct responses is not possible.

instrument. Any screener completed for which an eligible homeschooled or enrolled child was sampled received the PFI-Combined questionnaire.

The PFI-Combined questionnaire utilized a new set of question items. After asking the parent to confirm the child's grade, the PFI-Combined questionnaire asked:

2. Students today take part in many different types of schools and education settings. What type of school does this child attend?

Mark X one box for each item below.

- a. A public school located in a physical building, including charter school.....yes/no
- b. A private Catholic school located in a physical building.....yes/no
- c. A private, religious but not Catholic school located in a physical building.....yes/no
- d. A private, not religious school located in a physical building.....yes/no
- e. Full-time, online, virtual, or cyber school for grades kindergarten through 12.....yes/no
- f. College, community college, or university that is online, virtual, or cyber.....yes/no
- g. College, community college, or university located in a physical building.....yes/no
- h. Student is homeschooled, including co-ops.....yes/no

From this question, anyone who did not mark "yes" to item h ("student is homeschooled") was routed to a set of enrollment items. Anyone who marked "yes" to item h was routed to a set of homeschooling questions, including the following confirmation questions, which were slightly revised from 2016:

4. Some parents decide to educate their children at home rather than send them to a public or private school located in a physical building.

Is this child being schooled at home instead of at school for at least some classes or subjects?

- Yes
- No → [Skip out of homeschooling section]

5. Which of the following statements best describes your homeschooling arrangement for this child?

- This child is homeschooled for all classes or subject areas, which may include co-ops, virtual/cyber/online courses, and home instruction provided by a private tutor or teacher
- This child is homeschooled for some classes or subject areas and is also enrolled in a public or private school
- This child is not homeschooled. This child is enrolled in a public or private school for all classes or subject areas. → [Skip out of homeschooling section]

At the end of the set of homeschooling questions, respondents were asked:

## 29. Is this homeschooled child also enrolled in a school?

Questions about virtual course-taking were asked of parents of all students, regardless of homeschooling or enrollment status. In addition to the PFI questionnaire redesign, survey methods also changed for the NHES:2019 administration. Most sample members were first mailed an invitation to complete the survey online. Those who did not respond were mailed a second invitation to complete the survey online. Paper questionnaires were sent to web nonrespondents after the second web survey invitation. The web instrument sampled a focal child from the screener immediately, allowing PFI respondents to complete the two stages of the survey in one sitting. Consequently, the PFI-Combined response rate in 2019 was 83 percent, higher than PFI response rates in 2012 or 2016 (78 percent and 74 percent, respectively).

The 2019 homeschooling rate of 2.8 percent reflects NCES's historic definition of homeschooling applied to the PFI-Combined questionnaire to the greatest extent possible. The rate is computed by starting with students whose parents answered "yes" to item 2h and then confirmed the student's homeschooling status in the follow-up questions 4 and 5. From the group of respondents who answered that the child is homeschooled for all or some classes, cases are dropped when the child is homeschooled only because of temporary illness or when the number of hours in school is reported in the enrolled section of the questionnaire as being "More than 24 hours" in item 42 shown in exhibit 9-1 below.

Please note that the 2019 rate departs from previous years by excluding students who were homeschooled but attending school for exactly 25 hours per week. Data from 2016 indicate that four students were reported as homeschooled and attending school for 25 hours per week, representing about 0.9 percent of homeschoolers in the total 2016 homeschool population. Consequently, the 2019 rate of 2.8 percent may be an undercount compared to previous years. Because question wording for hours in schooling changed between 2016 and 2019, the measures are not comparable across years. Therefore, analysts should take caution in assuming that data from 2016 can be compared to 2019. Question wording from 2016 and 2019 is shown in exhibit 9-1 below.

### Exhibit 9-1. Hours in school question wording in NHES:2016 and NHES:2019

NHES:2016	NHES:2019
6. How many <u>hours</u> each <u>week</u> does this child usually go to a school for instruction? Do not include time spent in extracurricular activities.  ____ hours	42. About how many hours does this child attend a school each <u>week</u> ? <input type="checkbox"/> 0 hours. Child does not attend a school located in a physical building <input type="checkbox"/> 1-10 hours <input type="checkbox"/> 11-24 hours <input type="checkbox"/> More than 24 hours

#### 9.1.8.5 Full-time virtual school students

An important aspect of the change in homeschooling over time, and NCES’s questionnaire adaptations to measure those changes, is the growth of full-time virtual schooling for K-12 students. While online course-taking has become common among students enrolled in “brick and mortar” schools and homeschooled students alike, full-time enrollment in virtual schools is a distinct phenomenon. Full-time virtual school students receive 100 percent of their instruction online. The schools in which these students are enrolled may be operated by various entities. Some are operated by traditional local or state education agencies. Florida Virtual School (FLVS), for example, is among the largest state-run virtual schools (Miron, Gulosino, and Horvitz 2014; Natale and Cook, 2012). Other full-time virtual schools are charter schools, which may be operated by non-profit or for-profit education management organizations (EMOs). Full-time virtual schools are often called online schools or cyber schools (Rice and Huerta 2014).

In prior rounds of the NHES, parents of students who were full-time virtual school students either self-identified as homeschooling and answered the homeschooling questionnaire as best they could or indicated that the child was enrolled in school and answered questions about a child’s physical school as best they could.<sup>75</sup> Consequently, homeschooling estimates from 2012 and 2016 include some unknown proportion of students who were enrolled full-time in a public or private virtual school.

It is not clear how parents of full-time virtual school students would have made the judgement of whether to report the child as homeschooled or enrolled. One possibility is that parents of full-time virtual school students who responded to the screener questionnaire then discarded the PFI-Homeschool or PFI-Enrolled questionnaire after looking at the questions and deciding that it did not apply to their child; the resulting unit nonresponse could have diminished the accuracy of the PFI homeschool estimates in 2012 and 2016.

<sup>75</sup> Neither questionnaire was entirely appropriate. For example, the 2016 PFI-Homeschooled questionnaire asked parents, “Who is the person that mainly provides this child’s home instruction?” with response options of Mother, Father, Grandparent, Brother, Sister, or Other person; and the 2016 PFI-Enrolled questionnaire asked parents, “Since the beginning of this school year, has any adult in this child’s household done any of the following things at this child’s school? Attended a school or class event, such as a play, dance, sports event, or science fair?”

The combining of the PFI-Homeschool questionnaire and the PFI-Enrolled questionnaire was designed to allow parents of full-time virtual school students to report about the child’s virtual schooling experience, regardless of whether the parent considers the child to be homeschooled or not. Data users can now choose to report a rate of homeschooling that excludes all full-time virtual school students, includes only full-time virtual students identified as homeschooled, or includes all full-time virtual school students.

Because the 2019 homeschooling rate reported above mimics the methodology for calculating a rate from 2012 and 2016 to the greatest extent possible, the 2019 homeschooling rate of 2.8 includes only those full-time virtual school students that parents identified as homeschooled. About 4 percent of the 2019 homeschoolers are full-time virtual school students (or about 0.1 percent of all students). Among the parents of full-time virtual school students who responded to the PFI, about 82 percent completed the enrolled section of the questionnaire, and 18 percent completed the homeschooled section of the questionnaire.

Table 9-3, below, compares the reported 2.8 percent 2019 homeschooling rate with some alternative ways to analyze and report data from the PFI. For example, analysts may choose to exclude all full-time virtual school students from homeschooling estimates, which would produce a rate of 2.7 percent.

Analysts may also wish to report a rate of full-time virtual school students, irrespective of homeschooling status. The rate reported in the table below considers full-time virtual school students to be those whose parents answered “yes” to item 2e shown in section 9.1.8.4 above (“Full-time, online, virtual, or cyber school for grades kindergarten through 12”), reported that all of the child’s classes were online in either the homeschool section or the enrolled section of the questionnaire<sup>76</sup>, and reported that the student spent 10 or more hours a week in online courses.<sup>77</sup> About 0.5 percent of the school-aged population were reported to be full-time virtual school students based on this definition. The demographics of full-time virtual school students appear to include a lower proportion of rural students and a higher proportion of high school students than homeschoolers (see table 9-3).

For analysts who may wish to know the rate at which students were schooled at home in 2019, either through a more traditional homeschool model of parent-led curriculum choices or through enrollment in a full-time virtual school (regardless of curriculum source), the final column in the table, “Instruction

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<sup>76</sup> Item 9 (in the homeschool section of the PFI-Combined questionnaire) asked, “Is this child enrolled in any online, virtual, or cyber courses?” Do not include courses that use the Internet only for selected assignments.” Response options were, “Yes, all the child’s courses are online, virtual, or cyber;” “Yes, about half or more than half of the child’s courses are online, virtual, or cyber;” “Yes, less than half of the child’s courses are online, virtual, or cyber;” or “No, none of this child’s courses are online, virtual, or cyber.” Item 43 (in the enrolled section of the PFI-Combined questionnaire) has the same wording as item 9.

<sup>77</sup> Item 15 (in the homeschool section of the PFI-Combined questionnaire) asked, “In the last week that this child was homeschooled, about how many hours did this child spend in online, virtual, or cyber classes?” Response options were “Fewer than 10 hours;” “10-24 hours;” or “More than 24 hours.” Item 49 (in the enrolled section of the questionnaire) provided the same response options and asked, “In a typical school week, about how many hours does this child spend in online, virtual, or cyber classes?”

at home rate,” provides a rate that combines all homeschoolers and all full-time virtual school students. About 3.2 percent of the school-aged population in 2019 was schooled at home. Among the 3.2 percent of students who were instructed at home in 2019, about 16 percent were full-time virtual school students.

**Table 9-3. Additional estimates related to homeschooling from the 2019 Parent and Family Involvement in Education survey**

(Standard errors appear in parentheses)

	Homeschooling rate includes FT virtual homeschoolers <sup>1</sup>		Homeschooling rate excluding FT virtual homeschoolers <sup>2</sup>		Full-time virtual school rate (homeschooled and enrolled) <sup>3</sup>		Instruction at home rate <sup>4</sup>	
<b>Overall Rate</b>	2.8	(0.18)	2.7	(0.18)	0.5	(0.06)	3.2	(0.19)
<b>Locale of student's household<sup>5</sup></b>								
City	2.5	(0.29)	2.4	(0.29)	0.4	(0.09)	2.9	(0.31)
Suburban	2.4	(0.26)	2.3	(0.25)	0.6	(0.10)	2.8	(0.27)
Town	2.2	(0.39)	2.1	(0.38)	0.6	(0.21) !	2.7	(0.42)
Rural	4.7	(0.54)	4.6	(0.53)	0.6	(0.13)	5.2	(0.55)
<b>Student's sex</b>								
Male	2.7	(0.23)	2.6	(0.23)	0.4	(0.07)	3.0	(0.23)
Female	2.9	(0.25)	2.8	(0.25)	0.6	(0.10)	3.5	(0.26)
<b>Student's race/ethnicity</b>								
White, non-Hispanic	4.0	(0.28)	3.8	(0.28)	0.8	(0.10)	4.6	(0.30)
Black, non-Hispanic	1.2	(0.36) !	1.2	(0.36) !	0.3	(0.15) !	1.6	(0.42) !
Hispanic	1.9	(0.32)	1.8	(0.31)	0.3	(0.11) !	2.1	(0.33)
Asian or Pacific Islander, non-Hispanic	‡	†	‡	†	0.0	(0.00)	‡	†
Other, non-Hispanic <sup>6</sup>	2.8	(0.60)	2.8	(0.60)	0.4	(0.18) !	3.2	(0.62)
<b>Student's grade level</b>								
Kindergarten-2nd grade	2.8	(0.35)	2.8	(0.35)	0.1	(0.06) !	2.9	(0.35)
3rd-5th grade	2.9	(0.32)	2.8	(0.33)	0.2	(0.07) !	3.0	(0.34)
6th-8th grade	3.4	(0.43)	3.2	(0.42)	0.6	(0.13)	3.8	(0.43)
9th-12th grade	2.3	(0.26)	2.1	(0.26)	1.1	(0.15)	3.2	(0.30)
<b>Highest education level of parents/guardians</b>								
Less than high school	2.9	(0.69)	2.9	(0.69)	‡	(0.12)	3.2	(0.70)
High school graduate or equivalent	1.8	(0.34)	1.6	(0.34)	0.6	(0.15) !	2.2	(0.36)
Vocational/technical or some college	2.9	(0.30)	2.7	(0.30)	0.7	(0.10)	3.4	(0.32)
Bachelor's degree	3.3	(0.32)	3.2	(0.32)	0.5	(0.13) !	3.7	(0.33)
Graduate or professional school	3.1	(0.34)	3.0	(0.34)	0.5	(0.11)	3.4	(0.35)
<b>Poverty status<sup>7</sup></b>								
Poor	2.7	(0.45)	2.6	(0.45)	0.5	(0.14) !	3.1	(0.47)
Nonpoor	2.9	(0.19)	2.7	(0.18)	0.5	(0.07)	3.3	(0.19)

† Not applicable.

! Interpret data with caution. The coefficient of variation (CV) for this estimate is between 30 and 50 percent.

‡ Reporting standards not met. The coefficient of variation (CV) for this estimate is 50 percent or greater.

<sup>1</sup> Homeschooling rate with the students who are full-time online/virtual school students whose parents completed the homeschooling section included.

<sup>2</sup> Homeschooling rate with the students who are full-time online/virtual school students whose parents completed the homeschooling section excluded.

<sup>3</sup> Full-time online/virtual schooling rate with all possible students (those whose parents completed the homeschool section AND those whose parents completed the enrolled section).

<sup>4</sup> Instruction at home (combined) rate: combines homeschooling without virtual students (2 above) and full-time online/virtual schooling rate with all possible students (3 above).

<sup>5</sup> Locale of student's household classifies the residential ZIP code into a set of four major locale categories: city, suburban, town, rural.

<sup>6</sup> "Other, non-Hispanic" includes American Indian/Alaska Native children who are not Hispanic and children who are Two or more races and not Hispanic.

<sup>7</sup> Determined by the federal government, the poverty threshold is the income necessary to meet the household's needs, given the household's size and composition. Income is collected in categories in the survey, rather than as an exact amount, and therefore the poverty measures used in this report are approximations of poverty.

NOTE: Homeschooled students are school-age children who receive instruction at home instead of at a public or private school either all or most of the time. Excludes students who were enrolled in public or private school more than 25 hours per week and students who were homeschooled only because of temporary illness. Race categories exclude persons of Hispanic ethnicity. Detail may not sum to totals due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Parent and Family Involvement in Education Survey of the National Household Education Surveys Program (PFI-NHES), 2019.

## **9.2 Data Anomalies**

Data anomalies include responses out of the expected range and real or apparent inconsistencies in the data that were not corrected in data editing. The PFI contains 16,446 respondents and the ECPP has 7,092 respondents. The anomalies listed in this section represent a very small number of respondents. The following anomalies are documented here for the purpose of bringing them to analysts' attention.

### **9.2.1 Mothers' and Fathers' Specific Relationships to Sampled Children**

Several cases occurred where the specific relationships of mothers and fathers to the subject children were unusual. For example, a child could be reported to have a birth mother and foster father, birth father and foster mother, or stepmother and stepfather at home. Data users interested in specific parent relationships should consider how to treat these cases in their analyses.

### **9.2.2 Age and Grade Mismatch for Sampled Children**

The PFI file has some cases where age and grade do not appear to plausibly match (for example, a 12-year-old in 12th grade or an 18-year-old in 1st grade). In these cases, the inconsistent data reflected the respondents' answers and were, therefore, left as is. Analysts may wish to exclude age/grade outliers from analytic samples.

### **9.2.3 Inconsistency in Parent Reports of Type of School Child Attends**

To capture the diversity of schools and education settings in which students participate, NCES redesigned the PFI questionnaire between 2016 and 2019. The PFI-Homeschool questionnaire and the PFI-Enrolled questionnaire from 2016 were combined into one questionnaire, additional questions about school type were added, and skip patterns were used to route respondents to appropriate questions. Among some NHES:2019 cases, parents reported what appear to be inconsistencies about the type of schools that students attend. Because 2019 was the first year that many of these questions were asked, NCES chose to take a conservative approach toward editing data about school types so that data users could analyze response patterns and arrive at their own conclusions about how best to categorize students into school types. Examples of school type inconsistencies follow.

For 88 cases in the PFI data file, a parent reported that his or her child attended a public school (EDCPUB) and also marked at least one of the response options for "a private Catholic school located in a physical building," (EDCCAT), "a private, religious but not Catholic school located in a physical building," (EDCREL), and "a private, not religious school located in a physical building" (EDCPRI). While a student may have attended multiple schools at one time, it is unclear which school type in which these students were enrolled for most hours.

Further, for 12 cases in the PFI data file, a parent reported that his or her child attended a public school (EDCPUB), whereas data from the CCD or PSS for the school identified by the parent (S19PBPV)

indicated that the child attended a private school. Conversely, for 43 cases in the PFI data file, a parent reported that his or her child attended a private school (EDCCAT, EDCREL, or EDCPRI), whereas data from the CCD or PSS (S19BPBV) indicated that the child attended a public school.

On the paper version of the PFI questionnaire, items 29 (HSENRL) and 30 [not included on data file] are used to help route respondents into or out of questions about a student's physical school as applicable. HSENRL asks parents of homeschooled students if the student is also enrolled in a school. Item 30 asks if the school where the child is enrolled for most hours is a public, private, or virtual school, or whether the child is homeschooled only, so that parents of students enrolled in schools then received questions appropriate to the student's school type. Inconsistencies exist between responses to these items and responses to item 2, which asks parents about types of schools and education settings. For example, in 81 cases, the parent of a homeschooling child indicated that the child does attend a school in addition to homeschooling but did not mark "yes" to items EDCPUB, EDCCAT, EDCREL, EDCPRI, EDCINTK12, EDCINTCOL, or EDCCOL. The valid responses to items in the Child's School section of the questionnaire are the result of routing from item 30; though, for some cases, responses to this item may not have been consistent with responses to item 2. For example, 14 cases marked 'yes' to EDCPUB; marked 'no' to EDCCAT, EDCREL, EDCPRI, EDCINTK12, EDCINTCOL, and EDCCOL in item 2 (indicating the child attends a public school only); and marked that the child was not enrolled in public school for most of their hours in item 30.

Additionally, there are inconsistencies in parent responses to school type items among virtual schoolers and homeschoolers. For example, for 113 cases in the PFI data file, a parent reported that his or her child did not attend a virtual school (EDCINTK12) but also reported that the child is enrolled in all online, virtual, or cyber classes (EINTNET/HSINNET). Also, 11 cases reported their homeschooled child was enrolled in a public or private school (EDCPUB, EDCCAT, EDCREL, or EDCPRI) but then reported they were not enrolled in a school (HSENRL). The reported data for these cases were not changed. These anomalies could have been caused by parent misreporting of the type of school that the child attends, misidentification of the school by the parent, erroneous matching to the CCD or PSS, problems with the school type data from either the CCD or PSS, or other unknown survey collection and post-processing factors.

## Chapter 10. Guide to the Data File and Codebook

This chapter describes the content of the public-use and restricted-use data files constructed for the Early Childhood Program Participation (ECP) Survey and the Parent and Family Involvement in Education (PFI) Survey of the National Household Education Surveys Program of 2019 (NHES:2019). The ECP file includes data from questionnaires completed by parents or guardians of 7,092 children between the ages of 0 and 6 who were not yet enrolled in kindergarten. The PFI file includes data from questionnaires completed by parents or guardians of 16,446 children and youth enrolled in kindergarten through 12<sup>th</sup> grade or homeschooled for these grades. The ECP and PFI files contain data from all completed questionnaires. The ECP and PFI files have one record for each child. Only one child was sampled in each household; each record in NHES:2019 files represents one child from a unique household.

The files are organized so that logically related sets of variables are grouped together. The data items for the ECP and PFI files are listed in the files in the following order: system variables, questionnaire item variables, child health variables, household and family composition variables, derived variables based on questionnaire items, Zip Code Tabulation Area (ZCTA) and geocode level variables, variables derived from CCD and PSS (PFI only), other operational and screener variables, weighting and variance estimation variables, and imputation flag variables. All variables that appear on the public-use data file also appear in the restricted-use data file; the restricted-use file contains additional variables, which are described below.

Lists of all the variables in the public-use and restricted-use ECP and PFI data files are in appendix B. The VARIABLE NAME column displays the unique identifier for each variable in the data file. The VARIABLE LABEL column displays a short description associated with the variable. The FORMAT column indicates if a variable has a numeric (“N”) or a character (“C”) format. The LENGTH column indicates the number of columns of data the variable spans on the ASCII data file. The position of the variable on the ASCII file is indicated in the START and END columns.

The value “-1” for any variable on the file indicates that a case was part of a valid skip and therefore not eligible for the variable. For example, if the respondent answered that the child was born in the United States (CPLCBRTH), the respondent would not be asked how old the child was when he or she first moved to the United States (CMOVEAGE), and that variable would contain a value of “-1” for the case. On the restricted use files, missing write-in (e.g., other, specify) variables were not imputed. On both the restricted and public use files, the codes were not imputed when missing for data that was coded from write-in data. For these variables, missing values were coded as “-9.” The PFI questionnaire includes a question asking for up to ten subjects areas taught to the homeschooled child. In cases where some but not all subject fields were populated, missing fields were assigned a “-6” value to indicate the

respondent reported some information on the item but not for every subject. The ECPP questionnaire includes a question asking for the main reason a child's care arrangement was chosen. Many respondents reported multiple reasons, resulting in five variables for this question. Respondents who provided fewer than five reasons were assigned a "-6" value for inapplicable variables containing reasons for choosing care arrangements.

The NHES public-use data files are provided free of charge and are available on the Internet at <https://nces.ed.gov/nhes>. They also will be made available online through the National Center for Education Statistics (NCES) Online Codebook at <https://nces.ed.gov/OnlineCodebook/>. A license is required to obtain the restricted-use data file. Go to the NCES website at <https://nces.ed.gov/pubsearch/licenses.asp> to learn more about obtaining a restricted-use license.

The subsequent sections of this chapter provide descriptions and values of the derived, appended, and recoded variables on the NHES:2019 data files. These are grouped by type. The questionnaire variables are not described here; the questionnaires, with variable names shown, can be found in appendix A. Additionally, all variables are listed in the data file layouts in appendix B. SAS code for all variables derived from questionnaire data, other than variables that are derived from write-in text, can be found in appendix G.

### **10.1 System Variables (All Files)**

**BASMID** is the unique 11-character ID number for each case.

**RCVDATE** is the date on which the topical questionnaire was checked in or submitted on the web. For web cases that did not finish the questionnaire, this date represents the date the last completed question was answered. This variable appears on the restricted-use data files only.

### **10.2 Child Health Variables (ECPP and PFI Files)**

**DSBLTY** indicates whether the sampled child has a disability, based upon all items HDLEARNX, HDINTDIS, HDSPEECHX, HDDISTRBX, HDDEAFIMX, HDBLINDX, HDORTHOX, and HDOTHERX plus the additional items HDAUTISMX, HDPDDX, HDADDX, HDDELAYX, or HDTRBRAIN (items concerning autism, attention deficit disorder, pervasive developmental disorder, developmental delay, or traumatic brain injury).

The values for DSBLTY are as follows:

1 = Currently has a disability

2 = Does not currently have a disability

### **10.3 Child, Household, and Family Variables (ECPP and PFI Files)**

**PARIEDUC** indicates the educational attainment of the child's resident parent or guardian identified in the "Parent 1" section of the questionnaire. This variable was derived from PIEDUC. In 2012, cases who reported that their education was "Some graduate work, no degree" were classified

as having a graduate degree for the derived variables. In 2016 and 2019, this group was classified as having completed a bachelor's degree and grouped as category 4 = "College graduate."

The values of PAR1EDUC are as follows:

1 = Less than high school credential

2 = High school graduate or equivalent

3 = Vocational/technical education after high school or some college

4 = College graduate

5 = Graduate or professional school

**PAR1EMPL** indicates the employment status of the child's resident parent or guardian identified in the "Parent 1" section of the questionnaire. This variable was derived from PIEMPL, PIHRSWK, and PILKWRK.

The values of PAR1EMPL are as follows:

1 = Working 35 hours or more per week

2 = Working less than 35 hours per week

3 = Looking for work

4 = Not in the labor force

**PAR2EDUC** indicates the educational attainment of the child's resident parent or guardian identified in the "Parent 2" section of the questionnaire. This variable was derived from P2GUARD and P2EDUC. In 2012, cases who reported that their education was "Some graduate work, no degree" were classified as having a graduate degree for the derived variables. In 2016 and 2019, this group was classified as having completed a bachelor's degree and grouped as category 4 = "College graduate."

The values of PAR2EDUC are as follows:

1 = Less than high school credential

2 = High school graduate or equivalent

3 = Vocational/technical education after high school or some college

4 = College graduate

5 = Graduate or professional school

-1 = No second parent/guardian identified for the sampled child in the household

**PAR2EMPL** indicates the employment status of the child's resident parent or guardian identified in the "Parent 2" section of the questionnaire. This variable was derived from P2GUARD, P2EMPL, P2HRSWK, and P2LKWRK.

The values of PAR2EMPL are as follows:

1 = Working 35 hours or more per week

2 = Working less than 35 hours per week

3 = Looking for work

4 = Not in the labor force

-1 = No second parent/guardian identified for the sampled child in the household

**PAR1FTFY** indicates if the resident parent identified in the "Parent 1" section of the questionnaire currently works full time and has worked 12 months during the past year. Although this measure has some limitations because it is not known if the parent was employed full time (35 hours per week or more) for the entire year, it is consistent with a measure created from the Current Population Survey (CPS) to classify parents as full-time, full-year labor force participants.<sup>78</sup> This variable was constructed using PARIEMPL and P1MTHSWRK.

The values of PAR1FTFY are as follows:

1 = Full time and full year

2 = Less than full time or less than full year

3 = Not employed during past year

**PAR2FTFY** indicates if the resident parent identified in the "Parent 2" section of the questionnaire currently works full time and has worked 12 months during the past year. Although this measure has some limitations because it is not known if the parent was employed full time (35 hours per week or more) for the entire year, it is consistent with a measure created from the CPS to classify parents as

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<sup>78</sup>Full-time, full-year labor force participants are defined as all people age 16 and older who usually worked 35 hours or more per week for 50 to 52 weeks in the past 12 months.

full-time, full-year labor force participants.<sup>79</sup> This variable was constructed using P2GUARD, PAR2EMPL, and P2MTHSWRK.

The values for PAR2FTFY are as follows:

1 = Full time and full year

2 = Less than full time or less than full year

3 = Not employed during past year

-1 = No second parent/guardian identified for the sampled child in the household

**PAR1TYPE** indicates whether the resident parent identified in the “Parent 1” section of the questionnaire is a birth, adoptive, step, or foster mother or father or a female or male guardian or partner of the parent of the sampled child. This variable is derived from PIREL and PISEX.

The values for PAR1TYPE are as follows:

1 = Birth or adoptive mother

2 = Birth or adoptive father

3 = Step or foster mother

4 = Step or foster father

5 = Grandmother or other female guardian

6 = Grandfather or other male guardian

**PAR2TYPE** indicates whether the resident parent identified in the “Parent 2” section of the questionnaire is a birth, adoptive, step, or foster mother or father or a female or male guardian or partner of the parent of the sampled child. This variable is derived from P2GUARD, P2REL, and P2SEX.

The values for PAR2TYPE are as follows:

1 = Birth or adoptive mother

2 = Birth or adoptive father

3 = Step or foster mother

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<sup>79</sup>Full-time, full-year labor force participants are defined as all people age 16 and older who usually worked 35 hours or more per week for 50 to 52 weeks in the past 12 months.

4 = Step or foster father

5 = Grandmother or other female guardian

6 = Grandfather or other male guardian

-1 = No second parent/guardian identified for the sampled child in the household

**HHPARN19X** designates the sampled child's parents or guardians who reside in the household. It denotes a two-parent family, a one-parent family, or a family with nonparent guardians. This measure was derived from PAR1TYPE and PAR2TYPE (both derived earlier). Households comprised of opposite-sex parents or same-sex parents or partners of parents are included in the two-parent household category in this derived variable (see the description for FAMILY19X).

The values for HHPARN19X are as follows:

1 = Mother (birth, adoptive, step, foster, or female partner of parent) and father (birth, adoptive, step, foster, or male partner of parent), or two same-sex parents

2 = Mother (birth, adoptive, step, or foster) only

3 = Father (birth, adoptive, step, or foster) only

4 = Nonparent guardian(s)

**HHPARN19\_BRD** designates whether the sampled child lives with two parents or guardians or a single parent/guardian. Two-parent households include those with same-sex partners, partners of parents, and guardians identified as parent figures.

The values for HHPARN19\_BRD are as follows:

1 = Two parents or guardians

2 = Single parent or guardian

**NUMSIBSX** is a counter variable that indicates the total number of siblings with whom the sampled child lives. The responses to variables HHBROS and HHSISS are counted for this variable.

**FAMILY19X** consists of a set of family type categories using both parent and sibling information. It was created using HHPARN19X and NUMSIBSX, which are other derived variables. Nonparent guardians are included in the "other" category. Nonparent guardians are persons other than mothers and fathers (birth, adoptive, step, or foster, and same-sex parents or partners of parents), such as grandparents, aunts, or uncles. Households comprised of opposite-sex parents or same-sex parents or partners of

parents are included in the two-parent household category in this derived variable (see the description for HHPARN19X).

The values for FAMILY19X are as follows:

1 = Two parents and sibling(s)

2 = Two parents, no sibling

3 = One parent and sibling(s)

4 = One parent, no sibling

5 = Other

**FAMILY19\_BRD** consists of a set of family type categories using both parent and sibling information. It was created using P2GUARD and NUMSIBSX. The presence of a second parent or guardian in the household is included regardless of the parent/guardian's relationship to the child. This is created to be consistent with the education and employment derived variables that use education/employment information regardless of the parent/guardian's relationship to the child.

The values for FAMILY19\_BRD are as follows:

1 = Two parents and sibling(s)

2 = Two parents, no sibling

3 = One parent and sibling(s)

4 = One parent, no sibling

**HHUNDR6X** is the counter-derived variable that indicates the number of household members younger than age 6. The variable is derived from age variables in the screener (AGE2018, CHAGE1-CHAGE4).

**HHUNDR10X** is the counter-derived variable that indicates the number of household members younger than age 10. The variable is derived from age variables in the screener (AGE2018, CHAGE1-CHAGE4).

**HHUNDR16X** is the counter-derived variable that indicates the number of household members younger than age 16. The variable is derived from age variables in the screener (AGE2018, CHAGE1-CHAGE4).



1 = Now married

2 = Living with a partner

3 = Separated

4 = Divorced

5 = Widowed

6 = Never married

**PAR2MARST** indicates the current marital status of Parent 2 using marital status (P2MRSTA) and whether the parent lives with a partner (P2BFGF)

The values for PAR2MARST are as follows:

1 = Now married

2 = Living with a partner

3 = Separated

4 = Divorced

5 = Widowed

6 = Never married

-1 = No second parent/guardian identified for the sampled child in the household

**PAR1FSTGN** is new for 2019. This variable indicates whether Parent 1 is first generation immigrant or 1.5 generation immigrant using place of birth (P1PLCBRTH) and age moved to the U.S. (P1AGEMV). A first generation immigrant is a person who emigrated to the U.S. at age 18 or older. A 1.5 generation immigrant is a person who emigrated during their childhood or adolescence. The age of immigration for a person of 1.5 generation status is coded here as 17 or younger.

The values for PAR1FSTGN are as follows:

1 = First generation

2 = 1.5 generation

3 = Neither

**PAR2FSTGN** is new for 2019. This variable indicates whether Parent 2 is first generation immigrant or 1.5 generation immigrant using place of birth (P2PLCBRTH) and age moved to the U.S. (P2AGEMV). A

first generation immigrant is a person who emigrated to the U.S. at age 18 or older. A 1.5 generation immigrant is a person who emigrated during their childhood or adolescence. The age of immigration for a person of 1.5 generation status is coded here as 17 or younger.

The values for PAR2FSTGN are as follows:

1 = First generation

2 = 1.5 generation

3 = Neither

-1 = No second parent/guardian identified for the sampled child in the household

**AGE2018** is the age of the sampled child as of December 31, 2018.

**CSEX** is the sex of the sampled child.

The values of CSEX are as follows:

1 = Male

2 = Female

**RACEETH** denotes both the race and ethnicity of the child. If the respondent designated the child's ethnicity as Hispanic, RACEETH is Hispanic regardless of whether race was classified as White, Black, or another race. This measure was derived from CWHITE, CBLACK, CAMIND, CASIAN, CPACI, and CHISPAN.

The values for RACEETH are as follows:

1 = White, non-Hispanic

2 = Black, non-Hispanic

3 = Hispanic

4 = Asian or Pacific Islander, non-Hispanic

5 = All other races and multiple races, non-Hispanic

**RACEETH2** indicates the race and ethnicity of the child with more detail than RACEETH. Specifically, Asian and Pacific Islander origin is categorized separately in this derived variable. This measure was derived from CWHITE, CBLACK, CAMIND, CASIAN, CPACI, and CHISPAN.

The values for RACEETH2 are as follows:

1 = White, non-Hispanic

2 = Black, non-Hispanic

3 = Mexican, Mexican American, or Chicano

4 = Puerto Rican

5 = Cuban

6 = Another Hispanic, Latino, or Spanish origin or more than one Hispanic, Latino, or Spanish origin

7 = Asian, non-Hispanic

8 = Native Hawaiian or other Pacific Islander, non-Hispanic

9 = American Indian or Alaska Native, non-Hispanic

10 = All other races and multiple races, non-Hispanic

**INTACC** indicates whether the respondent has Internet access. It is derived from HVINTSPHO (cell phone access) and HVINTCOM (at home access).

The values for INTACC are as follows:

1 = Yes, at home and on a cell phone

2 = Yes, at home only

3 = Yes, on a cell phone only

4 = No

#### **10.4 Derived ECPP-Specific Variables**

**ANYCAREX** indicates whether the child currently participates in any nonparental care or program arrangements. ANYCAREX was created using the variables RCNOW, NCNOW, and CPNNOWX.

The values for ANYCAREX are as follows:

1 = Currently participates in any care or program arrangement

2 = Does not currently participate in any care or program arrangement

**ANYCARE2X** indicates whether the child currently participates in any nonparental care or program arrangements at least once each week. ANYCARE2X was created using the variables RCWEEK, RCOTHC, NCWEEK, NCOTHC, CPWEEKX, and CPOTHC.

The values for ANYCARE2X are as follows:

- 1 = Currently participates in any care or program arrangement that occurs at least once each week
- 2 = Does not currently participate in any care or program arrangement that occurs at least once each week

**CAREHOURX** is the total number of hours per week spent in nonparental care arrangements or programs at least once per week. Children whose only arrangements take place less often than once per week are coded 0 hours on this variable, as are children in no care or program arrangements. CAREHOURX was derived for ECPP using RCHRS, RCTLHR, NCHRS, NCTLHR, CPHRS, and CPTLHR.

**CPARRNEWX** is a categorical variable that indicates the number of center-based program arrangements in which a sampled child participates at least once per week. CPARRNEWX is derived using CPWEEKX and CPOTHC.

The values for CPARRNEWX are as follows:

- 0 = Does not currently participate in a center-based care arrangement
- 1 = Currently participates in one center-based care arrangement
- 2 = Currently participates in two or more center-based care arrangements

**MOSTHR SX** indicates the primary nonparental care or program arrangement in which the child spends the most hours per week. Children whose only arrangements take place less often than once per week are coded -1 on this variable. MOSTHR SX was derived using RCWEEK, RCHRS, RCOTHC, RCTLHR, NCWEEK, NCHRS, NCOTHC, NCTLHR, CPWEEKX, CPHRS, CPOTHC, and CPTLHR. If the arrangement with the most hours was a relative or nonrelative care arrangement, RCPLACE and NCPLACE were used to determine whether the care took place in the child's home or another home.

The values for MOSTHR SX are as follows:

- 1 = Relative care in child's home
- 2 = Relative care in another home
- 3 = Nonrelative care in child's home

4 = Nonrelative care in another home

5 = Center-based program

6 = Equal hours in 2 or more types of care

-1 = Valid skip; No weekly nonparental care arrangement/program

**NCARRNEWX** is a categorical variable that indicates the number of nonrelative care arrangements in which a sampled child participates at least once per week. NCARRNEWX is derived using NCWEEK and NCOTHC.

The values for NCARRNEWX are as follows:

0 = Does not currently participate in nonrelative care arrangement

1 = Currently participates in one nonrelative care arrangement

2 = Currently participates in two or more nonrelative care arrangements

**RCARRNEWX** is a categorical variable that indicates the number of relative care arrangements in which a sampled child participates at least once per week. RCARRNEWX is derived using RCWEEK and RNCOTHC.

The values for RCARRNEWX are as follows:

0 = Does not currently participate in relative care arrangement

1 = Currently participates in one relative care arrangement

2 = Currently participates in two or more relative care arrangements

**FOREADTOX** indicates how many times a parent or someone in their family read to the child in the past week. If the respondent marked the check box “Not at all” this variable was coded “0” otherwise, it was coded the number of times reported.

## 10.5 Derived PFI-Specific Variables

### 10.5.1 Derived Variables from the Common Core of Data and Private School Universe Survey Data

The record for each child enrolled in school on the PFI file contains variables derived from the 2017-18 Common Core of Data (CCD) or the 2017-18 Private School Universe Survey (PSS).<sup>80</sup> Children who were homeschooled and their parent(s) did not indicate they were enrolled in school or those children whose parent reported as virtual school only and did not report a public or private school the child attended (SID) have a value of “-1” for each of these variables.<sup>81</sup> The variables in this section were derived using only the SID, respondent data from other survey items were not used in the creation of these variables. The code “-1” also is used for public school variables when the child attended a private school and vice versa. A code of “-9” is used when the CCD or PSS file indicated that the variable is not applicable for that student’s particular school. NHES did not use any CCD or PSS data in derived variables for which inapplicable cases were present. A code of “-2” is used for schools that are not present in the current CCD or PSS data.

**S19CHART** classifies the public school the sampled child attends as charter, magnet, or regular public school or other public school. The measure was derived from CHARTER17, MAGNET17, and TYPE17 (variables from the CCD not on the NHES data files). Data for this variable are appended from the 2017-18 CCD.

The values for S19CHART are as follows:

1 = Charter School

2 = Magnet or Regular Public School

3 = Other Public School

-1 = Homeschooled only, virtual schooled only with no designated school, or private school for student

-9 = Missing from CCD

**S19NUMST** categorizes the total number of students at the sampled child’s school. The measure was derived from MEMBER (a variable from the CCD not on the NHES data files) and NUMSTUDS (a variable

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<sup>80</sup> For a small number of PFI cases, the child’s school could not be matched to the 2017-18 PSS database but could be found on the 2016-17 database. It is likely these schools were misreported as being “out of scope” for the 2017-18 data. For these cases, school data were appended from the 2016-17 CCD and 2015-16 PSS.

<sup>81</sup> Homeschooled students would not receive school question if they indicated they were homeschooled and did not enroll in any school. These cases were identified through HSENRL. Five cases were also missing a NCES school ID (SID) as a result of being enrolled in college or otherwise indicated they were enrolled in a school but provided no indication of public or private school.

from the PSS not on the NHES data files). A variable named NBRSTDNS was derived to indicate the number of students in the sampled child's school based on whether the sampled child is in a public school (MEMBER) or a private school (NUMSTUDS). The variable NBRSTDNS was then used to create the breakdowns listed here for the variable S19NUMST, although only the latter variable is on the NHES data files. Data for this variable are appended from the 2017-18 CCD for students in public school and from the 2017-18 PSS for students in private school.

The values for S19NUMST are as follows:

1 = Under 300

2 = 300-599

3 = 600-999

4 = 1,000-2,499

5 = 2,500 or more

-1 = Homeschooled only or virtual schooled only with no designated school for student

-2 = Inapplicable in the CCD universe file

-9 = Data are missing for school

**S19BPV** classifies the sampled child's school as public or private. The measure was derived from a flag variable created to indicate whether data were extracted from the CCD data file or the PSS data file. Data for this variable are appended from the 2017-18 CCD for students in public school and from the 2017-18 PSS for students in private school.

The values for S19BPV are as follows:

1 = Public (school is on CCD)

2 = Private (school is on PSS)

-1 = Homeschooled only or virtual schooled only with no designated school for student

**S19TYPE** classifies the type of school the sampled child attends. Categories 1 through 3 pertain to private school students. All public school students were assigned a value of 4 for this variable. The measure was derived from RELIG (a variable from the PSS not on the NHES data files). Data for this variable are appended from the 2017-18 CCD for students in public school and from the 2017-18 PSS for students in private school.

The values for S19TYPE are as follows:

1 = Catholic

2 = Other religious

3 = Nonsectarian

4 = Public

-1 = Homeschooled only or virtual schooled only with no designated school for student

-9 = Data are missing for school

**SCHLGRAD** classifies the type of school the sampled child attends based on the highest and lowest grades in the school. The measure was derived from GSLO (LOGR) & GSHI (HIGR) (variables not on the NHES data files). Values were obtained from the CCD and PSS data files when matched with the school ID of the child's school. Data for this variable are appended from the 2017-18 CCD for students in public school and from the 2017-18 PSS for students in private school. Transitional grades are classified as the same grades. That is, transitional kindergarten was considered kindergarten and transitional first grade was part of first grade.

The values for SCHLGRAD are as follows:

1 = Early childhood programs (low grade Prekindergarten (PK), Kindergarten (KG); high grade PK and KG)

2 = Elementary school (low grade PK, KG, 1 to 3; high grade 1 to 8)

3 = Middle/junior high school (low grade 4 to 9; high grade 4 to 9)

4 = High school (low grade 7 to 12; high grade 10 to 12)

5 = Combined grades school

-1 = Homeschooled only or virtual schooled only with no designated school for student or school is ungraded in the CCD/PSS universe file (low grade Ungraded (UG); high grade UG)

-2 = Inapplicable in the CCD/PSS universe file (low grade Not applicable (N), Adult education (AE); high grade N, AE)

-9 = Data are missing for school in CCD/PSS universe file (low grade not reported (M); high grade M)

**The following variables appear on the restricted-use file only:**

**SID** is the NCES School ID. It identifies the public or private school at which the child is enrolled and can be linked to the CCD and PSS public data files.

**S19SAMSX** classifies the private school the sampled child attends according to its coeducational status. The measure was derived from P335 (a variable from the PSS not on the NHES data files). Data for this variable are appended from the 2017-18 PSS for students.

The values for S19SAMSX are as follows:

1 = All male

2 = All female

3 = Co-ed

-1 = Homeschooled only, virtual schooled only with no designated school, or public school for student

-9 = Data are missing for school

**S19TITL1** classifies the public school the sampled child attends according to whether it is eligible for a schoolwide Title I program. The measure was derived from STITL17 (a variable from the CCD not on the NHES data files). Data for this variable are appended from the 2017-18 CCD.

The values for S19TITL1 are as follows:

1 = Yes

2 = No

-1 = Homeschooled only, virtual schooled only with no designated school, or private school for student

-2 = Inapplicable in the CCD universe file

-9 = Data are missing for school

**SCHLGRAD\_ALT** is a new variable in 2019. It classifies the type of school the sampled child attends based on the highest and lowest grades in the school. The classification is different from SCHLGRAD because only grades with non-zero enrollment counts were included. The measure was derived from PK-G12 (P140-P300), and GSLO (LOGR) & GSHI (HIGR) (variables on the CCD and PSS not on the NHES data files). Values were obtained from the CCD/PSS data files when matched with the school ID of the child's school. Data for this variable are appended from the 2017-2018 CCD for students in public school and from the 2017-2018 PSS for students in private school. Transitional grades are classified as the

same grades. That is, transitional kindergarten was considered kindergarten and transitional first grade was part of first grade.

The values for SCHLGRAD\_ALT are as follows:

1 = Prekindergarten (low grade Prekindergarten (PK); high grade PK)

2 = Elementary school (grades 1 to 4 have greater than 0 enrollment and grades 1 to 4 have greater than or equal to the enrollment of grades 5 to 8)

3 = Middle/junior high school (grades 5 to 8 have greater than 0 enrollment and grades 5 to 8 have greater than the enrollment of grades 1 to 4 and grades 9 to 12)

4 = High school (grades 9 to 12 have greater than 0 enrollment and grades 9 to 12 have greater than the enrollment of grades 5 to 8; or PK enrollment is greater than 0 or K enrollment is greater than 0 and grades 9 to 12 enrollment is greater than 0 and grades 1 to 4 enrollment equals 0 and grades 5 to 8 enrollment equals 0)

5 = Combined grades school (grades 1 to 4 enrollment is greater than 0 and grades 9 to 12 enrollment is greater than 0)

-1 = Homeschooled only, virtual schooled only with no designated school for student or school is ungraded in the CCD/PSS universe file (low grade Ungraded (UG); high grade UG)

-2 = Inapplicable in the CCD/PSS universe file (low grade Not applicable (N), Adult education (AE); high grade N, AE)

-9 = Data are missing for school in CCD/PSS universe file (low grade not reported (M); high grade M)

**S19CENRG** classifies the school location into census region using Federal Information Processing Standards (FIPS) codes to establish the regions. The measure was derived from FIPS, STFIPS, and LSTATE17 (variables indicating the FIPS/state code of the school extracted from the CCD and PSS not on the NHES data file). Data for this variable are appended from the 2017-18 CCD for students in public school and from the 2017-18 PSS for students in private school.

The values for S19CENRG are as follows:

1 = Northeast

2 = South

3 = Midwest

4 = West

-1 = Homeschooled only or virtual schooled only with no designated school for student

-9 = Data are missing for school

**S19FRRDL** categorizes the public school the sampled child attends according to the percentage of students eligible for free or reduced-price lunch. All homeschooled and private school students were assigned a value of “-1” for this variable. The measure was derived from TOTFRL and MEMBER (variables from the CCD not on the NHES data file). A variable named PCTFRRDL was calculated by dividing TOTFRL by MEMBER. The variable PCTFRRDL was then used to create the percentage breakdowns listed here for the variable S19FRRDL, although only the latter variable is on the NHES data file and appears only on the restricted file. Data for this variable are appended from the 2017-18 CCD.

The values for S19FRRDL are as follows:

1 = Fewer than 1 percent

2 = 1 percent to fewer than 5 percent

3 = 5 percent to fewer than 25 percent

4 = 25 percent or more

-1 = Homeschooled only, virtual schooled only with no designated school, or private school for student

-2 = Inapplicable in the CCD universe file

-9 = Data are missing for school

**S19FTET** categorizes the total number of employed teachers at the sampled child’s school, as measured by full-time equivalents (FTE). The measure was derived from FTE17 (a variable from the CCD not on the NHES data file) and NUMTEACH (a variable from the PSS not on the NHES data file). A variable named NBRTCHRS was derived to indicate the number of employed teachers, measured by FTE, in the sampled child’s school based on whether the sampled child is in a public school (FTE17) or a private school (NUMTEACH). The variable NBRTCHRS was then used to create the breakdowns, by quartiles, listed here for the variable S19FTET, although only the latter variable is on the NHES data file and appears only on the restricted file. Data for this variable are appended from the 2017-18 CCD for students in public school and from the 2017-18 PSS for students in private school.

The values for S19FTET are as follows:

1 = Under 28.5

2 = 28.5 to fewer than 43.2

3 = 43.2 to fewer than 70

4 = 70 or more

-1 = Homeschooled only or virtual schooled only with no designated school for student

-2 = Inapplicable in the CCD universe file

-9 = Data are missing for school

**S19HASG4** classifies the school the sampled child attends according to whether it has grade 4. The measure was derived from G4OFFERED (a variable from the CCD not on the NHES data file) and GSHI17 (variables from the CCD not on the NHES data file) and LOGR2017 and HIGR2017 (variables from the PSS not on the NHES data file) and appears only on the restricted file. Data for this variable are appended from the 2017-18 CCD for students in public school and from the 2017-18 PSS for students in private school.

The values for S19HASG4 are as follows:

1 = Yes

2 = No

-1 = Homeschooled only, virtual schooled only with no designated school for student, or school is ungraded

-9 = Data are missing for school

**S19HASG8** classifies the school the sampled child attends according to whether it has grade 8. The measure was derived from G8OFFERED (a variable from the CCD not on the NHES data file), LOGR2017, and HIGR2017 (variables from the PSS not on the NHES data file) and appears only on the restricted file. Data for this variable are appended from the 2017-18 CCD for students in public school and from the 2013-14 PSS for students in private school.

The values for S19HASG8 are as follows:

1 = Yes

2 = No

-1 = Homeschooled only, virtual schooled only with no designated school for student, or school is ungraded

-9 = Data are missing for school

**S19HASG12** classifies the school the sampled child attends according to whether it has grade 12. The measure was derived from G12OFFERED (a variable from the CCD not on the NHES data file), LOGR2017, and HIGR2017 (variables from the PSS not on the NHES data file) and appears only on the restricted file. Data for this variable are appended from the 2017-18 CCD for students in public school and from the 2017-18 PSS for students in private school.

The values for S19HASG12 are as follows:

1 = Yes

2 = No

-1 = Homeschooled only, virtual schooled only with no designated school for student, or school is ungraded

-9 = Data are missing for school

**S19HASGK** classifies the school the sampled child attends according to whether it has kindergarten. The measure was derived from KGOFFERED (a variable from the CCD not on the NHES data file), LOGR2017, and HIGR2017 (variables from the PSS not on the NHES data file) and appears only on the restricted file. Data for this variable are appended from the 2017-18 CCD for students in public school and from the 2017-18 PSS for students in private school.

The values for S19HASGK are as follows:

1 = Yes

2 = No

-1 = Homeschooled only, virtual schooled only with no designated school for student, or school is ungraded

-9 = Data are missing for school

**S19LOCL** classifies the ZIP code of the sampled child’s school by community type. The measure was derived from LOCALE (a variable from the CCD not on the NHES data file)<sup>82</sup> and ULOCALE17 (a variable from the PSS not on the NHES data file) and appears only on the restricted file. Data for this variable are appended from the 2017-18 CCD for students in public school and from the 2017-18 PSS for students in private school.

The values for S19LOCL are as follows:

11 = City - Large

12 = City - Midsize

13 = City - Small

21 = Suburb - Large

22 = Suburb - Midsize

23 = Suburb - Small

31 = Town - Fringe

32 = Town - Distant

33 = Town - Remote

41 = Rural - Fringe

42 = Rural - Distant

43 = Rural - Remote

-1 = Homeschooled only or virtual schooled only with no designated school for student

-9 = Data are missing for school

**S19MAGN** classifies the public school the sampled child attends as a magnet or nonmagnet school. All homeschooled and private school students were assigned a value of “-1” for this variable. The measure was derived from MAGNET\_TEXT (a variable from the CCD not on the NHES data file) and appears only on the restricted file. Data for this variable are appended from the 2017-18 CCD.

The values for S19MAGN are as follows:

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<sup>82</sup> A variable LOCALE appears on the PFI data file. This is a different variable than the variable LOCALE that is on the CCD. On the PFI, LOCALE is a survey variable that asks ‘How important was each of the following reasons when you chose the school where this child is enrolled for most credits? A. Convenient location.

1 = Yes

2 = No

-1 = Homeschooled only, virtual schooled only with no designated school, or private school for student

-2 = Inapplicable in the CCD universe file

-9 = Data are missing for school

**S19PBTYP** classifies the public school the sampled child attends by type. The measure was derived from SCH\_TYPE (a variable from the CCD not on the NHES data file) and appears only on the restricted file. Data for this variable are appended from the 2017-18 CCD.

The values for S19PBTYP are as follows:

1 = Regular school

2 = Special education school

3 = Vocational school

4 = Other/alternative

-1 = Homeschooled only, virtual schooled only with no designated school, or private school for student

-9 = Data are missing for school

**S19PCTB** categorizes the school the sampled child attends according to the percentage of students who are Black/African American, non-Hispanic. The measure was derived from BL and MEMBER (variables from the CCD not on the NHES data file), and P\_BLACK (a variable from the PSS not on the NHES data file). A variable named PCTBLACK was calculated for CCD schools by dividing BLACK by MEMBER. The variables PCTBLACK (for CCD schools) and P\_BLACK (for PSS schools) were then used to create the percentage breakdowns listed here for the variable S19PCTB, although only the latter variable is on the NHES data file. Data for this variable are appended from the 2017-18 CCD for students in public school and from the 2017-18 PSS for students in private school.

The values for S19PCTB are as follows:

1 = Fewer than 1 percent

2 = 1 percent to fewer than 5 percent

3 = 5 percent to fewer than 25 percent

4 = 25 percent or more

-1 = Homeschooled only or virtual schooled only with no designated school for student

-2 = Inapplicable in the CCD universe file

-9 = Data are missing for school

**S19PCTH** categorizes the school the sampled child attends according to the percentage of students who are Hispanic of any race. The measure was derived from HI and MEMBER (variables from the CCD not on the NHES data file), and P\_HISP (a variable from the PSS not on the NHES data file). A variable named PCTHISPN was calculated for CCD schools by dividing HISP by MEMBER. The variables PCTHISPN (for CCD schools) and P\_HISP (for PSS schools) were then used to create the percentage breakdowns listed here for the variable S19PCTH, although only the latter variable is on the NHES data file. S19PCTH appears only on the restricted file. Data for this variable are appended from the 2017-18 CCD for students in public school and from the 2017-18 PSS for students in private school.

The values for S19PCTH are as follows:

1 = Fewer than 1 percent

2 = 1 percent to fewer than 5 percent

3 = 5 percent to fewer than 25 percent

4 = 25 percent or more

-1 = Homeschooled only virtual schooled only with no designated school for student

-2 = Inapplicable in the CCD universe file

-9 = Data are missing for school

**S19PVTYP** classifies the private school the sampled child attends by type. The measure was derived from P415 (a variable from the PSS not on the NHES data file). S19PVTYP appears only on the restricted file. Data for this variable are appended from the 2017-18 PSS.

The values for S19PVTYP are as follows:

1 = Regular elementary or secondary .

2 = Montessori

3 = Special program emphasis

4 = Special education

5 = Career/technical/vocation

6 = Alternative

7 = Early childhood program/day care center

-1 = Homeschooled only, virtual schooled only with no designated school, or public school for student

-9 = Data are missing for school

**S19S\_TRT** categorizes the student-teacher FTE ratio at the sampled child's school. The measure was derived from MEMBER, FTE (a variable from the CCD not on the NHES data file), and STTCH\_RT (a variable from the PSS not on the NHES data file). A variable named ST\_RATIO was derived to indicate the student-teacher FTE ratio in the sampled child's school based on whether the sampled child is in a public school (MEMBER/FTE) or a private school (STTCH\_RT). The variable ST\_RATIO was then used to create the breakdowns, by quartiles, listed here for the variable S19S\_TRT, although only the latter variable is on the NHES data file. S19S\_TRT appears only on the restricted file. Data for this variable are appended from the 2014-15 CCD for students in public school and from the 2017-18 PSS for students in private school.

The values for S19S\_TRT are as follows:

1 = Under 13.8

2 = 13.8 to fewer than 15.8

3 = 15.8 to fewer than 18.1

4 = 18.1 or more

-1 = Homeschooled only or virtual schooled only with no designated school for student

-2 = Inapplicable in the CCD universe file

-9 = Data are missing for school

**CCDVIRTUAL** is a new variable in 2019. This variable indicates the virtual school status of a given school and comes from the 2017-18 CCD file. No virtual at all indicates the school does not offer any virtual instruction, a completely virtual school is one where all students receive all instruction virtually, a primarily virtual school is "a school whose primary purpose is to provide virtual instruction to students, but some traditional classroom instruction is also provided, and a primarily classroom

school has instruction directed by teachers in a traditional classroom setting and virtual instruction supplements face-to-face instruction by teachers. It appears only on the restricted file.

The values for CCDVIRTUAL are as follows:

0 = No virtual at all

1 = Completely virtual

2 = Primarily virtual

3 = Primarily classroom

-1 = Homeschooled only, virtual schooled only with no designated school, or private school for student

-2 = Inapplicable in the CCD universe file

-9 = Data are missing for school

**NEW\_SCHL** indicates schools that were listed on the CCD frame as being new as of the 2017- 18 school year but did not have other data needed for creating other school-level derived variables. It appears only on the restricted file.

The values for NEW\_SCHL are as follows:

0 = No

1 = Yes

-1= Homeschooled only, virtual schooled only with no designated school, or private school for student

-9 = Data are missing for school

**INTRAOPENR** is new for 2019. This variable indicates whether the state in which the student resides has open enrollment policies for intradistrict schools. Intradistrict means students can transfer to another school within their resident school district. This is derived from NCES's State Education Reforms (SER) data. It appears only on the restricted file. These data were last updated in 2017.

The values for INTRAOPENR are as follows:

1 = Voluntary intradistrict enrollment only

2 = Mandatory intradistrict enrollment only

3 = Both voluntary and mandatory intradistrict enrollment available

4 = None of them are available

**INTEROPENR** is new for 2019. This variable indicates whether the state in which the student resides has open enrollment policies for interdistrict schools. Interdistrict means students can transfer to a school outside of their resident district. This is derived from NCES's State Education Reforms (SER) data. It appears only on the restricted file. These data were last updated in 2017.

The values for INTEROPENR are as follows:

1 = Voluntary interdistrict enrollment only

2 = Mandatory interdistrict enrollment only

3 = Both voluntary and mandatory interdistrict enrollment available

4 = None of them are available

## **10.6 ZCTA-Level Variables**

These variables provide information on the characteristics of the zip code tabulation area (ZCTA) in which the respondent's household is located, using data from the 2014-2018 ACS 5-year files. Unless noted otherwise below, these variables were appended to all of the datafiles.

**CENREG** identifies the census region of the household in which the sampled child lives. This variable was drawn from the household address as provided on the sampling frame.

The values for CENREG are as follows:

1 = Northeast (Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont)

2 = South (Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia)

3 = Midwest (Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin)

4 = West (Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming)

**ZIP18PO2** is a variable that categorizes the percentage of families in the sampled child's ZCTA that have children under age 18 and had incomes in the 2014-2018 ACS below the poverty line. Data for this variable are appended from the 2014-2018 ACS. There are missing values (-9) on this variable in the PFI due to missing data from the 2014-2018 ACS.

The values for ZIP18PO2 are as follows:

1 = Less than 5 percent

2 = 5 to 9 percent

3 = 10 to 19 percent

4 = 20 percent or more

-9 = Missing

**ZIPBLHI2** is a variable that categorizes the percentage of persons in the sampled child's ZCTA in the 2014-2018 ACS who were Black or Hispanic. Data for this variable are appended from the 2014-2018 ACS.

The values for ZIPBLHI2 are as follows:

1 = Less than 6 percent

2 = 6 to 15 percent

3 = 16 to 40 percent

4 = 41 percent or more

**ZIPLOCL** is a locale variable that classifies the sampled child's ZCTA into a set of community types. This variable was derived using the respondent's ZCTA and Census data (Geverdt, 2015).

The values for ZIPLOCL are as follows:

11 = City - Large

12 = City - Midsize

13 = City - Small

21 = Suburb - Large

22 = Suburb - Midsize

23 = Suburb - Small

31 = Town - Fringe

32 = Town - Distant

33 = Town - Remote

41 = Rural - Fringe

42 = Rural - Distant

43 = Rural - Remote

**ZCTA** identifies the ZCTA in which the sampled child resides. Data for this variable are appended from the 2014-2018 ACS. ZCTA appears only on the restricted file.

**BLHISCNT** indicates the number of persons in the sampled child's ZCTA who were of Hispanic origin or Black or African American alone in the 2014-2018 ACS. This variable was derived from P007004 and P007010. Data for this variable are appended from the 2014-2018 ACS. BLHISCNT appears only on the restricted file.

**FAM18POV** indicates the number of families in the sampled child's ZCTA with related children under age 18 and income in the 2014-2018 ACS below the poverty level. This variable was derived from P090004, P090011, and P090017. Data for this variable are appended from the 2014-2018 ACS. There are missing values (-9) on this variable in the PFI due to missing data from the 2014-2018 ACS. FAM18POV appears only on the restricted file.

**PCT18POV** indicates the percentage of families in the sampled child's ZCTA with related children under age 18 and income in the 2014-2018 ACS below the poverty level. This variable was derived from P090001 and FAM18POV. Data for this variable are appended from the 2014-2018 ACS. There are missing values (-9) on this variable in the PFI due to missing data from the 2014-2018 ACS. PCT18POV appears only on the restricted file.

**PCTBLHIS** indicates the percentage of persons in the sampled child's ZCTA who were of Hispanic origin or Black or African American alone. This variable was derived from P007001 and BLHISCNT and appears only on the restricted file. Data for this variable are appended from the 2014-2018 ACS. PCTBLHIS appears only on the restricted file.

**REGION** indicates the region of the country in which the household is located. It was derived from the sampled child's state and is based on the U.S. Department of Education's classification system for regions. REGION appears only on the restricted file.

The values for REGION are as follows:

- 1 = Northeast (Connecticut, Delaware, District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont)
- 2 = Southeast (Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia)
- 3 = Central (Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin)
- 4 = West (Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oklahoma, Oregon, Texas, Utah, Washington, and Wyoming)

**RSTATE** is the state in which the sampled child resides. The variable was obtained from the sampling frame and was based on the respondent's ZIP code and appears only on the restricted file.

**P005003** indicates the number of persons in the sampled child's ZCTA who live in urbanized areas. The Census Bureau defines an urbanized area as comprising a central place(s) and the adjacent territory that together have a general population density of at least 1,000 people per square mile of land area and a minimum population of 50,000 people. ZCTA-level data were appended from the 2010 Decennial Census Summary File 1 (SF1). This variable appears only on the restricted file.

**P005004** indicates the number of persons in the sampled child's ZCTA who live in urban clusters. The Census Bureau defines an urban cluster as densely settled territory that has at least 2,500 people but fewer than 50,000. ZCTA-level data were appended from the 2010 Decennial Census SF1. This variable appears only on the restricted file.

**P005005** indicates the number of persons in the sampled child's ZCTA who live in rural areas. ZCTA-level data were appended from the 2010 Decennial Census SF1. This variable appears only on the restricted file.

**P007001** indicates the total number of persons in the sampled child's ZCTA in the 2014-2018 ACS. It appears only on the restricted file. Data for this variable are appended from the 2014-2018 ACS.

**P007004** indicates the number of persons in the sampled child's ZCTA in the 2014-2018 ACS who were Black or African American and have no Hispanic origins. It appears only on the restricted file. Data for this variable are appended from the 2014-2018 ACS.

**P007010** indicates the number of persons in the sampled child's ZCTA in the 2014-2018 ACS who were of Hispanic or Latino origin. It appears only on the restricted file. Data for this variable are appended from the 2014-2018 ACS.

**P090001** indicates the total number of families in the sampled child's ZCTA in the 2014-2018 ACS. It appears only on the restricted file. Data for this variable are appended from the 2014-2018 ACS.

**P090004** indicates the number of married-couple families in the sampled child's ZCTA living below the poverty line in the 2014-2018 ACS and who had related children under age 18. It appears only on the restricted files. Data for this variable are appended from the 2014-2018 ACS.

**P090011** indicates the number of families in the sampled child's ZCTA living below the poverty line in the 2014-2018 ACS that were headed by males, with no wife present, and had related children under age 18. It appears only on the restricted files. Data for this variable are appended from the 2014-2018 ACS.

**P090017** indicates the number of families in the sampled child's ZIP code living below the poverty line in the 2014-2018 ACS, that were headed by females, with no husband present, and had related children under age 18. It appears only on the restricted files. Data for this variable are appended from the 2014-2018 ACS. There are missing values (-9) on this variable in the PFI due to missing data from the 2014-2018 ACS.

## **10.7 Geocoded Variables**

These variables provide geographic identifiers with the state, county, census tract, and census block group information of the address in which the respondent's household is located. These variables were appended to all restricted-use data files.

The geographic identifiers permit data users to merge on any data available at the state, CBSA, county, NECTA, ZCTA, census tract, or census block group-level, such as population characteristics from the ACS.

**CENBLGRP** is a 12-digit geographic identifier that includes the 2-digit state FIPS code, the 3-digit county FIPS code, the 6-digit census tract code, and the 1-digit census block group code. This variable is derived from the for 2014-2018 ACS. CENBLGRP appears only on the restricted file.

**CBSA** is a 5-digit core based statistical area (CBSA) code. Some respondents who live in counties that are not part of a CBSA do not have a CBSA code and, therefore, are assigned a blank value for CBSA. This variable is derived from the U.S. Census Bureau CBSA- county list. CBSA appears only on the restricted file.

**CBSA\_NAME** is the name of the CBSA. Some respondents live in counties that are not part of a CBSA, do not have a CBSA code, and are assigned a blank value. This variable is derived from the U.S. Census Bureau CBSA- county list. CBSA\_NAME appears only on the restricted file.

**NECTA** is a 5-digit New England city and town areas (NECTA) code. Respondents living outside New England or in New England areas that are not part of a NECTA do not have a NECTA code, and, therefore, are assigned a blank value for NECTA. NECTA appears only on the restricted file.

**NECTA\_NAME** is the name of the NECTA. Respondents living outside New England or in New England areas that are not part of a NECTA do not have a NECTA code, and, therefore, are assigned a blank value. NECTA\_NAME appears only on the restricted file.

**UN\_LEAID** indicates the 7-digit unified NCES agency identification number. Students living in geographic areas with separate elementary and high school districts are assigned a blank value. UN\_LEAID appears only on the restricted file.

**UN\_LEANAME** indicates the unified education agency name. For example, if the UN\_LEAID variable is “3702970” then the UN\_LEANAME variable will be “Charlotte-Mecklenburg Schools.” Students living in geographic areas with separate elementary and high school districts are assigned a blank value. UN\_LEANAME appears only on the restricted file.

**EL\_LEAID** indicates the 7-digit elementary NCES agency identification number. Most students with an elementary NCES agency identification number also have a secondary NCES agency identification number. A few elementary districts do not have associated high school districts; these elementary districts pay tuition to a nearby district for their students to attend school in the upper grades. Students in these districts will have a non-missing value for EL\_LEAID but a blank value for SC\_LEAID. Students living in geographic areas with unified districts are assigned a blank value. EL\_LEAID appears only on the restricted file.

**EL\_LEANAME** indicates the elementary education agency name. Most students with an elementary education agency name also have a secondary education agency name. Students living in elementary districts that do not have associated high school districts will have a non-missing value for EL\_LEANAME but a blank value for SC\_LEANAME. Students living in geographic areas with unified districts are assigned a blank value. EL\_LEANAME appears only on the restricted file.

**SC\_LEAID** indicates the 7-digit secondary NCES agency identification number. All students with a secondary NCES agency identification number also have an elementary NCES agency identification number. Students living in geographic areas with unified districts are assigned a blank value. SC\_LEAID appears only on the restricted file.

**SC\_LEANAME** indicates the secondary education agency name. All students with a secondary education agency name also have an elementary education agency name. Students living in geographic areas with unified districts are assigned a blank value. SC\_LEANAME appears only on the restricted file.

## **10.8 Other Derived, Operational, and Screener Variables (Public- and Restricted-use Files)**

**ENGLSPANX** indicates (1) whether the topical mail questionnaire was completed in English or Spanish, and (2) if the questionnaire was completed on the Web, whether the last item was completed in English or Spanish.

The values for ENGLSPAN are as follows:

1 = Questionnaire was completed in English

2 = Questionnaire was completed in Spanish

**MODECOMP** this variable indicates whether the questionnaire was completed on the Web, on paper, or by a telephone interviewer.

The values for MODECOMP are as follows:

1 = Questionnaire was completed on the Web

2 = Questionnaire was completed on paper

3 = Questionnaire was completed by telephone interviewer

**CHAGE1 to CHAGE4** these variables indicate the age in years of the nonsampled children in the household as of December 31, 2018, based on the household screener-reported data. The screener allowed parents to report information for five or fewer children, so these variables represent information about a maximum of four unsampled children.

**CHSEX1 to CHSEX4** these variables indicate the sex of the nonsampled children in the household based on the household screener-reported data. The screener allowed parents to report information for five or fewer children, so these variables represent information about a maximum of four unsampled children.

The values of CHSEX1 to CHSEX4 are as follows:

1 = Male

2 = Female

-1 = Valid Skip

-9 = Missing

**CHENRL1 to CHENRL4** these variables indicate the school enrollment status of the nonsampled members of the household based on the household screener-reported data. The screener allowed parents to report information for five or fewer children, so these variables represent information about a maximum of four unsampled children.

The values of CHENRL1 to CHENRL4 are as follows:

1 = Homeschooled instead of attending a public or private school for some or all classes

2 = Public or private school, or preschool

3 = College, university, or vocational school

4 = Not in school

-1 = Valid Skip

-9 = Missing

**CHGRD1 to CHGRD4** these variables indicate the grade of the nonsampled children/youth of the household based on the household screener-reported data for up to five children or youth members.

The values of CHGRD1 to CHGRD4 are as follows:

1 = Preschool

2 = Kindergarten

3 = Grade 1

4 = Grade 2

5 = Grade 3

6 = Grade 4

7 = Grade 5

8 = Grade 6

9 = Grade 7

10 = Grade 8

11 = Grade 9

12 = Grade 10

13 = Grade 11

14 = Grade 12

15 = College, university or vocational school

16 = None of these

-1 = Valid Skip

-9 = Missing

## **10.9 Weighting and Variance Estimation Variables**

The full weight variables in the NHES:2019 data files are FEWT (ECP) and FPWT (PFI). These variables should be used to weight estimates computed from the data files. These weights contain all adjustments for the probabilities of selection, nonresponse, and undercoverage as described in chapter 7 of this manual. The restricted-use files also contain a base weight (UPW), which is described further in chapter 7.

