

National Survey of
Early Care & Education

2019 National Survey of Early Care and Education Data Collection and Sampling Methodology Report

OPRE Report #2022-118

APRIL 2022



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April 2022

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Office of Planning, Research, and Evaluation
Administration for Children and Families
U.S. Department of Health and Human Services

Contract

HHHSP23320095647WC

OMB Control Number: 0970-0391

Expiration Date: 10/31/2024

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Suggested Citation: National Survey of Early Care and Education Project Team (2022). 2019 National Survey of Early Care and Education Data Collection and Sampling Methodology Report. OPRE Report 2022-118, Washington DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

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Table of Contents

Executive Summary	1
1. Study Overview	5
Age definitions	6
2. Sample Design	6
Multistage design.....	8
Household sampling.	9
Provider sampling.	10
3. Component Surveys	12
Household Survey	12
Purpose.	12
Questionnaire content.	12
Screening.	13
Data collection summary.	13
Home-based Provider Survey.....	14
Purpose.....	14
Questionnaire content.	14
Screening.	15
Data collection summary.	15
Center-based Provider Survey	15
Purpose.	15
Questionnaire content.	16
Screening.	17
Data collection summary.	17
Workforce Survey	18
Purpose.....	18
Questionnaire content.	18
Screening.	19
Data collection summary.	19
Summary of Response Rate Information.....	19
4. Geography in the NSECE	20

Geographic variables in public use data files.....	20
Provider cluster design	21
Levels of geography within the complex sampling design	21
Correspondence of 2012 and 2019 geographic units	21
Opportunities for data linkage.....	22
5. Additional Distinctive Features	23
Survey design.....	23
ECE usage, supply, and access.	24
Home-based care.	24
Complexity in ECE.....	25
Provider financing.	25
Quality and quality improvements.....	26
Workforce.	26
6. Additional NSECE Resources	28
Reference List	29
Appendix I: Data Collection Supplement.....	32
1. Introduction.....	33
2. Household Survey	33
A. Household Survey Standard Data Collection Protocol.....	34
B. Important Household Subgroups	37
3. Unlisted Home-based Provider Survey.....	39
A. Unlisted Home-based Provider Standard Data Collection Protocol	40
B. Important Unlisted Home-based Provider Subgroups.....	42
4. Listed Home-based Provider Survey	43
A. Listed Home-based Provider Standard Data Collection Protocol.....	44
B. Important Listed Home-based Provider Subgroups	46
5. Center-based Provider Survey.....	48
A. Center-based Provider Standard Data Collection Protocol	49
B. Important Center-based Provider Subgroups.....	51
6. Workforce Survey	55
A. Workforce Standard Data Collection Protocol.....	56
B. Important Workforce Subgroups	58

List of Exhibits

Exhibit 2.1	2019 NSECE Sample Types and Questionnaires	7
Exhibit 2.2	Hypothetical Provider Cluster.....	9
Exhibit 3.1	2019 Response Rates by Component Survey	19
Exhibit 5.1	2012 and 2019 Sample Sizes for Selected Populations	23
Exhibit A1.2.1.	2019 NSECE Household Screener Eligibility Criteria.....	34
Exhibit A1.2.2.	2019 NSECE Household Survey Data Collection Flowchart.....	36
Exhibit A1.2.3.	Percentage of Total Household Survey Completes by Month (Graph)	39
Exhibit A1.2.4.	Percentage of Total Household Survey Completes by Month (Table)	39
Exhibit A1.3.1.	2019 NSECE Unlisted Home-based Provider Survey Data Collection Flowchart.....	41
Exhibit A1.3.2.	Percentage of Total Unlisted Home-based Provider Survey Completes by Mode and Month (Graph)	43
Exhibit A1.3.3.	Percentage of Total Unlisted Home-based Provider Survey Completes by Mode and Month (Table)	43
Exhibit A1.4.1.	2019 NSECE Listed Home-based Provider Survey Data Collection Flowchart.....	46
Exhibit A1.4.2.	Percentage of Listed Home-based Provider Survey Field and Web Completes by Month (Graph)	48
Exhibit A1.4.3.	Percentage of Total Listed Home-based Provider Survey Completes by Mode and Month (Table).....	48
Exhibit A1.5.1.	2019 NSECE Center-based Provider Survey Data Collection Flowchart	51
Exhibit A1.5.2.	Percentage of Total Center-based Provider Survey Completes by Mode and Month (Graph).....	54
Exhibit A1.5.3.	Percentage of Total Center-based Provider Survey Completes by Mode and Month (Table).....	54
Exhibit A1.6.1.	2019 NSECE Workforce Survey Data Collection Flowchart	56
Exhibit A1.6.2.	Percentage of Workforce Survey Field and Web Completes by Month (Graph)	60
Exhibit A1.6.3.	Percentage of Total Workforce Survey Completes by Mode and Month (Table)	60

Executive Summary

The 2019 National Survey of Early Care and Education (NSECE) is funded by the Office of Planning, Research, and Evaluation (OPRE) in the Administration for Children and Families. The project team is led by NORC at the University of Chicago. The 2019 NSECE is comprised of four integrated, nationally representative surveys which include: 1) households with children under age 13, 2) home-based early care and education (ECE) providers which are listed and unlisted, 3) center-based ECE providers serving children age 5 years and under, not yet in kindergarten, and 4) the center-based ECE provider workforce. (Home-based ECE providers who care for children who are not their own in a home-based setting and appeared on state and national lists of ECE providers are categorized as listed while those who did not appear on ECE provider lists are unlisted.) Collectively these surveys paint a comprehensive picture of the supply of and demand for ECE in America and offer a clearer understanding of how well families' needs and preferences match providers' offerings and constraints. This report provides information about the 2019 NSECE sample design, key elements of its four component surveys, and other unique survey features, and explains how it compares to the 2012 NSECE. A detailed appendix provides information about the data collection methodologies used in the 2019 NSECE.

Sample Design

There are two primary sample sources for the 2019 NSECE's four component surveys. The sample for the household survey and unlisted home-based provider survey is an address-based sample of housing units drawn from the Delivery Sequence File kept by the U.S. Postal Service. The center-based providers and listed home-based providers are sampled from a comprehensive list of addresses of ECE programs in the 50 states and the District of Columbia, which the NSECE team developed. The workforce survey sample is generated from completed center-based provider surveys.

The 2019 NSECE used a multistage probability design, which began with the selection of primary sampling units (PSUs) - counties or clusters of adjacent counties - across all 50 states and Washington DC. In the second stage, we selected secondary sampling units (SSUs) for the household sample. SSUs are one or two adjacent census tracts. Center-based providers and listed home-based providers were sampled from the SSU and the surrounding census tracts that fall within a two-mile radius of that center of the SSU. This sample design is referred to as the "NSECE provider cluster" and allows us to document the interaction of the supply of and the demand for ECE in local communities, while simultaneously capturing data that efficiently construct national estimates. The NSECE sample design also included a low-income oversample to provide insights to help shape ECE public policies. As a result, it provides larger samples of children in low-income households than many other sources.

Component Surveys

The household survey collects information from a parent or guardian of a child or children under age 13 in households with at least one member child under age 13 to describe the nation's demand for ECE services. The household questionnaire is unique as it collects information on all children under age 13 (not just a focal child) and child care payment data for each child with each of his or her providers rather than collecting an overall household expenditure on all child care arrangements. A total of 8,576 eligible households completed a household interview, yielding an unweighted interview completion rate of 63.5 percent (weighted 64.4 percent).

The home-based provider survey collects information from individuals who provide care at least five hours weekly in a home-based setting to children under age 13 who are not their own. These providers can be listed or unlisted. New features in the 2019 questionnaire include questions about perceptions of the subsidy system and follow-up questions for sampled addresses where home-based ECE is no longer provided. A total of 4,231 eligible listed home-based providers completed a home-based provider interview, yielding an unweighted interview completion rate of 90.3 percent (90.5 percent weighted). A total of 1,670 eligible unlisted home-based providers completed an unlisted home-based provider interview, yielding an unweighted interview completion rate of 62.0 percent (57.5 percent weighted).

The center-based provider survey collects information from center directors and other instructional leaders to describe the population of centers serving children 5 years and under, not yet in kindergarten. The 2019 questionnaire collects additional information on a center's revenues, food offerings and participation in the federal food program, and the respondent's training on operating and managing a child care center. A total of 6,917 eligible center-based providers, yielding an unweighted interview completion rate of 70.1 percent (69.9 percent weighted).

The workforce survey describes classroom-assigned teachers, assistants, and aides working in a center with at least one child 5 and under, not yet in kindergarten. The 2019 questionnaire includes a new section to gather data on staff and children from a nationally representative sample of center-based ECE classrooms including race/ethnicity, languages spoken other than English, and children's food insecurity. 4,709 workforce respondents completed interviews, yielding an unweighted interview completion rate of 73.7 percent (72.0 percent weighted).

Geography in the NSECE

Five features of the 2019 NSECE allow for analyses of geographically-based questions:

- ▶ Geographic variables in public use data files: All NSECE public-use data files include community characteristics variables that draw on American Community Survey data to describe the location of the sampled household or provider.

- ▶ **Provider cluster design:** All four component surveys are sampled within shared provider clusters, allowing analyses of households and providers that are near one another.
- ▶ **Levels of geography within the complex sampling design:** The NSECE supports estimates below the national level. For example, it is possible to generate state-level statistical estimates on a variety of topics and for many states.
- ▶ **Correspondence of 2019 and 2012 geographic units:** Most PSUs in the 2012 data also appear in the 2019 data. (An NSECE PSU is a county or cluster of counties.) While the NSECE design does not support estimates for any specific PSU, researchers could conduct longitudinal analyses at the PSU-level.
- ▶ **Opportunities for data linkage:** The NSECE data have been designed to permit linking to complementary ECE data sources, subject to requirements for handling restricted-use, confidential data. Geographically based data sets can be merged.

Additional Distinctive Features

The 2019 NSECE has seven other unique features:

- ▶ **Survey design:** The 2012 and 2019 data collection methodology and questionnaires were very closely aligned to maximize the feasibility of analytic comparisons at the national level. Thus, the topical areas and feasible research questions for both years are similar, and in many cases, over-time comparisons can be made across the two years.
- ▶ **ECE usage, supply, and access:** The 2019 NSECE data allow researchers to examine changes in the characteristics of households and their use of non-parental care and how significant programmatic and policy developments since 2012 may have addressed parents' changing ECE needs.
- ▶ **Home-based care:** By capturing core descriptive data on all home-based providers in a consistent manner, regardless of whether they are licensed, registered, or unregulated, the NSECE data provide a full portrait of family child care characteristics and prices and allow researchers to investigate whether these are consistently related to state regulatory standards, requirements, and enforcement
- ▶ **Complexity in ECE:** The NSECE design generally enables capturing the full spectrum and variety of different types of entities, often at the expense of detail about those entities. Unlike many other studies, the sample design represents as broadly as is feasible the full range of formal and informal providers of care to children under age 13.
- ▶ **Provider financing:** The 2012 NSECE collected new, nationally representative data that advanced the field's knowledge of the revenue and some expenditures of ECE providers at that point in time. The 2019 NSECE builds the link between cost and price of care, on one side, and features of quality, on the other, by collecting data related to programs' costs, advertised price, and the mix of funding sources and in-kind supports used to address costs in different ECE settings.

- ▶ **Quality and quality improvements:** The 2019 NSECE data provides information on how quality improvement efforts are associated with actual improvements in (predictors of) quality in infant/toddler classrooms and family child care settings that tend to be associated with lower quality ratings. The 2019 NSECE also provides needed data on the implementation of instructional supports, curricula, and quality improvement—topics emphasized by recent federal policies and programs.
- ▶ **Workforce:** The 2019 NSECE included a sample of both listed home-based and center-based providers, making it possible to analyze the 2019 state of ECE workforce compensation, as well as shifts in the workforce across funding streams and provider auspice. In addition, the 2019 NSECE workforce questionnaires for ECE workers (both the home-based provider and classroom staff) included the Center for Epidemiologic Studies Depression Scale, a widely used measure of depression.

1. Study Overview

The primary purpose of the 2019 National Survey of Early Care and Education (NSECE) was to provide a comprehensive snapshot of both the availability and utilization of early care and education (ECE) in the United States. The main objectives of the study included:

- ▶ Updating the 2012 NSECE, which was the first national portrait of the availability of ECE for the full spectrum of care providers, including households, providers and workforce from all 50 states and the District of Columbia.
- ▶ Identifying ECE and school-age care needs and preferences among U.S. households with children under age 13 as they pertain to supporting both employment of parents and development of children.
- ▶ Capturing data on all forms of non-parental care for all children in a household.
- ▶ Providing the perspectives of both families and providers on the services offered in a system where children are often in multiple arrangements and providers receive funding from multiple sources.
- ▶ Linking the survey data collected with other policy-relevant data.
- ▶ Increasing the understanding of the care received by children in low-income households and how that varies across communities.

The NSECE is a set of four integrated, nationally representative surveys conducted in 2019. Surveys were of: 1) households with children under age 13; 2) home-based providers to children under age 13; 3) center-based providers to children age 5 years and younger, not yet in kindergarten; and 4) the center-based provider workforce. Together they illustrate the supply of and demand for ECE in America and allow for better understanding of how well families' needs and preferences coordinate with providers' offerings and constraints. The study is funded by the Office of Planning, Research and Evaluation (OPRE) in the Administration for Children and Families (ACF), U.S. Department of Health and Human Services. The project team is led by NORC at the University of Chicago, with a team of partner organizations and individuals.¹

To facilitate over-time comparisons, the 2019 NSECE largely replicates the design of the 2012 NSECE, although both are cross-sectional surveys with no intentional overlap in sampled households, providers, or workforce members. Longitudinal data are not available for households, providers or workforce members.

This report documents key aspects of the 2019 NSECE survey design and data collection process. Extensive additional information about the design of the NSECE sample and the content of the NSECE instruments and data files is available at: <https://www.childandfamilydataarchive.org/cfda/pages/cfda/nsece.html>.

¹ Please see www.nsece.norc.org for a full list of 2019 NSECE team members.

Age definitions

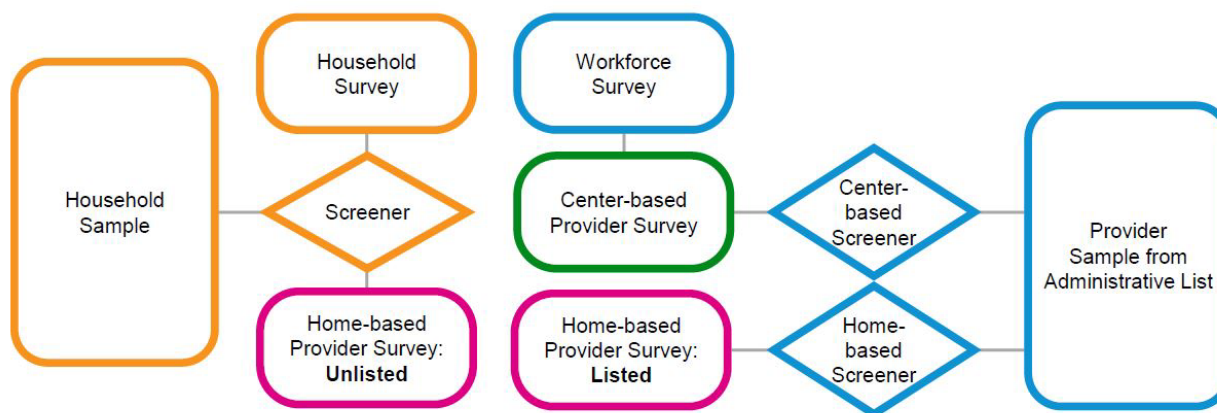
Ages of children covered by the NSECE design differ across component surveys. All surveys cover children age 5 years and under, not yet in kindergarten, and the ECE services available to them. Treatment of school-age children and school-age care (SAC) varies across surveys. References to ECE within this document may also include SAC.

Component Survey	Ages of Children Associated with Survey
Household	Children under age 13 years.
Home-based Provider	Providers serving children under age 13 years.
Center-based Provider	Centers serving at least one child age 5 years and under, not yet in kindergarten, report on all of their services to children under age 13. (Organizations serving only school-age children are not represented in this survey.)
(Center-based) Workforce	Teachers, assistant teachers and aides who work in classrooms with at least one child age 5 years and under, not yet in kindergarten. (Workers who work with only school-age children are not represented in the 2019 NSECE, even if they work in centers serving at least one child age 5 years and under.)

