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Design and Operation of the National Survey of Children's Health, 2011-2012



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Centers for Disease Control and Prevention
National Center for Health Statistics

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Design and Operation of the National Survey of Children's Health, 2011–2012

Programs and Collection Procedures

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Centers for Disease Control and Prevention
National Center for Health Statistics

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National Center for Health Statistics

Charles J. Rothwell, M.S., M.B.A., *Director*

Jennifer H. Madans, Ph.D., *Associate Director for Science*

Division of Health Interview Statistics

Marcie L. Cynamon, *Director*

Stephen J. Blumberg, Ph.D., *Associate Director for Science*

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Abstract

Objectives

This report presents the development, plan, and operation of the 2011–2012 National Survey of Children’s Health, a module of the State and Local Area Integrated Telephone Survey, conducted by the National Center for Health Statistics. Funding was provided by the Maternal and Child Health Bureau, Health Resources and Services Administration. The survey was designed to produce national and state prevalence estimates of the physical and emotional health of children aged 0–17 years, as well as factors that may relate to child well-being including medical homes, family interactions, parental health, school and after-school experiences, and neighborhood characteristics.

Methods

A random-digit-dial sample of households with children under age 18 years, comprising both landline and cell- phone numbers, was constructed for each of the 50 states and District of Columbia. Households were screened for children who lived or stayed in the household. If one or more children were identified, the interview was conducted for one randomly selected child. Respondents were parents or guardians familiar with the children’s health and health care. An additional sample was fielded in the U.S. Virgin Islands (USVI).

Results

Excluding USVI, 847,881 households were screened from February 2011 through June 2012. Of these households, 187,422 reported age-eligible children living or staying in the household. Interviews regarding 95,677 eligible children were completed, including 31,972 from cell-phone interviews. The weighted overall Council of American Survey Research Organizations or CASRO rate for interviews was 38.2% for landline sample, 15.5% for cell-phone sample, and 23.0% overall.

Keywords: child health services • child well-being • family functioning • physical and emotional health

Design and Operation of the National Survey of Children’s Health, 2011–2012

by Matthew D. Bramlett, Ph.D., Stephen J. Blumberg, Ph.D., and Benjamin Zablotzky, Ph.D., National Center for Health Statistics; and Jacquelyn M. George, A. Elizabeth Ormson, M.S., Alicia M. Frasier, M.P.H., Danielle M. Vsetecka, M.A., Kim L. Williams, M.S., Benjamin J. Skalland, M.S., Heather M. Morrison, M.A., Kathleen B. Santos, M.S., Steven Pedlow, M.S., and Fang Wang, M.S., NORC at the University of Chicago

Introduction

For more than a century, the Maternal and Child Health Bureau (MCHB) of the Health Resources and Services Administration (HRSA) and its predecessors have been charged with promoting and improving the health of mothers, children, and families in the United States. MCHB’s current mission is to “provide leadership, in partnership with key stakeholders, to improve the physical and mental health, safety, and well-being of the maternal and [child population] which includes all of the nation’s women, infants, children, adolescents, and their families, including fathers and children with special health care needs” (1). MCHB staff rely on data from population-based systems to evaluate how well this broad mission is fulfilled and to determine the impact of MCHB programs and activities.

Although national data on children’s health and well-being indicators are available from numerous ongoing surveys, these data sets cannot be used to produce valid and reliable state estimates for all 50 states and Washington, D.C. (D.C.). Therefore, in 2003, MCHB sponsored the first National Survey of Children’s Health (NSCH) (2) through the State and Local Area Integrated Telephone Survey (SLAITS) program to create meaningful and comparable estimates of health and well-being across the 50 states and D.C. for all children.

MCHB also sponsored the 2007 NSCH (3) and the 2011–2012 NSCH to continue monitoring the health of U.S. children. This methodology report documents the 2011–2012 NSCH design and procedures.

SLAITS Program

The SLAITS program, conducted by the National Center for Health Statistics (NCHS), is a broad-based surveillance system available at national, state, and local levels to track and monitor the health and well-being of children and adults. SLAITS surveys use the same sampling frame as the National Immunization Survey (NIS) and immediately follow NIS in selected households for efficiency and economy. In the course of identifying households with age-eligible children, NIS uses a random-digit-dial (RDD) sample and computer-assisted telephone interview (CATI) technology to screen more than 1 million households each year. The process to identify this large number of households—most of which are ultimately age-ineligible for NIS—is an opportunity to administer other surveys on a range of health and welfare-related topics in an operationally seamless, cost-effective, and statistically sound manner. Using the NIS sampling frame reduces the expense of developing a separate sampling frame and screening the sample for eligible households.

SLAITS surveys, also called modules, vary in content, duration,

and sample size based on the research needs of their sponsors. Sponsors work with NCHS to establish parameters including questionnaire design, sample size, number of completions, and other requirements. Since 2005, NORC at the University of Chicago has administered all aspects of SLAITS data collection operations. The staff at NORC program and test the CATI instrument, recruit and train interviewers who complete the targeted number of interviews, and prepare data files and related documentation.

Background

MCHB works to eliminate health barriers and disparities; improve the health infrastructure and systems of care; assure quality care; and acquire the best available evidence to develop and promote guidelines and practices for communities, states, and the nation. Findings from the 2011–2012 NSCH support these goals and provide an objective basis for federal and state program planning and evaluation efforts, especially the MCHB strategic plan goals and national performance measures. More information on MCHB is available from: <http://mchb.hrsa.gov/>.

To support these efforts, NSCH content is intentionally broad and addresses a variety of physical, emotional, and behavioral health indicators and measures of children's health experiences with the health care system. The survey includes an extensive battery of questions about the family such as parental health, stress and coping, and family activities, and it assesses the respondent's perceptions of the child's neighborhood. No other survey provides the breadth and depth of information about children, families, and neighborhoods with sample sizes sufficient to produce comparable state estimates.

NSCH data have a variety of uses for different stakeholders. For example, MCHB and state maternal and child health agencies can use these data to better characterize children's health status, understand their families and

communities, and identify the challenges they face in navigating the health care system. Federal and state Title V programs can use these data to plan and evaluate programs (4). Researchers and public policy analysts at state and federal levels can study the prevalence of uninsured children, the relationship of family health to children's health, and the effect of state programs on children's health and well-being. Finally, these data also provide baseline estimates for numerous Healthy People 2020 objectives (5).

Sample Design

The 2011–2012 NSCH used a state-level sample design that included landline telephone and cell-phone samples to address potential coverage bias. In 2011, 38.1% of all children aged 0–17 years lived in wireless-only households (6) and would not be included in the traditional RDD sample. Research has found that wireless-only households were significantly different from landline households; for example, adults in wireless-only households tended to be renters, were more likely to be non-Hispanic, and were more likely to live below the federal poverty level (FPL).

The targeted number of completed interviews in each state and D.C. was 1,800, with at least 600 from cell-phone interviews. Both the landline and cell-phone samples took advantage of the fact that NIS screening preceded a case's being screened and interviewed for NSCH; that is, these cases were already known to be households with children prior to being called for NSCH. Telephone numbers were initially selected from the telephone numbers randomly generated for the NIS screening effort. Therefore, procedures to draw the NIS sample were the first steps to draw the NSCH sample. However, additional sample cases were needed to achieve the targeted number of completed interviews in certain states for the landline sample, and in all states and D.C. for the cell-phone sample. In these cases, an augmentation sample was drawn for administering only the NSCH interview.

A separate landline RDD sample was also fielded for the U.S. Virgin Islands (USVI) during calendar Quarter 3, 2011. Because a cell-phone sample frame was not available for USVI at the time of fielding, a cell-phone sample was not fielded there.

The following two sections describe the basic NIS sample design and serve as a nontechnical description of the NSCH sample design and allocation procedures. [Appendix I](#) includes a more technical description of the sample design and weighting procedures. Further detail on the NIS sample design is available from: <https://www.cdc.gov/vaccines/imz-managers/nis/about.html>.

NIS Sampling Plan

NIS, conducted by the Centers for Disease Control and Prevention (CDC), was established to monitor vaccination levels of children within states and local areas. The estimation areas were nonoverlapping and cover the United States and USVI. In effect, NIS conducted a separate survey in each estimation area each quarter. The target number of completed interviews in each estimation area reflected the goal of obtaining an equal, effective number of children with adequate provider data in each estimation area. Thus, the national target for the total number of completed interviews was the sum of the targeted number of completed interviews in each estimation area. If necessary, the target for an estimation area in a quarter was adjusted to compensate for any shortfall or excess in previous quarters.

NIS consisted of two components: a survey of very young children (NIS–Child) and a separate survey of teenagers (NIS–Teen). The target population for NIS–Child was children aged 19 to 35 months, the primary target of immunization programs. Because less than 5% of U.S. households contain children in this age range, more than 1 million households per year were screened to identify enough households with eligible children.

In addition to the main NIS–Child survey, the second survey called NIS–Teen was also fielded with the NIS

sample. NIS–Teen monitored vaccination levels for children aged 13–17 years. Because the NIS–Teen target age range was much larger, fewer households were screened in the landline sample. Only a portion of the NIS landline sample was needed to meet the NIS–Teen targeted number of completed interviews.

Therefore, only a portion of the NIS landline sample was selected for the NIS–Teen survey. SLAITS modules also used the NIS screening sample and immediately followed the NIS–Child or NIS–Teen surveys. To reduce respondent burden, the sample selection process minimized the amount of the NIS sample that was selected for potential administration of both the NIS–Teen and SLAITS surveys.

The NIS cell-phone sample went through the same selection process to minimize the amount of sample selected for both NIS–Teen and SLAITS surveys in a given sampling area. However, the eligibility rate for NIS–Teen was much lower in the cell-phone sample, so a higher sample selection rate was required than in the landline sample. This resulted in a higher proportion of the available cell-phone sample being selected for both the NIS–Teen and NSCH interviews.

The NIS sample was an estimation-level design with 60 estimation areas (including USVI) for the landline sample and 59 estimation areas (excluding USVI) for the cell-phone sample. In 2011, NIS implemented a full dual-frame sample with cell-phone samples stratified at the estimation area level. At the start of 2012, the proportion of the cell-phone sample was increased, based on an optimum allocation given cost differentials between landline and cell-phone samples.

NIS used the list-assisted RDD method (7) for the landline sample, and the RDD method without list assistance for the cell sample because no directory listings existed for cell-phone numbers. The list-assisted method of RDD selected a random sample of telephone numbers from banks of 100 consecutive telephone numbers (e.g., 773–256–0000 to 773–256–0099) that contained at least one directory-listed residential telephone number. The sampling frames of

telephone numbers for both sample types were updated each quarter to reflect new telephone exchanges and area codes. For certain states, the landline and cell-phone augmentation samples used the same process as NIS to select sample lines, while ensuring no overlap with what had been selected for NIS.

NSCH Sample Design and Allocation

The goals of the NSCH sample design were to generate samples representative of populations of children aged 0–17 years within each state, and to obtain state-specific sample sizes that were sufficiently large to permit precise estimates of the population’s health characteristics.

To achieve these goals, state samples were designed to obtain 1,800 completed interviews with parents or guardians, with 600 of the interviews attained from the cell-phone sample and the remaining 1,200 interviews from the landline sample. For states with multiple NIS landline sampling areas, the number of children selected in each sampling area was determined by allocating the total of 1,200 children in a state to each sampling area within the state in proportion to the total projected number of households with children in the sampling area. This projected number was adjusted in each sampling area as needed, based on initial data collected from the NIS survey. Given this allocation, the number of households that needed to be screened in each sampling area was calculated, using the expected proportion of households with children under age 18 years in the sampling area. Then, the number of telephone numbers that needed to be called was computed using the expected working residential (household) number rate. The number of telephone numbers drawn was increased to compensate for the fact that not all respondents would agree to participate, leading to some degree of nonresponse.

The cell-phone sample was selected at the state level. Based on the target of 600 cell-phone interviews, the number of cell-phone lines that needed to be

screened in each state was calculated using the expected proportion of households with children under age 18 in the state. However, the NIS sample was not large enough to support this. In calendar Quarters 3 and 4 (July–December), 2011, and calendar Quarter 1 (January–March), 2012, cell-phone augmentation samples were fielded to attain the number of NSCH cell-phone targets for each state. Some states gained a large portion of cell-phone-completed interviews through the NIS cell-phone sample due to the large population within those states (e.g., Texas and California) and needed minimal amounts of augmentation sample to attain the target of 600 completed interviews.

For the cell-phone augmentation sample, the phone numbers were randomly selected at the state level, and the states were defined by the area codes of the phone number. In NIS, the estimation areas for the cell-phone sample were constructed based on the cell phone’s wire-center location.

The sample line needs were estimated using response rate information by state. An additional step was implemented in the calculation of sample lines for the cell-phone sample by taking into account higher mobility rates within the frame (e.g., people are likely to keep the same cell-phone number even if they have moved to a different state).

Drawing the Samples

After estimating the number of landline and cell-phone numbers needed to achieve the target number of interviews by sample type (landline and cell phone) in each area, the samples were drawn. The sample draw proceeded in two steps: First, telephone numbers were sampled in each area for NIS–Child and NIS–Teen as described above. Second, a portion of these telephone numbers in each area were flagged to be part of the NSCH sample. Thus, after these steps, every landline and cell-phone number sampled for NIS fell into one of four categories: (1) NIS–Child, (2) NIS–Child and NIS–Teen, (3) NIS–Child and NSCH, or (4) NIS–Child, NIS–Teen, and NSCH. Every effort was made to

minimize the flagging of cases for both NIS–Teen and NSCH, but some overlap was necessary between the two surveys in certain estimation areas (overlap sample). Overlap sample was required for both the landline and cell-phone samples of NSCH that were fielded through the NIS sample frame.