The 80 replicate weights, FEWT1 to FEWT80 (ECP) and FPWT1 to FPWT80 (PFI), are replicate weights that can be used by various statistical software packages, such as SAS, SUDAAN, Stata, and AM, to produce estimates of the sampling errors of the estimates. More details on how the replicate weights were created and how they can be used are given in chapter 7.

## **10.10 Imputation Flag Variables**

Item nonresponse occurred when some but not all the responses were missing from a case. To facilitate analyses of the NHES:2019 data, the missing data were imputed, that is, obtained from a donor case using statistical procedures. For each variable with imputed data on the NHES public-use and restricted-use data files, an imputation flag variable was created; this flag can be used to identify the variables with imputed values. Chapter 6 discusses the meaning of values assigned to the imputation flags.

The naming convention for the imputation flag variables is to add “F\_” to the beginning of the name of each variable. For example, the imputation flag for CSEX is F\_CSEX. The imputation flags appear on the file in the same order as the variables to which they refer.

## **10.11 Numeric and Character Variables**

All the variables in the NHES:2019 public-use data files have numeric formats except for BASMID.

The NHES:2019 restricted-use data files also include character variables for write-in responses for items including; homeschooled students' subject areas, main reason for choice of early childhood care arrangement, the language spoken in the home, each family member's relationship to the sampled child, and the sampled child's country or territory of birth. All "other, specify" write-in string variables are also character variables. Finally, the variables RCVDATE, RSTATE, SID, S19LOCL, ZCTA, CENBLGRP, CBSA, CBSA\_NAME, NECTA, NECTA\_NAME, UN\_LEAID, UN\_LEANAME, EL\_LEAID, EL\_LEANAME, SC\_LEAID, SC\_LEANAME also are character variables, and are included only on the restricted- use data file.

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## **Appendix A. Questionnaires**

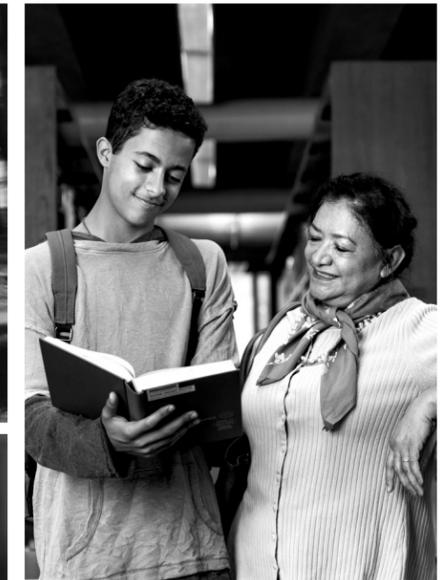
The following appendix includes the paper NHES:2019 screener questionnaire, the Early Childhood Program Participation questionnaire (NHES-ECPP), and the Parent Family Involvement questionnaire (NHES-PFI) in English.

**A.1 NHES:2019 Screener Questionnaire**

UNITED STATES DEPARTMENT OF COMMERCE  
Economics and Statistics Administration  
U.S. Census Bureau



# National Household Education Survey



Informational

The National Center for Education Statistics (NCES), within the U.S. Department of Education, is authorized to conduct the National Household Education Survey (NHES) by the Education Sciences Reform Act of 2002 (ESRA 2002, 20 U.S.C. §9543). The U.S. Census Bureau is administering this voluntary survey on behalf of NCES. There are no penalties should you choose not to participate in this study. All of the information you provide may be used only for statistical purposes and may not be disclosed, or used, in identifiable form for any other purpose except as required by law (20 U.S.C. §9573 and 6 U.S.C. §151). According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this voluntary survey is 1850-0768. The time required to complete this survey is estimated to average 3 minutes per response, including the time to review instructions, gather the data needed, and complete and review the survey. If you have any comments concerning the accuracy of the time estimate, suggestions for improving this survey, or any comments or concerns regarding the status of your individual submission of this survey, please e-mail: [nhes@census.gov](mailto:nhes@census.gov) or write directly to: Sarah Grady, National Center for Education Statistics (NCES), PCP, 550 12th St., SW, 4th floor, Washington, DC 20202.

**NHES-SCRN**  
(09/18/2018)



# National Household Education Survey

Conducted for:  
**U.S. Department of Education**  
 National Center for Education Statistics

## Start Here

The Department of Education is studying households with children or youth age 20 or younger. Each household is different, and we need your response so we can send you a survey that is right for your household.

- ▶ Return this form even if there are no children or youth in this household after marking the correct box in item 1 below.
- ▶ This survey should be filled out by an adult household member living at this address.
- ▶ Please use a blue or black pen if available.

### 1. Are there any children or youth age 20 or younger living in this household?

Include small children, foster children, babies, and those living in college housing (if they have no other permanent home).

- Yes
- No → **Please stop here and RETURN this survey to us in the enclosed envelope. It is important that we receive a response from every household selected for this study. Thank you for your time.**

### 2. How many children or youth age 20 or younger live in this household?

number age 20 or younger

- ▶ Continue answering questions 3 through 7 for each child or youth living in this household.

▶ Start with the youngest child or youth who is age 20 or younger.

### 3. What is his or her first name, initials, or nickname?

First names will be used only to ask you questions about the education of a specific child.

#### Child / Youth 1

First name/initials/nickname

### 4. What is this child/youth's month and year of birth?

/

month year of birth

### 5. What is this child/youth's sex?

- Male  
 Female

### 6. Is this child/youth currently in . . . . .

Mark [X] ONE only.

- Homeschool instead of attending a public or private school for some or all classes,
- Public or private school, or preschool,
- College, university or vocational school, or
- Not in school?

↳ GO TO child/youth 2

### 7. What is this child/youth's current grade or equivalent?

- Preschool  
 Kindergarten

write grade 1 through 12

- College, university or vocational school  
 None of these

#### Child / Youth 2

First name/initials/nickname

/

month year of birth

- Male  
 Female

- Homeschool instead of attending a public or private school for some or all classes,
- Public or private school, or preschool,
- College, university or vocational school, or
- Not in school?

↳ GO TO child/youth 3

- Preschool  
 Kindergarten

write grade 1 through 12

- College, university or vocational school  
 None of these

#### Child / Youth 3

First name/initials/nickname

/

month year of birth

- Male  
 Female

- Homeschool instead of attending a public or private school for some or all classes,
- Public or private school, or preschool,
- College, university or vocational school, or
- Not in school?

↳ GO TO child/youth 4

- Preschool  
 Kindergarten

write grade 1 through 12

- College, university or vocational school  
 None of these

#### Child / Youth 4

First name/initials/nickname

/

month year of birth

- Male  
 Female

- Homeschool instead of attending a public or private school for some or all classes,
- Public or private school, or preschool,
- College, university or vocational school, or
- Not in school?

↳ GO TO child/youth 5

- Preschool  
 Kindergarten

write grade 1 through 12

- College, university or vocational school  
 None of these

#### Child / Youth 5

First name/initials/nickname

/

month year of birth

- Male  
 Female

- Homeschool instead of attending a public or private school for some or all classes,
- Public or private school, or preschool,
- College, university or vocational school, or
- Not in school?

↳ Return Survey.

- Preschool  
 Kindergarten

write grade 1 through 12

- College, university or vocational school  
 None of these

▶ Please verify you have listed the 5 youngest children or youth living in this household in columns 1 through 5 above.

▶ Thank you. Please return this form in the postage-paid envelope provided or mail it to:

**U.S. Census Bureau**  
**ATTN: DCB 60-A (0939)**  
**1201 E. 10th Street**  
**Jeffersonville, IN 47132-0001**

**Toll-free number for questions: 1-888-840-8353**

**A.2 NHES:2019 Early Childhood Program Participation Questionnaire**

# Our Children's Future: A Survey of Young Children's Care and Education

Part of the 2019 National Household Education Survey



Thank you for helping us with this survey. Based on the information we received from your household in your last survey, we're asking you to complete this final step.



The National Center for Education Statistics (NCES), within the U.S. Department of Education, is authorized to conduct the National Household Education Survey (NHES) by the Education Sciences Reform Act of 2002 (ESRA 2002, 20 U.S.C. §9543). The U.S. Census Bureau is administering this voluntary survey on behalf of NCES. There are no penalties should you choose not to participate in this study. All of the information you provide may be used only for statistical purposes and may not be disclosed, or used, in identifiable form for any other purpose except as required by law (20 U.S.C. §9573 and 6 U.S.C. §151). According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this voluntary survey is 1850-0768. The time required to complete this survey is estimated to average 20 minutes per response, including the time to review instructions, gather the data needed, and complete and review the survey. If you have any comments concerning the accuracy of the time estimate, suggestions for improving this survey, or any comments or concerns regarding the status of your individual submission of this survey, please e-mail: [nhes@census.gov](mailto:nhes@census.gov) or write directly to: Sarah Grady, National Center for Education Statistics (NCES), PCP, 550 12th St., SW, 4th floor, Washington, DC 20202.

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**NHES-ECPP**  
(12/03/2018)

## Commonly Asked Questions

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**Q: How did you get my address?**

A: Your address was randomly selected from among all of the home addresses in the nation. It was selected using scientific sampling methods to represent other households in the United States.

**Q: How did you get my child's name and age?**

A: When you returned the initial National Household Education Survey (NHES) to us, we randomly chose one child to ask additional questions about. We are interested in understanding your child's experiences with care and early education.

**Q: Why should I take part in this study? Do I have to do this?**

A: You represent thousands of other households like yours, and you cannot be replaced. Your answers and opinions are very important to the success of this study. You may choose not to answer any or all questions in this survey. In order for the survey to be representative, it is important that you complete and return this questionnaire. Those who do not return the survey will not be represented in key statistics used by policymakers and researchers.

**Q: How will the information I provide be used? Will my privacy be protected?**

A: Your responses will be combined with those of others to produce statistical summaries and reports. Your individual data will not be reported. All of the information you provide may be used only for statistical purposes and may not be disclosed, or used, in identifiable form for any other purpose except as required by law (20 U.S.C. §9573 and 6 U.S.C. §151).

**Q: I have more than one child in my household. Will I receive additional surveys for the other children in my household?**

A: No, each household will receive a survey for only one child, even if there are multiple children living in the household. In households with multiple children, one child was randomly selected to be included in the study.

**Q: How will my response help the Department of Education?**

A: The Department of Education wants to understand the care and early education of children. This survey is the only way that the Department of Education can learn about the types of care and early learning activities children receive. Your responses will be combined with those from other households to inform educators, policymakers, schools, and universities about changes in the condition of education in the United States. Reports from past surveys can be found at [www.nces.ed.gov/nhes](http://www.nces.ed.gov/nhes).

**Q: Who is sponsoring the study?**

A: The National Center for Education Statistics (NCES), within the U.S. Department of Education, is authorized to conduct the National Household Education Survey (NHES) by the Education Sciences Reform Act of 2002 (ESRA 2002, 20 U.S.C. §9543). The U.S. Census Bureau is administering this voluntary survey on behalf of NCES. This study has been approved by the Office of Management and Budget (OMB), the office that reviews all federally sponsored surveys.



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## Instructions

- ◆ In response to the survey you answered earlier, we recorded that the child listed below has not yet started kindergarten. If this child is attending public or private school or is homeschooled for kindergarten through 12th grade or equivalent, please call us toll-free at 1-888-840-8353 to let us know.
- ◆ These questions should be filled in by a parent or guardian who knows about:

Please answer all the survey questions thinking about this child.

- ◆ To answer a question, simply mark  the box that best represents your answer or enter the numeral(s).
- ◆ Please use a black or blue pen, if available, to complete this survey.
- ◆ There are arrows and instructions to GO TO a question number beside some response options. These will help you move through the survey to questions that are appropriate for you.

The diagram shows a rectangular box containing two response options: "Yes" and "No". Each option has a small square checkbox to its left. An arrow points from the "No" checkbox to a rounded rectangular input field. A larger arrow points from the "Yes" checkbox down and then left, indicating a "GO TO" instruction.

- ◆ Please return the completed survey using the postage-paid envelope provided.



## Childhood Care and Programs

▶ Thank you for your help with the previous survey your household completed.

▶ Answer all the survey questions thinking about the child listed below:

### Care Your Child Receives from Relatives

 These questions ask about different types of child care this child may now receive on a regular basis from a relative other than his/her parents or guardians.

1. Is this child now receiving care from a relative other than a parent or guardian on a regular basis, for example, from grandparents, brothers or sisters, or any other relatives? RCNOW

Yes

No → GO TO question 20

2. Are any of these care arrangements regularly scheduled at least once a week? RCWEEK

Yes

No → GO TO question 20

3. These next questions are about the care that this child receives from the relative who provides the most care.

How is that relative related to this child?

Mark  ONE only. RCTYPE

Grandmother/Grandfather

Aunt/Uncle

Brother/Sister

Another relative

4. How old is the relative who provides the most care to this child?

age

RCAGE

5. Is this care provided in your home or another home?

Own home → GO TO question 7

Other home RCPLACE

Both

6. About how long does it take to go from your home to this relative's home?

Less than 10 minutes RCTIME

About 10 to 20 minutes

About 20 to 30 minutes

About 30 minutes to 1 hour

More than 1 hour

7. About how many days each week does this child receive care from this relative?

days each week RCDAYS

8. About how many hours each week does this child receive care from this relative?

hours each week RCHRS

9. How well does this relative care arrangement cover the hours needed for work?

Not well RCCVRWK

Somewhat well

Well

Very well

Not applicable



10. How old was this child in years and months when this particular regular care arrangement with this relative began?

years      months  
 RCSTRTY                      RCSTRTM

11. What language does this relative speak most when caring for this child?

English                      RCSPEAK  
 Spanish  
 English and Spanish equally  
 A language other than English or Spanish  
 English and another language equally

12. Will this relative care for this child when he or she is...

Mark  one box for EACH item below.

	Yes ▼	No ▼
a. sick but does not have a fever? .....	<input type="checkbox"/>	<input type="checkbox"/>
RCSKNFV		
b. sick and has a fever? .....	<input type="checkbox"/>	<input type="checkbox"/>
RCSKFV		

13. How many other children does this relative care for while caring for this child?

None                      RCOTCH  
 1-2  
 3-5  
 6 or more

14. Is there any charge or fee for the care this child receives from this relative, paid either by you or some other person or agency?

RCFEE

Yes  
 No → **GO TO question 18**

15. Do any of the following people, programs, or organizations help pay for this relative to care for this child?

Mark  one box for EACH item below.

a. A relative of this child outside your household who provides money specifically for that care, not including general child support .....	Yes ▼	No ▼
	<input type="checkbox"/>	<input type="checkbox"/>
b. Your state welfare or family assistance program (this may be called Temporary Assistance for Needy Families [TANF] or something else) .....		RCREL
	<input type="checkbox"/>	<input type="checkbox"/>
c. Another social service, welfare, child care, or other kind of agency .....		RCTANF
	<input type="checkbox"/>	<input type="checkbox"/>
d. An employer, not including a tax-free spending account for child care .....		RCSSAC
	<input type="checkbox"/>	<input type="checkbox"/>
		RCEMPL
e. Someone else .....	<input type="checkbox"/>	<input type="checkbox"/>
		RCOTHER





► **Care Your Child Receives from Non-relatives**

*The next questions ask about any care this child receives from someone not related to him or her, either in your home or someone else's home. This includes home child care providers or neighbors, but not day care centers or preschools.*

**20. Is this child now receiving care in your home or another home on a regular basis from someone who is not related to him or her?**

- Yes NCNOW  
 No → **GO TO question 41**

**21. Are any of these care arrangements regularly scheduled at least once a week?**

- Yes NCWEEK  
 No → **GO TO question 41**

**22. These next questions are about the care that this child receives from someone who is not related to him or her who provides the most care.**

**Does this person who cares for this child live in your household?**

- Yes NCINHH  
 No

**23. Is this care provided in your own home or another home?**

- Own home → **GO TO question 25**  
 Other home NCPLACE  
 Both

**24. About how long does it take to go from your home to this care provider's home?**

- Less than 10 minutes NCTIME  
 About 10 to 20 minutes  
 About 20 to 30 minutes  
 About 30 minutes to 1 hour  
 More than 1 hour

**25. About how many days each week does this child receive care from this person?**

- days each week NCDAYS

**26. About how many hours each week does this child receive care from this person?**

- hours each week NCHRS

**27. How well does this non-relative care arrangement cover the hours needed for work?**

- Not well NCCVRWK  
 Somewhat well  
 Well  
 Very well  
 Not applicable

**28. How old was this child in years and months when this particular regular care arrangement with this person began?**

- years  months  
NCSTRTY NCSTRTM

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29. Was this care provider someone you already knew?

- Yes NCALKNE  
 No

30. Is this child's care provider age 18 or older?

- Yes NCAGE  
 No

31. What language does this care provider speak most when caring for this child?

- English NCSPEAK  
 Spanish  
 English and Spanish equally  
 A language other than English or Spanish  
 English and another language equally

32. Will this care provider care for this child when he or she is...

Mark  one box for EACH item below.

- |  | Yes                      | No                       |
|--|--------------------------|--------------------------|
| a. sick but does not have a fever? ..... | <input type="checkbox"/> | <input type="checkbox"/> |
| NCSKNFV                                  |                          |                          |
| b. sick and has a fever? .....           | <input type="checkbox"/> | <input type="checkbox"/> |
| NCSKFV                                   |                          |                          |

33. How many other children does this provider care for while caring for this child?

- None NCOTCH  
 1-2  
 3-5  
 6 or more

34. Would you recommend this care provider to another parent?

- Yes NCRCMDPT  
 No

35. Is there any charge or fee for the care this child receives from this care provider, paid either by you or some other person or agency?

- Yes NCFEE  
 No → GO TO question 39

36. Do any of the following people, programs, or organizations help pay for this person to care for this child?

Mark  one box for EACH item below.

- |  |                          |                          |
|--|--------------------------|--------------------------|
| a. A relative of this child outside your household who provides money specifically for that care, not including general child support .....    | Yes                      | No                       |
|  | ▼                        | ▼                        |
|  | <input type="checkbox"/> | <input type="checkbox"/> |
| NCREL  |                          |                          |
| b. Your state welfare or family assistance program (this may be called Temporary Assistance for Needy Families [TANF] or something else) ..... | <input type="checkbox"/> | <input type="checkbox"/> |
| NTANF  |                          |                          |
| c. Another social service, welfare, child care, or other kind of agency. ....  | <input type="checkbox"/> | <input type="checkbox"/> |
| NCSSAC   |                          |                          |
| d. An employer, not including a tax-free spending account for child care .....   | <input type="checkbox"/> | <input type="checkbox"/> |
| NCEMPL   |                          |                          |
| e. Someone else. ....  | <input type="checkbox"/> | <input type="checkbox"/> |
| NCOTHER  |                          |                          |





► **Day Care Centers and Preschool Programs Your Child Attends**



*The next questions ask about any day care centers and early childhood programs that this child attends. This does not include care provided in a private home.*

**41. Is this child now attending a day care center, preschool, or prekindergarten not in a private home?**

Yes CPNNOWX

No → **GO TO question 61**

**42. Does this child go to a day care center, preschool, or prekindergarten, at least once each week?**

Yes → **GO TO question 43**

No → **GO TO question 61**

CPWEEKX

**The next questions ask about the program where this child spends the most time.**

**43. Where is this program located?**

Mark  ONE only. CPPLACEX

In a church, synagogue, or other place of worship

In a public elementary or secondary school

In a private elementary or secondary school

At a college or university

At a community center

At a public library

In its own building, office space, or storefront

Some other place – Specify: ↴

CPPLACOSX

**44. Does this program teach religious content to the children?**

Yes CPSPRLG

No

**45. Is this program located at your workplace or this child's other parent's workplace?**

Yes CPWORK

No



46. Is this program a Head Start or Early Head Start program?



Head Start and Early Head Start are federally sponsored preschool programs primarily for children from low-income families.

- Yes CPHEADST  
 No  
 Don't know

47. How many days each week does this child go to this program?

days each week CPDAYS

48. How many hours each week does this child go to this program?

hours each week CPHRS

49. How well does this program cover the hours needed for work?

- Not well CPCVRWK  
 Somewhat well  
 Well  
 Very well  
 Not applicable

50. How old was this child in years and months when he or she started going to this particular program?

years  months

CPSTRTY CPSTRM

51. What language does this child's main care provider or teacher at this program speak most when caring for this child?

- English CPSPEAK  
 Spanish  
 English and Spanish equally  
 A language other than English or Spanish  
 English and another language equally

52. About how long does it take to go from your home to this program?

- Less than 10 minutes CPTIME  
 About 10 to 20 minutes  
 About 20 to 30 minutes  
 About 30 minutes to 1 hour  
 More than 1 hour

53. Would you recommend this program to another parent?

- Yes CPRCMDPT  
 No



**54. Has this program provided any of the following services to this child?**

Mark  one box for EACH item below.

	Yes ▼	No ▼	Don't know ▼
a. Hearing, speech, or vision testing . . . . . CPTEST	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Physical examinations . . . . . CPPHYSE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Dental examinations . . . . . CPDENTA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Formal testing for developmental or learning problems . . . . . CPDISAB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Medication administration . . . . . CPMEDAM	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Sick child care when this child is sick but does not have a fever . . . . . CPSKNFV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Sick child care when this child is sick and has a fever . . . . . CPSKFV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**55. Is there any charge or fee for this program, paid either by you or some other person or agency?**

Yes → **GO TO question 56**

No → **GO TO question 59**

CPFEE

**56. Do any of the following people, programs, or organizations help pay for this child to go to this program?**

Mark  one box for EACH item below.

	Yes ▼	No ▼
a. A relative of this child outside your household who provides money <u>specifically</u> for that care, not including general child support . . . . . CPREL	<input type="checkbox"/>	<input type="checkbox"/>
b. Your state welfare or family assistance program (this may be called Temporary Assistance for Needy Families [TANF] or something else) . . . . . CPTANF	<input type="checkbox"/>	<input type="checkbox"/>
c. Another social service, welfare, child care, or other kind of agency . . . . . CPSSAC	<input type="checkbox"/>	<input type="checkbox"/>
d. An employer, not including a tax-free spending account for child care . . . . . CPEMPL	<input type="checkbox"/>	<input type="checkbox"/>
e. Someone else . . . . . CPOTHER	<input type="checkbox"/>	<input type="checkbox"/>

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57. How much does your household pay for this child to go to this program, not counting any money that you may receive from others to help pay for care?

Write '0' if your household does not pay for this program.

\$    ,    .00

CPCOST

Is that amount per...

- Hour CPUNIT
- Day
- Week
- Every 2 weeks
- Month
- Year
- Other — Specify:  CPUNITOS

58. How many children from your household is this amount for, including this child?

- This child only CPCSTHNX
- 2 children
- 3 children
- 4 children
- 5 or more children

59. Does this child have any other care arrangements at a day care center or preschool on a regular basis?

- Yes CPOTHC
- No → GO TO question 61

60. How many total hours each week does this child spend at those other day care centers or preschools?

CPTLHR hours each week

Informational Copy



# Finding and Choosing Care for Your Child

61. Has this child **ever** attended a Head Start or Early Head Start program?



*Head Start and Early Head Start are federally sponsored preschool programs primarily for children from low-income families.*

- Yes PCEVRHDX
- No
- Don't know

62. What is the **main** reason your household wanted a care arrangement for this child in the past year?

Mark  ONE only. MAINRESN

- Did not have care in the past year
- To provide care when a parent or guardian was at work or school
- To prepare this child for school
- To provide cultural or language learning
- To make time for running errands or free time
- Some other reason

63. Do you feel there are good choices for child care or early childhood programs where you live?

- Yes PPCHOIC
- No
- Don't know

64. Have you ever searched for care for this child?

- Yes → GO TO question 65
- No → GO TO question 70

CRSRCH

65. How much difficulty did you have finding the type of child care or early childhood program you wanted for this child?

- No difficulty → GO TO question 67
- A little difficulty PPDIFCLT
- Some difficulty
- A lot of difficulty
- Did not find the type of child care program I wanted

66. What was the **main** reason for the difficulty finding child care or early childhood programs?

Mark  ONE only.

- Cost WHYDIFCLT
- Location
- Quality
- Lack of open slots for new children
- Needed a program for children with special needs
- Other – Specify: ↴ WHYDIFCLTOS

67. Did you have a care arrangement for this child in the past year?

- Yes CCPY
- No → GO TO question 70

68. What was the main reason your household chose the care arrangement(s) or program that you chose for this child where this child spends the most time?

Please write your response in the box below.

CCREASN1-CCREASN5

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**69. How important was each of these reasons when you chose the child care arrangement or program where this child spends the most time?**

**a. The location of the arrangement**

- Not at all important DCLOA
- A little important
- Somewhat important
- Very important

**b. The cost of the arrangement**

- Not at all important DCOST
- A little important
- Somewhat important
- Very important

**c. The reliability of the arrangement**

- Not at all important DRELY
- A little important
- Somewhat important
- Very important

**d. The learning activities at the arrangement**

- Not at all important DLERN
- A little important
- Somewhat important
- Very important

**e. The child spending time with other kids his or her age**

- Not at all important DCHIL
- A little important
- Somewhat important
- Very important

**f. The times during the day that this caregiver is able to provide care**

- Not at all important DHROP
- A little important
- Somewhat important
- Very important

**g. The number of other children in the child's care group**

- Not at all important DNBGRP
- A little important
- Somewhat important
- Very important

**h. Ratings on a website**

- Not at all important DRTWEB
- A little important
- Somewhat important
- Very important
- Website ratings were not available

**i. Recommendations from friends and family**

- Not at all important DRECFAM
- A little important
- Somewhat important
- Very important
- Family and friends did not provide recommendations

**j. Qualifications of the staff**

- Not at all important DQUAL
- A little important
- Somewhat important
- Very important

**k. Whether or not the program teaches religious content**

- Not at all important DRELOR
- A little important
- Somewhat important
- Very important



## Family Activities

The next questions ask about this child's activities with family members in the past week or month.

70. About how many books does this child have of his or her own, including those shared with brothers or sisters?

number of books HABOOKS

71. How many times have you or someone in your family read to this child in the past week?

FOREADTOX

 Not at all

→ GO TO question 73

times FOREADTOX

72. About how many minutes on each of those times did you or someone in your family read to this child?

minutes FORDDAYX

73. In the past week, how many times has anyone in your family done the following things with this child?

- a. Told this child a story? (Do not include reading to him or her.)

Not at all FOSTORYX

1 or 2 times

3 or more times

- b. Taught this child letters, words, or numbers

Not at all FOWORDSX

1 or 2 times

3 or more times

- c. Sang songs with this child

Not at all FOSANG

1 or 2 times

3 or more times

- d. Worked on arts and crafts with this child

Not at all FOCRAFTSX

1 or 2 times

3 or more times

74. In the past week, how many days has your family eaten the evening meal together?

Write '0' if none.

days FODINNERX

75. In the past month, have you or someone in your family visited a library with this child?

Yes FOLIBRARY

No

76. In the past month, have you or someone in your family visited a bookstore with this child?

Yes FOBOOKST

No



## Your Child's Early Learning

These next questions ask about things that different children do at different ages. These things may or may not be true for this child and that's okay.

77. Is this child under 2 years old; or is this child 2 years old or older?

Under 2 years → **GO TO question 84**

2 years or older **DPIAGE**

78. Can this child recognize the letters of the alphabet?

No, none of them **DPLETTER**

Yes, some of them

Yes, most of them

Yes, all of them

79. Can this child write his or her first name, even if some of the letters are backwards?

Yes **DPNAME**

No

80. Can this child recognize the beginning sound of a word? For example, can this child tell you that the word "ball" starts with the "buh" sound?

Yes **DPLTRSND**

No

81. How often can this child explain things he or she has seen or done so that you get a very good idea of what happened?

Never **DPEXPLN**

Sometimes

About half the time

Usually

Always

82. How high can this child count?

This child cannot count **DPCOUNT**

Up to 5

Up to 10

Up to 20

Up to 50

Up to 100 or more

83. Can this child identify basic shapes such as a triangle, rectangle, circle, or square?

No, none of them **DPSHAPE**

Yes, some of them

Yes, most of them

Yes, all of them



# Child's Health

84. In general, how would you describe this child's health?

- Excellent HDHEALTH
- Very good
- Good
- Fair
- Poor

85. Has a health professional told you that this child has any of the following conditions?

Mark  one box for EACH item below.

- |  | Yes                      | No                       |
|--|--------------------------|--------------------------|
| a. An intellectual disability, formerly known as mental retardation . . . . .  | <input type="checkbox"/> | <input type="checkbox"/> |
| HDINTDIS   |                          |                          |
| b. A speech or language impairment . . . . .                                   | <input type="checkbox"/> | <input type="checkbox"/> |
| HDSPEECHX  |                          |                          |
| c. A serious emotional disturbance . . . . .                                   | <input type="checkbox"/> | <input type="checkbox"/> |
| HDDISTRBX  |                          |                          |
| d. Deafness or another hearing impairment . . . . .                            | <input type="checkbox"/> | <input type="checkbox"/> |
| HDDEAFIMX  |                          |                          |
| e. Blindness or another visual impairment not corrected with glasses . . . . . | <input type="checkbox"/> | <input type="checkbox"/> |
| HDBLINDX   |                          |                          |
| f. An orthopedic impairment . . . . .  | <input type="checkbox"/> | <input type="checkbox"/> |
| HDORTHOX   |                          |                          |
| g. Autism . . . . .  | <input type="checkbox"/> | <input type="checkbox"/> |
| HDAUTISMX  |                          |                          |
| h. Pervasive Developmental Disorder (PDD) . . . . .                            | <input type="checkbox"/> | <input type="checkbox"/> |
| HDPDDX   |                          |                          |
| i. Attention Deficit Disorder, ADD or ADHD . . . . .                           | <input type="checkbox"/> | <input type="checkbox"/> |
| HDADDX   |                          |                          |
| j. A specific learning disability . . . . .                                    | <input type="checkbox"/> | <input type="checkbox"/> |
| HDLEARNX   |                          |                          |
| k. A developmental delay . . . . .   | <input type="checkbox"/> | <input type="checkbox"/> |
| HDDELAYX   |                          |                          |
| l. Traumatic brain injury . . . . .  | <input type="checkbox"/> | <input type="checkbox"/> |
| HDTRBRAIN  |                          |                          |
| m. Another health impairment lasting 6 months or longer . . . . .              | <input type="checkbox"/> | <input type="checkbox"/> |
| HDOTHERX   |                          |                          |

86. (If child is under 3 years old) Has a health, education, or early intervention professional told you this child is "at risk" for a substantial developmental delay?

- Yes HDDLYRSK
- No
- Child is age 3 or older

87. Did you mark yes to any condition in question 85 or question 86?

- Yes Question not on data file
- No → **GO TO question 93**

88. Is this child receiving any services through an Individualized Family Service Plan (IFSP), Individualized Education Program (IEP), or services plan?

- Yes HDIFSPIEP
- No → **GO TO question 90**

89. Thinking about the child's IFSP, IEP or services plan, since September, how satisfied or dissatisfied have you been with the service provider's or school's communication with your family?

- Very satisfied HDCOMMUX
- Somewhat satisfied
- Somewhat dissatisfied
- Very dissatisfied
- Does not apply

90. Is this child currently enrolled in any special education classes or services?

- Yes HDSPCLEd
- No

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97. What is this child's race? You may mark one or more races.

Mark  all that apply.

- American Indian or Alaska Native  
CAMIND
- Asian  
CASIAN
- Black or African American  
CBLACK
- Native Hawaiian or other Pacific Islander  
CPACI
- White  
CWHITE

98. What is this child's sex?

- Male CSEX
- Female

99. Does this child live at this address and another address (for example, because of a joint custody arrangement)?

Do not include vacation properties.

- Yes CLIVYN
- No → **GO TO question 101**

100. If yes, does this child...

- Spend most time at this address?
- Spend most time at another address?
- Spend equal time at both addresses?  
CLIVELSWX

101. What language does this child speak most at home?

Mark  ONE only. CSPEAKX

- Child has not started to speak
- English
- Spanish
- English and Spanish equally
- A language other than English or Spanish
- English and another language equally

**GO TO question 103**

102. Is this child currently enrolled in English as a second language, bilingual education, or an English immersion program?

- Yes CENGLPRG
- No



# Household Members

**103. Including children, how many people live in this household?**

people    HHTOTALXX

**104. We are interested in learning about how the people in your household are related to this child. How many of the following people live in this household with this child?**

Example: Brother(s)   

Write '0' if none

This child's...	Number
a. Brother(s) . . . . . HHBROSX	<input type="text"/>
b. Sister(s) . . . . . HHSISSX	<input type="text"/>
c. Mother (birth, adoptive, step, or foster) . . . . . HHMOM	<input type="text"/>
d. Father (birth, adoptive, step, or foster) . . . . . HHDAD	<input type="text"/>
e. Aunt(s) . . . . . HHAUNTSX	<input type="text"/>
f. Uncle(s) . . . . . HHUNCLSX	<input type="text"/>
g. Grandmother(s) . . . . . HHGMASX	<input type="text"/>
h. Grandfather(s) . . . . . HHGPASX	<input type="text"/>
i. Cousin(s) . . . . . HHCSNSX	<input type="text"/>
j. Parent's girlfriend/ boyfriend/partner . . . . . HHPRTNRSX	<input type="text"/>
k. Other relative(s) . . . . . HHORELSX	<input type="text"/>
l. Other non-relative(s) . . . . . HHONRELSX	<input type="text"/>

**105. How are you related to this child?**

Mark  ONE only.    RELATION

- Mother (birth, adoptive, step, or foster)
- Father (birth, adoptive, step, or foster)
- Aunt
- Uncle
- Grandmother
- Grandfather
- Parent's girlfriend/boyfriend/partner
- Other relationship – Specify:

RELATIONOS

**106. Which language(s) are spoken at home by the adults in this household?**

Mark  all that apply.

- English    HHENGLISH
- Spanish    HHSPANISH
- French (including Patois, Creole, Cajun)    HHFRENCH
- Chinese    HHCHINESE
- Other languages – Specify:

HHOTHLANG

HHOTHLANGOS

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# Child's Family

## PARENT 1 LIVING IN HOUSEHOLD

**i** Answer questions 107 to 123 about yourself if you are the child's parent or guardian. If you are not the child's parent or guardian, answer questions 107 to 123 about one of this child's parents or guardians living in the household.

### 107. Is this parent or guardian the child's...

- Biological parent PIREL
- Adoptive parent
- Stepparent
- Foster parent
- Grandparent
- Other guardian

### 108. Is this parent or guardian male or female?

- Male PISEX
- Female

### 109. What is this parent or guardian's current marital status?

Mark  ONE only. PIMRSTA

- Now married → **GO TO question 111**
- Widowed
- Divorced
- Separated
- Never married

### 110. Is this parent or guardian currently living with a boyfriend/girlfriend or partner in this household?

- Yes PIBFGF
- No

### 111. What was the first language this parent or guardian learned to speak?

Mark  ONE only. PIFRLNG

- English → **GO TO question 113**
- Spanish
- English and Spanish equally
- A language other than English or Spanish
- English and another language equally

### 112. What language does this parent or guardian speak most at home now?

Mark  ONE only. PISPEAK

- English
- Spanish
- English and Spanish equally
- A language other than English or Spanish
- English and another language equally

### 113. Where was this parent or guardian born?

- One of the 50 United States or the District of Columbia → **GO TO question 115**
- One of the U.S. territories (*Puerto Rico, Guam, American Samoa, U.S. Virgin Islands, or Mariana Islands*)
- Another country P1PLCBRTH

### 114. How old was this parent or guardian when he or she first moved to the 50 United States or the District of Columbia? If younger than 1, write "0".

age P1AGEMV

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**115. Is this parent or guardian of Hispanic, Latino, or Spanish origin?** P1HISPAN

- No, not of Hispanic, Latino, or Spanish origin
- Yes, Mexican, Mexican American, Chicano
- Yes, Puerto Rican
- Yes, Cuban
- Yes, another Hispanic, Latino, or Spanish origin; or more than one Hispanic, Latino, or Spanish origin

**116. What is this parent or guardian's race? You may mark one or more races.**

- Mark  all that apply. P1AMIND
- American Indian or Alaska Native
  - Asian P1ASIAN
  - Black or African American P1BLACK
  - Native Hawaiian or other Pacific Islander P1PACI
  - White P1WHITE

**117. What is the highest grade or level of school that this parent or guardian completed?**

- Mark  ONE only. P1EDUC
- 8th grade or less
  - High school, but no diploma
  - High school diploma or equivalent (GED)
  - Vocational diploma after high school
  - Some college, but no degree
  - Associate's degree (AA, AS)
  - Bachelor's degree (BA, BS)
  - Some graduate or professional education, but no degree
  - Master's degree (MA, MS)
  - Doctorate degree (PhD, EdD)
  - Professional degree beyond bachelor's degree (MD, DDS, JD, LLB)

**118. Is this parent or guardian currently attending or enrolled in a school, college, university, or adult learning center, or receiving vocational education or job training?**

- Yes P1ENRL
- No

**119. Which of the following best describes this parent or guardian's employment status?**

Mark  ONE only. P1EMPL

- Employed for pay or income } **GO TO question 120**
- Self-employed } **GO TO question 121**
- Unemployed or out of work } **GO TO question 122**
- Full-time student } **GO TO question 122**
- Stay at home parent } **GO TO question 122**
- Retired } **GO TO question 122**
- Disabled or unable to work } **GO TO question 122**

**120. About how many hours per week does this parent or guardian usually work for pay or income, counting all jobs?**

- **GO TO question 122**
- hours P1HRSWK

**121. Has this parent or guardian been actively looking for work in the past 4 weeks?**

- Yes P1LKWRK
- No

**122. In the past 12 months, how many months (if any) has this parent or guardian worked for pay or income?**

- Write '0' if none.
- months P1MTHSWRK

**123. How old is this parent or guardian?**

- age P1AGE

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## PARENT 2 LIVING IN HOUSEHOLD

**i** Answer questions 124 to 141 about a second parent or guardian living in the household.

**124. Is there a second parent or guardian living in this household?**

Yes P2GUARD

No → **GO TO question 142**

**125. Is this parent or guardian the child's...**

Biological parent P2REL

Adoptive parent

Stepparent

Foster parent

Grandparent

Other guardian

**126. Is this parent or guardian male or female?**

Male P2SEX

Female

**127. What is this parent or guardian's current marital status?**

Mark  ONE only. P2MRSTA

Now married → **GO TO question 129**

Widowed

Divorced

Separated

Never married

**128. Is this parent or guardian currently living with a boyfriend/girlfriend or partner in this household?**

Yes P2BFGF

No

**129. What was the first language this parent or guardian learned to speak?**

Mark  ONE only. P2FRLNG

English → **GO TO question 131**

Spanish

English and Spanish equally

A language other than English or Spanish

English and another language equally

**130. What language does this parent or guardian speak most at home now?**

Mark  ONE only. P2SPEAK

English

Spanish

English and Spanish equally

A language other than English or Spanish

English and another language equally

**131. Where was this parent or guardian born?**

One of the 50 United States or the District of Columbia → **GO TO question 133**

One of the U.S. territories (Puerto Rico, Guam, American Samoa, U.S. Virgin Islands, or Mariana Islands)

Another country P2PLCBRTH

**132. How old was this parent or guardian when he or she first moved to the 50 United States or the District of Columbia?**

If younger than 1, write "0".

age P2AGEMV

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**133. Is this parent or guardian of Hispanic, Latino, or Spanish origin?** P2HISPAN

- No, not of Hispanic, Latino, or Spanish origin
- Yes, Mexican, Mexican American, Chicano
- Yes, Puerto Rican
- Yes, Cuban
- Yes, another Hispanic, Latino, or Spanish origin; or more than one Hispanic, Latino, or Spanish origin

**134. What is this parent or guardian's race? You may mark one or more races.**

Mark  all that apply.

P2AMIND

- American Indian or Alaska Native
- Asian P2ASIAN
- Black or African American P2BLACK
- Native Hawaiian or other Pacific Islander P2PACI
- White PWHITE

**135. What is the highest grade or level of school that this parent or guardian completed?**

Mark  ONE only.

P2EDUC

- 8th grade or less
- High school, but no diploma
- High school diploma or equivalent (GED)
- Vocational diploma after high school
- Some college, but no degree
- Associate's degree (AA, AS)
- Bachelor's degree (BA, BS)
- Some graduate or professional education, but no degree
- Master's degree (MA, MS)
- Doctorate degree (PhD, EdD)
- Professional degree beyond bachelor's degree (MD, DDS, JD, LLB)

**136. Is this parent or guardian currently attending or enrolled in a school, college, university, or adult learning center, or receiving vocational education or job training?**

- Yes P2ENRL
- No

**137. Which of the following best describes this parent or guardian's employment status?**

Mark  ONE only.

P2EMPL

- Employed for pay or income } GO TO question 138
- Self-employed } GO TO question 138
- Unemployed or out of work } GO TO question 138
- Full-time student } GO TO question 140
- Stay at home parent } GO TO question 140
- Retired } GO TO question 140
- Disabled or unable to work } GO TO question 140

**138. About how many hours per week does this parent or guardian usually work for pay or income, counting all jobs?**

- hours → GO TO question 140
- P2HRSWK

**139. Has this parent or guardian been actively looking for work in the past 4 weeks?**

- Yes P2LKWRK
- No



**140. In the past 12 months, how many months (if any) has this parent or guardian worked for pay or income?**

Write '0' if none.

months P2MTHSWRK

**141. How old is this parent or guardian?**

age P2AGE

## Your Household

**142. In the past 12 months, did your family ever receive benefits from any of the following programs?**

Mark  one box for EACH item below.

- |  | Yes<br>▼                 | No<br>▼                  |
|--|--------------------------|--------------------------|
| a. Your state welfare or family assistance program (this may be called Temporary Assistance for Needy Families [TANF] or something else) . . . . . | <input type="checkbox"/> | <input type="checkbox"/> |
|  | HWELFTANST               |                          |
| b. Women, Infants, and Children, or WIC . . . . .  | <input type="checkbox"/> | <input type="checkbox"/> |
|  | HWIC                     |                          |
| c. SNAP benefits, also known as Food Stamps. . . . .   | <input type="checkbox"/> | <input type="checkbox"/> |
|  | HFOODST                  |                          |
| d. Medicaid . . . . .  | <input type="checkbox"/> | <input type="checkbox"/> |
|  | HMEDICAID                |                          |
| e. Child Health Insurance Program (CHIP) . . . . .   | <input type="checkbox"/> | <input type="checkbox"/> |
|  | HCHIP                    |                          |
| f. Housing assistance through a voucher or Section 8 . . . . .   | <input type="checkbox"/> | <input type="checkbox"/> |
|  | HSECN8                   |                          |

**143. Which category best fits the total income of all persons in your household over the past 12 months?**

**Include your own income. Include money from jobs or other earnings, pensions, interest, rent, Social Security payments, and so on.**

TTLHHINC

- \$0 to \$10,000
- \$10,001 to \$20,000
- \$20,001 to \$30,000
- \$30,001 to \$40,000
- \$40,001 to \$50,000
- \$50,001 to \$60,000
- \$60,001 to \$75,000
- \$75,001 to \$100,000
- \$100,001 to \$150,000
- \$150,001 to \$200,000
- \$200,001 to \$250,000
- \$250,001 or more



**144. Is this house or apartment...**

Mark  ONE only. OWNRNTHB

- Owned or being bought by someone in this household?
- Rented by someone in this household?
- Occupied by some other arrangement?

**145. Do you have Internet access on a cell phone?**

- Yes HVINTSPHO
- No

**146. Do you have Internet access at home on a computer or tablet?**

- Yes HVINTCOM
- No

**147. How often does this child use the Internet at home for learning activities?**

- Every day CHLDNT
- A few times a week
- A few times a month
- A few times a year
- Never → **GO TO next page**

**148. Does the child use the Internet for learning activities on...**

Mark  one box for EACH item below.

- |                      | Yes<br>▼                 | No<br>▼                  |
|----------------------|--------------------------|--------------------------|
| a. Computer? .....   | <input type="checkbox"/> | <input type="checkbox"/> |
| LRNCOMP              | <input type="checkbox"/> | <input type="checkbox"/> |
| b. Tablet? .....     | <input type="checkbox"/> | <input type="checkbox"/> |
| LRNTAB               | <input type="checkbox"/> | <input type="checkbox"/> |
| c. Cell phone? ..... | <input type="checkbox"/> | <input type="checkbox"/> |
| LRNCELL              |                          |                          |

Informational Copy

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**Thank you.**

**Please return this questionnaire in the postage-paid envelope provided.**

Informational Copy

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**A.3 NHES:2019 Parent and Family Involvement Questionnaire**

# A Survey About Students' and Families' Experience with Their Schools and Homeschooling

Part of the 2019 National Household Education Survey



Thank you for helping us with this survey. Based on the information we received from your household in your last survey, we're asking you to complete this final step.



The National Center for Education Statistics (NCES), within the U.S. Department of Education, is authorized to conduct the National Household Education Survey (NHES) by the Education Sciences Reform Act of 2002 (ESRA 2002, 20 U.S.C. §9543). The U.S. Census Bureau is administering this voluntary survey on behalf of NCES. There are no penalties should you choose not to participate in this study. All of the information you provide may be used only for statistical purposes and may not be disclosed, or used, in identifiable form for any other purpose except as required by law (20 U.S.C. §9573 and 6 U.S.C. §151). According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this voluntary survey is 1850-0768. The time required to complete this survey is estimated to average 20 minutes per response, including the time to review instructions, gather the data needed, and complete and review the survey. If you have any comments concerning the accuracy of the time estimate, suggestions for improving this survey, or any comments or concerns regarding the status of your individual submission of this survey, please e-mail: [nhes@census.gov](mailto:nhes@census.gov) or write directly to: Sarah Grady, National Center for Education Statistics (NCES), PCP, 550 12th St., SW, 4th floor, Washington, DC 20202.

**NHES-PFI**  
(10/17/2018)

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## Commonly Asked Questions

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**Q: How did you get my address?**

A: Your address was randomly selected from among all of the home addresses in the nation. It was selected using scientific sampling methods to represent other households in the United States.

**Q: How did you get my child's name and grade?**

A: When you returned the initial National Household Education Survey (NHES) to us, we randomly chose one child to ask additional questions about. We are interested in understanding your child's experiences with schooling.

**Q: Why should I take part in this study? Do I have to do this?**

A: You represent thousands of other households like yours, and you cannot be replaced. Your answers and opinions are very important to the success of this study. You may choose not to answer any or all questions in this survey. In order for the survey to be representative, it is important that you complete and return this questionnaire. Those who do not return the survey will not be represented in key statistics used by policymakers and researchers.

**Q: How will the information I provide be used? Will my privacy be protected?**

A: Your responses will be combined with those of others to produce statistical summaries and reports. Your individual data will not be reported. All of the information you provide may be used only for statistical purposes and may not be disclosed, or used, in identifiable form for any other purpose except as required by law (20 U.S.C. §9573 and 6 U.S.C. §151).

**Q: I have more than one child in my household. Will I receive additional surveys for the other children in my household?**

A: No, each household will receive a survey for only one child, even if there are multiple children living in the household. In households with multiple children, one child was randomly selected to be included in the study.

**Q: How will my response help the Department of Education?**

A: The Department of Education wants to understand the condition of education in the United States. This survey is the only way that the Department of Education can learn about schooling from your perspective. Your responses will be combined with those from other households to inform educators, policymakers, schools, and universities about changes in the condition of education in the United States. Reports from past surveys can be found at [www.nces.ed.gov/nhes](http://www.nces.ed.gov/nhes).

**Q: Who is sponsoring the study?**

A: The National Center for Education Statistics (NCES), within the U.S. Department of Education, is authorized to conduct the National Household Education Survey (NHES) by the Education Sciences Reform Act of 2002 (ESRA 2002, 20 U.S.C. §9543). The U.S. Census Bureau is administering this voluntary survey on behalf of NCES. This study has been approved by the Office of Management and Budget (OMB), the office that reviews all federally sponsored surveys.



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## Instructions

- ◆ These questions should be filled in by a parent or guardian who knows about:

Please answer all the survey questions thinking about this child or youth.

- ◆ To answer a question, simply mark  the box that best represents your answer or enter the numeral(s).
- ◆ Please use a black or blue pen, if available, to complete this survey.
- ◆ There are arrows and instructions to GO TO a question number beside some response options. These will help you move through the survey to questions that are appropriate for you.

The diagram shows a rectangular box containing two radio button options: 'Yes' and 'No'. The 'No' option is selected with a black arrow pointing to it. To the right of the 'No' option, there is a callout box containing the text 'GO TO question 20'. A separate arrow points from the 'Yes' option down and then right towards the 'No' option.

- ◆ Please return the completed survey using the postage-paid envelope provided.



# Child's Schooling

- ▶ **Thank you for your help with the previous survey your household completed.**
- ▶ **Answer all the survey questions thinking about the child listed below:**

**1. What is this child's current grade, grade equivalent, or year of school?** ALLGRADEX

**If this child is not assigned a specific grade or is homeschooled, mark the grade level of the curriculum that the child receives.**

Child has not yet started kindergarten → Please STOP now and call 1-888-840-8353 so we can verify that you received the correct survey.

<input type="checkbox"/> Full-day kindergarten	<input type="checkbox"/> 3rd grade	<input type="checkbox"/> 7th grade	<input type="checkbox"/> 11th grade
<input type="checkbox"/> Partial-day kindergarten	<input type="checkbox"/> 4th grade	<input type="checkbox"/> 8th grade	<input type="checkbox"/> 12th grade
<input type="checkbox"/> 1st grade	<input type="checkbox"/> 5th grade	<input type="checkbox"/> 9th grade	
<input type="checkbox"/> 2nd grade	<input type="checkbox"/> 6th grade	<input type="checkbox"/> 10th grade	

**2. Students today take part in many different types of schools and education settings. What type of school does this child attend?**

Mark  one box for EACH item below.

	Yes ▼	No ▼
a. A public school located in a physical building, including charter school . . . . .	EDCPUB <input type="checkbox"/>	<input type="checkbox"/>
b. A private Catholic school located in a physical building . . . . .	EDCCAT <input type="checkbox"/>	<input type="checkbox"/>
c. A private, religious but <u>not</u> Catholic school located in a physical building. . . . .	EDCREL <input type="checkbox"/>	<input type="checkbox"/>
d. A private, not religious school located in a physical building . . . . .	EDCPRI <input type="checkbox"/>	<input type="checkbox"/>
e. Full-time online, virtual, or cyber school for grades kindergarten through 12 . . . . .	EDCINTK12 <input type="checkbox"/>	<input type="checkbox"/>
f. College, community college, or university that is online, virtual, or cyber. . . . .	EDCINTCOL <input type="checkbox"/>	<input type="checkbox"/>
g. College, community college, or university located in a physical building . . . . .	EDCCOL <input type="checkbox"/>	<input type="checkbox"/>
h. Student is homeschooled, including co-ops . . . . .	EDCHSFL <input type="checkbox"/>	<input type="checkbox"/>

**3. Did you mark Yes to "h. Homeschooled" from the list in question 2 above?**

Yes → GO TO question 4      Question not on the data file

No → GO TO question 30

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## Child's Homeschooling

4. Some parents decide to educate their children at home rather than send them to a public or private school located in a physical building.

Is this child being schooled at home instead of at school for at least some classes or subjects?

- Yes HOMESCHLX  
 No → **GO TO question 30**

5. Which of the following statements best describes your homeschooling arrangement for this child? HMSCHARR

- This child is homeschooled for all classes or subject areas, which may include co-ops, virtual/cyber/online courses, and home instruction provided by a private tutor or teacher
- This child is homeschooled for some classes or subject areas and is also enrolled in a public or private school
- This child is not homeschooled. This child is enrolled in a public or private school for all classes or subject areas → **GO TO question 30**

6. Is any of this child's instruction provided by a local homeschooling group or co-op?

- Yes HSCOOP  
 No

7. Who is the person that mainly provides this child's home instruction?

- Mother HSWHOX  
 Father  
 Grandparent  
 Brother/sister  
 Teacher of online, virtual, or cyber school  
 Another person - Who is that? → HSWHOOSX

8. Is any of this child's home instruction provided by a private tutor or teacher? HSTUTOR

- Yes  
 No

9. Is this child enrolled in any online, virtual, or cyber courses? HSINTNET

Do not include courses that use the Internet only for selected assignments.

- Yes, all the child's courses are online, virtual, or cyber
- Yes, about half or more than half of the child's courses are online, virtual, or cyber
- Yes, less than half of the child's courses are online, virtual, or cyber
- No, none of this child's courses are online, virtual, or cyber → **GO TO question 16**



**10. There are many different reasons that homeschooling parents may choose online, virtual, or cyber courses for their children. Is this child enrolled in online, virtual, or cyber courses because...**

Mark  one box for EACH item below.

- |   |        |                          |                          |
|---|--------|--------------------------|--------------------------|
| a. This child needed an advanced course(s) (e.g., Advanced Placement or college courses)?         | ONLNAP | Yes<br>▼                 | No<br>▼                  |
|   |        | <input type="checkbox"/> | <input type="checkbox"/> |
| b. This child needed a specialized course(s) (e.g., foreign language)?                            | ONLNCS |                          |                          |
|   |        | <input type="checkbox"/> | <input type="checkbox"/> |
| c. This child needed extra help in a course or subject?   | ONLNEH |                          |                          |
|   |        | <input type="checkbox"/> | <input type="checkbox"/> |
| d. This child's learning style is well suited for online/virtual/cyber learning?                  | ONLNLS |                          |                          |
|   |        | <input type="checkbox"/> | <input type="checkbox"/> |
| e. You prefer online, virtual, or cyber courses for this child?                                   | ONLNPR |                          |                          |
|   |        | <input type="checkbox"/> | <input type="checkbox"/> |
| f. We began homeschooling so that we could enroll this child in online, virtual, or cyber school. | ONLNHS |                          |                          |
|   |        | <input type="checkbox"/> | <input type="checkbox"/> |
| g. Another reason - Specify:  | ONLNTH |                          |                          |
|   |        | <input type="checkbox"/> | <input type="checkbox"/> |

ONLNTHOS

**11. Of the reasons that this child is enrolled in online, virtual, or cyber courses, which one would you say is the most important to you?**

Write the letter from question 10 for the most important reason your child is enrolled in online, virtual, or cyber courses.

letter from question 10

HSIMPONLI

**12. Do the following types of schools or teachers provide the instruction for this child's online, virtual, or cyber courses?**

Mark  one box for EACH item below.

- |   |          |                          |                          |
|---|----------|--------------------------|--------------------------|
|   |          | Yes<br>▼                 | No<br>▼                  |
| a. This child's public school or school district                                | HSINTPUB | <input type="checkbox"/> | <input type="checkbox"/> |
| b. This child's private school  | HSINTPRI | <input type="checkbox"/> | <input type="checkbox"/> |
| c. A college, community college, or university                                  | HSINTCOL | <input type="checkbox"/> | <input type="checkbox"/> |
| d. An online academy or virtual school or cyber school                          | HSINTVRT | <input type="checkbox"/> | <input type="checkbox"/> |
| e. A company that provides courses that I can purchase or access for this child | HSINTCMP | <input type="checkbox"/> | <input type="checkbox"/> |
| f. Another K-12 public or private school  | HSINTK12 | <input type="checkbox"/> | <input type="checkbox"/> |
| g. An independent instructor not affiliated with a school                       | HSINTIND | <input type="checkbox"/> | <input type="checkbox"/> |
| h. Someplace else - Specify:  | HSINTOH  | <input type="checkbox"/> | <input type="checkbox"/> |

HSINTOHOS

**13. How many online, virtual, or cyber courses does this child take?**

number

HSINTNUM

**14. What is the total amount of tuition and fees for all online, virtual, or cyber courses that this child takes?**

Write '0' if not applicable.

HSINTFEE



15. In the last week that this child was homeschooled, about how many hours did this child spend in online, virtual, or cyber classes?

HSINTHRS

- Fewer than 10 hours
- 10-24 hours
- More than 24 hours

16. Which of the following statements best describes the teaching style used to homeschool this child?

Mark  ONE only. HSSTYL

- We strictly follow a formal curriculum
- We mostly follow a formal curriculum, but also use informal learning (i.e., child-led learning, "teaching moments")
- We mostly use informal learning, but sometimes use a formal curriculum
- We always use informal learning, and never follow a formal curriculum

17. Since September, has this child participated in activities with other children outside of your family who are homeschooled?

- Yes HSKACTIV
- No

18. In this question, we are interested in the online, virtual, or cyber resources that are used in your home when a parent is providing instruction (for example, streaming instructional videos, downloaded course materials).

Since September, have you used materials from...

Mark  one box for EACH item below.

- |  | Yes<br>▼                 | No<br>▼                  |
|--|--------------------------|--------------------------|
| a. A public library? . . . . .   | <input type="checkbox"/> | <input type="checkbox"/> |
| HSINTLIB   |                          |                          |
| b. A catalog, publisher, store, private school, or individual that specializes in providing educational materials to homeschooling families? . . . . . | <input type="checkbox"/> | <input type="checkbox"/> |
| HSINTCAT   |                          |                          |
| c. (If yes) Is the catalog, publisher, private school, or individual affiliated with a particular religion or religious organization? . . . . .        | <input type="checkbox"/> | <input type="checkbox"/> |
| HSINTREL   |                          |                          |
| d. Your local public school or school district? . . . . .  | <input type="checkbox"/> | <input type="checkbox"/> |
| HSINTSCH   |                          |                          |
| e. Free websites (such as YouTube or Wikipedia)? . . . . .   | <input type="checkbox"/> | <input type="checkbox"/> |
| HSINTFRWB  |                          |                          |
| f. Organized online, virtual, or cyber educational resources (such as Khan Academy or edX)? . . . . .  | <input type="checkbox"/> | <input type="checkbox"/> |
| HSINTWEB   |                          |                          |
| g. Other source - Specify: ↴ . . . . .   | <input type="checkbox"/> | <input type="checkbox"/> |
| HSINTOTH   |                          |                          |

HSINTOTHOS

Informational Copy



**19. In this question, we are interested in the physical resources that you use. Where do you get the physical curriculum and materials you use to homeschool this child (for example, worksheets, textbooks, fiction/nonfiction books, DVDs, or videos)?**

**Since September, have you used materials from...**

Mark  one box for EACH item below.

- |  | Yes<br>▼                 | No<br>▼                  |
|--|--------------------------|--------------------------|
| a. A public library? . . . . .<br>HSCLIBRX   | <input type="checkbox"/> | <input type="checkbox"/> |
| b. A catalog, publisher, store, private school, or individual that specializes in providing educational materials to homeschooling families? . . . . .<br>HSCHPUBX | <input type="checkbox"/> | <input type="checkbox"/> |
| c. (If yes) Is the catalog, publisher, private school, or individual affiliated with a particular religion or religious organization? . . . . .<br>HSCSRELX        | <input type="checkbox"/> | <input type="checkbox"/> |
| d. Your local public school or school district? . . . . .<br>HSCPUBLX  | <input type="checkbox"/> | <input type="checkbox"/> |
| e. A homeschooling convention? . . . . .<br>HSCCNVX  | <input type="checkbox"/> | <input type="checkbox"/> |
| f. A used curriculum swap or exchange event? . . . . .<br>HSCVETX  | <input type="checkbox"/> | <input type="checkbox"/> |
| g. Other homeschool families? . . . . .<br>HSCFMLY   | <input type="checkbox"/> | <input type="checkbox"/> |
| h. Other source - Specify: <input type="checkbox"/> . . . . .<br>HSCOTH  | <input type="checkbox"/> | <input type="checkbox"/> |

HSCOTHOS

**20. In the past year, have you or another family member taken any courses, either online or in-person, to help you prepare this child's home instruction?** HSCOURS

- Yes, both online and in-person
- Yes, online only
- Yes, in-person only
- No, none of them

**21. Thinking about typical grade levels, for which grades was this child schooled at home for at least some classes or subjects?**

**Include the current year.**

Mark  all that apply.

- Kindergarten (Including transitional K and Pre-first grade) HOMEKX
- 1st grade HOME1
- 2nd grade HOME2
- 3rd grade HOME3
- 4th grade HOME4
- 5th grade HOME5
- 6th grade HOME6
- 7th grade HOME7
- 8th grade HOME8
- 9th grade - freshman HOME9
- 10th grade - sophomore HOME10
- 11th grade - junior HOME11
- 12th grade - senior HOME12

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**22. There are many different reasons that parents choose to homeschool their children. Did your family choose to homeschool this child because:**

Mark  one box for EACH item below.

- |  | Yes<br>▼                 | No<br>▼                  |
|--|--------------------------|--------------------------|
| a. You are concerned about the school environment, such as safety, drugs, or negative peer pressure? . . . . . | <input type="checkbox"/> | <input type="checkbox"/> |
| HSSAFETYX  |                          |                          |
| b. You are dissatisfied with the academic instruction at other schools? . . . . .                              | <input type="checkbox"/> | <input type="checkbox"/> |
| HSDISSATX  |                          |                          |
| c. You prefer to teach this child at home so that you can provide religious instruction? . . . . .             | <input type="checkbox"/> | <input type="checkbox"/> |
| HSRELGON   |                          |                          |
| d. You prefer to teach this child at home so that you can provide moral instruction? . . . . .                 | <input type="checkbox"/> | <input type="checkbox"/> |
| HSMORAL  |                          |                          |
| e. This child has a physical or mental health problem that has lasted six months or more? . . . . .            | <input type="checkbox"/> | <input type="checkbox"/> |
| HSDISABLX  |                          |                          |
| f. This child has a temporary illness that prevents him or her from going to school? . . . . .                 | <input type="checkbox"/> | <input type="checkbox"/> |
| HSILLX   |                          |                          |
| g. This child has other special needs that you feel the school can't or won't meet? . . . . .                  | <input type="checkbox"/> | <input type="checkbox"/> |
| HSSPCLNDX  |                          |                          |
| h. You are interested in a nontraditional approach to children's education? . . . . .                          | <input type="checkbox"/> | <input type="checkbox"/> |
| HSALTX   |                          |                          |
| i. You want to emphasize family life together? . . . . .   | <input type="checkbox"/> | <input type="checkbox"/> |
| HSFMLY   |                          |                          |
| j. You have another reason for homeschooling this child? - Specify: ↴ . . . . .                                | <input type="checkbox"/> | <input type="checkbox"/> |
| HSOTHERX   |                          |                          |

HSOTHERXOS

**23. Of the reasons your family chose to homeschool this child, which one would you say is the most important to you?**

**Write the letter from question 22 for the most important reason you chose to homeschool your child.**

HSMOSTX

|

letter from question 22

**24. In the most recent week that this child was homeschooled, what subject areas were taught during his or her home instruction?**

**We have provided spaces for you to tell us about up to 10 subject areas. You may have fewer subject areas to tell us about. Please write only one subject area in each box.**

1. 

HSSUBJ1
2. 

HSSUBJ2
3. 

HSSUBJ3
4. 

HSSUBJ4
5. 

HSSUBJ5
6. 

HSSUBJ6
7. 

HSSUBJ7
8. 

HSSUBJ8
9. 

HSSUBJ9
10. 

HSSUBJ10



25. Does your family participate in the activities or meetings of a local homeschooling association, co-op, or other local homeschool group?

Yes HSASSNX

No → **GO TO question 27**

26. Since September, how many times has your family gone to meetings or participated in the activities of a local homeschooling association, co-op, or other local homeschool group?

HSFREQX

number of times

27. Is your family or someone in your household a member of a national homeschooling organization?

Yes HSNATL

No

28. Is this child in a military family that frequently relocates?

Yes HSMLTY

No

29. Is this homeschooled child also enrolled in a school?

HSENRL

Yes → **GO TO question 30**

No → **GO TO question 59**

## Child's School

30. This question helps to route you to questions appropriate for this child.

Which best describes the physical or online/virtual/cyber school where this child is enrolled for the most hours?

Mark  ONE only. Question not on data file

A public school located in a physical building → **GO TO question 31**

A private school located in a physical building → **GO TO question 34**

An online, virtual, or cyber school → **GO TO question 32**

This child is homeschooled only → **GO TO question 59**

31. Please answer the next questions about the school where this child is enrolled for most credits. Is it his or her district-assigned school?

 A district-assigned school is the school that your local public school district told you that this child can attend, based on the location of your residence.

Yes DISTASSI

No

32. Is this school a charter school?

Yes SCHRTSCHL

No

33. Is this school a magnet school or does he or she attend a magnet program?

Yes SCHLMAGNET

No



34. Did you move to your current neighborhood so that this child could attend his or her current school?

Yes SNEIGHBRX

No

35. Did you feel that you had a choice in what school this child attends?

Yes SCCHOICE

No

36. Does your public school district let you choose which public school you want this child to attend?

*i* This may include applying to a magnet program in a public school, transferring to another public school within the district, or transferring to a public school outside of the district.

Yes SPUBCHOIX

No

Don't know

37. Did you consider other schools for this child?

Yes → GO TO question 38

No → GO TO question 39

SCONSIDR

38. How important was each of the following reasons when you chose the school where this child is enrolled for most credits?

*i* If this child is homeschooled, please answer about the physical or online/virtual/cyber school where this child is enrolled.

a. Convenient location LOCALE

Not at all important

Somewhat important

Important

Very important

b. Safety (including student discipline)

Not at all important SCHLSAFETY

Somewhat important

Important

Very important

c. Quality of teachers, principal, or other school staff SCHLSTFQUALITY

Not at all important

Somewhat important

Important

Very important

d. Curriculum focus or unique academic programs (e.g., language immersion, STEM focus) AVAILCOURSE

Not at all important

Somewhat important

Important

Very important

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**e. Extracurricular options (including before- and after-school programs)**

- Not at all important XTRACURRIC
- Somewhat important
- Important
- Very important

**f. Student body characteristics**

- Not at all important STUDNTCHAR
- Somewhat important
- Important
- Very important

**g. Academic performance of students (such as test scores, dropout rates, and so on)**

STUDNTPERFORM

- Not at all important
- Somewhat important
- Important
- Very important

**h. The religious orientation of the school**

RELIGSOR

- Child's school is not religious
- Not at all important
- Somewhat important
- Important
- Very important

**i. Quality or availability of special education (including services for students with disabilities)**

- Not at all important SPECALEDSERVS
- Somewhat important
- Important
- Very important

**j. Special facilities (e.g., gymnasium, planetarium, library)**

SPECIALFACILTS

- Not at all important
- Somewhat important
- Important
- Very important

**k. Number of students in class**

- Not at all important CLSSIZE
- Somewhat important
- Important
- Very important

**l. Cost**

SCHLCOST

- Not at all important
- Somewhat important
- Important
- Very important

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**39. How did you find out about this child's school?**

Mark  all that apply.

- It is in my neighborhood FINDSCHL
- Friend FINDFRND
- Family member FINDFAM
- Newspaper or magazine articles FINDNEWS
- State report cards FINDRPT
- A school ratings website FINDWEB
- Advertisements (television, radio, online, other) FINDADS
- Flier FINDFLY
- School or district staff (for example, teacher, administrator, school counselor) FINDSTF
- Church FINDCHRC
- Other - Specify:  FINDOTH

FINDOTHOS

**40. Is the school this child attends your first choice; that is to say, is it the school you wanted most for him or her to attend?**

- Yes S1STCHOI
- No

**41. Since the beginning of this school year, has this child been in the same school?**

- Yes SSAMSC
- No

**42. About how many hours does this child attend a school each week? SCHLHRSWK**

- 0 hours. Child does not attend a school located in a physical building
- 1-10 hours
- 11-24 hours
- More than 24 hours

**43. Is this child enrolled in any online, virtual, or cyber courses? EINTNET**

**Do not include courses that use the Internet only for selected assignments.**

- Yes, all the child's courses are online, virtual, or cyber
- Yes, about half or more than half of the child's courses are online, virtual, or cyber
- Yes, less than half of the child's courses are online, virtual, or cyber
- No, none of this child's courses are online, virtual, or cyber

**GO TO question 50**



**44. There are many different reasons that children are enrolled in online, virtual, or cyber courses. Is this child enrolled in online, virtual, or cyber courses because...**

Mark  one box for EACH item below.