2. Sample Design

Exhibit 2.1 provides an overall schematic of the NSECE sample types and questionnaires. The NSECE is a coordinated set of four nationally representative surveys pertaining to the supply of and demand for ECE in the U.S., including the individuals working directly with children. There are two primary sources of sample for these four surveys.

Exhibit 2.1 2019 NSECE Sample Types and Questionnaires



The household sample was an address-based sample of housing units selected from the Delivery Sequence File (DSF) maintained by the U.S. Postal Service. From this household sample, a household screening identified eligible households for two surveys:

1. Household survey. Households with at least one resident child under age 13 years participated through an interview completed by an adult knowledgeable about the youngest child in the household.
2. (Unlisted) home-based provider survey. This survey interviewed individuals who did not appear on state and national lists of ECE providers but did care at least five hours weekly in a home-based setting for children under age 13 years who are not their own.

The provider sample was a sample of addresses for known or potential ECE providers, as indicated in state and national lists of ECE providers. Three different surveys used the provider sample:

1. Center-based provider survey. This survey interviewed directors or instructional leaders of center-based programs that provided care to children 5 years and under, not yet in kindergarten. These respondents were selected through a center-based screener which was administered at addresses in the provider sample.
2. Workforce survey. This survey interviewed classroom-assigned instructional staff working with children 5 years and under, not yet in kindergarten. These respondents were selected from completed center-based provider interviews.
3. (Listed) home-based provider survey. This survey interviewed individuals appearing on state and national lists of ECE providers and who provided care at least five hours weekly in a home-based setting to at least one child under age 13 who was not their own.

Multistage design. The NSECE sample design is a multistage probability design. In the first stage, we selected 219 primary sampling units (PSUs) across all 50 states and Washington DC. PSUs are counties or clusters of adjacent counties. We based the number of PSUs in each state on the population of children under age 18 within that state. In the second stage, we selected secondary sampling units (SSUs) for the household sample. SSUs are one or two adjacent census tracts. Because the experiences of families in low-income households are of special interest in public policy addressing ECE, the NSECE sample design included a low-income oversample: we disproportionately selected SSUs from areas in which at least 40 percent of households had income below 250 percent of federal poverty guidelines. Altogether, the NSECE selected 747 SSUs, with 508 SSUs in these high-density low-income areas and 239 in areas with lower densities of low-income households. The large majority of PSUs in the 2019 NSECE were also part of the 2012 NSECE, although SSUs were newly sampled for 2019 within the PSUs, so census tracts overlap in the two years only by chance.

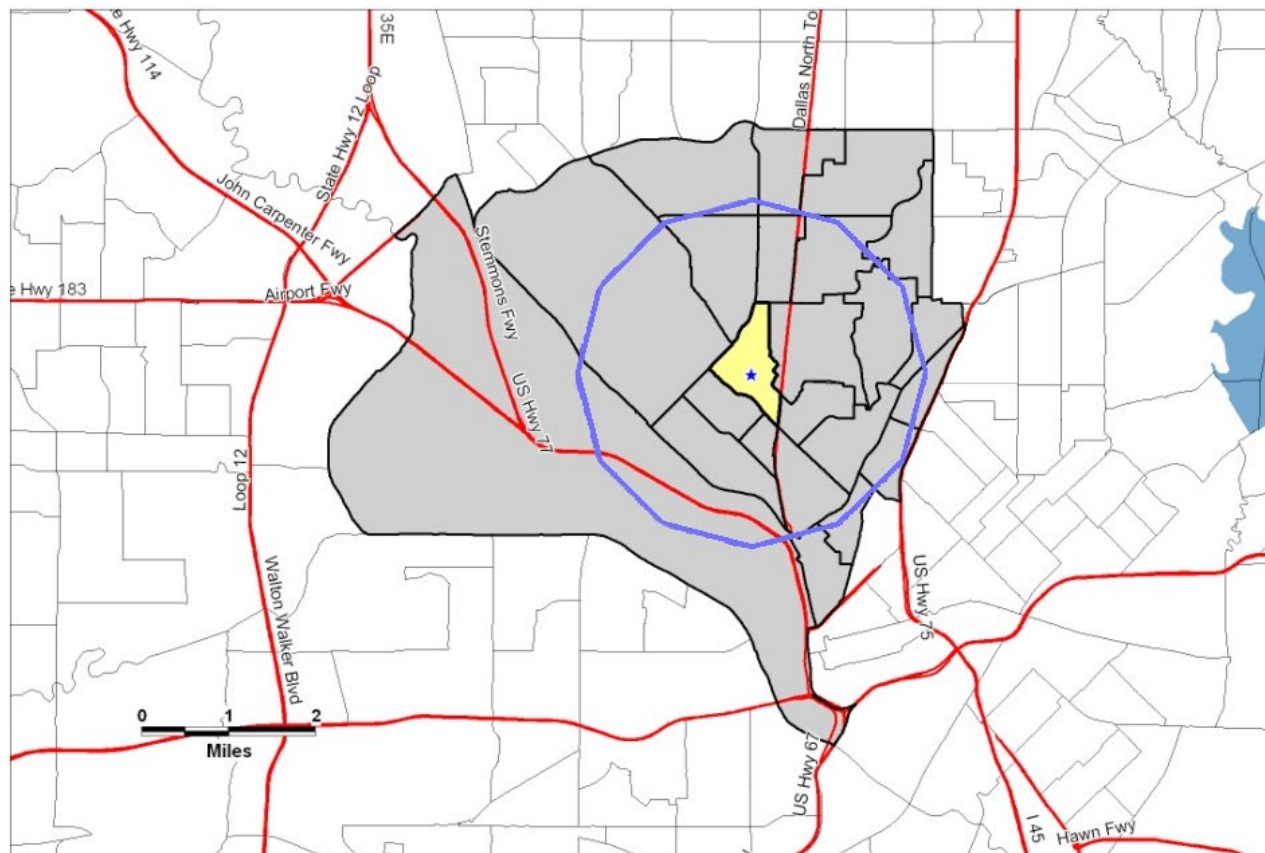
The 2012 NSECE sample design introduced something called the “NSECE provider cluster” for its nationally representative samples of providers. The provider cluster is a cluster of census tracts surrounding a central tract.

We depict a hypothetical provider cluster in Exhibit 2.2, below. The SSU is the central yellow area, which is the provider cluster’s core, while the gray shaded areas depict the remainder of the provider cluster. In this hypothetical example, we sample households from the yellow core (generally one or a small number of adjacent census tracts) for the household and unlisted home-based provider surveys. We sample providers from throughout the gray and yellow portions for the center-based and listed home-based provider surveys. The gray portion comprises all census tracts that overlap within a circle of two miles of the blue star, which is the population centroid of the SSU.

Households may or may not seek ECE within the provider cluster where they live, but it is likely that households’ perceptions and experiences of availability within their provider cluster will affect their search and selection of ECE. Thus, the provider cluster allows us to document the interaction of the supply of and the demand for ECE in local communities, while simultaneously capturing data that efficiently construct national estimates.

Exhibit 2.2 Hypothetical Provider Cluster

Dallas County 0006.01



Every SSU corresponds to one provider cluster. The 2019 NSECE includes 747 SSUs sampled for 2019 fielding and, therefore, 747 newly sampled provider clusters within the selected PSUs. OPRE offered states the opportunity to supplement their NSECE samples and increase state-specific sample sizes and analytic power. The state of Minnesota committed funds to supplement the federal data collection effort. All SSUs were re-sampled for 2019 within the selected PSUs.

Household sampling. We used a delivery sequence file (DSF) maintained by the U.S. Postal Service as the sampling frame for housing units (HUs) at the third stage of sampling. The DSF is known to be incomplete in some areas of the country, especially in some rural areas. With the exception of four SSUs, however, our address-based file had enough household addresses to sample the designated number of households. In the four SSUs with insufficient sample, we appended an adjacent census tract that was confirmed to meet the study's sampling needs. A similar appending process had occurred earlier in the sampling process, when some SSUs were defined as including more than one census tract.

Provider sampling. To build a comprehensive list of addresses of ECE programs in the 50 states and the District of Columbia, the NSECE team began by identifying available online lists of ECE center-based and home-based providers from every state child care licensing unit, division, or department. We then contacted each such unit, division, or department to inquire about the comprehensiveness of online lists and whether the agency maintained additional lists that it could provide to the NSECE team for licensed, registered, license exempt, subsidized, or otherwise compiled child care providers, documenting all list types and exemptions in each state. Through these efforts, we were able to obtain child care licensing lists from all 50 states and Washington DC; we collected these primarily from May to August 2018. Two states' home-based provider lists were completed in the fall of 2018, necessitating a second sampling effort for the affected areas.

Either through web scraping and/or using state-provided lists, the team secured child care provider lists from all 50 states. To supplement state lists and ensure that our provider frame included the types of providers most often exempted by state lists, we also collected the following national lists:

- ▶ Department of Defense child care
- ▶ General Services Administration child care on federal property
- ▶ National Association for the Education of Young Children (NAEYC)–accredited programs
- ▶ Office of Head Start's national list of programs

In addition, we collected public pre-kindergarten (public pre-K) lists; we collected these primarily from April to August 2018. We downloaded lists from state websites when available or used web scraping to collect public pre-K program information. We collected public pre-K lists from 47 states, including Washington DC. In remaining states, a list did not exist because there was no coordinated state-level funding program for public pre-K. With the exception of Montana, where programs serving children over age three and primarily educational in purpose were exempt from licensing requirements, public pre-K programs operating outside of public schools should have been included in licensing lists, though not separately designated. Mississippi also exempted Head Start programs operating in public schools from licensing.²

Because the 2012 NSECE data indicated that there were a number of ECE programs located in schools that were not on lists collected from the state department of education or licensing agency, we supplemented 2019 lists with ECE programs identified in the 100 largest school districts in the nation.³

² In the 2012 NSECE, the team also gathered after-school program lists. These lists were not gathered or incorporated into the 2019 frame unless they came from child-care licensing agencies.

³ Districts were identified as of 2015–16 school year, using most recently available NCES publications as of summer 2018.

We also included a proprietary list of all elementary schools in the nation offering at least one grade K through 8 and any early childhood program operated by a public school district. These were included as potential providers of ECE, although regular elementary school itself was not sufficient to qualify for the center-based provider survey. From these assembled lists, we constructed a provider sampling frame of unique addresses that were indicated on lists as housing an ECE provider or an elementary school. Major sampling frame construction tasks including de-duplicating records within and across lists, handling missing address data (especially for home-based provider lists), and geocoding all identified addresses so that they could be associated with sampled provider clusters where appropriate.

From the provider sampling frame, we extracted cluster-specific sampling frames consisting of all unique addresses housing at least one provider (or elementary school) on the sampling frame within each sampled provider cluster. The ultimate sampling unit for center-based providers was the organization operating an ECE program at an address. For locations/addresses with multiple programs, we administered a screener that collected a list of programs at the address and the organizations operating each program. A single organization operating one or more eligible programs was randomly selected for interview.

3. Component Surveys

Below, we describe each of the four surveys briefly. Appendix 1 includes additional information about data collection for each of the four surveys. Data collection for the 2019 NSECE took place November 2018 through July 2019. This section ends with a summary table that brings together in one place the case counts and response rates reported for each component survey.

Household Survey

Purpose. The household survey documents the nation’s demand for ECE services. Key questionnaire topics include details on usage of non-parental care, expenditures on non-parental care, parental search behavior for ECE, and the balance of parental employment with child care needs and availability. These data will help to answer such research questions such as: 1) Who is caring for America’s children when they are not with their parents, and do families with different demographic characteristics perceive types of care differently or use types of care differently? 2) How do families search for care, and how does this vary by age of children, characteristics of parents, location, and availability of licensed slots per population? 3) How and how much do families pay for care? and 4) How many families of different characteristics receive public financial support for ECE, and how does this vary by age of child, family characteristics, and type of care utilized?

Due to the oversampling of households in low-income areas, NSECE data offer larger samples of children in low-income households than do many other sources. The NSECE data are also valuable for more intensively investigating some of the patterns observed in other data. For example, the NSECE data expand the possibilities for understanding how parents coordinate work and school schedules with ECE usage and the extent to which different types of care solve or present schedule coordination problems.

Questionnaire content. The household questionnaire collects data on household composition, characteristics of any children under 13, ECE usage and cost, search for ECE, household characteristics, and a full week’s schedule of each child’s time in non-parental care and adults’ time in work-related activities such as work, school, and training. Distinctive features of the household questionnaire include collecting data on all children under age 13 (not just a focal child) and collecting child care payment data for each child with each of his or her providers rather than collecting an overall household expenditure on all child care arrangements.

The 2019 household questionnaire builds on the 2012 questionnaire, with new questions intended to improve the ability to identify 1) publicly funded center-based ECE arrangements and the source of their funding, and 2) ECE arrangements in which non-custodial parents are the caregivers. Questions about children using individual providers were created to improve researchers’ ability to associate individual providers with known types of home-based care. The 2019 household questionnaire also added

items that asked respondents about non-custodial parent's financial contributions to children's basic needs; households' prior receipt of child care subsidies; identification of 5-year-olds enrolled in kindergarten; and usual commute duration for every parent of children in the household.

Based on patterns of analyses of the 2012 data, we made some changes to who answered certain questions on the 2019 questionnaire that were also present in the 2012 questionnaire. For example, in 2012, adult calendar data were collected for parents, spouses, and non-parent regular caregivers within the household. In 2019, adult calendar data were collected only for parents and their spouses in the household, omitting non-parent regular caregivers from this set of questions. Omitting non-parent caregivers from the adult calendar freed up administration time to ask other questions in the interview. Also, in 2012, search data were collected for a randomly selected child under age 13. In 2019, search data were collected for a randomly selected child under age 6 if available, and for a child age 6 or older (up to age 13) only if no younger child was present in the household. This change helped to increase the relative availability of search data for young children within the data file.

Continuing data collection into July of 2019 would risk collecting summertime ECE usage data that would not be comparable with usage data collected during the school year. So that we could continue data collection with minimum harm to data quality, some revisions were made to the household questionnaire at the end of data collection: detailed calendar data are not available for these last household interviews, although key created variables on care usage and parental employment are available. Five percent of household interviews were completed in July 2019.

Screening. We found that 2012 household survey data were most often used to understand households with children under age 6 (72 months). To increase the proportion of household survey data that described these households, we implemented different rates of sampling for households with at least one child under 6 years versus households whose youngest child was at least 6 years old. Throughout data collection, 100 percent of households with at least one child under 6 years were eligible for the household interview, but households with the youngest child 6 years or older were sub-sampled for the interview at lower rates. At the start of data collection, 80 percent of households with youngest child 6 years or older were eligible for the household interview. Later in the data collection period, we began sampling households with youngest child 6 years or older at a 50 percent rate. Across the entire data collection period, households with youngest child 6 years or older were sampled at a 70 percent rate. These households with only school-age children thus have larger sampling weights than households with younger children.

Data collection summary. The household survey was conducted with households that had at least one member child under age 13. The desired respondent was a parent or guardian of one or more of the children under age 13 in the household, although in rare cases it was another adult in the household. Eligible respondents were identified through a Household Screener based only on the presence of an age-eligible child. Screening was completed by mail, by Internet, by phone, and in person. All interviews

were conducted by an interviewer, primarily in person but with a small fraction by telephone. A screening effort resolved eligibility for 93,875 housing units, for an unweighted screener completion rate of 85.5 percent (weighted 85.7 percent). From these, 8,576 eligible households completed a household interview, yielding an unweighted interview completion rate of 63.5 percent (weighted 64.4 percent). The overall unweighted response rate is 54.3 percent (weighted 55.2 percent).⁴

Home-based Provider Survey

Purpose. The home-based provider survey was conducted with individuals who provide care at least five hours weekly in a home-based setting to children under age 13 who are not their own. Survey data answers such questions as: 1) What kind of ECE is available across communities throughout the country? 2) How well does the available supply of ECE support parents' employment? 3) How do different types of providers vary in their characteristics of care and affordability? and 4) Who are the individuals working in ECE? What are their experiences in terms of employment characteristics, classroom activities, and professional development? What are their attitudes, orientations, and stress and depression levels?