For the landline sample, in 13 states (Alabama, Colorado, Delaware, Florida, Indiana, Michigan, Minnesota, Missouri, Montana, North Carolina, North Dakota, South Dakota, and Wyoming) and D.C., the NIS sample was insufficient to obtain the desired number of NSCH completed interviews. Therefore, additional telephone numbers were drawn in the same manner as the NIS sample and categorized as NSCH-only sample (augmentation sample) during Quarter 1, 2012.

Because NIS could not provide enough cell-phone lines for all states, an augmentation cell-phone sample was fielded for all states and D.C. during Quarter 3, 2011, and for most states during Quarter 4, 2011, and Quarter 1, 2012. [Table A](#) shows the proportion of the NSCH sample that was augmented for each state by sample type; that is, for each state in [Table A](#), the proportion listed is the proportion of NSCH sample telephone numbers that were called specifically from the augmentation sample.

Conducting NSCH Interviews

Each telephone number selected for NSCH was called and screened for residential status and the presence of NIS age-eligible children (as necessary, i.e., the augmentation sample was an exception to this rule, because it was selected solely to administer NSCH and not NIS—these households were not screened for NIS age-eligible children, but for the presence of any children). NIS–Child interviews were conducted if an NIS–Child age-eligible child lived in the household. If multiple NIS–Child age-eligible children lived in the household, then the NIS–Child interview was conducted for all eligible children. If the household was also selected for the

NIS–Teen survey, the household was then screened for the presence of a teenager (aged 13–17), and if an NIS–Teen age-eligible child lived in the household, an interview was conducted about the teenager’s vaccination history before moving on to the NSCH screener. If more than one NIS–Teen age-eligible child was in the household, one was randomly selected for the NIS–Teen interview. For

NSCH, if children were in the household, each child’s sex and age were recorded (unless this information had been collected during the NIS interview(s), in which case the questions were not asked again). If more than one age-eligible child was in the household, one child was randomly selected to be the subject of the NSCH interview.

Table A. Augmentation sample, by state and sample type

Area	Percent of landline sample called for NSCH only	Percent of cell-phone sample called for NSCH only
Alaska	...	42.8
Alabama	3.8	41.6
Arkansas	...	45.7
Arizona	...	49.6
California	...	5.5
Colorado	0.8	36.9
Connecticut	...	38.9
District of Columbia	4.7	56.0
Delaware	0.7	40.7
Florida	0.8	28.9
Georgia	...	35.9
Hawaii	...	43.8
Iowa	...	41.7
Idaho	...	53.7
Illinois	...	5.8
Indiana	0.9	47.3
Kansas	...	51.5
Kentucky	...	47.1
Louisiana	...	45.4
Massachusetts	...	46.6
Maryland	...	10.6
Maine	...	37.0
Michigan	5.5	37.0
Minnesota	1.1	46.7
Missouri	4.0	40.7
Mississippi	...	50.8
Montana	0.5	40.2
North Carolina	1.9	38.6
North Dakota	7.7	34.9
Nebraska	...	36.9
New Hampshire	...	40.1
New Jersey	...	55.9
New Mexico	...	44.8
Nevada	...	38.5
New York	...	16.7
Ohio	...	42.6
Oklahoma	...	48.5
Oregon	...	41.2
Pennsylvania	...	2.7
Rhode Island	...	31.5
South Carolina	...	55.4
South Dakota	3.9	60.3
Tennessee	...	25.5
Texas	...	...
Utah	...	65.2
Virginia	...	30.3
Vermont	...	35.6
Washington	...	35.0
Wisconsin	...	43.5
West Virginia	...	41.2
Wyoming	...	34.9

... Category not applicable.

NOTE: NSCH is National Survey of Children’s Health.

In addition to age-eligibility screening, the NIS cell-phone sample was screened to keep just those numbers for households that either did not have a landline (cell phone-only [CPO]), or were unlikely to be reached through a landline if the household had one (cell phone-mainly [CPM]) in Quarter 1, 2011. However, starting in Quarter 2, 2011, NIS implemented the “take all” cell-phone approach where respondents were no longer screened for cell-phone status, and all cell-phone respondents were selected for NIS if an eligible child was in the household.

For the NSCH cell-phone augmentation sample, a slightly different approach in screening households for the presence of children was implemented to minimize the burden on age-ineligible households (8). Once contact with a person was established, a cognitively simple question (“Are there any children living in your household?”) was asked immediately after the survey introduction. After this question, these cases followed the process described previously for the landline augmentation sample.

Questionnaire

The framework for the 2003 NSCH was initially discussed in September 2001. A panel consisting of selected state and federal maternal and child health program directors, representatives of family organizations, child health services researchers, and survey design experts met to discuss content domains. Eight domains were selected for their epidemiological and policy importance, including demographics; physical and mental health status; health insurance; health care use and access to health care; medical home; family functioning; parental health; and neighborhood characteristics. A subset of this panel assembled questions to capture these domains. Questionnaire items identified for inclusion were then assessed through reviews by outside experts and selected members of the community of potential data users. Upon final approval by MCHB, these questions were pretested in 2002 and fielded in 2003 as the first NSCH (2).

Although the overall structure of the NSCH questionnaire remained static across the 2003, 2007, and 2011–2012 administrations, questionnaire revisions occurred prior to each survey to improve data quality, accommodate new sample, and address research questions of interest. Selected examples follow; consult the Design and Operation report for each NSCH module for specific information (2,3). The 2003 questionnaire included several questions on asthma, mental and emotional health, Hepatitis A vaccination, dental insurance coverage, number of emergency room visits, and accidental poisoning, among other topics, that were dropped in 2007. Many of the questions used to assess medical home in the 2005–2006 National Survey of Children with Special Health Care Needs (NS–CSHCN) instrument were added to the 2007 NSCH instrument, in lieu of using the 2003 NSCH questions. The 2007 questionnaire included questions on influenza vaccination in children and adults who lived with children that were not included in 2011–2012. The 2011–2012 questionnaire included new questions on adverse child experiences asked about all children, and a new section that targeted families with income below a certain level who had one or more children eligible for, but unenrolled in, their state’s Children’s Health Insurance Program (CHIP) and Medicaid programs. These respondents were asked for reasons why the children were uninsured and assessed on their knowledge of, attitudes toward, and experience with CHIP and Medicaid

enrollment. The 2011–2012 questionnaire also included questions that collected information to bolster maternal and child health surveillance and assessment under the life course paradigm (9).

In January 2010, NCHS staff distributed an e-mail to members of several electronic mail lists to ask NSCH data users for their input and suggestions on questions and topics to delete, add, or revise. In April 2010, a technical expert panel (TEP) (Table B) was convened by MCHB to review the 2007 questionnaire, consider all suggested revisions that originated from data users and TEP members, assemble questions to address newly proposed content areas, and provide recommendations to MCHB. Selected questions in the 2011 NSCH instrument were cognitively tested by the NCHS Questionnaire Design Research Laboratory in late 2010. The questionnaire was finalized by MCHB senior staff and NCHS shortly afterward.

Content

The 2011–2012 NSCH interview was designed to immediately follow a completed NIS–Child interview in households with an NIS-eligible child, or to follow the NIS–Child screener in households without NIS-eligible children. The NSCH questionnaire also immediately followed the NIS–Teen interview in some households that had been flagged for both NIS–Teen and NSCH surveys (i.e., overlap sample). The NSCH augmentation sample

Table B. External technical expert panel members

Name	Affiliation (in 2010)
Christina Bethell, Ph.D.	Oregon Health & Science University
Paula Braveman, M.D., M.P.H.	University of California, San Francisco
Brian Castrucci, M.A.	Georgia Department of Community Health
Laurence Grummer-Strawn, Ph.D.	Centers for Disease Control and Prevention
Neal Halfon, M.D., M.P.H.	University of California, Los Angeles
Charles Irwin Jr., M.D.	University of California, San Francisco
Renee Jenkins, M.D.	Howard University
Kristin Anderson Moore, Ph.D.	Child Trends
Paul Newacheck, Dr.P.H. (chairman)	University of California, San Francisco
William P. O’Hare, Ph.D.	The Annie E. Casey Foundation
Kathy Sanders-Phillips, Ph.D.	Howard University
Laura Schieve, Ph.D.	National Center on Birth Defects and Developmental Disabilities
Edward Schor, M.D.	The Commonwealth Fund
Fan Tait, M.D., F.A.A.P.	American Academy of Pediatrics

NOTES: External panel members are nongovernmental. Panel members made recommendations to the Maternal and Child Health Bureau regarding questionnaire content for the 2011–2012 National Survey of Children’s Health.

questionnaire began with the NSCH screener. The questionnaire fielded in 2011–2012 was divided into 13 sections, summarized below. A copy of the questionnaire as administered in the final quarter (Quarter 1, 2012) appears in [Appendix II](#). [Appendix III](#) lists the key differences between the 2007 and 2011–2012 questionnaires from the start of data collection. [Appendix IV](#) provides a list of changes made to the 2011–2012 questionnaire over the data collection period.

- **Section 1: Age-eligibility Screening and Initial Demographics**—This section consists of the introduction to the interview and the question to determine if any children under age 18 live in the household. All children under age 18 who lived in the household were rostered by age, and one child was randomly sampled for the detailed NSCH interview. Rostering was followed by questions about the respondent’s relationship to the sampled child, the sex of the sampled child, and the primary language spoken in the household.
- **Section 2: Health and Functional Status**—This section included questions regarding the sampled child’s acute or chronic physical, mental, behavioral, learning, or developmental conditions, and when present, the effect of these conditions upon the child’s life. This section also contained the Children with Special Health Care Needs (CSHCN) Screener, a consequence-based screening tool to identify special health care needs in children (10). Respondents were also asked about the sampled child’s past and current specific conditions; behavioral, medical, and dental health; and any limits on activity the child might have had based on their special health care needs status.
- **Section 3: Health Insurance Coverage**—This section established whether sampled children had any type of private or public health care coverage at the time of the telephone interview and in the 12 months prior to interview. State-specific health insurance program names were used according to the respondent’s reported state ([Appendix V](#)). If the sampled child had health insurance, additional questions were asked to determine if the coverage met his or her needs and if the costs were reasonable.
- **Section 4: Health Care Access and Utilization**—The questions in this section addressed the availability of medical, dental, and mental health services for the sampled child within the 12 months prior to interview, and the degree to which these services were needed and used during that period.
- **Section 5: Medical Home**—This section asked questions to determine whether the sampled child had a primary health care provider; to assess the quality of care for, and communication with, the sampled child and his or her parents or guardians; and whether the child’s primary health care provider coordinated care received from various providers and services. Together, these items determined whether children had access to a medical home as defined by the American Academy of Pediatrics (e.g., primary care that is accessible, continuous, comprehensive, family-centered, coordinated, compassionate, and culturally effective) (11).
- **Section 6: Early Childhood (0–5 years)**—This section, administered if the sampled child was aged 5 years or under, included questions about developmental screening, learning, child care arrangements, the occurrence of accidental injuries, and length of breastfeeding, use of formula, and solid food introduction. Additional questions asked about reading to the child, the amount of television the child watched, level of play, and flourishing. This section also included copyrighted questions from the Parent’s Evaluation of Developmental Status (PEDS) Child Development Screening Test, a tool used to identify children at risk for developmental, behavioral, or social delays (12). It was used in this section as a risk assessment tool to identify children who either had or were more likely to have problems. Researchers interested in analyzing PEDS data should consult the PEDS documentation for scoring instructions (12). The clinical version of PEDS was not used in NSCH.
- **Section 7: Middle Childhood and Adolescence (6–17 years)**—This section, administered if the sampled child was aged 6 years or over, focused on school performance, activities outside school, and behaviors exhibited by the child. Respondents were also asked about their attendance at the sampled child’s events and activities; whether they had met all, some, or none of the sampled child’s friends; and the amount of time the sampled child spent caring for him- or herself. Questions were also asked about bullying and emotional difficulties, and flourishing at school and home.
- **Section 8: Family Functioning**—The questions in this section measured the number of recreational outings and religious services attended by the sampled child, the level of parental involvement with the sampled child, and the level of stress on the family resulting from the demands of parenting. Three of the parental stress questions (K8Q31, K8Q32, and K8Q34) comprised the Aggravation in Parenting Scale, which was derived from the Parental Stress Index (13) and the Parental Attitudes Toward Childrearing Scale (14). The parenting scale had been used previously in the Panel Study of Income Dynamics (University of Michigan), Survey of Income and Program Participation (U.S. Census Bureau), and Survey of Program Dynamics (U.S. Census Bureau). This section also included several questions from the National Survey of Families and Households (University of Wisconsin) and the Early Childhood Longitudinal Survey (National Center for Education Statistics) on how families deal with serious disagreements. These questions were modified slightly to refer to all household members.