ADVCCRSE	a. This child needed a course(s) that is more advanced (e.g., Advanced Placement or college courses) than the ones offered at his or her school? .....	Yes ▼ <input type="checkbox"/>	No ▼ <input type="checkbox"/>
SPCLCRSE	b. This child needed a specialized course(s) (e.g., foreign language) that was not offered at his or her school? . .	<input type="checkbox"/>	<input type="checkbox"/>
MKUPCRSE	c. This child needed to make up a course that he or she failed (e.g., course recovery or credit recovery)? .....	<input type="checkbox"/>	<input type="checkbox"/>
ADDCRSE	d. This child needed to earn additional credits? .....	<input type="checkbox"/>	<input type="checkbox"/>
HELP	e. This child needed extra help in a course or subject offered at his or her physical school? .....	<input type="checkbox"/>	<input type="checkbox"/>
CONFLCT	f. This child had a schedule conflict with the in-person courses? .....	<input type="checkbox"/>	<input type="checkbox"/>
DISABLX	g. This child has a physical or mental health problem that has lasted six months or more? .....	<input type="checkbox"/>	<input type="checkbox"/>
TEMPILL	h. This child has a temporary illness that prevents him or her from going to school? . . .	<input type="checkbox"/>	<input type="checkbox"/>
SPCLND.	i. This child has other special needs that you feel the school can't or won't meet? . .	<input type="checkbox"/>	<input type="checkbox"/>
LRNSTYLE	j. This child's learning style is well-suited for online/virtual/cyber learning? .....	<input type="checkbox"/>	<input type="checkbox"/>
NOCHOICE	k. This child did not have a choice because online/virtual/cyber learning is required? .....	<input type="checkbox"/>	<input type="checkbox"/>
SHLPLCE	l. The school placed this child in an online course because there was no in-person teacher for the course? .....	<input type="checkbox"/>	<input type="checkbox"/>
ONLINEPREF	m. You prefer online, virtual, or cyber courses for this child? . .	<input type="checkbox"/>	<input type="checkbox"/>
	n. Other - Specify: ↴ .....	<input type="checkbox"/>	<input type="checkbox"/>

ONLINEOTH

ONLINEOTHOS

**45. Of the reasons that this child is enrolled in online, virtual, or cyber courses, which one would you say is the most important to you?**

Write the letter from question 44 for the most important reason your child is enrolled in online, virtual, or cyber courses.

MOSTIMPT

letter from question 44

**46. Do the following types of schools or teachers provide the instruction for this child's online, virtual, or cyber courses?**

Mark  one box for EACH item below.

	Yes ▼ <input type="checkbox"/>	No ▼ <input type="checkbox"/>
a. This child's public school or school district. .... SPBSCH	<input type="checkbox"/>	<input type="checkbox"/>
b. This child's private school. . . . SPRIVT	<input type="checkbox"/>	<input type="checkbox"/>
c. A college, community college, or university. .... SUNIVSCH	<input type="checkbox"/>	<input type="checkbox"/>
d. An online academy or virtual school or cyber school. .... SCYBER	<input type="checkbox"/>	<input type="checkbox"/>
e. A company that provides courses that I can purchase or access for this child. .... SCOMPANY	<input type="checkbox"/>	<input type="checkbox"/>
f. Another K-12 public or private school. .... SOTHRSCH	<input type="checkbox"/>	<input type="checkbox"/>
g. An independent instructor not affiliated with a school. . . . STUTR	<input type="checkbox"/>	<input type="checkbox"/>
h. Someplace else - Specify: ↴ SOTHSCH	<input type="checkbox"/>	<input type="checkbox"/>

SOTHSCHOS

**47. How many online, virtual, or cyber courses does this child take?**

INTNUM

number



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55. Since starting kindergarten, has this child repeated any grades?

Yes SEREPEAT

No → **GO TO question 57**

56. What grade or grades did this child repeat?

Include the current year.

Mark  all that apply.

Kindergarten SEREPTK

1st grade SEREPT1

2nd grade SEREPT2

3rd grade SEREPT3

4th grade SEREPT4

5th grade SEREPT5

6th grade SEREPT6

7th grade SEREPT7

8th grade SEREPT8

9th grade - freshman SEREPT9

10th grade - sophomore SEREPT10

11th grade - junior SEREPT11

12th grade - senior SEREPT12

57. Has this child ever had the following experiences?

Mark  one box for EACH item below.

- |   | Yes<br>▼                 | No<br>▼                  |
|---|--------------------------|--------------------------|
| a. An out-of-school suspension . . .<br>SESUSOUT                        | <input type="checkbox"/> | <input type="checkbox"/> |
| b. An in-school suspension not counting detentions. . . . .<br>SESUSPIN | <input type="checkbox"/> | <input type="checkbox"/> |
| c. Been expelled from school. . . . .<br>SEEXPEL                        | <input type="checkbox"/> | <input type="checkbox"/> |

58. How would you describe his or her work at school?

Mark  ONE only. SEGRADEQ

- Excellent
- Above average
- Average
- Below average
- Failing

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# Families & School

**59. The questions in this section are about the physical or online/virtual/cyber school where this child is enrolled for the most hours.** Question not in the data file

**Which best describes that school?**

Homeschool for ALL subject areas → **GO TO question 72**

Full-time online, virtual, or cyber school → **GO TO question 62**

Any other type of school



**60. Since the beginning of this school year, has any adult in this child's household done any of the following things at this child's school?**

Mark  one box for EACH item below.

- |  | Yes<br>▼                 | No<br>▼                  |
|--|--------------------------|--------------------------|
| a. Attended a school or class event, such as a play, dance, sports event, or science fair. . . . .<br>FSSPORTX | <input type="checkbox"/> | <input type="checkbox"/> |
| b. Served as a volunteer in this child's classroom or elsewhere in the school. . . . .<br>FSVOL                | <input type="checkbox"/> | <input type="checkbox"/> |
| c. Attended a general school meeting, for example, an open house, or a back-to-school night. . . . .<br>FSMTNG | <input type="checkbox"/> | <input type="checkbox"/> |
| d. Attended a meeting of the parent-teacher organization or association. . . . .<br>FSPTMTNG                   | <input type="checkbox"/> | <input type="checkbox"/> |
| e. Gone to a regularly scheduled parent-teacher conference with this child's teacher. . . . .<br>FSATCNFN      | <input type="checkbox"/> | <input type="checkbox"/> |
| f. Participated in fundraising for the school. . . . .<br>FSFUNDRS   | <input type="checkbox"/> | <input type="checkbox"/> |
| g. Served on a school committee. . . . .<br>FSCOMMTE   | <input type="checkbox"/> | <input type="checkbox"/> |
| h. Met with a guidance counselor in person. . . . .<br>FSCOUNSLR   | <input type="checkbox"/> | <input type="checkbox"/> |

**61. During this school year, how many times has any adult in the household gone to meetings or participated in activities at this child's school?**

FSFREQ

number of times

**62. During this school year, has your family received any of the following:**

Mark  one box for EACH item below.

- |   | Yes<br>▼                 | No<br>▼                  |
|---|--------------------------|--------------------------|
| a. Notes or emails specifically about this child from his or her teachers or school administrators? . . . . .<br>FSNOTESX | <input type="checkbox"/> | <input type="checkbox"/> |
| b. Newsletters, memos, emails, or notices addressed to all parents? . . . . .<br>FSMEMO                                   | <input type="checkbox"/> | <input type="checkbox"/> |
| c. Phone calls specifically about this child from his or her teachers or school administrators? . . . . .<br>FSPHONCHX    | <input type="checkbox"/> | <input type="checkbox"/> |

**63. How well has this child's school been doing the following things during this school year:**

**a. Letting you know how this child is doing in school between report cards?**

- Very well FSSPPERF
- Just okay
- Not very well
- Does not do it at all

**b. Providing information about how to help this child with homework?**

- Very well FSSPHW
- Just okay
- Not very well
- Does not do it at all

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**c. Providing information about why this child is placed in particular groups or classes?**

- Very well FSSPCOUR
- Just okay
- Not very well
- Does not do it at all

**d. Providing information on your expected role at this child's school?**

- Very well FSSPROLE
- Just okay
- Not very well
- Does not do it at all

**e. Providing information on how to help this child plan for college or vocational school?**

- Very well FSSPCOLL
- Just okay
- Not very well
- Does not do it at all
- Does not apply

**64. How satisfied or dissatisfied are you with each of the following:**

**a. The school this child attends this year?**

- Very satisfied FCSCHOOL
- Somewhat satisfied
- Somewhat dissatisfied
- Very dissatisfied

**b. The teachers this child has this year?**

- Very satisfied FCTEACHR
- Somewhat satisfied
- Somewhat dissatisfied
- Very dissatisfied

**c. The academic standards of the school?**

- Very satisfied FCSTDS
- Somewhat satisfied
- Somewhat dissatisfied
- Very dissatisfied

**d. The order and discipline at the school?**

- Very satisfied FCORDER
- Somewhat satisfied
- Somewhat dissatisfied
- Very dissatisfied

**e. The way that school staff interacts with parents?**

- Very satisfied FCSUPPRT
- Somewhat satisfied
- Somewhat dissatisfied
- Very dissatisfied

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# Homework

**65. How often does this child do homework at home, at an after-school program, or somewhere else outside of school?**

- Less than once a week FHHOME
- 1 to 2 days a week
- 3 to 4 days a week
- 5 or more days a week
- Never
- This child does not have homework

**GO TO  
question 72**

**66. In an average week, how many hours does this child spend on homework outside of school?**

FHWKHRS

number of hours per week

**67. How do you feel about the amount of homework this child is assigned?**

- The amount is about right FHAMOUNT
- It's too much
- It's too little

**68. How does this child feel about the amount of homework he or she is assigned?**

FHCAMT

- The amount is about right
- It's too much
- It's too little

**69. Is there a place in your home that is set aside for this child to do homework?**

- Yes FHPLACE
- No
- This child does not do homework at home

**70. How often does any adult in your household check to see that this child's homework is done?**

- Never FHCHECKX
- Rarely
- Sometimes
- Always

**71. During this school year, about how many days in an average week does anyone in your household help this child with his or her homework?**

FHHELP

- Less than once a week
- 1 to 2 days a week
- 3 to 4 days a week
- 5 or more days a week
- Never



## Family Activities

**72. In the past week, has anyone in your family done the following things with this child?**

Mark  one box for EACH item below.

	Yes	No
FOSTORY2X a. Told him or her a story (Do not include reading to him or her.) . . . . .	<input type="checkbox"/>	<input type="checkbox"/>
FOCRAFTS b. Done activities like arts and crafts, coloring, painting, pasting, or using clay. . . . .	<input type="checkbox"/>	<input type="checkbox"/>
FOGAMES c. Played board games or did puzzles with him or her. . . . .	<input type="checkbox"/>	<input type="checkbox"/>
FOBUILDX d. Worked on a project like building, making, or fixing something. . . . .	<input type="checkbox"/>	<input type="checkbox"/>
FOSPORT e. Played sports, active games, or exercised together. . . . .	<input type="checkbox"/>	<input type="checkbox"/>
FORESPON f. Discussed with him or her how to manage time. . . . .	<input type="checkbox"/>	<input type="checkbox"/>
FOHISTX g. Talked with him or her about the family's history or ethnic heritage. . . . .	<input type="checkbox"/>	<input type="checkbox"/>

**73. In the past week, how many days has your family eaten the evening meal together?**

FODINNERX

Write '0' if none.

days

**74. In the past month, has anyone in your family done the following things with this child?**

Mark  one box for EACH item below.

	Yes	No
FOLIBRAYX a. Visited a library. . . . .	<input type="checkbox"/>	<input type="checkbox"/>
FOBOOKSTX b. Visited a bookstore . . . . .	<input type="checkbox"/>	<input type="checkbox"/>
FOCONCRTX c. Gone to a play, concert, or other live show. . . . .	<input type="checkbox"/>	<input type="checkbox"/>
FOMUSEUMX d. Visited an art gallery, museum, or historical site . . . . .	<input type="checkbox"/>	<input type="checkbox"/>
FOZOOX e. Visited a zoo or aquarium . . . . .	<input type="checkbox"/>	<input type="checkbox"/>
FOGROUPX f. Attended an event sponsored by a community, religious, or ethnic group . . . . .	<input type="checkbox"/>	<input type="checkbox"/>
FOSPRTEVX g. Attended an athletic or sporting event outside of school in which he or she was not a player . . . . .	<input type="checkbox"/>	<input type="checkbox"/>

## Child's Health

**75. In general, how would you describe this child's health?**

- Excellent HDHEALTH
- Very good
- Good
- Fair
- Poor

**76. Has a health or education professional told you that this child has any of the following conditions?**

Mark  one box for EACH item below.

	Yes	No	
a. An intellectual disability, formerly known as mental retardation . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	HDINTDIS
b. A speech or language impairment . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	HDSPEECHX
c. A serious emotional disturbance . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	HDDISTRBX
d. Deafness or another hearing impairment . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	HDDEAFIMX
e. Blindness or another visual impairment not corrected with glasses. . . . .	<input type="checkbox"/>	<input type="checkbox"/>	HDBLINDX
f. An orthopedic impairment. . . . .	<input type="checkbox"/>	<input type="checkbox"/>	HDORTHOX
g. Autism. . . . .	<input type="checkbox"/>	<input type="checkbox"/>	HDAUTISMX
h. Pervasive Developmental Disorder (PDD). . . . .	<input type="checkbox"/>	<input type="checkbox"/>	HDPEDDX
i. Attention Deficit Disorder, ADD or ADHD . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	HDADDX
j. A specific learning disability. . . . .	<input type="checkbox"/>	<input type="checkbox"/>	HDIEARNX
k. A developmental delay. . . . .	<input type="checkbox"/>	<input type="checkbox"/>	HDDELAYX
l. Traumatic brain injury . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	HDTRBRAIN
m. Another health impairment lasting 6 months or longer. . . . .	<input type="checkbox"/>	<input type="checkbox"/>	HDOTHERX

**77. Did you mark yes to any condition in question 76?**

Yes → **GO TO question 78**

No → **GO TO question 82**

Question not on data file

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78. Is this child receiving any services through an Individualized Education Program (IEP) or services plan?

Yes HDIEPX
No GO TO question 80

79. Thinking about the child's IEP or services plan, since September, how satisfied or dissatisfied have you been with the service provider's or school's communication with your family?

Very satisfied HDCOMMUX
Somewhat satisfied
Somewhat dissatisfied
Very dissatisfied
Does not apply

80. Is this child currently enrolled in any special education classes or services?

Yes HDSPCLED
No

81. Does this child's condition interfere with his or her ability to do any of the following things?

Mark X one box for EACH item below.

Table with 4 items (Learn, Participate in sports, Attend school, Make friends) and Yes/No columns with checkboxes.

Child's Background

82. In what month and year was this child born?

Month and year input fields with labels CDOBMM and CDOBY.

83. Where was this child born? CPLCBRTH

Options for birth location: One of the 50 United States..., One of the U.S. territories..., Another country.

84. How old was this child when he or she first moved to the 50 United States or the District of Columbia?

If younger than 1, write "0". age CMOVEAGE

85. Is this child of Hispanic, Latino, or Spanish origin? CHISPAN

Options for Hispanic/Latino/Spanish origin: No, not of Hispanic..., Yes, Mexican..., Yes, Puerto Rican..., Yes, Cuban..., Yes, another Hispanic...

86. What is this child's race? You may mark one or more races.

Mark X all that apply.

Options for race: American Indian or Alaska Native CAMIND, Asian CASIAN, Black or African American CBLACK, Native Hawaiian or other Pacific Islander CPACI, White CWHITE



**87. What is this child's sex?**

- Male CSEX
- Female

**88. Does this child live at this address and another address (for example, because of a joint custody arrangement)?**

Do not include vacation properties.

- Yes CLIVYN
- No → **GO TO question 90**

**89. If yes, does this child... CLIVELSWX**

- Spend most time at this address?
- Spend most time at another address?
- Spend equal time at both addresses?

**90. What language does this child speak most at home?**

CSPEAKX

Mark  ONE only.

- English → **GO TO question 92**
- Spanish
- English and Spanish equally
- A language other than English or Spanish
- English and another language equally
- This child is not able to speak

**91. Is this child currently enrolled in English as a second language, bilingual education, or an English immersion program?**

CENGLPRG

- Yes
- No

## Household Members

**92. Including children, how many people live in this household?**

HHTOTALXX

people

**93. We are interested in learning about how the people in your household are related to this child. How many of the following people live in this household with this child?**

Example: Brother(s)

Write '0' if none

This child's...	Number
a. Brother(s) . . . . . HHBROSX	<input type="text" value="0"/>
b. Sister(s) . . . . . HHSISSX	<input type="text" value="0"/>
c. Mother (birth, adoptive, step, or foster) . . . . . HHMOM	<input type="text" value="0"/>
d. Father (birth, adoptive, step, or foster) . . . . . HHDAD	<input type="text" value="0"/>
e. Aunt(s) . . . . . HHAUNTSX	<input type="text" value="0"/>
f. Uncle(s) . . . . . HHUNCLSX	<input type="text" value="0"/>
g. Grandmother(s) . . . . . HHGMASX	<input type="text" value="0"/>
h. Grandfather(s) . . . . . HHGPASX	<input type="text" value="0"/>
i. Cousin(s) . . . . . HHCSNSX	<input type="text" value="0"/>
j. Parent's girlfriend/boyfriend/partner . . . . . HHPRTNRSX	<input type="text" value="0"/>
k. Other relative(s) . . . . . HHORELSX	<input type="text" value="0"/>
l. Other non-relative(s) . . . . . HHONRELSX	<input type="text" value="0"/>

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**94. How are you related to this child?**

Mark  ONE only. RELATION

- Mother (birth, adoptive, step, or foster)
- Father (birth, adoptive, step, or foster)
- Aunt
- Uncle
- Grandmother
- Grandfather
- Parent's girlfriend/boyfriend/partner
- Other relationship - Specify: ↴

RELATIONOS

**95. Which language(s) are spoken at home by the adults in this household?**

Mark  all that apply.

- English HHENGLISH
- Spanish HHSPANISH
- French (including Patois, Creole, Cajun) HHFRENCH
- Chinese HHCHINESE
- Other languages - Specify: ↴ HHOTHLANG

HHOTHLANGOS

## Child's Family

### PARENT 1 LIVING IN HOUSEHOLD

**i** Answer questions 96 to 115 about yourself if you are the child's parent or guardian.

If you are not the child's parent or guardian, answer questions 96 to 115 about one of this child's parents or guardians living in the household.

**96. Is this parent or guardian the child's...**

- Biological parent PIREL
- Adoptive parent
- Stepparent
- Foster parent
- Grandparent
- Other guardian

**97. Is this parent or guardian male or female?**

- Male PISEX
- Female

**98. What is this parent or guardian's current marital status?**

Mark  ONE only. PIMRSTA

- Now married → **GO TO question 100**
- Widowed
- Divorced
- Separated
- Never married

**99. Is this parent or guardian currently living with a boyfriend/girlfriend or partner in this household?**

P1BFGF

- Yes
- No

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100. What was the **first** language this parent or guardian learned to speak?

Mark  ONE only. P1FRLNG

- English → **GO TO question 105**
- Spanish
- English and Spanish equally
- A language other than English or Spanish
- English and another language equally

101. What language does this parent or guardian speak most at home **now**?

Mark  ONE only. P1SPEAK

- English → **GO TO question 105**
- Spanish
- English and Spanish equally
- A language other than English or Spanish
- English and another language equally

102. How difficult is it for this parent or guardian to participate in activities at this child's school because he or she speaks a language other than English?

- Very difficult P1DIFFI
- Somewhat difficult
- Not at all difficult
- Parent has not tried to participate in activities at this child's school or child does not attend school in a physical building

103. Does the school have interpreters who speak this parent or guardian's native language for meetings or parent-teacher conferences?

- Yes P1SCINT
- No

104. Does the school have written materials, such as newsletters or school notices, that are translated into this parent or guardian's native language?

- Yes P1WRMTL
- No

105. Where was this parent or guardian born?

P1PLCBRTH

- One of the 50 United States or the District of Columbia → **GO TO question 107**
- One of the U.S. territories (*Puerto Rico, Guam, American Samoa, U.S. Virgin Islands, or Mariana Islands*)
- Another country

106. How old was this parent or guardian when he or she first moved to the 50 United States or the District of Columbia?

If younger than 1, write "0".

- age P1AGEMV

107. Is this parent or guardian of Hispanic, Latino, or Spanish origin? P1HISPAN

- No, not of Hispanic, Latino, or Spanish origin
- Yes, Mexican, Mexican American, Chicano
- Yes, Puerto Rican
- Yes, Cuban
- Yes, another Hispanic, Latino, or Spanish origin; or more than one Hispanic, Latino, or Spanish origin

108. What is this parent or guardian's race? You may mark one or more races.

Mark  all that apply.

- American Indian or Alaska Native P1AMIND
- Asian P1ASIAN
- Black or African American P1BLACK
- Native Hawaiian or other Pacific Islander P1PACI
- White P1WHITE



**109. What is the highest grade or level of school that this parent or guardian completed?** P1EDUC

Mark  ONE only.

- 8th grade or less
- High school, but no diploma
- High school diploma or equivalent (GED)
- Vocational diploma after high school
- Some college, but no degree
- Associate's degree (AA, AS)
- Bachelor's degree (BA, BS)
- Some graduate or professional education, but no degree
- Master's degree (MA, MS)
- Doctorate degree (PhD, EdD)
- Professional degree beyond bachelor's degree (MD, DDS, JD, LLB)

**110. Is this parent or guardian currently attending or enrolled in a school, college, university, or adult learning center, or receiving vocational education or job training?** P1ENRL

- Yes
- No

**111. Which of the following best describes this parent or guardian's employment status?** P1EMPL

Mark  ONE only.

- Employed for pay or income
- Self-employed
- Unemployed or out of work
- Full-time student
- Stay at home parent
- Retired
- Disabled or unable to work

GO TO question 112

GO TO question 113

GO TO question 114

**112. About how many hours per week does this parent or guardian usually work for pay or income, counting all jobs?**

hours → GO TO question 114  
PIHRSWK

**113. Has this parent or guardian been actively looking for work in the past 4 weeks?**

- Yes P1LKWRK
- No

**114. In the past 12 months, how many months (if any) has this parent or guardian worked for pay or income?** P1MTHSWRK

Write '0' if none.

months

**115. How old is this parent or guardian?**

age P1AGE



## PARENT 2 LIVING IN HOUSEHOLD

**i** Answer questions 116 to 136 about a second parent or guardian living in the household.

**116. Is there a second parent or guardian living in this household?** P2GUARD

- Yes
- No → **GO TO question 137**

**117. Is this parent or guardian the child's...**

- Biological parent P2REL
- Adoptive parent
- Stepparent
- Foster parent
- Grandparent
- Other guardian

**118. Is this parent or guardian male or female?**

- Male P2SEX
- Female

**119. What is this parent or guardian's current marital status?** P2MRSTA

Mark  ONE only.

- Now married → **GO TO question 121**
- Widowed
- Divorced
- Separated
- Never married

**120. Is this parent or guardian currently living with a boyfriend/girlfriend or partner in this household?** P2BFGF

- Yes
- No

**121. What was the first language this parent or guardian learned to speak?**

Mark  ONE only. P2FRLNG

- English → **GO TO question 126**
- Spanish
- English and Spanish equally
- A language other than English or Spanish
- English and another language equally

**122. What language does this parent or guardian speak most at home now?**

Mark  ONE only. P2SPEAK

- English → **GO TO question 126**
- Spanish
- English and Spanish equally
- A language other than English or Spanish
- English and another language equally

**123. How difficult is it for this parent or guardian to participate in activities at this child's school because he or she speaks a language other than English?**

- Very difficult P2DIFFI
- Somewhat difficult
- Not at all difficult
- Parent has not tried to participate in activities at this child's school or child does not attend school in a physical building

**124. Does the school have interpreters who speak this parent or guardian's native language for meetings or parent-teacher conferences?** P2SCINT

- Yes
- No



**125. Does the school have written materials, such as newsletters or school notices, that are translated into this parent or guardian's native language?**

- Yes P2WRMTL  
 No

**126. Where was this parent or guardian born?**  
P2PLCBRTH

- One of the 50 United States or the District of Columbia → **GO TO question 128**
- One of the U.S. territories (*Puerto Rico, Guam, American Samoa, U.S. Virgin Islands, or Mariana Islands*)
- Another country

**127. How old was this parent or guardian when he or she first moved to the 50 United States or the District of Columbia? If younger than 1, write "0".**

age P2AGEMV

**128. Is this parent or guardian of Hispanic, Latino, or Spanish origin?**  
P2HISPAN

- No, not of Hispanic, Latino, or Spanish origin
- Yes, Mexican, Mexican American, Chicano
- Yes, Puerto Rican
- Yes, Cuban
- Yes, another Hispanic, Latino, or Spanish origin; or more than one Hispanic, Latino, or Spanish origin

**129. What is this parent or guardian's race? You may mark one or more races.**

Mark  all that apply.

- American Indian or Alaska Native P2AMIND
- Asian P2ASIAN
- Black or African American P2BLACK
- Native Hawaiian or other Pacific Islander P2PACI
- White P2WHITE

**130. What is the highest grade or level of school that this parent or guardian completed?**  
P2EDUC

Mark  ONE only.

- 8th grade or less
- High school, but no diploma
- High school diploma or equivalent (GED)
- Vocational diploma after high school
- Some college, but no degree
- Associate's degree (AA, AS)
- Bachelor's degree (BA, BS)
- Some graduate or professional education, but no degree
- Master's degree (MA, MS)
- Doctorate degree (PhD, EdD)
- Professional degree beyond bachelor's degree (MD, DDS, JD, LLB)

**131. Is this parent or guardian currently attending or enrolled in a school, college, university, or adult learning center, or receiving vocational education or job training?**

- Yes P2ENRL  
 No

**132. Which of the following best describes this parent or guardian's employment status?**

Mark  ONE only.

P2EMPL

- Employed for pay or income } **GO TO question 133**
- Self-employed } **GO TO question 133**
- Unemployed or out of work → **GO TO question 134**
- Full-time student } **GO TO question 135**
- Stay at home parent } **GO TO question 135**
- Retired } **GO TO question 135**
- Disabled or unable to work } **GO TO question 135**

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**133. About how many hours per week does this parent or guardian usually work for pay or income, counting all jobs?**

P2HRSWK



GO TO question 135

hours

**134. Has this parent or guardian been actively looking for work in the past 4 weeks?**

Yes

P2LKWRK

No

**135. In the past 12 months, how many months (if any) has this parent or guardian worked for pay or income?**

P2MTHSWRK

Write '0' if none.

months

**136. How old is this parent or guardian?**

age

P2AGE

## Your Household

**137. In the past 12 months, did your family ever receive benefits from any of the following programs?**

Mark  one box for EACH item below.

- |  | Yes<br>▼                 | No<br>▼                  |
|--|--------------------------|--------------------------|
| a. Your state welfare or family assistance program (this may be called Temporary Assistance for Needy Families [TANF] or something else) . . . . . | <input type="checkbox"/> | <input type="checkbox"/> |
| HWELFTANST   |                          |                          |
| b. Women, Infants, and Children, or WIC . . . . .  | <input type="checkbox"/> | <input type="checkbox"/> |
| HWIC   |                          |                          |
| c. SNAP benefits, also known as Food Stamps. . . . .   | <input type="checkbox"/> | <input type="checkbox"/> |
| HFOODST  |                          |                          |
| d. Medicaid . . . . .  | <input type="checkbox"/> | <input type="checkbox"/> |
| HMEDICAID  |                          |                          |
| e. Child Health Insurance Program (CHIP) . . . . .   | <input type="checkbox"/> | <input type="checkbox"/> |
| HCHIP  |                          |                          |
| f. Housing assistance through a voucher or Section 8 . . . . .   | <input type="checkbox"/> | <input type="checkbox"/> |
| HSECN8   |                          |                          |

**138. Which category best fits the total income of all persons in your household over the past 12 months?**

Include your own income. Include money from jobs or other earnings, pensions, interest, rent, Social Security payments, and so on.

TTLHHINC

- \$0 to \$10,000
- \$10,001 to \$20,000
- \$20,001 to \$30,000
- \$30,001 to \$40,000
- \$40,001 to \$50,000
- \$50,001 to \$60,000
- \$60,001 to \$75,000
- \$75,001 to \$100,000
- \$100,001 to \$150,000
- \$150,001 to \$200,000
- \$200,001 to \$250,000
- \$250,001 or more



**139. Is this house or apartment...**

Mark  ONE only. OWNRNTHB

- Owned or being bought by someone in this household?
- Rented by someone in this household?
- Occupied by some other arrangement?

**140. Do you have Internet access on a cell phone?**

HVINTSPHO

- Yes
- No

**141. Do you have Internet access at home on a computer or tablet?**

- Yes HVINTCOM
- No

**142. How often does this child use the Internet at home for learning activities?**

CHLDNT

- Every day
- A few times a week
- A few times a month
- A few times a year
- Never → **GO TO question 144**

**143. Does the child access the Internet for learning activities on...**

Mark  one box for EACH item below.

- |                      | Yes<br>▼                 | No<br>▼                  |
|----------------------|--------------------------|--------------------------|
| a. Computer? .....   | <input type="checkbox"/> | <input type="checkbox"/> |
| LRNCOMP              |                          |                          |
| b. Tablet? .....     | <input type="checkbox"/> | <input type="checkbox"/> |
| LRNTAB               |                          |                          |
| c. Cell phone? ..... | <input type="checkbox"/> | <input type="checkbox"/> |
| LRNCELL              |                          |                          |

**144. How far do you expect this child to go in his or her education?**

Mark  ONE only. SEFUTUREX

- Complete less than a high school diploma
- Graduate from high school
- Attend a vocational or technical school after high school
- Attend two or more years of college
- Earn a bachelor's degree
- Earn a graduate degree or professional degree beyond a bachelor's







If you found and marked this child's school in the list provided in question 145, then **SKIP** this question and return your survey in the postage-paid envelope. Otherwise, continue with question 146.

**146. To help us identify the school this child attends, please write the name and address in the spaces below.**

Please use block or capital letters, for example:

SCHOOL

**a. School Name** SCHNAME

School Name

**b. School Street Address** SCHADDRE

School Street Address

**c. School City** SCHCITY

School City

**d. School State** SCHST

School State

**e. School Zip Code** SCHZIP

School Zip Code

Informational Copy



**Thank you.**

**Please return this questionnaire in the postage-paid envelope provided. If you have lost the envelope, mail the completed questionnaire to:**

**U.S. Census Bureau  
ATTN: DCB 60-A (0939)  
1201 E. 10th Street  
Jeffersonville, IN 47132-0001**

Informational Copy

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## **Appendix B. Data File Layout and Position Order**

Table B-1. Restricted-Use Data file Layout in Position Order, ECPP:2019

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
1	BASPID	Unique child identifier	C	11	1	11
2	RCVDATE	Survey Date	N	7	12	18
3	RCNOW	1. Regular care from relative	N	1	19	19
4	RCWEEK	2. Care from relative regularly scheduled	N	2	20	21
5	RCTYPE	3. Relative relation to child	N	2	22	23
6	RCAGE	4. Age of relative care provider	N	2	24	25
7	RCPLACE	5. Home for relative care	N	2	26	27
8	RCTIME	6. Time from home to relative's home	N	2	28	29
9	RCDAYS	7. Days a week child receives care from relative	N	2	30	31
10	RCHRS	8. Hours a week child receives care from relative	N	2	32	33
11	RCCVRWK	9. Relative care covers work hours	N	2	34	35
12	RCSTRTY	10. Child's age when care began from relative (Years)	N	2	36	37
13	RCSTRTM	10. Child's age when care began from relative (Months)	N	2	38	39
14	RCSPEAK	11. Language spoken by relative when caring for child	N	2	40	41
15	RCSKNFV	12. Relative care for child sick without a fever	N	2	42	43
16	RCSKFV	12. Relative care for child sick with a fever	N	2	44	45
17	RCOTCH	13. How many children under relative's care	N	2	46	47
18	RCFEE	14. Charge for care by relative	N	2	48	49
19	RCREL	15. Outside relative pays for care by relative	N	2	50	51
20	RCTANF	15. TANF pays for care by relative	N	2	52	53
21	RCSAC	15. Other social service pays for care by relative	N	2	54	55
22	RCEMPL	15. Employer pays for care by relative	N	2	56	57
23	RCOTHER	15. Someone else pays for care by relative	N	2	58	59
24	RCCOST	16. Amount household pays for care by relative	N	4	60	63
25	RCUNIT	16. Unit of time for cost of relative care	N	2	64	65
26	RCUNITOS	16. Unit of time for cost of relative care (Other, specify)	C	20	66	85
27	RCCSTHNX	17. Number of children in household amount covers for relative care	N	2	86	87
28	RCOTHC	18. Other regular relative care arrangements	N	2	88	89
29	RCTLHR	19. Hours each week spent in other relative care	N	2	90	91
30	NCNOW	20. Care from non-relative	N	1	92	92
31	NCWEEK	21. Care from non-relative regularly scheduled	N	2	93	94
32	NCINHH	22. Care provider live in household	N	2	95	96
33	NCPLACE	23. Home for non-relative care	N	2	97	98
34	NCTIME	24. Time from home to non-relative's home	N	2	99	100
35	NCDAYS	25. Days a week child receives non-relative care	N	2	101	102
36	NCHRS	26. Hours each week child receives non-relative care	N	2	103	104
37	NCCVRWK	27. Non-relative care covers work hours	N	2	105	106
38	NCSTRTY	28. Child's age when care began from non-relative (Years)	N	2	107	108
39	NCSTRTM	28. Child's age when care began from non-relative (Months)	N	2	109	110
40	NCALKNE	29. Non-relative care provider already known	N	2	111	112
41	NCAGE	30. Non-relative care provider 18 or older	N	2	113	114
42	NCSPEAK	31. Language spoken by non-relative when caring for child	N	2	115	116
43	NCSKNFV	32. Non-relative care for child sick without a fever	N	2	117	118
44	NCSKFV	32. Non-relative care for child sick with a fever	N	2	119	120
45	NCOTCH	33. How many children under non-relative's care	N	2	121	122
46	NCRCMDPT	34. Recommend non-relative care provider to another	N	2	123	124
47	NCFEE	35. Charge for care by non-relative	N	2	125	126
48	NCREL	36. Relative pays for care by non-relative	N	2	127	128
49	NCTANF	36. TANF pays for care by non-relative	N	2	129	130
50	NCSSAC	36. Other social service pays for care by non-relative	N	2	131	132
51	NCEMPL	36. Employer pays for care by non-relative	N	2	133	134
52	NCOTHER	36. Someone else pays for care by non-relative	N	2	135	136
53	NCCOST	37. Amount household pays for care by non-relative	N	5	137	141
54	NCUNIT	37. Unit of time for cost of non-relative care	N	2	142	143
55	NCUNITOS	37. Unit of time for cost of non-relative care (Other, specify)	C	80	144	223
56	NCCSTHNX	38. Number of children in household amount covers for non-relative care	N	2	224	225
57	NCOTHC	39. Other regular non-relative care arrangements	N	2	226	227
58	NCTLHR	40. Total hours per week in care with non-relatives	N	2	228	229
59	CPNNOWX	41. Attending program not in private home	N	1	230	230
60	CPWEEKX	42. Attend program at least once a week	N	2	231	232

See note at end of table.

Table B-1. Restricted-Use Data file Layout in Position Order, ECPP:2019

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
61	CPPLACEX	43. Program location	N	2	233	234
62	CPPLACOSX	43. Program location (Other, specify)	C	10	235	244
63	CPSPRLG	44. Program teaches religious content	N	2	245	246
64	CPWORK	45. Program location at workplace	N	2	247	248
65	CPHEADST	46. (Early) Head Start program	N	2	249	250
66	CPDAYS	47. Days each week child attends program	N	2	251	252
67	CPHRS	48. Hours each week child attends program	N	2	253	254
68	CPCVRWK	49. Program covers work hours	N	2	255	256
69	CPSTRTY	50. Age of child when starting program (Years)	N	2	257	258
70	CPSTRTM	50. Age of child when starting program (Months)	N	2	259	260
71	CPSPEAK	51. Language spoken by program provider when caring for child	N	2	261	262
72	CPTIME	52. Time from home to program	N	2	263	264
73	CPRCMDPT	53. Recommend program to another	N	2	265	266
74	CPTST	54. Provide hearing, speech, vision testing	N	2	267	268
75	CPPHYSE	54. Provide physical examinations	N	2	269	270
76	CPDENTA	54. Provide dental examinations	N	2	271	272
77	CPDISAB	54. Provide testing for learning problems	N	2	273	274
78	CPMEDAM	54. Provide medication administration	N	2	275	276
79	CPSKNFV	54. Provide care when child is sick without fever	N	2	277	278
80	CPSKFV	54. Provide care when child is sick with fever	N	2	279	280
81	CPFEE	55. Charge for program	N	2	281	282
82	CPREL	56. Relative pays for program care	N	2	283	284
83	CPTANF	56. TANF pays for program care	N	2	285	286
84	CPSSAC	56. Other social service pays for program care	N	2	287	288
85	CPEMPL	56. Employer pays for program care	N	2	289	290
86	CPOTHER	56. Someone else pays for program care	N	2	291	292
87	CPCOST	57. Amount household pays for program care	N	5	293	297
88	CPUNIT	57. Unit of time for cost of program care	N	2	298	299
89	CPUNITOS	57. Unit of time for cost of program care (Other, specify)	C	129	300	428
90	CPCSTHNX	58. Number of children in household amount covers for program	N	2	429	430
91	CPOTHC	59. Other regular program care arrangements	N	2	431	432
92	CPTLHR	60. Total hours per week at programs	N	2	433	434
93	PCEVRHDX	61. Ever attended (Early) Head Start program	N	1	435	435
94	MAINRESN	62. Reason for wanting care	N	1	436	436
95	PPCHOIC	63. Feel good choices for care	N	1	437	437
96	CRSRCH	64. Searched for care	N	1	438	438
97	PPDIFCLT	65. Difficulty finding care	N	2	439	440
98	WHYDIFCLT	66. Reason finding care was difficult	N	2	441	442
99	WHYDIFCLTOS	66. Reason finding care was difficult (specify)	C	114	443	556
100	CCPY	67. Care arrangement in the past year	N	2	557	558
101	CCREASN_W	68. Main reason household chose care arrangement - write-in	C	508	559	1066
102	CCREASN1	68. Main reason household chose care arrangement - Code 1	N	3	1067	1069
103	CCREASN2	68. Main reason household chose care arrangement - Code 2	N	3	1070	1072
104	CCREASN3	68. Main reason household chose care arrangement - Code 3	N	3	1073	1075
105	CCREASN4	68. Main reason household chose care arrangement - Code 4	N	3	1076	1078
106	CCREASN5	68. Main reason household chose care arrangement - Code 5	N	3	1079	1081
107	DCLOA	69. Importance of location	N	2	1082	1083
108	DCOST	69. Importance of cost	N	2	1084	1085
109	DRELY	69. Importance of reliability	N	2	1086	1087
110	DLERN	69. Importance of learning activities	N	2	1088	1089
111	DCHIL	69. Importance of child interaction with other kids	N	2	1090	1091
112	DHROP	69. Importance of caregiver availability	N	2	1092	1093
113	DNBGRP	69. Importance of number of children in group	N	2	1094	1095
114	DRTWEB	69. Importance of website ratings	N	2	1096	1097
115	DRECFAM	69. Importance of personal recommendations	N	2	1098	1099
116	DQUAL	69. Importance of qualifications of staff	N	2	1100	1101
117	DRELOR	69. Importance of religious orientation	N	2	1102	1103
118	HABOOKS	70. Books child owns	N	3	1104	1106
119	FOREADTOX	71. Time spent reading to child	N	2	1107	1108
120	FORDDAYX	72. Minutes spent each time reading to child	N	2	1109	1110
121	FOSTORYX	73. In the past week, times child has been told a story	N	1	1111	1111

See note at end of table.

Table B-1. Restricted-Use Data file Layout in Position Order, ECPP:2019

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
122	FOWORDSX	73. In the past week, times child has been taught letters, words, or numbers	N	1	1112	1112
123	FOSANG	73. In the past week, times sang with child	N	1	1113	1113
124	FOCRAFTSX	73. In the past week, time spent on arts and crafts with child	N	1	1114	1114
125	FODINNERX	74. Times eaten evening meal together	N	1	1115	1115
126	FOLIBRAY	75. Visited a library in the past month	N	1	1116	1116
127	FOBOOKST	76. Visited a bookstore in the past month	N	1	1117	1117
128	DPIAGE	77. Child older or younger than 2 years	N	1	1118	1118
129	DPLETTER	78. Recognize letters of alphabet	N	2	1119	1120
130	DPNAME	79. Ability to write first name	N	2	1121	1122
131	DPLTRSND	80. Recognize beginning sound of a word	N	2	1123	1124
132	DPEXPLN	81. Explain things he or she has seen	N	2	1125	1126
133	DPCOUNT	82. Count up to N	N	2	1127	1128
134	DPSHAPE	83. Identify basic shapes	N	2	1129	1130
135	HDHEALTH	84. Health of child	N	1	1131	1131
136	HDINTDIS	85. Intellectual disability	N	1	1132	1132
137	HDSPEECHX	85. Speech or language impairment	N	1	1133	1133
138	HDDISTRBX	85. Serious emotional disturbance	N	1	1134	1134
139	HDDEAFIMX	85. Deafness or another hearing impairment	N	1	1135	1135
140	HDBLINDX	85. Blindness or another visual impairment	N	1	1136	1136
141	HDORTHOX	85. Orthopedic impairment	N	1	1137	1137
142	HDAUTISMXX	85. Autism	N	1	1138	1138
143	HDPDDX	85. Pervasive Developmental Disorder	N	1	1139	1139
144	HDADDX	85. Attention Deficit Disorder	N	1	1140	1140
145	HDLEARNX	85. Learning disability	N	1	1141	1141
146	HDDELAYX	85. Developmental delay	N	1	1142	1142
147	HDTRBRAIN	85. Traumatic brain injury	N	1	1143	1143
148	HDOTHERX	85. Another health impairment	N	1	1144	1144
149	HDDLRSK	86. At-risk for delay	N	1	1145	1145
150	HDIFSIEP	88. Services provided by ISFP or IEP	N	2	1146	1147
151	HDCOMMXX	89. Satisfaction with service provider communication	N	2	1148	1149
152	HDSPCLED	90. Enrollment in special education classes	N	2	1150	1151
153	HDLEARN	91. Condition interferes with learning	N	2	1152	1153
154	HDPLAY	91. Condition interferes with participation in play	N	2	1154	1155
155	HDOUT	91. Condition interferes with going on outings	N	2	1156	1157
156	HDFRNDX	91. Condition interferes with making friends	N	2	1158	1159
157	HDCHDCARE	92. Condition interferes with ability to attend care	N	2	1160	1161
158	CDOBMM	93. Month child born	N	2	1162	1163
159	CDOBYX	93. Year child born	N	4	1164	1167
160	CPLCBRTH	94. Country where child born	N	1	1168	1168
161	CMOVEAGE	95. Age of child when first moved to US	N	2	1169	1170
162	CHISPAN	96. Child of Spanish, Hispanic, or Latino origin	N	1	1171	1171
163	CAMIND	97. Child Race - American Indian or Alaska Native	N	1	1172	1172
164	CASIAN	97. Child Race - Asian	N	1	1173	1173
165	CBLACK	97. Child Race - Black or African American	N	1	1174	1174
166	CPACI	97. Child Race - Native Hawaiian or other Pacific Islander	N	1	1175	1175
167	CWHITE	97. Child Race - White	N	1	1176	1176
168	CHISPRM	97. Child Race - Hispanic, race not reported	N	1	1177	1177
169	CSEX	98. Child Sex	N	1	1178	1178
170	CLIVYN	99. Child lives at another address	N	1	1179	1179
171	CLIVELSWX	100. Address where child spends most time	N	2	1180	1181
172	CSPEAKX	101. Language spoken by child at home	N	1	1182	1182
173	CENGLPRG	102. Enrolled in language program	N	2	1183	1184
174	HHTOTALXX	103. Total people in household	N	2	1185	1186
175	HHBROSX	104. Brothers	N	1	1187	1187
176	HHSISSX	104. Sisters	N	1	1188	1188
177	HHMOM	104. Mothers	N	1	1189	1189
178	HHDDAD	104. Fathers	N	1	1190	1190
179	HHAUNTSX	104. Aunts	N	1	1191	1191
180	HHUNCLSX	104. Uncles	N	1	1192	1192
181	HHGMASX	104. Grandmothers	N	1	1193	1193
182	HHGPASX	104. Grandfathers	N	1	1194	1194
183	HHCSNSX	104. Cousins	N	1	1195	1195

See note at end of table.

Table B-1. Restricted-Use Data file Layout in Position Order, ECPP:2019

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
184	HHPRTNRSX	104. Parent's girlfriend/boyfriend/partner	N	1	1196	1196
185	HHORELSX	104. Other relatives	N	1	1197	1197
186	HHONRELSX	104. Other non-relatives	N	1	1198	1198
187	RELATION	105. Relation to child	N	2	1199	1200
188	RELATIONOS	105. Relation to child (Other, specify)	C	37	1201	1237
189	HHENGLISH	106. Language spoken at home - English	N	1	1238	1238
190	HHSPANISH	106. Language spoken at home - Spanish	N	1	1239	1239
191	HHFRENCH	106. Language spoken at home - French	N	1	1240	1240
192	HHCHINESE	106. Language spoken at home - Chinese	N	1	1241	1241
193	HHOTHLANG	106. Language spoken at home - Other	N	1	1242	1242
194	HHOTHLANGOS	106. Language spoken at home (Other, specify)	C	99	1243	1341
195	PIREL	107. Relation of first parent/guardian to child	N	1	1342	1342
196	PISEX	108. First parent/guardian sex	N	1	1343	1343
197	PIMRSTA	109. First parent/guardian marital status	N	1	1344	1344
198	PIBFGF	110. First parent/guardian living with partner	N	2	1345	1346
199	PIFRLNG	111. First parent/guardian first language	N	1	1347	1347
200	PISPEAK	112. Language spoken most often at home by first parent/guardian	N	2	1348	1349
201	PIPLCBRTH	113. First parent/guardian born in U.S.	N	1	1350	1350
202	PIAGEMV	114. Age of first parent/guardian when first moved to US	N	2	1351	1352
203	PIHISPAN	115. First parent/guardian of Spanish, Hispanic, or Latino origin	N	1	1353	1353
204	PIAMIND	116. First parent/guardian race - American Indian or Alaska Native	N	1	1354	1354
205	PIASIAN	116. First parent/guardian race - Asian	N	1	1355	1355
206	PIBLACK	116. First parent/guardian race - Black or African American	N	1	1356	1356
207	PIPACI	116. First parent/guardian race - Native Hawaiian or other Pacific Islander	N	1	1357	1357
208	PIWHITE	116. First parent/guardian race - White	N	1	1358	1358
209	PIHISPRM	116. First parent/guardian race - Hispanic, race not reported	N	1	1359	1359
210	PIEDUC	117. First parent/guardian highest grade level completed	N	2	1360	1361
211	PIENRL	118. First parent/guardian attending school	N	1	1362	1362
212	PIEMPL	119. First parent/guardian employment status	N	1	1363	1363
213	PIHRSWK	120. First parent/guardian hours worked per week	N	2	1364	1365
214	PILKWRK	121. First parent/guardian looking for work	N	2	1366	1367
215	PIMTHSWRK	122. First parent/guardian months worked	N	2	1368	1369
216	PIAGE	123. First parent/guardian age	N	2	1370	1371
217	P2GUARD	124. Second parent/guardian	N	1	1372	1372
218	P2REL	125. Relation of second parent/guardian to child	N	2	1373	1374
219	P2SEX	126. Second parent/guardian sex	N	2	1375	1376
220	P2MRSTA	127. Second parent/guardian marital status	N	2	1377	1378
221	P2BFGF	128. Second parent/guardian living with partner	N	2	1379	1380
222	P2FRLNG	129. Second parent/guardian first language	N	2	1381	1382
223	P2SPEAK	130. Language spoken most often at home by second parent/guardian	N	2	1383	1384
224	P2PLCBRTH	131. Second parent/guardian born in U.S.	N	2	1385	1386
225	P2AGEMV	132. Age of second parent/guardian when first moved to US	N	2	1387	1388
226	P2HISPAN	133. Second parent/guardian of Spanish, Hispanic, or Latino origin	N	2	1389	1390
227	P2AMIND	134. Second parent/guardian race - American Indian or Alaska Native	N	2	1391	1392
228	P2ASIAN	134. Second parent/guardian race - Asian	N	2	1393	1394
229	P2BLACK	134. Second parent/guardian race - Black or African American	N	2	1395	1396
230	P2PACI	134. Second parent/guardian race - Native Hawaiian or other Pacific Islander	N	2	1397	1398
231	P2WHITE	134. Second parent/guardian race - White	N	2	1399	1400
232	P2HISPRM	134. Second parent/guardian race - Hispanic, race not reported	N	2	1401	1402
233	P2EDUC	135. Second parent/guardian highest grade level completed	N	2	1403	1404
234	P2ENRL	136. Second parent/guardian attending school	N	2	1405	1406
235	P2EMPL	137. Second parent/guardian employment status	N	2	1407	1408
236	P2HRSWK	138. Second parent/guardian hours worked per week	N	2	1409	1410
237	P2LKWRK	139. Second parent/guardian looking for work	N	2	1411	1412
238	P2MTHSWRK	140. Second parent/guardian months worked	N	2	1413	1414
239	P2AGE	141. Second parent/guardian age	N	2	1415	1416
240	HWELFTANST	142. Received TANF in past 12 months	N	1	1417	1417
241	HWIC	142. Received WIC in past 12 months	N	1	1418	1418
242	HFOODST	142. Received food stamps in past 12 months	N	1	1419	1419
243	HMEDICAID	142. Received Medicaid in past 12 months	N	1	1420	1420
244	HCHIP	142. Received CHIP in past 12 months	N	1	1421	1421
245	HSECNS	142. Received Section 8 in past 12 months	N	1	1422	1422

See note at end of table.

Table B-1. Restricted-Use Data file Layout in Position Order, ECPP:2019

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
246	TTLHHINC	143. Total income	N	2	1423	1424
247	OWNRNTHB	144. Own/rent house	N	1	1425	1425
248	HVINTSPHO	145. Internet access on a cell phone	N	1	1426	1426
249	HVINTCOM	146. Internet access on a computer or tablet	N	1	1427	1427
250	CHLDNT	147. Child use of internet for learning at home	N	1	1428	1428
251	LRNCOMP	148. Learning activities on computer	N	2	1429	1430
252	LRNTAB	148. Learning activities on tablet	N	2	1431	1432
253	LRNCELL	148. Learning activities on cell phone	N	2	1433	1434
254	DSBLTY	D-Child currently has disability	N	1	1435	1435
255	PARIEDUC	D-Educational attainment of child's first parent or guardian	N	1	1436	1436
256	PARIEMPL	D-Work status of child's first parent or guardian	N	1	1437	1437
257	PARIFTFY	D-First parent or guardian works full time	N	1	1438	1438
258	PARIMARST	D-First parent or guardian marital status	N	1	1439	1439
259	PARITYPE	D-Specific relationship of first parent or guardian to child	N	1	1440	1440
260	PARIFSTGN	D-First parent or guardian first generation immigrant status	N	1	1441	1441
261	PAR2EDUC	D-Educational attainment of child's second parent or guardian	N	2	1442	1443
262	PAR2EMPL	D-Work status of child's second parent or guardian	N	2	1444	1445
263	PAR2FTFY	D-Second parent or guardian works full time	N	2	1446	1447
264	PAR2MARST	D-Second parent or guardian marital status	N	2	1448	1449
265	PAR2TYPE	D-Specific relationship of second parent or guardian to child	N	2	1450	1451
266	PAR2FSTGN	D-Second parent or guardian first generation immigrant status	N	2	1452	1453
267	HHPARNI9X	D-Parental structure of household	N	1	1454	1454
268	HHPARNI9_BRD	D-Household has second parent or guardian	N	1	1455	1455
269	NUMSIBSX	D-Number of child's siblings	N	1	1456	1456
270	FAMILYI9X	D-Family type with parents	N	1	1457	1457
271	FAMILYI9_BRD	D-Family type with adults	N	1	1458	1458
272	HHUNDR6X	D-Number of children younger than age 6	N	1	1459	1459
273	HHUNDRI0X	D-Number of children younger than age 10	N	1	1460	1460
274	HHUNDRI6X	D-Number of children younger than age 16	N	1	1461	1461
275	HHUNDRI8X	D-Number of children younger than age 18	N	1	1462	1462
276	HHUNID	D-Other household member, not identified	N	1	1463	1463
277	LANGUAGEX	D-English spoken most by parents	N	1	1464	1464
278	PARGRADEX	D-Parent/guardian highest education	N	1	1465	1465
279	RACEETH	D-Race and ethnicity of child	N	1	1466	1466
280	RACEETH2	D-Detailed race and ethnicity of child	N	2	1467	1468
281	INTACC	D-Household has internet access	N	1	1469	1469
282	ANYCAREX	D-Child participates in any nonparental care or program arrangements	N	1	1470	1470
283	ANYCARE2X	D-Child has nonparental care at least once a week	N	1	1471	1471
284	CAREHOURX	D-Total hours a week child is in nonparental care	N	3	1472	1474
285	CPARRNEWX	D-Number of center-based programs at least once a week	N	1	1475	1475
286	MOSTHR SX	D-Care arrangement in which the child spends the most hours per week	N	2	1476	1477
287	NCARRNEWX	D-Number of nonrelative arrangements at least once a week	N	1	1478	1478
288	RCARRNEWX	D-Number of relative care arrangements at least once a week	N	1	1479	1479
289	CENREG	D-Census region where child lives	N	1	1480	1480
290	ZIP18PO2	D-Percent of families in zip code with children under 18 below the poverty line	N	1	1481	1481
291	ZIPBLHI2	D-Percent of persons in zip code who were Black or Hispanic	N	1	1482	1482
292	ZIPLOCL	D-Zip code classification by community type	N	2	1483	1484
293	BLHISCNT	D-Number of persons in zip code who were Black or Hispanic	N	6	1485	1490
294	FAMI8POV	D-Number of families in zip code with children under 18 below the poverty line	N	4	1491	1494
295	PCTI8POV	D-Percent of families in zip code with children under 18 below the poverty line	N	2	1495	1496
296	PCTBLHIS	D-Percent of persons in zip code who were Black or Hispanic alone	N	3	1497	1499
297	REGION	D-Department of Education region	N	1	1500	1500
298	RSTATE	D-Respondent's state	C	2	1501	1502
299	ZCTA	D-Respondent ZCTA (Zip Code Tabulation Area)	C	5	1503	1507
300	CENBLGRP	D-12-digit Census block group	C	12	1508	1519
301	CBSA	D-CBSA code	C	5	1520	1524
302	CBSA_NAME	D-CBSA name	C	46	1525	1570
303	NECTA	D-NECTA code	C	5	1571	1575
304	NECTA_NAME	D-NECTA name	C	37	1576	1612
305	UN_LEAID	D-Unified NCES agency identification number	C	7	1613	1619
306	EL_LEAID	D-Elementary NCES agency identification number	C	7	1620	1626
307	SC_LEAID	D-Secondary NCES agency identification number	C	7	1627	1633

See note at end of table.

Table B-1. Restricted-Use Data file Layout in Position Order, ECPP:2019

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
308	UN_LEANAME	D-Unified education agency name	C	63	1634	1696
309	EL_LEANAME	D-Elementary education agency name	C	61	1697	1757
310	SC_LEANAME	D-Secondary education agency name	C	57	1758	1814
311	P005003	D-Inside urbanized areas, population count	N	6	1815	1820
312	P005004	D-Inside urban clusters, population count	N	5	1821	1825
313	P005005	D-Rural population count	N	5	1826	1830
314	P007001	D-Total population count	N	6	1831	1836
315	P007004	D-Black/African American alone population count	N	5	1837	1841
316	P007010	D-Hispanic or Latino population count	N	5	1842	1846
317	P090001	D-Total families in zip code	N	5	1847	1851
318	P090004	D-In poverty and married couples with children under 18	N	4	1852	1855
319	P090011	D-In poverty and headed by male, no wife, with children under 18	N	4	1856	1859
320	P090017	D-In poverty and headed by female, no husband, with children under 18	N	4	1860	1863
321	ENGLSPANX	D-Questionnaire in English or Spanish	N	1	1864	1864
322	AGE2018	D-Child's Age as of Dec 31, 2018	N	1	1865	1865
323	MODECOMP	D-Completed on web or paper	N	1	1866	1866
324	CHAGE1	D-Age of 1st nonsampled child	N	2	1867	1868
325	CHAGE2	D-Age of 2nd nonsampled child	N	2	1869	1870
326	CHAGE3	D-Age of 3rd nonsampled child	N	2	1871	1872
327	CHAGE4	D-Age of 4th nonsampled child	N	2	1873	1874
328	CHSEX1	D-Sex of 1st nonsampled child	N	2	1875	1876
329	CHSEX2	D-Sex of 2nd nonsampled child	N	2	1877	1878
330	CHSEX3	D-Sex of 3rd nonsampled child	N	2	1879	1880
331	CHSEX4	D-Sex of 4th nonsampled child	N	2	1881	1882
332	CHENRL1	D-Enrollment status of 1st nonsampled child	N	2	1883	1884
333	CHENRL2	D-Enrollment status of 2nd nonsampled child	N	2	1885	1886
334	CHENRL3	D-Enrollment status of 3rd nonsampled child	N	2	1887	1888
335	CHENRL4	D-Enrollment status of 4th nonsampled child	N	2	1889	1890
336	CHGRD1	D-Grade of 1st nonsampled child	N	2	1891	1892
337	CHGRD2	D-Grade of 2nd nonsampled child	N	2	1893	1894
338	CHGRD3	D-Grade of 3rd nonsampled child	N	2	1895	1896
339	CHGRD4	D-Grade of 4th nonsampled child	N	2	1897	1898
340	EPSU	PSU FOR TAYLOR SERIES VAR EST	N	4	1899	1902
341	ESTRATUM	STRATUM FOR TAYLOR SERIES VAR EST	N	1	1903	1903
342	UPW	PERSON - LEVEL BASE WEIGHT	N	16	1904	1919
343	HBW	HOUSEHOLD-LEVEL BASE WEIGHT	N	16	1920	1935
344	SNIAF	SCREENER NON-INTERVIEW ADJUSTMENT FACTOR	N	16	1936	1951
345	HHW	FINAL HOUSEHOLD-LEVEL BASE WEIGHT	N	16	1952	1967
346	FEWT	FINAL INTV WEIGHT	N	16	1968	1983
347	FEWT1	FINAL INTV REPLICATE WEIGHT, FEWT1	N	16	1984	1999
348	FEWT2	FINAL INTV REPLICATE WEIGHT, FEWT2	N	16	2000	2015
349	FEWT3	FINAL INTV REPLICATE WEIGHT, FEWT3	N	16	2016	2031
350	FEWT4	FINAL INTV REPLICATE WEIGHT, FEWT4	N	16	2032	2047
351	FEWT5	FINAL INTV REPLICATE WEIGHT, FEWT5	N	16	2048	2063
352	FEWT6	FINAL INTV REPLICATE WEIGHT, FEWT6	N	16	2064	2079
353	FEWT7	FINAL INTV REPLICATE WEIGHT, FEWT7	N	16	2080	2095
354	FEWT8	FINAL INTV REPLICATE WEIGHT, FEWT8	N	16	2096	2111
355	FEWT9	FINAL INTV REPLICATE WEIGHT, FEWT9	N	16	2112	2127
356	FEWT10	FINAL INTV REPLICATE WEIGHT, FEWT10	N	16	2128	2143
357	FEWT11	FINAL INTV REPLICATE WEIGHT, FEWT11	N	16	2144	2159
358	FEWT12	FINAL INTV REPLICATE WEIGHT, FEWT12	N	16	2160	2175
359	FEWT13	FINAL INTV REPLICATE WEIGHT, FEWT13	N	16	2176	2191
360	FEWT14	FINAL INTV REPLICATE WEIGHT, FEWT14	N	16	2192	2207
361	FEWT15	FINAL INTV REPLICATE WEIGHT, FEWT15	N	16	2208	2223
362	FEWT16	FINAL INTV REPLICATE WEIGHT, FEWT16	N	16	2224	2239
363	FEWT17	FINAL INTV REPLICATE WEIGHT, FEWT17	N	16	2240	2255
364	FEWT18	FINAL INTV REPLICATE WEIGHT, FEWT18	N	16	2256	2271
365	FEWT19	FINAL INTV REPLICATE WEIGHT, FEWT19	N	16	2272	2287
366	FEWT20	FINAL INTV REPLICATE WEIGHT, FEWT20	N	16	2288	2303
367	FEWT21	FINAL INTV REPLICATE WEIGHT, FEWT21	N	16	2304	2319
368	FEWT22	FINAL INTV REPLICATE WEIGHT, FEWT22	N	16	2320	2335
369	FEWT23	FINAL INTV REPLICATE WEIGHT, FEWT23	N	16	2336	2351

See note at end of table.

Table B-1. Restricted-Use Data file Layout in Position Order, ECPP:2019

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
370	FEWT24	FINAL INTV REPLICATE WEIGHT, FEWT24	N	16	2352	2367
371	FEWT25	FINAL INTV REPLICATE WEIGHT, FEWT25	N	16	2368	2383
372	FEWT26	FINAL INTV REPLICATE WEIGHT, FEWT26	N	16	2384	2399
373	FEWT27	FINAL INTV REPLICATE WEIGHT, FEWT27	N	16	2400	2415
374	FEWT28	FINAL INTV REPLICATE WEIGHT, FEWT28	N	16	2416	2431
375	FEWT29	FINAL INTV REPLICATE WEIGHT, FEWT29	N	16	2432	2447
376	FEWT30	FINAL INTV REPLICATE WEIGHT, FEWT30	N	16	2448	2463
377	FEWT31	FINAL INTV REPLICATE WEIGHT, FEWT31	N	16	2464	2479
378	FEWT32	FINAL INTV REPLICATE WEIGHT, FEWT32	N	16	2480	2495
379	FEWT33	FINAL INTV REPLICATE WEIGHT, FEWT33	N	16	2496	2511
380	FEWT34	FINAL INTV REPLICATE WEIGHT, FEWT34	N	16	2512	2527
381	FEWT35	FINAL INTV REPLICATE WEIGHT, FEWT35	N	16	2528	2543
382	FEWT36	FINAL INTV REPLICATE WEIGHT, FEWT36	N	16	2544	2559
383	FEWT37	FINAL INTV REPLICATE WEIGHT, FEWT37	N	16	2560	2575
384	FEWT38	FINAL INTV REPLICATE WEIGHT, FEWT38	N	16	2576	2591
385	FEWT39	FINAL INTV REPLICATE WEIGHT, FEWT39	N	16	2592	2607
386	FEWT40	FINAL INTV REPLICATE WEIGHT, FEWT40	N	16	2608	2623
387	FEWT41	FINAL INTV REPLICATE WEIGHT, FEWT41	N	16	2624	2639
388	FEWT42	FINAL INTV REPLICATE WEIGHT, FEWT42	N	16	2640	2655
389	FEWT43	FINAL INTV REPLICATE WEIGHT, FEWT43	N	16	2656	2671
390	FEWT44	FINAL INTV REPLICATE WEIGHT, FEWT44	N	16	2672	2687
391	FEWT45	FINAL INTV REPLICATE WEIGHT, FEWT45	N	16	2688	2703
392	FEWT46	FINAL INTV REPLICATE WEIGHT, FEWT46	N	16	2704	2719
393	FEWT47	FINAL INTV REPLICATE WEIGHT, FEWT47	N	16	2720	2735
394	FEWT48	FINAL INTV REPLICATE WEIGHT, FEWT48	N	16	2736	2751
395	FEWT49	FINAL INTV REPLICATE WEIGHT, FEWT49	N	16	2752	2767
396	FEWT50	FINAL INTV REPLICATE WEIGHT, FEWT50	N	16	2768	2783
397	FEWT51	FINAL INTV REPLICATE WEIGHT, FEWT51	N	16	2784	2799
398	FEWT52	FINAL INTV REPLICATE WEIGHT, FEWT52	N	16	2800	2815
399	FEWT53	FINAL INTV REPLICATE WEIGHT, FEWT53	N	16	2816	2831
400	FEWT54	FINAL INTV REPLICATE WEIGHT, FEWT54	N	16	2832	2847
401	FEWT55	FINAL INTV REPLICATE WEIGHT, FEWT55	N	16	2848	2863
402	FEWT56	FINAL INTV REPLICATE WEIGHT, FEWT56	N	16	2864	2879
403	FEWT57	FINAL INTV REPLICATE WEIGHT, FEWT57	N	16	2880	2895
404	FEWT58	FINAL INTV REPLICATE WEIGHT, FEWT58	N	16	2896	2911
405	FEWT59	FINAL INTV REPLICATE WEIGHT, FEWT59	N	16	2912	2927
406	FEWT60	FINAL INTV REPLICATE WEIGHT, FEWT60	N	16	2928	2943
407	FEWT61	FINAL INTV REPLICATE WEIGHT, FEWT61	N	16	2944	2959
408	FEWT62	FINAL INTV REPLICATE WEIGHT, FEWT62	N	16	2960	2975
409	FEWT63	FINAL INTV REPLICATE WEIGHT, FEWT63	N	16	2976	2991
410	FEWT64	FINAL INTV REPLICATE WEIGHT, FEWT64	N	16	2992	3007
411	FEWT65	FINAL INTV REPLICATE WEIGHT, FEWT65	N	16	3008	3023
412	FEWT66	FINAL INTV REPLICATE WEIGHT, FEWT66	N	16	3024	3039
413	FEWT67	FINAL INTV REPLICATE WEIGHT, FEWT67	N	16	3040	3055
414	FEWT68	FINAL INTV REPLICATE WEIGHT, FEWT68	N	16	3056	3071
415	FEWT69	FINAL INTV REPLICATE WEIGHT, FEWT69	N	16	3072	3087
416	FEWT70	FINAL INTV REPLICATE WEIGHT, FEWT70	N	16	3088	3103
417	FEWT71	FINAL INTV REPLICATE WEIGHT, FEWT71	N	16	3104	3119
418	FEWT72	FINAL INTV REPLICATE WEIGHT, FEWT72	N	16	3120	3135
419	FEWT73	FINAL INTV REPLICATE WEIGHT, FEWT73	N	16	3136	3151
420	FEWT74	FINAL INTV REPLICATE WEIGHT, FEWT74	N	16	3152	3167
421	FEWT75	FINAL INTV REPLICATE WEIGHT, FEWT75	N	16	3168	3183
422	FEWT76	FINAL INTV REPLICATE WEIGHT, FEWT76	N	16	3184	3199
423	FEWT77	FINAL INTV REPLICATE WEIGHT, FEWT77	N	16	3200	3215
424	FEWT78	FINAL INTV REPLICATE WEIGHT, FEWT78	N	16	3216	3231
425	FEWT79	FINAL INTV REPLICATE WEIGHT, FEWT79	N	16	3232	3247
426	FEWT80	FINAL INTV REPLICATE WEIGHT, FEWT80	N	16	3248	3263
427	F_RCNOW	Imputation flag for RCNOW	N	1	3264	3264
428	F_RCWEEK	Imputation flag for RCWEEK	N	2	3265	3266
429	F_RCTYPE	Imputation flag for RCTYPE	N	2	3267	3268
430	F_RCAGE	Imputation flag for RCAGE	N	2	3269	3270
431	F_RCPLACE	Imputation flag for RCPLACE	N	2	3271	3272

See note at end of table.

Table B-1. Restricted-Use Data file Layout in Position Order, ECPP:2019

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
432	F_RCTIME	Imputation flag for RCTIME	N	2	3273	3274
433	F_RCDAYS	Imputation flag for RCDAYS	N	2	3275	3276
434	F_RCHRS	Imputation flag for RCHRS	N	2	3277	3278
435	F_RCCVRWK	Imputation flag for RCCVRWK	N	2	3279	3280
436	F_RCSTRTY	Imputation flag for RCSTRTY	N	2	3281	3282
437	F_RCSTRTM	Imputation flag for RCSTRTM	N	2	3283	3284
438	F_RCSPEAK	Imputation flag for RCSPEAK	N	2	3285	3286
439	F_RCSKNFV	Imputation flag for RCSKNFV	N	2	3287	3288
440	F_RCSKFV	Imputation flag for RCSKFV	N	2	3289	3290
441	F_RCOTCH	Imputation flag for RCOTCH	N	2	3291	3292
442	F_RCFEE	Imputation flag for RCFEE	N	2	3293	3294
443	F_RCREL	Imputation flag for RCREL	N	2	3295	3296
444	F_RCTANF	Imputation flag for RCTANF	N	2	3297	3298
445	F_RCSSAC	Imputation flag for RCSSAC	N	2	3299	3300
446	F_RCEMPL	Imputation flag for RCEMPL	N	2	3301	3302
447	F_RCOTHER	Imputation flag for RCOTHER	N	2	3303	3304
448	F_RCCOST	Imputation flag for RCCOST	N	2	3305	3306
449	F_RCUNIT	Imputation flag for RCUNIT	N	2	3307	3308
450	F_RCCSTHNX	Imputation flag for RCCSTHNX	N	2	3309	3310
451	F_RCOTHC	Imputation flag for RCOTHC	N	2	3311	3312
452	F_RCTLHR	Imputation flag for RCTLHR	N	2	3313	3314
453	F_NCNOW	Imputation flag for NCNOW	N	1	3315	3315
454	F_NCWEEK	Imputation flag for NCWEEK	N	2	3316	3317
455	F_NCINHH	Imputation flag for NCINHH	N	2	3318	3319
456	F_NCPLACE	Imputation flag for NCPLACE	N	2	3320	3321
457	F_NCTIME	Imputation flag for NCTIME	N	2	3322	3323
458	F_NCDAYS	Imputation flag for NCDAYS	N	2	3324	3325
459	F_NCHRS	Imputation flag for NCHRS	N	2	3326	3327
460	F_NCCVRWK	Imputation flag for NCCVRWK	N	2	3328	3329
461	F_NCSTRTY	Imputation flag for NCSTRTY	N	2	3330	3331
462	F_NCSTRTM	Imputation flag for NCSTRTM	N	2	3332	3333
463	F_NCALKNE	Imputation flag for NCALKNE	N	2	3334	3335
464	F_NCAGE	Imputation flag for NCAGE	N	2	3336	3337
465	F_NCSPEAK	Imputation flag for NCSPEAK	N	2	3338	3339
466	F_NCSKNFV	Imputation flag for NCSKNFV	N	2	3340	3341
467	F_NCSKFV	Imputation flag for NCSKFV	N	2	3342	3343
468	F_NCOTCH	Imputation flag for NCOTCH	N	2	3344	3345
469	F_NCRCMDPT	Imputation flag for NCRCMDPT	N	2	3346	3347
470	F_NCFEE	Imputation flag for NCFEE	N	2	3348	3349
471	F_NCREL	Imputation flag for NCREL	N	2	3350	3351
472	F_NCTANF	Imputation flag for NCTANF	N	2	3352	3353
473	F_NCSSAC	Imputation flag for NCSSAC	N	2	3354	3355
474	F_NCEMPL	Imputation flag for NCEMPL	N	2	3356	3357
475	F_NCOTHER	Imputation flag for NCOTHER	N	2	3358	3359
476	F_NCCOST	Imputation flag for NCCOST	N	2	3360	3361
477	F_NCUNIT	Imputation flag for NCUNIT	N	2	3362	3363
478	F_NCCSTHNX	Imputation flag for NCCSTHNX	N	2	3364	3365
479	F_NCOTHC	Imputation flag for NCOTHC	N	2	3366	3367
480	F_NCTLHR	Imputation flag for NCTLHR	N	2	3368	3369
481	F_CPNNOWX	Imputation flag for CPNNOWX	N	1	3370	3370
482	F_CPWEEKX	Imputation flag for CPWEEKX	N	2	3371	3372
483	F_CPPLACEX	Imputation flag for CPPLACEX	N	2	3373	3374
484	F_CPSPRLG	Imputation flag for CPSPRLG	N	2	3375	3376
485	F_CPWORK	Imputation flag for CPWORK	N	2	3377	3378
486	F_CPHEADST	Imputation flag for CPHEADST	N	2	3379	3380
487	F_CPDAYS	Imputation flag for CPDAYS	N	2	3381	3382
488	F_CPHRS	Imputation flag for CPHRS	N	2	3383	3384
489	F_CPCVRWK	Imputation flag for CPCVRWK	N	2	3385	3386
490	F_CPSTRTY	Imputation flag for CPSTRTY	N	2	3387	3388
491	F_CPSTRTM	Imputation flag for CPSTRTM	N	2	3389	3390
492	F_CPSPEAK	Imputation flag for CPSPEAK	N	2	3391	3392
493	F_CPTIME	Imputation flag for CPTIME	N	2	3393	3394

See note at end of table.