Questionnaire content. The home-based provider questionnaire includes key topics such as enrollment and the characteristics of the children served, rates charged for care, participation in government programs, household composition, qualifications for and attitudes toward ECE, use of curricula, and activities conducted with children. Portions of the home-based provider questionnaire will contribute to analyses of the ECE workforce and mirror the content of the workforce questionnaire (see below), which was administered to classroom-assigned instructional staff at center-based providers. Other portions of this questionnaire closely mimic the center-based provider questionnaire (see below) so that enrollment, program participation, perceptions of the subsidy system, provider charges for care, attitudes, orientation, and activities data can be accurately compared across all different categories of provider.

The 2019 instrument also included a few new features. One new feature was a few follow-up questions for sampled addresses where home-based ECE is no longer provided. These follow-up questions asked about when the provider had last cared for children and why they had stopped (These providers were ineligible for the main interview.) Within the main questionnaire (asked of individuals providing home-based care at the time of the interview), new questions also include perceptions of the subsidy system. Also, selected questions from the 2012 questionnaire were asked of larger subgroups of home-based providers in the 2019 questionnaire expanding the information available on providers' receipt of professional development, revenues, and other support services.

For interviews conducted in summer 2019, home-based providers reported about spring 2019, before summer schedules and enrollment would have begun. Nine percent of

⁴ Overall response rates are calculated using the definition for response rate #3, according to guidelines published by the American Association of Public Opinion Research.

listed home-based provider interviews and six percent of unlisted home-based provider interviews were completed in July 2019.

Screening. Two sample sources contributed providers for the survey. One source was the provider sampling frame, which was constructed from state and national administrative lists of ECE providers, such as state licensing lists, Head Start program records, or public pre-K rolls. We designate home-based providers selected from the provider sampling frame as “listed.” Listed providers were primarily licensed or regulated family child care providers but also included other home-based providers appearing on state and national ECE lists, such as license-exempt providers or providers participating in Early Head Start Child Care Partnerships. A screener at the start of the questionnaire asks listed providers to confirm that they are currently providing regular care to children under age 13.

A second source was the household sample. Responses to the household screener identified certain households as eligible for the home-based provider survey if an adult in the household was reported as regularly caring for children not his or her own at least five hours per week in a home-based setting. These providers did not appear in the provider sampling frame and are designated as “unlisted.”

This inclusion of providers identified through the household screener offers nationally representative data on the broad spectrum of home-based providers, whether they are known to the state licensing system, and is one of the distinctive features of the NSECE. The data offer insights about both paid and unpaid care, including how they differ in their characteristics and their availability to families.

Data collection summary. NSECE data include a combined total of 5,901 listed and unlisted home-based provider interviews. Data collection was conducted by Internet, in person, and by telephone with field interviewers. For listed home-based providers, eligibility was confirmed for a total of 6,709 home-based providers, for an unweighted screener completion rate of 77.7 percent (74.9 percent weighted). From these, 4,231 eligible listed home-based providers completed a home-based provider interview, yielding an unweighted interview completion rate of 90.3 percent (90.5 percent weighted). The overall unweighted response rate was 70.2 percent (67.8 weighted).

For unlisted home-based providers, the unweighted screener completion rate as part of the overall household screening was 79.0 percent (79.2 percent weighted). From these, 1,670 eligible unlisted home-based providers completed an unlisted home-based provider interview, yielding an unweighted interview completion rate of 62.0 percent (57.5 percent weighted). The overall unweighted response rate for unlisted providers is 49.0 percent (45.5 percent weighted). The team is exploring whether the relatively lower response rate for unlisted providers has implications for analytic findings.

Center-based Provider Survey

Purpose. The center-based provider survey collects information from center directors and other instructional leaders to describe the population of centers serving children 5

years and under, not yet in kindergarten. The survey data answers such questions as: 1) What kind of ECE is available across communities throughout the country? 2) How well does the available supply of ECE support parents' employment? 3) How do different types of providers vary in their characteristics of care and affordability? and 4) How many and what types of providers participate in quality improvement efforts, such as staff quality ratings and professional development?

The 2012 NSECE data was the first nationally representative data on the available supply of ECE since the 1990 Profile of Child Care Settings. The 2019 NSECE results update the 2012 data and the 1990 data in many ways, but they also reflect many contemporary issues, including the blending of public funding sources (sometimes with private funds), the provision of public prekindergarten in school-based and community-based settings, and targeted accommodations, such as comprehensive services and services for English-language learners and their families.

Questionnaire content. The center-based provider questionnaire covers such topics as enrollment and characteristics of children served, staffing, prices charged, schedules of service, participation in government programs, and staff compensation and professional development policies. Topics in the center-based provider questionnaire, such as enrollment, revenue sources and participation in public programs, and services offered, were designed in parallel with the home-based provider questionnaire (see above) so that comparable data would exist for larger, paid home-based providers as well as for centers.

Additionally, the questionnaire included the selection of one classroom per center, about which more detailed staffing and compensation information were collected. (For a detailed description of the selection process for the classrooms, see section 6. Workforce Survey in Appendix I.) Neither the 2012 nor the 2019 center-based provider surveys collected observational data on care provided; however, both include a variety of measures at both the program and individual staff levels that have been found in the literature to predict observed quality of care.

The 2019 center-based provider questionnaire includes a substantive expansion of questions collecting information on a center's revenues—a key change from 2012. Such topics included blending of funding at the center, classroom, and child level; self-reported mix of public/private funding; and center practices for using subsidies. The 2019 questionnaire also included additional questions covering the center's food offerings and participation in the federal food program, and the respondent's training on aspects of operating and managing a child care center.

Respondents generally reported on services to children under age 13 in both 2012 and in 2019. But in 2019, some staffing questions were edited to focus more specifically on ECE for children age 5 and under, not yet in kindergarten.

For the 8 percent of interviews conducted in summer 2019, respondents reported about spring, 2019, before summer schedules and enrollment would have begun.

Screening. Addresses to be screened for the center-based provider survey were identified from the provider sampling frame built from state or national administrative lists and included regulated and licensed providers and other private providers as well. The Center-based Provider Screener determined eligibility for the center-based provider questionnaire. An eligible provider needed to meet four criteria:

1. Offer non-parental care, including ECE or supervision of children age 5 years and under, not yet in kindergarten;
2. Operate on a regular schedule of at least three days per week and two hours per day but not including residential care;
3. Offer ECE services above and beyond ad-hoc drop-in care (excluding entities such as shopping malls and YMCA open gym programs); and
4. Offer care during the school year (excluding entities that offer only summer or holiday care).

If multiple organizations were serving children 5 and under not yet in kindergarten at one address, the screener sampled one responding organization.

Given the screening criteria, the center-based provider survey does not represent all school-age center care nationally; instead, it only represents those centers that also provide care for children not yet in kindergarten.

Data collection summary. The survey was conducted using internet, in-person, and telephone interviewing with directors or instructional leaders of ECE programs that provide care to children not yet in kindergarten. Eligibility is known for 16,211 addresses, for an unweighted screener completion rate of 87.6 percent (weighted 89.2 percent). From these, data are available for 6,917 eligible center-based providers, yielding an unweighted interview completion rate of 70.1 percent (69.9 percent weighted). The overall unweighted response rate is 61.5 percent (62.4 percent weighted).

Of the 6,917 center-based providers with data in the 2019 data file, 483 centers were associated with public school districts from which the project team was not able to secure permission to interview during the field period. Instead, we consulted publicly available administrative records on enrollment, funding, and staffing to extract data for these centers. They can be identified in the data files as having only administrative data (and no survey interview). Inclusion of these centers in the data file, albeit with partial information, allows researchers to accurately estimate the numbers of ECE centers associated with public school districts and their enrollment counts, which are statistics of high policy interest. In addition, the inclusion of these cases greatly improves the accuracy of geographic estimates below the national level, compared to what would have been possible if these centers had been treated with standard non-response adjustment techniques. Please consult the User's Guide for the 2019 center-based provider survey main public use data file for more information about the providers with administrative data.

Workforce Survey

Purpose. The 2019 (center-based) workforce survey describes classroom-assigned teachers, assistants, and aides working in a center with at least one child 5 and under, not yet in kindergarten. The workforce survey answers such questions as: 1) Who are the individuals working in ECE? and 2) What are their experiences in terms of employment characteristics, classroom activities, and professional development?

Some of the workforce questionnaire data allow tabulation by provider program characteristics (such as enrollment size, type of care, geographic location, for-profit/not-for profit status, and participation in government programs) or other factors that have been found in the literature to predict observed quality. These factors include staff qualifications and compensation, use of curricula, availability of professional development, and children's activities while in care.

The 2019 and 2012 workforce sampling approaches differ in two important ways. First, all workforce members in the 2019 data work with at least one child 5 and under, not yet in kindergarten. In the 2012 data, there were some workforce members working only with school-age children in a center that served at least one child 5 and under, not yet in kindergarten.

Second, the 2019 data include a second workforce member from the sampled classroom for a randomly selected subset of centers. The presence of two workforce members' data for some classrooms allows for explorations of within-classroom collaborations of instructional staff and comparison of wages, skills, and attitudes of workers within the same classroom. In the 2012 data, only a single workforce member was sampled from each center.

Questionnaire content. The Workforce Survey questionnaire closely mirrors portions of the home-based provider questionnaire (see above) so that the two data sources together can paint a rich portrait of the paid ECE workforce, including center-based and home-based paid providers. Topics include information about the work setting (activities in the classroom, interactions with parents and other staff, availability of professional development and other supports); roles and responsibilities (lead teacher, teacher, assistant teacher, aide); compensation (wages and benefits); and perceived leadership and morale, as well as personal information about qualifications, attitudes toward ECE, and stress, depression, and demographic information.

The 2019 questionnaire includes a new section that can provide data on a nationally representative sample of center-based ECE classrooms regarding staff and children in those classrooms, including their number, race/ethnicity, languages spoken other than English, and children's food insecurity. This is a key difference between the 2012 and 2019 questionnaires. The 2019 questionnaire also expanded the section on staff's professional development, including additional items on coursework, format of health or safety training, professional development plan, and time spent on professional development.

No questionnaire modifications were necessary for the 10 percent of workforce interviews conducted in summer 2019.

Screening. Workforce respondents were drawn from the center-based provider questionnaire data, in which all classroom-assigned instructional staff members had been enumerated from a randomly selected classroom.

Data collection summary. Altogether, 4,709 workforce respondents completed interviews using Web, paper-and-pencil, telephone, and in-person modes, yielding an unweighted interview completion rate of 73.7 percent (72.0 percent weighted). The overall unweighted response rate is 72.8 percent (70.9 percent weighted). These numbers include 379 interviews with a second workforce respondent in a sampled classroom.

In addition to these 4,709 workforce respondents with completed interviews, sampling weights are provided for an additional 483 records: one corresponding to each center-based provider for whom administrative data (but no survey interview) are available. Because no center-based provider interview was completed for these centers, and because permission to interview had not been secured, no workforce interview could be completed for these centers. The sampling weights allow for estimation of the size of the workforce population in centers associated with public schools for whom no workforce data are available.

Summary of Response Rate Information

For readers' ease of reference, the table below brings together the case count and response rate information presented for each of the component surveys throughout this section.

Exhibit 3.1 2019 Response Rates by Component Survey

Data Collection Statistic	Household	Unlisted Home-based	Listed Home-based	Center-based	Workforce
Number with known eligibility from screening	93,875	Part of HH screening	6,709	16,211	Part of Center-based interview
Screening rate (unweighted %)	85.5	79.0	77.7	87.6	
Screening rate (weighted %)	85.7	79.2	74.9	89.2	
Number of completed interviews	8,576	1,670	4,231	6,917	4,709
Interview completion rate (unweighted %)	63.5	62.0	90.3	70.1	73.7
Interview completion rate (weighted %)	64.4	57.5	90.5	69.9	72.0

Data Collection Statistic	Household	Unlisted Home-based	Listed Home-based	Center-based	Workforce
Overall response rate (unweighted %)	54.3	49.0	70.2	61.5	72.8
Overall response rate (weighted %)	55.2	45.5	67.8	62.4	70.9

Note: Center-based count of completed interviews includes centers with data drawn from administrative records. Please see Center-based Provider Survey discussion above for further details.

4. Geography in the NSECE

The NSECE includes several features that allow for analyses of geographically-based questions:

1. geographic variables in public use data files,
2. provider cluster design,
3. levels of geography within the complex sampling design,
4. correspondence of 2019 and 2012 geographic units, and
5. opportunities for data linkage.

We highlight each below. While the first of these is available in public use files, many geographic variables are available only through the restricted data access.

Geographic variables in public use data files

All NSECE public-use data files include community characteristics files that draw on American Community Survey data to describe the location of the sampled household or provider. Community characteristics include community poverty density, the proportion of the population that is not non-Hispanic white, and other features of the local economy. Characteristics are defined in the household data for the provider cluster, and in the provider data files for a similarly defined group of adjacent census tracts outlining a provider catchment area. Additional geographic context variables in all NSECE public use files include census region and urbanicity. Researchers can use these public use variables, for example, to contrast provider characteristics in high vs low-income areas, or in rural vs urban locations.

A categorical variable indicates the distance from household to each reported ECE provider in the household survey data.

Most geographic variables in the public use data files have restricted use versions as well that provide finer-grained detail. In the household data, this includes distances from household to parental employment locations.

Provider cluster design

The provider cluster design described in Section 1. Sample Design (above) sets up the NSECE data to contribute policy-relevant literature on how parents define search areas, providers define catchment areas, and reimbursement rates and other policies may therefore define child care markets. (Identifying sample members that are in the same cluster requires Level 2 restricted use access.)

Within a single NSECE sample, such as center-based providers, the provider cluster design allows description of centers that are near one another and are located near many of the same families. Researchers can use the clusters of centers, for example, to characterize communities' ECE supply. On the household side, researchers can study whether parents in more compact provider clusters use providers closer to home than do parents in more spread out clusters.

Across NSECE samples, the coordination of the four component NSECE surveys means that households, providers, and workforce members have been sampled from the same approximately 750 provider clusters across the country, and data can be linked to understand how households' characteristics relate to the ECE supply near them, or how center-based and home-based providers' characteristics align within communities.

Levels of geography within the complex sampling design

Both the 2012 and 2019 NSECE support estimates below the national level. For example, it is possible to generate state-level statistical estimates on a variety of topics and for many states (though not for all 50 states nor the District of Columbia, due to small sample sizes). Whether or not a state-specific analysis is possible depends on the data file to be used, the variables of interest, and the characteristics of the state. In general, analyses are more feasible for 1) states with larger populations (such as California and Texas), and 2) broad populations rather than narrow sub-groups (e.g., all centers vs centers that provide subsidized care to infants and toddlers). State identifiers are available through the Level 2 restricted use process and have specific disclosure guidelines on how analyses may be reported. Since all states and the District of Columbia are included in both years of the NSECE, it will often be possible to make state-level 2012 to 2019 comparisons when it is possible to generate a state-level estimate from a single year's data.

Correspondence of 2012 and 2019 geographic units

The vast majority of PSUs in the 2012 data also appear in the 2019 data. (An NSECE PSU is a county or cluster of counties.) While the NSECE design does not support

estimates for any specific PSU, researchers could conduct longitudinal analyses at the PSU-level. Such research questions might ask whether households' access to ECE improved in more populous counties relative to less populous counties between 2012 and 2019.

While longitudinal analysis is possible for states and PSUs between 2012 and 2019, tract-level longitudinal change cannot be estimated because SSUs (census tracts or clusters of tracts) were re-sampled within PSUs for the 2019 NSECE. And because SSUs were re-sampled, the likelihood of individual households, providers or workforce members appearing in both years' data is also small and not based on statistical sampling principles that would allow estimation of longitudinal change.

Sample sizes for many groups are smaller in 2019 than in 2012 due to a variety of data collection and sampling-related factors. As a result, in general, we would expect precision to be somewhat better for estimates using 2012 data relative to 2019 for any given subgroup, although any loss of precision would depend on the size of the subgroup and the nature of the estimate. For some very small subgroups, the 2019 data may not be adequate to provide an informative comparison relative to 2012.