- **Section 9: Parental Health**—Questions in this section were designed to obtain the number and type of parents (or those serving as parents) who lived inside the sampled child’s household, and to assess their physical, mental, and emotional health; exercise frequency; and whether smoking occurred in the household. This section also included a series of questions about adverse family experiences.
- **Section 10: Neighborhood and Community Characteristics**—The primary goal of this section was to determine respondents’ perceptions of their neighborhoods, and to determine the degree to which respondents believed their children were safe in the neighborhood and in school. Four of the questions in this section (K10Q30, K10Q31, K10Q32, and K10Q34) considered parents’ perceived level of neighborhood social capital, focusing specifically on positive aspects of social capital relating to children (15). This concept, alternatively called “social support,” was similar to the concept of “social cohesion and trust,” which was related to variations in violence among inner-city neighborhoods (16). These questions were originally developed for the Longitudinal Studies of Child Abuse and Neglect (University of North Carolina) and have also been used for the Survey of Income and Program Participation.
- **Section 11: Additional Demographic Characteristics**—In this section, respondents were asked a series of demographic questions, including the number of times the family had moved since the child was born and household use of assistance from a state or county welfare program. [Appendix VI](#) contains the state-specific Temporary Assistance for Needy Families (TANF) program names used. Additional questions determined the race and ethnicity of the child and whether the child and his or her parents were born in the United States. This section also included questions on family income. The annual family income was mapped to Department of

Health and Human Services (HHS) federal poverty guidelines for households in order to categorize the household’s income relative to FPL. [Appendix VII](#) lists the federal poverty guidelines tables used to determine household poverty status at interview, and a description of the process used to assign poverty status to households.

- **Section 12: Additional Health Insurance Questions**—With funding from the HHS Office of the Assistant Secretary for Planning and Evaluation, new questions were added in 2011–2012 to explore why some children who were eligible for their state’s CHIP and Medicaid programs were not enrolled. It was administered only to cases that reported a household income less than 400% FPL and indicated that the sampled child did not have health insurance coverage. Respondents were asked why the child was uninsured; what their experiences and history were with Medicaid or CHIP; if they were interested in and understood the enrollment process associated with Medicaid or CHIP; and, if parents had employer-sponsored insurance, what coverage was available for the child.
- **Section 13: Locating Information**—This section collected information about the telephone lines in the household and, beginning in Quarter 2, 2011, telephone status to better describe landline compared with cell-phone usage in the household. Questions also collected locating information from all respondents such as address and alternate telephone numbers, among others, in case respondents needed to be contacted in the future. All respondents were asked to confirm their zip code.

Computer-assisted Telephone Interviewing

The 2011–2012 NSCH was conducted using a CATI system. The CATI data collection method uses computer software that presents the

questionnaire on a computer screen to each interviewer. The computer program guides the interviewer through the questionnaire, automatically routing the interviewer to appropriate questions based on answers to previous questions. Interviewers enter survey responses directly into the computer, and the CATI program determines if the selected response is within an allowable range, checks it for consistency against other data collected during the interview, and saves the responses in a survey data file. On-screen help text is available to aid interviewers administering the CATI questionnaire. This data collection technology reduces the time required to transfer, process, and release data, and ensures accurate questionnaire flow.

The NSCH questionnaire was programmed as a module of NIS, integrating the two surveys into a single questionnaire. The instrument made full use of the CATI system’s ability to check whether a response was within a legitimate range, to follow skip patterns, to fill state-specific information in questions as applicable (e.g., names of state Medicaid and CHIP programs), and to employ pick lists for response categories. Certain household and demographic questions were identical across the NIS–Child, NIS–Teen, and NSCH portions of the interview. If a respondent answered these questions during administration of the NIS interview, the system was programmed so that the questions were not repeated in NSCH. Instead, answers to these questions in NIS were copied to the data file for NSCH as appropriate.

NSCH Augmentation Questionnaire

As noted earlier, the amount of sample required to reach the target number of completed interviews for the NSCH sample exceeded the NIS sample available in some states. For these states, an additional NSCH–only augmentation sample was drawn. Augmentation sample respondents did not receive any questions from the NIS screener or interview. Rather, the CATI system was programmed to begin with the NSCH

introduction and proceed to the NSCH interview in the same manner as the main sample.

Interviewer Training

Training Sessions

The data collection contractor NORC and its subcontractor conducted all interviews for the 2011–2012 NSCH. Interviewer training was conducted by NORC staff at production centers located in Chicago, Illinois, and Las Vegas, Nevada. The use of multiple sites ensured continuous coverage in all time zones across the United States.

In addition, NORC employed a small number of distributed computer-assisted telephone interviewing (DCATI) interviewers who resided in the Grand Rapids, Michigan, area. As a component of NORC's disaster preparedness plan, DCATI staff worked from their home office space. NORC provided them with the full desktop computer and telephone setup required to conduct interviews just as they would have if they were stationed at the Chicago or Las Vegas production centers. NORC staff traveled to Grand Rapids, Michigan, to train DCATI interviewers in person for their initial project training. All subsequent refresher or specialty training for DCATI staff took place over voice- and videoconferencing and was led by the Chicago training team.

The interviewer training sessions began with an introduction and project overview. Interviewers were informed about project goals, the purpose and history of the study, study sponsors, and study design. An overview of the screener and each section of the questionnaire was provided, with emphasis on quality data collection. The relationship between NSCH and NIS was also covered. Several exercises on gaining cooperation were conducted throughout the training to ensure that interviewers were equipped to answer frequently asked questions (FAQs) and handle refusals. Part of the exercises included pronunciation of medical conditions and a review of the FAQ and other job aids provided for interviewers. Interviewers were also

specifically trained in cell-phone sample dialing protocols: how to manually dial cell-phone cases, screen cell-phone cases appropriately, and respond to cell-phone-specific questions.

Two types of mock interviews were used during training: trainer-led interviews and dual-trainee interviews. The trainer-led mock interviews were conducted by the trainer and focused on gaining cooperation skills and increasing the interviewers' project knowledge. For the dual-trainee mock interviews, trainees were paired up and alternated playing the role of respondent and interviewer. The first dual-trainee mock interview was integrated into the section-by-section lecture that progressed through the questionnaire. The interviewers first listened to a lecture regarding each section, then practiced moving through that section in CATI before moving on to a discussion about the next section. This method ensured that interviewers became acclimated to the questionnaire, navigating CATI, and gaining cooperation as new topics were introduced. Additional mock interviews that simulated more realistic interviewing situations in real time were then conducted. Each mock interview was designed to highlight various sections of the screener and the main questionnaire, and provide different scenarios requiring alternative approaches to gain cooperation.

At the end of training, interviewers completed a certification mock interview and written evaluation. The certification mock interview was administered by trained supervisors. It was approximately 30 minutes in length and standardized to ensure that all interviewers were assessed equally in reading the questionnaire verbatim, project knowledge, pronunciation, and the ability to answer respondent questions. The written evaluation was administered to reinforce what was learned during the training sessions. Its nine questions took approximately 15 minutes to complete, covering FAQs, survey procedures, and question-specific information. Interviewers had to pass both the written evaluation and certification mock interview to be certified to call NSCH cases. [Table C](#) notes the number

of interviewers trained by location and month over the course of NSCH data collection.

Data Collection

Data collection for the 2011–2012 NSCH started February 28, 2011, and ended June 25, 2012, resulting in a total of 98,019 interviews including USVI. Age-eligibility screening was completed for 861,375 households. Of these households, 190,846 reported age-eligible children living or staying in the household. From each household, one child was randomly selected to be the target of the detailed NSCH interview. Interviews were completed for 95,689 of these sampled children and partially completed for 2,330. Interviews were considered partially complete if the interview was completed through the end of Section 6 (for households with children under age 6 years) or Section 7 (for households with children aged 6–17 years). [Table D](#) presents the total number of completed interviews by state and telephone sample type.

Every state started with a target of 1,800 completed interviews. Throughout data collection, sample release was determined by estimating the number of completed interviews still needed to reach the target and achieve reasonable response rates. The target number of completed interviews was achieved and exceeded in every state and D.C. The number of children with completed interviews per state ranged from 1,811 in South Dakota to 2,200 in Texas in the combined sample.

Of the 95,677 detailed completed interviews excluding USVI, 31,972 were completed with the cell-phone sample. The number of detailed interviews completed with cell-phone sample in each state ranged from 592 in Wisconsin to 942 in Maryland. The target number of completed interviews with cell-phone sample (600) was not achieved in four states: Wisconsin (592), Alaska (595), and Utah and Washington (597 each). Adding telephone lines at the end of the data collection period to reach the target was not recommended because biased

Table C. Number of interviewers trained, by month and telephone center location

Month	Trained			Passed			Total trained	Total passed	Percent passed
	Chicago, Ill.	Las Vegas, Nev.	DCATI	Chicago, Ill.	Las Vegas, Nev.	DCATI			
2011									
February	437	147	10	437	147	10	594	594	100
March	4	—	—	4	—	—	4	4	100
April	53	35	—	46	34	—	88	80	91
May	7	—	—	7	0	—	7	7	100
June	44	37	—	42	32	—	81	74	91
July	44	58	—	40	55	—	102	95	93
August	22	75	—	22	69	—	97	91	94
September	43	34	—	37	30	—	77	67	87
October	23	17	—	21	15	—	40	36	90
November	—	—	—	—	—	—	—	—	...
December	25	34	—	24	32	—	59	56	95
2012									
January	17	14	—	17	9	—	31	26	84
February	77	58	—	73	54	—	135	127	94
March	151	41	—	137	40	—	192	177	92
April	47	—	—	40	—	—	47	40	85
Total	994	550	10	947	517	10	1,554	1,474	95

— Quantity zero.

... Category not applicable.

NOTE: DCATI is distributed computer-assisted telephone interviewing.

estimates may result if some lines are called less frequently or over shorter periods of time than others.

Advance Letter

Advance letters have been shown to decrease nonresponse by confirming study legitimacy and communicating the survey's value (17). When a mailing address could be identified for a sampled landline telephone number, an advance letter was mailed prior to any calls. Cell-phone numbers do not have matched addresses and, therefore, are not sent advance letters. Because address matching was not available in USVI, this sample also did not receive advance letters. Every household with an available mailing address identified through reverse address services was sent an advance letter—22.7% of the landline telephone numbers randomly generated, and 42.3% of the telephone numbers dialed by interviewers. [Appendix VIII](#) contains the full complement of advance letters used during data collection.

Because NSCH typically follows NIS, the advance letter sent to the main sample was the NIS advance letter. In the letter, recipients were asked to participate in a voluntary study of the immunization status of their children and the types

of health and related services that their children need and use. The letter advised recipients that their telephone numbers had been chosen randomly and indicated that they might be called in the next few weeks. A toll-free telephone number was provided for those who wished to participate immediately or learn more about the study.

As described earlier, the landline sample was augmented with additional sample cases in states where the NIS sample was insufficient to meet NSCH sample targets. Such households with an identified address were sent a similar advance letter, asking recipients to participate in a study regarding the types of health and related services that their children need or use. The letter did not mention NIS or immunizations, and it included a unique SLAITS-only toll-free number for recipients who wished to participate immediately or learn more about the study.

Toll-free Telephone Numbers

A toll-free telephone line established for the survey offered respondents the flexibility to call at their convenience if they had questions about the survey or

wanted to establish eligibility, complete the interview, or submit feedback on any aspect of the survey. Advance letters, incentive letters, answering machine scripts, and closing scripts referenced the toll-free number, and interviewers provided that number to respondents who requested such a resource during the interview. NSCH cases in the NIS sample frame were provided a toll-free number accessed by both NIS and NSCH respondents, while NSCH augmentation sample households were given a unique SLAITS-only toll-free number to call.

Both toll-free telephone lines were answered by interviewers trained on NSCH. During the course of the survey, 77,862 calls were made to the toll-free line by cases in the NSCH sample, 61% of which were from cell-phone sample cases. Of these calls, 22,638 households were determined ineligible for NSCH. An additional 27,494 households were eligible for the survey, and of these, 9,495 cases completed the survey. The 27,730 remaining calls were either nonresidential numbers, out-of-scope households, households not able to be screened for age eligibility, or unresolved cases.