Table B-1. Restricted-Use Data file Layout in Position Order, ECPP:2019

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
494	F_CPRCMDPT	Imputation flag for CPRCMDPT	N	2	3395	3396
495	F_CPTEST	Imputation flag for CPTEST	N	2	3397	3398
496	F_CPPHYSE	Imputation flag for CPPHYSE	N	2	3399	3400
497	F_CPDENTA	Imputation flag for CPDENTA	N	2	3401	3402
498	F_CPDISAB	Imputation flag for CPDISAB	N	2	3403	3404
499	F_CPMEDAM	Imputation flag for CPMEDAM	N	2	3405	3406
500	F_CPSKNFV	Imputation flag for CPSKNFV	N	2	3407	3408
501	F_CPSKFV	Imputation flag for CPSKFV	N	2	3409	3410
502	F_CPFEE	Imputation flag for CPFEE	N	2	3411	3412
503	F_CPREL	Imputation flag for CPREL	N	2	3413	3414
504	F_CPTANF	Imputation flag for CPTANF	N	2	3415	3416
505	F_CPSSAC	Imputation flag for CPSSAC	N	2	3417	3418
506	F_CPEMPL	Imputation flag for CPEMPL	N	2	3419	3420
507	F_CPOTHER	Imputation flag for CPOTHER	N	2	3421	3422
508	F_CPCOST	Imputation flag for CPCOST	N	2	3423	3424
509	F_CPUNIT	Imputation flag for CPUNIT	N	2	3425	3426
510	F_CPCSTHNX	Imputation flag for CPCSTHNX	N	2	3427	3428
511	F_CPOTHX	Imputation flag for CPOTHX	N	2	3429	3430
512	F_CPTLHR	Imputation flag for CPTLHR	N	2	3431	3432
513	F_PCEVRHDX	Imputation flag for PCEVRHDX	N	1	3433	3433
514	F_MAINRESN	Imputation flag for MAINRESN	N	1	3434	3434
515	F_PPCHOIC	Imputation flag for PPCHOIC	N	1	3435	3435
516	F_CRSRCH	Imputation flag for CRSRCH	N	1	3436	3436
517	F_PPDIFCLT	Imputation flag for PPDIFCLT	N	2	3437	3438
518	F_WHYDIFCLT	Imputation flag for WHYDIFCLT	N	2	3439	3440
519	F_CCPY	Imputation flag for CCPY	N	2	3441	3442
520	F_DCLOA	Imputation flag for DCLOA	N	2	3443	3444
521	F_DCCOST	Imputation flag for DCOST	N	2	3445	3446
522	F_DRELY	Imputation flag for DRELY	N	2	3447	3448
523	F_DLERN	Imputation flag for DLERN	N	2	3449	3450
524	F_DCHIL	Imputation flag for DCHIL	N	2	3451	3452
525	F_DHROP	Imputation flag for DHROP	N	2	3453	3454
526	F_DNBGRP	Imputation flag for DNBGRP	N	2	3455	3456
527	F_DRTWEB	Imputation flag for DRTWEB	N	2	3457	3458
528	F_DRECFAM	Imputation flag for DRECFAM	N	2	3459	3460
529	F_DQUAL	Imputation flag for DQUAL	N	2	3461	3462
530	F_DRELOR	Imputation flag for DRELOR	N	2	3463	3464
531	F_HABOOKS	Imputation flag for HABOOKS	N	1	3465	3465
532	F_FOREADTOX	Imputation flag for FOREADTOX	N	1	3466	3466
533	F_FORDDAYX	Imputation flag for FORDDAYX	N	2	3467	3468
534	F_FOSTORYX	Imputation flag for FOSTORYX	N	1	3469	3469
535	F_FOWORDSX	Imputation flag for FOWORDSX	N	1	3470	3470
536	F_FOSANG	Imputation flag for FOSANG	N	1	3471	3471
537	F_FOCRAFTSX	Imputation flag for FOCRAFTSX	N	1	3472	3472
538	F_FODINNERX	Imputation flag for FODINNERX	N	1	3473	3473
539	F_FOLIBRAY	Imputation flag for FOLIBRAY	N	1	3474	3474
540	F_FOBOOKST	Imputation flag for FOBOOKST	N	1	3475	3475
541	F_DPIAGE	Imputation flag for DPIAGE	N	1	3476	3476
542	F_DPLETTER	Imputation flag for DPLETTER	N	2	3477	3478
543	F_DPNAME	Imputation flag for DPNAME	N	2	3479	3480
544	F_DPLTRSND	Imputation flag for DPLTRSND	N	2	3481	3482
545	F_DPEXPLN	Imputation flag for DPEXPLN	N	2	3483	3484
546	F_DPCOUNT	Imputation flag for DPCOUNT	N	2	3485	3486
547	F_DPSHAPE	Imputation flag for DPSHAPE	N	2	3487	3488
548	F_HDHEALTH	Imputation flag for HDHEALTH	N	1	3489	3489
549	F_HDINTDIS	Imputation flag for HDINTDIS	N	1	3490	3490
550	F_HDSPEECHX	Imputation flag for HDSPEECHX	N	1	3491	3491
551	F_HDDISTRBX	Imputation flag for HDDISTRBX	N	1	3492	3492
552	F_HDDEAFIMX	Imputation flag for HDDEAFIMX	N	1	3493	3493
553	F_HDBLINDX	Imputation flag for HDBLINDX	N	1	3494	3494
554	F_HDORTHOX	Imputation flag for HDORTHOX	N	1	3495	3495
555	F_HDAUTISMX	Imputation flag for HDAUTISMX	N	1	3496	3496

See note at end of table.

Table B-1. Restricted-Use Data file Layout in Position Order, ECPP:2019

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
556	F_HDPDDX	Imputation flag for HDPDDX	N	1	3497	3497
557	F_HDADDX	Imputation flag for HDADDX	N	1	3498	3498
558	F_HDLEARNX	Imputation flag for HDLEARNX	N	1	3499	3499
559	F_HDDELAYX	Imputation flag for HDDELAYX	N	1	3500	3500
560	F_HDTRBRAIN	Imputation flag for HDTRBRAIN	N	1	3501	3501
561	F_HDOTHERX	Imputation flag for HDOTHERX	N	1	3502	3502
562	F_HDDLRSK	Imputation flag for HDDLRSK	N	1	3503	3503
563	F_HDIFSPIEP	Imputation flag for HDIFSPIEP	N	2	3504	3505
564	F_HDCOMMUX	Imputation flag for HDCOMMUX	N	2	3506	3507
565	F_HDSPCLED	Imputation flag for HDSPCLED	N	2	3508	3509
566	F_HDLEARN	Imputation flag for HDLEARN	N	2	3510	3511
567	F_HDPLAY	Imputation flag for HDPLAY	N	2	3512	3513
568	F_HDOUT	Imputation flag for HDOUT	N	2	3514	3515
569	F_HDFRND	Imputation flag for HDFRND	N	2	3516	3517
570	F_HDCHDCARE	Imputation flag for HDCHDCARE	N	2	3518	3519
571	F_CDOBMM	Imputation flag for CDOBMM	N	1	3520	3520
572	F_CDOBY	Imputation flag for CDOBY	N	1	3521	3521
573	F_CPLCBRTH	Imputation flag for CPLCBRTH	N	1	3522	3522
574	F_CMOVEAGE	Imputation flag for CMOVEAGE	N	2	3523	3524
575	F_CHISPAN	Imputation flag for CHISPAN	N	1	3525	3525
576	F_CAMIND	Imputation flag for CAMIND	N	1	3526	3526
577	F_CASIAN	Imputation flag for CASIAN	N	1	3527	3527
578	F_CBLACK	Imputation flag for CBLACK	N	1	3528	3528
579	F_CPACI	Imputation flag for CPACI	N	1	3529	3529
580	F_CWHITE	Imputation flag for CWHITE	N	1	3530	3530
581	F_CHISPRM	Imputation flag for CHISPRM	N	1	3531	3531
582	F_CSEX	Imputation flag for CSEX	N	1	3532	3532
583	F_CLIVYN	Imputation flag for CLIVYN	N	1	3533	3533
584	F_CLIVELSWX	Imputation flag for CLIVELSWX	N	2	3534	3535
585	F_CSPEAKX	Imputation flag for CSPEAKX	N	1	3536	3536
586	F_CENGLPRG	Imputation flag for CENGLPRG	N	2	3537	3538
587	F_HHTOTALXX	Imputation flag for HHTOTALXX	N	1	3539	3539
588	F_HHBROX	Imputation flag for HHBROX	N	1	3540	3540
589	F_HHSISSX	Imputation flag for HHSISSX	N	1	3541	3541
590	F_HHMOM	Imputation flag for HHMOM	N	1	3542	3542
591	F_HHDAD	Imputation flag for HHDAD	N	1	3543	3543
592	F_HHAUNTSX	Imputation flag for HHAUNTSX	N	1	3544	3544
593	F_HHUNCLSX	Imputation flag for HHUNCLSX	N	1	3545	3545
594	F_HHGMAXX	Imputation flag for HHGMAXX	N	1	3546	3546
595	F_HHGPASX	Imputation flag for HHGPASX	N	1	3547	3547
596	F_HHCSNSX	Imputation flag for HHCSNSX	N	1	3548	3548
597	F_HHPRTNRSX	Imputation flag for HHPRTNRSX	N	1	3549	3549
598	F_HHORELSX	Imputation flag for HHORELSX	N	1	3550	3550
599	F_HHONRELSX	Imputation flag for HHONRELSX	N	1	3551	3551
600	F_RELATION	Imputation flag for RELATION	N	1	3552	3552
601	F_HHENGLISH	Imputation flag for HHENGLISH	N	1	3553	3553
602	F_HHSPANISH	Imputation flag for HHSPANISH	N	1	3554	3554
603	F_HHFRENCH	Imputation flag for HHFRENCH	N	1	3555	3555
604	F_HHCHINESE	Imputation flag for HHCHINESE	N	1	3556	3556
605	F_HHOTHLANG	Imputation flag for HHOTHLANG	N	1	3557	3557
606	F_PIREL	Imputation flag for PIREL	N	1	3558	3558
607	F_PISEX	Imputation flag for PISEX	N	1	3559	3559
608	F_PIMRSTA	Imputation flag for PIMRSTA	N	1	3560	3560
609	F_PIBFGF	Imputation flag for PIBFGF	N	2	3561	3562
610	F_PIFRLNG	Imputation flag for PIFRLNG	N	1	3563	3563
611	F_PISPEAK	Imputation flag for PISPEAK	N	2	3564	3565
612	F_PIPLCBRTH	Imputation flag for PIPLCBRTH	N	1	3566	3566
613	F_PIAGEMV	Imputation flag for PIAGEMV	N	2	3567	3568
614	F_PIHISPAN	Imputation flag for PIHISPAN	N	1	3569	3569
615	F_PIAMIND	Imputation flag for PIAMIND	N	1	3570	3570
616	F_PIASIAN	Imputation flag for PIASIAN	N	1	3571	3571
617	F_PIBLACK	Imputation flag for PIBLACK	N	1	3572	3572

See note at end of table.

Table B-1. Restricted-Use Data file Layout in Position Order, ECPP:2019

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
618	F_PIPACI	Imputation flag for PIPACI	N	1	3573	3573
619	F_P1WHITE	Imputation flag for P1WHITE	N	1	3574	3574
620	F_PIHISPRM	Imputation flag for PIHISPRM	N	1	3575	3575
621	F_PIEDUC	Imputation flag for PIEDUC	N	1	3576	3576
622	F_PIENRL	Imputation flag for PIENRL	N	1	3577	3577
623	F_PIEMPL	Imputation flag for PIEMPL	N	1	3578	3578
624	F_PIHRSWK	Imputation flag for PIHRSWK	N	2	3579	3580
625	F_PILKWRK	Imputation flag for PILKWRK	N	2	3581	3582
626	F_PIMTHSWRK	Imputation flag for PIMTHSWRK	N	1	3583	3583
627	F_P1AGE	Imputation flag for P1AGE	N	1	3584	3584
628	F_P2GUARD	Imputation flag for P2GUARD	N	1	3585	3585
629	F_P2REL	Imputation flag for P2REL	N	2	3586	3587
630	F_P2SEX	Imputation flag for P2SEX	N	2	3588	3589
631	F_P2MRSTA	Imputation flag for P2MRSTA	N	2	3590	3591
632	F_P2BFGF	Imputation flag for P2BFGF	N	2	3592	3593
633	F_P2FRLNG	Imputation flag for P2FRLNG	N	2	3594	3595
634	F_P2SPEAK	Imputation flag for P2SPEAK	N	2	3596	3597
635	F_P2PLCBRTH	Imputation flag for P2PLCBRTH	N	2	3598	3599
636	F_P2AGEMV	Imputation flag for P2AGEMV	N	2	3600	3601
637	F_P2HISPAN	Imputation flag for P2HISPAN	N	2	3602	3603
638	F_P2AMIND	Imputation flag for P2AMIND	N	2	3604	3605
639	F_P2ASIAN	Imputation flag for P2ASIAN	N	2	3606	3607
640	F_P2BLACK	Imputation flag for P2BLACK	N	2	3608	3609
641	F_P2PACI	Imputation flag for P2PACI	N	2	3610	3611
642	F_P2WHITE	Imputation flag for P2WHITE	N	2	3612	3613
643	F_P2HISPRM	Imputation flag for P2HISPRM	N	2	3614	3615
644	F_P2EDUC	Imputation flag for P2EDUC	N	2	3616	3617
645	F_P2ENRL	Imputation flag for P2ENRL	N	2	3618	3619
646	F_P2EMPL	Imputation flag for P2EMPL	N	2	3620	3621
647	F_P2HRSWK	Imputation flag for P2HRSWK	N	2	3622	3623
648	F_P2LKWRK	Imputation flag for P2LKWRK	N	2	3624	3625
649	F_P2MTHSWRK	Imputation flag for P2MTHSWRK	N	2	3626	3627
650	F_P2AGE	Imputation flag for P2AGE	N	2	3628	3629
651	F_HWELFTANST	Imputation flag for HWELFTANST	N	1	3630	3630
652	F_HWIC	Imputation flag for HWIC	N	1	3631	3631
653	F_HFOODST	Imputation flag for HFOODST	N	1	3632	3632
654	F_HMEDICAID	Imputation flag for HMEDICAID	N	1	3633	3633
655	F_HCHIP	Imputation flag for HCHIP	N	1	3634	3634
656	F_HSECN8	Imputation flag for HSECN8	N	1	3635	3635
657	F_TTLHHINC	Imputation flag for TTLHHINC	N	1	3636	3636
658	F_OWNRNTHB	Imputation flag for OWNRNTHB	N	1	3637	3637
659	F_HVINTSPHO	Imputation flag for HVINTSPHO	N	1	3638	3638
660	F_HVINTCOM	Imputation flag for HVINTCOM	N	1	3639	3639
661	F_CHLDNT	Imputation flag for CHLDNT	N	1	3640	3640
662	F_LRNCOMP	Imputation flag for LRNCOMP	N	2	3641	3642
663	F_LRNTAB	Imputation flag for LRNTAB	N	2	3643	3644
664	F_LRNCELL	Imputation flag for LRNCELL	N	2	3645	3646
665	F_HHUNID	Imputation flag for HHUNID	N	1	3647	3647
666	F_ZIPLOCL	Imputation flag for ZIPLOCL	N	1	3648	3648
667	F_RSTATE	Imputation flag for RSTATE	N	1	3649	3649
668	F_ZCTA	Imputation flag for ZCTA	N	1	3650	3650

SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Program Participation Survey of the 2019 National Household Education

Table B-2. Restricted-Use Data file Layout in Position Order, PFI:2019

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
1	BASMID	Unique child identifier	C	11	1	11
2	RCVDATE	Survey date	N	7	12	18
3	SID	NCES School ID	C	12	19	30
4	ALLGRADEX	1. Current grade	N	2	31	32
5	EDCPUB	2. Type of school - Public	N	1	33	33
6	EDCCAT	2. Type of school - Private catholic	N	1	34	34
7	EDCREL	2. Type of school - Private religious not catholic	N	1	35	35
8	EDCPRI	2. Type of school - Private not religious	N	1	36	36
9	EDCINTK12	2. Type of school - Full time online grade K through 12	N	1	37	37
10	EDCINTCOL	2. Type of school - Online college or university	N	1	38	38
11	EDCCOL	2. Type of school - Regular college or university	N	1	39	39
12	EDCHSFL	2. Type of school - Homeschooled	N	1	40	40
13	HOMESCHLX	4. Homeschooled for some classes or subjects	N	2	41	42
14	HMSCHARR	5. Homeschooling arrangement	N	2	43	44
15	HSCOOP	6. Homeschool instruction by homeschool group	N	2	45	46
16	HSWHOX	7. Person providing homeschool instruction	N	2	47	48
17	HSWHOOXS	7. Person providing homeschool instruction (Other, specify)	C	38	49	86
18	HSTUTOR	8. Homeschool instruction by tutor	N	2	87	88
19	HSINTNET	9. Internet homeschool instruction	N	2	89	90
20	ONLNAP	10. Online, virtual or cyber enrollment - Advanced placement	N	2	91	92
21	ONLNSC	10. Online, virtual or cyber enrollment - Specialized course	N	2	93	94
22	ONLNEH	10. Online, virtual or cyber enrollment - Extra help	N	2	95	96
23	ONLNLS	10. Online, virtual or cyber enrollment - Learning style	N	2	97	98
24	ONLNPR	10. Online, virtual or cyber enrollment - Prefers online/virtual	N	2	99	100
25	ONLNHS	10. Online, virtual or cyber enrollment - Began homeschooling to enroll in	N	2	101	102
26	ONLNOTH	10. Online, virtual or cyber enrollment - Another reason	N	2	103	104
27	ONLBULLY	10. Online, virtual or cyber enrollment - Bullying	N	2	105	106
28	ONLHLTH	10. Online, virtual or cyber enrollment - Physical or mental health problem	N	2	107	108
29	ONLSPNDS	10. Online, virtual or cyber enrollment - Other special needs	N	2	109	110
30	ONLAVDPUB	10. Online, virtual or cyber enrollment - Concerns about public school	N	2	111	112
31	ONLNOTHOS	10. Online, virtual or cyber enrollment - Another reason, specify	C	187	113	299
32	HSIMPONLI	11. Most important reason for online, virtual or cyber enrollment	N	2	300	301
33	HSINTPUB	12. Homeschool online instruction provided by - Local public school	N	2	302	303
34	HSINTPRI	12. Homeschool online instruction provided by - Private school	N	2	304	305
35	HSINTCOL	12. Homeschool online instruction provided by - College	N	2	306	307
36	HSINTVRT	12. Homeschool online instruction provided by - Online academy instruction	N	2	308	309
37	HSINTCMP	12. Homeschool online instruction provided by - Courses purchased online	N	2	310	311
38	HSINTK12	12. Homeschool online instruction provided by - K-12 public or private school	N	2	312	313
39	HSINTIND	12. Homeschool online instruction provided by - Independent instructor	N	2	314	315
40	HSINTOH	12. Homeschool online instruction provided by - Someplace else	N	2	316	317
41	HSINTHOS	12. Homeschool online instruction provided by - Someplace else, specify	C	71	318	388
42	HSINTNUM	13. Total online courses	N	2	389	390
43	HSINTFEE	14. Total tuition for online courses	N	5	391	395
44	HSINTHRS	15. Homeschooling hours spent online	N	2	396	397
45	HSSTYL	16. Homeschool teaching style	N	2	398	399
46	HSKACTIV	17. Participated in activities while homeschooled	N	2	400	401
47	HSINTLIB	18. Online, virtual or cyber resources - Public library resource	N	2	402	403
48	HSINTCAT	18. Online, virtual or cyber resources - Specialized provider of homeschooling materials	N	2	404	405
49	HSINTREL	18. Online, virtual or cyber resources - Affiliated with a particular religion	N	2	406	407
50	HSINTSCH	18. Online, virtual or cyber resources - Local public school or school district	N	2	408	409
51	HSINTFRWB	18. Online, virtual or cyber resources - Free website	N	2	410	411
52	HSINTWEB	18. Online, virtual or cyber resources - Cyber educational resources	N	2	412	413
53	HSINTOTH	18. Online, virtual or cyber resources - Other sources	N	2	414	415
54	HSINTOTHOS	18. Online, virtual or cyber resources - Other sources, specify	C	79	416	494
55	HSCLIBRX	19. Homeschool physical curriculum source - Library	N	2	495	496
56	HSCHSPUBX	19. Homeschool physical curriculum source - Homeschool catalog	N	2	497	498
57	HSCHSRELX	19. Homeschool physical curriculum source - Catalog affiliation	N	2	499	500
58	HSCPUBLX	19. Homeschool physical curriculum source - Public school or district	N	2	501	502
59	HSCCNVX	19. Homeschool physical curriculum source - Homeschooling convention	N	2	503	504
60	HSCVETX	19. Homeschool physical curriculum source - Curriculum swap or exchange	N	2	505	506
61	HSCFMLY	19. Homeschool physical curriculum source - Other homeschool families	N	2	507	508
62	HSCOTH	19. Homeschool physical curriculum source - Other source	N	2	509	510
63	HSCOTHOS	19. Homeschool physical curriculum source - Other source, specify	C	182	511	692

See note at end of table.

Table B-2. Restricted-Use Data file Layout in Position Order, PFI:2019

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
64	HSCOURS	20. Courses online or in person	N	2	693	694
65	HOMEKX	21. Homeschooled in kindergarten	N	2	695	696
66	HOME1	21. Homeschooled in first grade	N	2	697	698
67	HOME2	21. Homeschooled in second grade	N	2	699	700
68	HOME3	21. Homeschooled in third grade	N	2	701	702
69	HOME4	21. Homeschooled in fourth grade	N	2	703	704
70	HOME5	21. Homeschooled in fifth grade	N	2	705	706
71	HOME6	21. Homeschooled in sixth grade	N	2	707	708
72	HOME7	21. Homeschooled in seventh grade	N	2	709	710
73	HOME8	21. Homeschooled in eighth grade	N	2	711	712
74	HOME9	21. Homeschooled in ninth grade	N	2	713	714
75	HOME10	21. Homeschooled in tenth grade	N	2	715	716
76	HOME11	21. Homeschooled in eleventh grade	N	2	717	718
77	HOME12	21. Homeschooled in twelfth grade	N	2	719	720
78	HSSAFETYX	22. Reason to homeschool - School environment	N	2	721	722
79	HSDISSATX	22. Reason to homeschool - Dissatisfied with instruction	N	2	723	724
80	HSRELGN	22. Reason to homeschool - Religious instruction	N	2	725	726
81	HSMORAL	22. Reason to homeschool - Moral instruction	N	2	727	728
82	HSDISABLX	22. Reason to homeschool - Health problem	N	2	729	730
83	HSILLX	22. Reason to homeschool - Temporary illness	N	2	731	732
84	HSSPCLNDX	22. Reason to homeschool - Special needs	N	2	733	734
85	HSALTX	22. Reason to homeschool - Nontraditional education	N	2	735	736
86	HSFMLY	22. Reason to homeschool - Emphasize family life together	N	2	737	738
87	HSOTHERX	22. Reason to homeschool - Other	N	2	739	740
88	HSBULLY	22. Reason to homeschool - Bullying	N	2	741	742
89	HSOTHERXOS	22. Reason to homeschool (Other, specify)	C	351	743	1093
90	HSMOSTX	23. Most important reason to homeschool	N	2	1094	1095
91	HSSUBJ1	24. 1st home instruction subject area	N	3	1096	1098
92	HSSUBJ2	24. 2nd home instruction subject area	N	3	1099	1101
93	HSSUBJ3	24. 3rd home instruction subject area	N	3	1102	1104
94	HSSUBJ4	24. 4th home instruction subject area	N	3	1105	1107
95	HSSUBJ5	24. 5th home instruction subject area	N	3	1108	1110
96	HSSUBJ6	24. 6th home instruction subject area	N	3	1111	1113
97	HSSUBJ7	24. 7th home instruction subject area	N	3	1114	1116
98	HSSUBJ8	24. 8th home instruction subject area	N	3	1117	1119
99	HSSUBJ9	24. 9th home instruction subject area	N	3	1120	1122
100	HSSUBJ10	24. 10th home instruction subject area	N	3	1123	1125
101	HSSUBJ1_W	24. 1st home instruction subject area - write-in	C	70	1126	1195
102	HSSUBJ2_W	24. 2nd home instruction subject area - write-in	C	49	1196	1244
103	HSSUBJ3_W	24. 3rd home instruction subject area - write-in	C	37	1245	1281
104	HSSUBJ4_W	24. 4th home instruction subject area - write-in	C	51	1282	1332
105	HSSUBJ5_W	24. 5th home instruction subject area - write-in	C	38	1333	1370
106	HSSUBJ6_W	24. 6th home instruction subject area - write-in	C	38	1371	1408
107	HSSUBJ7_W	24. 7th home instruction subject area - write-in	C	46	1409	1454
108	HSSUBJ8_W	24. 8th home instruction subject area - write-in	C	48	1455	1502
109	HSSUBJ9_W	24. 9th home instruction subject area - write-in	C	29	1503	1531
110	HSSUBJ10_W	24. 10th home instruction subject area - write-in	C	38	1532	1569
111	HSASSNX	25. Participate in homeschool activities	N	2	1570	1571
112	HSFREQX	26. Participate in homeschool activities - times	N	2	1572	1573
113	HSNATL	27. Member of homeschool organization	N	2	1574	1575
114	HSMLTY	28. Military family that frequently relocates	N	2	1576	1577
115	HSENRL	29. Homeschooled child enrolled in school	N	2	1578	1579
116	DISTASSI	31. District-assigned school	N	2	1580	1581
117	SCHRTSCHL	32. Charter school	N	2	1582	1583
118	SCHLMAGNET	33. Magnet school	N	2	1584	1585
119	SNEIGHBRX	34. Moved to attend school	N	2	1586	1587
120	SCCHOICE	35. Choice in school attendance	N	2	1588	1589
121	SPUBCHOIX	36. District allows school choice	N	2	1590	1591
122	SCONSIDR	37. Other schools considered	N	2	1592	1593
123	LOCALE	38. Reason for choosing school - Convenient location	N	2	1594	1595
124	SCHLSAFETY	38. Reason for choosing school - Safety	N	2	1596	1597
125	SCHLSTFQUALITY	38. Reason for choosing school - Quality of staff	N	2	1598	1599
126	AVAILCOURSE	38. Reason for choosing school - Curriculum focus	N	2	1600	1601

See note at end of table.

Table B-2. Restricted-Use Data file Layout in Position Order, PFI:2019

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
127	XTRACURRIC	38. Reason for choosing school - Extracurricular options	N	2	1602	1603
128	STUDNTCHAR	38. Reason for choosing school - Student body characteristics	N	2	1604	1605
129	STUDNTPERFORM	38. Reason for choosing school - Academic performance of student	N	2	1606	1607
130	RELIGSOR	38. Reason for choosing school - Religious orientation	N	2	1608	1609
131	SPECALEDSERVS	38. Reason for choosing school - Quality or availability of special education	N	2	1610	1611
132	SPECALFACILTS	38. Reason for choosing school - Special facilities	N	2	1612	1613
133	CLSSIZE	38. Reason for choosing school - Number of students in class	N	2	1614	1615
134	SCHLCOST	38. Reason for choosing school - Cost	N	2	1616	1617
135	FINDSCHL	39. Finding school - In my neighborhood	N	2	1618	1619
136	FINDFRND	39. Finding school - Friend	N	2	1620	1621
137	FINDFAM	39. Finding school - Family member	N	2	1622	1623
138	FINDNEWS	39. Finding school - Newspaper or magazine articles	N	2	1624	1625
139	FINDRPT	39. Finding school - State report cards	N	2	1626	1627
140	FINDWEB	39. Finding school - School ratings website	N	2	1628	1629
141	FINDADS	39. Finding school - Advertisements	N	2	1630	1631
142	FINDFLY	39. Finding school - Flier	N	2	1632	1633
143	FINDSTF	39. Finding school - School or district staff	N	2	1634	1635
144	FINDCHRC	39. Finding school - Church	N	2	1636	1637
145	FINDOTH	39. Finding school - Other reason	N	2	1638	1639
146	FINDOTHOS	39. Finding school - Other reason, specify	C	339	1640	1978
147	SISTCHOI	40. First choice school	N	2	1979	1980
148	SSAMSC	41. Same school since beginning of school year	N	2	1981	1982
149	SCHLHRSWK	42. Hours attend school each week	N	2	1983	1984
150	EINTNET	43. Child enrolled in online, virtual or cyber courses	N	2	1985	1986
151	ADVCCRSE	44. Online, virtual or cyber enrollment - Advanced Placement or college courses	N	2	1987	1988
152	SPCLCRSE	44. Online, virtual or cyber enrollment - Specialized courses	N	2	1989	1990
153	MKUPCRSE	44. Online, virtual or cyber enrollment - Make up course	N	2	1991	1992
154	ADDCRSE	44. Online, virtual or cyber enrollment - Earn additional credits	N	2	1993	1994
155	HELP	44. Online, virtual or cyber enrollment - Extra help in a course or subject	N	2	1995	1996
156	CONFLICT	44. Online, virtual or cyber enrollment - Schedule conflict with the in-person courses	N	2	1997	1998
157	DISABLX	44. Online, virtual or cyber enrollment - Physical or mental health problem	N	2	1999	2000
158	TEMPILL	44. Online, virtual or cyber enrollment - Temporary illness	N	2	2001	2002
159	SPCLND	44. Online, virtual or cyber enrollment - Other special needs	N	2	2003	2004
160	LRNSTYLE	44. Online, virtual or cyber enrollment - Learning style	N	2	2005	2006
161	NOCHOICE	44. Online, virtual or cyber enrollment - Was required	N	2	2007	2008
162	SCHLPLCE	44. Online, virtual or cyber enrollment - School placement in online course	N	2	2009	2010
163	ONLINEPREF	44. Online, virtual or cyber enrollment - Online course preference	N	2	2011	2012
164	ONLINEOTH	44. Online, virtual or cyber enrollment - Other reason	N	2	2013	2014
165	ONLINEOTHOS	44. Online, virtual or cyber enrollment - Other reason, specify	C	309	2015	2323
166	MOSTIMPT	45. Most important reason for online, virtual or cyber enrollment	N	2	2324	2325
167	SPBSCH	46. Online, virtual, or cyber instruction - Public school instruction	N	2	2326	2327
168	SPRIVT	46. Online, virtual, or cyber instruction - Private school instruction	N	2	2328	2329
169	SUNIVSCH	46. Online, virtual, or cyber instruction - Community college/university instruction	N	2	2330	2331
170	SCYBER	46. Online, virtual, or cyber instruction - Online academy instruction	N	2	2332	2333
171	SCOMPANY	46. Online, virtual, or cyber instruction - Courses purchased for instruction	N	2	2334	2335
172	SOTHRSCH	46. Online, virtual, or cyber instruction - Another K-12 public or private school	N	2	2336	2337
173	STUTR	46. Online, virtual, or cyber instruction - Independent instructor	N	2	2338	2339
174	SOTHSCH	46. Online, virtual, or cyber instruction - Instruction from someplace else	N	2	2340	2341
175	SOTHSCHOS	46. Online, virtual, or cyber instruction - Instruction from someplace else, specify	C	74	2342	2415
176	INTNUM	47. Number of online courses	N	2	2416	2417
177	SINSTFEE	48. Total tuition for online courses	N	5	2418	2422
178	INTHRS	49. Virtual/cyber instruction hours spent online	N	2	2423	2424
179	SEENJOY	50. Child enjoyment of school	N	2	2425	2426
180	SEGRADES	51. Child's grades	N	2	2427	2428
181	SEADPLCXX	52. Advanced placement enrollment	N	2	2429	2430
182	SEBEHAVX	53. Times contacted about behavior problems	N	2	2431	2432
183	SESCHWRK	53. Times contacted about problems with school work	N	2	2433	2434
184	SEGBEHAV	53. Times contacted about very good behavior	N	2	2435	2436
185	SEGWORK	53. Times contacted about very good school work	N	2	2437	2438
186	SEABSNT	54. Days absent	N	2	2439	2440
187	SEREPEAT	55. Whether grades repeated	N	2	2441	2442
188	SEREPTK	56. Which grades repeated - Kindergarten	N	2	2443	2444

See note at end of table.

Table B-2. Restricted-Use Data file Layout in Position Order, PFI:2019

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
189	SEREPT1	56. Which grades repeated - 1st grade	N	2	2445	2446
190	SEREPT2	56. Which grades repeated - 2nd grade	N	2	2447	2448
191	SEREPT3	56. Which grades repeated - 3rd grade	N	2	2449	2450
192	SEREPT4	56. Which grades repeated - 4th grade	N	2	2451	2452
193	SEREPT5	56. Which grades repeated - 5th grade	N	2	2453	2454
194	SEREPT6	56. Which grades repeated - 6th grade	N	2	2455	2456
195	SEREPT7	56. Which grades repeated - 7th grade	N	2	2457	2458
196	SEREPT8	56. Which grades repeated - 8th grade	N	2	2459	2460
197	SEREPT9	56. Which grades repeated - 9th grade	N	2	2461	2462
198	SEREPT10	56. Which grades repeated - 10th grade	N	2	2463	2464
199	SEREPT11	56. Which grades repeated - 11th grade	N	2	2465	2466
200	SEREPT12	56. Which grades repeated - 12th grade	N	2	2467	2468
201	SESUSOUT	57. Out of school suspension	N	2	2469	2470
202	SESUSPIN	57. In school suspension	N	2	2471	2472
203	SEEXPEL	57. Expelled	N	2	2473	2474
204	SEGRADEQ	58. Description of school work	N	2	2475	2476
205	FSPORTX	60. Participation in school activities - Attend a school event	N	2	2477	2478
206	FSVOL	60. Participation in school activities - Serve as a volunteer	N	2	2479	2480
207	FSMTNG	60. Participation in school activities - Attend a school meeting	N	2	2481	2482
208	FSPTMTNG	60. Participation in school activities - Attend a parent - teacher organization meeting	N	2	2483	2484
209	FSATCNFN	60. Participation in school activities - Attend parent - teacher conference	N	2	2485	2486
210	FSFUNDRS	60. Participation in school activities - Participate in fundraising	N	2	2487	2488
211	FSCOMMTE	60. Participation in school activities - Serve on school committee	N	2	2489	2490
212	FSCOUNSLR	60. Participation in school activities - Meet with guidance counselor	N	2	2491	2492
213	FSFREQ	61. Times participated in school meetings	N	2	2493	2494
214	FSNOTESX	62. School communication - Receive notes or emails	N	2	2495	2496
215	FSMEMO	62. School communication - Receive newsletters	N	2	2497	2498
216	FSPHONCHX	62. School communication - Receive phone calls	N	2	2499	2500
217	FSSPPERF	63. School provides child progress between report cards	N	2	2501	2502
218	FSSPHW	63. School provides information on homework help	N	2	2503	2504
219	FSSPCOUR	63. School provides information on class placement	N	2	2505	2506
220	FSSPROLE	63. School provides information on your expected role	N	2	2507	2508
221	FSSPCOLL	63. School provides information on college	N	2	2509	2510
222	FCCHOOL	64. Satisfaction with school	N	2	2511	2512
223	FCTEACHR	64. Satisfaction with teachers	N	2	2513	2514
224	FCSTDS	64. Satisfaction with academic standards	N	2	2515	2516
225	FCORDER	64. Satisfaction with discipline	N	2	2517	2518
226	FCSUPPRT	64. Satisfaction with school staff/parent interaction	N	2	2519	2520
227	FHHOME	65. Days spent doing homework	N	2	2521	2522
228	FHWKHRS	66. Hours spent doing homework	N	2	2523	2524
229	FHAMOUNT	67. Adult's feelings about amount of homework	N	2	2525	2526
230	FHCAMT	68. Child's feelings about amount of homework	N	2	2527	2528
231	FHPLACE	69. Place at home to do homework	N	2	2529	2530
232	FHCHECKX	70. Check for homework completion	N	2	2531	2532
233	FHHELP	71. Days help with homework	N	2	2533	2534
234	FOSTORY2X	72. In the past week, child has been told a story	N	1	2535	2535
235	FOCRAFTS	72. In the past week, spent time on arts and crafts	N	1	2536	2536
236	FOGAMES	72. In the past week, played board games	N	1	2537	2537
237	FOBUILDX	72. In the past week, worked on a project	N	1	2538	2538
238	FOSPORT	72. In the past week, spent time playing sports	N	1	2539	2539
239	FORESPON	72. In the past week, discussed time management	N	1	2540	2540
240	FOHISTX	72. In the past week, discussed ethnic heritage	N	1	2541	2541
241	FODINNERX	73. Eaten the evening meal together in the past week	N	1	2542	2542
242	FOLIBRAYX	74. Visited a library in the past month	N	1	2543	2543
243	FOBOOKSTX	74. Visited a bookstore in the past month	N	1	2544	2544
244	FOCONCRTX	74. Gone to a play in the past month	N	1	2545	2545
245	FOMUSEUMX	74. Visited an art gallery in the past month	N	1	2546	2546
246	FOZOOX	74. Visited a zoo in the past month	N	1	2547	2547
247	FOGROUPX	74. Attended a religious event in the past month	N	1	2548	2548
248	FOSPRTVEX	74. Attended a sporting event in the past month	N	1	2549	2549
249	HDHEALTH	75. Health of child	N	1	2550	2550
250	HDINTDIS	76. Intellectual disability	N	1	2551	2551
251	HDSPEECHX	76. Speech or language impairment	N	1	2552	2552

See note at end of table.

Table B-2. Restricted-Use Data file Layout in Position Order, PFI:2019

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
252	HDDISTRBX	76. Serious emotional disturbance	N	1	2553	2553
253	HDDEAFIMX	76. Deafness or another hearing impairment	N	1	2554	2554
254	HDBLINDX	76. Blindness or another visual impairment	N	1	2555	2555
255	HDORTHOX	76. Orthopedic impairment	N	1	2556	2556
256	HDAUTISM	76. Autism	N	1	2557	2557
257	HDPDDX	76. Pervasive Developmental Disorder	N	1	2558	2558
258	HDADDX	76. Attention Deficit Disorder	N	1	2559	2559
259	HDLEARNX	76. Learning disability	N	1	2560	2560
260	HDDELAYX	76. Developmental delay	N	1	2561	2561
261	HDTRBRAIN	76. Traumatic brain injury	N	1	2562	2562
262	HDOTHERX	76. Another health impairment	N	1	2563	2563
263	HDIEPX	78. Services provided by IEP	N	2	2564	2565
264	HDCOMM	79. Satisfaction with service provider communication	N	2	2566	2567
265	HDSPCLD	80. Enrollment in special education classes	N	2	2568	2569
266	HDLEARN	81. Condition interferes with learning	N	2	2570	2571
267	HDPLAY	81. Condition interferes with participation in sports	N	2	2572	2573
268	HDOUT	81. Condition interferes with attending school regularly	N	2	2574	2575
269	HDFRND	81. Condition interferes with making friends	N	2	2576	2577
270	CDOBMM	82. Month child born	N	2	2578	2579
271	CDOBY	82. Year child born	N	4	2580	2583
272	CPLCBRTH	83. Country where child born	N	1	2584	2584
273	CMOVEAGE	84. Age of child when first moved to US	N	2	2585	2586
274	CHISPAN	85. Child of Spanish, Hispanic, or Latino origin	N	1	2587	2587
275	CAMIND	86. Child Race - American Indian or Alaska Native	N	1	2588	2588
276	CASIAN	86. Child Race - Asian	N	1	2589	2589
277	CBLACK	86. Child Race - Black or African American	N	1	2590	2590
278	CPACI	86. Child Race - Native Hawaiian or other Pacific Islander	N	1	2591	2591
279	CWHITE	86. Child Race - White	N	1	2592	2592
280	CHISPRM	86. Child Race - Hispanic, race not reported	N	1	2593	2593
281	CSEX	87. Child sex	N	1	2594	2594
282	CLIVYN	88. Child lives at another address	N	1	2595	2595
283	CLIVELSWX	89. Address where child spends most time	N	2	2596	2597
284	CSPEAKX	90. Language spoken by child at home	N	1	2598	2598
285	CENGLPRG	91. Enrolled in language program	N	2	2599	2600
286	HHTOTALXX	92. Total people in household	N	2	2601	2602
287	HBBROSX	93. Brothers	N	1	2603	2603
288	HHSISSX	93. Sisters	N	1	2604	2604
289	HHMOM	93. Mothers	N	1	2605	2605
290	HHDAD	93. Fathers	N	1	2606	2606
291	HHAUNTSX	93. Aunts	N	1	2607	2607
292	HHUNCLSX	93. Uncles	N	1	2608	2608
293	HHGMASX	93. Grandmothers	N	1	2609	2609
294	HHGPASX	93. Grandfathers	N	1	2610	2610
295	HHCSNSX	93. Cousins	N	1	2611	2611
296	HHPRTNRSX	93. Parent's girlfriend/boyfriend/partner	N	1	2612	2612
297	HHORELSX	93. Other relatives	N	1	2613	2613
298	HHONRELSX	93. Other non - relatives	N	1	2614	2614
299	RELATION	94. Relation to child	N	2	2615	2616
300	RELATIONOS	94. Relation to child (Other, specify)	C	63	2617	2679
301	HHENGLISH	95. Language spoken at home - English	N	1	2680	2680
302	HHSPANISH	95. Language spoken at home - Spanish	N	1	2681	2681
303	HHFRENCH	95. Language spoken at home - French	N	1	2682	2682
304	HHCHINESE	95. Language spoken at home - Chinese	N	1	2683	2683
305	HHOTHLANG	95. Language spoken at home - Other	N	1	2684	2684
306	HHOTHLANGOS	95. Language spoken at home (Other, specify)	C	39	2685	2723
307	PIREL	96. Relation of first parent/guardian to child	N	1	2724	2724
308	PISEX	97. First parent/guardian sex	N	1	2725	2725
309	PIMRSTA	98. First parent/guardian marital status	N	1	2726	2726
310	PIBFGF	99. First parent/guardian living with partner	N	2	2727	2728
311	PIFRLNG	100. First parent/guardian first language	N	1	2729	2729
312	PISPEAK	101. Language spoken most often at home by first parent/guardian	N	2	2730	2731
313	PIDIFFI	102. First parent/guardian difficulty participating in child's school due to language	N	2	2732	2733
314	PISCINT	103. Interpreters at school for first parent/guardian	N	2	2734	2735

See note at end of table.

Table B-2. Restricted-Use Data file Layout in Position Order, PFI:2019

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
315	PIWRMTL	104. Written materials at school in first parent/guardian native language	N	2	2736	2737
316	PIPLCBRTH	105. First parent/guardian born in U.S	N	1	2738	2738
317	PIAGEMV	106. Age of first parent/guardian when first moved to US	N	2	2739	2740
318	PIHISPAN	107. First parent/guardian of Spanish, Hispanic, or Latino origin	N	1	2741	2741
319	PIAMIND	108. First parent/guardian race - American Indian or Alaska Native	N	1	2742	2742
320	PIASIAN	108. First parent/guardian race - Asian	N	1	2743	2743
321	PBLACK	108. First parent/guardian race - Black or African American	N	1	2744	2744
322	PIPACI	108. First parent/guardian race - Native Hawaiian or other Pacific Islander	N	1	2745	2745
323	PIWHITE	108. First parent/guardian race - White	N	1	2746	2746
324	PIHISPRM	108. First parent/guardian race - Hispanic, race not reported	N	1	2747	2747
325	PIEDUC	109. First parent/guardian highest grade level completed	N	2	2748	2749
326	PIENRL	110. First parent/guardian attending school	N	1	2750	2750
327	PIEMPL	111. First parent/guardian employment status	N	1	2751	2751
328	PIHRSWK	112. First parent/guardian hours worked per week	N	2	2752	2753
329	PIKWRK	113. First parent/guardian looking for work	N	2	2754	2755
330	PIMTHSWRK	114. First parent/guardian months worked	N	2	2756	2757
331	PIAGE	115. First parent/guardian age	N	2	2758	2759
332	P2GUARD	116. Second parent/guardian	N	1	2760	2760
333	P2REL	117. Relation of second parent/guardian to child	N	2	2761	2762
334	P2SEX	118. Second parent/guardian sex	N	2	2763	2764
335	P2MRSTA	119. Second parent/guardian marital status	N	2	2765	2766
336	P2BFGF	120. Second parent/guardian living with partner	N	2	2767	2768
337	P2FRLNG	121. Second parent/guardian first language	N	2	2769	2770
338	P2SPEAK	122. Language spoken most often at home by second parent/guardian	N	2	2771	2772
339	P2DIFFI	123. Second parent/guardian difficulty participating in child's school due to language	N	2	2773	2774
340	P2SCINT	124. Interpreters at school for second parent/guardian	N	2	2775	2776
341	P2WRMTL	125. Written materials at school in second parent/guardian native language	N	2	2777	2778
342	P2PLCBRTH	126. Second parent/guardian born in U.S.	N	2	2779	2780
343	P2AGEMV	127. Age of second parent/guardian when first moved to US	N	2	2781	2782
344	P2HISPAN	128. Second parent/guardian of Spanish, Hispanic, or Latino origin	N	2	2783	2784
345	P2AMIND	129. Second parent/guardian race - American Indian or Alaska Native	N	2	2785	2786
346	P2ASIAN	129. Second parent/guardian race - Asian	N	2	2787	2788
347	P2BLACK	129. Second parent/guardian race - Black or African American	N	2	2789	2790
348	P2PACI	129. Second parent/guardian race - Native Hawaiian or other Pacific Islander	N	2	2791	2792
349	P2WHITE	129. Second parent/guardian race - White	N	2	2793	2794
350	P2HISPRM	129. Second parent/guardian race - Hispanic, race not reported	N	2	2795	2796
351	P2EDUC	130. Second parent/guardian highest grade level completed	N	2	2797	2798
352	P2ENRL	131. Second parent/guardian attending school	N	2	2799	2800
353	P2EMPL	132. Second parent/guardian employment status	N	2	2801	2802
354	P2HRSWK	133. Second parent/guardian hours worked per week	N	2	2803	2804
355	P2LWRK	134. Second parent/guardian looking for work	N	2	2805	2806
356	P2MTHSWRK	135. Second parent/guardian months worked	N	2	2807	2808
357	P2AGE	136. Second parent/guardian age	N	2	2809	2810
358	HWELFTANST	137. Received TANF in past 12 months	N	1	2811	2811
359	HWIC	137. Received WIC in past 12 months	N	1	2812	2812
360	HFOODST	137. Received food stamps in past 12 months	N	1	2813	2813
361	HMEDICAID	137. Received Medicaid in past 12 months	N	1	2814	2814
362	HCHIP	137. Received CHIP in past 12 months	N	1	2815	2815
363	HSECN8	137. Received Section 8 in past 12 months	N	1	2816	2816
364	TTLHHINC	138. Total income	N	2	2817	2818
365	OWNRNTHB	139. Own/rent house	N	1	2819	2819
366	HVINTSPHO	140. Internet access on cell phone	N	1	2820	2820
367	HVINTCOM	141. Internet access on computer or tablet	N	1	2821	2821
368	CHLDNT	142. Child use of internet for learning at home	N	1	2822	2822
369	LRNCOMP	143. Learning activities on computer	N	2	2823	2824
370	LRNTAB	143. Learning activities on tablet	N	2	2825	2826
371	LRNCELL	143. Learning activities on cell phone	N	2	2827	2828
372	SEFUTUREX	144. Expectations for child's future education	N	1	2829	2829
373	DSBLTY	D - Child currently has disability	N	1	2830	2830
374	PARIEDUC	D - Educational attainment of child's first parent or guardian	N	1	2831	2831
375	PARIEMPL	D - Work status of child's first parent or guardian	N	1	2832	2832
376	PARIFTFY	D - First parent or guardian works full time	N	1	2833	2833
377	PARIMARST	D - First parent or guardian marital status	N	1	2834	2834

See note at end of table.

Table B-2. Restricted-Use Data file Layout in Position Order, PFI:2019

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
378	PARI1TYPE	D - Specific relationship of first parent or guardian to child	N	1	2835	2835
379	PAR1FSTGN	D - First parent or guardian first generation immigrant status	N	1	2836	2836
380	PAR2EDUC	D - Educational attainment of child's second parent or guardian	N	2	2837	2838
381	PAR2EMPL	D - Work status of child's second parent or guardian	N	2	2839	2840
382	PAR2FTFY	D - Second parent or guardian works full time	N	2	2841	2842
383	PAR2MARST	D - Second parent or guardian marital status	N	2	2843	2844
384	PAR2TYPE	D - Specific relationship of second parent or guardian to child	N	2	2845	2846
385	PAR2FSTGN	D-Second parent or guardian first generation immigrant status	N	2	2847	2848
386	HHPARN19X	D - Parental structure of household	N	1	2849	2849
387	HHPARN19_BRD	D - Household has second parent or guardian	N	1	2850	2850
388	NUMSIBSX	D - Number of child's siblings	N	1	2851	2851
389	FAMILY19X	D - Family type with parents	N	1	2852	2852
390	FAMILY19_BRD	D - Family type with adults	N	1	2853	2853
391	HHUNDR6X	D - Number of children younger than age 6	N	1	2854	2854
392	HHUNDRI0X	D - Number of children younger than age 10	N	1	2855	2855
393	HHUNDRI6X	D - Number of children younger than age 16	N	1	2856	2856
394	HHUNDRI8X	D - Number of children younger than age 18	N	1	2857	2857
395	HHUNID	D - Other household member, not identified	N	1	2858	2858
396	LANGUAGEX	D - English spoken most by parents	N	1	2859	2859
397	PARGRADEX	D - Parent/guardian highest education	N	1	2860	2860
398	RACEETH	D - Race and ethnicity of child	N	1	2861	2861
399	RACEETH2	D - Detailed race and ethnicity of child	N	2	2862	2863
400	INTACC	D - Household has internet access	N	1	2864	2864
401	CENREG	D - Census region where child lives	N	1	2865	2865
402	ZIP18PO2	D - Percent of families in zip code with children under 18 below the poverty line	N	2	2866	2867
403	ZIPBLH12	D - Percent of persons in zip code who were Black or Hispanic	N	1	2868	2868
404	ZIPLOCL	D - Zip code classification by community type	N	2	2869	2870
405	BLHISCNT	D - Number of persons in zip code who were Black or Hispanic	N	6	2871	2876
406	FAM18POV	D - Number of families in zip code with children under 18 below the poverty line	N	4	2877	2880
407	PCT18POV	D - Percent of families in zip code with children under 18 below the poverty line	N	2	2881	2882
408	PCTBLHIS	D - Percent of persons in zip code who were Black or Hispanic alone	N	3	2883	2885
409	REGION	D - Department of Education region	N	1	2886	2886
410	RSTATE	D - Respondent's state	C	2	2887	2888
411	ZCTA	D - Respondent ZCTA (Zip Code Tabulation Area)	C	5	2889	2893
412	CENBLGRP	D - 12-digit Census block group	C	12	2894	2905
413	CBSA	D - CBSA code	C	5	2906	2910
414	CBSA_NAME	D - CBSA name	C	46	2911	2956
415	NECTA	D - NECTA code	C	5	2957	2961
416	NECTA_NAME	D - NECTA name	C	37	2962	2998
417	UN_LEAID	D - Unified NCES agency identification number	C	7	2999	3005
418	EL_LEAID	D - Elementary NCES agency identification number	C	7	3006	3012
419	SC_LEAID	D - Secondary NCES agency identification number	C	7	3013	3019
420	UN_LEANAME	D - Unified education agency name	C	63	3020	3082
421	EL_LEANAME	D - Elementary education agency name	C	61	3083	3143
422	SC_LEANAME	D - Secondary education agency name	C	81	3144	3224
423	PO05003	D - Inside urbanized areas, population count	N	6	3225	3230
424	PO05004	D - Inside urban clusters, population count	N	5	3231	3235
425	PO05005	D - Rural population count	N	5	3236	3240
426	PO07001	D - Total population count	N	6	3241	3246
427	PO07004	D - Black/African American alone population count	N	5	3247	3251
428	PO07010	D - Hispanic or Latino population count	N	5	3252	3256
429	PO90001	D - Total families in zip code	N	5	3257	3261
430	PO90004	D - In poverty and married couples with children under 18	N	4	3262	3265
431	PO90011	D - In poverty and headed by male, no wife, with children under 18	N	4	3266	3269
432	PO90017	D - In poverty and headed by female, no husband, with children under 18	N	4	3270	3273
433	INTRAOPENR	D - Intra-district open enrollment	N	1	3274	3274
434	INTEROPENR	D - Inter-district open enrollment	N	1	3275	3275
435	S19CHART	D - School charter, magnet/regular public, other on CCD	N	2	3276	3277
436	S19NUMST	D - Total school enrollment of students on CCD/PSS	N	2	3278	3279
437	S19BPV	D - School is public or private on CCD/PSS	N	2	3280	3281
438	S19SAMSX	D - Coeducational status of school on PSS	N	2	3282	3283
439	S19TITL1	D - Schoolwide title 1 on CCD	N	2	3284	3285
440	S19TYPE	D - Type of school on CCD/PSS	N	2	3286	3287

See note at end of table.

Table B-2. Restricted-Use Data file Layout in Position Order, PFI:2019

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
441	SCHLGRAD	D - Child's school level classification on CCD/PSS	N	2	3288	3289
442	SCHLGRAD_ALT	D - Child's school level classification on CCD/PSS (alternative)	N	2	3290	3291
443	NEW_SCHL	D - New school on CCD frame	N	2	3292	3293
444	S19CENRG	D - School's Census Region on CCD/PSS	N	2	3294	3295
445	S19FRRDL	D - Percent of students eligible for free or reduced lunch on CCD	N	2	3296	3297
446	S19FTET	D - Number of full - time teachers in school on CCD/PSS	N	2	3298	3299
447	S19HASG4	D - School has grade 4 on CCD/PSS	N	2	3300	3301
448	S19HASG8	D - School has grade 8 on CCD/PSS	N	2	3302	3303
449	S19HASG12	D - School has grade 12 on CCD/PSS	N	2	3304	3305
450	S19HASGK	D - School has a kindergarten on CCD/PSS	N	2	3306	3307
451	S19LOCL	D - Locale code for school on CCD/PSS	N	2	3308	3309
452	S19MAGN	D - School is identified as a magnet school on CCD	N	2	3310	3311
453	S19PBTYP	D - Type of public school child attends on CCD	N	2	3312	3313
454	S19PCTB	D - Percent of blacks in school on CCD/PSS	N	2	3314	3315
455	S19PCTH	D - Percent of Hispanics in school on CCD/PSS	N	2	3316	3317
456	S19PVTYP	D - Type of private school child attends on PSS	N	2	3318	3319
457	S19S_TRT	D - Student to teacher ratio for school on CCD/PSS	N	2	3320	3321
458	CCDVIRTUAL	D - Data source flag for virtual status of school	N	2	3322	3323
459	ENGLSPANX	D - Questionnaire in English or Spanish	N	1	3324	3324
460	AGE2018	D - Age of child as of Dec 31, 2018	N	2	3325	3326
461	MODECOMP	D - Completed on web or paper	N	1	3327	3327
462	CHAGE1	D - Age of 1st nonsampled child	N	2	3328	3329
463	CHAGE2	D - Age of 2nd nonsampled child	N	2	3330	3331
464	CHAGE3	D - Age of 3rd nonsampled child	N	2	3332	3333
465	CHAGE4	D - Age of 4th nonsampled child	N	2	3334	3335
466	CHSEX1	D - Sex of 1st nonsampled child	N	2	3336	3337
467	CHSEX2	D - Sex of 2nd nonsampled child	N	2	3338	3339
468	CHSEX3	D - Sex of 3rd nonsampled child	N	2	3340	3341
469	CHSEX4	D - Sex of 4th nonsampled child	N	2	3342	3343
470	CHENRL1	D - Enrollment status of 1st nonsampled child	N	2	3344	3345
471	CHENRL2	D - Enrollment status of 2nd nonsampled child	N	2	3346	3347
472	CHENRL3	D - Enrollment status of 3rd nonsampled child	N	2	3348	3349
473	CHENRL4	D - Enrollment status of 4th nonsampled child	N	2	3350	3351
474	CHGRD1	D - Grade of 1st nonsampled child	N	2	3352	3353
475	CHGRD2	D - Grade of 2nd nonsampled child	N	2	3354	3355
476	CHGRD3	D - Grade of 3rd nonsampled child	N	2	3356	3357
477	CHGRD4	D - Grade of 4th nonsampled child	N	2	3358	3359
478	PPSU	PSU FOR TAYLOR SERIES VAR EST	N	5	3360	3364
479	PSTRATUM	STRATUM FOR TAYLOR SERIES VAR EST	N	1	3365	3365
480	UPW	PERSON - LEVEL BASE WEIGHT	N	16	3366	3381
481	HBW	HOUSEHOLD - LEVEL BASE WEIGHT	N	16	3382	3397
482	SNIAF	SCREENER NON - INTERVIEW ADJUSTMENT FACTOR	N	16	3398	3413
483	HHW	FINAL HOUSEHOLD - LEVEL BASE WEIGHT	N	16	3414	3429
484	FPWT	FINAL INTV WEIGHT	N	16	3430	3445
485	FPWT1	FINAL INTV REPLICATE WEIGHT, FPWT1	N	16	3446	3461
486	FPWT2	FINAL INTV REPLICATE WEIGHT, FPWT2	N	16	3462	3477
487	FPWT3	FINAL INTV REPLICATE WEIGHT, FPWT3	N	16	3478	3493
488	FPWT4	FINAL INTV REPLICATE WEIGHT, FPWT4	N	16	3494	3509
489	FPWT5	FINAL INTV REPLICATE WEIGHT, FPWT5	N	16	3510	3525
490	FPWT6	FINAL INTV REPLICATE WEIGHT, FPWT6	N	16	3526	3541
491	FPWT7	FINAL INTV REPLICATE WEIGHT, FPWT7	N	16	3542	3557
492	FPWT8	FINAL INTV REPLICATE WEIGHT, FPWT8	N	16	3558	3573
493	FPWT9	FINAL INTV REPLICATE WEIGHT, FPWT9	N	16	3574	3589
494	FPWT10	FINAL INTV REPLICATE WEIGHT, FPWT10	N	16	3590	3605
495	FPWT11	FINAL INTV REPLICATE WEIGHT, FPWT11	N	16	3606	3621
496	FPWT12	FINAL INTV REPLICATE WEIGHT, FPWT12	N	16	3622	3637
497	FPWT13	FINAL INTV REPLICATE WEIGHT, FPWT13	N	16	3638	3653
498	FPWT14	FINAL INTV REPLICATE WEIGHT, FPWT14	N	16	3654	3669
499	FPWT15	FINAL INTV REPLICATE WEIGHT, FPWT15	N	16	3670	3685
500	FPWT16	FINAL INTV REPLICATE WEIGHT, FPWT16	N	16	3686	3701
501	FPWT17	FINAL INTV REPLICATE WEIGHT, FPWT17	N	16	3702	3717
502	FPWT18	FINAL INTV REPLICATE WEIGHT, FPWT18	N	16	3718	3733
503	FPWT19	FINAL INTV REPLICATE WEIGHT, FPWT19	N	16	3734	3749

See note at end of table.

Table B-2. Restricted-Use Data file Layout in Position Order, PFI:2019

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
504	FPWT20	FINAL INTV REPLICATE WEIGHT, FPWT20	N	16	3750	3765
505	FPWT21	FINAL INTV REPLICATE WEIGHT, FPWT21	N	16	3766	3781
506	FPWT22	FINAL INTV REPLICATE WEIGHT, FPWT22	N	16	3782	3797
507	FPWT23	FINAL INTV REPLICATE WEIGHT, FPWT23	N	16	3798	3813
508	FPWT24	FINAL INTV REPLICATE WEIGHT, FPWT24	N	16	3814	3829
509	FPWT25	FINAL INTV REPLICATE WEIGHT, FPWT25	N	16	3830	3845
510	FPWT26	FINAL INTV REPLICATE WEIGHT, FPWT26	N	16	3846	3861
511	FPWT27	FINAL INTV REPLICATE WEIGHT, FPWT27	N	16	3862	3877
512	FPWT28	FINAL INTV REPLICATE WEIGHT, FPWT28	N	16	3878	3893
513	FPWT29	FINAL INTV REPLICATE WEIGHT, FPWT29	N	16	3894	3909
514	FPWT30	FINAL INTV REPLICATE WEIGHT, FPWT30	N	16	3910	3925
515	FPWT31	FINAL INTV REPLICATE WEIGHT, FPWT31	N	16	3926	3941
516	FPWT32	FINAL INTV REPLICATE WEIGHT, FPWT32	N	16	3942	3957
517	FPWT33	FINAL INTV REPLICATE WEIGHT, FPWT33	N	16	3958	3973
518	FPWT34	FINAL INTV REPLICATE WEIGHT, FPWT34	N	16	3974	3989
519	FPWT35	FINAL INTV REPLICATE WEIGHT, FPWT35	N	16	3990	4005
520	FPWT36	FINAL INTV REPLICATE WEIGHT, FPWT36	N	16	4006	4021
521	FPWT37	FINAL INTV REPLICATE WEIGHT, FPWT37	N	16	4022	4037
522	FPWT38	FINAL INTV REPLICATE WEIGHT, FPWT38	N	16	4038	4053
523	FPWT39	FINAL INTV REPLICATE WEIGHT, FPWT39	N	16	4054	4069
524	FPWT40	FINAL INTV REPLICATE WEIGHT, FPWT40	N	16	4070	4085
525	FPWT41	FINAL INTV REPLICATE WEIGHT, FPWT41	N	16	4086	4101
526	FPWT42	FINAL INTV REPLICATE WEIGHT, FPWT42	N	16	4102	4117
527	FPWT43	FINAL INTV REPLICATE WEIGHT, FPWT43	N	16	4118	4133
528	FPWT44	FINAL INTV REPLICATE WEIGHT, FPWT44	N	16	4134	4149
529	FPWT45	FINAL INTV REPLICATE WEIGHT, FPWT45	N	16	4150	4165
530	FPWT46	FINAL INTV REPLICATE WEIGHT, FPWT46	N	16	4166	4181
531	FPWT47	FINAL INTV REPLICATE WEIGHT, FPWT47	N	16	4182	4197
532	FPWT48	FINAL INTV REPLICATE WEIGHT, FPWT48	N	16	4198	4213
533	FPWT49	FINAL INTV REPLICATE WEIGHT, FPWT49	N	16	4214	4229
534	FPWT50	FINAL INTV REPLICATE WEIGHT, FPWT50	N	16	4230	4245
535	FPWT51	FINAL INTV REPLICATE WEIGHT, FPWT51	N	16	4246	4261
536	FPWT52	FINAL INTV REPLICATE WEIGHT, FPWT52	N	16	4262	4277
537	FPWT53	FINAL INTV REPLICATE WEIGHT, FPWT53	N	16	4278	4293
538	FPWT54	FINAL INTV REPLICATE WEIGHT, FPWT54	N	16	4294	4309
539	FPWT55	FINAL INTV REPLICATE WEIGHT, FPWT55	N	16	4310	4325
540	FPWT56	FINAL INTV REPLICATE WEIGHT, FPWT56	N	16	4326	4341
541	FPWT57	FINAL INTV REPLICATE WEIGHT, FPWT57	N	16	4342	4357
542	FPWT58	FINAL INTV REPLICATE WEIGHT, FPWT58	N	16	4358	4373
543	FPWT59	FINAL INTV REPLICATE WEIGHT, FPWT59	N	16	4374	4389
544	FPWT60	FINAL INTV REPLICATE WEIGHT, FPWT60	N	16	4390	4405
545	FPWT61	FINAL INTV REPLICATE WEIGHT, FPWT61	N	16	4406	4421
546	FPWT62	FINAL INTV REPLICATE WEIGHT, FPWT62	N	16	4422	4437
547	FPWT63	FINAL INTV REPLICATE WEIGHT, FPWT63	N	16	4438	4453
548	FPWT64	FINAL INTV REPLICATE WEIGHT, FPWT64	N	16	4454	4469
549	FPWT65	FINAL INTV REPLICATE WEIGHT, FPWT65	N	16	4470	4485
550	FPWT66	FINAL INTV REPLICATE WEIGHT, FPWT66	N	16	4486	4501
551	FPWT67	FINAL INTV REPLICATE WEIGHT, FPWT67	N	16	4502	4517
552	FPWT68	FINAL INTV REPLICATE WEIGHT, FPWT68	N	16	4518	4533
553	FPWT69	FINAL INTV REPLICATE WEIGHT, FPWT69	N	16	4534	4549
554	FPWT70	FINAL INTV REPLICATE WEIGHT, FPWT70	N	16	4550	4565
555	FPWT71	FINAL INTV REPLICATE WEIGHT, FPWT71	N	16	4566	4581
556	FPWT72	FINAL INTV REPLICATE WEIGHT, FPWT72	N	16	4582	4597
557	FPWT73	FINAL INTV REPLICATE WEIGHT, FPWT73	N	16	4598	4613
558	FPWT74	FINAL INTV REPLICATE WEIGHT, FPWT74	N	16	4614	4629
559	FPWT75	FINAL INTV REPLICATE WEIGHT, FPWT75	N	16	4630	4645
560	FPWT76	FINAL INTV REPLICATE WEIGHT, FPWT76	N	16	4646	4661
561	FPWT77	FINAL INTV REPLICATE WEIGHT, FPWT77	N	16	4662	4677
562	FPWT78	FINAL INTV REPLICATE WEIGHT, FPWT78	N	16	4678	4693
563	FPWT79	FINAL INTV REPLICATE WEIGHT, FPWT79	N	16	4694	4709
564	FPWT80	FINAL INTV REPLICATE WEIGHT, FPWT80	N	16	4710	4725
565	F_SID	Imputation flag for SID	N	2	4726	4727
566	F_ALLGRADEX	Imputation flag for ALLGRADEX	N	1	4728	4728

See note at end of table.