Opportunities for data linkage

The NSECE data have been designed to permit linking to complementary ECE data sources, subject to requirements for handling restricted-use, confidential data. Geographically based data sets can be merged: researchers can link state- and county-level data such as Temporary Assistance for Needy Families (TANF) and Child Care Development Fund (CCDF) rules databases or state- or local-level licensing requirements. At the provider level, one could attach such provider characteristics as NAEYC accreditation or whether or not the provider accepts CCDF subsidies. This ability to link greatly extends the value of ACF's investment in the NSECE and leaves open the potential that the data set could be useful in research that could not be anticipated at the time of the study's design or implementation.

Geographical linkages are even more valuable with two years of data. For example, researchers could link 2012 and 2019 provider data to their applicable licensing or subsidy policies in each year to explore how provider characteristics vary in jurisdictions with different licensing or subsidy policies, and how these have changed from 2012 to 2019.

Both the 2012 and 2019 household questionnaires requested consent from parents to link their children's data to state or local government records for child-care subsidy, Supplemental Nutritional Assistance Program (SNAP or "Food Stamps"), TANF, Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), Medicaid, or other programs that provide assistance to families. It is possible that household- or child-level longitudinal analyses could be conducted through linkage to records from time points different from the survey years. For example, researchers could conduct child-level longitudinal analyses by linking administrative data from 2020 to children in the 2012 NSECE. In that situation, the survey data would be from 2012,

and the later measures would come from administrative data. Similarly, publicly available provider records could be linked to provider survey data for longitudinal analyses; one example of such analysis is Wong, et al. (forthcoming), which links 2012 survey data on listed home-based providers to the 2019 sampling frame.

5. Additional Distinctive Features

Survey design. The 2012 and 2019 NSECE constitute a “repeated cross-sectional design.” Each component survey in both years is designed to generate nationally representative estimates. In addition, the data collection methodology and the questionnaires have been very closely aligned to maximize the feasibility of analytic comparisons at the national level. Thus, the topical areas and feasible research questions for both years are similar, and in many cases, over-time comparisons can be made across the two years.

The exhibit below includes the 2012 and 2019 sample sizes for selected populations. Although we were aiming to achieve roughly the same sample sizes across each data collection effort, final sample sizes varied across populations. In some cases, we made design choices that led to different sample sizes in 2019 versus 2012. These sampling choices are documented in the sampling design section above. In other cases, this variation in sample sizes stems from the prevalence of different subgroups and the ever-increasing challenges of collecting data.

Exhibit 5.1 2012 and 2019 Sample Sizes for Selected Populations

	2012	2019
Households with at least one child under 6	7,034	5,675
Households with youngest child 6-12	4,951	2,859
Unlisted home-based provider	2,052	1,670
Listed home-based provider	3,934	4,231
Center-based provider serving children 5 and under, not yet in kindergarten	7,771	6,904
Center-based workforce member serving children 5 and under, not yet in kindergarten	4,832	5,191

Terminology within the ECE literature has grown organically, often with overlapping meanings or inconsistent interpretations. The NSECE questionnaires have attempted to avoid such terminology wherever possible, adopting lay language and focusing on objective attributes wherever possible. These data have the potential to help clarify appropriate definitions for type of care and other key concepts in ECE research through

a flexible approach that will allow equating to a variety of terms used in other data sources.

In addition to policy and programmatic changes since 2012, emerging research findings have advanced the field by identifying trends and policy-relevant issues that affect ECE. Together with those changes, recent research findings and trends in the following topical areas related to ECE served as the foundation for the 2019 NSECE data collection: ECE usage, supply and access; complexity in ECE, home-based care, provider financing, quality/quality improvements, and workforce issues.

ECE usage, supply, and access. The 2012 NSECE highlighted the strong reliance of families (particularly families in low-income households) on unlisted providers, both paid and unpaid (NSECE, 2016a). It also highlighted the need for regulated care during non-standard hours and the need for infant/toddler providers, particularly in areas of high-poverty density and in rural areas (NSECE, 2016b). Research substantiated and expanded those findings regarding unmet care needs and child care deserts, or areas that have few providers (Werner, 2016; Isaacs, Katz, Minton & Michie, 2015; Anthony, Muenchow, Arellanes & Manship, 2016).

Since the last fielding of the NSECE, multiple policy and programmatic changes had been implemented to improve ECE availability, quality, and affordability, as well as parents' awareness of ECE options. These changes occurred at the federal, state, and local levels, such as the passage of federal legislation that carried with it new program rules for the Child Care and Development Fund child care subsidies program and Head Start performance standards and, at the state level, through expansions of state public pre-K programs, quality rating and improvement system (QRIS), and scholarships designed to make high-quality care more affordable for families in low-income households. The field has also advanced since the 2012 NSECE fielding in conceptualizing families' access to ECE, work that was incorporated into the 2019 NSECE surveys (Friese, Lin, Forry & Tout, 2017).

As in 2012, the 2019 household survey gathered information about the characteristics of households with children under 13 years of age, employment and non-parental care arrangements for all children in the household, and information about families' preferences and choices of non-parental care to meet the needs of families and their children. The NSECE data allow researchers to examine changes in the characteristics of households and their use of non-parental care and how significant developments since 2012 may have addressed parents' changing ECE needs.

Home-based care. A significant advantage of the NSECE is its emphasis on both the usage and availability of ECE services; the 2012 NSECE provided a wealth of information on the state of the nation's ECE supply at that time. This survey identified the number of home-based providers caring for children ages birth to 13 years, including those who were listed or unlisted, paid or unpaid.

Nationally representative research on family child care (FCC)⁵ has been seriously hampered by differing state licensing requirements and differing extents of underground provision of services. By capturing core descriptive data on all home-based providers in a consistent manner, regardless of whether they are licensed, registered, or unregulated, the NSECE data provide a full portrait of FCC characteristics and prices and allow researchers to investigate whether these are consistently related to state regulatory standards, requirements, and enforcement.

Complexity in ECE. As a broad characterization, it can be said that the NSECE design enables capturing the full spectrum and variety of different types of entities, often at the expense of detail about those entities. For example, the instrumentation captures all forms of non-parental care used by households for all of their children under age 13. The sample design emphasizes representing as broadly as is feasible the full range of formal and informal providers of care to children under age 13. For example, in 2012, 21.7 percent of children age 36 to 71 months are served by more than one type of regular ECE provider: usually one formal and one informal/unpaid (NSECE, 2016a). Within the provider group, the focus is on characterizing the mix of age groups served or the blend of government program participation. These data are often unique for supporting analyses such as, “How do households balance the needs of all of their children under age 13 in selecting ECE arrangements?” and “How do providers combine care for different age groups and participation in various public programs, and how do these vary with the characteristics of the care offered?”

Provider financing. The 2012 NSECE collected new, nationally representative data that advanced the field’s knowledge of the revenue and some expenditures of ECE providers at that point in time. These data have been useful in comparing which types of care received government funding and revenue from other sources, calculating average fees by type of care and age of child, and comparing data on the labor-related costs inherent in providing ECE. New issues related to provider financing emerged after the administration of the 2012 NSECE, in part as a result of the NSECE findings. The 2019 NSECE furthers our understanding of the link between cost and price of care, on one side, and features of quality, on the other, by collecting data related to programs’ costs, advertised price, and the mix of funding sources and in-kind supports used to address costs in different ECE settings. The 2012 NSECE established the first nationally representative incidence rates of providers combining funding streams, but the availability of these rates now introduces new questions about how providers are using their multiple funding streams (e.g., within classrooms or among children). Through the addition of targeted new questionnaire items and analyses, the 2019 NSECE further attempts to distinguish different ways providers have of combining funding to better describe multiple-funded centers.

Participation in public programs such as Head Start, state or locally-funded Public Pre-K, and CCDF are clearly indicated in the center-based and home-based provider survey data. Parents are often less aware of funding sources and mechanisms, and so are

⁵ In this document, we mostly avoid the common terms family child care (FCC) and family, friend, or neighbor care (FFN), combining all home-based ECE into a pool to be distinguished in analysis. For data analytic reports, we have defined the terms listed and unlisted as they relate to other commonly used terms.

unable to report public program participation as accurately. The 2019 NSECE included new questions in the household questionnaires to help researchers identify which public funding programs might be associated with which center-based ECE arrangements. New analyses of the 2019 data may test out how well these new questions work.

Quality and quality improvements. Despite more than two decades of research focused on the importance of early childhood quality (Yoshikawa et al., 2013), nationally, quality of care across many different early childhood settings (as currently defined and measured) still typically remains in the low to moderate range. Although the 2012 NSECE did not include observational measures of quality, data related to structural predictors of quality⁶ (e.g., provider education, use of a curriculum) reflected differences by type of care, (center-based and home-based providers) and funding (Head Start, pre-K, regulated community-based programs) across multiple indicators (NSECE, 2015).

Efforts to improve quality since 2012 have included the expansion of QRIS (Tout, Epstein, Soli & Lowe, 2015), modifications to program standards, and the use of monitoring to formalize expectations regarding structural quality, such as teacher education, curriculum, and group size (Maxwell, Sosinsky, Tout & Hegseth, 2016). The 2019 NSECE data provides needed information on how quality improvement efforts are associated with actual improvements in (predictors of) quality in the two settings that tend to be associated with lower quality ratings: infant/toddler classrooms and family child care settings. The 2019 NSECE also provides needed data on the implementation of instructional supports, curricula, and quality improvement—topics emphasized by recent federal policies and programs.

Workforce. Estimates from the 2012 NSECE provided the first counts of ECE workers since 1990 and the first-ever self-reports from this population regarding their professional qualifications, attitudes and beliefs, and compensation (NSECE, 2013). Research since the 2012 NSECE has focused on the importance of strengthening practitioner competencies and qualifications as a necessary means to improve program quality. The decentralized nature of the ECE workforce poses challenges in how to systematically provide additional education and development opportunities (Institute of Medicine and National Research Council of the National Academies, 2015). Nevertheless, ECE workers, providers, researchers, policy experts, and other partners express interest in identifying the multiple access routes to increased ECE professional development, especially for those who are new to the field or who currently lack state and/or national certification (Limardo, Hill, Stadd & Zimmer, 2016). Some recent work in this area has focused on the preparation and ongoing continuing professional

⁶ Structural predictors of quality refer to features that are quantifiable and regulated, such as teacher–child ratio, group size, and teacher educational level (NICHHD, 2006). These predictors have been studied mostly in center-based programs. New research is exploring specific features of quality that are unique to home-based providers. For example, the OPRE-funded Home-based Child Care Supply and Quality study will provide data to better understand their incidence in this type of ECE.

development of those ECE providers who care for infants and toddlers (Epstein, Halle, Moodie, Sosinsky & Zaslow, 2016; Madill, Blasberg, Halle, Zaslow & Epstein, 2016).

The compensation of ECE workers is another area of interest (Whitebook, McLean & Austin, 2016; NSECE, 2013; Whitebook, Phillips & Howes, 2014). Because the 2019 NSECE included a sample of both listed home-based and center-based providers, it is possible to analyze the 2019 state of ECE workforce compensation, as well as shifts in the workforce across funding streams and provider auspice (e.g., in response to market shifts such as the expansion of public pre-K).

Finally, the mental health of ECE workers and its relationship to providing quality care and child outcomes is another growing area of interest (Raver, Blair & Li-Grining, 2012; Madill, Halle, Gebhart & Shuey, 2018). The 2019 NSECE workforce questionnaires for ECE workers (both the home-based provider and classroom staff) included the Center for Epidemiologic Studies Depression Scale, a widely used measure of depression.

6. Additional NSECE Resources

The NSECE team produces a wide variety of resources to help individuals analyze the NSECE data and better understand findings and implications based on NSECE data. The list of resources grows consistently, but includes:

Data use resources at

<https://www.childandfamilydataarchive.org/cfda/pages/cfda/nsece.html>

- ▶ Data file documentation including User's Guides for each public use main data file and Manuals for each Quick Tabulation data file.
- ▶ Recorded webinars that highlight data use techniques and analytic findings
- ▶ Self-guided tutorials and technical resources for using the data

Information on study design and analytic findings on the OPRE websites for the study <https://www.acf.hhs.gov/opre/project/national-survey-early-care-and-education-nsece-2012>

<https://www.acf.hhs.gov/opre/project/national-survey-early-care-and-education-2019-2017-2022>

- ▶ Annotated questionnaires
- ▶ Analysis products

Finally, a wide variety of researchers have published analyses using NSECE data. Many of these publications are cited here:

<https://researchconnections.org/childcare/resources/129666>

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Appendix I: Data Collection Supplement

1. Introduction

This supplement provides additional information on the data collection procedures employed in the 2019 NSECE. Sections 2 through 5 provide an overview of each survey. Each survey overview describes first the standard data collection approach used for the majority of cases sampled for that survey. Then we turn to some important subgroups that received different treatments, detailing what that work entailed. Although unlisted and listed home-based providers completed the same questionnaire, we treat them separately in this document because they received different data collection treatments.

To make this supplement informative and easy to follow, each survey overview follows the same structure and contains the components outlined in the table below.

Survey Overview Component	Description/notes
Data collection flow chart	As part of the description of the standard data collection approach used for most cases, we present a data collection flow chart that outlines the multiple paths a case could take
Graph showing proportion of completes by month	When a survey collected data across modes, this graph depicts mode by month
Table illustrating proportion of completes by month	This table is closely related to the graph. When a survey collected data across multiple modes, the table will show proportion of completes by mode.

2. Household Survey

The NSECE household sample consisted of 109,783 households. Data collection with this sample was twofold. First, all sampled housing units had to be screened to determine eligibility for the household and unlisted home-based provider questionnaires. Second, respondents in eligible households were asked to complete the relevant questionnaire(s). The majority of households were not eligible for either questionnaire and therefore were not approached after screener completion. This section describes data collection procedures for the NSECE household survey; Section 3 of this appendix will explain procedures for those households identified through the household screener as being eligible for the unlisted home-based provider questionnaire.

Household survey data collection began in November 2018 and continued through July 2019. The household screener and questionnaire were programmed in both English and Spanish. The screener was available for completion across multiple modes (including paper-and-pencil self-administered questionnaire [SAQ], self-administered web questionnaire, and interviewer administered by phone or in person). The screener was used to identify households with children under the age of 13 for participation in the household survey.

We estimated that the household survey would take an average household about 60 minutes to complete. Because the household survey questionnaire was a complex instrument, there was no self-administered version of the questionnaire; an interviewer was required to complete the survey with the respondent by phone or in person. We offered a \$20 gift card to eligible households for participation in the survey. Exhibit A1.2.1 below documents the eligibility criteria for the household survey.

Exhibit A1.2.1. 2019 NSECE Household Screener Eligibility Criteria

Survey	Eligibility Criteria	Sub-sampling rate
Household survey	Household has at least one child under the age of six.	100 percent of eligible households sampled for household interview
	Household has a youngest child between the ages of 6 and 13.	70 percent of eligible households sampled for household interview. ⁷
Home-based provider survey (for unlisted home-based providers)	Individuals who regularly provide care in a residential setting for one or more children under age 13 who are not their own at least five hours per week. (These individuals do not appear on administrative lists of regulated or registered home-based providers.)	100 percent of households with an eligible individual sampled for unlisted home-based provider interview. If a household had more than one eligible individual, one individual was sampled.

Section A below outlines the standard data collection protocol that most household sample cases received during the 2019 NSECE data collection effort. In section B, we turn to special subgroups in the household sample and offer a brief description of how their data collection treatment differed.

A. Household Survey Standard Data Collection Protocol

Initial Mail Cycle

The NSECE team conducted a pre-field screening effort by mail beginning in November 2018 and extending into early winter. The initial mailing went to all households with a valid address and included a paper-and-pencil SAQ version of the screener along with a letter asking households to complete the short questionnaire and return it in the postage-paid envelope. This mailing also included a \$2 bill to encourage households to return the questionnaire after the first mailing.