Table D. Number of completed interviews, by state and telephone sample type

Area	Total	Completed	Partially completed	Landline			Cell phone		
				Total	Completed	Partially completed	Total	Completed	Partially completed
All areas (excluding USVI) ¹	95,677	93,406	2,271	63,705	62,438	1,267	31,972	30,968	1,004
All areas (including USVI) ¹	98,019	95,689	2,330	66,047	64,721	1,326	31,972	30,968	1,004
Alabama	1,820	1,774	46	1,205	1,181	24	615	593	22
Alaska	1,846	1,809	37	1,251	1,230	21	595	579	16
Arizona	1,845	1,807	38	1,232	1,210	22	613	597	16
Arkansas	1,849	1,798	51	1,239	1,210	29	610	588	22
California	1,903	1,845	58	1,298	1,260	38	605	585	20
Colorado	1,820	1,785	35	1,211	1,191	20	609	594	15
Connecticut	1,888	1,828	60	1,259	1,226	33	629	602	27
Delaware	1,824	1,783	41	1,213	1,190	23	611	593	18
District of Columbia	1,861	1,782	79	1,261	1,234	27	600	548	52
Florida	1,855	1,810	45	1,234	1,200	34	621	610	11
Georgia	1,848	1,807	41	1,230	1,212	18	618	595	23
Hawaii	1,881	1,821	60	1,251	1,217	34	630	604	26
Idaho	1,857	1,823	34	1,243	1,222	21	614	601	13
Illinois	2,071	2,028	43	1,421	1,402	19	650	626	24
Indiana	1,829	1,795	34	1,224	1,203	21	605	592	13
Iowa	1,847	1,815	32	1,226	1,208	18	621	607	14
Kansas	1,836	1,796	40	1,224	1,199	25	612	597	15
Kentucky	1,864	1,816	48	1,245	1,217	28	619	599	20
Louisiana	1,846	1,794	52	1,233	1,199	34	613	595	18
Maine	1,823	1,791	32	1,214	1,197	17	609	594	15
Maryland	2,181	2,151	30	1,239	1,219	20	942	932	10
Massachusetts	1,861	1,816	45	1,260	1,231	29	601	585	16
Michigan	1,833	1,787	46	1,226	1,198	28	607	589	18
Minnesota	1,830	1,798	32	1,211	1,199	12	619	599	20
Mississippi	1,883	1,814	69	1,244	1,207	37	639	607	32
Missouri	1,859	1,806	53	1,220	1,196	24	639	610	29
Montana	1,824	1,790	34	1,217	1,191	26	607	599	8
Nebraska	1,818	1,780	38	1,210	1,190	20	608	590	18
Nevada	1,901	1,846	55	1,286	1,251	35	615	595	20
New Hampshire	1,934	1,898	36	1,328	1,308	20	606	590	16
New Jersey	1,858	1,806	52	1,237	1,206	31	621	600	21
New Mexico	1,847	1,805	42	1,229	1,204	25	618	601	17
New York	1,989	1,918	71	1,344	1,309	35	645	609	36
North Carolina	1,852	1,801	51	1,225	1,204	21	627	597	30
North Dakota	1,835	1,793	42	1,213	1,198	15	622	595	27
Ohio	1,916	1,880	36	1,293	1,271	22	623	609	14
Oklahoma	1,886	1,835	51	1,262	1,229	33	624	606	18
Oregon	1,846	1,800	46	1,217	1,194	23	629	606	23
Pennsylvania	1,886	1,832	54	1,259	1,231	28	627	601	26
Rhode Island	1,889	1,841	48	1,257	1,227	30	632	614	18
South Carolina	1,930	1,868	62	1,285	1,260	25	645	608	37
South Dakota	1,811	1,779	32	1,192	1,180	12	619	599	20
Tennessee	1,862	1,814	48	1,231	1,204	27	631	610	21
Texas	2,200	2,146	54	1,504	1,467	37	696	679	17
Utah	1,823	1,801	22	1,226	1,209	17	597	592	5
Vermont	1,856	1,824	32	1,222	1,206	16	634	618	16
Virginia	1,909	1,873	36	1,260	1,236	24	649	637	12
Washington	1,843	1,812	31	1,246	1,228	18	597	584	13
West Virginia	1,827	1,785	42	1,191	1,166	25	636	619	17
Wisconsin	1,838	1,802	36	1,246	1,222	24	592	580	12
Wyoming	1,837	1,798	39	1,211	1,189	22	626	609	17
U.S. Virgin Islands	2,342	2,283	59	2,342	2,283	59	...	...	...

... Category not applicable.

¹USVI is U.S. Virgin Islands.

Selection of Respondent

Upon contacting a household, interviewers asked to speak to a parent or guardian living in the household who knew about the health and health care of the child(ren) in the household. The respondent’s relationship to the child was collected in two questions (K1Q02 and C10Q02A). The relationship of respondent to the child was determined using C10Q02A for completed cases; however, for partial cases and where C10Q02A was missing, K1Q02 was used to determine this relationship. **Table E** shows the frequency and percentage of respondents by their relationship with the child randomly selected for the detailed interview. The respondent was the parent of the child (mother or father, of any type) for 93.1% of sampled children.

A parent, guardian, or other adult aged 18 or over was not identified in 25,102 households (these were largely telephone numbers that had been resolved as households but screening was incomplete). No interviews were conducted in these households, even if a minor who lived there was the parent of an age-eligible child.

Informed Consent

After a knowledgeable respondent came to the phone, or after the person who answered the call identified him- or herself as a knowledgeable parent or guardian, the respondent was informed of his or her rights as a survey participant. Verbal consent for study participation was then obtained and documented in the CATI system. The consent script informed respondents of the voluntary nature of the survey, assured them that their responses would be kept confidential, and informed them that there was no penalty for not answering questions. Respondents were also told that the interview might be recorded and monitored by a supervisor for quality purposes. If the case qualified for a monetary incentive, the incentive amount was also provided in the informed consent statement. Because the interview length depended on whether children were in the household, the respondent was told that the estimate of the

Table E. Number and percentage of respondents, by relationship to sampled child

Relationship of respondent to sampled child	Number	Percent
Mother or female guardian	67,603	68.97
Father or male guardian	23,602	24.08
Grandparent	5,154	5.26
Other relative	1,554	1.59
Nonrelative	86	0.09
Don't know or refused	20	0.02
Total	98,019	100.00

interview’s duration would be provided after a few questions.

The NCHS Research Ethics Review Board and the NORC Institutional Review Board approved all study procedures and modifications. The federal Office of Management and Budget control number for this data collection is 0920–0406.

Assurance of Confidentiality

Participation in surveys conducted by NCHS is voluntary, and all individually identifiable information collected is confidential. For NSCH, assurance of confidentiality was provided to potential respondents as part of the informed consent procedures. Interviewers read the following statement to respondents:

We are required by Federal laws to develop and follow strict procedures to protect your information and use your answers only for statistical research. I can describe these laws if you wish.

If respondents requested to hear more about the actual laws, they were read the following:

The Public Health Service Act is Title 42 of the U.S. Code, Section 242k. The collection of information in this survey is authorized by Section 306 of this Act. Through the National Center for Health Statistics, the confidentiality of your responses is assured by Section 308d of this Act and by the Confidential Information Protection and Statistical Efficiency Act. Would you like me to read the Confidential Information Protection provisions to you?

If respondents indicated that they would like to hear the provisions, interviewers read the following:

The information you provide will be used for statistical purposes only. In accordance with the Confidential Information Protection provisions of Title V, Subtitle A, Public Law 107–347 and other applicable Federal laws, your responses will be kept confidential and will not be disclosed in identifiable form to anyone other than employees or agents. By law, every employee of the National Center for Health Statistics, the National Center for Immunization and Respiratory Diseases, and its agent, NORC at the University of Chicago, who works on this survey has taken an oath and is subject to a jail term of up to 5 years, a fine of up to \$250,000, or both, if he or she willingly discloses ANY identifiable information about you or your household members.

If respondents had any additional questions or concerns, they were directed to the project website at <https://www.cdc.gov/nchs/slaits.htm> for more information and were provided a toll-free telephone number.

When NCHS (including its contractors and agents) collects personally identifiable information under a pledge of confidentiality for exclusive statistical purposes, Section 308d of the Public Health Service Act and Section 512b of the Confidential Information Protection and Statistical Efficiency Act (CIPSEA) require that confidentiality be maintained without exception. Violations of CIPSEA are a class E felony, punishable by imprisonment for not more than 5 years, a fine not more than \$250,000, or both. Strict procedures

are used by NCHS, its data collection contractors, and other agents to prevent disclosure of confidential data in survey operations and data dissemination.

Selection of Sampled Child

All households were screened for the presence of children under age 18 either living or staying in the household. For households with children, the ages of all children living or staying in the household were rostered. If a household had only one child, that child was selected as the focus of the interview by default. In households with multiple children, one child was randomly selected by the CATI system to be the focus of the interview.

Finding NIS-eligible Children in NSCH Rostering

NSCH was designed to follow the administration of the NIS–Child or NIS–Teen interview(s) for eligible households. On occasion, a household would indicate that no NIS–Child or NIS–Teen eligible children were in the household, but upon rostering the children by age in the NSCH screener, NIS-eligible children were found. When this occurred, the interview returned to the NIS–Child or NIS–Teen interview for completion prior to continuing with the NSCH interview. A total of 191 such households were identified during data collection, and 54 of these cases completed NIS and then completed NSCH.

Interviews in Spanish

The questionnaire was translated into Spanish by a professional translator. Spanish-speaking telephone interviewers and supervisors at NORC reviewed the translation and evaluated it for accuracy and cultural appropriateness. Issues raised during this review were resolved in consultation with the original translator. Any necessary modifications were made and the translated questionnaire was programmed into the CATI system for testing and eventual production.

All households were first called

by an English-speaking interviewer. If a potential respondent answered the telephone in a language other than English, interviewers asked, “What language do you speak?” If it was determined that the respondent needed a Spanish-speaking interviewer, the case was placed in a Spanish calling queue. If the interviewer placing the initial call was a Spanish speaker and trained to administer the Spanish version of the questionnaire, the interviewer was able to toggle to the Spanish questionnaire and continue the interview with no interruption. If not, the case was flagged in the CATI system as needing a Spanish-speaking interviewer, and all subsequent calls were made by Spanish-speaking interviewers. Nevertheless, the interview may have been conducted in English if a subsequent call by a Spanish-speaking interviewer reached an English-speaking respondent.

During data collection, 36,272 telephone numbers were placed in the Spanish calling queue. Of these, 27,479 were determined as having reached households and 21,517 were screened for age eligibility. Some telephone numbers in the Spanish calling queue were determined to be businesses, whereas others remained unresolved due to hang-ups, answering machines, or lack of answer after multiple attempts by a Spanish-speaking interviewer. Age-eligible children were identified in 10,743 households, and 4,905 households completed the NSCH interview. Spanish-speaking households, as defined by the response to variable K1Q03 (“What is the primary language spoken in your home?”) comprised 5.3% of all completed NSCH interviews.

Interviews in Languages Other Than English or Spanish

Based on experience from the 2007 NSCH, four languages were identified as the most probable languages that interviewers would encounter other than English or Spanish: Mandarin, Cantonese, Vietnamese, and Korean. The 2011–2012 NSCH was administered in these languages as well as in English

and Spanish. Independent translators translated the questionnaire into these Asian languages using the same procedures as were used for the Spanish questionnaire. Although the Spanish questionnaire was programmed into the CATI system, given the expected low incidence of the other languages, a different procedure was followed to screen and interview these Asian-language households.

When a household was first identified as needing a language other than English or Spanish, the case was sent to specially trained interviewers who would determine the necessary language with a language service used by NORC, Language Line Services (LLS). LLS provides a real-time translation service in more than 170 languages. These households were then screened for NIS age-eligible children and, if they were eligible for NIS, the interviewer immediately conducted the NIS interview with the assistance of the LLS interpreter. After a completed NIS interview, or if no NIS age-eligible children were living in the household, the interviewer (with the help of the interpreter) screened the household for children under age 18. In the event that the household included children and spoke one of the four Asian languages, the case was assigned to the appropriate language queue to be called by a specially trained interviewer who spoke that language. Special language interviewers entered the respondent’s answers into the English CATI system while using a hard-copy version of the translated questionnaire to reference the appropriate translation for each question. This allowed for the data to be captured immediately in the CATI system and to be subject to all built-in logic and validation checks.

Throughout the course of data collection, 249 sampled telephone lines were identified as needing an interview in one of the four available Asian languages. The full NSCH interview was completed with 229 of the age-eligible households. Households that were identified as needing an Asian language interviewer comprised 0.1% of all screened households with children, and 0.2% of all fully completed NSCH interviews.

If the household included age-eligible children but potential respondents apparently did not speak English, Spanish, or one of the four Asian languages, the case was coded as “age-eligible, interview incomplete” and the case was finalized. A total of 1,143 households with children were finalized due to language.

USVI Sample

NSCH was administered in USVI in Quarter 3, 2011. All of the USVI sample was composed of landline sample, and because address matching for this sample was not available, advance letters were not mailed. To ensure that the NSCH questionnaire was appropriate for USVI residents, certain questions were modified or added. Rather than ask respondents for a zip code, the question, “On what island do you live?” was asked in its place. In addition, because Indian Health Service is not available to USVI residents, the question regarding access to this service was not displayed for these cases. Finally, all references to “state” in the questionnaire were replaced with “area.”

A total of 13,494 households in USVI were screened for age-eligible children using a landline sample. Of these households, 3,424 reported age-eligible children living or staying in the household. Detailed interviews were

completed for 2,342 children in USVI. Data files and documentation for the 2011–2012 NSCH in USVI are available on the SLAITS website: <https://www.cdc.gov/nchs/slaits.htm>.

Cell-phone Sample

Cell-phone dialing began in Quarter 3, 2011, for NIS cell-phone sample lines flagged for NSCH and for SLAITS augmentation cases. To accommodate cell-phone dialing, several questionnaire and system modifications were made, including:

- Addition of a safety screener question (S_WARM) to ensure respondents were not driving or doing anything that required their full attention.
- Addition of a question to confirm the state in which the respondent lived, to determine as early as possible if the respondent lived in a state that was different from their sampled area code.
- Modification of all introduction and answering-machine scripts to inform respondents that they were intentionally being called on their cellular device.
- Modification of the Telephone and Household Information section to collect information on the number of personal cell phones in the

household, the number of cell phones that adults in the household usually use, and the household’s cell phone—mostly and cell phone—mainly (CPM) status (as defined in “Conducting NSCH Interviews”).

- Creation of cell-phone-specific termination paths, documenting when a case terminated due to a minor-only cell phone, among other reasons.
- Modification of the dialing system so that cell-phone numbers were manually dialed.

Interview Length

The length of time to administer the interview depended on whether any age-eligible children lived in the household. Interview times also varied by NIS eligibility, because some demographic and household questions necessary for NSCH were administered as part of the NIS interview and were not repeated during the NSCH interview. Mean and median interview lengths, by section and NIS eligibility, appear in [Table F](#) for landline sample interviews and [Table G](#) for cell-phone sample interviews.