Table B-2. Restricted-Use Data file Layout in Position Order, PFI:2019

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
567	F_EDCPUB	Imputation flag for EDCPUB	N	1	4729	4729
568	F_EDCCAT	Imputation flag for EDCCAT	N	1	4730	4730
569	F_EDCREL	Imputation flag for EDCREL	N	1	4731	4731
570	F_EDCPRI	Imputation flag for EDCPRI	N	1	4732	4732
571	F_EDCINTK12	Imputation flag for EDCINTK12	N	1	4733	4733
572	F_EDCINTCOL	Imputation flag for EDCINTCOL	N	1	4734	4734
573	F_EDCCOL	Imputation flag for EDCCOL	N	1	4735	4735
574	F_EDCHSFL	Imputation flag for EDCHSFL	N	1	4736	4736
575	F_HOMESCHLX	Imputation flag for HOMESCHLX	N	2	4737	4738
576	F_HMSCHARR	Imputation flag for HMSCHARR	N	2	4739	4740
577	F_HSCOOP	Imputation flag for HSCOOP	N	2	4741	4742
578	F_HSWHOX	Imputation flag for HSWHOX	N	2	4743	4744
579	F_HSTUTOR	Imputation flag for HSTUTOR	N	2	4745	4746
580	F_HSINTNET	Imputation flag for HSINTNET	N	2	4747	4748
581	F_ONLNAP	Imputation flag for ONLNAP	N	2	4749	4750
582	F_ONLNSC	Imputation flag for ONLNSC	N	2	4751	4752
583	F_ONLNEH	Imputation flag for ONLNEH	N	2	4753	4754
584	F_ONLNLS	Imputation flag for ONLNLS	N	2	4755	4756
585	F_ONLNPR	Imputation flag for ONLNPR	N	2	4757	4758
586	F_ONLNHS	Imputation flag for ONLNHS	N	2	4759	4760
587	F_ONLNOTH	Imputation flag for ONLNOTH	N	2	4761	4762
588	F_ONLBULLY	Imputation flag for ONLBULLY	N	2	4763	4764
589	F_ONLHLTH	Imputation flag for ONLHLTH	N	2	4765	4766
590	F_ONLSPNDS	Imputation flag for ONLSPNDS	N	2	4767	4768
591	F_ONLAVDPUB	Imputation flag for ONLAVDPUB	N	2	4769	4770
592	F_HSIMPONLI	Imputation flag for HSIMPONLI	N	2	4771	4772
593	F_HSINTPUB	Imputation flag for HSINTPUB	N	2	4773	4774
594	F_HSINTPRI	Imputation flag for HSINTPRI	N	2	4775	4776
595	F_HSINTCOL	Imputation flag for HSINTCOL	N	2	4777	4778
596	F_HSINTVRT	Imputation flag for HSINTVRT	N	2	4779	4780
597	F_HSINTCMP	Imputation flag for HSINTCMP	N	2	4781	4782
598	F_HSINTK12	Imputation flag for HSINTK12	N	2	4783	4784
599	F_HSINTIND	Imputation flag for HSINTIND	N	2	4785	4786
600	F_HSINTOH	Imputation flag for HSINTOH	N	2	4787	4788
601	F_HSINTNUM	Imputation flag for HSINTNUM	N	2	4789	4790
602	F_HSINTFEE	Imputation flag for HSINTFEE	N	2	4791	4792
603	F_HSINTHRS	Imputation flag for HSINTHRS	N	2	4793	4794
604	F_HSSTYL	Imputation flag for HSSTYL	N	2	4795	4796
605	F_HSKACTIV	Imputation flag for HSKACTIV	N	2	4797	4798
606	F_HSINTLIB	Imputation flag for HSINTLIB	N	2	4799	4800
607	F_HSINTCAT	Imputation flag for HSINTCAT	N	2	4801	4802
608	F_HSINTREL	Imputation flag for HSINTREL	N	2	4803	4804
609	F_HSINTSCH	Imputation flag for HSINTSCH	N	2	4805	4806
610	F_HSINTFRWB	Imputation flag for HSINTFRWB	N	2	4807	4808
611	F_HSINTWEB	Imputation flag for HSINTWEB	N	2	4809	4810
612	F_HSINTOTH	Imputation flag for HSINTOTH	N	2	4811	4812
613	F_HSCLIBRX	Imputation flag for HSCLIBRX	N	2	4813	4814
614	F_HSCHSPUBX	Imputation flag for HSCHSPUBX	N	2	4815	4816
615	F_HSCHSRELX	Imputation flag for HSCHSRELX	N	2	4817	4818
616	F_HSCPUBLX	Imputation flag for HSCPUBLX	N	2	4819	4820
617	F_HSCCNVX	Imputation flag for HSCCNVX	N	2	4821	4822
618	F_HSCVTVX	Imputation flag for HSCVTVX	N	2	4823	4824
619	F_HSCFMLY	Imputation flag for HSCFMLY	N	2	4825	4826
620	F_HSCOTH	Imputation flag for HSCOTH	N	2	4827	4828
621	F_HSCOURS	Imputation flag for HSCOURS	N	2	4829	4830
622	F_HOMEKX	Imputation flag for HOMEKX	N	2	4831	4832
623	F_HOME1	Imputation flag for HOME1	N	2	4833	4834
624	F_HOME2	Imputation flag for HOME2	N	2	4835	4836
625	F_HOME3	Imputation flag for HOME3	N	2	4837	4838
626	F_HOME4	Imputation flag for HOME4	N	2	4839	4840
627	F_HOME5	Imputation flag for HOME5	N	2	4841	4842
628	F_HOME6	Imputation flag for HOME6	N	2	4843	4844
629	F_HOME7	Imputation flag for HOME7	N	2	4845	4846

See note at end of table.

Table B-2. Restricted-Use Data file Layout in Position Order, PFI:2019

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
630	F_HOME8	Imputation flag for HOME8	N	2	4847	4848
631	F_HOME9	Imputation flag for HOME9	N	2	4849	4850
632	F_HOME10	Imputation flag for HOME10	N	2	4851	4852
633	F_HOME11	Imputation flag for HOME11	N	2	4853	4854
634	F_HOME12	Imputation flag for HOME12	N	2	4855	4856
635	F_HSSAFETYX	Imputation flag for HSSAFETYX	N	2	4857	4858
636	F_HSDISSATX	Imputation flag for HSDISSATX	N	2	4859	4860
637	F_HSRELGON	Imputation flag for HSRELGON	N	2	4861	4862
638	F_HSMORAL	Imputation flag for HSMORAL	N	2	4863	4864
639	F_HSDISABLX	Imputation flag for HSDISABLX	N	2	4865	4866
640	F_HSILLX	Imputation flag for HSILLX	N	2	4867	4868
641	F_HSSPCLNDX	Imputation flag for HSSPCLNDX	N	2	4869	4870
642	F_HSALT	Imputation flag for HSALT	N	2	4871	4872
643	F_HSFMLY	Imputation flag for HSFMLY	N	2	4873	4874
644	F_HSOOTHERX	Imputation flag for HSOOTHERX	N	2	4875	4876
645	F_HSBULLY	Imputation flag for HSBULLY	N	2	4877	4878
646	F_HSMOSTX	Imputation flag for HSMOSTX	N	2	4879	4880
647	F_HSASSNX	Imputation flag for HSASSNX	N	2	4881	4882
648	F_HSFREQX	Imputation flag for HSFREQX	N	2	4883	4884
649	F_HSNATL	Imputation flag for HSNATL	N	2	4885	4886
650	F_HSMLTY	Imputation flag for HSMLTY	N	2	4887	4888
651	F_HSENRL	Imputation flag for HSENRL	N	2	4889	4890
652	F_DISTASSI	Imputation flag for DISTASSI	N	2	4891	4892
653	F_SCHRTSCHL	Imputation flag for SCHRTSCHL	N	2	4893	4894
654	F_SCHLMAGNET	Imputation flag for SCHLMAGNET	N	2	4895	4896
655	F_SNEIGHBRX	Imputation flag for SNEIGHBRX	N	2	4897	4898
656	F_SCCHOICE	Imputation flag for SCCHOICE	N	2	4899	4900
657	F_SPUBCHOIX	Imputation flag for SPUBCHOIX	N	2	4901	4902
658	F_SCONSIDR	Imputation flag for SCONSIDR	N	2	4903	4904
659	F_LOCALE	Imputation flag for LOCALE	N	2	4905	4906
660	F_SCHLSAFETY	Imputation flag for SCHLSAFETY	N	2	4907	4908
661	F_SCHLSTFQUALITY	Imputation flag for SCHLSTFQUALITY	N	2	4909	4910
662	F_AVAILCOURSE	Imputation flag for AVAILCOURSE	N	2	4911	4912
663	F_XTRACURRIC	Imputation flag for XTRACURRIC	N	2	4913	4914
664	F_STUDNTCHAR	Imputation flag for STUDNTCHAR	N	2	4915	4916
665	F_STUDNTPERFORM	Imputation flag for STUDNTPERFORM	N	2	4917	4918
666	F_RELIGSOR	Imputation flag for RELIGSOR	N	2	4919	4920
667	F_SPECALEDSEVS	Imputation flag for SPECALEDSEVS	N	2	4921	4922
668	F_SPECFACILTS	Imputation flag for SPECFACILTS	N	2	4923	4924
669	F_CLSSIZE	Imputation flag for CLSSIZE	N	2	4925	4926
670	F_SCHLCOST	Imputation flag for SCHLCOST	N	2	4927	4928
671	F_FINDSCHL	Imputation flag for FINDSCHL	N	2	4929	4930
672	F_FINDFRND	Imputation flag for FINDFRND	N	2	4931	4932
673	F_FINDFAM	Imputation flag for FINDFAM	N	2	4933	4934
674	F_FINDNEWS	Imputation flag for FINDNEWS	N	2	4935	4936
675	F_FINDRPT	Imputation flag for FINDRPT	N	2	4937	4938
676	F_FINDWEB	Imputation flag for FINDWEB	N	2	4939	4940
677	F_FINDADS	Imputation flag for FINDADS	N	2	4941	4942
678	F_FINDFLY	Imputation flag for FINDFLY	N	2	4943	4944
679	F_FINDSTF	Imputation flag for FINDSTF	N	2	4945	4946
680	F_FINDCHRC	Imputation flag for FINDCHRC	N	2	4947	4948
681	F_FINDOTH	Imputation flag for FINDOTH	N	2	4949	4950
682	F_SISTCHOI	Imputation flag for SISTCHOI	N	2	4951	4952
683	F_SSAMSC	Imputation flag for SSAMSC	N	2	4953	4954
684	F_SCHLHRSWK	Imputation flag for SCHLHRSWK	N	2	4955	4956
685	F_EINTNET	Imputation flag for EINTNET	N	2	4957	4958
686	F_ADVCCRSE	Imputation flag for ADVCCRSE	N	2	4959	4960
687	F_SPCLCRSE	Imputation flag for SPCLCRSE	N	2	4961	4962
688	F_MKUPCRSE	Imputation flag for MKUPCRSE	N	2	4963	4964
689	F_ADDCRSE	Imputation flag for ADDCRSE	N	2	4965	4966
690	F_HELP	Imputation flag for HELP	N	2	4967	4968
691	F_CONFLCT	Imputation flag for CONFLCT	N	2	4969	4970
692	F_DISABLX	Imputation flag for DISABLX	N	2	4971	4972

See note at end of table.

Table B-2. Restricted-Use Data file Layout in Position Order, PFI:2019

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
693	F_TEMPILL	Imputation flag for TEMPILL	N	2	4973	4974
694	F_SPCLND	Imputation flag for SPCLND	N	2	4975	4976
695	F_LRNSTYLE	Imputation flag for LRNSTYLE	N	2	4977	4978
696	F_NOCHOICE	Imputation flag for NOCHOICE	N	2	4979	4980
697	F_SCHLPLCE	Imputation flag for SCHLPLCE	N	2	4981	4982
698	F_ONLINEPREF	Imputation flag for ONLINEPREF	N	2	4983	4984
699	F_ONLINEOTH	Imputation flag for ONLINEOTH	N	2	4985	4986
700	F_MOSTIMPT	Imputation flag for MOSTIMPT	N	2	4987	4988
701	F_SPBSCH	Imputation flag for SPBSCH	N	2	4989	4990
702	F_SPRIVT	Imputation flag for SPRIVT	N	2	4991	4992
703	F_SUNIVSCH	Imputation flag for SUNIVSCH	N	2	4993	4994
704	F_SCYBER	Imputation flag for SCYBER	N	2	4995	4996
705	F_SCOMPANY	Imputation flag for SCOMPANY	N	2	4997	4998
706	F_SOTHRSCH	Imputation flag for SOTHRSCH	N	2	4999	5000
707	F_STUTR	Imputation flag for STUTR	N	2	5001	5002
708	F_SOTHSCH	Imputation flag for SOTHSCH	N	2	5003	5004
709	F_INTNUM	Imputation flag for INTNUM	N	2	5005	5006
710	F_SINSTFEE	Imputation flag for SINSTFEE	N	2	5007	5008
711	F_INTHRS	Imputation flag for INTHRS	N	2	5009	5010
712	F_SEENJOY	Imputation flag for SEENJOY	N	2	5011	5012
713	F_SEGRADES	Imputation flag for SEGRADES	N	2	5013	5014
714	F_SEADPLCXX	Imputation flag for SEADPLCXX	N	2	5015	5016
715	F_SEBEHAVX	Imputation flag for SEBEHAVX	N	2	5017	5018
716	F_SESCHWRK	Imputation flag for SESCHWRK	N	2	5019	5020
717	F_SEGBEHAV	Imputation flag for SEGBEHAV	N	2	5021	5022
718	F_SEGWORK	Imputation flag for SEGWORK	N	2	5023	5024
719	F_SEABSNT	Imputation flag for SEABSNT	N	2	5025	5026
720	F_SEREPEAT	Imputation flag for SEREPEAT	N	2	5027	5028
721	F_SEREPTK	Imputation flag for SEREPTK	N	2	5029	5030
722	F_SEREPT1	Imputation flag for SEREPT1	N	2	5031	5032
723	F_SEREPT2	Imputation flag for SEREPT2	N	2	5033	5034
724	F_SEREPT3	Imputation flag for SEREPT3	N	2	5035	5036
725	F_SEREPT4	Imputation flag for SEREPT4	N	2	5037	5038
726	F_SEREPT5	Imputation flag for SEREPT5	N	2	5039	5040
727	F_SEREPT6	Imputation flag for SEREPT6	N	2	5041	5042
728	F_SEREPT7	Imputation flag for SEREPT7	N	2	5043	5044
729	F_SEREPT8	Imputation flag for SEREPT8	N	2	5045	5046
730	F_SEREPT9	Imputation flag for SEREPT9	N	2	5047	5048
731	F_SEREPT10	Imputation flag for SEREPT10	N	2	5049	5050
732	F_SEREPT11	Imputation flag for SEREPT11	N	2	5051	5052
733	F_SEREPT12	Imputation flag for SEREPT12	N	2	5053	5054
734	F_SESUSOUT	Imputation flag for SESUSOUT	N	2	5055	5056
735	F_SESUSPIN	Imputation flag for SESUSPIN	N	2	5057	5058
736	F_SEEXPEL	Imputation flag for SEEXPEL	N	2	5059	5060
737	F_SEGRADEQ	Imputation flag for SEGRADEQ	N	2	5061	5062
738	F_FSSPORTX	Imputation flag for FSSPORTX	N	2	5063	5064
739	F_FSVOL	Imputation flag for FSVOL	N	2	5065	5066
740	F_FSMTNG	Imputation flag for FSMTNG	N	2	5067	5068
741	F_FSPTMTNG	Imputation flag for FSPTMTNG	N	2	5069	5070
742	F_FSATCNFN	Imputation flag for FSATCNFN	N	2	5071	5072
743	F_FSFUNDRS	Imputation flag for FSFUNDRS	N	2	5073	5074
744	F_FSCOMMTE	Imputation flag for FSCOMMTE	N	2	5075	5076
745	F_FSCOUNSLR	Imputation flag for FSCOUNSLR	N	2	5077	5078
746	F_FSFREQ	Imputation flag for FSFREQ	N	2	5079	5080
747	F_FSNOTESX	Imputation flag for FSNOTESX	N	2	5081	5082
748	F_FSMEMO	Imputation flag for FSMEMO	N	2	5083	5084
749	F_FSPHONCHX	Imputation flag for FSPHONCHX	N	2	5085	5086
750	F_FSSPPERF	Imputation flag for FSSPPERF	N	2	5087	5088
751	F_FSSPHW	Imputation flag for FSSPHW	N	2	5089	5090
752	F_FSSPCOUR	Imputation flag for FSSPCOUR	N	2	5091	5092
753	F_FSSPROLE	Imputation flag for FSSPROLE	N	2	5093	5094
754	F_FSSPCOLL	Imputation flag for FSSPCOLL	N	2	5095	5096
755	F_FCSCHOOL	Imputation flag for FCSCHOOL	N	2	5097	5098

See note at end of table.

Table B-2. Restricted-Use Data file Layout in Position Order, PFI:2019

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
756	F_FCTEACHR	Imputation flag for FCTEACHR	N	2	5099	5100
757	F_FCSTDS	Imputation flag for FCSTDS	N	2	5101	5102
758	F_FCORDER	Imputation flag for FCORDER	N	2	5103	5104
759	F_FCSUPPRT	Imputation flag for FCSUPPRT	N	2	5105	5106
760	F_FHHOME	Imputation flag for FHHOME	N	2	5107	5108
761	F_FHWHRS	Imputation flag for FHWHRS	N	2	5109	5110
762	F_FHAMOUNT	Imputation flag for FHAMOUNT	N	2	5111	5112
763	F_FHCAMT	Imputation flag for FHCAMT	N	2	5113	5114
764	F_FHPLACE	Imputation flag for FHPLACE	N	2	5115	5116
765	F_FHCHKX	Imputation flag for FHCHKX	N	2	5117	5118
766	F_FHHELP	Imputation flag for FHHELP	N	2	5119	5120
767	F_FOSTORY2X	Imputation flag for FOSTORY2X	N	1	5121	5121
768	F_FOCRAFTS	Imputation flag for FOCRAFTS	N	1	5122	5122
769	F_FOGAMES	Imputation flag for FOGAMES	N	1	5123	5123
770	F_FOBUILD	Imputation flag for FOBUILD	N	1	5124	5124
771	F_FOSPORT	Imputation flag for FOSPORT	N	1	5125	5125
772	F_FORESPON	Imputation flag for FORESPON	N	1	5126	5126
773	F_FOHISTX	Imputation flag for FOHISTX	N	1	5127	5127
774	F_FODINNERX	Imputation flag for FODINNERX	N	1	5128	5128
775	F_FOLIBRAYX	Imputation flag for FOLIBRAYX	N	1	5129	5129
776	F_FOBOOKSTX	Imputation flag for FOBOOKSTX	N	1	5130	5130
777	F_FOCONCRTX	Imputation flag for FOCONCRTX	N	1	5131	5131
778	F_FOMUSEUMX	Imputation flag for FOMUSEUMX	N	1	5132	5132
779	F_FOZOOX	Imputation flag for FOZOOX	N	1	5133	5133
780	F_FOGROUPX	Imputation flag for FOGROUPX	N	1	5134	5134
781	F_FOSPRTEVX	Imputation flag for FOSPRTEVX	N	1	5135	5135
782	F_HDHEALTH	Imputation flag for HDHEALTH	N	1	5136	5136
783	F_HDINTDIS	Imputation flag for HDINTDIS	N	1	5137	5137
784	F_HDSPEECHX	Imputation flag for HDSPEECHX	N	1	5138	5138
785	F_HDDISTRBX	Imputation flag for HDDISTRBX	N	1	5139	5139
786	F_HDDEAFIMX	Imputation flag for HDDEAFIMX	N	1	5140	5140
787	F_HDBLINDX	Imputation flag for HDBLINDX	N	1	5141	5141
788	F_HDORTHOX	Imputation flag for HDORTHOX	N	1	5142	5142
789	F_HDAUTISM	Imputation flag for HDAUTISM	N	1	5143	5143
790	F_HDPDDX	Imputation flag for HDPDDX	N	1	5144	5144
791	F_HDADDX	Imputation flag for HDADDX	N	1	5145	5145
792	F_HDLEARNX	Imputation flag for HDLEARNX	N	1	5146	5146
793	F_HDDELAYX	Imputation flag for HDDELAYX	N	1	5147	5147
794	F_HDTRBRAIN	Imputation flag for HDTRBRAIN	N	1	5148	5148
795	F_HDOTHERX	Imputation flag for HDOTHERX	N	1	5149	5149
796	F_HDIEPX	Imputation flag for HDIEPX	N	2	5150	5151
797	F_HDCOMMXX	Imputation flag for HDCOMMXX	N	2	5152	5153
798	F_HDSPLED	Imputation flag for HDSPLED	N	2	5154	5155
799	F_HDLEARN	Imputation flag for HDLEARN	N	2	5156	5157
800	F_HDPLAY	Imputation flag for HDPLAY	N	2	5158	5159
801	F_HDOUT	Imputation flag for HDOUT	N	2	5160	5161
802	F_HDFRND	Imputation flag for HDFRND	N	2	5162	5163
803	F_CDOBMM	Imputation flag for CDOBMM	N	1	5164	5164
804	F_CDOBY	Imputation flag for CDOBY	N	1	5165	5165
805	F_CPLCBRTH	Imputation flag for CPLCBRTH	N	1	5166	5166
806	F_CMOVEAGE	Imputation flag for CMOVEAGE	N	2	5167	5168
807	F_CHISPAN	Imputation flag for CHISPAN	N	1	5169	5169
808	F_CAMIND	Imputation flag for CAMIND	N	1	5170	5170
809	F_CASIAN	Imputation flag for CASIAN	N	1	5171	5171
810	F_CBLACK	Imputation flag for CBLACK	N	1	5172	5172
811	F_CPACI	Imputation flag for CPACI	N	1	5173	5173
812	F_CWHITE	Imputation flag for CWHITE	N	1	5174	5174
813	F_CHISPRM	Imputation flag for CHISPRM	N	1	5175	5175
814	F_CSEX	Imputation flag for CSEX	N	1	5176	5176
815	F_CLIVYN	Imputation flag for CLIVYN	N	1	5177	5177
816	F_CLIVELSWX	Imputation flag for CLIVELSWX	N	2	5178	5179
817	F_CSPEAKX	Imputation flag for CSPEAKX	N	1	5180	5180
818	F_CENGLPRG	Imputation flag for CENGLPRG	N	2	5181	5182

See note at end of table.

Table B-2. Restricted-Use Data file Layout in Position Order, PFI:2019

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
819	F_HHTOTALXX	Imputation flag for HHTOTALXX	N	1	5183	5183
820	F_HHBROX	Imputation flag for HHBROX	N	1	5184	5184
821	F_HHSISSX	Imputation flag for HHSISSX	N	1	5185	5185
822	F_HHMOM	Imputation flag for HHMOM	N	1	5186	5186
823	F_HHDAD	Imputation flag for HHDAD	N	1	5187	5187
824	F_HHAUNTSX	Imputation flag for HHAUNTSX	N	1	5188	5188
825	F_HHUNCLSX	Imputation flag for HHUNCLSX	N	1	5189	5189
826	F_HHGMASX	Imputation flag for HHGMASX	N	1	5190	5190
827	F_HHGPASX	Imputation flag for HHGPASX	N	1	5191	5191
828	F_HHCSNSX	Imputation flag for HHCSNSX	N	1	5192	5192
829	F_HHPRTNRSX	Imputation flag for HHPRTNRSX	N	1	5193	5193
830	F_HHORELSX	Imputation flag for HHORELSX	N	1	5194	5194
831	F_HHONRELSX	Imputation flag for HHONRELSX	N	1	5195	5195
832	F_RELATION	Imputation flag for RELATION	N	1	5196	5196
833	F_HHENGLISH	Imputation flag for HHENGLISH	N	1	5197	5197
834	F_HHSPANISH	Imputation flag for HHSPANISH	N	1	5198	5198
835	F_HHFRENCH	Imputation flag for HHFRENCH	N	1	5199	5199
836	F_HHCHINESE	Imputation flag for HHCHINESE	N	1	5200	5200
837	F_HHOTHLANG	Imputation flag for HHOTHLANG	N	1	5201	5201
838	F_PIREL	Imputation flag for PIREL	N	1	5202	5202
839	F_PISEX	Imputation flag for PISEX	N	1	5203	5203
840	F_PIMRSTA	Imputation flag for PIMRSTA	N	1	5204	5204
841	F_PIBFGF	Imputation flag for PIBFGF	N	2	5205	5206
842	F_PIFRLNG	Imputation flag for PIFRLNG	N	1	5207	5207
843	F_PISPEAK	Imputation flag for PISPEAK	N	2	5208	5209
844	F_PIDIFFI	Imputation flag for PIDIFFI	N	2	5210	5211
845	F_PISCINT	Imputation flag for PISCINT	N	2	5212	5213
846	F_P1WRMTL	Imputation flag for P1WRMTL	N	2	5214	5215
847	F_P1PLCBRTH	Imputation flag for P1PLCBRTH	N	1	5216	5216
848	F_P1AGEMV	Imputation flag for P1AGEMV	N	2	5217	5218
849	F_P1HISPAN	Imputation flag for P1HISPAN	N	1	5219	5219
850	F_P1AMIND	Imputation flag for P1AMIND	N	1	5220	5220
851	F_P1ASIAN	Imputation flag for P1ASIAN	N	1	5221	5221
852	F_P1BLACK	Imputation flag for P1BLACK	N	1	5222	5222
853	F_P1PACI	Imputation flag for P1PACI	N	1	5223	5223
854	F_P1WHITE	Imputation flag for P1WHITE	N	1	5224	5224
855	F_P1HISPRM	Imputation flag for P1HISPRM	N	1	5225	5225
856	F_P1EDUC	Imputation flag for P1EDUC	N	1	5226	5226
857	F_P1ENRL	Imputation flag for P1ENRL	N	1	5227	5227
858	F_P1EMPL	Imputation flag for P1EMPL	N	1	5228	5228
859	F_P1HRSWK	Imputation flag for P1HRSWK	N	2	5229	5230
860	F_P1LKWRK	Imputation flag for P1LKWRK	N	2	5231	5232
861	F_P1MTHSWRK	Imputation flag for P1MTHSWRK	N	1	5233	5233
862	F_P2GUARD	Imputation flag for P2GUARD	N	1	5234	5234
863	F_P2IAGE	Imputation flag for P2IAGE	N	1	5235	5235
864	F_P2REL	Imputation flag for P2REL	N	2	5236	5237
865	F_P2SEX	Imputation flag for P2SEX	N	2	5238	5239
866	F_P2MRSTA	Imputation flag for P2MRSTA	N	2	5240	5241
867	F_P2BFGF	Imputation flag for P2BFGF	N	2	5242	5243
868	F_P2FRLNG	Imputation flag for P2FRLNG	N	2	5244	5245
869	F_P2SPEAK	Imputation flag for P2SPEAK	N	2	5246	5247
870	F_P2DIFFI	Imputation flag for P2DIFFI	N	2	5248	5249
871	F_P2SCINT	Imputation flag for P2SCINT	N	2	5250	5251
872	F_P2WRMTL	Imputation flag for P2WRMTL	N	2	5252	5253
873	F_P2PLCBRTH	Imputation flag for P2PLCBRTH	N	2	5254	5255
874	F_P2AGEMV	Imputation flag for P2AGEMV	N	2	5256	5257
875	F_P2HISPAN	Imputation flag for P2HISPAN	N	2	5258	5259
876	F_P2AMIND	Imputation flag for P2AMIND	N	2	5260	5261
877	F_P2ASIAN	Imputation flag for P2ASIAN	N	2	5262	5263
878	F_P2BLACK	Imputation flag for P2BLACK	N	2	5264	5265
879	F_P2PACI	Imputation flag for P2PACI	N	2	5266	5267
880	F_P2WHITE	Imputation flag for P2WHITE	N	2	5268	5269
881	F_P2HISPRM	Imputation flag for P2HISPRM	N	2	5270	5271

See note at end of table.

Table B-2. Restricted-Use Data file Layout in Position Order, PFI:2019

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
882	F_P2EDUC	Imputation flag for P2EDUC	N	2	5272	5273
883	F_P2ENRL	Imputation flag for P2ENRL	N	2	5274	5275
884	F_P2EMPL	Imputation flag for P2EMPL	N	2	5276	5277
885	F_P2HRSWK	Imputation flag for P2HRSWK	N	2	5278	5279
886	F_P2LKWRK	Imputation flag for P2LKWRK	N	2	5280	5281
887	F_P2MTHSWRK	Imputation flag for P2MTHSWRK	N	2	5282	5283
888	F_P2AGE	Imputation flag for P2AGE	N	2	5284	5285
889	F_HWELFTANST	Imputation flag for HWELFTANST	N	1	5286	5286
890	F_HWIC	Imputation flag for HWIC	N	1	5287	5287
891	F_HFOODST	Imputation flag for HFOODST	N	1	5288	5288
892	F_HMEDICAID	Imputation flag for HMEDICAID	N	1	5289	5289
893	F_HCHIP	Imputation flag for HCHIP	N	1	5290	5290
894	F_HSECNS	Imputation flag for HSECNS	N	1	5291	5291
895	F_TTLHHINC	Imputation flag for TTLHHINC	N	1	5292	5292
896	F_OWNRNTHB	Imputation flag for OWNRNTHB	N	1	5293	5293
897	F_HVINTSPHO	Imputation flag for HVINTSPHO	N	1	5294	5294
898	F_HVINTCOM	Imputation flag for HVINTCOM	N	1	5295	5295
899	F_CHLDNT	Imputation flag for CHLDNT	N	1	5296	5296
900	F_LRNCOMP	Imputation flag for LRNCOMP	N	2	5297	5298
901	F_LRNTAB	Imputation flag for LRNTAB	N	2	5299	5300
902	F_LRNCELL	Imputation flag for LRNCELL	N	2	5301	5302
903	F_SEFUTUREX	Imputation flag for SEFUTUREX	N	1	5303	5303
904	F_HHUNID	Imputation flag for HHUNID	N	1	5304	5304
905	F_RSTATE	Imputation flag for RSTATE	N	1	5305	5305
906	F_ZCTA	Imputation flag for ZCTA	N	1	5306	5306
907	F_ZIPLOCL	Imputation flag for ZIPLOCL	N	1	5307	5307

SOURCE: U.S. Department of Education, National Center for Education Statistics, Parent and Family Involvement in Education Survey of the 2019 National Household Education Surveys Program (PFI-NHES:2019)

Table B-3. Public-Use Data file Layout in Position Order, ECPP:2019

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
1	BASMID	Unique child identifier	C	11	1	11
2	RCNOW	1. Regular care from relative	N	1	12	12
3	RCWEEK	2. Care from relative regularly scheduled	N	2	13	14
4	RCATYPE	3. Relative relation to child	N	2	15	16
5	RCAGE	4. Age of relative care provider	N	2	17	18
6	RCPLACE	5. Home for relative care	N	2	19	20
7	RCTIME	6. Time from home to relative's home	N	2	21	22
8	RCDAYS	7. Days a week child receives care from relative	N	2	23	24
9	RCHRS	8. Hours a week child receives care from relative	N	2	25	26
10	RCCVRWK	9. Relative care covers work hours	N	2	27	28
11	RCSTRTY	10. Child's age when care began from relative (Years)	N	2	29	30
12	RCSTRTM	10. Child's age when care began from relative (Months)	N	2	31	32
13	RCSPEAK	11. Language spoken by relative when caring for child	N	2	33	34
14	RCSKNFV	12. Relative care for child sick without a fever	N	2	35	36
15	RCSKFV	12. Relative care for child sick with a fever	N	2	37	38
16	RCOTCH	13. How many children under relative's care	N	2	39	40
17	RCFEE	14. Charge for care by relative	N	2	41	42
18	RCREL	15. Outside relative pays for care by relative	N	2	43	44
19	RCTANF	15. TANF pays for care by relative	N	2	45	46
20	RCSSAC	15. Other social service pays for care by relative	N	2	47	48
21	RCEMPL	15. Employer pays for care by relative	N	2	49	50
22	RCOTHER	15. Someone else pays for care by relative	N	2	51	52
23	RCCOST	16. Amount household pays for care by relative	N	4	53	56
24	RCUNIT	16. Unit of time for cost of relative care	N	2	57	58
25	RCCSTHNX	17. Number of children in household amount covers for relative care	N	2	59	60
26	RCOTHC	18. Other regular relative care arrangements	N	2	61	62
27	RCTLHR	19. Hours each week spent in other relative care	N	2	63	64
28	NCNOW	20. Care from non-relative	N	1	65	65
29	NCWEEK	21. Care from non-relative regularly scheduled	N	2	66	67
30	NCINHH	22. Care provider live in household	N	2	68	69
31	NCPLACE	23. Home for non-relative care	N	2	70	71
32	NCTIME	24. Time from home to non-relative's home	N	2	72	73
33	NCDAYS	25. Days a week child receives non-relative care	N	2	74	75
34	NCHRS	26. Hours each week child receives non-relative care	N	2	76	77
35	NCCVRWK	27. Non-relative care covers work hours	N	2	78	79
36	NCSTRTY	28. Child's age when care began from non-relative (Years)	N	2	80	81
37	NCSTRTM	28. Child's age when care began from non-relative (Months)	N	2	82	83
38	NCALKNE	29. Non-relative care provider already known	N	2	84	85
39	NCAGE	30. Non-relative care provider 18 or older	N	2	86	87
40	NCSPEAK	31. Language spoken by non-relative when caring for child	N	2	88	89
41	NCSKNFV	32. Non-relative care for child sick without a fever	N	2	90	91
42	NCSKFV	32. Non-relative care for child sick with a fever	N	2	92	93
43	NCOTCH	33. How many children under non-relative's care	N	2	94	95
44	NCRCMDPT	34. Recommend non-relative care provider to another	N	2	96	97
45	NCFEE	35. Charge for care by non-relative	N	2	98	99
46	NCREL	36. Relative pays for care by non-relative	N	2	100	101
47	NCTANF	36. TANF pays for care by non-relative	N	2	102	103
48	NCSSAC	36. Other social service pays for care by non-relative	N	2	104	105
49	NCEMPL	36. Employer pays for care by non-relative	N	2	106	107
50	NCOTHER	36. Someone else pays for care by non-relative	N	2	108	109
51	NCCOST	37. Amount household pays for care by non-relative	N	5	110	114
52	NCUNIT	37. Unit of time for cost of non-relative care	N	2	115	116
53	NCCSTHNX	38. Number of children in household amount covers for non-relative care	N	2	117	118
54	NCOTHC	39. Other regular non-relative care arrangements	N	2	119	120
55	NCTLHR	40. Total hours per week in care with non-relatives	N	2	121	122
56	CPNOWX	41. Attending program not in private home	N	1	123	123
57	CPWEEKX	42. Attend program at least once a week	N	2	124	125
58	CPPLACEX	43. Program location	N	2	126	127
59	CPSPRLG	44. Program teaches religious content	N	2	128	129
60	CPWORK	45. Program location at workplace	N	2	130	131
61	CPHEADST	46. (Early) Head Start program	N	2	132	133
62	CPDAYS	47. Days each week child attends program	N	2	134	135

See note at end of table.

Table B-3. Public-Use Data file Layout in Position Order, ECPP:2019

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
63	CPHRS	48. Hours each week child attends program	N	2	136	137
64	CPCVRWK	49. Program covers work hours	N	2	138	139
65	CPSTRTY	50. Age of child when starting program (Years)	N	2	140	141
66	CPSTRTM	50. Age of child when starting program (Months)	N	2	142	143
67	CPSPEAK	51. Language spoken by program provider when caring for child	N	2	144	145
68	CPTIME	52. Time from home to program	N	2	146	147
69	CPRCMDPT	53. Recommend program to another	N	2	148	149
70	CPTEST	54. Provide hearing, speech, vision testing	N	2	150	151
71	CPPHYSE	54. Provide physical examinations	N	2	152	153
72	CPDENTA	54. Provide dental examinations	N	2	154	155
73	CPDISAB	54. Provide testing for learning problems	N	2	156	157
74	CPMEDAM	54. Provide medication administration	N	2	158	159
75	CPSKNFV	54. Provide care when child is sick without fever	N	2	160	161
76	CPSKFV	54. Provide care when child is sick with fever	N	2	162	163
77	CPFEE	55. Charge for program	N	2	164	165
78	CPREL	56. Relative pays for program care	N	2	166	167
79	CPTANF	56. TANF pays for program care	N	2	168	169
80	CPSSAC	56. Other social service pays for program care	N	2	170	171
81	CPEMPL	56. Employer pays for program care	N	2	172	173
82	CPOTHER	56. Someone else pays for program care	N	2	174	175
83	CPCOST	57. Amount household pays for program care	N	5	176	180
84	CPUNIT	57. Unit of time for cost of program care	N	2	181	182
85	CPCSTHNX	58. Number of children in household amount covers for program	N	2	183	184
86	CPOTHC	59. Other regular program care arrangements	N	2	185	186
87	CPTLHR	60. Total hours per week at programs	N	2	187	188
88	PCEVRHDX	61. Ever attended (Early) Head Start program	N	1	189	189
89	MAINRESN	62. Reason for wanting care	N	1	190	190
90	PPCHOIC	63. Feel good choices for care	N	1	191	191
91	CRSRCH	64. Searched for care	N	1	192	192
92	PPDIFCLT	65. Difficulty finding care	N	2	193	194
93	WHYDIFCLT	66. Reason finding care was difficult	N	2	195	196
94	CCPY	67. Care arrangement in the past year	N	2	197	198
95	CCREASN1	68. Main reason household chose care arrangement - Code 1	N	3	199	201
96	CCREASN2	68. Main reason household chose care arrangement - Code 2	N	3	202	204
97	CCREASN3	68. Main reason household chose care arrangement - Code 3	N	3	205	207
98	CCREASN4	68. Main reason household chose care arrangement - Code 4	N	3	208	210
99	CCREASN5	68. Main reason household chose care arrangement - Code 5	N	3	211	213
100	DCLOA	69. Importance of location	N	2	214	215
101	DCOST	69. Importance of cost	N	2	216	217
102	DRELY	69. Importance of reliability	N	2	218	219
103	DLERN	69. Importance of learning activities	N	2	220	221
104	DCHIL	69. Importance of child interaction with other kids	N	2	222	223
105	DHROP	69. Importance of caregiver availability	N	2	224	225
106	DNBGRP	69. Importance of number of children in group	N	2	226	227
107	DRTWEB	69. Importance of website ratings	N	2	228	229
108	DRECFAM	69. Importance of personal recommendations	N	2	230	231
109	DQUAL	69. Importance of qualifications of staff	N	2	232	233
110	DRELOR	69. Importance of religious orientation	N	2	234	235
111	HABOOKS	70. Books child owns	N	3	236	238
112	FOREADTOX	71. Time spent reading to child	N	2	239	240
113	FORDDAYX	72. Minutes spent each time reading to child	N	2	241	242
114	FOSTORYX	73. In the past week, times child has been told a story	N	1	243	243
115	FOWORDSX	73. In the past week, times child has been taught letters, words, or numbers	N	1	244	244
116	FOSANG	73. In the past week, times sang with child	N	1	245	245
117	FOCRAFTSX	73. In the past week, time spent on arts and crafts with child	N	1	246	246
118	FODINNERX	74. Times eaten evening meal together	N	1	247	247
119	FOLIBRAY	75. Visited a library in the past month	N	1	248	248
120	FOBOOKST	76. Visited a bookstore in the past month	N	1	249	249
121	DPIAGE	77. Child older or younger than 2 years	N	1	250	250
122	DPLETTER	78. Recognize letters of alphabet	N	2	251	252
123	DPNAME	79. Ability to write first name	N	2	253	254
124	DPLTRSND	80. Recognize beginning sound of a word	N	2	255	256

See note at end of table.

Table B-3. Public-Use Data file Layout in Position Order, ECPP:2019

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
125	DPEXPLN	81. Explain things he or she has seen	N	2	257	258
126	DPCCOUNT	82. Count up to N	N	2	259	260
127	DPSHAPE	83. Identify basic shapes	N	2	261	262
128	HDHEALTH	84. Health of child	N	1	263	263
129	HDINTDIS	85. Intellectual disability	N	1	264	264
130	HDSPEECHX	85. Speech or language impairment	N	1	265	265
131	HDDISTREX	85. Serious emotional disturbance	N	1	266	266
132	HDDEAFIMX	85. Deafness or another hearing impairment	N	1	267	267
133	HDBLINDX	85. Blindness or another visual impairment	N	1	268	268
134	HDORTHOX	85. Orthopedic impairment	N	1	269	269
135	HDAUTISMXX	85. Autism	N	1	270	270
136	HDPDDX	85. Pervasive Developmental Disorder	N	1	271	271
137	HDADDX	85. Attention Deficit Disorder	N	1	272	272
138	HDLEARNX	85. Learning disability	N	1	273	273
139	HDDELAYX	85. Developmental delay	N	1	274	274
140	HDTRBRAIN	85. Traumatic brain injury	N	1	275	275
141	HDOTHERX	85. Another health impairment	N	1	276	276
142	HDDLRSK	86. At-risk for delay	N	1	277	277
143	HDIFSPIEP	88. Services provided by ISFP or IEP	N	2	278	279
144	HDCOMMXX	89. Satisfaction with service provider communication	N	2	280	281
145	HDSPCLED	90. Enrollment in special education classes	N	2	282	283
146	HDLEARN	91. Condition interferes with learning	N	2	284	285
147	HDPLAY	91. Condition interferes with participation in play	N	2	286	287
148	HDOUT	91. Condition interferes with going on outings	N	2	288	289
149	HDFRNDX	91. Condition interferes with making friends	N	2	290	291
150	HDCHDCARE	92. Condition interferes with ability to attend care	N	2	292	293
151	CDOBMM	93. Month child born	N	2	294	295
152	CDOBYX	93. Year child born	N	4	296	299
153	CPLCBRTH	94. Country where child born	N	1	300	300
154	CMOVEAGE	95. Age of child when first moved to US	N	2	301	302
155	CHISPAN	96. Child of Spanish, Hispanic, or Latino origin	N	1	303	303
156	CAMIND	97. Child Race - American Indian or Alaska Native	N	1	304	304
157	CASIAN	97. Child Race - Asian	N	1	305	305
158	CBLACK	97. Child Race - Black or African American	N	1	306	306
159	CPACI	97. Child Race - Native Hawaiian or other Pacific Islander	N	1	307	307
160	CWHITE	97. Child Race - White	N	1	308	308
161	CHISPRM	97. Child Race - Hispanic, race not reported	N	1	309	309
162	CSEX	98. Child Sex	N	1	310	310
163	CLIVYN	99. Child lives at another address	N	1	311	311
164	CLIVELSWX	100. Address where child spends most time	N	2	312	313
165	CSPEAKX	101. Language spoken by child at home	N	1	314	314
166	CENGLPRG	102. Enrolled in language program	N	2	315	316
167	HHTOTALXX	103. Total people in household	N	2	317	318
168	HHBROX	104. Brothers	N	1	319	319
169	HHSISX	104. Sisters	N	1	320	320
170	HHMOM	104. Mothers	N	1	321	321
171	HHHAD	104. Fathers	N	1	322	322
172	HHAUNTSX	104. Aunts	N	1	323	323
173	HHUNCLSX	104. Uncles	N	1	324	324
174	HHGMASX	104. Grandmothers	N	1	325	325
175	HHGPASX	104. Grandfathers	N	1	326	326
176	HHCSNSX	104. Cousins	N	1	327	327
177	HHPRTNRSX	104. Parent's girlfriend/boyfriend/partner	N	1	328	328
178	HHORELSX	104. Other relatives	N	1	329	329
179	HHONRELSX	104. Other non-relatives	N	1	330	330
180	RELATION	105. Relation to child	N	2	331	332
181	HHENGLISH	106. Language spoken at home - English	N	1	333	333
182	HHSPANISH	106. Language spoken at home - Spanish	N	1	334	334
183	HHFRENCH	106. Language spoken at home - French	N	1	335	335
184	HHCHINESE	106. Language spoken at home - Chinese	N	1	336	336
185	HHOTHLANG	106. Language spoken at home - Other	N	1	337	337
186	PIREL	107. Relation of first parent/guardian to child	N	1	338	338

See note at end of table.

Table B-3. Public-Use Data file Layout in Position Order, ECPP:2019

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
187	PISEX	108. First parent/guardian sex	N	1	339	339
188	PIMRSTA	109. First parent/guardian marital status	N	1	340	340
189	PIBFGF	110. First parent/guardian living with partner	N	2	341	342
190	PIFRLNG	111. First parent/guardian first language	N	1	343	343
191	PISPEAK	112. Language spoken most often at home by first parent/guardian	N	2	344	345
192	PIPLCBRTH	113. First parent/guardian born in U.S.	N	1	346	346
193	PIAGEMV	114. Age of first parent/guardian when first moved to US	N	2	347	348
194	PIHISPAN	115. First parent/guardian of Spanish, Hispanic, or Latino origin	N	1	349	349
195	PIAMIND	116. First parent/guardian race - American Indian or Alaska Native	N	1	350	350
196	PIASIAN	116. First parent/guardian race - Asian	N	1	351	351
197	PIBLACK	116. First parent/guardian race - Black or African American	N	1	352	352
198	PIPACI	116. First parent/guardian race - Native Hawaiian or other Pacific Islander	N	1	353	353
199	PIWHITE	116. First parent/guardian race - White	N	1	354	354
200	PIHISPRM	116. First parent/guardian race - Hispanic, race not reported	N	1	355	355
201	PIEDUC	117. First parent/guardian highest grade level completed	N	2	356	357
202	PIENRL	118. First parent/guardian attending school	N	1	358	358
203	PIEMPL	119. First parent/guardian employment status	N	1	359	359
204	PIHRSWK	120. First parent/guardian hours worked per week	N	2	360	361
205	PILKWRK	121. First parent/guardian looking for work	N	2	362	363
206	PIMTHSWRK	122. First parent/guardian months worked	N	2	364	365
207	PIAGE	123. First parent/guardian age	N	2	366	367
208	P2GUARD	124. Second parent/guardian	N	1	368	368
209	P2REL	125. Relation of second parent/guardian to child	N	2	369	370
210	P2SEX	126. Second parent/guardian sex	N	2	371	372
211	P2MRSTA	127. Second parent/guardian marital status	N	2	373	374
212	P2BFGF	128. Second parent/guardian living with partner	N	2	375	376
213	P2FRLNG	129. Second parent/guardian first language	N	2	377	378
214	P2SPEAK	130. Language spoken most often at home by second parent/guardian	N	2	379	380
215	P2PLCBRTH	131. Second parent/guardian born in U.S.	N	2	381	382
216	P2AGEMV	132. Age of second parent/guardian when first moved to US	N	2	383	384
217	P2HISPAN	133. Second parent/guardian of Spanish, Hispanic, or Latino origin	N	2	385	386
218	P2AMIND	134. Second parent/guardian race - American Indian or Alaska Native	N	2	387	388
219	P2ASIAN	134. Second parent/guardian race - Asian	N	2	389	390
220	P2BLACK	134. Second parent/guardian race - Black or African American	N	2	391	392
221	P2PACI	134. Second parent/guardian race - Native Hawaiian or other Pacific Islander	N	2	393	394
222	P2WHITE	134. Second parent/guardian race - White	N	2	395	396
223	P2HISPRM	134. Second parent/guardian race - Hispanic, race not reported	N	2	397	398
224	P2EDUC	135. Second parent/guardian highest grade level completed	N	2	399	400
225	P2ENRL	136. Second parent/guardian attending school	N	2	401	402
226	P2EMPL	137. Second parent/guardian employment status	N	2	403	404
227	P2HRSWK	138. Second parent/guardian hours worked per week	N	2	405	406
228	P2LKWRK	139. Second parent/guardian looking for work	N	2	407	408
229	P2MTHSWRK	140. Second parent/guardian months worked	N	2	409	410
230	P2AGE	141. Second parent/guardian age	N	2	411	412
231	HWELFTANST	142. Received TANF in past 12 months	N	1	413	413
232	HWIC	142. Received WIC in past 12 months	N	1	414	414
233	HFOODST	142. Received food stamps in past 12 months	N	1	415	415
234	HMEDICAID	142. Received Medicaid in past 12 months	N	1	416	416
235	HCHIP	142. Received CHIP in past 12 months	N	1	417	417
236	HSECN8	142. Received Section 8 in past 12 months	N	1	418	418
237	TTLHHINC	143. Total income	N	2	419	420
238	OWNRNTHB	144. Own/rent house	N	1	421	421
239	HVINTSPHO	145. Internet access on a cell phone	N	1	422	422
240	HVINTCOM	146. Internet access on a computer or tablet	N	1	423	423
241	CHLDNT	147. Child use of internet for learning at home	N	1	424	424
242	LRNCOMP	148. Learning activities on computer	N	2	425	426
243	LRNTAB	148. Learning activities on tablet	N	2	427	428
244	LRNCELL	148. Learning activities on cell phone	N	2	429	430
245	DSBLTY	D-Child currently has disability	N	1	431	431
246	PARIEDUC	D-Educational attainment of child's first parent or guardian	N	1	432	432
247	PARIEMPL	D-Work status of child's first parent or guardian	N	1	433	433
248	PARIFTFY	D-First parent or guardian works full time	N	1	434	434

See note at end of table.

Table B-3. Public-Use Data file Layout in Position Order, ECPP:2019

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
249	PARIMARST	D-First parent or guardian marital status	N	1	435	435
250	PARITYPE	D-Specific relationship of first parent or guardian to child	N	1	436	436
251	PARIFSTGN	D-First parent or guardian first generation immigrant status	N	1	437	437
252	PAR2EDUC	D-Educational attainment of child's second parent or guardian	N	2	438	439
253	PAR2EMPL	D-Work status of child's second parent or guardian	N	2	440	441
254	PAR2FTFY	D-Second parent or guardian works full time	N	2	442	443
255	PAR2MARST	D-Second parent or guardian marital status	N	2	444	445
256	PAR2TYPE	D-Specific relationship of second parent or guardian to child	N	2	446	447
257	PAR2FSTGN	D-Second parent or guardian first generation immigrant status	N	2	448	449
258	HHPARN19X	D-Parental structure of household	N	1	450	450
259	HHPARN19_BRD	D-Household has second parent or guardian	N	1	451	451
260	NUMSIBSX	D-Number of child's siblings	N	1	452	452
261	FAMILY19X	D-Family type with parents	N	1	453	453
262	FAMILY19_BRD	D-Family type with adults	N	1	454	454
263	HHUNDR6X	D-Number of children younger than age 6	N	1	455	455
264	HHUNDRI0X	D-Number of children younger than age 10	N	1	456	456
265	HHUNDRI6X	D-Number of children younger than age 16	N	1	457	457
266	HHUNDRI8X	D-Number of children younger than age 18	N	1	458	458
267	HHUNID	D-Other household member, not identified	N	1	459	459
268	LANGUAGEX	D-English spoken most by parents	N	1	460	460
269	PARGRADEX	D-Parent/guardian highest education	N	1	461	461
270	RACEETH	D-Race and ethnicity of child	N	1	462	462
271	RACEETH2	D-Detailed race and ethnicity of child	N	2	463	464
272	INTACC	D-Household has internet access	N	1	465	465
273	ANYCAREX	D-Child participates in any nonparental care or program arrangements	N	1	466	466
274	ANYCARE2X	D-Child has nonparental care at least once a week	N	1	467	467
275	CAREHOURX	D-Total hours a week child is in nonparental care	N	3	468	470
276	CPARRNEWX	D-Number of center-based programs at least once a week	N	1	471	471
277	MOSTHRXSX	D-Care arrangement in which the child spends the most hours per week	N	2	472	473
278	NCARRNEWX	D-Number of nonrelative arrangements at least once a week	N	1	474	474
279	RCARRNEWX	D-Number of relative care arrangements at least once a week	N	1	475	475
280	CENREG	D-Census region where child lives	N	1	476	476
281	ZIP18PO2	D-Percent of families in zip code with children under 18 below the poverty line	N	1	477	477
282	ZIPBLHI2	D-Percent of persons in zip code who were Black or Hispanic	N	1	478	478
283	ZIPLOCL	D-Zip code classification by community type	N	2	479	480
284	ENGLSPANX	D-Questionnaire in English or Spanish	N	1	481	481
285	AGE2018	D-Child's Age as of Dec 31, 2018	N	1	482	482
286	MODECOMP	D-Completed on web or paper	N	1	483	483
287	CHAGE1	D-Age of 1st nonsampled child	N	2	484	485
288	CHAGE2	D-Age of 2nd nonsampled child	N	2	486	487
289	CHAGE3	D-Age of 3rd nonsampled child	N	2	488	489
290	CHAGE4	D-Age of 4th nonsampled child	N	2	490	491
291	CHSEX1	D-Sex of 1st nonsampled child	N	2	492	493
292	CHSEX2	D-Sex of 2nd nonsampled child	N	2	494	495
293	CHSEX3	D-Sex of 3rd nonsampled child	N	2	496	497
294	CHSEX4	D-Sex of 4th nonsampled child	N	2	498	499
295	CHENRL1	D-Enrollment status of 1st nonsampled child	N	2	500	501
296	CHENRL2	D-Enrollment status of 2nd nonsampled child	N	2	502	503
297	CHENRL3	D-Enrollment status of 3rd nonsampled child	N	2	504	505
298	CHENRL4	D-Enrollment status of 4th nonsampled child	N	2	506	507
299	CHGRD1	D-Grade of 1st nonsampled child	N	2	508	509
300	CHGRD2	D-Grade of 2nd nonsampled child	N	2	510	511
301	CHGRD3	D-Grade of 3rd nonsampled child	N	2	512	513
302	CHGRD4	D-Grade of 4th nonsampled child	N	2	514	515
303	EPSU	PSU FOR TAYLOR SERIES VAR EST	N	4	516	519
304	ESTRATUM	STRATUM FOR TAYLOR SERIES VAR EST	N	1	520	520
305	FEWT	FINAL INTV WEIGHT	N	16	521	536
306	FEWT1	FINAL INTV REPLICATE WEIGHT, FEWT1	N	16	537	552
307	FEWT2	FINAL INTV REPLICATE WEIGHT, FEWT2	N	16	553	568
308	FEWT3	FINAL INTV REPLICATE WEIGHT, FEWT3	N	16	569	584
309	FEWT4	FINAL INTV REPLICATE WEIGHT, FEWT4	N	16	585	600
310	FEWT5	FINAL INTV REPLICATE WEIGHT, FEWT5	N	16	601	616

See note at end of table.

Table B-3. Public-Use Data file Layout in Position Order, ECPP:2019

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
311	FEWT6	FINAL INTV REPLICATE WEIGHT, FEWT6	N	16	617	632
312	FEWT7	FINAL INTV REPLICATE WEIGHT, FEWT7	N	16	633	648
313	FEWT8	FINAL INTV REPLICATE WEIGHT, FEWT8	N	16	649	664
314	FEWT9	FINAL INTV REPLICATE WEIGHT, FEWT9	N	16	665	680
315	FEWT10	FINAL INTV REPLICATE WEIGHT, FEWT10	N	16	681	696
316	FEWT11	FINAL INTV REPLICATE WEIGHT, FEWT11	N	16	697	712
317	FEWT12	FINAL INTV REPLICATE WEIGHT, FEWT12	N	16	713	728
318	FEWT13	FINAL INTV REPLICATE WEIGHT, FEWT13	N	16	729	744
319	FEWT14	FINAL INTV REPLICATE WEIGHT, FEWT14	N	16	745	760
320	FEWT15	FINAL INTV REPLICATE WEIGHT, FEWT15	N	16	761	776
321	FEWT16	FINAL INTV REPLICATE WEIGHT, FEWT16	N	16	777	792
322	FEWT17	FINAL INTV REPLICATE WEIGHT, FEWT17	N	16	793	808
323	FEWT18	FINAL INTV REPLICATE WEIGHT, FEWT18	N	16	809	824
324	FEWT19	FINAL INTV REPLICATE WEIGHT, FEWT19	N	16	825	840
325	FEWT20	FINAL INTV REPLICATE WEIGHT, FEWT20	N	16	841	856
326	FEWT21	FINAL INTV REPLICATE WEIGHT, FEWT21	N	16	857	872
327	FEWT22	FINAL INTV REPLICATE WEIGHT, FEWT22	N	16	873	888
328	FEWT23	FINAL INTV REPLICATE WEIGHT, FEWT23	N	16	889	904
329	FEWT24	FINAL INTV REPLICATE WEIGHT, FEWT24	N	16	905	920
330	FEWT25	FINAL INTV REPLICATE WEIGHT, FEWT25	N	16	921	936
331	FEWT26	FINAL INTV REPLICATE WEIGHT, FEWT26	N	16	937	952
332	FEWT27	FINAL INTV REPLICATE WEIGHT, FEWT27	N	16	953	968
333	FEWT28	FINAL INTV REPLICATE WEIGHT, FEWT28	N	16	969	984
334	FEWT29	FINAL INTV REPLICATE WEIGHT, FEWT29	N	16	985	1000
335	FEWT30	FINAL INTV REPLICATE WEIGHT, FEWT30	N	16	1001	1016
336	FEWT31	FINAL INTV REPLICATE WEIGHT, FEWT31	N	16	1017	1032
337	FEWT32	FINAL INTV REPLICATE WEIGHT, FEWT32	N	16	1033	1048
338	FEWT33	FINAL INTV REPLICATE WEIGHT, FEWT33	N	16	1049	1064
339	FEWT34	FINAL INTV REPLICATE WEIGHT, FEWT34	N	16	1065	1080
340	FEWT35	FINAL INTV REPLICATE WEIGHT, FEWT35	N	16	1081	1096
341	FEWT36	FINAL INTV REPLICATE WEIGHT, FEWT36	N	16	1097	1112
342	FEWT37	FINAL INTV REPLICATE WEIGHT, FEWT37	N	16	1113	1128
343	FEWT38	FINAL INTV REPLICATE WEIGHT, FEWT38	N	16	1129	1144
344	FEWT39	FINAL INTV REPLICATE WEIGHT, FEWT39	N	16	1145	1160
345	FEWT40	FINAL INTV REPLICATE WEIGHT, FEWT40	N	16	1161	1176
346	FEWT41	FINAL INTV REPLICATE WEIGHT, FEWT41	N	16	1177	1192
347	FEWT42	FINAL INTV REPLICATE WEIGHT, FEWT42	N	16	1193	1208
348	FEWT43	FINAL INTV REPLICATE WEIGHT, FEWT43	N	16	1209	1224
349	FEWT44	FINAL INTV REPLICATE WEIGHT, FEWT44	N	16	1225	1240
350	FEWT45	FINAL INTV REPLICATE WEIGHT, FEWT45	N	16	1241	1256
351	FEWT46	FINAL INTV REPLICATE WEIGHT, FEWT46	N	16	1257	1272
352	FEWT47	FINAL INTV REPLICATE WEIGHT, FEWT47	N	16	1273	1288
353	FEWT48	FINAL INTV REPLICATE WEIGHT, FEWT48	N	16	1289	1304
354	FEWT49	FINAL INTV REPLICATE WEIGHT, FEWT49	N	16	1305	1320
355	FEWT50	FINAL INTV REPLICATE WEIGHT, FEWT50	N	16	1321	1336
356	FEWT51	FINAL INTV REPLICATE WEIGHT, FEWT51	N	16	1337	1352
357	FEWT52	FINAL INTV REPLICATE WEIGHT, FEWT52	N	16	1353	1368
358	FEWT53	FINAL INTV REPLICATE WEIGHT, FEWT53	N	16	1369	1384
359	FEWT54	FINAL INTV REPLICATE WEIGHT, FEWT54	N	16	1385	1400
360	FEWT55	FINAL INTV REPLICATE WEIGHT, FEWT55	N	16	1401	1416
361	FEWT56	FINAL INTV REPLICATE WEIGHT, FEWT56	N	16	1417	1432
362	FEWT57	FINAL INTV REPLICATE WEIGHT, FEWT57	N	16	1433	1448
363	FEWT58	FINAL INTV REPLICATE WEIGHT, FEWT58	N	16	1449	1464
364	FEWT59	FINAL INTV REPLICATE WEIGHT, FEWT59	N	16	1465	1480
365	FEWT60	FINAL INTV REPLICATE WEIGHT, FEWT60	N	16	1481	1496
366	FEWT61	FINAL INTV REPLICATE WEIGHT, FEWT61	N	16	1497	1512
367	FEWT62	FINAL INTV REPLICATE WEIGHT, FEWT62	N	16	1513	1528
368	FEWT63	FINAL INTV REPLICATE WEIGHT, FEWT63	N	16	1529	1544
369	FEWT64	FINAL INTV REPLICATE WEIGHT, FEWT64	N	16	1545	1560
370	FEWT65	FINAL INTV REPLICATE WEIGHT, FEWT65	N	16	1561	1576
371	FEWT66	FINAL INTV REPLICATE WEIGHT, FEWT66	N	16	1577	1592
372	FEWT67	FINAL INTV REPLICATE WEIGHT, FEWT67	N	16	1593	1608

See note at end of table.

Table B-3. Public-Use Data file Layout in Position Order, ECPP:2019

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
373	FEWT68	FINAL INTV REPLICATE WEIGHT, FEWT68	N	16	1609	1624
374	FEWT69	FINAL INTV REPLICATE WEIGHT, FEWT69	N	16	1625	1640
375	FEWT70	FINAL INTV REPLICATE WEIGHT, FEWT70	N	16	1641	1656
376	FEWT71	FINAL INTV REPLICATE WEIGHT, FEWT71	N	16	1657	1672
377	FEWT72	FINAL INTV REPLICATE WEIGHT, FEWT72	N	16	1673	1688
378	FEWT73	FINAL INTV REPLICATE WEIGHT, FEWT73	N	16	1689	1704
379	FEWT74	FINAL INTV REPLICATE WEIGHT, FEWT74	N	16	1705	1720
380	FEWT75	FINAL INTV REPLICATE WEIGHT, FEWT75	N	16	1721	1736
381	FEWT76	FINAL INTV REPLICATE WEIGHT, FEWT76	N	16	1737	1752
382	FEWT77	FINAL INTV REPLICATE WEIGHT, FEWT77	N	16	1753	1768
383	FEWT78	FINAL INTV REPLICATE WEIGHT, FEWT78	N	16	1769	1784
384	FEWT79	FINAL INTV REPLICATE WEIGHT, FEWT79	N	16	1785	1800
385	FEWT80	FINAL INTV REPLICATE WEIGHT, FEWT80	N	16	1801	1816
386	F_RCNOW	Imputation flag for RCNOW	N	1	1817	1817
387	F_RCWEEK	Imputation flag for RCWEEK	N	2	1818	1819
388	F_RCTYPE	Imputation flag for RCTYPE	N	2	1820	1821
389	F_RCAGE	Imputation flag for RCAGE	N	2	1822	1823
390	F_RCPLACE	Imputation flag for RCPLACE	N	2	1824	1825
391	F_RCTIME	Imputation flag for RCTIME	N	2	1826	1827
392	F_RCDAYS	Imputation flag for RCDAYS	N	2	1828	1829
393	F_RCHRS	Imputation flag for RCHRS	N	2	1830	1831
394	F_RCCVRWK	Imputation flag for RCCVRWK	N	2	1832	1833
395	F_RCSTRTY	Imputation flag for RCSTRTY	N	2	1834	1835
396	F_RCSTRTM	Imputation flag for RCSTRTM	N	2	1836	1837
397	F_RCSPEAK	Imputation flag for RCSPEAK	N	2	1838	1839
398	F_RCSKNFV	Imputation flag for RCSKNFV	N	2	1840	1841
399	F_RCSKFV	Imputation flag for RCSKFV	N	2	1842	1843
400	F_RCOTCH	Imputation flag for RCOTCH	N	2	1844	1845
401	F_RCFEE	Imputation flag for RCFEE	N	2	1846	1847
402	F_RCREL	Imputation flag for RCREL	N	2	1848	1849
403	F_RCTANF	Imputation flag for RCTANF	N	2	1850	1851
404	F_RCSSAC	Imputation flag for RCSSAC	N	2	1852	1853
405	F_RCEMPL	Imputation flag for RCEMPL	N	2	1854	1855
406	F_RCOTHER	Imputation flag for RCOTHER	N	2	1856	1857
407	F_RCCOST	Imputation flag for RCCOST	N	2	1858	1859
408	F_RCUNIT	Imputation flag for RCUNIT	N	2	1860	1861
409	F_RCCSTHNX	Imputation flag for RCCSTHNX	N	2	1862	1863
410	F_RCOTHC	Imputation flag for RCOTHC	N	2	1864	1865
411	F_RCTLHR	Imputation flag for RCTLHR	N	2	1866	1867
412	F_NCNOW	Imputation flag for NCNOW	N	1	1868	1868
413	F_NCWEEK	Imputation flag for NCWEEK	N	2	1869	1870
414	F_NCINHH	Imputation flag for NCINHH	N	2	1871	1872
415	F_NCPLACE	Imputation flag for NCPLACE	N	2	1873	1874
416	F_NCTIME	Imputation flag for NCTIME	N	2	1875	1876
417	F_NCDAYS	Imputation flag for NCDAYS	N	2	1877	1878
418	F_NCHRS	Imputation flag for NCHRS	N	2	1879	1880
419	F_NCCVRWK	Imputation flag for NCCVRWK	N	2	1881	1882
420	F_NCSTRTY	Imputation flag for NCSTRTY	N	2	1883	1884
421	F_NCSTRTM	Imputation flag for NCSTRTM	N	2	1885	1886
422	F_NCALKNE	Imputation flag for NCALKNE	N	2	1887	1888
423	F_NCAGE	Imputation flag for NCAGE	N	2	1889	1890
424	F_NCSPEAK	Imputation flag for NCSPEAK	N	2	1891	1892
425	F_NCSKNFV	Imputation flag for NCSKNFV	N	2	1893	1894
426	F_NCSKFV	Imputation flag for NCSKFV	N	2	1895	1896
427	F_NCOTCH	Imputation flag for NCOTCH	N	2	1897	1898
428	F_NCRCMDPT	Imputation flag for NRCMDPT	N	2	1899	1900
429	F_NCFEE	Imputation flag for NCFEE	N	2	1901	1902
430	F_NCREL	Imputation flag for NCREL	N	2	1903	1904
431	F_NCTANF	Imputation flag for NCTANF	N	2	1905	1906
432	F_NCSSAC	Imputation flag for NCSSAC	N	2	1907	1908
433	F_NCEMPL	Imputation flag for NCEMPL	N	2	1909	1910
434	F_NCOTHER	Imputation flag for NCOTHER	N	2	1911	1912

See note at end of table.

Table B-3. Public-Use Data file Layout in Position Order, ECPP:2019

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
435	F_NCCOST	Imputation flag for NCCOST	N	2	1913	1914
436	F_NCUNIT	Imputation flag for NCUNIT	N	2	1915	1916
437	F_NCCSTHNX	Imputation flag for NCCSTHNX	N	2	1917	1918
438	F_NCOTHC	Imputation flag for NCOTHC	N	2	1919	1920
439	F_NCTLHR	Imputation flag for NCTLHR	N	2	1921	1922
440	F_CPNNOWX	Imputation flag for CPNNOWX	N	1	1923	1923
441	F_CPWEEKX	Imputation flag for CPWEEKX	N	2	1924	1925
442	F_CPPLACEX	Imputation flag for CPPLACEX	N	2	1926	1927
443	F_CPSPRLG	Imputation flag for CPSPRLG	N	2	1928	1929
444	F_CPWORK	Imputation flag for CPWORK	N	2	1930	1931
445	F_CPHEADST	Imputation flag for CPHEADST	N	2	1932	1933
446	F_CPDAYS	Imputation flag for CPDAYS	N	2	1934	1935
447	F_CPHRS	Imputation flag for CPHRS	N	2	1936	1937
448	F_CPCVRWK	Imputation flag for CPCVRWK	N	2	1938	1939
449	F_CPSTRTY	Imputation flag for CPSTRTY	N	2	1940	1941
450	F_CPSTRTM	Imputation flag for CPSTRTM	N	2	1942	1943
451	F_CPSPEAK	Imputation flag for CPSPEAK	N	2	1944	1945
452	F_CPTIME	Imputation flag for CPTIME	N	2	1946	1947
453	F_CPRCMDPT	Imputation flag for CPRCMDPT	N	2	1948	1949
454	F_CPTEST	Imputation flag for CPTEST	N	2	1950	1951
455	F_CPPHYSE	Imputation flag for CPPHYSE	N	2	1952	1953
456	F_CPDENTA	Imputation flag for CPDENTA	N	2	1954	1955
457	F_CPDISAB	Imputation flag for CPDISAB	N	2	1956	1957
458	F_CPMEDAM	Imputation flag for CPMEDAM	N	2	1958	1959
459	F_CPSKNFV	Imputation flag for CPSKNFV	N	2	1960	1961
460	F_CPSKFV	Imputation flag for CPSKFV	N	2	1962	1963
461	F_CPFEE	Imputation flag for CPFEE	N	2	1964	1965
462	F_CPREL	Imputation flag for CPREL	N	2	1966	1967
463	F_CPTANF	Imputation flag for CPTANF	N	2	1968	1969
464	F_CPSSAC	Imputation flag for CPSSAC	N	2	1970	1971
465	F_CPEMPL	Imputation flag for CPEMPL	N	2	1972	1973
466	F_CPOTHER	Imputation flag for CPOTHER	N	2	1974	1975
467	F_CPCOST	Imputation flag for CPCOST	N	2	1976	1977
468	F_CPUNIT	Imputation flag for CPUNIT	N	2	1978	1979
469	F_CPCSTHNX	Imputation flag for CPCSTHNX	N	2	1980	1981
470	F_CPOTHC	Imputation flag for CPOTHC	N	2	1982	1983
471	F_CPTLHR	Imputation flag for CPTLHR	N	2	1984	1985
472	F_PCEVRHDX	Imputation flag for PCEVRHDX	N	1	1986	1986
473	F_MAINRESN	Imputation flag for MAINRESN	N	1	1987	1987
474	F_PPCHOIC	Imputation flag for PPCHOIC	N	1	1988	1988
475	F_CRSRCH	Imputation flag for CRSRCH	N	1	1989	1989
476	F_PPDIFCLT	Imputation flag for PPDIFCLT	N	2	1990	1991
477	F_WHYDIFCLT	Imputation flag for WHYDIFCLT	N	2	1992	1993
478	F_CCPY	Imputation flag for CCPY	N	2	1994	1995
479	F_DCLOA	Imputation flag for DCLOA	N	2	1996	1997
480	F_DCCOST	Imputation flag for DCCOST	N	2	1998	1999
481	F_DRELY	Imputation flag for DRELY	N	2	2000	2001
482	F_DLERN	Imputation flag for DLERN	N	2	2002	2003
483	F_DCHIL	Imputation flag for DCHIL	N	2	2004	2005
484	F_DHROP	Imputation flag for DHROP	N	2	2006	2007
485	F_DNBGRP	Imputation flag for DNBGRP	N	2	2008	2009
486	F_DRTWEB	Imputation flag for DRTWEB	N	2	2010	2011
487	F_DRECFAM	Imputation flag for DRECFAM	N	2	2012	2013
488	F_DQUAL	Imputation flag for DQUAL	N	2	2014	2015
489	F_DRELOR	Imputation flag for DRELOR	N	2	2016	2017
490	F_HABOOKS	Imputation flag for HABOOKS	N	1	2018	2018
491	F_FOREADTOX	Imputation flag for FOREADTOX	N	1	2019	2019
492	F_FORDDAYX	Imputation flag for FORDDAYX	N	2	2020	2021
493	F_FOSTORYX	Imputation flag for FOSTORYX	N	1	2022	2022
494	F_FOWORDSX	Imputation flag for FOWORDSX	N	1	2023	2023
495	F_FOSANG	Imputation flag for FOSANG	N	1	2024	2024
496	F_FOCRAFTSX	Imputation flag for FOCRAFTSX	N	1	2025	2025

See note at end of table.