Follow-up mailings went to households that had not returned the initial screener. First, we sent a thank you/reminder postcard within a short timeframe to encourage

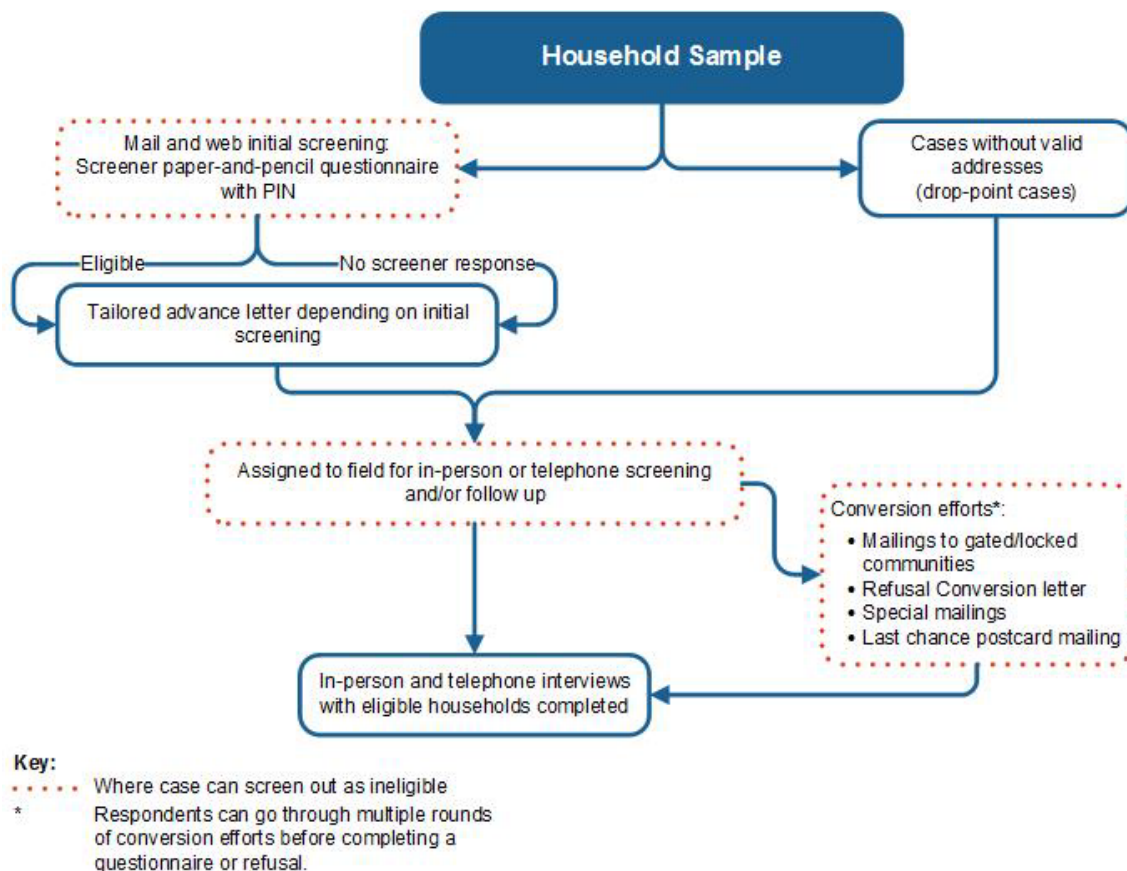
⁷ Exhibit A1.2.1. At the start of data collection, the sub-sampling rate for households with only school-aged children was 80 percent. In March 2019, the eligibility criteria was edited to sample in 50 percent of households with only school-aged children, decreasing the eligibility rate and reducing the overall number of eligible cases for fieldwork.

households to return their completed questionnaire. The postcard also provided a link to the web questionnaire and asked households to complete the screener online if they preferred. About two weeks later, we mailed a follow-up letter that included a second paper SAQ screener and link to the web version of the screening questionnaire. By screening as many households as possible in low-cost modes prior to the start of the 2019 field period, we hoped to reduce burden on respondents, the costs associated with in-person screening, and the workload on field staff at the start of data collection in January. In total, we received 10,689 unique completed screeners by mail and web through this effort.

The data collection flowchart in Exhibit A1.2.2. depicts the paths that household cases followed depending on their response to the household pre-field screening effort. (See the left-hand side of the flow chart.)

1. **Completed mail screener – Eligible for household survey.** When a household completed a screener indicating they were eligible for the household survey, the NSECE team sent a letter thanking them for their response and alerting them that a field interviewer would be contacting them soon to ask some additional questions. These mailings were sent in batches as we received eligible screeners, a process that continued into the early field period.
2. **Completed mail screener – Not Eligible for household survey.** If a household completed a pre-field screener that indicated that the household was ineligible, we made no further contact.
3. **No completed screener.** When a household did not respond to the initial screening effort, we assigned them to field interviewers for telephone and in-person follow up beginning in January 2019. Prior to interviewer outreach, the NSECE team mailed these households a letter that reintroduced the study and informed the household that a field interviewer would contact them in the near future. Interviewers attempted to screen these households and administer the household questionnaire if eligible.

Exhibit A1.2.2. 2019 NSECE Household Survey Data Collection Flowchart



Fieldwork

In order to facilitate field outreach for all households, the NSECE team matched the household sample to multiple telephone commercial databases to identify any telephone numbers associated with the sampled households. Field interviewers contacted households by phone where possible and in person when needed for screening and interviewing. While phone matches were reliable in 2012 and helped reduce the number of in person visits, the match rate was significantly lower in 2019 with fewer accurate phone numbers returned than anticipated.

The NSECE central office team provided support to field interviewers working cases in the field, coordinating special mailings with in-person follow-up activities. For instance, we developed a mailing in the spring to help make progress on households that were known to be eligible but had not yet completed the interview. We mailed a postcard encouraging participation along with a packet of flower seeds. Interviewers were instructed to visit these households within one week of the mailing and attempt to complete the survey or schedule a time for the interview.

Similarly, coordinated mailings were used to contact sampled households in areas where field interviewers were too far away to visit regularly. In anticipation of planned

travel by interviewers to these areas, we sent mailings with the household screener SAQ along with a note explaining that someone would be visiting them soon to talk further about the study. Throughout the last months of data collection, we made use of other coordinated mail and interviewer outreach to target cases. In the last month of data collection, we sent a last-chance mailing to households in an effort to complete surveys with the remaining eligible households before the end of data collection.

Results

At the end of data collection, we screened 93,875 households and had completed 8,576 surveys with eligible households. See exhibits A1.2.3 and A1.2.4 below for the proportion of completed household surveys by month.

B. Important Household Subgroups

Drop-point Addresses

The household sample included 2,392 drop-point addresses. The right side of the flow chart in Exhibit A1.2.2 shows the data collection path for these cases. Drop points refer to the addresses within the U.S. Postal Service Delivery Sequence File (DSF) where mail is distributed in one location for multiple unit structures, such as a ‘community mailbox’ in which mailboxes are clustered together for a set of households rather than being located on each household’s property. As specific unit numbers are not specified in the DSF, NORC statisticians prescribed a descriptive field that contained the numerical representation of unit sampled out of the total number of street addresses (e.g., unit 3 of 10). These selected units did not receive a mailing and instead were assigned directly to field staff for face-to-face resolution. Interviewers were charged with canvassing the assigned address and identifying the unit assigned. Since unit numbers and sequences can vary by location, interviewers received training to first confirm the total number of units present for the street style address provided and to use a standardized counting method for selecting the appropriate unit. Attempts were made to screen the unit identified. If there were discrepancies between the total number of units identified in the field and the total number of units identified in the DSF, interviewers were instructed to report the issue to the NSECE Helpdesk for resolution by the statistical team. There were 103 drop-point cases that completed a household survey.

Households in Gated Communities or Locked Buildings

Some sampled households were located in locked buildings (such as high-rise apartment buildings) or gated communities that were inaccessible to field interviews. We used a number of methods to attempt to contact individuals living in these households. To gain permission for interviewers to enter buildings, the NSECE team sent letters to property managers with information about the NSECE and related materials such as brochures. In some cases, the team also sent letters to community authorities such as mayors, sheriffs, or other officials to ensure that we would be able to collect in-person data. We sent these “community authority” letters based on previous experiences with certain types of communities or if we received inquiries from

community officials, interacted with officials during data collection, or in response to concerns expressed by other community members. A more targeted letter was used for sampled households on military bases that required special permission from residents to allow access. Attempts were also made to contact respondents directly. Field interviewers would request special gated-community letters be sent directly to sampled households in gated communities, and occasionally, people living in locked apartment buildings. These mailings included a brochure with an overview of the NSECE and encouraged households to make an appointment with a field interviewer to complete the household questionnaire. All special requests mailings were identified by the field and fulfilled by the NSECE team once a week. In addition to mailings, a commercial database was used by the NSECE team to find phone numbers associated with sampled addresses. We conducted these phone number searches regularly throughout data collection.

Households on Tribal Lands

Some NSECE sample was located in tribal areas and therefore required special permission to contact them about participating in the study. The NSECE team began gaining cooperation with tribal leaders before the start of data collection. This work extended into the field period. Once permission was received in a particular area, the NSECE team mailed the household screener SAQ and the household brochure to all sampled housing units located in the approved area. These cases were then assigned to field interviewers for follow-up. Interviewers would contact households by phone or in person to screen for eligibility. If the household included children under 13 years old, the interviewer would attempt to complete the interview.

Exhibit A1.2.3. Percentage of Total Household Survey Completes by Month (Graph)

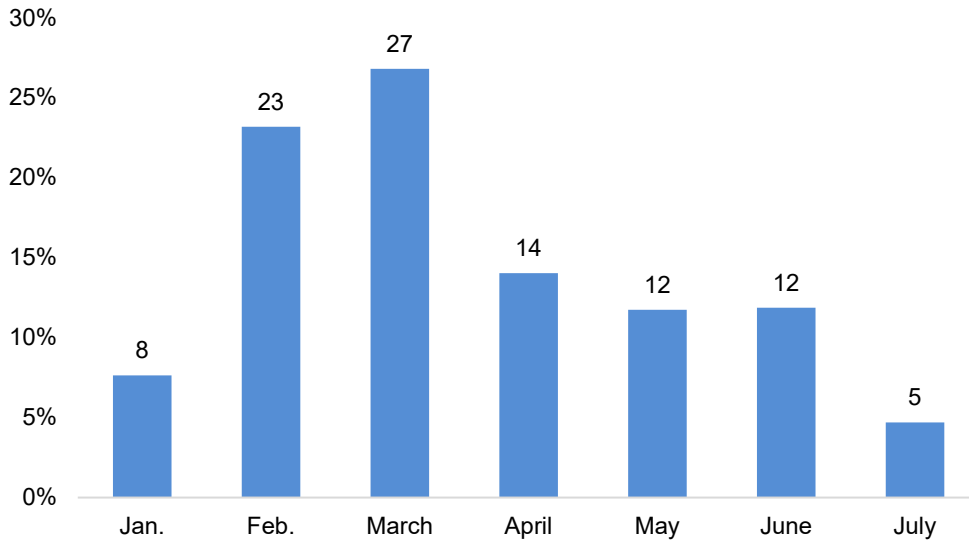


Exhibit A1.2.4. Percentage of Total Household Survey Completes by Month (Table)

2019	Jan.	Feb.	March	April	May	June	July	TOTAL
Completed Questionnaires	7.6%	23.2%	26.8%	14.0%	11.7%	11.9%	4.7%	100.0%

3. Unlisted Home-based Provider Survey

The NSECE team also screened the household sample to identify any individuals in the household who:

- ▶ cared at least five hours each week,
- ▶ for children under 13,
- ▶ who were not their own, and
- ▶ did so in a home-based setting.

We refer to these individuals as “unlisted” home-based providers because they are not identified through the provider sampling frame built from administrative lists. Households with addresses known to appear in the provider sampling frame were asked to complete the household interview if determined eligible in the screener, but were not asked to complete the home-based provider interview regardless of their

screeener responses since they would have been eligible to be sampled for the listed home-based provider survey.

Because they were identified through household screening, unlisted home-based providers were fielded in parallel with household cases (January through July 2019). Although these unlisted home-based providers are identified through a different sample source, they completed the same questionnaire as “listed” home-based providers. The questionnaire was designed with multiple paths to accommodate the diverse groups of individuals who look after children in a home-based setting. It was available in both English and Spanish and could be completed across multiple modes (web, interviewer administered by phone, or in person).

Because unlisted providers are less likely to run complex programs, we estimated that the survey would take about 20 minutes for them to complete. Unlisted home-based providers were offered a \$10 gift card for participating in the survey.

Section A describes the standard data collection protocol. The data collection flowchart shown in Exhibit A1.3.1 illustrates the paths an unlisted home-based provider case could take, depending on the outcome of the household mail screening effort. Section B then turns to some unlisted home-based provider subgroups that received different treatments.

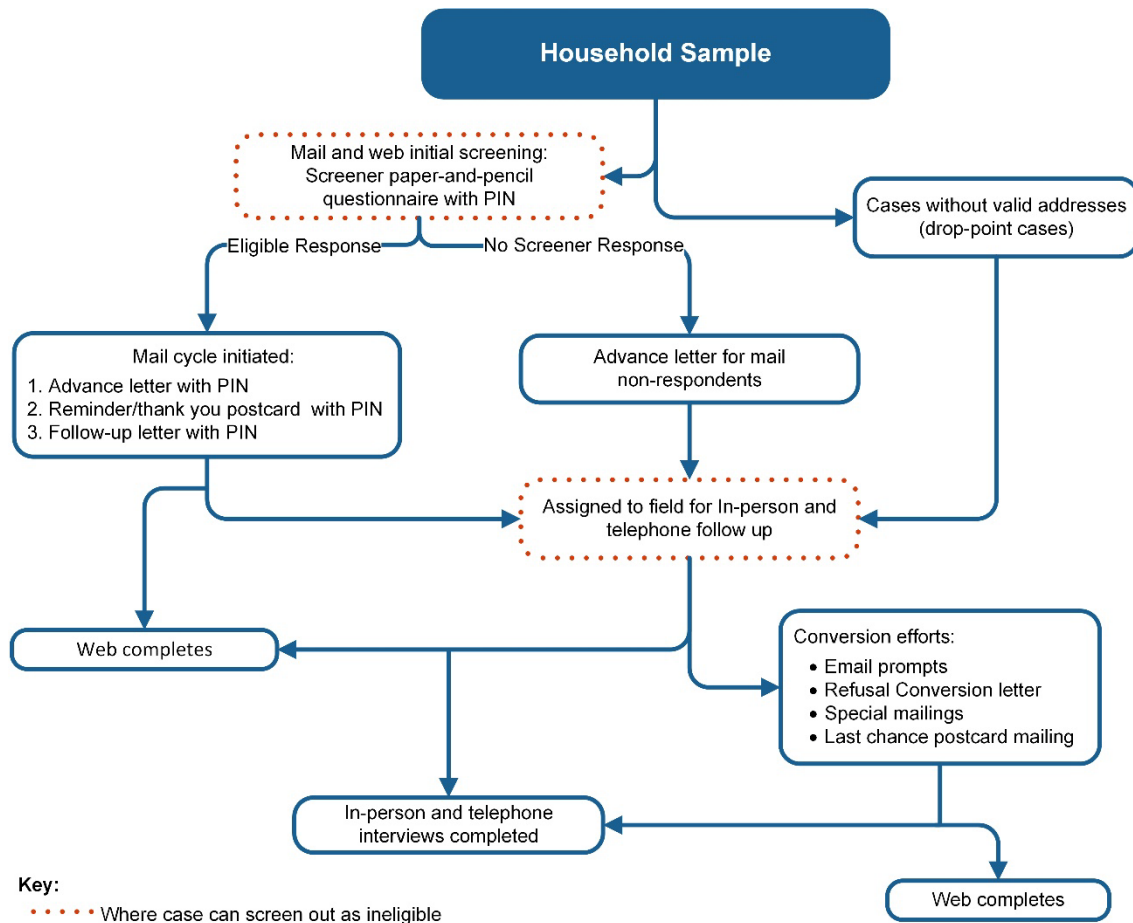
A. Unlisted Home-based Provider Standard Data Collection Protocol

Initial Mail Cycle

The left side of the flowchart in Exhibit A1.3.1 depicts the data collection protocol for cases that completed a screener during the household pre-field mail screening effort, which indicated that they were eligible for the unlisted home-based provider questionnaire. We contacted these cases initially by mail in the hope of completing as many cases as possible by web before field outreach was needed.

They received a series of three mailings beginning with an invitation to participate in the survey in January 2019. This first letter explained how they were identified, described the purpose of the study, and provided the access information for the web survey. It also mentioned that eligible participants would receive a \$10 thank you gift for participation. Approximately two weeks later the NSECE team sent a follow-up thank you/reminder postcard to eligible unlisted home-based providers who had not yet completed the questionnaire. Two weeks later, non-respondents received a follow-up third letter, alerting them that a field interviewer would be contacting them to complete the questionnaire. Field interviewers attempted outreach by phone where available and then shifted to in-person visits as the field period progressed.