Table F. Mean and median length of National Survey of Children’s Health interview in minutes and seconds, by interview type, section, and National Immunization Survey eligibility: Landline sample

Section and type of interview	NIS ineligible		NIS eligible	
	Median	Mean	Median	Mean
Overall length	0:31:43	0:33:06	0:30:35	0:31:47
Screener: Age Eligibility—Selection of Sampled Child and Informed Consent.	0:01:25	0:01:32	0:01:23	0:01:26
Section 1: Initial Demographics	0:00:33	0:00:40	0:00:31	0:00:37
Section 2: Health and Functional Status	0:04:05	0:04:33	0:04:02	0:04:30
Section 3: Health Insurance Coverage	0:02:03	0:02:12	0:01:56	0:02:02
Section 4: Health Care Access and Utilization	0:03:21	0:03:33	0:03:19	0:03:31
Section 5: Medical Home	0:02:13	0:02:19	0:02:11	0:02:16
Section 6: Early Childhood (0–5 years) (entire section)	0:05:54	0:06:09	0:05:38	0:05:53
Section 7: Middle Childhood and Adolescence (6–17 years)	0:05:04	0:04:17	0:05:09	0:04:23
Section 8: Family Functioning	0:01:38	0:01:47	0:01:38	0:01:46
Section 9: Parental Health	0:03:58	0:04:13	0:03:55	0:04:09
Section 10: Neighborhood and Community Characteristics	0:02:05	0:02:15	0:02:04	0:02:13
Section 11: Additional Demographics (entire section)	0:02:51	0:03:06	0:02:35	0:02:47
Section 12: Additional Health Insurance Questions	0:05:23	0:05:44	0:05:19	0:05:39
Section 13: Locating Information	0:01:21	0:01:27	0:01:12	0:01:11

NOTES: NIS is National Immunization Survey. NIS ineligible includes cases where NIS–Child and NIS–Teen were not completed. NIS eligible includes cases that completed NIS–Child or NIS–Teen. Augmentation sample is categorized as NIS ineligible. Overall interview length is calculated only for cases that began and completed the interview on the same call. Individual section timings are calculated only for cases that began and completed that particular section on the same call.

Table G. Mean and median length of National Survey of Children’s Health interview in minutes and seconds, by interview type, section, and National Immunization Survey eligibility: Cell-phone sample

Section and type of interview	NIS ineligible		NIS eligible	
	Median	Mean	Median	Mean
Overall length	0:31:39	0:33:06	0:31:00	0:32:24
Screener: Age Eligibility—Selection of Sampled Child and Informed Consent	0:01:22	0:01:30	0:01:25	0:01:32
Section 1: Initial Demographics	0:00:36	0:00:44	0:00:34	0:00:41
Section 2: Health and Functional Status	0:04:13	0:04:41	0:04:13	0:04:41
Section 3: Health Insurance Coverage	0:02:07	0:02:17	0:02:01	0:02:08
Section 4: Health Care Access and Utilization	0:03:26	0:03:39	0:03:25	0:03:39
Section 5: Medical Home	0:02:16	0:02:21	0:02:15	0:02:20
Section 6: Early Childhood (0–5 years) (entire section)	0:06:01	0:06:17	0:05:52	0:06:08
Section 7: Middle Childhood and Adolescence (6–17 years)	0:04:53	0:03:49	0:05:02	0:04:00
Section 8: Family Functioning	0:01:39	0:01:47	0:01:39	0:01:48
Section 9: Parental Health	0:04:05	0:04:20	0:04:03	0:04:18
Section 10: Neighborhood and Community Characteristics	0:02:09	0:02:19	0:02:09	0:02:19
Section 11: Additional Demographics (entire section)	0:03:01	0:03:16	0:02:48	0:03:01
Section 12: Additional Health Insurance Questions	0:05:29	0:05:51	0:05:29	0:05:50
Section 13: Locating Information	0:01:28	0:01:31	0:01:14	0:01:21

NOTES: NIS is National Immunization Survey. NIS ineligible includes cases where NIS–Child and NIS–Teen were not completed. NIS eligible includes cases that completed NIS–Child or NIS–Teen. Augmentation sample is categorized as NIS ineligible. Overall interview length is calculated only for cases that began and completed the interview on the same call. Individual section timings are calculated only for cases that began and completed that particular section on the same call.

Interview Breakoffs

Households that initially refused participation in the interview were placed into a queue that was worked by interviewers specially trained in refusal conversion strategies. These interviewers attempted to convert incomplete interviews into completed interviews. By the end of data collection, 31.6% of all completed interviews were completed with households that had refused to participate at least once after age eligibility was established; 29.4% of these were cell-phone cases.

More than 95,000 known age-eligible cases did not complete the full interview; see [Table H](#) for their final disposition. Most of these cases were determined to be age-eligible (97.6%) but did not reach the point of partial completion in the NSCH interview. A total of 2,330 cases partially completed the NSCH interview through the end of Section 6 or Section 7, depending on the

age of the selected child.

Among cases that completed the age rostering but were neither partially nor fully completed interviews, 58.2% did not reach the start of Section 1 after completing the age roster. Another 18.4% of cases started Section 1 but did not reach the beginning of Section 2. From this point on, the number of cases that advanced to the next section declined relatively steadily.

Cases Pending at Close of Data Collection

Approximately five-sixths of the cases pending at the end of data collection ($n = 1,705,693$) were those in which the sampled telephone number had not yet been resolved as a residential or nonresidential number (86.9% of pending cases, or 27.7% of the initial sample). Age eligibility had not yet been determined in less than one-tenth of the pending residential cases (8.4%,

or 2.7% of the initial sample). A small number of households were determined to be age-eligible, but the interview was not partially or fully completed (4.7% of all pending cases, or 1.5% of the initial sample). [Table J](#) and [Appendix IX](#) provide more information about the final disposition of these cases.

Response Rates

Response rates provide one measure of the potential for nonresponse bias—that is, the possibility that the sample interviewed differs from the actual population in some meaningful way. Three weighted overall response rates were calculated for NSCH:

- Household-level resolution rate reflects the potential for nonresponse bias in the sample of telephone lines that were identified as belonging to households that contained at least one age-eligible child.
- Child-level age-screener response rate reflects the potential for nonresponse bias in the sample of screened children aged 0–17 years.
- Interview response rate reflects the potential for nonresponse bias in the sample of children for whom the NSCH interview was completed.

These rates were calculated for the landline, cell-phone, and combined

Table H. Final disposition of age-eligible households where interview was not completed

Final disposition	Age-eligible incompletes	
	Number	Percent
Known age-eligible household		
Interview not completed	92,827	97.6
Interview partially completed	2,330	2.4
Total, full interview not completed	95,157	100.0

Table J. Final disposition of 2011–2012 National Survey of Children’s Health sample

Final disposition	Total ¹		Landline ¹		Cell phone ¹	
	Number	Percent	Number	Percent	Number	Percent
Total	6,152,487	100.0	4,252,193	100.0	1,900,294	100.0
Not resolved as residential or nonresidential ²	1,705,693	27.7	755,007	17.8	950,686	50.0
Out of scope (business, nonworking, fax, or modem)	3,389,715	55.1	2,860,125	67.3	529,590	27.9
Cell phone-screened household, minor-only cell or landline-mainly cell	30,387	0.5	0.0	0.0	30,387	1.6
Known household, age eligibility undetermined ²	165,317	2.7	76,320	1.8	88,997	4.7
Age-screened household, no age-eligible child	670,529	10.9	442,146	10.4	228,383	12.0
Known age-eligible household, interview not completed ²	92,827	1.5	52,548	1.2	40,279	2.1
Known age-eligible household, interview partially completed	2,330	0.0	1,326	0.0	1,004	0.1
Completed interview	95,689	1.6	64,721	1.5	30,968	1.6

¹Selected telephone lines.²Pending cases at the end of data collection.

landline and cell-phone samples at the national and state levels. The NSCH interview response rate can be calculated as the product of component completion rates: resolution rate, age screener completion rate, and NSCH interview completion rate, which are discussed below. (The response rates presented in this section were weighted by base weights; see [Appendix I](#) for further details.)

In the tables in this section, “state” is the state to which the telephone number was assigned at the time the sample of telephone numbers was selected. For the landline sample, this “sampling state” is almost always the same as the state where the household with that telephone number is located, but this is not true for the cell-phone sample, where the sampling state often differs from the state of residence. However, because the true state of residence is known only for households that have completed the interview, the sampling state must be used to compute the response rates.

For the landline and cell-phone samples, national rates including and excluding USVI are presented. However, the national rates cited below exclude USVI.

Resolution rate

Response rates for telephone surveys are typically lower than response rates for household in-person surveys, because some telephone calls ring with no indication of whether the number belongs to a household or to a business. The national resolution rate, which measures the proportion of sampled telephone

numbers that could be identified as residential or nonresidential, was 80.9% in the landline sample and 48.6% in the cell-phone sample.

These resolution rates treat all telephone numbers that resulted in no contact (i.e., all attempts resulting in rings with no answer or a busy signal) as unresolved. Because every telephone number was dialed at least six times at different times on different days, it is possible that these “noncontact” numbers are actually nonworking residential numbers. An alternative national resolution rate, which treats these numbers as nonworking, was 88.7% in the landline sample and 54.0% in the cell-phone sample.

The original and alternative resolution rates for each state are presented in [Table K](#) for the landline sample and [Table M](#) for the cell-phone sample.

Screener completion rate

After a telephone number had been determined to belong to a household, that household was screened for the presence of children under age 18. Each household was first screened for NIS–Child eligibility; that is, each household was screened for the presence of children aged 19–35 months. A portion of these households was also screened for NIS–Teen, that is, for the presence of a teenager aged 13–17. If the household was found to be age-eligible for NIS–Child or NIS–Teen, then the household was also considered to be age-eligible for NSCH. If the household was age-ineligible for NIS–Child or NIS–Teen,

then that household proceeded to the rostering portion of NSCH where, if the respondent indicated that the household contained children under age 18 years, the household was considered to be age-eligible for NSCH. (NSCH augmentation households were not screened for NIS–Child or NIS–Teen and, so, were age-screened only during the rostering portion of NSCH.) If, during the NIS–Child screener, the NIS–Teen screener, or the rostering portion of NSCH, the respondent indicated that the household contained no children, the household was considered age-ineligible for NSCH.

During Quarter 1, 2011, an additional screener was put in place for the cell-phone sample to identify cell-phone-only (CPO) and cell-phone-mainly (CPM) households. In this quarter, if the household reached through the cell-phone sample had a landline telephone that was somewhat or extremely likely to be answered, the household was ineligible for the cell-phone sample. To calculate component completion rates and response rates for the cell-phone sample, in this quarter this cell phone-only or -mainly (CPO/M) screener was treated as part of a single telephone-status screener to identify cell phones used by adults in CPO/M households. An additional screener was put in place for the cell-phone augmentation sample to quickly screen out households with no children. In this quarter, after a cell-phone number was determined to belong to a household but prior to cell-phone status screening, the respondent was asked, “Are there any children living in your household?” Households

Table K. Weighted National Survey of Children's Health completion rates, nationally and by state: Landline sample

Area	Resolution rate	Alternative resolution rate	Screener completion rate	Interview completion rate
Total (excluding USVI) ¹	80.9	88.7	87.2	54.1
Total (including USVI) ¹	80.9	88.8	87.2	54.1
Alabama	80.0	89.4	87.6	58.9
Alaska	83.7	91.7	87.7	53.6
Arizona	80.8	88.5	86.8	50.7
Arkansas	85.4	91.9	90.6	56.6
California	75.2	87.7	84.7	49.4
Colorado	81.6	87.9	89.0	59.6
Connecticut	77.0	84.0	85.5	53.9
Delaware	76.3	84.5	87.3	52.5
District of Columbia	81.5	91.6	87.4	58.1
Florida	80.5	88.3	86.3	51.1
Georgia	81.9	89.3	86.9	55.0
Hawaii	83.4	90.3	85.3	49.6
Idaho	84.5	90.1	89.9	54.1
Illinois	83.1	90.3	88.0	54.3
Indiana	84.8	91.1	89.1	62.1
Iowa	85.3	91.0	90.9	60.0
Kansas	84.5	90.5	89.3	60.0
Kentucky	81.9	89.6	87.9	53.6
Louisiana	83.4	90.9	86.2	52.1
Maine	82.5	89.1	90.3	57.6
Maryland	78.5	86.9	85.8	58.3
Massachusetts	77.3	84.1	86.1	53.2
Michigan	83.6	90.2	88.2	58.2
Minnesota	84.6	89.3	90.2	57.2
Mississippi	84.4	91.4	87.4	55.2
Missouri	84.2	90.7	89.2	59.4
Montana	85.9	90.3	90.8	64.6
Nebraska	85.3	90.8	89.1	58.4
Nevada	78.5	87.8	86.0	49.6
New Hampshire	79.4	85.7	88.0	53.5
New Jersey	77.7	87.2	85.1	50.8
New Mexico	83.8	89.4	88.3	58.5
New York	79.3	87.9	85.1	46.9
North Carolina	81.0	88.6	88.2	54.8
North Dakota	88.3	92.7	90.5	56.1
Ohio	83.6	89.6	88.3	55.3
Oklahoma	81.8	90.0	87.5	51.0
Oregon	84.3	90.2	90.7	60.9
Pennsylvania	79.4	86.7	88.0	54.8
Rhode Island	78.8	85.1	86.7	55.7
South Carolina	80.8	89.1	87.5	51.8
South Dakota	87.6	91.9	90.3	57.8
Tennessee	82.3	89.4	89.0	55.1
Texas	81.0	89.5	85.6	53.2
Utah	83.3	89.2	89.3	58.7
Vermont	83.2	89.3	91.0	64.6
Virginia	79.3	87.7	87.6	58.0
Washington	82.5	88.0	89.0	58.4
West Virginia	78.9	86.6	88.2	57.1
Wisconsin	83.5	89.9	90.0	57.7
Wyoming	84.6	90.2	89.9	57.2
U.S. Virgin Islands	88.1	96.0	92.2	68.4

¹USVI is U.S. Virgin Islands.