Table B-3. Public-Use Data file Layout in Position Order, ECPP:2019

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
497	F_FODINNERX	Imputation flag for FODINNERX	N	1	2026	2026
498	F_FOLIBRAY	Imputation flag for FOLIBRAY	N	1	2027	2027
499	F_FOBOOKST	Imputation flag for FOBOOKST	N	1	2028	2028
500	F_DPIAGE	Imputation flag for DPIAGE	N	1	2029	2029
501	F_DPLETTER	Imputation flag for DPLETTER	N	2	2030	2031
502	F_DPNAME	Imputation flag for DPNAME	N	2	2032	2033
503	F_DPLTRSND	Imputation flag for DPLTRSND	N	2	2034	2035
504	F_DPEXPLN	Imputation flag for DPEXPLN	N	2	2036	2037
505	F_DPCOUNT	Imputation flag for DPCOUNT	N	2	2038	2039
506	F_DPSHAPE	Imputation flag for DPSHAPE	N	2	2040	2041
507	F_HDHEALTH	Imputation flag for HDHEALTH	N	1	2042	2042
508	F_HDINTDIS	Imputation flag for HDINTDIS	N	1	2043	2043
509	F_HDSPEECHX	Imputation flag for HDSPEECHX	N	1	2044	2044
510	F_HDDISTRBX	Imputation flag for HDDISTRBX	N	1	2045	2045
511	F_HDDEAFIMX	Imputation flag for HDDEAFIMX	N	1	2046	2046
512	F_HDBLINDX	Imputation flag for HDBLINDX	N	1	2047	2047
513	F_HDORTHOX	Imputation flag for HDORTHOX	N	1	2048	2048
514	F_HDAUTISMX	Imputation flag for HDAUTISMX	N	1	2049	2049
515	F_HDPDDX	Imputation flag for HDPDDX	N	1	2050	2050
516	F_HDADDX	Imputation flag for HDADDX	N	1	2051	2051
517	F_HDLEARNX	Imputation flag for HDLEARNX	N	1	2052	2052
518	F_HDDELAYX	Imputation flag for HDDELAYX	N	1	2053	2053
519	F_HDTRBRAIN	Imputation flag for HDTRBRAIN	N	1	2054	2054
520	F_HDOTHERX	Imputation flag for HDOTHERX	N	1	2055	2055
521	F_HDDLRSK	Imputation flag for HDDLRSK	N	1	2056	2056
522	F_HDIFSPIEP	Imputation flag for HDIFSPIEP	N	2	2057	2058
523	F_HDCOMMUX	Imputation flag for HDCOMMUX	N	2	2059	2060
524	F_HDSPCLED	Imputation flag for HDSPCLED	N	2	2061	2062
525	F_HDLEARN	Imputation flag for HDLEARN	N	2	2063	2064
526	F_HDPLAY	Imputation flag for HDPLAY	N	2	2065	2066
527	F_HDOUT	Imputation flag for HDOUT	N	2	2067	2068
528	F_HDFRNDX	Imputation flag for HDFRNDX	N	2	2069	2070
529	F_HDCHDCARE	Imputation flag for HDCHDCARE	N	2	2071	2072
530	F_CDOBMM	Imputation flag for CDOBMM	N	1	2073	2073
531	F_CDOBYX	Imputation flag for CDOBYX	N	1	2074	2074
532	F_CPLCBRTH	Imputation flag for CPLCBRTH	N	1	2075	2075
533	F_CMOVEAGE	Imputation flag for CMOVEAGE	N	2	2076	2077
534	F_CHISPAN	Imputation flag for CHISPAN	N	1	2078	2078
535	F_CAMIND	Imputation flag for CAMIND	N	1	2079	2079
536	F_CASIAN	Imputation flag for CASIAN	N	1	2080	2080
537	F_CBLACK	Imputation flag for CBLACK	N	1	2081	2081
538	F_CPACI	Imputation flag for CPACI	N	1	2082	2082
539	F_CWHITE	Imputation flag for CWHITE	N	1	2083	2083
540	F_CHISPRM	Imputation flag for CHISPRM	N	1	2084	2084
541	F_CSEX	Imputation flag for CSEX	N	1	2085	2085
542	F_CLIVYN	Imputation flag for CLIVYN	N	1	2086	2086
543	F_CLIVELSWX	Imputation flag for CLIVELSWX	N	2	2087	2088
544	F_CSPEAKX	Imputation flag for CSPEAKX	N	1	2089	2089
545	F_CENGLPRG	Imputation flag for CENGLPRG	N	2	2090	2091
546	F_HHTOTALXX	Imputation flag for HHTOTALXX	N	1	2092	2092
547	F_HHBROX	Imputation flag for HHBROX	N	1	2093	2093
548	F_HHSISSX	Imputation flag for HHSISSX	N	1	2094	2094
549	F_HHMOM	Imputation flag for HHMOM	N	1	2095	2095
550	F_HHDAD	Imputation flag for HHDAD	N	1	2096	2096
551	F_HHAUNTSX	Imputation flag for HHAUNTSX	N	1	2097	2097
552	F_HHUNCLX	Imputation flag for HHUNCLX	N	1	2098	2098
553	F_HHGMAX	Imputation flag for HHGMAX	N	1	2099	2099
554	F_HHGMAX	Imputation flag for HHGMAX	N	1	2100	2100
555	F_HHCSNSX	Imputation flag for HHCSNSX	N	1	2101	2101
556	F_HHPRTNRSX	Imputation flag for HHPRTNRSX	N	1	2102	2102
557	F_HHORELSX	Imputation flag for HHORELSX	N	1	2103	2103
558	F_HHONRELSX	Imputation flag for HHONRELSX	N	1	2104	2104

See note at end of table.

Table B-3. Public-Use Data file Layout in Position Order, ECPP:2019

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
559	F_RELATION	Imputation flag for RELATION	N	1	2105	2105
560	F_HHENGLISH	Imputation flag for HHENGLISH	N	1	2106	2106
561	F_HHSPANISH	Imputation flag for HHSPANISH	N	1	2107	2107
562	F_HHFRENCH	Imputation flag for HHFRENCH	N	1	2108	2108
563	F_HHCHINESE	Imputation flag for HHCHINESE	N	1	2109	2109
564	F_HHOTHLANG	Imputation flag for HHOTHLANG	N	1	2110	2110
565	F_PIREL	Imputation flag for PIREL	N	1	2111	2111
566	F_PISEX	Imputation flag for PISEX	N	1	2112	2112
567	F_PIMRSTA	Imputation flag for PIMRSTA	N	1	2113	2113
568	F_PIBFGF	Imputation flag for PIBFGF	N	2	2114	2115
569	F_PIFRLNG	Imputation flag for PIFRLNG	N	1	2116	2116
570	F_PISPEAK	Imputation flag for PISPEAK	N	2	2117	2118
571	F_PIPLCBRTH	Imputation flag for PIPLCBRTH	N	1	2119	2119
572	F_PIAGEMV	Imputation flag for PIAGEMV	N	2	2120	2121
573	F_PIHISPAN	Imputation flag for PIHISPAN	N	1	2122	2122
574	F_PIAMIND	Imputation flag for PIAMIND	N	1	2123	2123
575	F_PIASIAN	Imputation flag for PIASIAN	N	1	2124	2124
576	F_PIBLACK	Imputation flag for PIBLACK	N	1	2125	2125
577	F_PIPACI	Imputation flag for PIPACI	N	1	2126	2126
578	F_PIWHITE	Imputation flag for PIWHITE	N	1	2127	2127
579	F_PIHISPRM	Imputation flag for PIHISPRM	N	1	2128	2128
580	F_PIEDUC	Imputation flag for PIEDUC	N	1	2129	2129
581	F_PIENRL	Imputation flag for PIENRL	N	1	2130	2130
582	F_PIEMPL	Imputation flag for PIEMPL	N	1	2131	2131
583	F_PIHRSWK	Imputation flag for PIHRSWK	N	2	2132	2133
584	F_PILKWRK	Imputation flag for PILKWRK	N	2	2134	2135
585	F_PIMTHSWRK	Imputation flag for PIMTHSWRK	N	1	2136	2136
586	F_PIAGE	Imputation flag for PIAGE	N	1	2137	2137
587	F_P2GUARD	Imputation flag for P2GUARD	N	1	2138	2138
588	F_P2REL	Imputation flag for P2REL	N	2	2139	2140
589	F_P2SEX	Imputation flag for P2SEX	N	2	2141	2142
590	F_P2MRSTA	Imputation flag for P2MRSTA	N	2	2143	2144
591	F_P2BFGF	Imputation flag for P2BFGF	N	2	2145	2146
592	F_P2FRLNG	Imputation flag for P2FRLNG	N	2	2147	2148
593	F_P2SPEAK	Imputation flag for P2SPEAK	N	2	2149	2150
594	F_P2PLCBRTH	Imputation flag for P2PLCBRTH	N	2	2151	2152
595	F_P2AGEMV	Imputation flag for P2AGEMV	N	2	2153	2154
596	F_P2HISPAN	Imputation flag for P2HISPAN	N	2	2155	2156
597	F_P2AMIND	Imputation flag for P2AMIND	N	2	2157	2158
598	F_P2ASIAN	Imputation flag for P2ASIAN	N	2	2159	2160
599	F_P2BLACK	Imputation flag for P2BLACK	N	2	2161	2162
600	F_P2PACI	Imputation flag for P2PACI	N	2	2163	2164
601	F_P2WHITE	Imputation flag for P2WHITE	N	2	2165	2166
602	F_P2HISPRM	Imputation flag for P2HISPRM	N	2	2167	2168
603	F_P2EDUC	Imputation flag for P2EDUC	N	2	2169	2170
604	F_P2ENRL	Imputation flag for P2ENRL	N	2	2171	2172
605	F_P2EMPL	Imputation flag for P2EMPL	N	2	2173	2174
606	F_P2HRSWK	Imputation flag for P2HRSWK	N	2	2175	2176
607	F_P2LKWRK	Imputation flag for P2LKWRK	N	2	2177	2178
608	F_P2MTHSWRK	Imputation flag for P2MTHSWRK	N	2	2179	2180
609	F_P2AGE	Imputation flag for P2AGE	N	2	2181	2182
610	F_HWELFTANST	Imputation flag for HWELFTANST	N	1	2183	2183
611	F_HWIC	Imputation flag for HWIC	N	1	2184	2184
612	F_HFOODST	Imputation flag for HFOODST	N	1	2185	2185
613	F_HMEDICAID	Imputation flag for HMEDICAID	N	1	2186	2186
614	F_HCHIP	Imputation flag for HCHIP	N	1	2187	2187
615	F_HSEC8	Imputation flag for HSEC8	N	1	2188	2188
616	F_TTLHHINC	Imputation flag for TTLHHINC	N	1	2189	2189
617	F_OWNRNTHB	Imputation flag for OWNRNTHB	N	1	2190	2190
618	F_HVINTSPHO	Imputation flag for HVINTSPHO	N	1	2191	2191
619	F_HVINTCOM	Imputation flag for HVINTCOM	N	1	2192	2192
620	F_CHLDNT	Imputation flag for CHLDNT	N	1	2193	2193

See note at end of table.

Table B-3. Public-Use Data file Layout in Position Order, ECPP:2019

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
621	F_LRNCOMP	Imputation flag for LRNCOMP	N	2	2194	2195
622	F_LRNTAB	Imputation flag for LRNTAB	N	2	2196	2197
623	F_LRNCCELL	Imputation flag for LRNCCELL	N	2	2198	2199
624	F_HHUNID	Imputation flag for HHUNID	N	1	2200	2200
625	F_ZIPLOCL	Imputation flag for ZIPLOCL	N	1	2201	2201

SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Program Participation Survey of the 2019 National Household Education Surveys Program (ECP-P-NHES:2019)

Table B-4. Public-Use Data file Layout in Position Order, PFI:2019

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
1	BASMID	Unique child identifier	C	11	1	11
2	ALLGRADEX	1. Current grade	N	2	12	13
3	EDCPUB	2. Type of school - Public	N	1	14	14
4	EDCCAT	2. Type of school - Private catholic	N	1	15	15
5	EDCREL	2. Type of school - Private religious not catholic	N	1	16	16
6	EDCPRI	2. Type of school - Private not religious	N	1	17	17
7	EDCINTK12	2. Type of school - Full time online grade K through 12	N	1	18	18
8	EDCINTCOL	2. Type of school - Online college or university	N	1	19	19
9	EDCCOL	2. Type of school - Regular college or university	N	1	20	20
10	EDCHSFL	2. Type of school - Homeschooled	N	1	21	21
11	HOMESCHLX	4. Homeschooled for some classes or subjects	N	2	22	23
12	HMSCHARR	5. Homeschooling arrangement	N	2	24	25
13	HSCOOP	6. Homeschool instruction by homeschool group	N	2	26	27
14	HSWHOX	7. Person providing homeschool instruction	N	2	28	29
15	HSTUTOR	8. Homeschool instruction by tutor	N	2	30	31
16	HSINTNET	9. Internet homeschool instruction	N	2	32	33
17	ONLNAP	10. Online, virtual or cyber enrollment - Advanced placement	N	2	34	35
18	ONLNSC	10. Online, virtual or cyber enrollment - Specialized course	N	2	36	37
19	ONLNEH	10. Online, virtual or cyber enrollment - Extra help	N	2	38	39
20	ONLNLS	10. Online, virtual or cyber enrollment - Learning style	N	2	40	41
21	ONLNPR	10. Online, virtual or cyber enrollment - Prefers online/virtual	N	2	42	43
22	ONLNHS	10. Online, virtual or cyber enrollment - Began homeschooling to enroll in online/virtual	N	2	44	45
23	ONLNOTH	10. Online, virtual or cyber enrollment - Another reason	N	2	46	47
24	ONLBULLY	10. Online, virtual or cyber enrollment - Bullying	N	2	48	49
25	ONLHLTH	10. Online, virtual or cyber enrollment - Physical or mental health problem	N	2	50	51
26	ONLSPNDS	10. Online, virtual or cyber enrollment - Other special needs	N	2	52	53
27	ONLAVDPUB	10. Online, virtual or cyber enrollment - Concerns about public school	N	2	54	55
28	HSIMPONLI	11. Most important reason for online, virtual or cyber enrollment	N	2	56	57
29	HSINTPUB	12. Homeschool online instruction provided by - Local public school	N	2	58	59
30	HSINTPRI	12. Homeschool online instruction provided by - Private school	N	2	60	61
31	HSINTCOL	12. Homeschool online instruction provided by - College	N	2	62	63
32	HSINTVRT	12. Homeschool online instruction provided by - Online academy instruction	N	2	64	65
33	HSINTCMP	12. Homeschool online instruction provided by - Courses purchased online	N	2	66	67
34	HSINTK12	12. Homeschool online instruction provided by - K-12 public or private school	N	2	68	69
35	HSINTIND	12. Homeschool online instruction provided by - Independent instructor	N	2	70	71
36	HSINTOH	12. Homeschool online instruction provided by - Someplace else	N	2	72	73
37	HSINTNUM	13. Total online courses	N	2	74	75
38	HSINTFEE	14. Total tuition for online courses	N	5	76	80
39	HSINTHRS	15. Homeschooling hours spent online	N	2	81	82
40	HSSTYL	16. Homeschool teaching style	N	2	83	84
41	HSKACTIV	17. Participated in activities while homeschooled	N	2	85	86
42	HSINTLIB	18. Online, virtual or cyber resources - Public library resource	N	2	87	88
43	HSINTCAT	18. Online, virtual or cyber resources - Specialized provider of homeschooling materials	N	2	89	90
44	HSINTREL	18. Online, virtual or cyber resources - Affiliated with a particular religion	N	2	91	92
45	HSINTSCH	18. Online, virtual or cyber resources - Local public school or school district	N	2	93	94
46	HSINTFRWB	18. Online, virtual or cyber resources - Free website	N	2	95	96
47	HSINTWEB	18. Online, virtual or cyber resources - Cyber educational resources	N	2	97	98
48	HSINTOTH	18. Online, virtual or cyber resources - Other sources	N	2	99	100
49	HSCLIBRX	19. Homeschool physical curriculum source - Library	N	2	101	102
50	HSCHSPUBX	19. Homeschool physical curriculum source - Homeschool catalog	N	2	103	104
51	HSCHSRELX	19. Homeschool physical curriculum source - Catalog affiliation	N	2	105	106
52	HSCPUBLX	19. Homeschool physical curriculum source - Public school or district	N	2	107	108
53	HSCCNVX	19. Homeschool physical curriculum source - Homeschooling convention	N	2	109	110
54	HSCVTVX	19. Homeschool physical curriculum source - Curriculum swap or exchange	N	2	111	112
55	HSCFMLY	19. Homeschool physical curriculum source - Other homeschool families	N	2	113	114
56	HSCOTH	19. Homeschool physical curriculum source - Other source	N	2	115	116
57	HSCOURS	20. Courses online or in person	N	2	117	118
58	HOMEKX	21. Homeschooled in kindergarten	N	2	119	120
59	HOME1	21. Homeschooled in first grade	N	2	121	122
60	HOME2	21. Homeschooled in second grade	N	2	123	124
61	HOME3	21. Homeschooled in third grade	N	2	125	126
62	HOME4	21. Homeschooled in fourth grade	N	2	127	128
63	HOME5	21. Homeschooled in fifth grade	N	2	129	130

See note at end of table.

Table B-4. Public-Use Data file Layout in Position Order, PFI:2019

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
64	HOME6	21. Homeschooled in sixth grade	N	2	131	132
65	HOME7	21. Homeschooled in seventh grade	N	2	133	134
66	HOME8	21. Homeschooled in eighth grade	N	2	135	136
67	HOME9	21. Homeschooled in ninth grade	N	2	137	138
68	HOME10	21. Homeschooled in tenth grade	N	2	139	140
69	HOME11	21. Homeschooled in eleventh grade	N	2	141	142
70	HOME12	21. Homeschooled in twelfth grade	N	2	143	144
71	HSSAFETYX	22. Reason to homeschool - School environment	N	2	145	146
72	HSDISSATX	22. Reason to homeschool - Dissatisfied with instruction	N	2	147	148
73	HSRELGN	22. Reason to homeschool - Religious instruction	N	2	149	150
74	HSMORAL	22. Reason to homeschool - Moral instruction	N	2	151	152
75	HSDISABLX	22. Reason to homeschool - Health problem	N	2	153	154
76	HSILLX	22. Reason to homeschool - Temporary illness	N	2	155	156
77	HSSPCLNDX	22. Reason to homeschool - Special needs	N	2	157	158
78	HSALTX	22. Reason to homeschool - Nontraditional education	N	2	159	160
79	HSFMLY	22. Reason to homeschool - Emphasize family life together	N	2	161	162
80	HSOTHERX	22. Reason to homeschool - Other	N	2	163	164
81	HSBULLY	22. Reason to homeschool - Bullying	N	2	165	166
82	HSMOSTX	23. Most important reason to homeschool	N	2	167	168
83	HSSUBJ1	24. 1st home instruction subject area	N	3	169	171
84	HSSUBJ2	24. 2nd home instruction subject area	N	3	172	174
85	HSSUBJ3	24. 3rd home instruction subject area	N	3	175	177
86	HSSUBJ4	24. 4th home instruction subject area	N	3	178	180
87	HSSUBJ5	24. 5th home instruction subject area	N	3	181	183
88	HSSUBJ6	24. 6th home instruction subject area	N	3	184	186
89	HSSUBJ7	24. 7th home instruction subject area	N	3	187	189
90	HSSUBJ8	24. 8th home instruction subject area	N	3	190	192
91	HSSUBJ9	24. 9th home instruction subject area	N	3	193	195
92	HSSUBJ10	24. 10th home instruction subject area	N	3	196	198
93	HSASSNX	25. Participate in homeschool activities	N	2	199	200
94	HSFREQX	26. Participate in homeschool activities - times	N	2	201	202
95	HSNATL	27. Member of homeschool organization	N	2	203	204
96	HSMLTY	28. Military family that frequently relocates	N	2	205	206
97	HSENRL	29. Homeschooled child enrolled in school	N	2	207	208
98	DISTASSI	31. District-assigned school	N	2	209	210
99	SCHRTSCHL	32. Charter school	N	2	211	212
100	SCHLMAGNET	33. Magnet school	N	2	213	214
101	SNEIGHBRX	34. Moved to attend school	N	2	215	216
102	SCCHOICE	35. Choice in school attendance	N	2	217	218
103	SPUBCHOIX	36. District allows school choice	N	2	219	220
104	SCONSIDR	37. Other schools considered	N	2	221	222
105	LOCALE	38. Reason for choosing school - Convenient location	N	2	223	224
106	SCHLSAFETY	38. Reason for choosing school - Safety	N	2	225	226
107	SCHLSTFQUALITY	38. Reason for choosing school - Quality of staff	N	2	227	228
108	AVAILCOURSE	38. Reason for choosing school - Curriculum focus	N	2	229	230
109	XTRACURRIC	38. Reason for choosing school - Extracurricular options	N	2	231	232
110	STUDNTCHAR	38. Reason for choosing school - Student body characteristics	N	2	233	234
111	STUDNTPERFORM	38. Reason for choosing school - Academic performance of student	N	2	235	236
112	RELIGSOR	38. Reason for choosing school - Religious orientation	N	2	237	238
113	SPECALEDSEVS	38. Reason for choosing school - Quality or availability of special education	N	2	239	240
114	SPECALFACILTS	38. Reason for choosing school - Special facilities	N	2	241	242
115	CLSSIZE	38. Reason for choosing school - Number of students in class	N	2	243	244
116	SCHLCOST	38. Reason for choosing school - Cost	N	2	245	246
117	FINDSCHL	39. Finding school - In my neighborhood	N	2	247	248
118	FINDFRND	39. Finding school - Friend	N	2	249	250
119	FINDFAM	39. Finding school - Family member	N	2	251	252
120	FINDNEWS	39. Finding school - Newspaper or magazine articles	N	2	253	254
121	FINDRPT	39. Finding school - State report cards	N	2	255	256
122	FINDWEB	39. Finding school - School ratings website	N	2	257	258
123	FINDADS	39. Finding school - Advertisements	N	2	259	260
124	FINDFLY	39. Finding school - Flier	N	2	261	262
125	FINDSTF	39. Finding school - School or district staff	N	2	263	264

See note at end of table.

Table B-4. Public-Use Data file Layout in Position Order, PFI:2019

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
126	FINDCHRC	39. Finding school - Church	N	2	265	266
127	FINDOTH	39. Finding school - Other reason	N	2	267	268
128	SISTCHOI	40. First choice school	N	2	269	270
129	SSAMSC	41. Same school since beginning of school year	N	2	271	272
130	SCHLHRSWK	42. Hours attend school each week	N	2	273	274
131	EINTNET	43. Child enrolled in online, virtual or cyber courses	N	2	275	276
132	ADVCCRSE	44. Online, virtual or cyber enrollment - Advanced Placement or college courses	N	2	277	278
133	SPCLCRSE	44. Online, virtual or cyber enrollment - Specialized courses	N	2	279	280
134	MKUPCRSE	44. Online, virtual or cyber enrollment - Make up course	N	2	281	282
135	ADDCRSE	44. Online, virtual or cyber enrollment - Earn additional credits	N	2	283	284
136	HELP	44. Online, virtual or cyber enrollment - Extra help in a course or subject	N	2	285	286
137	CONFLICT	44. Online, virtual or cyber enrollment - Schedule conflict with the in-person courses	N	2	287	288
138	DISABLX	44. Online, virtual or cyber enrollment - Physical or mental health problem	N	2	289	290
139	TEMPILL	44. Online, virtual or cyber enrollment - Temporary illness	N	2	291	292
140	SPCLND	44. Online, virtual or cyber enrollment - Other special needs	N	2	293	294
141	LRNSTYLE	44. Online, virtual or cyber enrollment - Learning style	N	2	295	296
142	NOCHOICE	44. Online, virtual or cyber enrollment - Was required	N	2	297	298
143	SCHLPLCE	44. Online, virtual or cyber enrollment - School placement in online course	N	2	299	300
144	ONLINEPREF	44. Online, virtual or cyber enrollment - Online course preference	N	2	301	302
145	ONLINEOTH	44. Online, virtual or cyber enrollment - Other reason	N	2	303	304
146	MOSTIMPT	45. Most important reason for online, virtual or cyber enrollment	N	2	305	306
147	SPBSCH	46. Online, virtual, or cyber instruction - Public school instruction	N	2	307	308
148	SPRIVT	46. Online, virtual, or cyber instruction - Private school instruction	N	2	309	310
149	SUNIVSCH	46. Online, virtual, or cyber instruction - Community college/university instruction	N	2	311	312
150	SCYBER	46. Online, virtual, or cyber instruction - Online academy instruction	N	2	313	314
151	SCOMPANY	46. Online, virtual, or cyber instruction - Courses purchased for instruction	N	2	315	316
152	SOTHRSCH	46. Online, virtual, or cyber instruction - Another K-12 public or private school	N	2	317	318
153	STUTR	46. Online, virtual, or cyber instruction - Independent instructor	N	2	319	320
154	SOTHSC	46. Online, virtual, or cyber instruction - Instruction from someplace else	N	2	321	322
155	INTNUM	47. Number of online courses	N	2	323	324
156	SINSTFEE	48. Total tuition for online courses	N	5	325	329
157	INTHRS	49. Virtual/cyber instruction hours spent online	N	2	330	331
158	SEENJOY	50. Child enjoyment of school	N	2	332	333
159	SEGRADES	51. Child's grades	N	2	334	335
160	SEADPLCXX	52. Advanced placement enrollment	N	2	336	337
161	SEBEHAVX	53. Times contacted about behavior problems	N	2	338	339
162	SESCHWRK	53. Times contacted about problems with school work	N	2	340	341
163	SEGBEHAV	53. Times contacted about very good behavior	N	2	342	343
164	SEGWORK	53. Times contacted about very good school work	N	2	344	345
165	SEABSNT	54. Days absent	N	2	346	347
166	SEREPEAT	55. Whether grades repeated	N	2	348	349
167	SEREPTK	56. Which grades repeated - Kindergarten	N	2	350	351
168	SEREPT1	56. Which grades repeated - 1st grade	N	2	352	353
169	SEREPT2	56. Which grades repeated - 2nd grade	N	2	354	355
170	SEREPT3	56. Which grades repeated - 3rd grade	N	2	356	357
171	SEREPT4	56. Which grades repeated - 4th grade	N	2	358	359
172	SEREPT5	56. Which grades repeated - 5th grade	N	2	360	361
173	SEREPT6	56. Which grades repeated - 6th grade	N	2	362	363
174	SEREPT7	56. Which grades repeated - 7th grade	N	2	364	365
175	SEREPT8	56. Which grades repeated - 8th grade	N	2	366	367
176	SEREPT9	56. Which grades repeated - 9th grade	N	2	368	369
177	SEREPT10	56. Which grades repeated - 10th grade	N	2	370	371
178	SEREPT11	56. Which grades repeated - 11th grade	N	2	372	373
179	SEREPT12	56. Which grades repeated - 12th grade	N	2	374	375
180	SESUSOUT	57. Out of school suspension	N	2	376	377
181	SESUSPIN	57. In school suspension	N	2	378	379
182	SEEXPEL	57. Expelled	N	2	380	381
183	SEGRADEQ	58. Description of school work	N	2	382	383
184	FSSPORTX	60. Participation in school activities - Attend a school event	N	2	384	385
185	FSVOL	60. Participation in school activities - Serve as a volunteer	N	2	386	387
186	FSMTNG	60. Participation in school activities - Attend a school meeting	N	2	388	389
187	FSPTMTNG	60. Participation in school activities - Attend a parent - teacher organization meeting	N	2	390	391

See note at end of table.

Table B-4. Public-Use Data file Layout in Position Order, PFI:2019

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
188	FSATCNFN	60. Participation in school activities - Attend parent - teacher conference	N	2	392	393
189	FSFUNDRS	60. Participation in school activities - Participate in fundraising	N	2	394	395
190	FSCOMMTE	60. Participation in school activities - Serve on school committee	N	2	396	397
191	FSCOUNSLR	60. Participation in school activities - Meet with guidance counselor	N	2	398	399
192	FSFREQ	61. Times participated in school meetings	N	2	400	401
193	FSNOTESX	62. School communication - Receive notes or emails	N	2	402	403
194	FSMEMO	62. School communication - Receive newsletters	N	2	404	405
195	FSPHONCHX	62. School communication - Receive phone calls	N	2	406	407
196	FSSPPERF	63. School provides child progress between report cards	N	2	408	409
197	FSSPHW	63. School provides information on homework help	N	2	410	411
198	FSSPCOUR	63. School provides information on class placement	N	2	412	413
199	FSSPROLE	63. School provides information on your expected role	N	2	414	415
200	FSSPCOLL	63. School provides information on college	N	2	416	417
201	FCSCCHOOL	64. Satisfaction with school	N	2	418	419
202	FCTEACHR	64. Satisfaction with teachers	N	2	420	421
203	FCSTDS	64. Satisfaction with academic standards	N	2	422	423
204	FCORDER	64. Satisfaction with discipline	N	2	424	425
205	FCSUPPRT	64. Satisfaction with school staff/parent interaction	N	2	426	427
206	FHHOME	65. Days spent doing homework	N	2	428	429
207	FHWKHRS	66. Hours spent doing homework	N	2	430	431
208	FHAMOUNT	67. Adult's feelings about amount of homework	N	2	432	433
209	FHCAMT	68. Child's feelings about amount of homework	N	2	434	435
210	FHPLACE	69. Place at home to do homework	N	2	436	437
211	FHCHECKX	70. Check for homework completion	N	2	438	439
212	FHHELP	71. Days help with homework	N	2	440	441
213	FOSTORY2X	72. In the past week, child has been told a story	N	1	442	442
214	FOCRAFTS	72. In the past week, spent time on arts and crafts	N	1	443	443
215	FOGAMES	72. In the past week, played board games	N	1	444	444
216	FOBUILDX	72. In the past week, worked on a project	N	1	445	445
217	FOSPORT	72. In the past week, spent time playing sports	N	1	446	446
218	FORESPON	72. In the past week, discussed time management	N	1	447	447
219	FOHISTX	72. In the past week, discussed ethnic heritage	N	1	448	448
220	FODINNERX	73. Eaten the evening meal together in the past week	N	1	449	449
221	FOLIBRAYX	74. Visited a library in the past month	N	1	450	450
222	FOBOOKSTX	74. Visited a bookstore in the past month	N	1	451	451
223	FOCONCRTX	74. Gone to a play in the past month	N	1	452	452
224	FOMUSEUMX	74. Visited an art gallery in the past month	N	1	453	453
225	FOZOOX	74. Visited a zoo in the past month	N	1	454	454
226	FOGROUPX	74. Attended a religious event in the past month	N	1	455	455
227	FOSPRTEVX	74. Attended a sporting event in the past month	N	1	456	456
228	HDHEALTH	75. Health of child	N	1	457	457
229	HDINTDIS	76. Intellectual disability	N	1	458	458
230	HDSPEECHX	76. Speech or language impairment	N	1	459	459
231	HDDISTRBX	76. Serious emotional disturbance	N	1	460	460
232	HDDEAFIMX	76. Deafness or another hearing impairment	N	1	461	461
233	HDBLINDX	76. Blindness or another visual impairment	N	1	462	462
234	HDORTHOX	76. Orthopedic impairment	N	1	463	463
235	HDAUTISMX	76. Autism	N	1	464	464
236	HDPDDX	76. Pervasive Developmental Disorder	N	1	465	465
237	HDADDD	76. Attention Deficit Disorder	N	1	466	466
238	HDLEARNX	76. Learning disability	N	1	467	467
239	HDDELAYX	76. Developmental delay	N	1	468	468
240	HDTRBRAIN	76. Traumatic brain injury	N	1	469	469
241	HDOTHERX	76. Another health impairment	N	1	470	470
242	HDIEPX	78. Services provided by IEP	N	2	471	472
243	HDCOMMUX	79. Satisfaction with service provider communication	N	2	473	474
244	HDSPLED	80. Enrollment in special education classes	N	2	475	476
245	HDLEARN	81. Condition interferes with learning	N	2	477	478
246	HDPLAY	81. Condition interferes with participation in sports	N	2	479	480
247	HDOUT	81. Condition interferes with attending school regularly	N	2	481	482
248	HDFRNDS	81. Condition interferes with making friends	N	2	483	484
249	CDOBMM	82. Month child born	N	2	485	486

See note at end of table.

Table B-4. Public-Use Data file Layout in Position Order, PFI:2019

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
250	CDOBY	82. Year child born	N	4	487	490
251	CPLCBRTH	83. Country where child born	N	1	491	491
252	CMOVEAGE	84. Age of child when first moved to US	N	2	492	493
253	CHISPAN	85. Child of Spanish, Hispanic, or Latino origin	N	1	494	494
254	CAMIND	86. Child Race - American Indian or Alaska Native	N	1	495	495
255	CASIAN	86. Child Race - Asian	N	1	496	496
256	CBLACK	86. Child Race - Black or African American	N	1	497	497
257	CPACI	86. Child Race - Native Hawaiian or other Pacific Islander	N	1	498	498
258	CWHITE	86. Child Race - White	N	1	499	499
259	CHISPRM	86. Child Race - Hispanic, race not reported	N	1	500	500
260	CSEX	87. Child sex	N	1	501	501
261	CLIVYN	88. Child lives at another address	N	1	502	502
262	CLIVELSWX	89. Address where child spends most time	N	2	503	504
263	CSPEAKX	90. Language spoken by child at home	N	1	505	505
264	CENGLPRG	91. Enrolled in language program	N	2	506	507
265	HHTOTALXX	92. Total people in household	N	2	508	509
266	HHBROSX	93. Brothers	N	1	510	510
267	HHSISSX	93. Sisters	N	1	511	511
268	HHMOM	93. Mothers	N	1	512	512
269	HHDAD	93. Fathers	N	1	513	513
270	HHAUNTSX	93. Aunts	N	1	514	514
271	HHUNCLSX	93. Uncles	N	1	515	515
272	HHGMASX	93. Grandmothers	N	1	516	516
273	HHGPASX	93. Grandfathers	N	1	517	517
274	HHCSNSX	93. Cousins	N	1	518	518
275	HHPRTRNSX	93. Parent's girlfriend/boyfriend/partner	N	1	519	519
276	HHORELSX	93. Other relatives	N	1	520	520
277	HHONRELSX	93. Other non - relatives	N	1	521	521
278	RELATION	94. Relation to child	N	2	522	523
279	HHENGLISH	95. Language spoken at home - English	N	1	524	524
280	HHSPANISH	95. Language spoken at home - Spanish	N	1	525	525
281	HHFRENCH	95. Language spoken at home - French	N	1	526	526
282	HHCHINESE	95. Language spoken at home - Chinese	N	1	527	527
283	HHOTHLANG	95. Language spoken at home - Other	N	1	528	528
284	PIREL	96. Relation of first parent/guardian to child	N	1	529	529
285	PISEX	97. First parent/guardian sex	N	1	530	530
286	PIMRSTA	98. First parent/guardian marital status	N	1	531	531
287	PIBFGF	99. First parent/guardian living with partner	N	2	532	533
288	PIFRLNG	100. First parent/guardian first language	N	1	534	534
289	PISPEAK	101. Language spoken most often at home by first parent/guardian	N	2	535	536
290	PIDIFFI	102. First parent/guardian difficulty participating in child's school due to language	N	2	537	538
291	PISCINT	103. Interpreters at school for first parent/guardian	N	2	539	540
292	PIWRMTL	104. Written materials at school in first parent/guardian native language	N	2	541	542
293	PIPLCBRTH	105. First parent/guardian born in U.S	N	1	543	543
294	PIAGEMV	106. Age of first parent/guardian when first moved to US	N	2	544	545
295	PIHISPAN	107. First parent/guardian of Spanish, Hispanic, or Latino origin	N	1	546	546
296	PIAMIND	108. First parent/guardian race - American Indian or Alaska Native	N	1	547	547
297	PIASIAN	108. First parent/guardian race - Asian	N	1	548	548
298	PIBLACK	108. First parent/guardian race - Black or African American	N	1	549	549
299	PIPACI	108. First parent/guardian race - Native Hawaiian or other Pacific Islander	N	1	550	550
300	PIWHITE	108. First parent/guardian race - White	N	1	551	551
301	PIHISPRM	108. First parent/guardian race - Hispanic, race not reported	N	1	552	552
302	PIEDUC	109. First parent/guardian highest grade level completed	N	2	553	554
303	PIENRL	110. First parent/guardian attending school	N	1	555	555
304	PIEMPL	111. First parent/guardian employment status	N	1	556	556
305	PIHRSWK	112. First parent/guardian hours worked per week	N	2	557	558
306	PIKWRK	113. First parent/guardian looking for work	N	2	559	560
307	PIMTHSWRK	114. First parent/guardian months worked	N	2	561	562
308	PIAGE	115. First parent/guardian age	N	2	563	564
309	P2GUARD	116. Second parent/guardian	N	1	565	565
310	P2REL	117. Relation of second parent/guardian to child	N	2	566	567
311	P2SEX	118. Second parent/guardian sex	N	2	568	569

See note at end of table.

Table B-4. Public-Use Data file Layout in Position Order, PFI:2019

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
312	P2MRSTA	119. Second parent/guardian marital status	N	2	570	571
313	P2BFGF	120. Second parent/guardian living with partner	N	2	572	573
314	P2FRLNG	121. Second parent/guardian first language	N	2	574	575
315	P2SPEAK	122. Language spoken most often at home by second parent/guardian	N	2	576	577
316	P2DIFFI	123. Second parent/guardian difficulty participating in child's school due to language	N	2	578	579
317	P2SCINT	124. Interpreters at school for second parent/guardian	N	2	580	581
318	P2WRMTL	125. Written materials at school in second parent/guardian native language	N	2	582	583
319	P2PLCBRTH	126. Second parent/guardian born in U.S.	N	2	584	585
320	P2AGEMV	127. Age of second parent/guardian when first moved to US	N	2	586	587
321	P2HISPAN	128. Second parent/guardian of Spanish, Hispanic, or Latino origin	N	2	588	589
322	P2AMIND	129. Second parent/guardian race - American Indian or Alaska Native	N	2	590	591
323	P2ASIAN	129. Second parent/guardian race - Asian	N	2	592	593
324	P2BLACK	129. Second parent/guardian race - Black or African American	N	2	594	595
325	P2PACI	129. Second parent/guardian race - Native Hawaiian or other Pacific Islander	N	2	596	597
326	P2WHITE	129. Second parent/guardian race - White	N	2	598	599
327	P2HISPRM	129. Second parent/guardian race - Hispanic, race not reported	N	2	600	601
328	P2EDUC	130. Second parent/guardian highest grade level completed	N	2	602	603
329	P2ENRL	131. Second parent/guardian attending school	N	2	604	605
330	P2EMPL	132. Second parent/guardian employment status	N	2	606	607
331	P2HRSWK	133. Second parent/guardian hours worked per week	N	2	608	609
332	P2LKWRK	134. Second parent/guardian looking for work	N	2	610	611
333	P2MTHSWRK	135. Second parent/guardian months worked	N	2	612	613
334	P2AGE	136. Second parent/guardian age	N	2	614	615
335	HWELFTANST	137. Received TANF in past 12 months	N	1	616	616
336	HWIC	137. Received WIC in past 12 months	N	1	617	617
337	HFOODST	137. Received food stamps in past 12 months	N	1	618	618
338	HMEDICAID	137. Received Medicaid in past 12 months	N	1	619	619
339	HCHIP	137. Received CHIP in past 12 months	N	1	620	620
340	HSECN8	137. Received Section 8 in past 12 months	N	1	621	621
341	TTLHHINC	138. Total income	N	2	622	623
342	OWNRNTHB	139. Own/rent house	N	1	624	624
343	HVINTSPHO	140. Internet access on cell phone	N	1	625	625
344	HVINTCOM	141. Internet access on computer or tablet	N	1	626	626
345	CHLDNT	142. Child use of internet for learning at home	N	1	627	627
346	LRNCOMP	143. Learning activities on computer	N	2	628	629
347	LRNTAB	143. Learning activities on tablet	N	2	630	631
348	LRNCELL	143. Learning activities on cell phone	N	2	632	633
349	SEFUTUREX	144. Expectations for child's future education	N	1	634	634
350	DSBLTY	D - Child currently has disability	N	1	635	635
351	PARIEDUC	D - Educational attainment of child's first parent or guardian	N	1	636	636
352	PARIEMPL	D - Work status of child's first parent or guardian	N	1	637	637
353	PARIFTFY	D - First parent or guardian works full time	N	1	638	638
354	PARIMARST	D - First parent or guardian marital status	N	1	639	639
355	PARITYPE	D - Specific relationship of first parent or guardian to child	N	1	640	640
356	PARIFSTGN	D - First parent or guardian first generation immigrant status	N	1	641	641
357	PAR2EDUC	D - Educational attainment of child's second parent or guardian	N	2	642	643
358	PAR2EMPL	D - Work status of child's second parent or guardian	N	2	644	645
359	PAR2FTFY	D - Second parent or guardian works full time	N	2	646	647
360	PAR2MARST	D - Second parent or guardian marital status	N	2	648	649
361	PAR2TYPE	D - Specific relationship of second parent or guardian to child	N	2	650	651
362	PAR2FSTGN	D - Second parent or guardian first generation immigrant status	N	2	652	653
363	HHPARNI9X	D - Parental structure of household	N	1	654	654
364	HHPARNI9_BRD	D - Household has second parent or guardian	N	1	655	655
365	NUMSIBSX	D - Number of child's siblings	N	1	656	656
366	FAMILYI9X	D - Family type with parents	N	1	657	657
367	FAMILYI9_BRD	D - Family type with adults	N	1	658	658
368	HHUNDR6X	D - Number of children younger than age 6	N	1	659	659
369	HHUNDRIOX	D - Number of children younger than age 10	N	1	660	660
370	HHUNDR16X	D - Number of children younger than age 16	N	1	661	661
371	HHUNDR18X	D - Number of children younger than age 18	N	1	662	662
372	HHUNID	D - Other household member, not identified	N	1	663	663
373	LANGUAGEX	D - English spoken most by parents	N	1	664	664
374	PARGRADEX	D - Parent/guardian highest education	N	1	665	665

See note at end of table.

Table B-4. Public-Use Data file Layout in Position Order, PFI:2019

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
375	RACEETH	D - Race and ethnicity of child	N	1	666	666
376	RACEETH2	D - Detailed race and ethnicity of child	N	2	667	668
377	INTACC	D - Household has internet access	N	1	669	669
378	CENREG	D - Census region where child lives	N	1	670	670
379	ZIP18PO2	D - Percent of families in zip code with children under 18 below the poverty line	N	2	671	672
380	ZIPBLHI2	D - Percent of persons in zip code who were Black or Hispanic	N	1	673	673
381	ZIPLOCL	D - Zip code classification by community type	N	2	674	675
382	S19CHART	D - School charter, magnet/regular public, other on CCD	N	2	676	677
383	S19NUMST	D - Total school enrollment of students on CCD/PSS	N	2	678	679
384	S19BPV	D - School is public or private on CCD/PSS	N	2	680	681
385	S19TYPE	D - Type of school on CCD/PSS	N	2	682	683
386	SCHLGRAD	D - Child's school level classification on CCD/PSS	N	2	684	685
387	ENGLSPANX	D - Questionnaire in English or Spanish	N	1	686	686
388	AGE2018	D - Age of child as of Dec 31, 2018	N	2	687	688
389	MODECOMP	D - Completed on web or paper	N	1	689	689
390	CHAGE1	D - Age of 1st nonsampled child	N	2	690	691
391	CHAGE2	D - Age of 2nd nonsampled child	N	2	692	693
392	CHAGE3	D - Age of 3rd nonsampled child	N	2	694	695
393	CHAGE4	D - Age of 4th nonsampled child	N	2	696	697
394	CHSEX1	D - Sex of 1st nonsampled child	N	2	698	699
395	CHSEX2	D - Sex of 2nd nonsampled child	N	2	700	701
396	CHSEX3	D - Sex of 3rd nonsampled child	N	2	702	703
397	CHSEX4	D - Sex of 4th nonsampled child	N	2	704	705
398	CHENRL1	D - Enrollment status of 1st nonsampled child	N	2	706	707
399	CHENRL2	D - Enrollment status of 2nd nonsampled child	N	2	708	709
400	CHENRL3	D - Enrollment status of 3rd nonsampled child	N	2	710	711
401	CHENRL4	D - Enrollment status of 4th nonsampled child	N	2	712	713
402	CHGRD1	D - Grade of 1st nonsampled child	N	2	714	715
403	CHGRD2	D - Grade of 2nd nonsampled child	N	2	716	717
404	CHGRD3	D - Grade of 3rd nonsampled child	N	2	718	719
405	CHGRD4	D - Grade of 4th nonsampled child	N	2	720	721
406	PPSU	PSU FOR TAYLOR SERIES VAR EST	N	5	722	726
407	PSTRATUM	STRATUM FOR TAYLOR SERIES VAR EST	N	1	727	727
408	FPWT	FINAL INTV WEIGHT	N	16	728	743
409	FPWT1	FINAL INTV REPLICATE WEIGHT, FPWT1	N	16	744	759
410	FPWT2	FINAL INTV REPLICATE WEIGHT, FPWT2	N	16	760	775
411	FPWT3	FINAL INTV REPLICATE WEIGHT, FPWT3	N	16	776	791
412	FPWT4	FINAL INTV REPLICATE WEIGHT, FPWT4	N	16	792	807
413	FPWT5	FINAL INTV REPLICATE WEIGHT, FPWT5	N	16	808	823
414	FPWT6	FINAL INTV REPLICATE WEIGHT, FPWT6	N	16	824	839
415	FPWT7	FINAL INTV REPLICATE WEIGHT, FPWT7	N	16	840	855
416	FPWT8	FINAL INTV REPLICATE WEIGHT, FPWT8	N	16	856	871
417	FPWT9	FINAL INTV REPLICATE WEIGHT, FPWT9	N	16	872	887
418	FPWT10	FINAL INTV REPLICATE WEIGHT, FPWT10	N	16	888	903
419	FPWT11	FINAL INTV REPLICATE WEIGHT, FPWT11	N	16	904	919
420	FPWT12	FINAL INTV REPLICATE WEIGHT, FPWT12	N	16	920	935
421	FPWT13	FINAL INTV REPLICATE WEIGHT, FPWT13	N	16	936	951
422	FPWT14	FINAL INTV REPLICATE WEIGHT, FPWT14	N	16	952	967
423	FPWT15	FINAL INTV REPLICATE WEIGHT, FPWT15	N	16	968	983
424	FPWT16	FINAL INTV REPLICATE WEIGHT, FPWT16	N	16	984	999
425	FPWT17	FINAL INTV REPLICATE WEIGHT, FPWT17	N	16	1000	1015
426	FPWT18	FINAL INTV REPLICATE WEIGHT, FPWT18	N	16	1016	1031
427	FPWT19	FINAL INTV REPLICATE WEIGHT, FPWT19	N	16	1032	1047
428	FPWT20	FINAL INTV REPLICATE WEIGHT, FPWT20	N	16	1048	1063
429	FPWT21	FINAL INTV REPLICATE WEIGHT, FPWT21	N	16	1064	1079
430	FPWT22	FINAL INTV REPLICATE WEIGHT, FPWT22	N	16	1080	1095
431	FPWT23	FINAL INTV REPLICATE WEIGHT, FPWT23	N	16	1096	1111
432	FPWT24	FINAL INTV REPLICATE WEIGHT, FPWT24	N	16	1112	1127
433	FPWT25	FINAL INTV REPLICATE WEIGHT, FPWT25	N	16	1128	1143
434	FPWT26	FINAL INTV REPLICATE WEIGHT, FPWT26	N	16	1144	1159
435	FPWT27	FINAL INTV REPLICATE WEIGHT, FPWT27	N	16	1160	1175
436	FPWT28	FINAL INTV REPLICATE WEIGHT, FPWT28	N	16	1176	1191

See note at end of table.

Table B-4. Public-Use Data file Layout in Position Order, PFI:2019

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
437	FPWT29	FINAL INTV REPLICATE WEIGHT, FPWT29	N	16	1192	1207
438	FPWT30	FINAL INTV REPLICATE WEIGHT, FPWT30	N	16	1208	1223
439	FPWT31	FINAL INTV REPLICATE WEIGHT, FPWT31	N	16	1224	1239
440	FPWT32	FINAL INTV REPLICATE WEIGHT, FPWT32	N	16	1240	1255
441	FPWT33	FINAL INTV REPLICATE WEIGHT, FPWT33	N	16	1256	1271
442	FPWT34	FINAL INTV REPLICATE WEIGHT, FPWT34	N	16	1272	1287
443	FPWT35	FINAL INTV REPLICATE WEIGHT, FPWT35	N	16	1288	1303
444	FPWT36	FINAL INTV REPLICATE WEIGHT, FPWT36	N	16	1304	1319
445	FPWT37	FINAL INTV REPLICATE WEIGHT, FPWT37	N	16	1320	1335
446	FPWT38	FINAL INTV REPLICATE WEIGHT, FPWT38	N	16	1336	1351
447	FPWT39	FINAL INTV REPLICATE WEIGHT, FPWT39	N	16	1352	1367
448	FPWT40	FINAL INTV REPLICATE WEIGHT, FPWT40	N	16	1368	1383
449	FPWT41	FINAL INTV REPLICATE WEIGHT, FPWT41	N	16	1384	1399
450	FPWT42	FINAL INTV REPLICATE WEIGHT, FPWT42	N	16	1400	1415
451	FPWT43	FINAL INTV REPLICATE WEIGHT, FPWT43	N	16	1416	1431
452	FPWT44	FINAL INTV REPLICATE WEIGHT, FPWT44	N	16	1432	1447
453	FPWT45	FINAL INTV REPLICATE WEIGHT, FPWT45	N	16	1448	1463
454	FPWT46	FINAL INTV REPLICATE WEIGHT, FPWT46	N	16	1464	1479
455	FPWT47	FINAL INTV REPLICATE WEIGHT, FPWT47	N	16	1480	1495
456	FPWT48	FINAL INTV REPLICATE WEIGHT, FPWT48	N	16	1496	1511
457	FPWT49	FINAL INTV REPLICATE WEIGHT, FPWT49	N	16	1512	1527
458	FPWT50	FINAL INTV REPLICATE WEIGHT, FPWT50	N	16	1528	1543
459	FPWT51	FINAL INTV REPLICATE WEIGHT, FPWT51	N	16	1544	1559
460	FPWT52	FINAL INTV REPLICATE WEIGHT, FPWT52	N	16	1560	1575
461	FPWT53	FINAL INTV REPLICATE WEIGHT, FPWT53	N	16	1576	1591
462	FPWT54	FINAL INTV REPLICATE WEIGHT, FPWT54	N	16	1592	1607
463	FPWT55	FINAL INTV REPLICATE WEIGHT, FPWT55	N	16	1608	1623
464	FPWT56	FINAL INTV REPLICATE WEIGHT, FPWT56	N	16	1624	1639
465	FPWT57	FINAL INTV REPLICATE WEIGHT, FPWT57	N	16	1640	1655
466	FPWT58	FINAL INTV REPLICATE WEIGHT, FPWT58	N	16	1656	1671
467	FPWT59	FINAL INTV REPLICATE WEIGHT, FPWT59	N	16	1672	1687
468	FPWT60	FINAL INTV REPLICATE WEIGHT, FPWT60	N	16	1688	1703
469	FPWT61	FINAL INTV REPLICATE WEIGHT, FPWT61	N	16	1704	1719
470	FPWT62	FINAL INTV REPLICATE WEIGHT, FPWT62	N	16	1720	1735
471	FPWT63	FINAL INTV REPLICATE WEIGHT, FPWT63	N	16	1736	1751
472	FPWT64	FINAL INTV REPLICATE WEIGHT, FPWT64	N	16	1752	1767
473	FPWT65	FINAL INTV REPLICATE WEIGHT, FPWT65	N	16	1768	1783
474	FPWT66	FINAL INTV REPLICATE WEIGHT, FPWT66	N	16	1784	1799
475	FPWT67	FINAL INTV REPLICATE WEIGHT, FPWT67	N	16	1800	1815
476	FPWT68	FINAL INTV REPLICATE WEIGHT, FPWT68	N	16	1816	1831
477	FPWT69	FINAL INTV REPLICATE WEIGHT, FPWT69	N	16	1832	1847
478	FPWT70	FINAL INTV REPLICATE WEIGHT, FPWT70	N	16	1848	1863
479	FPWT71	FINAL INTV REPLICATE WEIGHT, FPWT71	N	16	1864	1879
480	FPWT72	FINAL INTV REPLICATE WEIGHT, FPWT72	N	16	1880	1895
481	FPWT73	FINAL INTV REPLICATE WEIGHT, FPWT73	N	16	1896	1911
482	FPWT74	FINAL INTV REPLICATE WEIGHT, FPWT74	N	16	1912	1927
483	FPWT75	FINAL INTV REPLICATE WEIGHT, FPWT75	N	16	1928	1943
484	FPWT76	FINAL INTV REPLICATE WEIGHT, FPWT76	N	16	1944	1959
485	FPWT77	FINAL INTV REPLICATE WEIGHT, FPWT77	N	16	1960	1975
486	FPWT78	FINAL INTV REPLICATE WEIGHT, FPWT78	N	16	1976	1991
487	FPWT79	FINAL INTV REPLICATE WEIGHT, FPWT79	N	16	1992	2007
488	FPWT80	FINAL INTV REPLICATE WEIGHT, FPWT80	N	16	2008	2023
489	F_ALLGRADEX	Imputation flag for ALLGRADEX	N	1	2024	2024
490	F_EDCPUB	Imputation flag for EDCPUB	N	1	2025	2025
491	F_EDCCAT	Imputation flag for EDCCAT	N	1	2026	2026
492	F_EDCREL	Imputation flag for EDCREL	N	1	2027	2027
493	F_EDCPRI	Imputation flag for EDCPRI	N	1	2028	2028
494	F_EDCINTK12	Imputation flag for EDCINTK12	N	1	2029	2029
495	F_EDCINTCOL	Imputation flag for EDCINTCOL	N	1	2030	2030
496	F_EDCCOL	Imputation flag for EDCCOL	N	1	2031	2031
497	F_EDCHSFL	Imputation flag for EDCHSFL	N	1	2032	2032
498	F_HOMESCHLX	Imputation flag for HOMESCHLX	N	2	2033	2034

See note at end of table.

Table B-4. Public-Use Data file Layout in Position Order, PFI:2019

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
499	F_HMSCHARR	Imputation flag for HMSCHARR	N	2	2035	2036
500	F_HSCOOP	Imputation flag for HSCOOP	N	2	2037	2038
501	F_HSWHOX	Imputation flag for HSWHOX	N	2	2039	2040
502	F_HSTUTOR	Imputation flag for HSTUTOR	N	2	2041	2042
503	F_HSINTNET	Imputation flag for HSINTNET	N	2	2043	2044
504	F_ONLNAP	Imputation flag for ONLNAP	N	2	2045	2046
505	F_ONLNSC	Imputation flag for ONLNSC	N	2	2047	2048
506	F_ONLNEH	Imputation flag for ONLNEH	N	2	2049	2050
507	F_ONLNLS	Imputation flag for ONLNLS	N	2	2051	2052
508	F_ONLNPR	Imputation flag for ONLNPR	N	2	2053	2054
509	F_ONLNHS	Imputation flag for ONLNHS	N	2	2055	2056
510	F_ONLNOTH	Imputation flag for ONLNOTH	N	2	2057	2058
511	F_ONLBULLY	Imputation flag for ONLBULLY	N	2	2059	2060
512	F_ONLHLTH	Imputation flag for ONLHLTH	N	2	2061	2062
513	F_ONLSPNDS	Imputation flag for ONLSPNDS	N	2	2063	2064
514	F_ONLAVDPUB	Imputation flag for ONLAVDPUB	N	2	2065	2066
515	F_HSIMPONLI	Imputation flag for HSIMPONLI	N	2	2067	2068
516	F_HSINTPUB	Imputation flag for HSINTPUB	N	2	2069	2070
517	F_HSINTPRI	Imputation flag for HSINTPRI	N	2	2071	2072
518	F_HSINTCOL	Imputation flag for HSINTCOL	N	2	2073	2074
519	F_HSINTVRT	Imputation flag for HSINTVRT	N	2	2075	2076
520	F_HSINTCMP	Imputation flag for HSINTCMP	N	2	2077	2078
521	F_HSINTKI2	Imputation flag for HSINTKI2	N	2	2079	2080
522	F_HSINTIND	Imputation flag for HSINTIND	N	2	2081	2082
523	F_HSINTOH	Imputation flag for HSINTOH	N	2	2083	2084
524	F_HSINTNUM	Imputation flag for HSINTNUM	N	2	2085	2086
525	F_HSINTFEE	Imputation flag for HSINTFEE	N	2	2087	2088
526	F_HSINTHRS	Imputation flag for HSINTHRS	N	2	2089	2090
527	F_HSSTYL	Imputation flag for HSSTYL	N	2	2091	2092
528	F_HSKACTIV	Imputation flag for HSKACTIV	N	2	2093	2094
529	F_HSINTLIB	Imputation flag for HSINTLIB	N	2	2095	2096
530	F_HSINTCAT	Imputation flag for HSINTCAT	N	2	2097	2098
531	F_HSINTREL	Imputation flag for HSINTREL	N	2	2099	2100
532	F_HSINTSCH	Imputation flag for HSINTSCH	N	2	2101	2102
533	F_HSINTFRWB	Imputation flag for HSINTFRWB	N	2	2103	2104
534	F_HSINTWEB	Imputation flag for HSINTWEB	N	2	2105	2106
535	F_HSINTOTH	Imputation flag for HSINTOTH	N	2	2107	2108
536	F_HSCLIBRX	Imputation flag for HSCLIBRX	N	2	2109	2110
537	F_HSCHSPUBX	Imputation flag for HSCHSPUBX	N	2	2111	2112
538	F_HSCHSRELX	Imputation flag for HSCHSRELX	N	2	2113	2114
539	F_HSCPUBLX	Imputation flag for HSCPUBLX	N	2	2115	2116
540	F_HSCCNVX	Imputation flag for HSCCNVX	N	2	2117	2118
541	F_HSCEVTX	Imputation flag for HSCEVTX	N	2	2119	2120
542	F_HSCFMLY	Imputation flag for HSCFMLY	N	2	2121	2122
543	F_HSCOTH	Imputation flag for HSCOTH	N	2	2123	2124
544	F_HSCOURS	Imputation flag for HSCOURS	N	2	2125	2126
545	F_HOMEKX	Imputation flag for HOMEKX	N	2	2127	2128
546	F_HOME1	Imputation flag for HOME1	N	2	2129	2130
547	F_HOME2	Imputation flag for HOME2	N	2	2131	2132
548	F_HOME3	Imputation flag for HOME3	N	2	2133	2134
549	F_HOME4	Imputation flag for HOME4	N	2	2135	2136
550	F_HOME5	Imputation flag for HOME5	N	2	2137	2138
551	F_HOME6	Imputation flag for HOME6	N	2	2139	2140
552	F_HOME7	Imputation flag for HOME7	N	2	2141	2142
553	F_HOME8	Imputation flag for HOME8	N	2	2143	2144
554	F_HOME9	Imputation flag for HOME9	N	2	2145	2146
555	F_HOME10	Imputation flag for HOME10	N	2	2147	2148
556	F_HOME11	Imputation flag for HOME11	N	2	2149	2150
557	F_HOME12	Imputation flag for HOME12	N	2	2151	2152
558	F_HSSAFETYX	Imputation flag for HSSAFETYX	N	2	2153	2154
559	F_HSDISSATX	Imputation flag for HSDISSATX	N	2	2155	2156
560	F_HSRELGON	Imputation flag for HSRELGON	N	2	2157	2158

See note at end of table.

Table B-4. Public-Use Data file Layout in Position Order, PFI:2019

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
561	F_HSMORAL	Imputation flag for HSMORAL	N	2	2159	2160
562	F_HSDISABLX	Imputation flag for HSDISABLX	N	2	2161	2162
563	F_HSILLX	Imputation flag for HSILLX	N	2	2163	2164
564	F_HSSPCLNDX	Imputation flag for HSSPCLNDX	N	2	2165	2166
565	F_HSALTX	Imputation flag for HSALTX	N	2	2167	2168
566	F_HSFMLY	Imputation flag for HSFMLY	N	2	2169	2170
567	F_HSOTHERX	Imputation flag for HSOTHERX	N	2	2171	2172
568	F_HSBULLY	Imputation flag for HSBULLY	N	2	2173	2174
569	F_HSMOSTX	Imputation flag for HSMOSTX	N	2	2175	2176
570	F_HSASSNX	Imputation flag for HSASSNX	N	2	2177	2178
571	F_HSFREQX	Imputation flag for HSFREQX	N	2	2179	2180
572	F_HSNATL	Imputation flag for HSNATL	N	2	2181	2182
573	F_HSMLTY	Imputation flag for HSMLTY	N	2	2183	2184
574	F_HSENRL	Imputation flag for HSENRL	N	2	2185	2186
575	F_DISTASSI	Imputation flag for DISTASSI	N	2	2187	2188
576	F_SCHRTSCHL	Imputation flag for SCHRTSCHL	N	2	2189	2190
577	F_SCHLMAGNET	Imputation flag for SCHLMAGNET	N	2	2191	2192
578	F_SNEIGHBRX	Imputation flag for SNEIGHBRX	N	2	2193	2194
579	F_SCCHOICE	Imputation flag for SCCHOICE	N	2	2195	2196
580	F_SPUBCHOIX	Imputation flag for SPUBCHOIX	N	2	2197	2198
581	F_SCONSIDR	Imputation flag for SCONSIDR	N	2	2199	2200
582	F_LOCALE	Imputation flag for LOCALE	N	2	2201	2202
583	F_SCHLSAFETY	Imputation flag for SCHLSAFETY	N	2	2203	2204
584	F_SCHLSTFQUALITY	Imputation flag for SCHLSTFQUALITY	N	2	2205	2206
585	F_AVALCOURSE	Imputation flag for AVALCOURSE	N	2	2207	2208
586	F_XTRACURRIC	Imputation flag for XTRACURRIC	N	2	2209	2210
587	F_STUDNTCHAR	Imputation flag for STUDNTCHAR	N	2	2211	2212
588	F_STUDNTPERFORM	Imputation flag for STUDNTPERFORM	N	2	2213	2214
589	F_RELIGSOR	Imputation flag for RELIGSOR	N	2	2215	2216
590	F_SPECALEDSEVS	Imputation flag for SPECALEDSEVS	N	2	2217	2218
591	F_SPECALFACILTS	Imputation flag for SPECALFACILTS	N	2	2219	2220
592	F_CLSSIZE	Imputation flag for CLSSIZE	N	2	2221	2222
593	F_SCHLCOST	Imputation flag for SCHLCOST	N	2	2223	2224
594	F_FINDSCHL	Imputation flag for FINDSCHL	N	2	2225	2226
595	F_FINDFRND	Imputation flag for FINDFRND	N	2	2227	2228
596	F_FINDFAM	Imputation flag for FINDFAM	N	2	2229	2230
597	F_FINDNEWS	Imputation flag for FINDNEWS	N	2	2231	2232
598	F_FINDRPT	Imputation flag for FINDRPT	N	2	2233	2234
599	F_FINDWEB	Imputation flag for FINDWEB	N	2	2235	2236
600	F_FINDADS	Imputation flag for FINDADS	N	2	2237	2238
601	F_FINDFLY	Imputation flag for FINDFLY	N	2	2239	2240
602	F_FINDSTF	Imputation flag for FINDSTF	N	2	2241	2242
603	F_FINDCHRC	Imputation flag for FINDCHRC	N	2	2243	2244
604	F_FINDOTH	Imputation flag for FINDOTH	N	2	2245	2246
605	F_SISTCHOI	Imputation flag for SISTCHOI	N	2	2247	2248
606	F_SSAMSC	Imputation flag for SSAMSC	N	2	2249	2250
607	F_SCHLHRSWK	Imputation flag for SCHLHRSWK	N	2	2251	2252
608	F_EINTNET	Imputation flag for EINTNET	N	2	2253	2254
609	F_ADVCCRSE	Imputation flag for ADVCCRSE	N	2	2255	2256
610	F_SPCLCRSE	Imputation flag for SPCLCRSE	N	2	2257	2258
611	F_MKUPCRSE	Imputation flag for MKUPCRSE	N	2	2259	2260
612	F_ADDCRSE	Imputation flag for ADDCRSE	N	2	2261	2262
613	F_HELP	Imputation flag for HELP	N	2	2263	2264
614	F_CONFLCT	Imputation flag for CONFLCT	N	2	2265	2266
615	F_DISABLX	Imputation flag for DISABLX	N	2	2267	2268
616	F_TEMPILL	Imputation flag for TEMPILL	N	2	2269	2270
617	F_SPLCND	Imputation flag for SPLCND	N	2	2271	2272
618	F_LRNSTYLE	Imputation flag for LRNSTYLE	N	2	2273	2274
619	F_NOCHOICE	Imputation flag for NOCHOICE	N	2	2275	2276
620	F_SCHLPLCE	Imputation flag for SCHLPLCE	N	2	2277	2278
621	F_ONLINEPREF	Imputation flag for ONLINEPREF	N	2	2279	2280
622	F_ONLINEOTH	Imputation flag for ONLINEOTH	N	2	2281	2282

See note at end of table.