Exhibit A1.3.1. 2019 NSECE Unlisted Home-based Provider Survey Data Collection Flowchart



Fieldwork

If a household did not respond to the pre-field screener mailings, we mailed the letter encouraging households to complete the web screener and explaining that an interviewer would be contacting them soon. If an interviewer identified an eligible unlisted home-based provider through screening, they attempted to conduct the interview at that time. If that was not feasible, they attempted to collect the eligible individual's email address (and any other contact information) in order to send the web survey access information by email.

Interviewers were responsible for following up with eligible unlisted home-based providers throughout the data collection period to address questions, provide technical support, and prompt them to complete the questionnaire. The NSECE team provided additional support to field interviewer outreach, responding to mail requests and sending emails to non-respondents on a regular basis.

Toward the end of data collection, we sent a last-chance postcard to encourage any lingering unlisted home-based providers to complete the survey. This postcard noted

the critical role informal caregivers play in families' lives and detailed the reasons why the NSECE needed to hear from them. This last chance mailing was coordinated with an email containing similar information and a field interviewer visit where possible.

Results

At the end of data collection, we had identified 3,295 eligible unlisted home-based providers through screening the household sample. Of these, 1,670 completed the unlisted home-based provider survey. See Exhibits A1.3.2 and A1.3.3 below for the proportion of completes by mode and month.

B. Important Unlisted Home-based Provider Subgroups

Because unlisted home-based providers were identified through screening of the household sample, many of the special subgroups associated with the household survey apply here as well—such as drop-point addresses and households on tribal lands. Below we describe special subgroups that are particular to unlisted home-based providers and therefore received a different treatment after eligibility was determined through the household screener.

Households with Multiple Unlisted Home-based Providers

A household could contain multiple individuals eligible for the unlisted home-based provider survey. When an interviewer screened a household using the computer-assisted household screener, the screener randomly selected one eligible household member to serve as the respondent for the home-based provider questionnaire. A different process was needed when a household completed the mail screener indicating that more than one person looked after children in a home-based setting. These households were assigned directly to field interviewers who were instructed to re-screen the household using the computer-assisted screener. A special call note identified these cases and provided instructions to interviewers. Information collected in the mail screener was also added to the case records to help facilitate contact. Once interviewers administered the computer-assisted screener and the respondent was sampled, the interviewer would attempt to complete the questionnaire or collect additional contact information for future follow-up efforts.

Unlisted Home-based Providers on Provider Sampling Frame

Prior to data collection, we checked the selected household survey sample against the provider sampling frame so that no unlisted home-based provider interviews would be conducted with households that contained a listed home-based provider. Because of a substantial rate of missing addresses on some states' home-based provider lists, we were not always able to identify overlaps between the household sample and the provider sampling frame. After data collection, we reviewed all addresses where an unlisted home-based provider had been identified to again check for presence on the provider sampling frame. Addresses identified as appearing on the provider sampling

frame were reclassified as listed home-based providers and assigned the appropriate selection of probability and sampling weight.

Exhibit A1.3.2. Percentage of Total Unlisted Home-based Provider Survey Completes by Mode and Month (Graph)

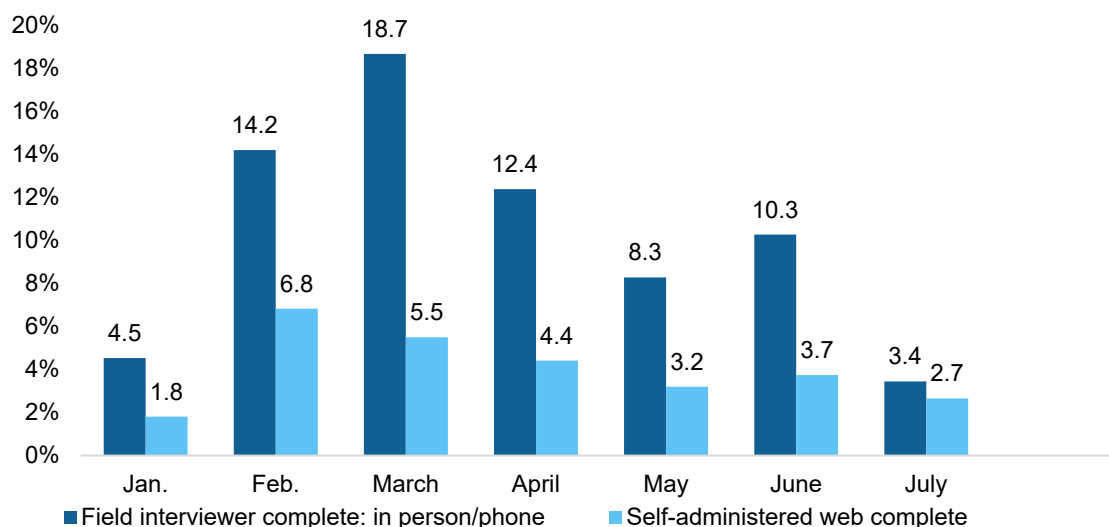


Exhibit A1.3.3. Percentage of Total Unlisted Home-based Provider Survey Completes by Mode and Month (Table)

Mode	Jan.	Feb.	March	April	May	June	July	TOTAL
Field	4.5%	14.2%	18.7%	12.4%	8.3%	10.3%	3.4%	71.8%
Web	1.8%	6.8%	5.5%	4.4%	3.2%	3.7%	2.7%	28.1%
TOTAL	6.4%	21.0%	24.2%	16.8%	11.5%	14.0%	6.1%	100.0%

4. Listed Home-based Provider Survey

The NSECE team sampled home-based providers from the NSECE provider sampling frame to be screened for eligibility for the home-based provider survey. We refer to these individuals as “listed” home-based providers because they are identified through the provider sampling frame built from administrative lists.

One of the challenges we experienced during the 2012 data collection effort was identifying whether listed home-based providers were still providing care to children under the age of 13. Close to 30 percent of our sample turned out to be ineligible in 2012. To help us identify these individuals more easily in 2019, we added a screener to the home-based provider questionnaire and tailored our outreach to account for the possibility that a sampled address may no longer be providing care to children. The

home-based provider screener first identified whether individuals were looking after children under 13 who were not their own. (Eligibility for listed home-based providers did not depend on the number of hours that children received care or the relationship of providers to children.) If the provider was not providing care, the screener collected additional information to help us understand when they last cared for children and why they had stopped. If the screener determined that an individual was an eligible provider, the individual moved into the main questionnaire.

The NSECE team collected data from listed home-based providers beginning in January and extending through July 2019. We adopted a multi-mode data collection approach to provide home-based providers with convenient and flexible options for participating in the survey: options included a web survey designed for self-administration as well as a version of the survey to be administered by interviewers either in person or by phone. The questionnaire was available in both English and Spanish across all modes.

We estimated that the survey would take about 40 minutes to complete. Eligible providers were offered a \$15 gift card as a post-paid gift for participation. Section A describes the standard data collection approach we employed in 2019 for listed home-based providers. Section B then outlines important subgroups in the listed home-based provider sample and how their treatment differed from the majority of these provider cases.

A. Listed Home-based Provider Standard Data Collection Protocol

Initial Mail Cycle

The NSECE team fielded listed home-based providers in parallel with center-based providers, beginning with a series of initial contacts by mail in early January 2019 to all cases that had a valid mailing address. This path is shown in Exhibit A1.4.1. We limited our initial outreach to mail in order to complete as many questionnaires through self-administration as possible and thereby preserve resources for more challenging cases later in the field period.

The mail cycle included a total of three mailings. The initial letter was sent to approximately 8,500 listed home-based providers inviting them to complete a short survey online. Because we expected that a significant number of listed home-based providers would no longer be caring for children, the initial mail contacts were designed to encourage self-report of eligibility through completion of the home-based provider screener. The letter encouraged individuals to answer a few questions about whether they were currently looking after children or not and included a \$2 bill to encourage response.

This initial letter was followed by two more contact attempts by mail: a follow-up postcard sent about a week later and another letter to non-respondents after two weeks. At the end of the mail cycle, we had about 385 completed web surveys.

Fieldwork

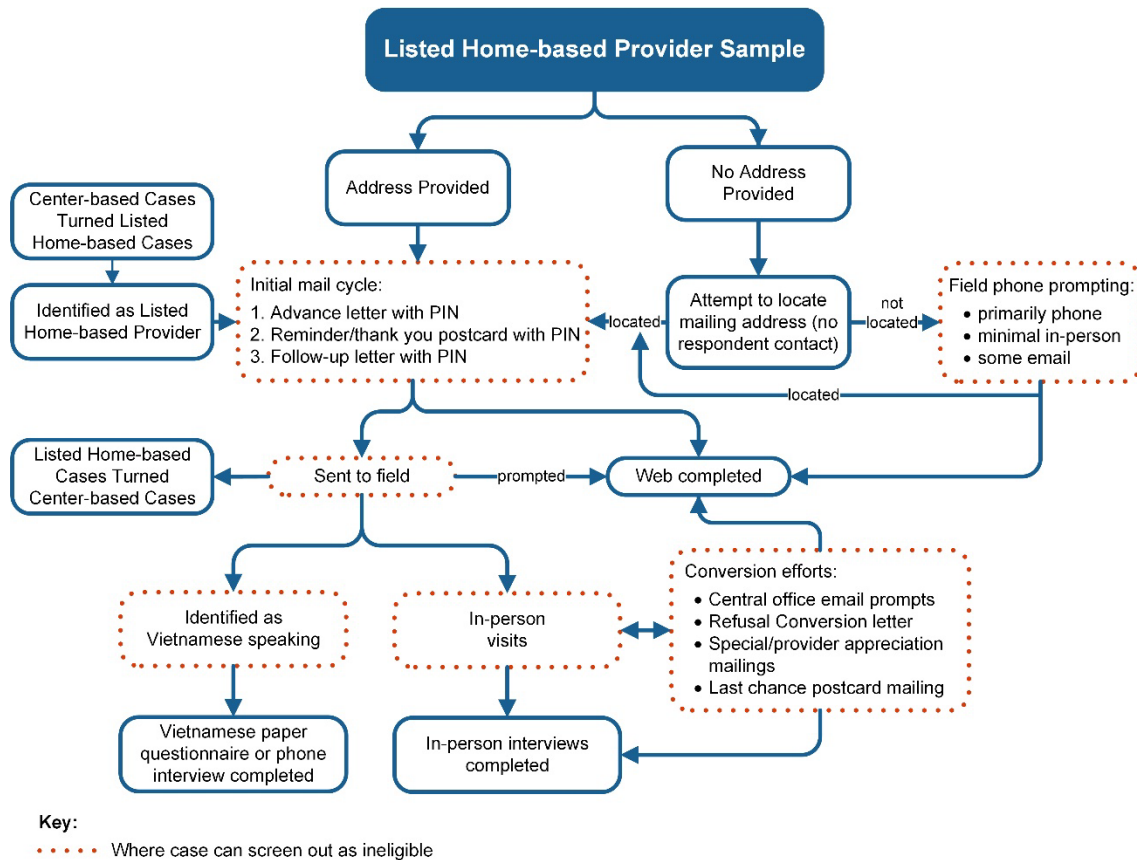
After the mailing cycle had been completed, remaining listed home-based provider cases were assigned to field interviewers in mid-February for follow-up by phone or in person. Interviewers were trained to identify whether sampled providers were eligible for the survey and gauge whether they were aware of the study. If they knew about the study, interviewers attempted to gain cooperation and encourage completion of the survey. If not, they introduced the study and provided supporting materials. When possible, interviewers completed the survey with providers by phone or in person. Interviewers also provided key support throughout the field period, helping to troubleshoot questionnaire and technical issues or answer questions about privacy concerns or the survey content. Interviewers were also encouraged to collect email addresses of providers so that the NSECE team could send mass emails encouraging participation.

In the later months of data collection, the NSECE team applied multiple conversion efforts, including additional mail and email contacts. For providers who were known to be eligible, we sent tailored letters and emails emphasizing the importance of participation for individuals looking after children in a home-based setting. These contacts noted that eligible providers would receive a \$15 thank you gift for participating. For those cases whose eligibility remained uncertain, the NSECE team sent a screening postcard to help resolve additional cases at the end of data collection. Although the postcard was designed to help us identify providers no longer looking after children, nearly all responses were from eligible providers.

Results

At the end of data collection, we had a total of 4,231 completed listed home-based provider surveys.

Exhibit A1.4.1. 2019 NSECE Listed Home-based Provider Survey Data Collection Flowchart



B. Important Listed Home-based Provider Subgroups

Home-based Providers with Incomplete Address Information

Some states have laws that prohibit them from providing complete street address information for home-based providers who are licensed or registered in their state. About 1,000 sampled listed home-based provider cases came from such states. Having incomplete street addresses for a good portion of our sample impeded data collection and presented a significant challenge for field staff because they required considerable locating work in addition to the contacting, prompting, and gaining cooperation needed with other cases. These cases are depicted on the right-hand side of the data collection flowchart in Exhibit A1.4.1 above. (We often had ZIP code, city, and/or telephone number for these providers.)

To manage these cases, the NSECE team conducted a pre-field locating effort to help identify address and phone information for these cases prior to the initial mailing cycle that began in January 2019 so that they could receive the initial 2019 NSECE mailings and have the opportunity to complete the survey. Cases for which we were unable to

find addresses through locating were assigned to a team of phone specialists who contacted them by phone when a number was found and attempted to collect an email address or mailing address so that we could share project materials and the link to the web survey.

After data collection, we observed higher rates of duplicate records and ineligibility for home-based providers with missing address information. Our sampling weight construction process therefore treated incomplete-addresses cases separately from complete-address cases.

Also after data collection, we identified home-based providers who had been sampled through the household sample but—with more complete information—could be matched to home-based providers appearing in the provider sampling frame. In our final data files, these providers are considered listed home-based providers.

Switches between Home-based and Center-based Samples

Field interviewers discovered that a number of listed home-based providers (99 cases) were center-based providers when they visited the location in person. We experienced this misclassification in 2012 as well and found that it happened most often because of the way in which specific states organize their administrative lists: for example, by mandating that home-based providers be included on licensing lists. The same misclassification occurred for center-based providers that were actually home-based providers. When this issue was discovered, we instituted a process for moving providers from one sample group to the other. Any cases that seemed to be misclassified were researched online, and when we were able to confirm that a case was assigned to the incorrect sample group, we made the sample group switch. In other cases where we were less certain, field interviewers made phone calls or in-person visits to determine what sample group the case should belong to.

Listed Home-based Providers on Tribal Lands

Some NSECE sample was located in tribal areas and therefore required special permission to contact about participating in the study. The NSECE team began gaining cooperation with tribal leaders before the start of data collection. This work extended into the field period. Once permission was received in a particular area, the NSECE team mailed the advance letter and the listed home-based provider brochure to the sampled providers to introduce them to the study and explain its importance. These cases were then assigned to field interviewers for follow-up.

Home-based Providers Requiring Vietnamese Language Materials

The home-based provider survey was available both in English and Spanish across all modes. During the data collection field period, we identified more than 50 eligible providers who were not comfortable completing an interview in English or Spanish, as their preferred language was Vietnamese. To accommodate these providers, we developed an abbreviated Vietnamese self-administered questionnaire that was mailed to these providers toward the end of the data collection period. A field interviewer who

was fluent in Vietnamese made outreach to these providers and assisted them in completing the questionnaire where needed. About 10 home-based providers completed the Vietnamese questionnaire, and an additional almost 20 chose to complete the English questionnaire. Most of these were listed home-based providers.