Table M. Weighted National Survey of Children's Health completion rates, nationally and by state: Cell-phone sample

Area	Resolution rate	Alternative resolution rate	Screener completion rate	Interview completion rate
Total (excluding USVI) ¹	48.6	54.0	77.2	41.2
Total (including USVI) ¹	...	...	...	...
Alabama	55.8	62.1	78.8	43.0
Alaska	59.7	73.0	81.0	53.3
Arizona	46.5	53.9	80.0	44.8
Arkansas	55.8	59.3	79.9	48.2
California	46.4	51.0	73.4	37.0
Colorado	46.8	53.4	78.5	47.2
Connecticut	41.4	47.0	76.1	40.8
Delaware	43.0	50.3	81.9	44.4
District of Columbia	40.6	52.9	84.7	50.7
Florida	49.9	53.6	77.3	37.1
Georgia	52.8	58.8	77.6	41.8
Hawaii	44.5	49.2	77.9	41.2
Idaho	51.1	55.5	81.8	51.9
Illinois	52.1	56.8	74.2	38.4
Indiana	51.8	56.9	80.9	44.0
Iowa	53.0	59.4	81.7	46.7
Kansas	55.0	60.1	82.1	49.3
Kentucky	50.4	56.3	79.1	44.1
Louisiana	51.8	56.8	77.6	42.0
Maine	46.7	50.3	80.8	45.0
Maryland	38.1	47.4	78.2	41.8
Massachusetts	42.6	49.9	78.3	45.1
Michigan	49.6	56.2	79.4	41.2
Minnesota	49.9	56.1	81.8	45.8
Mississippi	57.7	62.9	80.4	42.1
Missouri	49.0	53.9	80.7	46.7
Montana	62.9	67.6	82.8	51.5
Nebraska	54.0	57.6	80.5	52.4
Nevada	44.5	51.2	78.0	43.5
New Hampshire	44.4	49.5	78.4	44.8
New Jersey	45.9	53.0	78.6	38.5
New Mexico	56.4	61.8	81.1	45.3
New York	46.0	50.4	74.3	34.0
North Carolina	51.8	56.6	78.0	43.5
North Dakota	64.8	71.0	82.2	49.2
Ohio	46.2	52.1	78.5	40.6
Oklahoma	54.7	60.0	80.2	43.5
Oregon	47.4	51.0	81.6	47.2
Pennsylvania	42.9	48.8	75.7	31.8
Rhode Island	42.5	47.4	77.0	45.5
South Carolina	52.9	57.4	79.8	41.1
South Dakota	64.0	67.1	83.8	50.1
Tennessee	48.8	52.9	77.0	44.0
Texas	48.5	53.1	72.9	39.6
Utah	48.4	58.6	81.5	51.5
Vermont	46.5	50.4	79.9	50.1
Virginia	41.7	50.7	79.8	44.2
Washington	42.6	48.1	79.3	45.7
West Virginia	44.6	48.3	78.6	42.9
Wisconsin	51.5	56.3	79.3	47.0
Wyoming	71.2	73.3	80.0	52.0
U.S. Virgin Islands	...	...	...	...

... Category not applicable.

¹USVI is U.S. Virgin Islands.

reporting no children were ineligible for NSCH. Because the age screener was administered before the cell-phone status screener for some households and after the same screener for others, the age- and cell-status screeners were treated as a single screener to identify CPO or CPM households containing children when calculating component completion rates and response rates for the cell-phone sample.

Some households did not complete the age and cell-phone-status screeners. For the landline sample, the age-screener completion rate is the proportion of identified households for which it was determined whether the household contained children under age 18. For the cell-phone sample, the age-screener completion rate is the proportion of identified households for which it was determined whether the cell phone was used by an adult in a household that contained children under age 18. In the Quarter 1, 2011, cell-phone sample, the age and cell-phone-status screener completion rate is the proportion of identified households for which it was determined whether the cell phone was used by an adult in a CPO/M household that contained children under age 18. The national screener completion rate was 87.2% for the landline sample and 77.2% for the cell-phone sample. The screener completion rates for each state are given in [Table K](#) for the landline sample and [Table M](#) for the cell-phone sample.

Interview completion rate

Once a child was randomly chosen from the household, an attempt was made to conduct a full interview about the selected child. Not all households containing children completed the full interview. The interview completion rate is the proportion of households known to contain a child that completed Section 6 (for children aged 0–5 years) or Section 7 (for children aged 6–17 years). The national interview completion rate was 54.1% for the landline sample and 41.2% for the cell-phone sample. The rates for each state are given in [Table K](#) for the landline sample and [Table M](#) for the cell-phone sample.

Overall response rate

The NSCH interview response rate is the product of the resolution rate, age and cell-phone-status screener completion rate, and interview completion rate. Using the original resolution rate, this calculation returns response rates of 38.2% for the landline sample, 15.5% for the cell-phone sample, and 23.0% for the overall sample. Using the alternative resolution rate described earlier (which treats telephone numbers with no contact as nonworking numbers), the resulting response rates are 41.9% for the landline sample, 17.2% for the cell-phone sample, and 25.4% for the overall sample. The true estimate of the response rate likely lies between the original and alternative calculation, depending on the proportion of noncontact numbers that were nonworking. [Table N](#) shows the overall response rates nationally and by state.

Other methods exist to calculate response rates that result in different rates. [Appendix X](#) contains the overall response rate for the landline, cell-phone, and overall samples for each state and the nation, as well as alternative response rates and guidance on comparing response rates across surveys.

Efforts to Improve Response Rates

Advance letters, toll-free numbers, refusal conversion efforts, and translated questionnaires were used to help improve response rates. In addition, other efforts included questionnaire review and revision, sample management, and monetary incentives.

NCHS and MCHB worked with data collection contractor NORC to make specific improvements to the 2011–2012 instrument based on feedback from data users. After every quarter of data collection, a list of potential changes to the instrument also was reviewed and implemented if necessary. These changes were based on analysis of questionnaire breakoffs and reports from interviewers of problem areas within the questionnaire ([Appendixes III and IV](#)).

Two integrated sample management teams—one focused on NIS and one on SLAITS—met frequently to manage

the sample effectively and efficiently. Ongoing assessments and modifications of the data collection instrument, data collection procedures, and calling rules were conducted.

Response rates were monitored closely throughout the data collection period. Specially trained refusal converters attempted to convert nonrespondents by targeting the case-specific source of the refusal, based on the case history. In addition, an extensive incentive protocol was conducted to increase the rate of refusal conversions and response rates in general. An incentive experiment was conducted to identify best practices to present the incentive offer and its value. A full explanation of the incentive experiment, the resulting incentive methods chosen, and the effect on NSCH response rates can be found in [Appendix XI](#).

Incentive treatment was generally applied to cases with one or two refusals in their case history ([Appendix XI](#)). To further increase response rates, incentives were also offered to cases that reported having age-eligible children in the household and subsequently refused participation in a passive manner, by not engaging in live contact with a telephone interviewer for at least 21 days. Passive cases had either zero or one refusal in their case history, and following the 21-day period, became eligible for the two-refusal incentive treatment. A total of 7,510 cases that received the passive refusal incentive treatment went on to complete the survey, effectively increasing survey response rates ([Appendix XI](#)). [Appendix XII](#) shows the envelopes used for mailing incentives as described in [Appendix XI](#).

Nonresponse Bias

Although the efforts outlined above improved the response rate, much nonresponse to the survey remained. [Appendix XIII](#) details the nonresponse bias analysis that was performed to examine the extent that nonresponse bias affected survey estimates. Generally, the results indicate that the interviewed population was more likely to live in rural and other areas with lower household density when compared with

Table N. National Survey of Children's Health 2011–2012 response rates overall, nationally and by state

Area	Overall response rate (percent)
Total	23.0
Alabama	25.5
Alaska	31.6
Arizona	22.4
Arkansas	26.5
California	19.5
Colorado	25.3
Connecticut	23.5
Delaware	23.3
District of Columbia	23.2
Florida	20.8
Georgia	24.0
Hawaii	21.3
Idaho	26.4
Illinois	22.9
Indiana	27.2
Iowa	29.0
Kansas	29.1
Kentucky	24.3
Louisiana	22.7
Maine	25.9
Maryland	22.9
Massachusetts	23.4
Michigan	24.3
Minnesota	27.6
Mississippi	23.8
Missouri	26.7
Montana	34.3
Nebraska	29.8
Nevada	21.5
New Hampshire	23.8
New Jersey	22.5
New Mexico	26.8
New York	20.3
North Carolina	23.7
North Dakota	31.9
Ohio	22.7
Oklahoma	24.8
Oregon	27.7
Pennsylvania	20.8
Rhode Island	25.5
South Carolina	23.0
South Dakota	32.9
Tennessee	23.2
Texas	20.1
Utah	27.8
Vermont	30.4
Virginia	24.7
Washington	25.2
West Virginia	24.8
Wisconsin	27.3
Wyoming	34.3

the nonresponding population. The interviewed population was also more likely to live in areas associated with higher levels of homeownership, lower home values, and a greater percentage of non-Hispanic white persons. When nonresponse-adjusted weights were used, minor differences by homeownership, home values, and race remained. In general, the analysis showed that response biases could have had a small

impact on key survey estimates, but that the nonresponse adjustment to the weights substantially reduced the potential magnitude of those biases. Of the 10 key survey estimates examined, 3 showed maximum estimated biases of less than 1 percentage point, and 5 showed maximum estimated biases that were within the 95% confidence interval for the “biased” estimate, indicating that nonresponse bias was

smaller than potential sampling error. Family structure showed a maximum bias for the percentage of two-parent biological or adoptive families that was similarly smaller than sampling error; the percentages of two-parent stepfamilies, single-mother families, and other family structures showed maximum biases of 4.4, 2.0, and 2.3 percentage points, respectively, but all three also showed biases in the opposite direction depending on which method is used to estimate bias. Of the remaining key survey estimates examined, one showed a maximum estimated bias of 1.72 percentage points but also showed other estimates of bias in the opposite direction, and the other showed estimated biases of 0.12–2.5 percentage points, depending on the method used to estimate bias. In fact, bias estimates were so small that, for most of the key survey variables examined, changing the method used to estimate bias changed the estimated direction of the bias. Without a true gold standard, it is impossible to accurately measure bias and, thus, bias cannot be completely ruled out, but the low estimated biases and inconsistent direction of estimated biases do not suggest the presence of substantial bias.

Quality Control of Interviewing

The CATI system was programmed to help ensure complete and accurate data collection using automated data-checking techniques, such as response-value range checks and consistency edits, during the interview process. These features enabled interviewers to obtain needed clarifications while still on the telephone with the respondent. Throughout data collection, interview data were reviewed for consistency between fields, appropriate response-value ranges, skip logic patterns, and missing information.

Telephone center supervisors were immediately available to assist interviewing staff at all times to resolve any questions or concerns about a case. Supervisors regularly observed the data collection process to monitor interviewers. In addition, supervisory staff used remote telephone and

computer-monitoring technology to evaluate whether interviewers performed according to project specifications. This formal monitoring was conducted to ensure that introductory materials were properly read, item wording and sequence of the questionnaire were followed correctly, respondent questions were answered properly, and any vague responses were properly probed. Computer monitoring also allowed supervisors to determine whether answers were entered accurately into the CATI system.

New supervisors attended an 8-hour training session that introduced them to the monitoring procedures. In addition, supervisors participated in an exercise to learn how to give effective feedback and coach interviewers. After this training session, each new supervisor conducted dual-monitoring sessions with experienced staff. Each new monitor observed live monitoring side by side with an experienced monitor, and each completed a Monitoring Evaluation Form. At the end of each session, the new supervisor and experienced monitor compared notes, discussed proper scoring guidelines, and created a strategy to give feedback. These training procedures ensured that all supervisors were monitoring interviewers using the same criteria for evaluation.

The CATI monitoring system automatically selected which interviewers to monitor and gave the highest priority for monitoring to newly trained interviewers, those with the fewest monitoring sessions, or those with the weakest performance reviews. Experienced interviewers were prioritized for monitoring based on the length of time since their last monitoring session and their recent monitoring scores. Each interviewer was typically monitored at least once a week; however, some interviewers were monitored more often.

Throughout data collection, interviews were recorded as well, after obtaining agreement from respondents. These recordings were valuable tools for training, and when necessary, they allowed supervisors to document specific case-related performance and provide tailored feedback to interviewers. Recordings were destroyed after 1 year.

Questionnaire updating

After every quarter of data collection, a list of potential changes to the instrument was reviewed and implemented if necessary. These changes were based on analysis of questionnaire breakoffs and reports from interviewers of problem areas within the questionnaire ([Appendixes III and IV](#)).

Toll-free telephone number

As discussed in “Data Collection: Toll-free Telephone Numbers,” toll-free numbers were maintained and listed in all letters to respondents. The toll-free numbers allowed respondents to participate immediately, ask questions regarding the survey, or obtain additional survey-related information.