Table B-4. Public-Use Data file Layout in Position Order, PFI:2019

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
623	F_MOSTIMPT	Imputation flag for MOSTIMPT	N	2	2283	2284
624	F_SPBSCH	Imputation flag for SPBSCH	N	2	2285	2286
625	F_SPRIVT	Imputation flag for SPRIVT	N	2	2287	2288
626	F_SUNIVSCH	Imputation flag for SUNIVSCH	N	2	2289	2290
627	F_SCYBER	Imputation flag for SCYBER	N	2	2291	2292
628	F_SCOMPANY	Imputation flag for SCOMPANY	N	2	2293	2294
629	F_SOTHRSCX	Imputation flag for SOTHRSCX	N	2	2295	2296
630	F_STUTR	Imputation flag for STUTR	N	2	2297	2298
631	F_SOTHSCH	Imputation flag for SOTHSCH	N	2	2299	2300
632	F_INTNUM	Imputation flag for INTNUM	N	2	2301	2302
633	F_SINSTFEE	Imputation flag for SINSTFEE	N	2	2303	2304
634	F_INTHRS	Imputation flag for INTHRS	N	2	2305	2306
635	F_SEENJOY	Imputation flag for SEENJOY	N	2	2307	2308
636	F_SEGRADES	Imputation flag for SEGRADES	N	2	2309	2310
637	F_SEADPLCXX	Imputation flag for SEADPLCXX	N	2	2311	2312
638	F_SEBEHAVX	Imputation flag for SEBEHAVX	N	2	2313	2314
639	F_SESCHWRK	Imputation flag for SESCHWRK	N	2	2315	2316
640	F_SEGBEHAV	Imputation flag for SEGBEHAV	N	2	2317	2318
641	F_SEGWORK	Imputation flag for SEGWORK	N	2	2319	2320
642	F_SEABSNT	Imputation flag for SEABSNT	N	2	2321	2322
643	F_SEREPEAT	Imputation flag for SEREPEAT	N	2	2323	2324
644	F_SEREPTK	Imputation flag for SEREPTK	N	2	2325	2326
645	F_SEREPT1	Imputation flag for SEREPT1	N	2	2327	2328
646	F_SEREPT2	Imputation flag for SEREPT2	N	2	2329	2330
647	F_SEREPT3	Imputation flag for SEREPT3	N	2	2331	2332
648	F_SEREPT4	Imputation flag for SEREPT4	N	2	2333	2334
649	F_SEREPT5	Imputation flag for SEREPT5	N	2	2335	2336
650	F_SEREPT6	Imputation flag for SEREPT6	N	2	2337	2338
651	F_SEREPT7	Imputation flag for SEREPT7	N	2	2339	2340
652	F_SEREPT8	Imputation flag for SEREPT8	N	2	2341	2342
653	F_SEREPT9	Imputation flag for SEREPT9	N	2	2343	2344
654	F_SEREPT10	Imputation flag for SEREPT10	N	2	2345	2346
655	F_SEREPT11	Imputation flag for SEREPT11	N	2	2347	2348
656	F_SEREPT12	Imputation flag for SEREPT12	N	2	2349	2350
657	F_SESUSOUT	Imputation flag for SESUSOUT	N	2	2351	2352
658	F_SESUSPIN	Imputation flag for SESUSPIN	N	2	2353	2354
659	F_SEEXPEL	Imputation flag for SEEXPEL	N	2	2355	2356
660	F_SEGRADEQ	Imputation flag for SEGRADEQ	N	2	2357	2358
661	F_FSSPORTX	Imputation flag for FSSPORTX	N	2	2359	2360
662	F_FSVOL	Imputation flag for FSVOL	N	2	2361	2362
663	F_FSMTNG	Imputation flag for FSMTNG	N	2	2363	2364
664	F_FSPTMTNG	Imputation flag for FSPTMTNG	N	2	2365	2366
665	F_FSATCNFN	Imputation flag for FSATCNFN	N	2	2367	2368
666	F_FSFUNDRS	Imputation flag for FSFUNDRS	N	2	2369	2370
667	F_FSCOMMTE	Imputation flag for FSCOMMTE	N	2	2371	2372
668	F_FSCOUNSLR	Imputation flag for FSCOUNSLR	N	2	2373	2374
669	F_FSFREQ	Imputation flag for FSFREQ	N	2	2375	2376
670	F_FSNOTESX	Imputation flag for FSNOTESX	N	2	2377	2378
671	F_FSMEMO	Imputation flag for FSMEMO	N	2	2379	2380
672	F_FSPHONCHX	Imputation flag for FSPHONCHX	N	2	2381	2382
673	F_FSSPPERF	Imputation flag for FSSPPERF	N	2	2383	2384
674	F_FSSPHW	Imputation flag for FSSPHW	N	2	2385	2386
675	F_FSSPCOUR	Imputation flag for FSSPCOUR	N	2	2387	2388
676	F_FSSPROLE	Imputation flag for FSSPROLE	N	2	2389	2390
677	F_FSSPCOLL	Imputation flag for FSSPCOLL	N	2	2391	2392
678	F_FCSCHOOL	Imputation flag for FCSCHOOL	N	2	2393	2394
679	F_FCTEACHR	Imputation flag for FCTEACHR	N	2	2395	2396
680	F_FCSTDS	Imputation flag for FCSTDS	N	2	2397	2398
681	F_FCORDER	Imputation flag for FCORDER	N	2	2399	2400
682	F_FCSUPPRT	Imputation flag for FCSUPPRT	N	2	2401	2402
683	F_FHHOME	Imputation flag for FHHOME	N	2	2403	2404
684	F_FHWKHRS	Imputation flag for FHWKHRS	N	2	2405	2406

See note at end of table.

Table B-4. Public-Use Data file Layout in Position Order, PFI:2019

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
685	F_FHAMOUNT	Imputation flag for FHAMOUNT	N	2	2407	2408
686	F_FHCAMT	Imputation flag for FHCAMT	N	2	2409	2410
687	F_FHPLACE	Imputation flag for FHPLACE	N	2	2411	2412
688	F_FHCHECKX	Imputation flag for FHCHECKX	N	2	2413	2414
689	F_FHHELP	Imputation flag for FHHELP	N	2	2415	2416
690	F_FOSTORY2X	Imputation flag for FOSTORY2X	N	1	2417	2417
691	F_FOCRAFTS	Imputation flag for FOCRAFTS	N	1	2418	2418
692	F_FOGAMES	Imputation flag for FOGAMES	N	1	2419	2419
693	F_FOBUILD	Imputation flag for FOBUILD	N	1	2420	2420
694	F_FOSPORT	Imputation flag for FOSPORT	N	1	2421	2421
695	F_FORESPON	Imputation flag for FORESPON	N	1	2422	2422
696	F_FOHISTX	Imputation flag for FOHISTX	N	1	2423	2423
697	F_FODINNERX	Imputation flag for FODINNERX	N	1	2424	2424
698	F_FOLIBRAYX	Imputation flag for FOLIBRAYX	N	1	2425	2425
699	F_FOBOOKSTX	Imputation flag for FOBOOKSTX	N	1	2426	2426
700	F_FOCONCRTX	Imputation flag for FOCONCRTX	N	1	2427	2427
701	F_FOMUSEUMX	Imputation flag for FOMUSEUMX	N	1	2428	2428
702	F_FOZOOX	Imputation flag for FOZOOX	N	1	2429	2429
703	F_FOGROUPX	Imputation flag for FOGROUPX	N	1	2430	2430
704	F_FOSPRTEVX	Imputation flag for FOSPRTEVX	N	1	2431	2431
705	F_HDHEALTH	Imputation flag for HDHEALTH	N	1	2432	2432
706	F_HDINTDIS	Imputation flag for HDINTDIS	N	1	2433	2433
707	F_HDSPEECHX	Imputation flag for HDSPEECHX	N	1	2434	2434
708	F_HDDISTRBX	Imputation flag for HDDISTRBX	N	1	2435	2435
709	F_HDDEAFIMX	Imputation flag for HDDEAFIMX	N	1	2436	2436
710	F_HDBLINDX	Imputation flag for HDBLINDX	N	1	2437	2437
711	F_HDORTHOX	Imputation flag for HDORTHOX	N	1	2438	2438
712	F_HDAUTISM	Imputation flag for HDAUTISM	N	1	2439	2439
713	F_HDPDDX	Imputation flag for HDPDDX	N	1	2440	2440
714	F_HDADDX	Imputation flag for HDADDX	N	1	2441	2441
715	F_HDLEARNX	Imputation flag for HDLEARNX	N	1	2442	2442
716	F_HDDELAYX	Imputation flag for HDDELAYX	N	1	2443	2443
717	F_HDTRBRAIN	Imputation flag for HDTRBRAIN	N	1	2444	2444
718	F_HDOTHERX	Imputation flag for HDOTHERX	N	1	2445	2445
719	F_HDIEPX	Imputation flag for HDIEPX	N	2	2446	2447
720	F_HDCOMMUMX	Imputation flag for HDCOMMUMX	N	2	2448	2449
721	F_HDSPCLED	Imputation flag for HDSPCLED	N	2	2450	2451
722	F_HDLEARN	Imputation flag for HDLEARN	N	2	2452	2453
723	F_HDPLAY	Imputation flag for HDPLAY	N	2	2454	2455
724	F_HDOUT	Imputation flag for HDOUT	N	2	2456	2457
725	F_HDFRND	Imputation flag for HDFRND	N	2	2458	2459
726	F_CDOBMM	Imputation flag for CDOBMM	N	1	2460	2460
727	F_CDOBY	Imputation flag for CDOBY	N	1	2461	2461
728	F_CPLCBRTH	Imputation flag for CPLCBRTH	N	1	2462	2462
729	F_CMOVEAGE	Imputation flag for CMOVEAGE	N	2	2463	2464
730	F_CHISPAN	Imputation flag for CHISPAN	N	1	2465	2465
731	F_CAMIND	Imputation flag for CAMIND	N	1	2466	2466
732	F_CASIAN	Imputation flag for CASIAN	N	1	2467	2467
733	F_CBLACK	Imputation flag for CBLACK	N	1	2468	2468
734	F_CPACI	Imputation flag for CPACI	N	1	2469	2469
735	F_CWHITE	Imputation flag for CWHITE	N	1	2470	2470
736	F_CHISPRM	Imputation flag for CHISPRM	N	1	2471	2471
737	F_CSEX	Imputation flag for CSEX	N	1	2472	2472
738	F_CLIVYN	Imputation flag for CLIVYN	N	1	2473	2473
739	F_CLIVELSWX	Imputation flag for CLIVELSWX	N	2	2474	2475
740	F_CSPEAKX	Imputation flag for CSPEAKX	N	1	2476	2476
741	F_CENGLPRG	Imputation flag for CENGLPRG	N	2	2477	2478
742	F_HHTOTALXX	Imputation flag for HHTOTALXX	N	1	2479	2479
743	F_HHBROX	Imputation flag for HHBROX	N	1	2480	2480
744	F_HHSISSX	Imputation flag for HHSISSX	N	1	2481	2481
745	F_HHMOM	Imputation flag for HHMOM	N	1	2482	2482
746	F_HHDAD	Imputation flag for HHDAD	N	1	2483	2483

See note at end of table.

Table B-4. Public-Use Data file Layout in Position Order, PFI:2019

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
747	F_HHAUNTSX	Imputation flag for HHAUNTSX	N	1	2484	2484
748	F_HHUNCLSX	Imputation flag for HHUNCLSX	N	1	2485	2485
749	F_HHGMASX	Imputation flag for HHGMASX	N	1	2486	2486
750	F_HHGPASX	Imputation flag for HHGPASX	N	1	2487	2487
751	F_HHCSNSX	Imputation flag for HHCSNSX	N	1	2488	2488
752	F_HHPRTNRSX	Imputation flag for HHPRTNRSX	N	1	2489	2489
753	F_HHORELSX	Imputation flag for HHORELSX	N	1	2490	2490
754	F_HHONRELSX	Imputation flag for HHONRELSX	N	1	2491	2491
755	F_RELATION	Imputation flag for RELATION	N	1	2492	2492
756	F_HHENGLISH	Imputation flag for HHENGLISH	N	1	2493	2493
757	F_HHSPANISH	Imputation flag for HHSPANISH	N	1	2494	2494
758	F_HHFRENCH	Imputation flag for HHFRENCH	N	1	2495	2495
759	F_HHCHINESE	Imputation flag for HHCHINESE	N	1	2496	2496
760	F_HHOTHLANG	Imputation flag for HHOTHLANG	N	1	2497	2497
761	F_PIREL	Imputation flag for PIREL	N	1	2498	2498
762	F_PISEX	Imputation flag for PISEX	N	1	2499	2499
763	F_PIMRSTA	Imputation flag for PIMRSTA	N	1	2500	2500
764	F_PIBFGF	Imputation flag for PIBFGF	N	2	2501	2502
765	F_PIFRLNG	Imputation flag for PIFRLNG	N	1	2503	2503
766	F_PISPEAK	Imputation flag for PISPEAK	N	2	2504	2505
767	F_PIDIFFI	Imputation flag for PIDIFFI	N	2	2506	2507
768	F_PISCINT	Imputation flag for PISCINT	N	2	2508	2509
769	F_P1WRMTL	Imputation flag for P1WRMTL	N	2	2510	2511
770	F_P1PLCBRTH	Imputation flag for P1PLCBRTH	N	1	2512	2512
771	F_P1AGEMV	Imputation flag for P1AGEMV	N	2	2513	2514
772	F_P1HISPAN	Imputation flag for P1HISPAN	N	1	2515	2515
773	F_P1AMIND	Imputation flag for P1AMIND	N	1	2516	2516
774	F_P1ASIAN	Imputation flag for P1ASIAN	N	1	2517	2517
775	F_P1BLACK	Imputation flag for P1BLACK	N	1	2518	2518
776	F_P1PACI	Imputation flag for P1PACI	N	1	2519	2519
777	F_P1WHITE	Imputation flag for P1WHITE	N	1	2520	2520
778	F_P1HISPRM	Imputation flag for P1HISPRM	N	1	2521	2521
779	F_P1EDUC	Imputation flag for P1EDUC	N	1	2522	2522
780	F_P1ENRL	Imputation flag for P1ENRL	N	1	2523	2523
781	F_P1EMPL	Imputation flag for P1EMPL	N	1	2524	2524
782	F_P1HRSWK	Imputation flag for P1HRSWK	N	2	2525	2526
783	F_P1LKWRK	Imputation flag for P1LKWRK	N	2	2527	2528
784	F_P1MTHSWRK	Imputation flag for P1MTHSWRK	N	1	2529	2529
785	F_P2GUARD	Imputation flag for P2GUARD	N	1	2530	2530
786	F_P2IAGE	Imputation flag for P2IAGE	N	1	2531	2531
787	F_P2REL	Imputation flag for P2REL	N	2	2532	2533
788	F_P2SEX	Imputation flag for P2SEX	N	2	2534	2535
789	F_P2MRSTA	Imputation flag for P2MRSTA	N	2	2536	2537
790	F_P2BFGF	Imputation flag for P2BFGF	N	2	2538	2539
791	F_P2FRLNG	Imputation flag for P2FRLNG	N	2	2540	2541
792	F_P2SPEAK	Imputation flag for P2SPEAK	N	2	2542	2543
793	F_P2DIFFI	Imputation flag for P2DIFFI	N	2	2544	2545
794	F_P2SCINT	Imputation flag for P2SCINT	N	2	2546	2547
795	F_P2WRMTL	Imputation flag for P2WRMTL	N	2	2548	2549
796	F_P2PLCBRTH	Imputation flag for P2PLCBRTH	N	2	2550	2551
797	F_P2AGEMV	Imputation flag for P2AGEMV	N	2	2552	2553
798	F_P2HISPAN	Imputation flag for P2HISPAN	N	2	2554	2555
799	F_P2AMIND	Imputation flag for P2AMIND	N	2	2556	2557
800	F_P2ASIAN	Imputation flag for P2ASIAN	N	2	2558	2559
801	F_P2BLACK	Imputation flag for P2BLACK	N	2	2560	2561
802	F_P2PACI	Imputation flag for P2PACI	N	2	2562	2563
803	F_P2WHITE	Imputation flag for P2WHITE	N	2	2564	2565
804	F_P2HISPRM	Imputation flag for P2HISPRM	N	2	2566	2567
805	F_P2EDUC	Imputation flag for P2EDUC	N	2	2568	2569
806	F_P2ENRL	Imputation flag for P2ENRL	N	2	2570	2571
807	F_P2EMPL	Imputation flag for P2EMPL	N	2	2572	2573
808	F_P2HRSWK	Imputation flag for P2HRSWK	N	2	2574	2575

See note at end of table.

Table B-4. Public-Use Data file Layout in Position Order, PFI:2019

Order	Variable Name	Variable Label	Format	Length	Start Column	End Column
809	F_P2LKWRK	Imputation flag for P2LKWRK	N	2	2576	2577
810	F_P2MTHSWRK	Imputation flag for P2MTHSWRK	N	2	2578	2579
811	F_P2AGE	Imputation flag for P2AGE	N	2	2580	2581
812	F_HWELFTANST	Imputation flag for HWELFTANST	N	1	2582	2582
813	F_HWIC	Imputation flag for HWIC	N	1	2583	2583
814	F_HFOODST	Imputation flag for HFOODST	N	1	2584	2584
815	F_HMEDICAID	Imputation flag for HMEDICAID	N	1	2585	2585
816	F_HCHIP	Imputation flag for HCHIP	N	1	2586	2586
817	F_HSECN8	Imputation flag for HSECN8	N	1	2587	2587
818	F_TTLHHINC	Imputation flag for TTLHHINC	N	1	2588	2588
819	F_OWNRNTHB	Imputation flag for OWNRNTHB	N	1	2589	2589
820	F_HVINTSPHO	Imputation flag for HVINTSPHO	N	1	2590	2590
821	F_HVINTCOM	Imputation flag for HVINTCOM	N	1	2591	2591
822	F_CHLDNT	Imputation flag for CHLDNT	N	1	2592	2592
823	F_LRNCOMP	Imputation flag for LRNCOMP	N	2	2593	2594
824	F_LRNTAB	Imputation flag for LRNTAB	N	2	2595	2596
825	F_LRNCELL	Imputation flag for LRNCELL	N	2	2597	2598
826	F_SEFUTUREX	Imputation flag for SEFUTUREX	N	1	2599	2599
827	F_HHUNID	Imputation flag for HHUNID	N	1	2600	2600
828	F_ZIPLOCL	Imputation flag for ZIPLOCL	N	1	2601	2601

SOURCE: U.S. Department of Education, National Center for Education Statistics, Parent and Family Involvement in Education Survey of the 2019 National Household Education Surveys Program (PFI-NHES:2019)

## **Appendix C. Comparison of Estimates**

**Table C-1. Percentage distribution for household size, place of birth, race/ethnicity, age, and number of children in the household: ECPP-NHES:2019, PFI-NHES:2019, and CPS:2018**

Characteristic	ECPP-NHES:2019 and PFI-NHES:2019		CPS:2018		Difference	
	Percent	s.e.	Percent	s.e.	Percent	s.e.
Household size						
2	4.4	0.01	4.2	0.14	0.2	0.14
3-4	52.0	0.09	52.4	0.56	-0.4	0.57
5+	43.6	0.09	43.3	0.55	0.2	0.55
Child's place of birth						
US state or DC	94.8	0.22	96.0	0.18	-1.1 *	0.28
US territory	0.6	0.08	0.2	0.05	0.4 *	0.09
Another country	4.5	0.20	3.8	0.17	0.7 *	0.27
Race/ethnicity of child						
White, non-Hispanic	48.6	0.28	50.1	0.12	-1.6 *	0.31
Black, non-Hispanic	13.4	0.11	13.9	0.12	-0.5 *	0.16
Hispanic	25.5	0.06	25.4	0.08	0.1	0.10
Asian/Pacific Islander, non-Hispanic	6.0	0.20	5.5	0.11	0.5 *	0.23
Other, non-Hispanic	6.5	0.24	5.0	0.11	1.5 *	0.26
Age category						
0-2 years	17.9	0.11	16.1	0.09	1.8 *	0.14
3-5 years	16.3	0.20	16.5	0.13	-0.2	0.24
6-9 years	21.5	0.16	21.5	0.11	-0.1	0.20
10-12 years	17.0	0.16	16.8	0.13	0.2	0.21
13-15 years	16.2	0.16	16.5	0.14	-0.4	0.21
16-18 years	11.0	0.10	12.2	0.11	-1.2 *	0.15
19-20 years	0.2	0.03	0.4	0.05	-0.2 *	0.06
Number of children in household						
1	24.0	0.25	22.5	0.32	1.4 *	0.41
2	40.2	0.32	39.0	0.46	1.2 *	0.56
3	22.1	0.45	23.1	0.47	-1.0	0.65
4	8.8	0.40	9.6	0.35	-0.8	0.53
5+	4.9	0.33	5.7	0.34	-0.8	0.48

\*Indicates a statistically significant difference ( $p < .05$ )

NOTE: s.e. is standard error. Full-time homeschoolers are excluded from the NHES estimates. Full-time homeschoolers are those who do not spend any time in public/private school. Because of rounding, percentages may not add to 100. The estimates in this table were produced solely for the purpose of evaluating nonresponse bias and are not official statistics.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019; U.S. Department of Commerce, Bureau of the Census, Current Population Survey (CPS) of 2018.

**Table C-2A. Percentage distribution of children ages 3 through 20 not enrolled in school or enrolled in kindergarten through grade 12: ECPP-NHES:2019 and PFI-NHES:2019**

Child's age	Number of children (thousands)	Child's current grade													
		Not Enrolled	Kindergarten	1	2	3	4	5	6	7	8	9	10	11	12
3	3,817	96.3	2.4!								‡				
4	3,686	92.4	6.2	‡	‡	‡						‡	‡		‡
5	4,375	24.4	70.0	4.4	‡	‡						‡	‡		
6	4,114	1.1	31.2	60.9	5.1	‡	‡	‡	‡	‡		‡	‡	‡	‡
7	3,513		‡	33.3	61.0	3.4!	0.4!	‡	‡			‡	‡	‡	‡
8	4,006		‡	‡	28.8	65.7	3.1	‡		‡				‡	
9	4,007		‡	‡	‡	31.7	60.1	4.9	‡	‡	‡	‡			‡
10	4,210					1.7!	31.7	59.7	5.4	‡	‡	‡		‡	‡
11	4,019						‡	29.4	61.0	5.8	‡	‡	‡	‡	‡
12	4,145			‡	‡	‡	‡	1.8	32.1	60.0	4.7	0.5!		‡	‡
13	3,758		‡				‡	‡	1.7!	34.9	57.8	4.0	0.4!	‡	‡
14	4,098						‡	‡	‡	1.6	33.8	57.8	5.8	‡	‡
15	3,915				‡	‡	‡		‡	‡	2.4!	32.3	60.1	4.3	‡
16	3,861		‡		‡			‡	‡	‡	‡	2.0	35.8	57.1	4.5
17	3,149						‡		‡	‡	‡	0.9!	2.9	35.3	60.5
18	993			‡		‡		‡		‡			1.3!	4.9!	90.0
19	134		‡		‡		‡						‡	‡	77.9
20	23!							‡		‡				‡	67.8

‡ Reporting standards not met. There were too few cases for a reliable estimate or the coefficient of variation (CV) is 50 percent or higher.

! Interpret data with caution; coefficient of variation is between 30 and 50 percent.

NOTE: Blank cells round to zero. Full-time homeschoolers are excluded from the NHES estimates. Full-time homeschoolers are those who do not spend any time in public/private school. Because of rounding, percentages may not add to 100. The estimates in this table were produced solely for the purpose of evaluating nonresponse bias and are not official statistics.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019; U.S. Department of Commerce, Bureau of the Census, Current Population Survey (CPS) of 2018.

**Table C-2B. Standard errors of the percentage distribution of children ages 3 through 20 not enrolled in school or enrolled in kindergarten through grade 12: ECPP-NHES:2019 and PFI-NHES:2019**

Child's age	Number of children (thousands)	Child's current grade													
		Not Enrolled	Kindergarten	1	2	3	4	5	6	7	8	9	10	11	12
3	122.9	1.06	0.92								†		†		
4	113.1	1.56	1.38	†	†	†						†	†		†
5	152.9	1.33	1.74	1.16	†	†						†	†		
6	111.4	0.30	1.94	2.11	1.07	†	†	†	†	†		†	†	†	†
7	135.2		†	2.01	2.22	1.06	0.19	†	†			†	†	†	†
8	133.7		†	†	1.83	2.04	0.90	†		†			†		
9	133.2		†	†	†	1.98	2.65	1.16	†	†	†	†			†
10	137.0					0.57	1.93	2.18	0.98	†	†	†		†	†
11	136.5					†	†	2.09	2.10	1.16	†	†	†	†	†
12	102.9			†	†	†	†	0.47	1.87	1.82	0.77	0.23		†	†
13	110.6		†				†	†	0.55	1.96	2.11	0.82	0.21	†	†
14	102.6					†		†	†	0.41	1.70	1.70	1.00	†	†
15	107.2				†	†	†		†	†	0.79	1.67	1.83	0.77	†
16	123.7		†		†			†	†	†	†	0.39	1.68	1.75	0.75
17	87.3						†		†	†	†	0.44	0.86	1.58	1.54
18	37.5			†		†		†		†			0.47	1.53	2.22
19	20.0		†		†		†						†	†	9.11
20	6.9							†		†				†	17.47

† Not applicable.

NOTE: Blank cells round to zero. Full-time homeschoolers are excluded from the NHES estimates. Full-time homeschoolers are those who do not spend any time in public/private school.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019; U.S. Department of Commerce, Bureau of the Census, Current Population Survey (CPS) of 2018.

**Table C-2C. Percentage distribution of children ages 3 through 20 not enrolled in school or enrolled in kindergarten through grade 12: CPS:2018**

Child's age	Number of children (thousands)	Child's current grade													
		Not Enrolled	Kindergarten	1	2	3	4	5	6	7	8	9	10	11	12
3	3,986	98.3	1.7												
4	4,152	93.7	6.3												
5	3,970	27.0	67.6	4.9	0.5!										
6	3,995	5.4	21.4	69.4	3.2	0.6!									
7	3,980		1.0!	24.2	69.3	4.7	0.8!								
8	4,014			1.4!	25.2	68.1	4.4	0.9!							
9	3,858			0.8!	2.7	25.9	66.0	3.6	1.1!						
10	4,088				0.3!	3.3	26.5	64.1	5.2	0.6!					
11	4,135					0.5!	3.5	26.7	63.7	4.5	1.1				
12	4,122						0.8!	3.0	26.9	64.7	4.3	0.3!			
13	4,061							1.1	3.7	26.9	62.7	5.0	0.6!		
14	4,078								0.5!	3.5	21.8	69.6	4.1	0.5!	
15	4,031									0.7!	3.1	25.7	62.2	6.8	1.5
16	3,942								‡	0.5!	0.4!	4.8	29.0	57.7	7.6
17	3,651								‡	‡	‡	0.7!	5.1	30.7	62.9
18	1,383									‡		‡	1.4!	14.8	82.9
19	173									‡		‡	‡	25.0	65.6
20	115									‡		‡	‡	18.9!	51.4

‡ Reporting standards not met. There were too few cases for a reliable estimate or the coefficient of variation (CV) is 50 percent or higher.

! Interpret data with caution; coefficient of variation is between 30 and 50 percent.

NOTE: Blank cells round to zero. Because of rounding, percentages may not add to 100. The estimates in this table were produced solely for the purpose of evaluating nonresponse bias and are not official statistics.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey (CPS) of 2018.

**Table C-2D. Standard errors of the percentage distribution of children ages 3 through 20 not enrolled in school or enrolled in kindergarten through grade 12: CPS:2018**

Child's age	Number of children (thousands)	Child's current grade														
		Not Enrolled	Kindergarten	1	2	3	4	5	6	7	8	9	10	11	12	
3	72.6	0.41	0.41													
4	74.5	0.72	0.72													
5	70.0	1.38	1.45	0.71	0.24											
6	75.2	0.72	1.24	1.21	0.52	0.26										
7	80.3		0.30	1.33	1.38	0.65	0.27									
8	67.4			0.44	1.24	1.42	0.61	0.29								
9	71.5			0.30	0.51	1.15	1.41	0.61	0.40							
10	96.6				0.15	0.53	1.19	1.39	0.73	0.23						
11	84.5					0.20	0.52	1.21	1.27	0.57	0.28					
12	95.1						0.29	0.50	1.20	1.32	0.59	0.14				
13	88.6							0.30	0.55	1.23	1.44	0.62	0.22			
14	62.0								0.18	0.58	1.15	1.22	0.55	0.21		
15	62.1									0.29	0.49	1.26	1.38	0.76	0.34	
16	57.3									†	0.23	0.20	0.60	1.27	1.43	0.76
17	58.4									†	†	†	0.23	0.70	1.44	1.43
18	62.3										†	†	0.60	1.72	1.87	
19	26.1										†	†	†	6.72	7.42	
20	21.7										†	†	†	8.07	10.55	

† Not applicable.

NOTE: Blank cells round to zero.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey (CPS) of 2018.

**Table C-2E. Difference in percentage distribution of children ages 3 through 20 not enrolled in school or enrolled in kindergarten through grade 12: CPS:2018 vs. NHES:2019**

Child's age	Number of children (thousands)	Not Enrolled	Child's current grade														
			Kindergarten	1	2	3	4	5	6	7	8	9	10	11	12		
3	-169	-2.0	0.7									†		†			
4	-466	-1.3	-0.1	†	†	†							†	†			†
5	405	-2.7	2.4	-0.4	†	†							†	†			
6	119	-4.2 *	9.8 *	-8.5 *	2.0	†	†	†	†	†	†		†	†	†	†	†
7	-467		†	9.0 *	-8.2 *	-1.3	-0.4	†	†				†	†	†	†	†
8	-8		†	†	3.6	-2.4	-1.3	† *			†				†		
9	149		†	†	-0.4	5.8 *	-5.9 *	1.3	†	†	†	†	†				†
10	122				-0.3 *	-1.6 *	5.2 *	-4.3	0.2	†	†	†	†			†	†
11	-116					†	†	2.7	-2.8	1.4	†	†	†	†	†	†	†
12	24			†	†	†	† *	-1.2	5.2 *	-4.7 *	0.5	0.2				†	†
13	-304		†				†	† *	-2.1 *	8.0 *	-4.9	-1.0	-0.1	†	†	†	†
14	21					†		†	†	-1.9 *	12.0 *	-11.8 *	1.7	†	†	†	†
15	-116				†	†	†		†	†	-0.7	6.7 *	-2.1	-2.5 *	†	†	† *
16	-82		†		†			†	†	†	†	-2.8 *	6.8 *	-0.5	-3.1		† *
17	-502						†		†	†	†	0.2	-2.1	4.6 *	-2.4		
18	-390			†		†		†		†		†	-0.1	-9.9 *	7.2 *		
19	-40		†		†		†			†		†	†	†	12.3		
20	-93							†		†		†	†	†	16.4		

\* Indicates a statistically significant difference ( $p < .05$ ).

† Not applicable.

NOTE: Blank cells round to zero. Full-time homeschoolers are excluded from the NHES estimates. Full-time homeschoolers are those who do not spend any time in public/private school.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019; U.S. Department of Commerce, Bureau of the Census, Current Population Survey (CPS) of 2018.

**Table C-2F. Standard errors of difference in the percentage distribution of children ages 3 through 20 not enrolled in school or enrolled in kindergarten through grade 12: CPS:2018 vs. NHES:2019**

Child's age	Number of children (thousands)	Child's current grade													
		Not Enrolled	Kindergarten	1	2	3	4	5	6	7	8	9	10	11	12
3	142.8	1.14	1.01								†			†	
4	135.5	1.72	1.55	†	†	†						†	†		†
5	168.2	1.92	2.27	1.36	†	†						†	†		
6	134.4	0.78	2.30	2.43	1.19	†	†	†	†	†		†	†	†	†
7	157.3		†	2.41	2.61	1.24	0.33	†	†			†	†	†	†
8	149.7		†	†	2.21	2.49	1.09	†		†			†		
9	151.1		†	†	†	2.29	3.00	1.31	†	†	†	†			†
10	167.7				0.15	0.78	2.27	2.59	1.23	†	†	†			†
11	160.6					†	†	2.41	2.45	1.29	†	†	†	†	†
12	140.1			†	†	†	†	0.69	2.23	2.25	0.97	0.27			†
13	141.7		†					†	†	0.78	2.32	2.56	1.03	0.31	†
14	119.8					†		†	†	0.71	2.05	2.09	1.14	†	†
15	123.9				†	†	†		†	†	0.93	2.09	2.29	1.09	†
16	136.3		†		†			†	†	†	†	0.72	2.11	2.25	1.07
17	105.0							†		†	†	0.50	1.11	2.13	2.11
18	72.7			†		†		†		†		†	0.76	2.31	2.91
19	32.9		†		†			†		†		†	†	†	11.75
20	22.7							†		†		†	†	†	20.41

† Not applicable.

NOTE: Blank cells round to zero. Full-time homeschoolers are excluded from the NHES estimates. Full-time homeschoolers are those who do not spend any time in public/private school.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019; U.S. Department of Commerce, Bureau of the Census, Current Population Survey (CPS) of 2018.

**Table C-3. Number of children in kindergarten through grade 12, by school type and by student grade level: PFI-NHES:2019 and CPS:2018**

School type and grade	PFI-NHES:2019		CPS:2018		Difference	
	Number (thousands)	s.e. (thousands)	Number (thousands)	s.e. (thousands)	Number (thousands)	s.e. (thousands)
Total	51,626	138.7	52,636	147.0	-1,010 *	202.07
School type						
Public	45,796	230.1	48,294	203.6	-2,498 *	307.25
Private or other <sup>1</sup>	5,830	196.8	4,343	178.9	1,487 *	265.97
Student grade level						
K	4,690	139.0	3,907	89.1	783 *	165.14
1	3,945	122.6	4,016	84.2	-72	148.69
2	3,617	134.9	4,031	83.7	-414 *	158.78
3	4,202	120.7	4,097	83.2	105	146.57
4	4,004	109.1	4,019	91.8	-15	142.59
5	4,010	138.3	4,063	86.7	-53	163.22
6	4,133	131.9	4,172	95.5	-39	162.82
7	4,216	123.6	4,201	94.1	15	155.41
8	3,941	114.8	3,803	89.3	139	145.50
9	3,949	117.3	4,330	86.3	-381 *	145.65
10	4,158	118.9	4,062	80.1	96	143.36
11	3,602	102.4	3,958	99.6	-357 *	142.87
12	3,158	78.2	3,977	93.8	-818 *	122.16

\* Indicates a total that differs between the NHES and CPS with  $p < .05$  (Student's  $t$  test).

<sup>1</sup>For the PFI-NHES:2019, the "public school" category includes all respondents who reported that their children were in public school (regardless of any additional options chosen); and the "private or other" category includes all respondents who did not report that their children were in public school. The latter includes children in private school as well as children enrolled in full-time virtual/online/cyber school and those whose school type is unknown. For the CPS:2018, respondents are required to choose between public or private school and other schooling categories are not explicitly captured. Differences between the PFI-NHES:2019 and CPS:2018 estimates may be driven in part by differences in the measurement of school type in the two collections.

NOTE: s.e. is standard error. Because of rounding, details may not add to totals. Full-time homeschoolers are excluded from the NHES estimates. Full-time homeschoolers are those who do not spend any time in public/private school. The estimates in this table were produced solely for the purpose of evaluating nonresponse bias and are not official statistics.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019; U.S. Department of Commerce, Bureau of the Census, Current Population Survey (CPS) of 2018.

**Table C-4. Number and percentage of children in kindergarten through grade 12 enrolled in public and private schools: PFI-NHES:2019 and CPS:2018**

Child's current grade	School type						
	Public			Private or other <sup>1</sup>			
	Number (thousands)	Percent	s.e.	Number (thousands)	Percent	s.e.	
PFI-NHES:2019							
K	4,004	85.4	1.46	686	14.6	1.46	
1	3,335	84.6	1.62	609	15.4	1.62	
2	3,130	86.5	1.60	487	13.5	1.60	
3	3,670	87.3	1.86	532	12.7	1.86	
4	3,618	90.4	1.77	386	9.6	1.77	
5	3,680	91.8	0.83	330	8.2	0.83	
6	3,723	90.1	1.37	410	9.9	1.37	
7	3,703	87.8	1.28	513	12.2	1.28	
8	3,510	89.0	1.14	432	11.0	1.14	
9	3,589	90.9	0.98	360	9.1	0.98	
10	3,740	89.9	0.83	418	10.1	0.83	
11	3,284	91.2	0.83	317	8.8	0.83	
12	2,809	88.9	0.92	349	11.1	0.92	
CPS:2018							
K	3,528	90.3	0.87	379	9.7	0.87	
1	3,604	89.7	0.88	412	10.3	0.88	
2	3,724	92.4	0.81	306	7.6	0.81	
3	3,766	91.9	0.78	331	8.1	0.78	
4	3,659	91.1	0.94	360	8.9	0.94	
5	3,697	91.0	0.90	366	9.0	0.90	
6	3,829	91.8	0.85	343	8.2	0.85	
7	3,808	90.7	0.89	393	9.3	0.89	
8	3,503	92.1	0.81	300	7.9	0.81	
9	4,044	93.4	0.70	286	6.6	0.70	
10	3,765	92.7	0.73	297	7.3	0.73	
11	3,703	93.5	0.68	256	6.5	0.68	
12	3,663	92.1	0.85	314	7.9	0.85	
Difference							
K	476	-4.9	*	1.70	307	4.9	*
1	-268	-5.2	*	1.84	197	5.2	*
2	-594	-5.9	*	1.79	180	5.9	*
3	-96	-4.6	*	2.01	201	4.6	*
4	-41	-0.7		2.00	26	0.7	

See notes at end of table.

**Table C-4. Number and percentage of children in kindergarten through grade 12 enrolled in public and private schools: PFI-NHES:2019 and CPS:2018—Continued**

Child's current grade	School type					
	Public			Private or other <sup>1</sup>		
	Number (thousands)	Percent	s.e.	Number (thousands)	Percent	s.e.
Difference						
5	-17	0.8	1.23	-36	-0.8	1.23
6	-106	-1.7	1.61	67	1.7	1.61
7	-105	-2.8	1.56	120	2.8	1.56
8	7	-3.1 *	1.40	132	3.1 *	1.40
9	-455	-2.5 *	1.21	74	2.5 *	1.21
10	-25	-2.8 *	1.10	121	2.8 *	1.10
11	-419	-2.4 *	1.08	62	2.4 *	1.08
12	-854	-3.2 *	1.25	36	3.2 *	1.25

\* Indicates a proportion that differs between the NHES and CPS with  $p < .05$  (Student's  $t$  test).

<sup>1</sup>For the PFI-NHES:2019, the "public school" category includes all respondents who reported that their children were in public school (regardless of any additional options chosen); and the "private or other" category includes all respondents who did not report that their children were in public school. The latter includes children in private school as well as children enrolled in full-time virtual/online/cyber school and those whose school type is unknown. For the CPS:2018, respondents are required to choose between public or private school and other schooling categories are not explicitly captured. Differences between the PFI-NHES:2019 and CPS:2018 estimates may be driven in part by differences in the measurement of school type in the two collections.

NOTE: s.e. is standard error. Full-time homeschoolers are excluded from the NHES estimates. Full-time homeschoolers are those who do not spend any time in public/private school. Because of rounding, percentages may not add to 100. The estimates in this table were produced solely for the purpose of evaluating nonresponse bias and are not official statistics.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019; U.S. Department of Commerce, Bureau of the Census, Current Population Survey (CPS) of 2018.

**Table C-5. Percentage of children enrolled in kindergarten through grade 12 enrolled in public and private schools, by race/ethnicity: PFI-NHES:2019 and CPS:2018**

Race/ethnicity	PFI-NHES:2019					CPS:2018					Difference						
	Number of children (thousands)	Public		Private <sup>1</sup>		Number of children (thousands)	Public		Private <sup>1</sup>		Number of children (thousands)	Public		Private <sup>1</sup>			
		Percent	t	s.e.	Percent		t	s.e.	Percent	t		s.e.	Percent	t	s.e.		
White, non-Hispanic	24,964	86.1	0.61	13.9	0.61	26,673	89.2	0.52	10.8	0.52	-1,709	-3.0	*	0.80	3.0	*	0.80
Black, non-Hispanic	7,044	90.1	1.28	9.9	1.28	7,281	95.3	0.73	4.7	0.73	-237	-5.2	*	1.47	5.2	*	1.47
Hispanic	13,166	92.0	0.58	8.0	0.58	13,205	95.2	0.45	4.8	0.45	-39	-3.2	*	0.74	3.2	*	0.74
Asian/Pacific Islander, non-Hispanic	3,178	89.7	1.31	10.3	1.31	2,878	92.4	1.08	7.6	1.08	300	-2.8		1.70	2.8		1.70
Other, non-Hispanic	3,273	91.0	0.99	9.0	0.99	2,600	90.0	1.56	10.0	1.56	674	1.0		1.85	-1.0		1.85

\* Indicates a proportion that differs between the NHES and CPS with  $p < .05$  (Student's *t* test).

<sup>1</sup>For the PFI-NHES:2019, the "public school" category includes all respondents who reported that their children were in public school (regardless of any additional options chosen); and the "private or other" category includes all respondents who did not report that their children were in public school. The latter includes children in private school as well as children enrolled in full-time virtual/online/cyber school and those whose school type is unknown. For the CPS:2018, respondents are required to choose between public or private school and other schooling categories are not explicitly captured. Differences between the PFI-NHES:2019 and CPS:2018 estimates may be driven in part by differences in the measurement of school type in the two collections.

NOTE: s.e. is standard error. Full-time homeschoolers are excluded from the NHES estimates. Full-time homeschoolers are those who do not spend any time in public/private school. Because of rounding, percentages may not add to 100. The estimates in this table were produced solely for the purpose of evaluating nonresponse bias and are not official statistics.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019; U.S. Department of Commerce, Bureau of the Census, Current Population Survey (CPS) of 2018.

**Table C-6. Percentage of children in kindergarten through grade 12, by household income: PFI-NHES:2019 and ACS: 2018**

Household income	PFI-NHES:2019		ACS:2018		Difference	
	Percent	s.e.	Percent	s.e.	Percent	s.e.
\$10,000 or less	4.3	#	4.3	0.06	#	0.06
\$10,001 to \$20,000	5.6	#	5.6	0.06	#	0.06
\$20,001 to \$30,000	7.3	#	7.3	0.07	#	0.07
\$30,001 to \$40,000	7.7	#	7.7	0.07	#	0.07
\$40,001 to \$50,000	7.3	#	7.3	0.06	#	0.06
\$50,001 to \$60,000	6.9	#	6.9	0.06	#	0.06
\$60,001 to \$75,000	9.7	#	9.7	0.08	#	0.08
\$75,001 to \$100,000	13.4	#	13.4	0.09	#	0.09
\$100,001 to \$150,000	18.3	#	18.3	0.10	#	0.10
Over \$150,000	19.4	#	19.4	0.10	#	0.10

# Estimate rounds to zero.

NOTE: s.e. is standard error. Because of rounding, percentages may not add to 100. NHES and ACS estimates include homeschooled. The estimates in this table were produced solely for the purpose of evaluating nonresponse bias and are not official statistics.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019; U.S. Department of Commerce, Bureau of the Census, American Community Survey (ACS) of 2018.

**Table C-7. Percentage of children in kindergarten through grade 12, by household income and race/ethnicity: PFI-NHES:2019 and ACS:2018**

Race/ethnicity	Number of children (thousands)	Household income													
		Less than \$20,000		\$20,001-\$40,000		\$40,001-\$60,000		\$60,001-\$75,000		\$75,001-\$100,000		\$100,001-\$150,000		Over \$150,000	
		Percent	s.e.	Percent	s.e.	Percent	s.e.	Percent	s.e.	Percent	s.e.	Percent	s.e.	Percent	s.e.
PFI-NHES:2019															
White, non-Hispanic	25,944	5.7	0.26	9.4	0.29	11.5	0.25	9.1	0.22	14.5	0.23	23.0	0.26	26.8	0.22
Black, non-Hispanic	7,211	21.2	#	22.7	#	16.4	#	9.4	#	11.3	#	11.2	#	7.8	#
Hispanic	13,404	12.5	#	22.5	#	18.8	#	10.8	#	12.3	#	13.6	#	9.6	#
Asian/Pacific Islander, non-Hispanic	3,183	5.9!	1.91	12.1	1.53	13.1	1.45	9.8	1.71	13.3	1.60	17.0	1.44	28.8	1.59
Other, non-Hispanic	3,361	10.7	1.71	15.7	2.21	14.7	1.75	9.8	1.45	14.1	1.43	17.4	1.61	17.5	1.30
ACS:2018															
White, non-Hispanic	26,727	5.8	0.08	9.7	0.10	11.8	0.09	9.5	0.10	14.8	0.11	22.6	0.13	25.9	0.14
Black, non-Hispanic	7,211	21.2	0.36	22.7	0.32	16.4	0.30	9.4	0.21	11.3	0.23	11.2	0.23	7.8	0.18
Hispanic	13,404	12.5	0.17	22.5	0.23	18.8	0.19	10.8	0.16	12.3	0.15	13.6	0.17	9.6	0.15
Asian/Pacific Islander, non-Hispanic	2,690	5.4	0.23	11.2	0.31	10.6	0.31	7.3	0.26	11.5	0.31	19.7	0.41	34.4	0.50
Other, non-Hispanic	3,071	11.0	0.31	15.3	0.36	14.8	0.36	9.3	0.29	12.8	0.34	17.0	0.31	19.7	0.34
Difference															
White, non-Hispanic	-783	-0.1	0.27	-0.3	0.30	-0.3	0.27	-0.3	0.24	-0.3	0.26	0.4	0.29	0.9	* 0.26
Black, non-Hispanic	#	#	0.36	#	0.32	#	0.30	#	0.21	#	0.23	#	0.23	#	0.18
Hispanic	#	#	0.17	#	0.23	#	0.19	#	0.16	#	0.15	#	0.17	#	0.15
Asian/Pacific Islander, non-Hispanic	493	0.5	1.92	1.0	1.56	2.5	1.49	2.5	1.73	1.8	1.63	-2.7	1.50	-5.6	* 1.67
Other, non-Hispanic	290	-0.3	1.74	0.4	2.24	-0.1	1.79	0.5	1.48	1.2	1.47	0.4	1.64	-2.2	1.34

# Estimate rounds to zero.

! Interpret data with caution; coefficient of variation is between 30 and 50 percent.

\* Indicates a proportion that differs between the NHES and ACS with  $p < .05$  (Student's  $t$  test).

Note: s.e. is standard error. Because of rounding, percentages may not add to 100. NHES and ACS estimates include homeschoolers. The estimates in this table were produced solely for the purpose of evaluating nonresponse bias and are not official statistics.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019; U.S. Department of Commerce, Bureau of the Census, American Community Survey (ACS) of 2018.

**Table C-8. Percentage of students in kindergarten through grade 12, by parents' highest level of education and race/ethnicity: PFI-NHES:2019, PFI-NHES:2016**

Race/ethnicity	Number of children (thousands)	Parents' highest level of education									
		Less than high school		High school		Some college		College graduate		Graduate school	
		Percent	s.e.	Percent	s.e.	Percent	s.e.	Percent	s.e.	Percent	s.e.
PFI-NHES:2019											
White, non-Hispanic	25,944	3.6	0.39	15.7	0.52	24.7	0.56	31.5	0.57	24.4	0.30
Black, non-Hispanic	7,211	10.3	1.27	22.5	1.70	33.4	1.72	22.4	1.45	11.4	0.71
Hispanic	13,404	23.1	0.88	25.5	0.89	24.5	0.88	18.0	0.75	8.9	0.40
Asian/Pacific Islander, non-Hispanic	3,183	13.5	2.58	10.3	1.51	13.3	1.66	30.5	2.21	32.4	1.87
Other, non-Hispanic	3,361	7.6	1.93	17.3	2.21	27.6	1.82	26.8	1.98	20.7	1.49
PFI-NHES:2016											
White, non-Hispanic	26,792	3.1	0.38	17.5	0.65	26.4	0.70	32.4	0.74	20.6	0.34
Black, non-Hispanic	7,301	12.9	1.51	21.8	1.87	32.4	1.49	21.1	1.53	11.9	0.77
Hispanic	12,944	28.0	0.98	24.4	1.15	22.5	0.85	17.1	0.81	8.0	0.45
Asian/Pacific Islander, non-Hispanic	3,267	12.8	3.43	9.7	1.25	13.0	1.94	34.4	2.53	30.1	2.23
Other, non-Hispanic	2,921	4.4	1.13	18.8	3.27	29.7	1.93	27.4	2.50	19.7	1.96
Difference											
White, non-Hispanic	-848	0.5	0.55	-1.8 *	0.83	-1.7	0.90	-0.9	0.93	3.8 *	0.45
Black, non-Hispanic	-90	-2.6	1.98	0.7	2.53	1.1	2.28	1.3	2.11	-0.4	1.04
Hispanic	460	-4.9 *	1.32	1.0	1.45	2.0	1.22	0.9	1.11	1.0	0.60
Asian/Pacific Islander, non-Hispanic	-85	0.7	4.29	0.6	1.96	0.3	2.56	-3.9	3.36	2.3	2.91
Other, non-Hispanic	440	3.2	2.24	-1.5	3.95	-2.1	2.65	-0.6	3.19	1.0	2.47

\* Indicates a proportion that differs between the PFI-NHES:2019 and PFI-NHES:2016 with  $p < .05$  (Student's  $t$  test).

NOTE: s.e. is standard error. Because of rounding, percentages may not add to 100. The estimates in this table were produced solely for the purpose of evaluating nonresponse bias and are not official statistics.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016 and 2019.

**Table C-9. Percentage of children in kindergarten through grade 12 by family structure and parents' highest level of education, and mean number of siblings: PFI-NHES:2019, PFI-NHES:2016**

Family and community characteristics	PFI-NHES:2019		PFI-NHES:2016		Difference	
	Percent	s.e.	Percent	s.e.	Percent	s.e.
Family structure						
Two parents and sibling(s)	62.6	0.51	62.1	0.54	0.6	0.74
Two parents, no siblings	8.7	0.19	8.9	0.21	-0.3	0.29
One parent and sibling(s)	17.6	0.46	17.3	0.51	0.3	0.69
One parent, no sibling	7.5	0.17	7.8	0.31	-0.3	0.35
Other	3.6	0.20	3.8	0.23	-0.2	0.30
Mean number of siblings	1.5	0.01	1.5	0.02	#	0.02
Parents' highest education						
Less than high school	10.3	#	11.2	#	-0.9 *	0.00
High school graduate	18.9	#	19.4	#	-0.5 *	0.00
Some college	25.4	0.36	25.6	0.40	-0.3	0.54
College graduate	26.5	0.36	27.0	0.40	-0.4	0.54
Graduate school	19.0	#	16.9	#	2.1 *	0.00

#Estimate rounds to zero.

\* Indicates a proportion that differs between the PFI-NHES:2019 and PFI-NHES:2016 with  $p < .05$  (Student's  $t$  test).

NOTE: s.e. is standard error. Because of rounding, percentages may not add to 100. The estimates in this table were produced solely for the purpose of evaluating nonresponse bias and are not official statistics.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016 and 2019.

**Table C-10. Percentage of students enrolled in kindergarten through grade 12, by selected characteristics: PFI-NHES:2019, PFI-NHES:2016**

Selected characteristics	PFI-NHES:2019		PFI-NHES:2016		Difference	
	Percent	s.e.	Percent	s.e.	Percent	s.e.
School effort to contact family						
School contacted parents about student's academic performance	51.9	0.57	51.3	0.62	0.7	0.84
School contacted parents about student's behavior	49.7	0.55	49.3	0.69	0.4	0.88
Participation in school activities by a parent or guardian						
Attended a general school meeting (open house), back-to-school night, meeting of parent-teacher organization	88.6	0.37	88.4	0.48	0.1	0.61
Went to a regularly scheduled parent-teacher conference with child's teacher	75.2	0.54	77.6	0.54	-2.5 *	0.76
Attended a school or class event (e.g., play, sports event, science fair) because of child	79.2	0.54	79.2	0.55	0.1	0.77
Acted as a volunteer at the school or served on a committee	43.0	0.62	43.4	0.67	-0.4	0.91
Participated in fundraising for the school	56.5	0.54	59.3	0.63	-2.7 *	0.84
Child has a disability						
Any disability	23.1	0.46	23.3	0.62	-0.2	0.77
Intellectual disability	1.4	0.14	1.8	0.17	-0.4	0.22
Speech impairment	6.9	0.26	7.0	0.37	-0.1	0.45
Serious emotional disturbance	2.9	0.21	3.2	0.24	-0.3	0.32
Deafness or another hearing impairment	0.9	0.10	1.2	0.15	-0.3	0.19
Blindness or another visual impairment	1.2	0.12	1.3	0.12	-0.2	0.17
An orthopedic impairment	1.5	0.11	1.7	0.10	-0.2	0.15
Autism	2.4	0.15	2.3	0.17	0.0	0.22
PDD	0.6	0.09	0.9	0.14	-0.3	0.16
ADHD	10.4	0.33	11.2	0.48	-0.8	0.59
Specific learning disability	5.4	0.26	6.6	0.31	-1.2 *	0.41
Developmental delay	3.5	0.18	3.9	0.28	-0.5	0.34
Traumatic brain injury	0.4	0.08	0.6	0.12	-0.2	0.14
Other health impairment	3.8	0.20	3.5	0.26	0.3	0.33
School type <sup>1</sup>						
Public	86.3	0.43	87.3	0.41	-1.0	0.60
Private, religious	7.3	0.34	6.7	0.27	0.7	0.43
Private, not religious	2.2	0.15	2.4	0.19	-0.3	0.24
Homeschooled, virtual, or other	4.2	0.30	3.6	0.30	0.6	0.42

\* Indicates a proportion that differs between the PFI-NHES:2019 and PFI-NHES:2016 with  $p < .05$  (Student's  $t$  test).

<sup>1</sup>Changes in school type percentages between the PFI-NHES:2016 and PFI-NHES:2019 may be driven by part by changes in the items that ask about school type. In the PFI-NHES:2016, respondents could choose only one of public, private (Catholic), private (other religious), or private (non-religious). In the PFI-NHES:2019, school type was asked in a series of items that allowed the respondent to choose more than one school type.

NOTE: s.e. is standard error. Because of rounding, percentages may not add to 100. The estimates in this table were produced solely for the purpose of evaluating nonresponse bias and are not official statistics.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016 and 2019.

**Table C-11. Homeschooling rate among students ages 5-17: PFI-NHES:2019, PFI-NHES:2016, PFI-NHES:2012, PFI-NHES:2007, PFI-NHES:2003, and PFI-NHES:1999**

Survey	Estimated homeschooling rate		Difference from PFI-NHES:2019 estimated homeschooling rate	
	Percent	s.e.	Percent	s.e.
PFI-NHES:2019	2.8	0.18	†	†
PFI-NHES:2016	3.3	0.23	0.4	0.29
PFI-NHES:2012 (adjusted) <sup>1</sup>	3.4	0.23	0.6 *	0.29
PFI-NHES:2012 (unadjusted) <sup>1</sup>	2.1	0.17	-0.7 *	0.24
PFI-NHES:2007	2.9	0.23	0.1	0.29
PFI-NHES:2003	2.2	0.18	-0.6 *	0.25
PFI-NHES:1999	1.7	0.14	-1.1 *	0.23

\* Indicates a proportion that differs between the PFI-NHES:2019 and the specified prior NHES administration with  $p < .05$  (Student's  $t$  test).

† Not applicable.

<sup>1</sup>In the PFI-NHES:2012, respondents to the PFI-Enrolled who stated that their child was homeschooled were not asked the items necessary to allow the identification of children who do not meet the official NCES definition of homeschoolers. The adjusted 2012 estimate includes PFI-Enrolled respondents who stated that their child was homeschooled, with weights adjusted downward to account for the expected proportion of such children who do not meet the official NCES definition of homeschoolers. The unadjusted 2012 estimate includes only PFI-Homeschooled respondents, which renders the adjustment unnecessary. In the PFI-NHES:2016, the PFI-Enrolled questionnaire was adjusted to allow the identification of children who do not meet the official NCES definition of homeschoolers, and therefore no statistical adjustment was required.

NOTE: s.e. is standard error. The homeschooling rate is the number of homeschooled students ages 5 through 17 divided by the number of enrolled and homeschooled students ages 5 through 17. The definition of homeschoolers excludes students who are homeschooled only due to a temporary illness and students who are in public or private school for more than 25 hours per week. The estimates in this table were produced solely for the purpose of evaluating nonresponse bias and are not official statistics.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 1999, 2003, 2007, 2012, 2016 and 2019.

**Table C-12. Percentage of children from birth through age 6 and not enrolled in school, by household income: ECPP-NHES:2019 and ACS:2018**

Household income	ECPP-NHES:2019		ACS:2018		Difference	
	Percent	s.e.	Percent	s.e.	Percent	s.e.
\$10,000 or less	5.4	#	5.4	0.07	#	0.07
\$10,001 to \$20,000	6.0	#	6.0	0.10	#	0.10
\$20,001 to \$30,000	7.9	#	7.9	0.10	#	0.10
\$30,001 to \$40,000	8.1	#	8.1	0.09	#	0.09
\$40,001 to \$50,000	7.9	#	7.9	0.08	#	0.08
\$50,001 to \$60,000	7.2	#	7.2	0.10	#	0.10
\$60,001 to \$75,000	10.1	#	10.1	0.10	#	0.10
\$75,001 to \$100,000	13.4	#	13.4	0.11	#	0.11
\$100,001 to \$150,000	17.5	#	17.5	0.13	#	0.13
Over \$150,000	16.5	#	16.5	0.13	#	0.13

# Rounds to zero.

NOTE: s.e. is standard error. Because of rounding, percentages may not add to 100. The estimates in this table were produced solely for the purpose of evaluating nonresponse bias and are not official statistics.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019; U.S. Department of Commerce, Bureau of the Census, American Community Survey (ACS) of 2018.

**Table C-13. Percentage of children ages 0 through 6 and not enrolled in school, by household income and race/ethnicity: ECPP-NHES:2019 and ACS:2018**

Race/ethnicity	Number of children (thousands)	Household income															
		Less than \$20,000		\$20,001-\$40,000		\$40,001-\$60,000		\$60,001-\$75,000		\$75,001-\$100,000		\$100,001-\$150,000		Over \$150,000			
		Percent	s.e.	Percent	s.e.	Percent	s.e.	Percent	s.e.	Percent	s.e.	Percent	s.e.	Percent	s.e.		
ECPP-NHES:2019																	
White, non-Hispanic	10,438	7.1	0.29	10.9	0.36	13.9	0.30	10.5	0.28	15.5	0.29	21.2	0.30	20.9	0.35		
Black, non-Hispanic	2,722	26.2	#	23.0	#	15.8	#	8.8	#	9.9	#	9.9	#	6.6	#		
Hispanic	5,437	14.1	#	22.9	#	18.5	#	10.5	#	11.6	#	13.4	#	9.1	#		
Asian/Pacific Islander, non-Hispanic	1,181	2.2	0.64	13.8	2.10	12.6	2.21	9.0	1.70	13.5	1.67	23.1	2.37	25.8	2.21		
Other, non-Hispanic	1,463	11.9	1.88	15.5	2.31	11.7	1.53	9.3	1.55	12.1	1.61	15.8	1.48	23.8	1.88		
ACS:2018																	
White, non-Hispanic	10,667	6.7	0.12	11.1	0.15	13.7	0.16	10.7	0.12	15.5	0.15	21.3	0.20	21.0	0.19		
Black, non-Hispanic	2,722	26.2	0.45	23.0	0.50	15.8	0.39	8.8	0.29	9.9	0.30	9.9	0.31	6.6	0.27		
Hispanic	5,437	14.1	0.27	22.9	0.33	18.5	0.33	10.5	0.27	11.6	0.27	13.4	0.23	9.1	0.22		
Asian/Pacific Islander, non-Hispanic	1,000	5.2	0.35	11.6	0.43	10.3	0.44	7.0	0.34	12.1	0.51	21.2	0.59	32.6	0.58		
Other, non-Hispanic	1,415	12.4	0.46	16.0	0.51	14.3	0.53	8.8	0.38	12.8	0.40	16.2	0.43	19.6	0.45		
Difference																	
White, non-Hispanic	-229	0.4	0.31	-0.2	0.39	0.2	0.34	-0.2	0.30	#	0.33	-0.1	0.36	#	0.40		
Black, non-Hispanic	#	#	0.45	#	0.50	#	0.39	#	0.29	#	0.30	#	0.31	#	0.27		
Hispanic	#	#	0.27	#	0.33	#	0.33	#	0.27	#	0.27	#	0.23	#	0.22		
Asian/Pacific Islander, non-Hispanic	181	-3.0	*	0.73	2.2	2.15	2.3	2.26	1.9	1.73	1.4	1.74	1.9	2.44	-6.7	*	2.29
Other, non-Hispanic	48	-0.4	1.93	-0.5	2.37	-2.7	1.62	0.5	1.59	-0.7	1.66	-0.4	1.55	4.2	*	1.93	

\* Indicates a proportion that differs between the NHES and ACS with  $p < .05$  (Student's  $t$  test).

# Rounds to zero.

NOTE: s.e. is standard error. Because of rounding, percentages may not add to 100. The estimates in this table were produced solely for the purpose of evaluating nonresponse bias and are not official statistics.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2019; U.S. Department of Commerce, Bureau of the Census, American Community Survey (ACS) of 2018.

**Table C-14. Percentage of children ages 0 through 6 not yet in kindergarten, by parents' highest level of education and race/ethnicity: ECPP-NHES:2019, ECPP-NHES:2016**

Race/ethnicity	Number of children (thousands)	Parents' highest level of education									
		Less than high school		High school		Some college		College graduate		Graduate school	
		Percent	s.e.	Percent	s.e.	Percent	s.e.	Percent	s.e.	Percent	s.e.
ECPP-NHES:2019											
White, non-Hispanic	10438	4.2	0.60	14.8	0.67	21.5	0.81	34.9	0.74	24.6	0.45
Black, non-Hispanic	2722	13.0	2.46	25.5	2.31	30.9	2.02	17.6	1.84	13.1	1.44
Hispanic	5437	17.3	1.44	27.3	1.25	26.4	1.37	19.6	1.20	9.3	0.61
Asian/Pacific Islander, non-Hispanic	1181	7.0!	2.80	6.5	1.57	10.1	1.66	35.7	2.49	40.7	2.34
Other, non-Hispanic	1463	5.3!	1.80	15.0	2.16	29.4	2.20	26.4	1.80	24.0	1.80
ECPP-NHES:2016											
White, non-Hispanic	10804	5.2	0.80	15.6	0.64	23.4	0.82	32.7	0.91	23.1	0.48
Black, non-Hispanic	2837	14.2	2.20	21.3	2.07	28.1	2.34	24.9	2.32	11.5	1.41
Hispanic	5420	21.5	1.57	26.1	1.73	24.7	1.36	19.1	1.25	8.6	0.61
Asian/Pacific Islander, non-Hispanic	1011	11.2!	4.29	9.4!	3.27	10.8	2.15	32.2	2.78	36.4	3.08
Other, non-Hispanic	1367	‡	‡	21.8	3.01	29.0	2.69	29.3	2.83	16.0	1.60
Difference											
White, non-Hispanic	-366	-1.0	1.00	-0.8	0.93	-1.9	1.15	2.2	1.17	1.5 *	0.65
Black, non-Hispanic	-114	-1.2	3.30	4.1	3.11	2.8	3.09	-7.4 *	2.96	1.6	2.01
Hispanic	18	-4.2 *	2.13	1.2	2.13	1.7	1.93	0.5	1.73	0.7	0.86
Asian/Pacific Islander, non-Hispanic	170	-4.2	5.13	-2.8	3.63	-0.7	2.72	3.5	3.73	4.3	3.87
Other, non-Hispanic	96	‡	‡	-6.8	3.70	0.3	3.48	-2.9	3.35	8.0 *	2.41

\* Indicates a proportion that differs between the ECPP-NHES:2016 and ECPP-NHES:2019 with  $p < .05$  (Student's  $t$  test).

‡ Reporting standards not met. There were too few cases for a reliable estimate or the coefficient of variation (CV) is 50 percent or higher.

! Interpret data with caution; coefficient of variation is between 30 and 50 percent.

NOTE: s.e. is standard error. Detail may not sum to totals because of rounding. The estimates in this table were produced solely for the purpose of evaluating nonresponse bias and are not official statistics.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016 and 2019.

**Table C-15. Percentage of children ages 0 through 6 not yet in kindergarten by family characteristics, and mean number of siblings: ECPP-NHES:2019, ECPP-NHES:2016**

Family characteristics	ECPP-NHES:2019		ECPP-NHES:2016		Difference	
	Percent	s.e.	Percent	s.e.	Percent	s.e.
Family structure						
Two parents and sibling(s)	58.9	0.77	58.1	0.74	0.8	1.07
Two parents, no siblings	19.3	0.49	18.9	0.53	0.5	0.72
One parent and sibling(s)	11.3	0.58	12.0	0.61	-0.7	0.84
One parent, no sibling	8.1	0.37	8.8	0.47	-0.7	0.59
Other	2.4	0.24	2.3	0.28	0.2	0.37
Mean number of siblings	1.2	0.02	1.2	0.03	0.0	0.03
Parents' highest education						
Less than high school	8.9	#	10.7	#	-1.8 *	#
High school graduate	18.9	#	19.1	#	-0.2 *	#
Some college	23.9	0.44	24.1	0.58	-0.2	0.73
College graduate	28.2	0.44	28.0	0.58	0.2	0.73
Graduate school	20.1	#	18.1	#	2.0 *	#

# Rounds to zero.

\* Indicates a proportion that differs between the ECPP-NHES:2016 and ECPP-NHES:2019 with  $p < .05$  (Student's  $t$  test).

NOTE: s.e. is standard error. Detail may not sum to totals because of rounding. The estimates in this table were produced solely for the purpose of evaluating nonresponse bias and are not official statistics.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016 and 2019.

**Table C-16. Percentage of children ages 0 through 6 not yet in kindergarten participating in different care arrangements, by race/ethnicity: ECPP-NHES:2019, ECPP-NHES:2016**

Child's race/ethnicity	Number of children (thousands)	Type of arrangement					
		Relative care		Nonrelative care		Center- or school-based program	
		Percent	s.e.	Percent	s.e.	Percent	s.e.
ECPP-NHES:2019							
White, non-Hispanic	10438	23.2	0.94	14.7	0.65	40.2	1.09
Black, non-Hispanic	2722	33.2	2.87	11.0	1.67	39.4	2.25
Hispanic	5437	27.9	1.80	10.7	1.09	32.2	1.59
Asian/Pacific Islander, non-Hispanic	1181	24.7	2.53	6.9	1.12	36.9	2.56
Other, non-Hispanic	1463	23.7	2.08	13.8	1.99	37.5	2.80
ECPP-NHES:2016							
White, non-Hispanic	10804	25.6	1.04	16.3	0.73	38.3	0.89
Black, non-Hispanic	2837	33.8	2.73	14.6	2.08	40.3	3.37
Hispanic	5420	26.3	1.67	10.0	1.04	28.3	1.60
Asian/Pacific Islander, non-Hispanic	1011	25.1	3.46	9.2	1.69	36.0	2.76
Other, non-Hispanic	1367	25.7	2.71	13.8	2.58	36.2	3.39
Difference							
White, non-Hispanic	-366	-2.4	1.40	-1.6	0.98	1.9	1.41
Black, non-Hispanic	-114	-0.6	3.96	-3.6	2.67	-0.9	4.05
Hispanic	18	1.6	2.46	0.7	1.51	3.9	2.26
Asian/Pacific Islander, non-Hispanic	170	-0.4	4.29	-2.4	2.02	0.9	3.76
Other, non-Hispanic	96	-2.0	3.41	0.1	3.25	1.3	4.40

NOTE: s.e. is standard error. Center-based programs include nursery schools, preschools, center-based Head Start programs, and prekindergarten. Children with more than one arrangement type are included in multiple categories. The estimates in this table were produced solely for the purpose of evaluating nonresponse bias and are not official statistics.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016 and 2019.

**Table C-17. Percentage of children (ages 0 through 6 not yet in kindergarten) participating in relative, nonrelative, or center- or school-based care who participate in the care arrangement at least once each week, by race/ethnicity: ECPP-NHES:2019, ECPP-NHES:2016**

Child's race/ethnicity	Number of children (thousands)	Type of arrangement					
		Relative care		Nonrelative care		Center- or school-based program	
		Percent	s.e.	Percent	s.e.	Percent	s.e.
ECPP-NHES:2019							
White, non-Hispanic	10438	88.8	2.39	96.6	0.76	99.3	0.17
Black, non-Hispanic	2722	86.9	3.27	77.5	8.81	94.2	2.33
Hispanic	5437	87.8	1.88	85.1	5.42	99.0	0.49
Asian/Pacific Islander, non-Hispanic	1181	78.4	6.48	93.4	4.04	99.2	0.59
Other, non-Hispanic	1463	80.5	4.70	96.7	3.32	98.0	1.06
ECPP-NHES:2016							
White, non-Hispanic	10804	88.5	1.24	95.4	1.29	99.0	0.39
Black, non-Hispanic	2837	91.1	3.32	87.4	5.41	96.2	1.70
Hispanic	5420	93.1	1.39	89.5	4.50	97.4	1.44
Asian/Pacific Islander, non-Hispanic	1011	93.2	2.71	93.3	3.37	99.1	0.76
Other, non-Hispanic	1367	87.1	4.92	92.8	5.30	100.0	#
Difference							
White, non-Hispanic	-366	0.2	2.70	1.2	1.50	0.3	0.43
Black, non-Hispanic	-114	-4.2	4.66	-9.9	10.34	-2.0	2.88
Hispanic	18	-5.2	* 2.34	-4.4	7.05	1.6	1.52
Asian/Pacific Islander, non-Hispanic	170	-14.8	* 7.02	0.1	5.26	0.1	0.96
Other, non-Hispanic	96	-6.7	6.81	4.0	6.25	-2.0	1.06

# Rounds to zero.

\* Indicates a proportion that differs between the ECPP-NHES:2016 and ECPP-NHES:2019 with  $p < .05$  (Student's  $t$  test).

NOTE: s.e. is standard error. Center-based programs include nursery schools, preschools, center-based Head Start programs, and prekindergarten. Children with more than one arrangement type are included in multiple categories. The estimates in this table were produced solely for the purpose of evaluating nonresponse bias and are not official statistics.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016 and 2019.

**Table C-18. Percentage of children ages 0 through 6 not yet in kindergarten participating in center-based programs, by poverty status: ECPP-NHES:2019, ECPP-NHES:2016**

Poverty Status <sup>1</sup>	ECPP-NHES:2019		ECPP-NHES:2016		Difference	
	Percent	s.e.	Percent	s.e.	Percent	s.e.
At or above poverty threshold	38.8	0.75	38.1	0.95	0.7	1.21
Below poverty threshold	32.6	1.97	26.3	1.98	6.3 *	2.79

\* Indicates a proportion that differs between the ECPP-NHES:2016 and ECPP-NHES:2019 with  $p < .05$  (Student's  $t$  test).

<sup>1</sup>Poverty status indicates whether a sample student resided in a household categorized as poor or nonpoor. Thresholds to define poverty are based on weighted averages from 2015 and 2018 Census poverty thresholds. A household is considered poor if a household of a particular size falls under certain income categories. For 2015, poverty is defined as follows by household size: (1) if household size is 2 to 4 and income categories TTLHHINC are 1-2 (less than or equal to \$20,000); or (2) if household size is 5 or 6 and income categories TTLHHINC are 1-3 (less than or equal to \$30,000); or (3) if household size is 7 or 8 and income categories TTLHHINC are 1-4 (less than or equal to \$40,000); or (4) if household size is 9 or more and income categories TTLHHINC are 1-5 (less than or equal to \$50,000). For 2018, poverty is defined as follows by household size: (1) if household size is 2 or 3 and income categories TTLHHINC are 1-2 (less than or equal to \$20,000); or (2) if household size is 4, 5, or 6 and income categories TTLHHINC are 1-3 (less than or equal to \$30,000); or (3) if household size is 7 or 8 and income categories TTLHHINC are 1-4 (less than or equal to \$40,000); or (4) if household size is 9 or more and income categories TTLHHINC are 1-5 (less than or equal to \$50,000).