Exhibit A1.4.2. Percentage of Listed Home-based Provider Survey Field and Web Completes by Month (Graph)

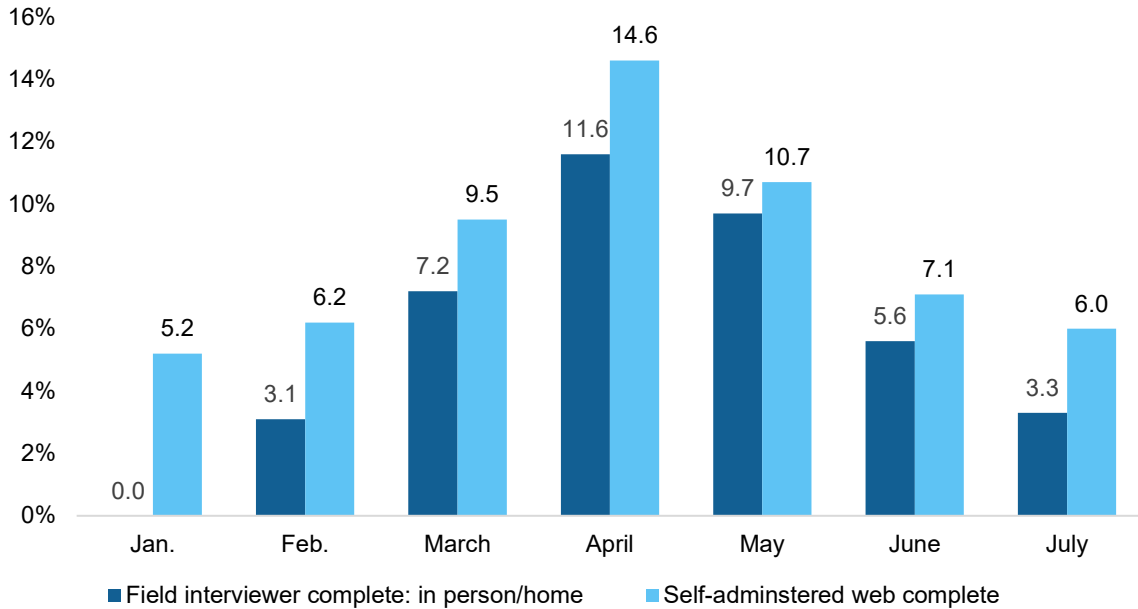


Exhibit A1.4.3. Percentage of Total Listed Home-based Provider Survey Completes by Mode and Month (Table)

2019	Jan.	Feb.	March	April	May	June	July	TOTAL
Field	0.0%	3.1%	7.2%	11.6%	9.7%	5.6%	3.3%	40.5%
Web	5.2%	6.2%	9.5%	14.6%	10.7%	7.1%	6.0%	59.3%
SAQ	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.2%
TOTAL	5.2%	9.3%	16.7%	26.2%	20.4%	12.7%	9.5%	100.0%

5. Center-based Provider Survey

The NSECE team sampled center-based providers from the NSECE provider sampling frame to be screened for eligibility for the center-based provider survey. These providers were selected across two strata: 1) the known stratum that included providers likely to be eligible for the survey, and 2) the possible stratum that included providers less likely to operate an eligible ECE program at their location. (The possible stratum included elementary schools not known to have ECE programs, school-age programs

not known to serve children age 5 years and under, not yet in kindergarten, and other providers that did not qualify for the 'known' stratum.) The screener was designed to confirm providers' program information and determine whether they are eligible to participate in the survey. An eligible provider needed to meet four criteria:

1. Offer non-parental care, including early education, or supervision of children age 5 years and under, not yet in kindergarten;
2. Operate on a regular schedule of at least three days per week and two hours per day but not including residential care;
3. Offer ECE services above and beyond ad-hoc drop-in care (excluding entities such as shopping malls and YMCA open gym programs); and
4. Offer care during the school year (excluding entities that offer only summer or holiday care).

The screener also conducted an additional stage of sampling for more complex cases when more than one provider was operating at a selected address. For example, a public elementary school building might contain a public pre-K classroom operated by the school district and a Head Start program operated by a local community organization. These would count as two different providers. The second sampling routine identified one provider at the sampled location to serve as the respondent for the center-based provider questionnaire.

The NSECE team fielded the center-based provider survey between January and July 2019. To offer flexible options for participation in the survey, we developed a multi-mode data collection approach similar to that employed for the listed home-based provider survey. These included a self-administered web survey along with a version of the survey to be administered by an interviewer either in person or by phone. This questionnaire was programmed in English only. No respondents were identified by field staff as wanting to complete the questionnaire in Spanish.

The survey was expected to take about 45 minutes to complete. Eligible providers were offered a \$20 gift card for participating in the survey.

Section A below describes the standard data collection protocol applied to most center-based providers. Section B describes some subgroups that received slightly different treatments during data collection.

A. Center-based Provider Standard Data Collection Protocol

Initial Mail Cycle

The data collection protocol for center-based providers was similar to that of listed home-based providers, and both samples were fielded in parallel. Exhibit A1.5.1 illustrates the main paths that center-based provider cases could follow through data

collection The NSECE team initiated outreach to the center-based provider sample by mail, sending a cycle of three coordinated contacts beginning in January 2019. The initial mailing was sent to all center-based provider cases in the known stratum, along with any providers from the possible stratum that had been screened prior to the start of the field period (see below for more details on these cases). This included about 10,400 center-based provider cases. See the left-hand side of the flowchart in Exhibit A1.4.1 to view the path these cases followed. The letter explained the purpose of the study the reason for selection, and instructions for accessing the questionnaire. About two weeks later, we sent a thank you/reminder postcard to sampled providers who had not yet responded, again requesting their participation if they have not yet completed the questionnaire. We mailed the third letter approximately two weeks later to sampled providers who had not yet responded, informing them that a field interviewer would be contacting them in the near future. Each of the mailings mentioned the \$20 honorarium for their time. At the end of the mail cycle, about 315 center-based providers had completed the web survey.

Fieldwork

In mid-February, the NSECE team assigned any non-responding cases to field interviewers for additional outreach. Interviewers contacted sampled providers by phone and in person where possible. The initial aim of their outreach was to screen a provider location if eligibility had not yet been determined. If eligible, interviewers were instructed to gauge whether the provider was aware of the study and its purpose, identify an appropriate respondent for the survey, and gain cooperation for the study. In many cases, gaining cooperation efforts unfolded over multiple visits and/or phone contacts. As part of this work, interviewers would identify barriers to participation and try to resolve them. Common barriers included privacy and confidentiality concerns; permission issues (when a location needs permission from a main office, regional headquarters, or school district before participating); or technical issues with the survey, among others. Field interviewers also used these contacts to collect additional contact information (email, phone) from sampled providers for further follow-up. If possible, field interviewers completed the questionnaire in person or over the phone.

Throughout the field period, the NSECE team provided support to interviewers working in the field. The team fulfilled mailing requests from field interviewers multiple times a week and sent regular prompting emails to center-based providers who had valid email addresses associated with the case. Technical assistance and permission issues were submitted to the NSECE helpdesk, and the NSECE team would attempt to resolve these.

During the last months of data collection, the NSECE team adopted multiple conversion efforts to continue to complete surveys with our more challenging cases. We sent a special mailing to all remaining center-based providers for teacher appreciation week. This included a colorful postcard with a thank you note. In some cases, we included a key chain as a small thank you gift. The NSECE team also developed a series of contacts to be sent to school-based programs as the school year began to come to a close. These mailings explained how the NSECE is particularly beneficial for school-

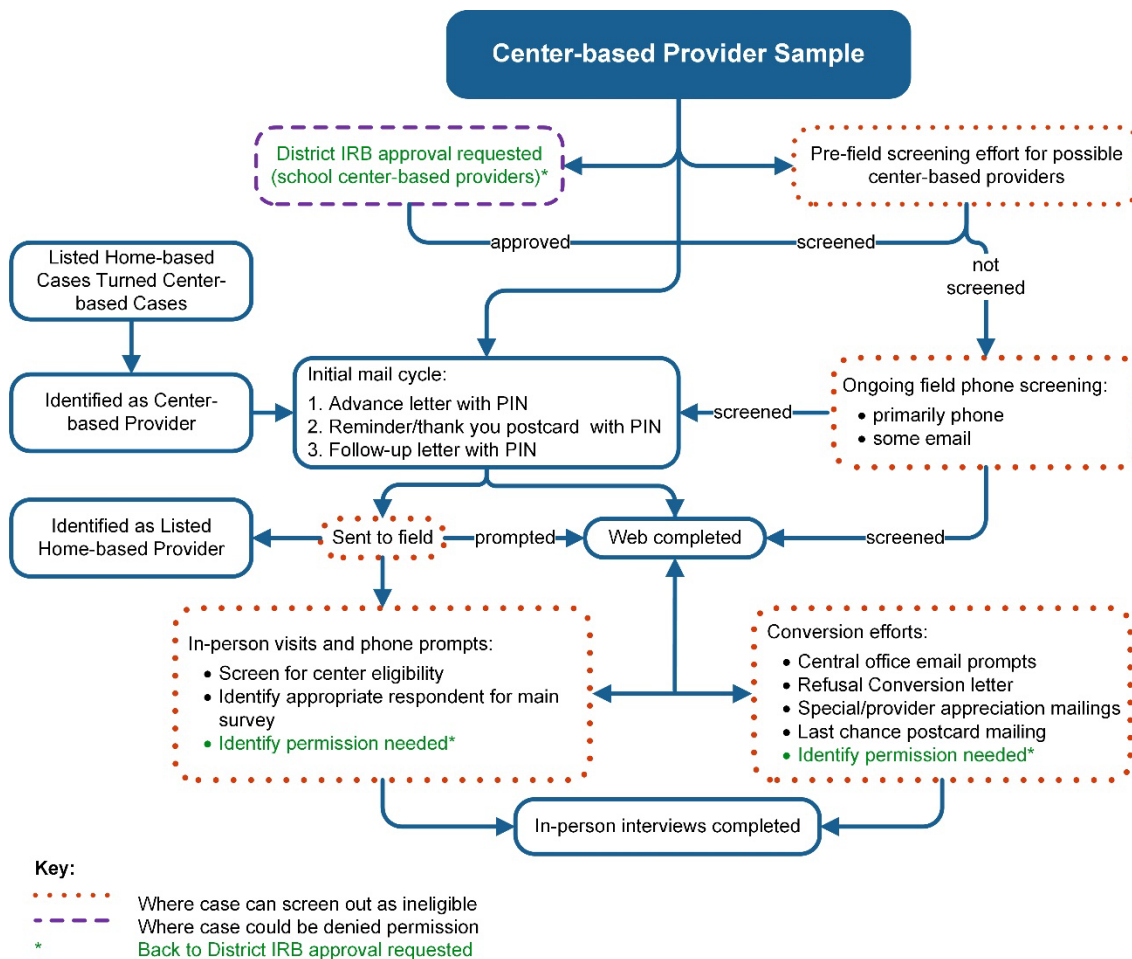
based providers and asked them to take some time to complete the survey. Because some school-based providers believed they could participate only when school was in session, these contacts also emphasized that providers were welcome to complete the survey after the close of the school year. Finally, we sent a last chance postcard in mid-July to alert providers to the close of data collection at the end of the month. Each special mailing was coordinated with follow up contacts by email and by field interviewers over the phone in person where possible.

Results

At the end of the field period, we had screened 16,211 center-based providers and completed a total of 6,917 surveys. Exhibits A1.5.2 and A1.5.3 show the proportion of center-based provider completes by month and mode of data collection.

B. Important Center-based Provider Subgroups

Exhibit A1.5.1. 2019 NSECE Center-based Provider Survey Data Collection Flowchart



Pre-field Screening of Center-based Providers

Because cases sampled in the possible stratum were less likely to be eligible for the center-based provider survey, we conducted a pre-field screening effort to help identify eligible providers before the start of data collection. This subgroup is depicted in the flowchart in Exhibit A1.5.1. Screening was conducted by a small team of interviewers in December 2018. They contacted providers to administer the center-based provider screener over the telephone. When a case screened eligible, it was folded into the mailing cycle that began in early January 2019. After the start of data collection, the telephone team resumed work on the remaining cases in late January. When an email was collected, the telephone team would email the survey invitation to eligible providers at the completion of screening. The NSECE team would then send a copy of the advance letter to these providers along with the brochure. Cases were then assigned to a local field interviewer for follow-up.

School District IRB Approvals and Providers Requiring Permission

Many public school districts and some Catholic diocesan districts have specific requirements for conducting surveys within their schools, and most have set schedules for when internal review board (IRB) packages will be reviewed—often only a few times a year. In order to balance the need to secure consent where required against resource constraints, the NSECE team followed an approach to securing district IRB approvals that is common in other school-based studies. In order to manage this process systematically, the NSECE team first grouped school districts into three tiers based on the number of sampled addresses they had. Then adopted a different approach to securing permission for each tier. The table below summarizes the tier assignments and the associated approach.

Tier	# sampled addresses in district	Approach
Tier 1	15 or more	Active outreach made to districts to see whether they had any type of IRB requirement that needed to be followed. If so, a complete package was submitted for review.
Tier 2	3-14	Passive district consent letter sent. Letter informed district of the survey and asked them to contact us by email or our toll-free line if they had questions or a specific protocol to be followed to conduct research within their district. It also stated that we would begin contacting schools within the next few weeks if we did not hear from them.
Tier 3	1-2	No contact made with these districts prior to data collection. We sent the survey outreach materials to sampled addresses in these districts, or telephoned them directly for screening.

We began preparing submission materials for Tier 1 districts in early fall 2018, with work continuing into the field period and ending in June 2019. The passive district consent letter for Tier 2 was sent in October 2018.

If a district approved participation in the 2019 NSECE before the start of data collection in January 2019, sampled providers were folded into the initial mail cycle. As we received approvals during the field period, the NSECE team sent a mailing to these newly released providers along with any approval letter from the district. These cases were then assigned to interviewers for additional outreach.

During data collection we received several additional requests for approval from cases located within school districts as well as from other providers as well. To manage these requests, we developed a series of generic materials that could be quickly adapted to a number of situations we had encountered, and we assembled a small team for field staff to help us address these requests. This same team also helped us to resolve a number of submissions that had gone unanswered and required multiple calls and emails to resolve. In late spring, there remained a number of district clearance packages for which we had received no response. In these cases we sent a letter informing districts that we had submitted the requested information and would begin outreach within three weeks unless they contacted us to say we were not permitted to contact providers in their district.

Switches between Center-based and Home-based Samples

Throughout data collection, field interviewers would notify the NSECE team when they identified providers that were assigned to the incorrect sample group. In total, 139 cases switched from the center-based provider to home-based provider group, while 99 cases changed from the home-based providers to the center-based provider group.

Center-based Providers Located in Tribal Areas

Some NSECE sample was located in tribal areas and therefore required special permission to contact about participating in the study. The NSECE team began gaining cooperation with tribal leaders before the start of data collection. This work extended into the field period. Once permission was received in a particular area, the NSECE team mailed the advance letter and the center-based provider brochure to the sampled providers to introduce them to the study and explain its importance. These cases were then assigned to field interviewers for follow-up.

Administrative Data Collection

Due to challenges securing permission from public school districts to screen or interview within their purview, we were concerned about differential non-response from these addresses. Because of the broad availability of administrative data for public schools, we were able to secure some critical variables for these addresses despite not being able to screen or interview them using survey techniques. We first sought 1) actual (rather than estimated or projected) enrollment data for 2) children age 5 years and under, not yet in kindergarten, at 3) the address-level for 4) the 2018–2019 school year for each sampled address in this category. If we were able to find this enrollment information, we used it to determine the eligibility status of the address for the center-based provider questionnaire. If screened eligible, we then sought additional information

from administrative data that would have been collected in the interview, such as enrollment and characteristics of enrolled students, sources of funding, hours of operation, weeks of operation, and staffing. We did not seek information that would not appear in administrative records, such as perception or attitude information, or classroom-level information for sampling a workforce member. Altogether, we were able to include ECE enrollment data, and possibly additional information, for 483 sampled addresses for whom we do not have questionnaire data. Researchers will find additional information about these cases in the center-based provider Quick Tabulation Manual and the User’s Guide for the center-based provider survey main public use data file, including how to identify these centers in the data file so that researchers may investigate the extracted data and choose their own approaches for handling the data for these addresses.