Data Files

One data file was created, using SAS version 9.2. The file included data from 2011 and 2012 complete interviews, that is, complete through Section 6: Early Childhood (0–5 years) or Section 7: Middle Childhood and Adolescence (6–17 years). To maintain confidentiality, certain variables that could be used to identify respondents were excluded from the file. One record was created for each child who was randomly selected to be the subject of the interview. This file ($n = 98,019$) contains data on the sampled child’s health and health care, family functioning, parental health, neighborhood and community characteristics, health insurance coverage, and demographics such as family composition. Of the 98,019 records, 95,689 cases were fully completed interviews, and 2,330 were partially completed interviews.

This data file was split into two files for public release: one containing data from the 50 states and D.C. ($n = 95,677$), and the other containing data for USVI ($n = 2,342$).

Separate data files contain multiply imputed values for missing poverty status. As with the main data files, one file is for the 50 states and D.C., and one file is for USVI. [Appendix XIV](#) describes

the procedures used to multiply impute household income and household size to allow computation of poverty status for households with missing income or size.

Editing

The CATI system was designed to perform edits as an interviewer entered data into the computer system. To prevent interviewer error, the CATI system was developed to include range checks and consistency checks. If an interviewer entered a value that was “out of range,” a warning screen would appear, instructing the interviewer that the data would not be accepted and that he or she would have to enter a different answer (and possibly re-ask the question). For example, a respondent might report three people in the household but had earlier reported four children. In that event, a consistency check would appear, saying, “NUMBER OF PEOPLE IN THIS HOUSEHOLD CANNOT BE LESS THAN NUMBER OF KIDS+1,” indicating that the numbers did not add up correctly. To the extent possible without making the CATI system overly complicated, out-of-range and inconsistent responses resulted in a warning screen for the benefit of the interviewer, who was trained to correct errors as they occurred. These messages were designed primarily to prevent data entry errors and respondent errors and not to challenge respondents who gave logically inconsistent responses. Logically inconsistent responses given by the respondent were left inconsistent.

Even with many built-in CATI checks, data cleaning was still necessary. Invalid values were deleted and missing values were investigated. On rare occasions, certain data were not collected as expected, but the missing data were easy to determine based on related questions. The most important part of data cleaning was making sure that each household had the expected number of children’s ages rostered, as well as the age and sex for the child that was selected for the full interview. Finally, missing data had to be determined to be a result of legitimate skip, a partially completed interview, or data that were missing in error.

Missing Data

Missing data are not desirable when doing analyses and are often ignored completely. However, it can be helpful to know why data are missing. The SAS data files for NSCH include special missing-value codes for analysts who may wish to differentiate between different types of missing values. The following key provides a description of the various codes that were used to represent missing data in the file:

(.N) Not in universe—Respondents skipped an entire section of questions based on eligibility criteria. For NSCH, sampled children aged 0–5 years were not eligible for Section 7 of the survey, and children aged 6–17 years were not eligible for survey Section 6. Sampled children with health insurance, or living in households that reported an income over 400% FPL, were not eligible for Section 12 of the survey.

(.L) Legitimate skip—Variable is missing due to valid questionnaire paths, based on a previous answer to a root question.

(.P) Partially completed interview—Variable is missing because the respondent ended the call after completing Section 6 or Section 7 but before completing the full interview.

(.M) Missing in error—Variable is missing due to interviewer or system errors. In cases of interviewer error, the interviewer may have deleted the data accidentally or may have not entered the response. In cases of system error, the response may not have been collected or saved properly after it was entered by the interviewer in the CATI system.

(.A) Added question—Variable is missing because this question was added after the start of data collection, and the interview was conducted before the question was added.

Derived variables (i.e., variables whose response was not directly provided by the respondent) do not include the detailed coding of missing data. All missing values for derived variables received a “.M” code regardless of the reason for the missing data. Similarly, “.M” was used when derived variables were suppressed to protect the confidentiality of survey participants.

Data missing because the respondent did not know the answer or refused to provide the answer have been treated differently. Rather than assigning a missing value to these records, a numeric code was used to identify these responses. Typically, unknown answers are coded as “6,” “96,” or “996.” Refused responses are coded as “7,” “97,” or “997.” Analysts are encouraged to consult the data documentation and frequency lists to identify the correct codes for each variable. Failure to do so may result in inappropriate calculations, especially for variables measured using ordinal, interval, or ratio scales.

Coding of Verbatim Answers Into Question Responses

For some questions in the NSCH interview, respondents provided a response that did not match any pre-existing category. If this occurred, the interviewer entered “other” and typed in the exact response provided by the respondent. At the end of the data collection period, an attempt was made to recode the verbatim responses into existing categories where appropriate. For certain variables listed below, new response categories were added to the data file to capture verbatim responses. This back-coding occurred for a number of variables, listed below showing the sampled child as [S.C.]:

- Type of doctor or other health care provider who first told respondent that [S.C.] had autism or autism spectrum disorder (K2Q35D)
- Any other reasons why respondent thinks [S.C.] may no longer have autism or autism spectrum disorder? (K2Q35G)
- Any other reasons why a doctor or other health care provider may have told you that [S.C.] had autism or autism spectrum disorder when [he/she] never had it? (K2Q35J)
- Place of health care provider (K4Q02)

Three additional response categories were used in the back-coding of this variable:

- Places a telephone call (e.g., hotline, nurse’s line)
- Mental health service provider (e.g., counselor, therapist, psychiatrist)
- Alternative health care (e.g., chiropractor, homeopath, naturopath)

- Kind of place or places [S.C.] had [his/her] vision tested (K4Q32)

Two additional response categories were used in the back-coding of this variable:

- Retail center (e.g., Walmart)
- Department of Motor Vehicles

- What is the main reason [S.C.] does not have health insurance now? (K12Q01)
- What is the main reason that [S.C.]’s [Medicaid] enrollment ended? (K12Q14)
- What is the main reason that you were unable to enroll [S.C.] in Medicaid? (K12Q17)
- What is the main reason that [S.C.]’s [State CHIP name] enrollment ended? (K12Q24)
- What is the main reason that you were unable to enroll [S.C.] in [STATE CHIP NAME]? (K12Q27)
- What is the main reason you would NOT want to enroll [S.C.]? (K12Q36)
- What is the main reason [S.C.] is not enrolled in [PROGRAM]? (K12Q37)
- What is the main reason that you think [S.C.] is not eligible for [PROGRAM]? (K12Q38)
- What is the main reason that [S.C.] is not covered by insurance provided through this [employer/union/ employer or union]? (K12Q45, K12Q55, K12Q65)

For respondents who did not choose one of the pre-existing categories for the race and ethnicity questions (C10Q31, C10Q32X01–C10Q32X08, and C10Q32A), three new variables were created to capture the verbatim response: RACE, RACERECODE, and RACEARRAY.

Edits to Protect Confidentiality

NCHS takes extraordinary measures to ensure that the identity of survey subjects cannot be determined. The risk of inadvertent disclosure of confidential information regarding individual respondents is higher with a publicly released data set that includes detailed geography variables, a detailed and extensive set of survey observations, or a sizeable proportion of the total population of interest. Coarsening a data set by suppressing survey variables, collapsing multiple variables into one, collapsing response categories for other variables, or introducing noise in the data are common techniques to reduce the risk of inadvertent disclosure.

Geography

Geographic information that would identify the specific estimation area in states with multiple estimation areas has been suppressed. However, state identifiers are included. In addition, an indicator identifying whether the household resides inside or outside of a metropolitan statistical area (MSA) has been included for some states. This indicator, called `MSA_STAT`, was suppressed whenever the total population for all MSA areas in a given state was less than 500,000 persons, or whenever the total population for all of the non-MSA areas in a given state was less than 500,000 persons. This resulted in the suppression of the MSA identifier in 16 states.

Due to the suppression of this identifier in 16 states, national estimates by MSA status are not possible with the publicly available NSCH data set, and analysts should use caution when including this variable in statistical models. Analysts may consider using imputation to assign an MSA indicator to children in states where the indicator was suppressed. One option for analyses at the national level is to assign MSA status to children in states that are predominantly metropolitan and to assign non-MSA status to children in states that are predominantly nonmetropolitan. If MSA status is imputed to all children in

Alaska, Connecticut, Delaware, Hawaii, Idaho, Maine, Maryland, Massachusetts, New Hampshire, Nevada, and Rhode Island, the MSA identifier will be correct for 78% of the children (16,339 out of 20,885). If non-MSA status is imputed to all children in Montana, North Dakota, South Dakota, Vermont, and Wyoming, the MSA identifier will be correct for 63% of the children (5,755 out of 9,163). For weighted analyses, this imputation procedure will result in erroneous classifications for 1.7% of children nationally.

Race

Question K11Q02 asked about the sampled child's race. Respondents were permitted to identify all possible categories that described the child's race. If a race other than one of the seven existing categories was indicated, then a verbatim response was captured. Verbatim responses were reviewed and matched against a database of alternative race terminology maintained by the U.S. Census Bureau. Where possible, "other" race responses were back-coded into one of the seven existing categories. Once all possible verbatim responses were back-coded, a new race variable was created by collapsing the seven categories into one of six categories: white, black or African American, American Indian or Alaska Native (AIAN), Asian, Native Hawaiian or Other Pacific Islander (NHOPI), and multiple race. Multiple race was reserved for those cases where more than one of the other five categories applied.

To protect the confidentiality of individual respondents and children, responses for the race variable were further collapsed into four categories: white only, African American or black only, other race, and multiple race. The "other race" category includes children for whom only one of the other three categories (Asian, AIAN, or NHOPI) was reported. Children for whom more than one race was identified (for example, Asian as well as NHOPI) were included in the multiple race category. If the respondent did not know or refused to provide the race, then race was coded as missing. Cases where a verbatim response could not be conclusively

back-coded (for example, American, Indian, or Jewish), and no other race was reported, were also coded as missing. This new derived race variable (called RACER) is the only classification publicly available for all 50 states and D.C.

In several states, however, minority group populations are sufficiently large that the release of additional race categories was possible while still protecting the confidentiality of the respondents and children. To identify these states, data from the American Community Survey (ACS) were examined to identify minority groups that comprise at least 5% of the total population of children in a specific state. Based on this criterion, the data files identify AIAN children in Alaska, Arizona, Montana, New Mexico, North Dakota, Oklahoma, and South Dakota. This race classification variable is called RACEAIAN. Asian children's race is reported for children in California, Hawaii, Maryland, Massachusetts, Minnesota, Nevada, New Jersey, New York, Virginia, and Washington. This race classification variable is called RACEASIA. The data file identifies both Asian children and NHOPI children in Hawaii, using the race classification variable called `RACE_HI`.

Note that national estimates for AIAN, Asian, and NHOPI children are not possible using the publicly available NSCH data set. Children with these race classifications are identified in selected states only. These race classifications were suppressed in other states for 1,084 AIAN children, 1,439 Asian children, and 350 NHOPI children. Nationally, children with suppressed race classifications represent 65.5% of AIAN children, 38.8% of Asian children, and 85.9% of NHOPI children.

Language

Question K1Q03 collected data on the primary language spoken in the household. Of the 7,451 children living in households with a non-English language as the primary language, 71.9% ($n = 5,359$) lived in Spanish-language households. Of the remaining non-English-language households, 488 (6.5%) spoke one of the four Asian languages in

which the interview was conducted, and 1,604 (21.5%) spoke another language. To protect confidentiality, the specific language spoken in non-English language households, and the specific language used for any non-English interview (OTH_LANG), have been suppressed.

Height and weight

To protect the confidentiality of individual children, specific height and weight have been suppressed in the public data file. In their place, a four-category variable identifying underweight and overweight children (BMICLASS) has been added to the data set. Children aged 10–17 years have been identified as having a BMI-for-age that is 1) equal to the 5th percentile or lower, 2) greater than the 5th percentile but lower than the 85th percentile, 3) equal to the 85th percentile or greater but lower than the 95th percentile, or 4) equal to the 95th percentile or greater. Percentiles are based on sex and age. For example, if the value of a child's BMI is equal to the 95th percentile, then that child is among the 95% of children of that age and sex whose BMI is equal to or less than that value. Percentiles were determined using the CDC growth charts and a SAS statistical analysis software program provided online by CDC (a version of this SAS program, updated in 2016, is available online) (18). However, this program relies on the child's age in months; because age was reported only in years for this survey, children were assumed to be at the midpoint of the age-year (that is, a child aged 10 years was assumed to be aged 126 months) for purposes of calculating BMI-for-age.

Height and weight were based on parent report and were not independently measured. Researchers attempting to validate parent report of height and weight in the 2003 NSCH have concluded that parent-reported data should not be used to estimate overweight prevalence among preschool-aged and elementary school-aged children (19). Parents' reports significantly underestimated height; as a result, too many young children were classified as overweight in the 2003 NSCH. Due to concerns about the validity of

the 2011–2012 data, calculated BMI categorizations (BMICLASS) have been suppressed for children under age 10 years.

Family structure

To protect the confidentiality of individual children whose families have unique structural characteristics, a single measure of family structure and parental marital status (FAM_MAR_COHAB) was created from C10Q02A, C10Q02B, and C10Q10–C10Q13C. This variable refers to parents living in the household and has nine levels: 1) two-parent household with both a biological or adoptive mother and a biological or adoptive father who are currently married; 2) two-parent household with both a biological or adoptive mother and a biological or adoptive father who are currently cohabiting; 3) two-parent household with both a mother and a father who are currently married and at least one is a stepparent to the child; 4) two-parent household with both a mother and a father who are currently cohabiting and at least one is a stepparent to the child; 5) one-parent household with a biological, step, foster, or adoptive mother and no father of any type present, and the mother is currently married and living apart from her spouse or is formerly married; 6) one-parent household with a biological, step, foster, or adoptive mother and no father of any type present, and the mother is never married; 7) other family structures where the parent(s) are currently or formerly married; 8) other family structures where the parent(s) are never married; and 9) other family structures with no parents in the household. Any of these family structures may include other people who serve as parents, such as grandparents, aunts, uncles, or unmarried partners of the parents. Legal guardians were not considered to be mothers or fathers.