NOTE: s.e. is standard error. Center-based programs include nursery schools, preschools, center-based Head Start programs, and prekindergarten. Census poverty status categories have been adjusted to align with NHES household income categories. Children with more than one arrangement type are included in multiple categories. The estimates in this table were produced solely for the purpose of evaluating nonresponse bias and are not official statistics.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016 and 2019. U.S. Census Bureau: Poverty Status 2018: <https://www.census.gov/data/tables/time-series/demo/income-poverty/historical-poverty-thresholds.html>

**Table C-19. Percentage of children ages 0 through 6 not yet in kindergarten, by frequency read to per week, letter recognition, and disability status: ECPP-NHES:2019 and ECPP-NHES:2016**

Characteristic	ECPP-NHES:2019		ECPP-NHES:2016		Difference	
	Percent	s.e.	Percent	s.e.	Percent	s.e.
Frequency read to per week						
Not at all	9.3	0.46	10.4	0.67	-1.1	0.81
Once or twice	11.8	0.55	10.7	0.63	1.1	0.83
Three or more times	79.0	0.63	78.9	0.76	0.1	0.99
Child recognizes any letters of the alphabet						
Yes	85.0	0.74	81.0	0.84	4.0 *	1.12
No	15.0	0.74	19.0	0.84	-4.0 *	1.12
Child has a disability						
Any disability	10.5	0.49	9.9	0.56	0.6	0.75
Intellectual disability	0.4!	0.12	0.4	0.09	#	0.14
Speech impairment	6.5	0.39	6.3	0.44	0.1	0.59
Serious emotional disturbance	0.3	0.08	0.4!	0.14	-0.1	0.16
Deafness or another hearing impairment	0.7	0.11	0.8	0.16	-0.1	0.19
Blindness or another visual impairment	0.5	0.11	0.6	0.16	-0.1	0.19
Orthopedic impairment	1.0	0.15	0.9	0.13	0.1	0.20
Autism	1.1	0.15	0.9	0.11	0.2	0.19
PDD	0.2!	0.07	0.1!	0.04	0.1	0.08
ADHD	0.8	0.13	1.1	0.17	-0.3	0.21
Specific learning disability	0.9	0.20	0.7	0.10	0.2	0.22
Developmental delay	3.5	0.28	3.3	0.27	0.2	0.39
Traumatic brain injury	0.2!	0.06	0.2!	0.05	#	0.08
Other health impairment	1.7	0.25	1.5	0.21	0.2	0.32

\* Indicates a proportion that differs between the ECPP-NHES:2016 and ECPP-NHES:2019 with  $p < .05$  (Student's  $t$  test).

# Rounds to zero.

! Interpret data with caution; coefficient of variation is between 30 and 50 percent.

NOTE: s.e. is standard error. Because of rounding, percentages may not add to 100. The estimates in this table were produced solely for the purpose of evaluating nonresponse bias and are not official statistics.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Household Education Surveys Program (NHES) of 2016 and 2019.

## **Appendix D. Screener Nonresponse Interview Adjustment Cells**

**Exhibit D-1. Definitions of column headings for Screener interview adjustment cells table**

Column heading	Definition	Response categories
Percent without high school diploma	ACS percent of persons in block group without a high school diploma (categorized into quartiles)	0=missing for block group; 1=1 <sup>st</sup> quartile; 2=2 <sup>nd</sup> quartile; 3=3 <sup>rd</sup> quartile; 4=4 <sup>th</sup> quartile
Number of adults	Number of adults in the household	0=information missing on sampling frame; 1=1 adult in the household; 2=2 adults in the household; ...
Age	Age of the head of household	0=age information missing on sampling frame; 1=0-17 years; 2=18-24 years; 3=25-34 years; 4=35-44 years; 5=45-54 years; 6=55-64 years; 7=65+ years
Educational attainment	Highest educational attainment of the head of household	0=educational information missing on sampling frame; 1=High school credential; 2=Some college; 3=Bachelor degree; 4=Graduate degree; 5=Less than high school credential
Low Response Score	ACS Low Response Score (LRS) (categorized into quartiles)	0=LRS missing for block group; 1=1 <sup>st</sup> quartile; 2=2 <sup>nd</sup> quartile; 3=3 <sup>rd</sup> quartile; 4=4 <sup>th</sup> quartile
Income	Household income	0=income information missing from sampling frame; 1=under \$50,000; 2=\$50,000 to \$74,999; 3=\$75,000 to \$99,999; 4=\$100,000 to \$124,999; 5=\$125,000 or higher
Percent Black	ACS percent of persons in block group who are Black (categorized into quartiles)	0=missing for block group; 1=1 <sup>st</sup> quartile; 2=2 <sup>nd</sup> quartile; 3=3 <sup>rd</sup> quartile; 4=4 <sup>th</sup> quartile
Home tenure	Whether the address was owned or rented by the household	0=tenure information missing from frame; 1=owned; 2=rented
Dwelling type	Whether the address is a single-family or multi-unit structure	0=dwelling type missing from frame; 1=single-family; 2=multi-unit
Treatment group flag	Assigned NHES:2019 treatment group	0=baseline; 1=targeted mailing; 2=opt-out; 3=no advance and FedEx 2 <sup>nd</sup> ; 4=advance and FedEx 2 <sup>nd</sup> ; 5=campaign and FedEx 2 <sup>nd</sup> ; 6=no advance and FedEx 4 <sup>th</sup> ; 7=advance and FedEx 4 <sup>th</sup> ; 8=campaign and FedEx 4 <sup>th</sup> ; 9=no advance and modeled FedEx; 10=advance and modeled FedEx; 11=campaign and modeled FedEx; 12=\$10 choice plus; 13=\$20 choice plus; 14=modeled mode; 15=paper-only
Race/ethnicity	Race or ethnicity of the head of household	0=race information missing on sampling frame; 1=White; 2=Black; 3=Hispanic; 4=Asian or Pacific Islander; 5=Other
Marital status	Marital status of the head of household	0=marital status information missing on sampling frame; 1=single; 2=married

NOTE: ACS = American Community Survey.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Surveys Program (NHES), 2019.

**Table D-1. Screener nonresponse adjustment cells, NHES:2019**

CHAID cell <sup>1</sup>	Percent without high school diploma	Number of adults	Age	Educational attainment	Low Response Score	Income	Percent Black	Home tenure	Dwelling type	Treatment group flag	Race/ethnicity	Marital status	Estimated response rate <sup>2</sup>
1	1	3,4,5	7	†	†	1,2,3,4,5	1,2,3,4	†	†	†	†	†	84.9
2	1	3,4,5	6	†	†	1,2,3,4,5	1,2,3,4	†	†	†	0,1,2,3,4	†	79.5
3	1	3,4,5	0,2,3,4,5	†	†	1,2,3,4,5	1,2,3,4	†	†	†	†	†	70.8
4	1	2	6	†	†	1,2,3,4,5	1,2,3,4	†	†	†	†	†	77.3
5	1	2	7	0,2,3,4	†	1,2,3,4,5	1,2,3,4	†	†	†	†	†	87.7
6	1	2	7	1,5	†	1,2,3,4,5	1,2,3,4	†	†	†	†	†	83.3
7	1	2	0,2,3,4,5	†	1	1,2,4	1,2,3,4	†	†	†	†	†	68.2
8	1	2	2,5	†	1	3,5	1,2,3,4	†	†	†	†	†	75.1
9	1	2	0,3,4	†	1	3,5	1,2,3,4	†	†	†	†	†	70.6
10	1	2	0,2,3,4,5	0,3,4	0,2,3,4	1,2,3,4,5	1,2,3,4	†	†	†	†	†	68.4
11	1	2	0,2,3,4,5	1,2,5	0,2,3,4	1,2,3,4,5	1,2,3,4	†	†	†	†	†	60.1
12	1	1,6	7	†	†	†	1,2	†	†	†	†	†	79.8
13	1	1,6	7	†	†	†	3,4	†	1,2	†	†	†	73.3
14	1	1,6	6	†	1	1,2,3,4,5	1,2,3,4	†	†	†	†	†	72.5
15	1	1,6	6	†	0,2,3,4	1,2,3,4,5	1,2,3,4	†	†	†	0,1,2,3,4	†	67.1
16	1	1,6	5	†	0,1	1,2,3,4,5	1,2,3,4	†	†	†	†	†	68.5
17	1	1,6	5	†	2,3,4	1,2,3,4,5	1,2,3,4	†	†	†	†	†	62.0
18	1	1,6	2,3,4	†	†	†	1,2,3,4	0,2	†	†	†	†	54.4
19	1	1,6	2,3,4	3,4	†	1,2,3,4,5	1,2,3,4	1	†	†	†	†	66.8
20	1	1	2,3,4	0,1,2,5	†	1,2,3,4,5	1,2,3,4	1	†	†	†	†	60.4
21	1	1	0	†	3,4	†	1,2,3,4	†	†	†	†	†	52.3
22	1	1	0	0,3,4	0,1,2	†	1,2,3,4	†	1,2	†	†	†	64.7
23	1	1	0	1,2,5	0,1,2	1,2,3,4,5	1,2,3,4	†	†	†	†	†	55.9
24	1	0,7,8	†	0,2,3,4	0,1,2	†	1,2,3,4	†	†	†	0,1,2,4	†	65.9
25	1	0,7	†	0,2,3	3,4	†	1,2,3,4	†	†	†	0,1,4	†	52.9

See notes at end of table.

**Table D-1. Screener nonresponse adjustment cells, NHES:2019—continued**

CHAID cell <sup>1</sup>	Percent without high school diploma	Number of adults	Age	Educational attainment	Low Response Score	Income	Percent Black	Home tenure	Dwelling type	Treatment group flag	Race/ethnicity	Marital status	Estimated response rate <sup>2</sup>
26	2	0,3,4,5,6	7	†	†	†	1,2,3,4	†	†	†	†	†	81.4
27	2	2	7	†	†	1,2,3,4,5	1,2	†	†	†	†	†	85.8
28	2	2	7	†	†	1,2,3,4,5	3,4	†	†	†	†	†	81.8
29	2	1	7	†	1	†	1,2,3,4	†	†	†	†	†	79.6
30	2	1	7	†	0,2,3,4	†	1,2,3,4	†	†	†	†	†	73.6
31	2	0,2,3,4,5,6	6	†	†	†	1,2	†	†	†	†	†	78.7
32	2	0,2,3,4,5,6	6	†	†	†	3,4	†	†	†	†	†	71.8
33	2	1,7	6	†	†	1,2,3,4,5	1,2	†	†	†	†	†	69.9
34	2	1,7,8	6	†	†	1,2,3,4,5	3,4	†	†	†	0,1,2,3,4	†	64.3
35	2	1,2,3,4,5,6	5	3,4	†	1,2,3,4,5	1,2,3,4	†	†	†	†	†	69.5
36	2	0,2,3,4,5	5	0,1,2,5	†	†	1,2,3,4	†	†	†	†	†	64.5
37	2	1,6,7	5	0,1,2,5	†	1,2,3,4,5	1,2,3,4	†	†	†	†	†	57.4
38	2	0,1,2,3,4,5,6	2,3,4	†	†	†	1,2,3,4	0,2	†	†	†	†	52.6
39	2	1,6	2,3,4	†	†	1,2,3,4,5	1,2,3,4	1	†	†	†	†	58.5
40	2	0,2,3,4,5	2,3,4	†	0,1	1,2,3,4,5	1,2,3,4	1	†	†	†	†	68.6
41	2	0,2,3,4,5	2,3,4	†	2,3,4	1,2,3,4,5	1,2,3,4	1	†	†	†	†	62.7
42	2	0,1,2,3,4,5	0	†	1	†	1,2,3,4	†	†	†	†	†	64.4
43	2	0,1,2,3,4	0	†	4	†	1,2,3,4	†	†	†	†	†	49.8
44	2	0,1,2,3,4	0	†	0,2,3	1,2,3,4,5	1,2,3,4	1	†	†	†	†	58.1
45	2	0,1,2,3,4	0	†	0,2,3	†	1,2,3,4	0,2	0,2	†	†	†	61.7
46	2	0,1,2,4	0	†	0,2,3	†	1,2,3,4	0,2	1	†	0,1,2,3,4	†	55.1
47	0,3	0,1,2,3,4,5	7	†	†	†	†	0,2	†	†	†	†	66.5
48	0,3	2,3,4,6,7	7	†	†	1,2,3,4,5	†	1	†	7,12,13,14	†	†	86.5
49	0,3	2,3,4,6,7	7	†	†	1,2,3,4,5	†	1	†	0,1,2,3,4,5,6,8,9,10,11,15	†	†	79.5
50	0,3	0,1,5	7	†	†	1,2,3,4,5	0,1,2	1	†	†	†	†	78.9

See notes at end of table.

**Table D-1. Screener nonresponse adjustment cells, NHES:2019—continued**

CHAID cell <sup>1</sup>	Percent without high school diploma	Number of adults	Age	Educational attainment	Low Response Score	Income	Percent Black	Home tenure	Dwelling type	Treatment group flag	Race/ethnicity	Marital status	Estimated response rate <sup>2</sup>
51	3	0,1,5	7	†	†	1,2,3,4,5	3,4	1	†	†	†	†	70.6
52	0,3	1,2,3,4,5,6,7	6	†	†	1,2,3,4,5	†	†	†	†	2,3	†	58.2
53	0,3	0,2,3,4,5	6	†	†	†	†	†	†	†	0,1,4,5	†	74.5
54	0,3	1,6	6	†	†	1,2,3,4,5	†	†	†	†	0,1,4,5	†	65.3
55	0,3	0,1,2,3,4,5,6,7	5	†	†	†	†	0,2	†	†	†	†	50.1
56	0,3	0,2,3,4,5,6,7	5	†	†	1,2,3,4,5	†	1	†	†	†	†	63.5
57	0,3	1,8	5	†	†	1,2,3,4,5	†	1	†	†	†	†	56.5
58	0,3	1,2,3,4,5,6,7	2,3,4	†	†	1,2,3,4,5	†	1	†	†	2,3	†	46.7
59	0,3	0,2,3,4,7	2,3,4	†	†	†	†	1	†	†	0,1,4,5	†	61.5
60	0,3	1,5,6,8	2,3,4	†	†	1,2,3,4,5	†	1	†	†	0,1,4,5	†	56.9
61	0,3	1,2,3,4,5,6,7	2,3,4	†	†	1,2,3,4,5	†	0,2	†	†	1	†	52.0
62	0,3	0,1,2,3,4,5,6,7	2,3,4	†	†	†	1,2,3,4	0,2	†	†	0,2,3,4,5	†	44.9
63	0,3	0,1,2,3,4	0	†	1,2	†	1,2,3,4	1	†	†	†	†	60.1
64	0,3	0,1,2,3,4	0	†	1,2	†	1,2,3,4	0,2	†	†	†	†	60.8
65	0,3	0,1,2,3,4,5	0	†	0,3	1,2,3,4,5	†	†	†	†	†	1,2	50.6
66	0,3	0,1,2,3,4	0	†	0,3	†	†	†	†	†	0,1,2,3,4	0	54.2
67	0,3	0,1,2,3,4,6	0	†	4	†	1,2,3	†	†	†	†	†	50.0
68	3	0,1,2,3,4,5,7	0	†	4	†	4	†	†	†	†	†	48.9
69	4	1,2,3,4,5,6	7	2,3,4	†	1,2,3,4,5	1,2,3,4	†	†	†	†	†	74.7
70	4	1,2,3,4,5,6	7	5	†	1,2,3,4,5	1,2,3,4	†	†	†	†	†	57.7
71	4	1,2,3,4,5,6,8	7	0,1	†	1,2,3,4,5	1,2,3,4	†	†	†	1	†	75.3
72	4	0,1,2,3,4,5,6,7	7	0,1	†	†	1,2,3,4	†	†	†	0,2,3,4,5	†	66.0
73	4	1,2,3,4,5,6,7,8	6	†	†	1,2,3,4,5	1,2,3,4	†	†	†	1	†	66.6
74	4	†	6	†	†	1,2,3,4,5	1,2,3,4	†	†	†	0,2,3,4,5	†	54.8
75	4	1,2,3,4,5,6,7	5	†	†	1,2,3,4,5	1,2,3,4	†	†	†	1	†	58.9

See notes at end of table.

**Table D-1. Screener nonresponse adjustment cells, NHES:2019—continued**

CHAID cell <sup>1</sup>	Percent without high school diploma	Number of adults	Age	Educational attainment	Low Response Score	Income	Percent Black	Home tenure	Dwelling type	Treatment group flag	Race/ethnicity	Marital status	Estimated response rate <sup>2</sup>
76	4	†	5	†	†	†	1,2,3,4	†	†	†	0,2,4,5	†	49.8
77	4	1,2,3,4,5,6,7,8	5	†	†	1,2,3,4,5	1,2,3,4	†	†	†	3	†	42.1
78	4	0,1,2,3,4,5,6,7	3,4	†	†	†	1,2,3,4	0,2	†	†	†	†	44.1
79	4	0,1,2,3,4,5,6,7	3,4	†	†	1,2,3,4,5	1,2,3,4	1	†	†	0,1,4	†	53.9
80	4	1,2,3,4,5,6,7	3,4	†	†	1,2,3,4,5	1,2,3,4	1	†	†	2,3,5	†	44.7
81	4	0,1,2,3,4,5	0,2	†	1,2	†	1,2,3,4	†	†	†	†	†	54.7
82	4	0,1,2,3,4	0,2	†	0,3	†	1,2,3,4	†	†	5,10,12,13,14,15	†	†	52.7
83	4	0,1,2,3,4,5,6	0,2	†	0,3	†	1,2,3,4	†	†	0,1,2,3,4,6,7,8,9,11	†	†	47.1
84	4	0,1,2,3,4,5,6,7	0,2	†	4	†	1,2,3,4	†	†	2,3,4,10,11,12,13,15	†	†	47.9
85	4	0,1,2,3,4,5,6	0,2	†	4	1,2,3,4,5	1,2,3,4	†	†	0,1,5,6,7,8,9,14	†	1,2	39.8
86	4	0,1,2,3,4	0,2	†	4	†	1,2,3,4	†	†	0,1,5,6,7,8,9,14	†	0	43.5

†Not applicable; in these cases, the cells included all values of a particular variable.

<sup>1</sup>CHAID refers to Chi-Squared Automatic Interaction Detection.

<sup>2</sup>The estimated response rate is the number of completed interviews over the estimated number of eligible sampled cases, calculated using the American Association for Public Opinion Research (AAPOR) Response Rate 3 and weighted by the inverse probability of selection.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Surveys Program (NHES), 2019.

## **Appendix E. ECPP Nonresponse Interview Adjustment Cells**

### Exhibit E-1. Definitions of column headings for ECPP nonresponse adjustment cells table

Column heading	Definition	Response categories
Topical mode	Mode of initial topical contact	1 = proceeded directly from web or TQA screener to web topical; 2 = completed web or TQA screener, received web topical mailing; 3 = offered web screener, completed paper screener, and received paper topical; 4 = not offered web screener and completed paper screener
Ineligible or unknown	Number of children reported on the screener who are ineligible for any topical survey, or for whom eligibility status cannot be determined due to missing or inconsistent information	0 = no children; 1 = 1 child; 2 = 2 or more children
Stratum	Race/ethnicity stratum	1 = Black stratum; 2 = Hispanic stratum; 3 = Other stratum
PFI children	Number of PFI-eligible children in the household	0 = no children; 1 = 1 child; ...; 5 = 5 children
Sex	Sex of sampled child	1 = male; 2 = female; 3 = not reported
ECPP children	Number of ECPP-eligible children in the household	0 = no children; 1 = 1 child; ...; 5 = 5 or more children
Age	Age of sampled child (ECPP categories)	0 = 0 years; 1 = 1 year; ...; 5 = 5 or 6 years; 6 = not reported

NOTE: PFI = Parent and Family Involvement in Education. ECPP = Early Childhood Program Participation.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Surveys Program (NHES), 2019.

**Table E-1. ECPP nonresponse adjustment cells, NHES:2019**

CHAID cell <sup>1</sup>	Topical mode	Ineligible or unknown	Stratum	PFI children	Sex	ECPP children	Age	Estimated response rate <sup>2</sup>
1	1	1,2	†	0,1,2,3	†	1,2,3	†	88.4
2	1	0	1	†	†	†	†	91.8
3	1	0	2,3	0,4	†	1,2,3,4,5	†	93.8
4	1	0	2,3	1,2,3	2,3	0,1,2,3,4	0,1,2,3,4,5	97.0
5	1	0	2,3	1,2,3	1	1,4	†	96.4
6	1	0	2,3	1,2,3	1	2,3	0,1,2,3,4,5	92.8
7	2,3,4	†	3	†	†	1,2,3,4	0,2,4,5	71.0
8	2,3,4	†	1,2	†	†	1,2,3,4,5	0,2,4,5	62.3
9	2,3,4	†	†	0	†	1,2,3,4,5	1,3,6	65.3
10	2,3,4	†	†	1,2,3,4	†	1,2,3,4	1,3,6	54.9

†Not applicable; in these cases, the cells included all values of a particular variable.

<sup>1</sup> CHAID refers to Chi-Squared Automatic Interaction Detection.

<sup>2</sup> The estimated response rate is the number of completed interviews over the estimated number of eligible sampled cases, calculated using the American Association for Public Opinion Research (AAPOR) Response Rate 1 and weighted by the inverse probability of selection.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Surveys Program (NHES), 2019.

## **Appendix F. PFI Nonresponse Interview Adjustment Cells**

**Exhibit F-1. Definitions of column headings for PFI nonresponse adjustment cells table**

<b>Column heading</b>	<b>Definition</b>	<b>Response categories</b>
Topical noncontingent incentive	Noncontingent incentive amount at first topical mailing	0 = no topical mailings received; 5 = \$5; 15 = \$15
Enrollment	Reported enrollment of sampled child	1 = homeschooled, 2 = public/private school or preschool; 3 = college; 4 = not in school; 5 = not reported
Stratum	Race/ethnicity stratum	1 = Black stratum; 2 = Hispanic stratum; 3 = Other stratum
Age	Age of sampled child (PFI categories)	1 = 0-4 years; 2 = 5-6 years; 3 = 7-8 years; 4 = 9-10 years; 5 = 11-12 years; 6 = 13-14 years; 7 = 15-16 years, 8 = 17-18 years; 9 = 19-20 years; 10 = not reported
ECPP children	Number of ECPP-eligible children in the household	0 = no children; 1 = 1 child; ...; 5 = 5 or more children
Topical mode	Mode of initial topical contact	1 = proceeded directly from web or TQA screener to web topical; 2 = completed web or TQA screener, received web topical mailing; 3 = offered web screener, completed paper screener, and received paper topical; 4 = not offered web screener and completed paper screener

NOTE: PFI = Parent and Family Involvement in Education. ECPP = Early Childhood Program Participation.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Surveys Program (NHES), 2019.

**Table F-1. PFI nonresponse adjustment cells, NHES:2019**

CHAID cell <sup>1</sup>	Topical noncontingent incentive	Enrollment	Stratum	Age	ECPP children	Topical mode	Estimated response rate <sup>2</sup>
1	0	1,3,4,5	†	†	†	1	84.4
2	0	2	3	2,3,5,6,7,8	†	1,3	94.7
3	0	2	3	1,4,9,10	0,1,2,3	1,3	90.9
4	0	2	1,2	†	0,4	1,3,4	92.2
5	0	2	1,2	1,2,3,4,5,6,7,8,9	1,2,3	1	87.2
6	5	†	†	†	0,1,2,3	4	78.2
7	5	1,2,4,5	†	†	†	2,3	67.9
8	15	†	2,3	†	†	2,3,4	63.4
9	15	1,2,3,5	1	†	0,1,2,3	2,3,4	56.4

†Not applicable; in these cases, the cells included all values of a particular variable.

<sup>1</sup>CHAID refers to Chi-Squared Automatic Interaction Detection.

<sup>2</sup>The estimated response rate is the number of completed interviews over the estimated number of eligible sampled cases, calculated using the American Association for Public Opinion Research (AAPOR) Response Rate 1 and weighted by the inverse probability of selection.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Surveys Program (NHES), 2019.

## **Appendix G. Summary of Weighting and Sample Variance Estimation Variables**

**Exhibit G-1. Summary of weighting and sample variance estimation variables: 1991-2019**

NHES data file	Full sample weight	Computing sampling errors					DEFT (Average Root Design Effect) for approximating sampling errors
		Replication method (SAS, R, Stata, WesVar, SUDAAN, AM <sup>1</sup> )			Taylor series method (SAS, R, Stata, SUDAAN, AM, SPSS Complex Samples Module) <sup>2</sup>		
		Respondent ID	Replicate weights	Jackknife method	Sample design	Nesting variables	
<i>NHES:1991 Early Childhood Education</i>							
Primary file	EWGT	PERSID	EWREPL1 - EWREPL50	JK1	WR	VSTRAT PSU	1.2
Preprimary file	EWGT	PERSID	EWREPL1 - EWREPL50	JK1	WR	VSTRAT PSU	1.2
<i>NHES:1991 Adult Education</i>							
Adult file	AEWT	PERSID	AEREPL1 - AEREPL50	JK1	WR	VSTRAT PSU	2.1 Full Sample 1.5 Participants 1.7 Nonparticipants
Course file <sup>3</sup>	AEWT	CLASID	AEREPL1 - AEREPL50	JK1	WR	VSTRAT PSU	2.0 Black (non-Hispanic)
							1.8 Hispanic 1.7 White (non-Hispanic)
NHES:1993 <i>School Readiness</i>	FWGTO	ENUMID	FWGT1 - FWGT60	JK2	WR	STRATUM PSU	1.6 Other races 1.3

See notes at end of table.

**Exhibit G-1. Summary of weighting and sample variance estimation variables: 1991-2019–  
Continued**

NHES data file	Full sample weight	Computing sampling errors					DEFT (Average Root Design Effect) for approximating sampling errors
		Replication method (SAS, R, Stata, WesVar, SUDAAN, AM <sup>1</sup> )			Taylor series method (SAS, R, Stata, SUDAAN, AM, SPSS Complex Samples Module) <sup>2</sup>		
		Respondent ID	Replicate weights	Jackknife method	Sample design	Nesting variables	
NHES:1993 <i>School Safety &amp; Discipline</i> Parent interviews only	FWGTO	BASMID	FWGT1-FWGT60	JK2	WR	STRATUM PSU	1.4
Parent & Emancipated Youth (EY) interviews	FWGTO (for parents) & PFWGTO (for EY)	BASMID	FWGT1-FWGT60, PFWGT1-PFWGT60	JK2	WR	STRATUM PSU	1.4
Youth interviews (including Emancipated Youth)	FWGTO	ENUMID	FWGT1-FWGT60	JK2	WR	STRATUM PSU	1.5
NHES:1995 <i>Early Childhood Participation Program</i>	EWEIGHT	ENUMID	ERPL1 - ERPL50	JK1	WR	STRATUM PSU	1.2
NHES:1995 <i>Adult Education</i> <sup>4</sup>	AEWEIGHT	BASMID	ARPL1 - ARPL50	JK1	WR	STRATUM PSU	1.3
NHES:1996 <i>Screeners/ Household &amp; Library</i>	FHWT	BASEID	FHWTR1-FHWTR80	JK1	WR	HSTRATUM HPSU	1.1
NHES:1996 <i>Parent PFI/CI</i>	FPWT	BASMID	FPWTR1-FPWTR80	JK1	WR	PSTRATUM PPSU	1.3
NHES:1996 Youth CI	FYWT	BASMID	FYWTR1-FYWTR80	JK1	WR	YSTRATUM YPSU	1.4
NHES:1996 Adult CI	FAWT	BASMID	FAWTR1-FAWTR80	JK1	WR	ASTRATUM APSU	1.2
NHES:1999 Parent Interview	FPWT	BASMID	FPWT1-FPWT80	JK1	WR	PSTRATUM PPSU	1.3
NHES:1999 Youth Interview	FYWT	BASMID	FYWT1-FYWT80	JK1	WR	YSTRATUM YPSU	1.3

See notes at end of table.

**Exhibit G-1. Summary of weighting and sample variance estimation variables: 1991–2019–  
Continued**

NHES data file	Full sample weight	Computing sampling errors					DEFT (Average Root Design Effect) for approximating sampling errors
		Replication method (SAS, R, Stata, WesVar, SUDAAN, AM <sup>1</sup> )			Taylor series method (SAS, R, Stata, SUDAAN, AM, SPSS Complex Samples Module) <sup>2</sup>		
		Respondent ID	Replicate weights	Jackknife method	Sample design	Nesting variables	
NHES:1999 Adult Education Interview	FAWT	BASMID	FAWT1-FAWT80	JK1	WR	ASTRATUM APSU	1.3 Full sample 1.4 Participants 1.5 Black, non-Hispanic
NHES:2001 Early Childhood Program Participation	FEWT	BASMID	FEWT1-FEWT80	JK1	WR	ESTRATUM EPSU	1.2 Full sample 1.3 Black, non-Hispanic
NHES:2001 Before- and After-School Programs and Activities	FSWT	BASMID	FSWT1-FSWT80	JK1	WR	SSTRATUM SPSU	1.3 Full sample 1.4 Black, non-Hispanic
NHES:2001 Adult Education	FAWT	BASMID	FAWT1-FAWT80	JK1	WR	ASTRATUM APSU	1.3
NHES:2003 Parent and Family Involvement in Education	FPWT	BASMID	FPWT1-FPWT80	JK1	WR	PSTRATUM PPSU	1.3 Full sample 1.4 Race/ethnicity subgroups
NHES:2003 Adult Education for Work-Related Reasons	FAWT	BASMID	FAWT1-FAWT80	JK1	WR	ASTRATUM APSU	1.3 Full sample 1.4 Hispanics 1.4 Work-related adult education participants
NHES:2005 Early Childhood Program Participation	FEWT	BASMID	FEWT1-FEWT80	JK1	WR	ESTRATUM EPSU	1.4 Full sample 1.3 Preschoolers
NHES:2005 After-School Programs and Activities	FSWT	BASMID	FSWT1-FSWT80	JK1	WR	SSTRATUM SPSU	1.4 Full sample 1.3 Home schoolers 1.3 White, non-Hispanic 1.5 Black, non-Hispanic

See notes at end of table.

**Exhibit G-1. Summary of weighting and sample variance estimation variables: 1991-2019—  
Continued**

NHES data file	Full sample weight	Computing sampling errors					DEFT (Average Root Design Effect) for approximating sampling errors
		Replication method (SAS, R, Stata, WesVar, SUDAAN, AM <sup>1</sup> )			Taylor series method (SAS, R, Stata, SUDAAN, AM, SPSS Complex Samples Module) <sup>2</sup>		
		Respondent ID	Replicate weights	Jackknife method	Sample design	Nesting variables	
NHES:2005 Adult Education	FAWT	BASMID	FAWT1-FAWT80	JK1	WR	ASTRATUM APSU	1.6 Full sample 1.5 White, non-Hispanic 1.5 Black, non-Hispanic 1.5 Nonparticipants 1.7 Less than high school 1.4 High school diploma/ equiv. 1.4 Bachelors or higher 1.5 Associates degree
NHES:2007 School Readiness	FSWT	BASMID	FSWT1-FSWT80	JK1	WR	RSTRATUM RPSU	1.4 Full sample 1.5 Preschoolers 1.6 Black, non-Hispanic
NHES:2007 Parent and Family Involvement in Education	FPWT	BASMID	FPWT1-FPWT80	JK1	WR	PSTRATUM PPSU	1.4 Full sample 1.5 Elementary schoolers 1.5 Middle schoolers 1.5 High schoolers 1.5 Black, non-Hispanic

See notes at end of table.

**Exhibit G-1. Summary of weighting and sample variance estimation variables: 1991-2019—  
Continued**

NHES data file	Full sample weight	Computing sampling errors					DEFT (Average Root Design Effect) for approximating sampling errors
		Replication method (SAS, R, Stata, WesVar, SUDAAN, AM <sup>1</sup> )			Taylor series method (SAS, R, Stata, SUDAAN, AM, SPSS Complex Samples Module) <sup>2</sup>		
		Respondent ID	Replicate weights	Jackknife method	Sample design	Nesting variables	
NHES:2012 Early Childhood Program Participation	FEWT	BASMID	FEWT1- FEWT80	JK1	WR	ESTRATUM EPSU	1.3 Full sample (1.30256) 1.4 White, non-Hispanic (1.43268) 1.4 Black, non-Hispanic (1.43268) 1.4 Hispanic (1.43268) 2.2 All other, multiple races, non-Hispanic (2.16520) 1.5 Infants (1.52149) 1.5. Preschoolers (1.52149)

See notes at end of table.

**Exhibit G-1. Summary of weighting and sample variance estimation variables: 1991-2019—  
Continued**

NHES data file	Full sample weight	Computing sampling errors					DEFT (Average Root Design Effect) for approximating sampling errors
		Replication method (SAS, R, Stata, WesVar, SUDAAN, AM <sup>1</sup> )			Taylor series method (SAS, R, Stata, SUDAAN, AM, SPSS Complex Samples Module) <sup>2</sup>		
		Respondent ID	Replicate weights	Jackknife method	Sample design	Nesting variables	
NHES:2012 Parent and Family Involvement in Education	FPWT	BASMID	FPWT1-FPWT80	JK1	WR	PSTRATUM PPSU	1.5 Full Sample (1.45932) 1.6 White, non-Hispanic (1.59891) 1.6 Black, non-Hispanic (1.59891) 1.6 Hispanic (1.59891) 2.1 All other, multiple races, non-Hispanic (2.05125) 1.6 Elementary schoolers (1.64958) 1.6 Middle schoolers (1.64958) 1.6 High schoolers (1.64958) 2.8 Homeschoolers (2.75817)

See notes at end of table.

**Exhibit G-1. Summary of weighting and sample variance estimation variables: 1991-2019—  
Continued**

NHES data file	Full sample weight	Computing sampling errors					DEFT (Average Root Design Effect) for approximating sampling errors
		Replication method (SAS, R, Stata, WesVar, SUDAAN, AM <sup>1</sup> )			Taylor series method (SAS, R, Stata, SUDAAN, AM, SPSS Complex Samples Module) <sup>2</sup>		
		Respondent ID	Replicate weights	Jackknife method	Sample design	Nesting variables	
NHES:2016 Early Childhood Program Participation	FEWT	BASMID	FEWT1- FEWT80	JK1	WR	ESTRATUM EPSU	1.4 Full sample (1.375357) 1.4 Infants (1.433905) 1.2 Preschoolers (1.175756) 1.5 White, non-Hispanic (1.480576) 1.5 Black, non-Hispanic (1.480576) 1.5 Hispanic (1.480576) 1.4 All other, multiple races, non-Hispanic (1.402667)

See notes at end of table.

**Exhibit G-1. Summary of weighting and sample variance estimation variables: 1991–2019—  
Continued**

NHES data file	Full sample weight	Computing sampling errors					DEFT (Average Root Design Effect) for approximating sampling errors
		Replication method (SAS, R, Stata, WesVar, SUDAAN, AM <sup>1</sup> )			Taylor series method (SAS, R, Stata, SUDAAN, AM, SPSS Complex Samples Module) <sup>2</sup>		
		Respondent ID	Replicate weights	Jackknife method	Sample design	Nesting variables	
NHES:2016 Parent and Family Involvement in Education	FPWT	BASMID	FPWT1-FPWT80	JK1	WR	PSTRATUM PPSU	1.6 Full sample (1.594158) 1.5 Elementary schoolers (1.497959) 1.5 Middle schoolers (1.497959) 1.5 High schoolers (1.497959) 1.8 Homeschoolers (1.779204) 1.6 White, non-Hispanic (1.645322) 1.6 Black, non-Hispanic (1.645322) 1.6 Hispanic (1.645322) 1.6 All other, multiple races, non-Hispanic (1.568250)

See notes at end of table.

**Exhibit G-1. Summary of weighting and sample variance estimation variables: 1991-2019—  
Continued**

NHES data file	Full sample weight	Computing sampling errors					DEFT (Average Root Design Effect) for approximating sampling errors
		Replication method (SAS, R, Stata, WesVar, SUDAAN, AM <sup>1</sup> )			Taylor series method (SAS, R, Stata, SUDAAN, AM, SPSS Complex Samples Module) <sup>2</sup>		
		Respondent ID	Replicate weights	Jackknife method	Sample design	Nesting variables	
NHES:2016 Adult Training and Education Survey	FAWT	BASMID	FAWT1-FAWT80	JK1	WR	ASTRATUM APSU	1.5 Full sample (1.464392) 1.6 White, non-Hispanic (1.542901) 1.6 Black, non-Hispanic (1.542901) 1.6 Hispanic (1.542901) 1.6 All other, multiple races, non-Hispanic (1.542901)
NHES:2019 Early Childhood Program Participation	FEWT	BASMID	FEWT1- FEWT80	JK1	WR	ESTRATUM EPSU	1.4 Full sample (1.387913)
NHES:2019 Parent and Family Involvement in Education	FPWT	BASMID	FPWT1- FPWT80	JK1	WR	PSTRATUM PPSU	1.6 Full sample (1.600118)

<sup>1</sup>WesVar Complex Samples software, version 5.1, is available from Westat ([www.westat.com](http://www.westat.com)). Information on SUDAAN can be obtained at [www.rti.org](http://www.rti.org). Information on Stata can be obtained at [www.stata.com](http://www.stata.com). Information on AM can be obtained at [www.am.air.org](http://www.am.air.org). Information on SAS can be obtained at [www.sas.com](http://www.sas.com). Information on the R survey package can be obtained at <https://cran.r-project.org/web/packages/survey/survey.pdf>.

<sup>2</sup>Information on SUDAAN can be obtained at [www.rti.org](http://www.rti.org). Information on Stata can be obtained at [www.stata.com](http://www.stata.com). Information on SAS can be obtained at [www.sas.com](http://www.sas.com). Information on AM can be obtained at [www.am.air.org](http://www.am.air.org). Information on SPSS Complex Samples can be obtained at <https://www.ibm.com/us-en/marketplace/spss-complex-samples>. Information on the R survey package can be obtained at <https://cran.r-project.org/web/packages/survey/survey.pdf>.

<sup>3</sup>Unlike the NHES:1995 Adult Education data file, no course weights are provided in the NHES:1991 course file. The full sample weight and variables for computing sampling errors are provided in the course file for making adult-level estimates. Information as to the total number of courses that adults took is also available, and procedures similar to those described in the NHES:1995 *Adult Education Data File User's Manual* (Collins et al. 1996) could be used to create weights for making course-related estimates. However, it is important to note that the course information collected in the NHES:1991 pertains to the four most recent courses taken, rather than a random sample of courses as was the case in the NHES:1995.

<sup>4</sup>This data file contains weights for making “person-course” estimates pertaining to work-related and other formal structured courses. A simple way of doing this is to create a new variable that is the product of the course weight and the variable of interest. The standard weight and variance estimation methods are then applied to the new variable. The weight variables are called WRWGT, for adjusting for the courses adults took in work-related classes, and SAWGT, for adjusting for personal development courses. Weights are required for these types of courses because course-related data were collected only for a random subsample of courses. See the NHES:1995 *Adult Education Data File User's Manual* (Collins et al. 1996) for more details.

Source: U.S. Department of Education, National Center for Education Statistics, National Household Education Surveys Program (NHES), 1991-2019.

## Appendix H. SAS Code for Derived Variables

\*The SAS code for the ECPP and PFI derived variables is below, with the exception of non-sampled household member variables; linked variables (e.g. ZIP18PO2, ZIPBLHI2, ZIPLOCL) that used the respondent's ZIP code to extract data from the 2014-2018 American Community Survey (ACS) and the 2010 Census of Population Summary File 1; and school characteristic variables that were derived using source variables from the Common Core of Data or the Private School Universe data files (e.g., S19TYPE, SCHART).

### \*\*\*\*Child Characteristic Variables (ECPP & PFI)\*\*\*\*

#### \*\*\*\*AGE2018\*\*\*\*

#### \*\*\*\* Child's Age as of Dec 31, 2018 \*\*\*\*

AGE2018 = 2018 - CDOBYY;

IF CDOBYY = 2019 THEN AGE2018 = 0;

#### \*\*\*\*RACEETH\*\*\*\*

#### \*\*\*\*Race and ethnicity of child\*\*\*\*

IF CHISPAN gt 1 THEN RACEETH = 3;

ELSE IF CWHITE = 1 & CBLACK = 2 & CAMIND = 2 & CASIAN = 2 & CPACI = 2 THEN RACEETH = 1;

ELSE IF CBLACK= 1 & CWHITE = 2 & CAMIND = 2 & CASIAN = 2 & CPACI = 2 THEN RACEETH = 2;

ELSE IF (CASIAN = 1 OR CPACI = 1) & CWHITE = 2 & CBLACK = 2 & CAMIND = 2 THEN RACEETH = 4;

ELSE RACEETH = 5;

#### \*\*\*\*RACEETH2\*\*\*\*

#### \*\*\*\*Detailed race and ethnicity of child\*\*\*\*

IF CHISPAN=2 THEN RACEETH2 = 3;

ELSE IF CHISPAN=3 THEN RACEETH2 = 4;

ELSE IF CHISPAN=4 THEN RACEETH2 = 5;

ELSE IF CHISPAN=5 THEN RACEETH2 = 6;

ELSE IF CWHITE = 1 & CBLACK = 2 & CAMIND = 2 & CASIAN = 2 & CPACI = 2 THEN RACEETH2 = 1;  
ELSE IF CBLACK= 1 & CWHITE = 2 & CAMIND = 2 & CASIAN = 2 & CPACI = 2 THEN RACEETH2 = 2;  
ELSE IF CASIAN = 1 & CPACI =2 & CWHITE = 2 & CBLACK = 2 & CAMIND = 2 THEN RACEETH2 = 7;  
ELSE IF CPACI = 1 & CASIAN=2 & CWHITE = 2 & CBLACK = 2 & CAMIND = 2 THEN RACEETH2 = 8;  
ELSE IF CAMIND=1 & CWHITE = 2 & CBLACK = 2 & CASIAN = 2 & CPACI = 2 THEN RACEETH2 = 9;  
ELSE RACEETH2 = 10;

**\*\*\*\*DSBLTY\*\*\*\***

**\*\*\*\*Child currently has disability\*\*\*\***

IF HDLEARNX = 1 OR HDINTDIS = 1 OR HDSPEECHX = 1 OR HDDISTRBX = 1 OR HDDEAFIMX = 1 OR  
HDBLINDX = 1 OR HDORTHOX = 1 OR HDDELAYX = 1 OR HDTRBRAIN = 1 OR HDOTHERX = 1 OR  
HDAUTISMX = 1 OR HDPDDX = 1 OR HDADDX = 1 THEN DSBLTY = 1;  
ELSE DSBLTY = 2;

**\*\*\*\*Household and Family Variables (ECP & PFI)\*\*\*\***

**\*\*\*\*PARIEDUC\*\*\*\***

**\*\*\*\*Educational attainment of child's first parent or guardian\*\*\*\***

IF P1EDUC >= 9 THEN PARIEDUC = 5;  
ELSE IF P1EDUC IN (7,8) THEN PARIEDUC = 4;  
ELSE IF P1EDUC IN (4,5,6) THEN PARIEDUC = 3;  
ELSE IF P1EDUC = 3 THEN PARIEDUC = 2;  
ELSE IF P1EDUC IN (1,2) THEN PARIEDUC = 1;

**\*\*\*\*PARIEMPL\*\*\*\***

**\*\*\*\*Work status of child's first parent or guardian\*\*\*\***

IF P1EMPL IN (1,2) THEN DO;  
IF PIHRWK GE 35 THEN PARIEMPL = 1;  
ELSE IF 0 LT PIHRWK LT 35 THEN PARIEMPL = 2;

END;

ELSE IF P1EMPL = 3 THEN DO;

IF P1LKWRK = 1 THEN PARIEMPL = 3;

ELSE IF P1LKWRK = 2 THEN PARIEMPL = 4;

END;

ELSE IF P1EMPL IN (4,5,6,7) THEN PARIEMPL = 4;

**\*\*\*\*PAR2EDUC\*\*\*\***

**\*\*\*\*Educational attainment of child's second parent or guardian\*\*\*\***

IF P2GUARD = 2 THEN PAR2EDUC = -1;

ELSE IF P2EDUC >= 9 THEN PAR2EDUC = 5;

ELSE IF P2EDUC IN (7,8) THEN PAR2EDUC = 4;

ELSE IF P2EDUC IN (4,5,6) THEN PAR2EDUC = 3;

ELSE IF P2EDUC = 3 THEN PAR2EDUC = 2;

ELSE IF P2EDUC IN (1,2) THEN PAR2EDUC = 1;

**\*\*\*\*PAR2EMPL\*\*\*\***

**\*\*\*\*Work status of child's first parent or guardian\*\*\*\***

IF P2GUARD = 2 THEN PAR2EMPL = -1;

ELSE IF P2EMPL IN (1,2) THEN DO;

IF P2HRSWK GE 35 THEN PAR2EMPL = 1;

ELSE IF 0 LT P2HRSWK LT 35 THEN PAR2EMPL = 2;

END;

ELSE IF P2EMPL = 3 THEN DO;

IF P2LKWRK = 1 THEN PAR2EMPL = 3;

ELSE IF P2LKWRK = 2 THEN PAR2EMPL = 4;

END;

ELSE IF P2EMPL IN (4,5,6,7) THEN PAR2EMPL = 4;

**\*\*\*\*PAR1FTFY\*\*\*\***

**\*\*\*\*First parent or guardian works full time\*\*\*\***

IF PAR1EMPL = 1 AND P1MTHSWRK = 12 THEN PAR1FTFY = 1;

ELSE IF PAR1EMPL = 1 AND 0 LE P1MTHSWRK LE 11 THEN PAR1FTFY = 2;

ELSE IF PAR1EMPL = 2 THEN PAR1FTFY = 2;

ELSE IF PAR1EMPL IN (3,4) AND P1MTHSWRK GT 0 THEN PAR1FTFY = 2;

ELSE IF PAR1EMPL IN (3,4) THEN PAR1FTFY = 3;

**\*\*\*\*PAR2FTFY\*\*\*\***

**\*\*\*\*Second parent or guardian works full time\*\*\*\***

IF PAR2EMPL = -1 THEN PAR2FTFY = -1;

ELSE IF PAR2EMPL = 1 AND P2MTHSWRK = 12 THEN PAR2FTFY = 1;

ELSE IF PAR2EMPL = 1 AND 0 LE P2MTHSWRK LE 11 THEN PAR2FTFY = 2;

ELSE IF PAR2EMPL = 2 THEN PAR2FTFY = 2;

ELSE IF PAR2EMPL IN (3,4) AND P2MTHSWRK GT 0 THEN PAR2FTFY = 2;

ELSE IF PAR2EMPL IN (3,4) THEN PAR2FTFY = 3;

**\*\*\*\*PAR1TYPE\*\*\*\***

**\*\*\*\*Specific relationship of first parent or guardian to child\*\*\*\***

IF P1REL IN (1,2) THEN DO;

IF P1SEX = 2 THEN PAR1TYPE = 1;

ELSE IF P1SEX = 1 THEN PAR1TYPE = 2;

END;

ELSE IF P1REL IN (3,4) THEN DO;

IF P1SEX = 2 THEN PAR1TYPE = 3;

ELSE IF P1SEX = 1 THEN PAR1TYPE = 4;

END;

ELSE IF P1REL IN (5,6) THEN DO;

IF P1SEX = 2 THEN PAR1TYPE = 5;

ELSE IF P1SEX = 1 THEN PAR1TYPE = 6;

END;

**\*\*\*\*PAR2TYPE\*\*\*\***

**\*\*\*\*Specific relationship of second parent or guardian to child\*\*\*\***

IF P2GUARD = 2 THEN PAR2TYPE = -1;

ELSE IF P2REL IN (1,2) THEN DO;

IF P2SEX = 2 THEN PAR2TYPE = 1;

ELSE IF P2SEX = 1 THEN PAR2TYPE = 2;

END;

ELSE IF P2REL IN (3,4) THEN DO;

IF P2SEX = 2 THEN PAR2TYPE = 3;

ELSE IF P2SEX = 1 THEN PAR2TYPE = 4;

END;

ELSE IF P2REL IN (5,6) THEN DO;

IF P2SEX = 2 THEN PAR2TYPE = 5;

ELSE IF P2SEX = 1 THEN PAR2TYPE = 6;

END;

**\*\*\*\*HHPARN19X\*\*\*\***

**\*\*\*\*Parental structure of household\*\*\*\***

IF PAR1TYPE IN (1,2,3,4) AND PAR2TYPE IN (1,2,3,4) THEN HHPARN19X = 1;

ELSE IF PAR1TYPE IN (1,3) OR PAR2TYPE IN (1,3) THEN HHPARN19X = 2;

ELSE IF PAR1TYPE IN (2,4) OR PAR2TYPE IN (2,4) THEN HHPARN19X = 3;

ELSE HHPARN19X = 4;

\*Note: The derived variables PAR1TYPE and PAR2TYPE were used in the creation of HHPARN19X.

\*\*\*\*HHPARN19\_BRD\*\*\*\*

\*\*\*\*Household has second parent or guardian\*\*\*\*

IF P2GUARD = 1 THEN HHPARN19\_BRD = 1;

ELSE HHPARN19\_BRD = 2;

\*\*\*\*NUMSIBSX\*\*\*\*

\*\*\*\*Number of child's siblings\*\*\*\*

NUMSIBSX = HHBROSEX+HHSISSEX;

\*\*\*\*FAMILY19X\*\*\*\*

\*\*\*\*Family type with parents\*\*\*\*

IF (HHPARN19X = 1 AND NUMSIBSX > 0) THEN FAMILY19X = 1;

ELSE IF (HHPARN19X = 1 AND NUMSIBSX = 0) THEN FAMILY19X = 2;

ELSE IF (HHPARN19X IN (2,3) AND NUMSIBSX > 0) THEN FAMILY19X = 3;

ELSE IF (HHPARN19X IN (2,3) AND NUMSIBSX = 0) THEN FAMILY19X = 4;

ELSE FAMILY19X = 5;

\*\*\*\*FAMILY19\_BRD\*\*\*\*

\*\*\*\*Family type with adults\*\*\*\*

IF (P2GUARD = 1 AND NUMSIBSX > 0) THEN FAMILY19\_BRD = 1;

ELSE IF (P2GUARD = 1 AND NUMSIBSX = 0) THEN FAMILY19\_BRD = 2;

ELSE IF (P2GUARD NE 1 AND NUMSIBSX > 0) THEN FAMILY19\_BRD = 3;

ELSE IF (P2GUARD NE 1 AND NUMSIBSX = 0) THEN FAMILY19\_BRD = 4;

\*\*\*\*HHUNDR6X\*\*\*\*

\*\*\*\*Number of children younger than age 6\*\*\*\*

HHUNDR6X=0;

IF 0 LE AGE2018 LT 6 THEN HHUNDR6X+1;

IF 0 LE CHAGE1 LT 6 THEN HHUNDR6X+1;

IF 0 LE CHAGE2 LT 6 THEN HHUNDR6X+1;

IF 0 LE CHAGE3 LT 6 THEN HHUNDR6X+1;

IF 0 LE CHAGE4 LT 6 THEN HHUNDR6X+1;

**\*\*\*\*HHUNDR10X\*\*\*\***

**\*\*\*\*Number of children younger than age 10\*\*\*\***

HHUNDR10X=0;

IF 0 LE AGE2018 LT 10 THEN HHUNDR10X+1;

IF 0 LE CHAGE1 LT 10 THEN HHUNDR10X+1;

IF 0 LE CHAGE2 LT 10 THEN HHUNDR10X+1;

IF 0 LE CHAGE3 LT 10 THEN HHUNDR10X+1;

IF 0 LE CHAGE4 LT 10 THEN HHUNDR10X+1;

**\*\*\*\*HHUNDR16X\*\*\*\***

**\*\*\*\*Number of children younger than age 16\*\*\*\***

HHUNDR16X=0;

IF 0 LE AGE2018 LT 16 THEN HHUNDR16X+1;

IF 0 LE CHAGE1 LT 16 THEN HHUNDR16X+1;

IF 0 LE CHAGE2 LT 16 THEN HHUNDR16X+1;

IF 0 LE CHAGE3 LT 16 THEN HHUNDR16X+1;

IF 0 LE CHAGE4 LT 16 THEN HHUNDR16X+1;

**\*\*\*\*HHUNDR18X\*\*\*\***

**\*\*\*\*Number of children younger than age 18\*\*\*\***

HHUNDR18X=0;

IF 0 LE AGE2018 LT 18 THEN HHUNDR18X+1;

IF 0 LE CHAGE1 LT 18 THEN HHUNDR18X+1;

IF 0 LE CHAGE2 LT 18 THEN HHUNDR18X+1;

IF 0 LE CHAGE3 LT 18 THEN HHUNDR18X+1;

IF 0 LE CHAGE4 LT 18 THEN HHUNDR18X+1;

Note: The derived variables AGE2018 and CHAGE1--CHAGE4 were used in the creation of HHUNDR6X, HHUNDR10X, HHUNDR16X, and HHUNDR18X.

**\*\*\*\*HHUNID\*\*\*\***

**\*\*\*\*Other household member, not identified\*\*\*\***

IF HHTOTALXX > (SUM (HHBROX, HHSISSX, HHMOM, HHDAD, HHAUNTSX, HHUNCLX, HHGMASX, HHGPASX, HHCSNSX, HHPRTNRSX, HHORELSX, HHONRELSX, 1)) THEN HHUNID = HHTOTALXX - (SUM (HHBROX, HHSISSX, HHMOM, HHDAD, HHAUNTSX, HHUNCLX, HHGMASX, HHGPASX, HHCSNSX, HHPRTNRSX, HHORELSX, HHONRELSX, 1));

ELSE HHUNID = 0;

**\*\*\*\*LANGUAGEX\*\*\*\***

**\*\*\*\*English spoken most by parents\*\*\*\***

IF (PIFRLNG IN (1,3,5) OR PISPEAK IN (1,3,5)) AND (P2GUARD = 2 OR P2FRLNG IN (1,3,5) OR P2SPEAK IN (1,3,5)) THEN LANGUAGEX = 1;

ELSE IF PIFRLNG IN (1,3,5) OR PISPEAK IN (1,3,5) OR P2FRLNG IN (1,3,5) OR P2SPEAK IN (1,3,5) THEN LANGUAGEX = 2;

ELSE IF PISPEAK IN (2,4) AND (P2GUARD = 2 OR P2SPEAK IN (2,4)) THEN LANGUAGEX = 3;

**\*\*\*\*PARGRADEX\*\*\*\***

**\*\*\*\*Parent/guardian highest education\*\*\*\***

IF PAR1EDUC IN (1,2,3,4,5) AND PAR2EDUC IN (1,2,3,4,5) THEN PARGRADEX = MAX(PAR1EDUC, PAR2EDUC);

ELSE PARGRADEX = PAR1EDUC;

Note: The derived variables PAR1EDUC and PAR2EDUC were used in the creation of PARGRADEX.

**\*\*\*\*PAR1MARST\*\*\*\***

**\*\*\*\*First parent or guardian marital status\*\*\*\***

IF P1MRSTA = 1 THEN PAR1MARST = 1;  
ELSE IF P1BFGF = 1 THEN PAR1MARST = 2;  
ELSE IF P1MRSTA = 4 AND P1BFGF NE 1 THEN PAR1MARST = 3;  
ELSE IF P1MRSTA = 3 AND P1BFGF NE 1 THEN PAR1MARST = 4;  
ELSE IF P1MRSTA = 2 AND P1BFGF NE 1 THEN PAR1MARST = 5;  
ELSE IF P1MRSTA = 5 AND P1BFGF NE 1 THEN PAR1MARST = 6;

**\*\*\*\*PAR2MARST\*\*\*\***

**\*\*\*\*Second parent or guardian marital status\*\*\*\***

IF P2GUARD = 2 THEN PAR2MARST = -1;  
ELSE IF P2MRSTA = 1 THEN PAR2MARST = 1;  
ELSE IF P2BFGF = 1 THEN PAR2MARST = 2;  
ELSE IF P2MRSTA = 4 AND P2BFGF NE 1 THEN PAR2MARST = 3;  
ELSE IF P2MRSTA = 3 AND P2BFGF NE 1 THEN PAR2MARST = 4;  
ELSE IF P2MRSTA = 2 AND P2BFGF NE 1 THEN PAR2MARST = 5;  
ELSE IF P2MRSTA = 5 AND P2BFGF NE 1 THEN PAR2MARST = 6;

**\*\*\*\*PAR1FSTGN\*\*\*\***

**\*\*\*\*First parent or guardian first generation immigrant status\*\*\*\***

IF P1PLCBRTH > 2 THEN DO;  
IF P1AGEMV > 17 THEN PAR1FSTGN = 1;  
ELSE PAR1FSTGN = 2;  
END;  
ELSE PAR1FSTGN = 3;

**\*\*\*\*PAR2FSTGN\*\*\*\***

**\*\*\*\*Second parent or guardian first generation immigrant status\*\*\*\***

IF P2GUARD = 2 THEN PAR2FSTGN = -1;  
ELSE IF P2PLCBRTH > 2 THEN DO;  
IF P2AGEMV > 17 THEN PAR2FSTGN = 1;  
ELSE PAR2FSTGN = 2;  
END;  
ELSE PAR2FSTGN = 3;

**\*\*\*\*INTACC\*\*\*\***

**\*\*\*\*Household has internet access\*\*\*\***

IF HVINTCOM = 1 AND HVINTSPHO = 1 THEN INTACC = 1;  
ELSE IF HVINTCOM = 1 AND HVINTSPHO = 2 THEN INTACC = 2;  
ELSE IF HVINTSPHO = 1 AND HVINTCOM = 2 THEN INTACC = 3;  
ELSE IF HVINTSPHO = 2 AND HVINTCOM = 2 THEN INTACC = 4;

**\*\*\*\*Child Care Variables (ECP only)\*\*\*\***

**\*\*\*\*ANYCAREX\*\*\*\***

**\*\*\*\*Child participates in any nonparental care or program arrangements\*\*\*\***

IF RCNOW = 1 OR NCNOW = 1 OR CPNNOWX = 1 THEN ANYCAREX = 1;  
ELSE ANYCAREX = 2;

**\*\*\*\*ANYCARE2X\*\*\*\***

**\*\*\*\*Child has nonparental care at least once a week\*\*\*\***

IF RCWEEK=1 OR NCWEEK=1 OR CPWEEKX=1 THEN ANYCARE2X=1;  
ELSE ANYCARE2X=2;

**\*\*\*\*CAREHOURX\*\*\*\***

**\*\*\*\*Total hours a week child is in nonparental care\*\*\*\***

LENGTH CAREHOURX 3;

IF RCHRS < 0 AND RCTLHR<0 THEN TRCHRS = 0;  
ELSE if RCTLHR gt 0 then TRCHRS = SUM(RCHRS, RCTLHR);  
ELSE if RCHRS>0 then TRCHRS=RCHRS;  
IF NCHRS < 0 AND NCTLHR<0 THEN TNCHRS = 0;  
ELSE if NCTLHR gt 0 then TNCHRS = SUM(NCHRS, NCTLHR);  
ELSE if NCHRS gt 0 then TNCHRS=NCHRS;  
IF CPHRS < 0 AND CPTLHR<0 THEN TCPHRS = 0;  
ELSE if CPTLHR gt 0 then TCPHRS = SUM(CPHRS, CPTLHR);  
ELSE if CPHRS gt 0 then TCPHRS=CPHRS;  
CAREHOURX = SUM(TRCHRS, TNCHRS, TCPHRS);

**\*\*\*\*CPARRNEWX\*\*\*\***

**\*\*\*\*Number of center-based programs at least once a week\*\*\*\***

IF CPWEEKX = 1 AND CPOTHC = 1 THEN CPARRNEWX = 2;  
ELSE IF CPWEEKX = 1 THEN CPARRNEWX = 1;  
ELSE CPARRNEWX = 0;

**\*\*\*\*NCARRNEWX\*\*\*\***

**\*\*\*\*Number of nonrelative arrangements at least once a week\*\*\*\***

IF NCWEEK = 1 AND NCOTHC = 1 THEN NCARRNEWX = 2;  
ELSE IF NCWEEK = 1 THEN NCARRNEWX = 1;  
ELSE NCARRNEWX = 0;

**\*\*\*\*RCARRNEWX\*\*\*\***

**\*\*\*\*-Number of relative care arrangements at least once a week\*\*\*\***

IF RCWEEK = 1 AND RCOTHC = 1 THEN RCARRNEWX = 2;  
ELSE IF RCWEEK = 1 THEN RCARRNEWX = 1;  
ELSE RCARRNEWX = 0;

**\*\*\*\*MOSTHRX\*\*\*\***

**\*\*\*\*Care arrangement in which the child spends the most hours per week\*\*\*\***

RELNUM = 0;

IF RCWEEK = 1 THEN RELNUM=1;

NRELNUM = 0;

IF NCWEEK = 1 THEN NRELNUM=1;

CENTNUM = 0;

IF CPWEEKX = 1 THEN CENTNUM=1;

NUMCARE = SUM(RELANUM,NRELNUM,CENTNUM);

IF NUMCARE = 0 THEN MOSTHRX = -1;

ELSE IF NUMCARE = 1 THEN DO;

IF RCWEEK = 1 & RCPLACE IN (1,3) THEN MOSTHRX = 1;

ELSE IF RCWEEK = 1 & RCPLACE = 2 THEN MOSTHRX = 2;

IF NCWEEK = 1 & NCPLACE IN (1,3) THEN MOSTHRX = 3;

ELSE IF NCWEEK = 1 & NCPLACE = 2 THEN MOSTHRX = 4;

IF CPWEEKX = 1 THEN MOSTHRX = 5;

END;

ELSE DO;

X = MAX(RCHRS, NCHRS, CPHRS);

IF X > 0 THEN DO;

FOUNDIT = 0;

ARRAY SAMENUM (3) RCHRS NCHRS CPHRS;

DO i = 1 TO 3;

IF SAMENUM(i) = X THEN FOUNDIT = FOUNDIT + 1;

END;

```
IF FOUNDIT > 1 THEN MOSTHRX = 6;
ELSE IF X = RCHRS & RCPLACE IN(1,3) THEN MOSTHRX=1;
ELSE IF X = RCHRS & RCPLACE = 2 THEN MOSTHRX=2;
ELSE IF X = NCHRS & NCPLACE IN(1,3) THEN MOSTHRX=3;
ELSE IF X = NCHRS & NCPLACE = 2 THEN MOSTHRX=4;
ELSE IF X = CPHRS THEN MOSTHRX = 5;
END;
END;
```

## **Appendix I. Changes Across Cycles For Homeschooling Estimates**

The exhibit below summarizes key features of the collection and analysis of homeschooling estimates in NHES over the six time points for which NCES has published homeschooling data. Rows in blue represent characteristics that are different across years. Rows in orange represent characteristics that have stayed the same across years.

**Exhibit I-1. Detail for the collection and report of homeschooling estimates from 1999 to 2019 in the National Household Education Surveys program**

	1999, 2003, and 2007	2012	2016	2019
Estimated percentage of school-aged students who were homeschooled	1.7 percent, 2.2 percent, and 2.9 percent, respectively.	3.4 percent adjusted / 2.1 percent non-adjusted	3.3 percent	2.8 percent
<b> Screener items used to identify homeschooled students</b>	<b> Now I'd like to talk with you about (CHILD)'s school experiences. Is (CHILD) attending (or enrolled in) (school/nursery school, kindergarten, or school)?"</b>	Is this child currently in... <ul style="list-style-type: none"> <li><input type="checkbox"/> Public or private school, or preschool</li> <li><input type="checkbox"/> Homeschool <u>instead</u> of school for some or all classes, or</li> <li><input type="checkbox"/> Not in school?</li> </ul>	Is this person currently in... <ul style="list-style-type: none"> <li><input type="checkbox"/> Homeschool <u>instead</u> of attending public or private school for some or all classes,</li> <li><input type="checkbox"/> Public or private school, or preschool,</li> <li><input type="checkbox"/> College, university, or vocational school, or</li> <li><input type="checkbox"/> Not in school?</li> </ul>	Is this child/youth currently in... <ul style="list-style-type: none"> <li><input type="checkbox"/> Homeschool <u>instead</u> of attending public or private school for some or all classes,</li> <li><input type="checkbox"/> Public or private school, or preschool,</li> <li><input type="checkbox"/> College, university, or vocational school, or</li> <li><input type="checkbox"/> Not in school?</li> </ul>
<b> PFI questionnaire items used to identify homeschooled students</b>	<b> Some parents decide to educate their children at home rather than send them to school. Is (CHILD) being schooled at home?</b>  <b> So (CHILD) is being schooled at home <u>instead</u> of at school for at least some classes or subjects?</b>	PFI-Enrolled questionnaire only:  Is this child being schooled at home instead of at school for some classes or subjects?	PFI-Enrolled questionnaire only:  Some parents decide to educate their children at home rather than send them to a public or private school. Is this child being schooled at home <u>instead</u> of at school for at least <u>some</u> classes or subjects?  Which of the following statements best describes your homeschooling arrangement for this child? <ul style="list-style-type: none"> <li><input type="checkbox"/> This child is homeschooled for <u>all</u> classes or subject areas</li> <li><input type="checkbox"/> This child is homeschooled for <u>some</u> classes or subject areas and also attends a public or private school</li> <li><input type="checkbox"/> This child is <u>not</u> homeschooled. This child attends a public or private school for all classes or subject areas.</li> </ul>	Students today take part in many different types of schools and education settings. What type of school does this child attend? Mark X one box for each item below. <ul style="list-style-type: none"> <li>a. A public school located in a physical building, including charter school. yes/no</li> <li>b. A private Catholic school located in a physical building. yes/no</li> <li>c. A private, religious but <u>not</u> Catholic school located in a physical building .yes/no</li> <li>d. A private, not religious school located in a physical building. yes/no</li> <li>e. Full-time, online, virtual, or cyber school for grades kindergarten through 12. yes/no</li> <li>f. College, community college, or university that is online, virtual, or cyber.yes/no</li> <li>g. College, community college, or university located in a physical building. yes/no</li> </ul>

**Exhibit I-1. Detail for the collection and report of homeschooling estimates from 1999 to 2019 in the National Household Education Surveys program**

1999, 2003, and 2007	2012	2016	2019
			<p>h. Student is homeschooled, including co-ops.yes/no</p> <p>Some parents decide to educate their children at home rather than send them to a public or private school located in a physical building. Is this child being schooled at home <u>instead</u> of at school for at least <u>some</u> classes or subjects?</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No → [Skip out of homeschooling section]</p> <p>Which of the following statements best describes your homeschooling arrangement for this child?</p> <p><input type="checkbox"/> This child is homeschooled for <u>all</u> classes or subject areas, which may include co-ops, virtual/cyber/online courses, and home instruction provided by a private tutor or teacher</p> <p><input type="checkbox"/> This child is homeschooled for <u>some</u> classes or subject areas and is also enrolled in a public or private school</p> <p><input type="checkbox"/> This child is <u>not</u> homeschooled. This child is enrolled in a public or private school for all classes or subject areas → [Skip out of homeschooling section]</p>

**Exhibit I-1. Detail for the collection and report of homeschooling estimates from 1999 to 2019 in the National Household Education Surveys program**

	<b>1999, 2003, and 2007</b>	<b>2012</b>	<b>2016</b>	<b>2019</b>
Data collection mode(s)	Phone (interviewer-administered)	Paper (self-administered)	Paper and limited web (self-administered)	Web and paper (self-administered) and limited inbound phone interviews (interviewer administered)
Sampling frame	Random-digit dial landline phone	Address-based sample	Address-based sample	Address-based sample
Separate questionnaire for students reported as “enrolled” on the screener		X	X	
Number of hours in school	25 or fewer	25 or fewer	25 or fewer	24 or fewer
PFI items used to identify part-time homeschoolers	How many hours each week does (CHILD) usually go to a school for instruction? Please do not include time spent in extracurricular activities.	PFI-Homeschool questionnaire only: How many <u>hours</u> each <u>week</u> does this child usually go to a school for instruction? Do not include time spent in extracurricular activities. ____ hours	How many <u>hours</u> each <u>week</u> does this child usually go to a school for instruction? Do not include time spent in extracurricular activities. ____ hours	About how many hours does this child attend a school each <u>week</u> ? <input type="checkbox"/> 0 hours. Child does not attend a school located in a physical building <input type="checkbox"/> 1-10 hours <input type="checkbox"/> 11-24 hours <input type="checkbox"/> More than 24 hours
Allows for separate estimates of full-time virtual school students				X
Implicitly includes full-time virtual school students	X	X	X	X
Eligible age range	5-17	5-17	5-17	5-17
Eligible grade range	K-12	K-12	K-12	K-12
Reason for homeschooling	All reasons except only for temporary illness	All reasons except only for temporary illness	All reasons except only for temporary illness	All reasons except only for temporary illness
Languages offered	English / Spanish	English/Spanish	English / Spanish	English/Spanish