Exhibit A1.5.2. Percentage of Total Center-based Provider Survey Completes by Mode and Month (Graph)

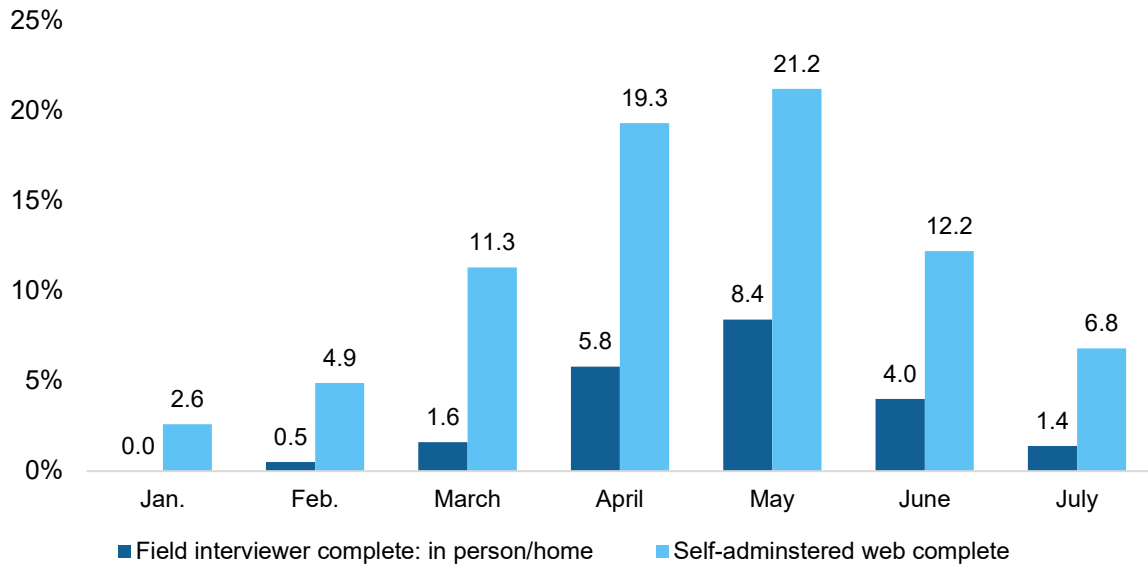


Exhibit A1.5.3. Percentage of Total Center-based Provider Survey Completes by Mode and Month (Table)

2019	Jan.	Feb.	March	April	May	June	July	TOTAL
Field	0.0%	0.5%	1.6%	5.8%	8.4%	4.0%	1.4%	21.7%
Web	2.6%	4.9%	11.3%	19.3%	21.2%	12.2%	6.8%	78.3%
TOTAL	2.6%	5.4%	12.9%	25.1%	29.6%	16.2%	8.2%	100.0%

6. Workforce Survey

The workforce survey has a close relationship to the center-based provider survey. As shown in Exhibit 1, respondents for the workforce survey are sampled directly from completed center-based provider questionnaires. The sampling procedure for the workforce survey was built into the center-based provider questionnaire. At the end of that survey, the respondent for the workforce survey was selected. This sampling procedure went through three stages:

1. The center-based provider questionnaire included questions about a randomly selected classroom or group within the program.⁸
2. The questionnaire asked the center-based provider respondent to enumerate all personnel who were primarily assigned to that classroom.
3. The sampling procedure in the questionnaire then randomly selected two staff members from among those enumerated as belonging to the randomly selected classroom, when possible. Workforce respondents had to be over 18 years old, work for the program responding to the center-based provider survey, and be associated with the selected classroom in that survey. The survey sampled selected individuals from the following staff roles: Lead Teacher, Instructor, Teacher (possibly including Director/Teacher), Assistant Teacher/Instructor, and Aide.

In most cases, we fielded only one workforce case per center; however, the NSECE team fielded two workforce cases for a subset of center-based providers randomly selected during the provider sampling stage. This was done to increase the total number of respondents for the workforce survey and to allow for additional research questions to be addressed.

Because the workforce survey sample depends on completed center-based provider questionnaires, the NSECE team did not begin fielding this survey until February 2019 once we had amassed a reasonable sample to begin outreach. Data collection continued through July 2019. The workforce questionnaire could be completed with an interviewer by phone or in person, or online through a web survey programmed for self-administration. Later in the field period, a self-administered paper-and-pencil version of the questionnaire was distributed to non-respondents to encourage completion. The workforce survey was available in English and Spanish across all modes except the paper SAQ. No Spanish-language paper SAQ was fielded, given the relatively low take-up by respondents of the English-language paper SAQ.

⁸ The classroom was identified by first randomly selecting one of the self-reported age groups that the center-based provider reported serving earlier in the questionnaire, then asking the provider to enumerate each of the classrooms or groups the provider maintained to serve that age group. One of these classrooms/groups was then selected for further questions.

The questionnaire was expected to take about 25 minutes to complete. Respondents were offered a \$10 gift card as a gift for participation.

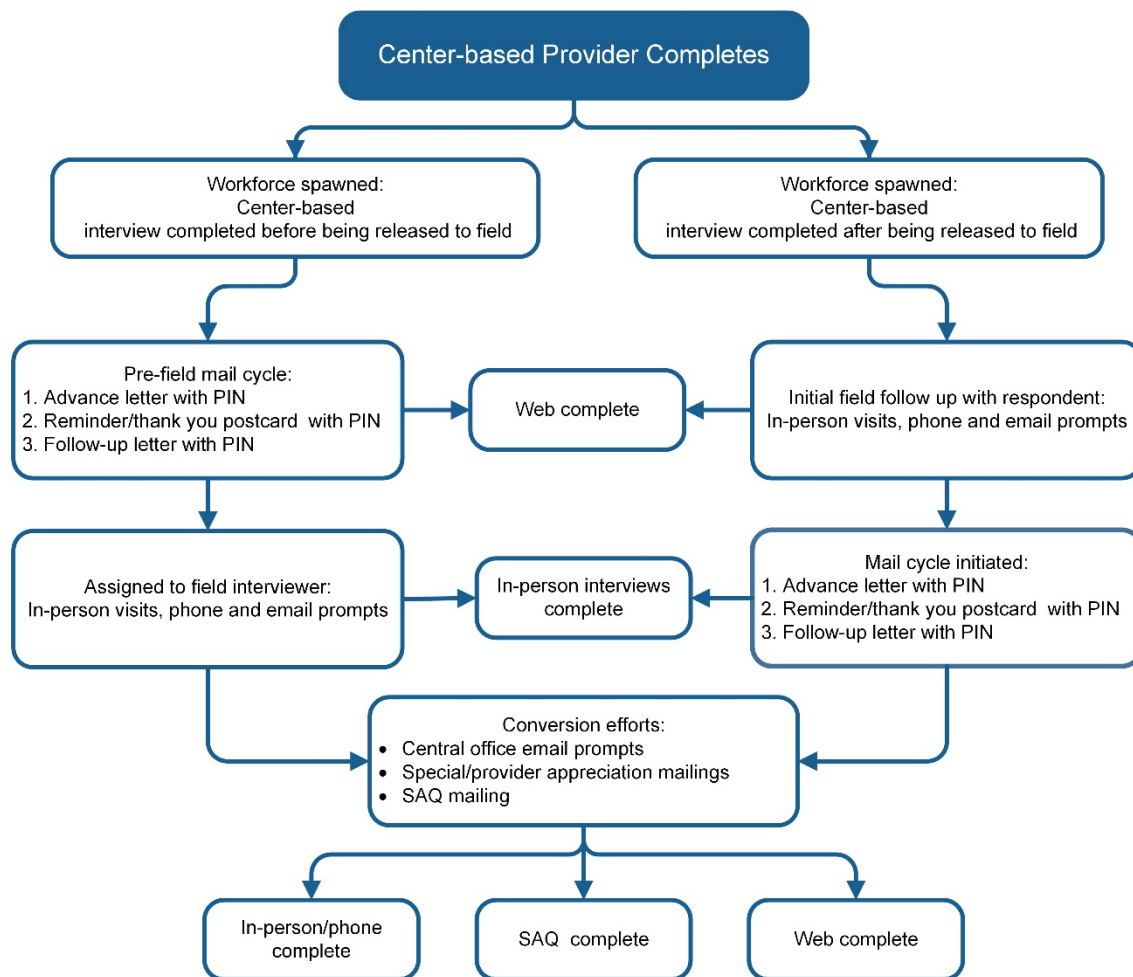
Section A below details the data collection approach we employed with most workforce cases. Section B then describes the cases that had unique circumstances and therefore required different data collection treatments.

A. Workforce Standard Data Collection Protocol

Initial Contact

Workforce cases could receive one of two treatments depending on what point in the field period the center-based provider questionnaire was completed: 1) cases spawned from center-based providers that completed during the initial mail cycle (January – late February 2019) and 2) cases spawned from center-based providers that completed after being released to the field (late February – July 2019). The data collection flow chart in Exhibit A1.6.1 illustrates these two paths.

Exhibit A1.6.1. 2019 NSECE Workforce Survey Data Collection Flowchart



Cases spawned from center-based providers that completed during the initial mail cycle. The initial mail cycle for center-based provider cases ran between early January and late February 2019. This path is depicted along the left-hand side of the flow chart. The NSECE team began outreach to these workforce cases through mail in February, sending a series of three contacts inviting them to participate in the survey. The initial letter explained the purpose of the study and why we were contacting them. It also provided access information for the web survey and mentioned the offer of a cash gift for participating. This mailing was followed a week later by a thank you/reminder postcard. Finally, another letter was sent about two weeks later, encouraging participation and explaining the benefits of the study for people who work directly with children in the classroom. At the end of the mail cycle, the NSECE team assigned cases that did not complete by web to field interviewers for prompting work. Because a relatively small number of center-based providers completed their interviews during the initial mail cycle, very few workforce interviews came from this path.

Cases spawned from center-based providers that completed after being released to the field for work. In most cases, the workforce respondent was spawned from a center-based provider case that was already assigned to a field interviewer and therefore received a slightly different treatment. These cases are depicted on the right-hand side of the workforce survey flow chart. If the center-based provider questionnaire was completed in person, the interviewer would work with the center-based provider respondent and attempt to meet the selected workforce respondent(s) to introduce the study and gain cooperation on the spot. If the survey could not be completed at that time, interviewers would provide the web survey access information so that the selected workforce respondent could complete at a later time. If the field interviewers were not able to meet with the selected workforce respondent, they would attempt to leave a packet of materials at the provider location and follow up at a later time by phone or in person. If the center-based provider survey was completed by web, interviewers would attempt to make contact with the selected workforce respondent(s) as needed. In some cases, they would send an email to provide the web survey link and access information when they were able. This work began in late February 2019 and extended through the end of data collection in July.

Workforce cases were worked in tandem by the NSECE central office team and NSECE field interviewers. Letters and letter timing for selected workforce members were the same whether the center-based provider interview occurred during the center-based provider mail cycle or through field work. If a workforce respondent completed the interview before the end of the mail cycle, the rest of the mail cycle was discontinued, and the workforce respondent received their gift card.

Fieldwork

Once initial contact was made by mail or in person, field interviewers would follow-up with selected workforce respondents regularly to prompt them to complete the survey. Contacting workforce respondents could be challenging because these individuals are often busy in the classroom or preparing for the following day. Interviewers had the greatest success when they were able to enlist the help of the center-based provider

respondent to make this connection, but not all respondents were willing to provide this assistance. Some center staff expressed general concerns about privacy and taking staff time away from the children. Interviewers were trained to address these concerns, sharing a questionnaire overview about what types of questions would be asked and offering to do the survey outside of center hours. In cases where the provider was unwilling to help, interviewers would leave materials for the selected respondent where possible or rely on alternate modes of outreach like phone, email, and mail.

In the later months of data collection, we employed several refusal conversion efforts to help gain completed surveys from non-respondents. The NSECE team sent regular email prompts to any non-response case throughout the last months of data collection. These emails explained the importance of the study and addressed some potential concerns respondents might have about participating. In addition, we sent special provider appreciation mailings similar to those sent to the listed home-based and center-based providers. Finally, the NSECE team mailed a self-administered questionnaire to any remaining non-respondents at the end of data collection to see if they would be willing to complete a paper-and-pencil instrument.

Results

At the end of data collection, we had spawned 6,561 workforce cases and completed surveys with 4,709. Exhibits A1.6.2 and A1.6.3 below show the proportion of completed interviews by mode and month.

B. Important Workforce Subgroups

Respondents No Longer Available

Throughout data collection there were instances when sampled workforce respondents were no longer available to participate in the survey. This situation arose most often when the workforce member left their job at the center, and we did not have any additional contact information to contact them outside their former place of employment. In these cases, we were able to replace the selected workforce respondent with another using the second sampled staff member that was being held in reserve. Reserve staff members were available only for centers randomly selected to have one classroom staff case. Centers selected to have two classroom staff eligible for participation already had both cases active in the field

When a sampled workforce respondent left a center, field staff would notify the NSECE help desk in order to get a new workforce case activated when available. The NSECE team would then review the case to make certain the respondent was eligible for replacement by the second sampled classroom staff member. If so, the original case was made inactive, and the reserve case was released to the field for follow up.

Respondents with Unusable/Unidentifiable Names

At the end of the center-based provider survey, the questionnaire randomly selected up to two staff members for a follow up workforce survey. The center-based respondent was then asked to provide the full names of selected staff so that we could contact them. In some cases, center-based provider respondents did not provide a complete name when requested and some were unusable. NSECE team members reviewed newly generated workforce cases each morning for this issue. Cases with insufficient name information were set aside, and field staff were instructed not to contact until the name issue could be resolved. These cases were then assigned to a field manager for follow up. They contacted center-based provider respondents to see whether they could clarify classroom staff names. When the center-based provider respondent was cooperative, field managers began the re-selection by rostering the classroom staff again. They then selected a workforce respondent using a randomized selection tool known as a Kish table, which factored in the total number of staff within the classroom. Once the selection was made, field managers then collected contact information, and updated the case record indicating that the workforce case was available for field follow-up.

Workforce Data for Center-based Providers Having Only Administrative (No Survey) Data

It was not possible for us to sample or interview workforce members from the center-based providers associated with public school districts where we did not receive permission to interview during the fielding period. (Please see the above discussion on 'Administrative Data Collection' in the Center-based Provider Survey for more information about these providers.) One workforce record is available for each of these 483 center-based providers so that researchers may understand the size of the population for whom these data are missing. The records are clearly identified in the data file. Please consult the User's Guide for the workforce main public use data file for more information about these records.

Exhibit A1.6.2. Percentage of Workforce Survey Field and Web Completes by Month (Graph)

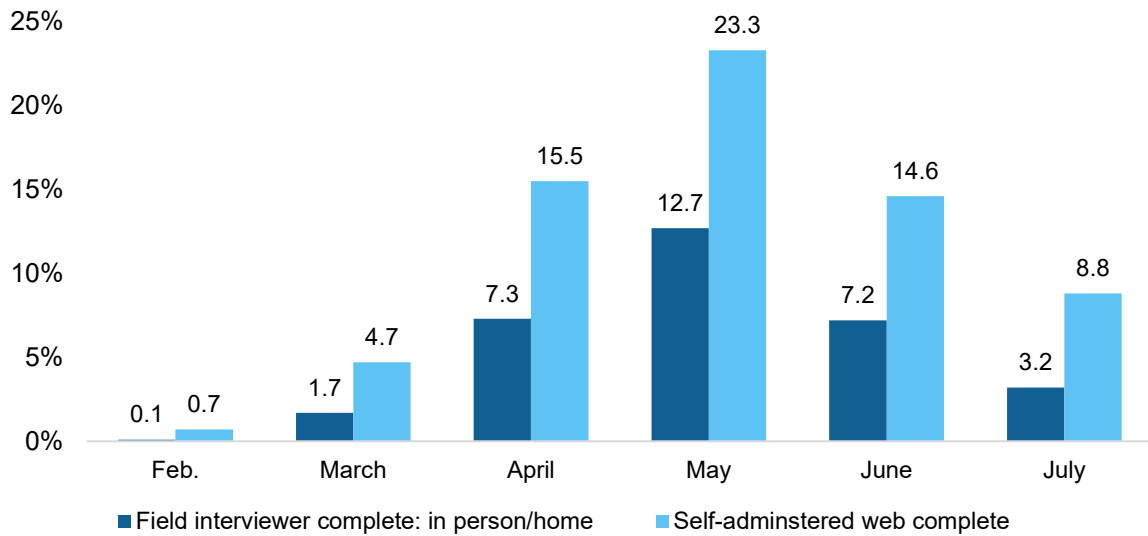


Exhibit A1.6.3. Percentage of Total Workforce Survey Completes by Mode and Month (Table)

2019	Feb.	March	April	May	June	July	TOTAL
Field	0.1%	1.7%	7.3%	12.7%	7.2%	3.2%	32.2%
Web	0.7%	4.7%	15.5%	23.3%	14.6%	8.8%	67.6%
TOTAL	0.9%	6.4%	22.8%	36.0%	21.8%	12.0%	100.0%