Other Derived and Collapsed or Topcoded Variables

Some variables have been recoded for inclusion in the public data file, either

by combining information from multiple raw variables in to a new derived variable or by collapsing, topcoding, or otherwise coarsening a single variable into fewer or less detailed categories. The definitions of these variables follow. An "R" appended to the end of the variable name indicates that a recode of some kind has occurred, and analysts should consult the codebook of frequencies released with the public data file to understand the differences between the questions asked in the questionnaire and the variables available in the public data.

AGEPOS4—This variable uses information from the rostering of children in the household to categorize the birth position of the focal child.

C10Q14R—C10Q14 bottom-coded at 22 or younger and topcoded at 85 or more.

CSHCN—This variable uses information from variables K2Q10–K2Q23 to indicate whether a child has special health care needs.

EDUC_MOMR—This variable, based on K11Q20, reports the highest level of school that the sampled child's mother in the household has achieved, categorized in three levels: less than high school, high school, or more than high school.

EDUC_DADR—This variable, based on K11Q21, reports the highest level of school that the sampled child's father in the household has achieved, categorized in three levels: less than high school, high school, or more than high school.

EDUC_RESR—This variable, based on K11Q22, reports the highest level of school that the sampled child's nonparent respondent in the household has achieved, categorized in three levels: less than high school, high school, or more than high school.

EDUC_PARR—This variable, based on K11Q20, K11Q21, and K11Q22, reports the highest level of school that the sampled child's mother, father, or nonparent respondent in the household has achieved, categorized in three levels: less than high school, high school, or more than high school.

HISPANIC—This variable, based on K11Q01 updated with back-coding from "other" race responses recorded in

K11Q02_OS, indicates whether a child is of Hispanic or Latino origin.

HOUSE_GEN—This variable uses information from K11Q30, K11Q31, and K11Q32 to categorize household-level immigrant generational status. First-generation households include those in which the child was born outside the United States (except for children adopted from other countries, who are not considered immigrants), while second-generation households are those in which one or both resident parents were born outside the United States but the child was born in the United States.

K11Q03R—This variable, based on K11Q03, has been suppressed in the public data file for all states except Alaska, Arizona, Montana, New Mexico, North Dakota, Oklahoma, and South Dakota.

K11Q43R—K11Q43 topcoded at 12 or more.

K12Q13R—K12Q13 standardized to months.

K12Q16R—K12Q16 standardized to months.

K12Q23R—K12Q23 standardized to months.

K12Q26R—K12Q26 standardized to months.

K2Q04R—K2Q04 standardized to ounces.

K4Q20R—K4Q20 topcoded at 20 or more.

K4Q21R—K4Q21 topcoded at 12 or more.

K6Q41R—K6Q41 standardized to age in days and topcoded at 1,095 or more.

K6Q42R—K6Q42 standardized to age in days.

K6Q43R—K6Q43 standardized to age in days.

K7Q02R—K7Q02 topcoded at 40 or more.

K7Q04R—K7Q04 topcoded at 25 or more.

K7Q05R—This variable uses information from K7Q05 and K7Q05_A to indicate the most recent grade of school that was repeated.

K8Q12R—K8Q12 recoded into the following categories: never, at least once a year but less than once a month, at least once a month but less than once a week,

at least once a week but less than daily, and daily.

K9Q16R—K9Q16 bottom-coded at 20 or younger and topcoded at 59 or more.

MULT_REPEATS—This variable uses information from K7Q05 and K7Q05_A to indicate whether the child had repeated more than one grade of school.

NUMB_SERVICES—This variable sums the number of health care services the child needed as recorded in section 4, subdomain 2, of the questionnaire (S4Q01–K4Q35).

POVERTY_LEVELR—This variable is based on total household members (K9Q00) and the household income value. If data for either of these components are missing, refused, or had a “don’t know” response, this variable is assigned a missing value. Once an income-to-household-size measure is computed, it is compared with HHS federal poverty guidelines ([Appendix VII](#)). This variable is based on POVERTY_LEVEL, collapsing the nine categories into eight.

RELATION—This variable, based on question C10Q02A, describes the relationship between the respondent and the child selected for the interview.

SAMPLE—This variable indicates the telephone sample type (i.e., landline or cell phone).

SEX—This variable, based on K1Q01, specifies the child’s sex.

SUMMER—This variable uses date of interview to indicate whether the interview was completed in June, July, or August.

STATE—This variable, based on sampling state, is updated to true state when respondent-reported zip code at C11Q22 indicated that the telephone number had been migrated to a household in a different state.

TOTADULT3—This variable is based on the difference between K9Q00 (total people in household) and TOTKIDS (total children in household). It gives the total number of adults in the household and equals .M if one or both of the variables K9Q00 and TOTKIDS equal “don’t know,” refused, or missing. This variable has been topcoded at 3 or more.

TOTKIDS4—This is a categorical variable that indicates the number of children in the household and has been topcoded at 4 or more.

Dummy Variables

When respondents were permitted to provide multiple answers for the same question, a variable was created for each possible answer. The values for these new dummy variables are “yes, this answer was given” and “no, this answer was not given.” When respondents could not or did not provide an answer to the question, a value of “don’t know” or refused was reported for each of the dummy variables.

- K4Q28 is represented by K4Q28X01–K4Q28X05.
- K4Q32 is represented by K4Q32X01–K4Q32X07.

Additional Data Notes

- NSCH partial completes occur where the NIS–Child or NIS–Teen interview was fully completed. Where applicable, responses from NIS–Child or NIS–Teen questions have been used to fill the corresponding NSCH responses.
- Upon beginning Section 12, a small number of respondents indicated that they misspoke earlier in the survey and did, in fact, have health coverage for the selected child. For these cases, Section 3 and Section 12 insurance variables were updated accordingly in postprocessing. This resulted in several variables from Section 3 being coded as missing in error.
- To accommodate the new cell-phone screening approach, changes were made to the cell-phone questions between Q1/2011 and Q2/2011. First, SL_LANDLINE and SL_CELLUSE were added in Q2/2011 to collect cell-phone status from all cell-phone respondents. In Q1/2011, landline-only cases skipped C11Q16; however, starting in Q2/2011, both landline-only and cell phone-only cases skipped C11Q16. Finally, in Q1/2011, both cell phone-only (CPO) and cell phone-mainly (CPM) cases skipped C11Q20; however, starting

in Q2/2011 (and continuing through Q1/2012), only CPO cases skipped C11Q20.

- During data review, special attention was given to the telephone section within Section 13 for cell-phone sample. This review identified a number of cell-phone cases that indicated having no cell phones at C11Q15_CELL or having no adults who usually use the cell phones in the household at C11Q15_CELL_USUALLY. Cases that were identified to have been minor-only or business-only cell phones were removed from the interview file. Corrections to C11Q15_CELL resulted in a number of cases in C11Q15_CELL_USUALLY and C11Q16 being set to missing in error.
- Skip logic for K9Q19 changed from Q1/2011 to Q2/2011. In Q1/2011, K9Q19 asked if there was no mother or father of any type in the household but *did* include any older relative or guardian (i.e., grandmother or grandfather, aunt or uncle, or male or female guardian). In Q2/2011, the logic was modified such that K9Q19 asked if there was no mother or father of any type in the household but *did* include any older relative or guardian *and* C10Q02C was not equal to “1.”

Quality Control

Using the questionnaire specifications, NORC project staff produced several programs to review the data and identify data items that required cleaning. These programs were also used during data collection to monitor production. The programming team developed cleaning programs so that the resulting cleaned data file could be replicated and reviewed by others. These programs applied any final data corrections based on data recovery, checked that skip patterns were followed, created derived variables from questionnaire variables, and assigned special codes to reflect various missing data.

Project staff then ran numerous quality control checks on the cleaned data file. Variable frequencies were reviewed

to confirm skip patterns, missing code assignments, and expected distributions. Derived variable specifications and computations were carefully reviewed. Variable labels were compared against the questionnaire to confirm accurate label assignments.

The cleaning programs were run on each new version of the data file until no problems were identified in the quality control checks.

Procedures for Developing Sampling Weights

This section provides a nontechnical overview of the weighting procedures for the 2011–2012 NSCH. A more detailed and technical description is in [Appendix I](#).

Base Sampling Weights

The landline telephone and cell-phone lines selected for screening for the 2011–2012 NSCH represent a random sample of all possible landline and cell-phone lines in each geographic area. The probability that any given landline or cell-phone line was selected from the population of all possible landline and cell-phone lines was calculated by dividing the number of telephone lines selected for the study by the total number of telephone lines in a given sampling area by sample type (landline or cell phone).

Each landline or cell-phone line selected for the 2011–2012 NSCH represented some larger number of telephone lines in the geographic area. This number was calculated as the inverse of the probability of selection for any telephone line within sample type. This number became the base weight associated with each completed household interview in that geographic area within sample type. Base weights varied by geographic areas and sample type.

Derivation of Annual Sampling Weight

The quarterly weights were adjusted so that the samples from all quarters jointly represented the corresponding full population. Because the weights were calculated for each quarter separately, the sum of base weights in each quarter represented the full population for each state within sample type. The weights were adjusted by the released sample size within each quarter (i.e., quarters with larger released sample sizes represented a larger portion of the annual sampling weight).

Adjustment for Nonresolution of Released Telephone Lines

When the selected landline and cell-phone numbers were called, three results were possible:

1. It was determined that the telephone number belonged to a household or an active personal cell-phone number (APCN).
2. It was determined that the telephone number was not a working residential number or APCN (i.e., a business number or a nonworking number).
3. The status was undetermined because the telephone rang without an answer, the person answering the telephone hung up immediately, or the telephone-answering device did not indicate whether the telephone line belonged to a household.

The last category likely included some household telephone lines, but the exact number in this category was unknown. The completed household interviews needed to represent the households in this unknown category. The size of the adjustment depended on the size of the unknown category after all telephone numbers had been called several times. This adjustment varied based on sample type, geographic area, proportion of owners or renters, proportion of population that is minority, median household income level, median education level, median age,

MSA status, and whether the telephone line was directory-listed. Based on the frequency of the nonresponse in a given area, compensation was made for this nonresponse separately for the landline and cell-phone samples by proportionately increasing the weights for those interviews that were completed in that area, so that the completed interviews represented the households in the unknown category.

Adjustment for Incomplete CPO/M Screener

In Quarter 1, 2011, the cell-phone sample was released for NSCH. This sample was screened to include only those numbers associated with households that had no landline telephone (CPO) or where the respondent was unlikely to answer the landline (CPM). When a cell-phone sample household was identified, three results were possible:

1. It was determined that the respondent was living in a cell phone-only/ mainly or CPO/M household and was eligible for further screening.
2. It was determined that the respondent was not living in a CPO/M household and was not eligible.
3. The screening interview was not completed, and the eligibility of the household was unknown.

The last category included some CPO/M households, however, the exact number of CPO/M households in this category was unknown. The completed cell-phone sample household interviews needed to represent the CPO/M households in this unknown category for the cell sample. The size of the adjustment was based on the size of the first two categories. The proportion of CPO/M households in the unknown category was assumed to be the same as the proportion of CPO/M households among all households where the screening interview for CPO/M was completed. This adjustment varied based on geographic area and MSA status. Based on the frequency of nonresponse to the CPO/M screening interview in a given area and a given

sample, compensation was made for this nonresponse by proportionately increasing the weights for those interviews that were completed in that area, thus representing the CPO/M households in the unknown category. No adjustment was calculated for the cell-phone sample in the remaining quarters (Quarter 2, Quarter 3, Quarter 4, 2011, and Quarter 1, 2012), the landline sample, or USVI.

Adjustment for Incomplete S_KIDS Screener

In Quarter 3, 2011; Quarter 4, 2011; and Quarter 1, 2012, the cell-phone augmentation sample had an additional screener implemented only for this portion of the sample. After the standard NSCH introduction, the first question asked was, “Are there any children living in your household?” When a household had been identified in the cell-phone augmentation sample, three results were possible:

1. It was determined that the household includes a child and was eligible for further screening.
2. It was determined that the household does not include a child and was not eligible.
3. The screening interview was not completed, and the eligibility of the household was unknown.

The last category included some child-eligible households, however, the exact number of child-eligible households in this category was unknown. The completed household interviews needed to represent the child-eligible households in this unknown category. The size of the adjustment was based on the size of the first two categories. The proportion of child-eligible households in the unknown category was assumed to be the same as the proportion of child-eligible households among all households where the screening interview for the presence of children was completed. This adjustment varied based on geographic area and MSA status. Based on the frequency of nonresponse to the child-eligible screening interview in a given area, compensation was made

for this nonresponse by proportionately increasing the weights for those interviews that were completed in that area, thus representing the child-eligible households in the unknown category. No adjustment was calculated for the landline sample, USVI, or NIS cell sample.

Adjustment for Incomplete Age-eligibility Screener

For all non-cell-phone augmentation sample (all landline sample including USVI and NIS cell-phone sample), age eligibility was determined by a question that asked for the number of people under age 18 living or staying in the household. When a household was identified, three results were possible:

1. It was determined that the household included an age-eligible child.
2. It was determined that the household did not include a child and was not eligible.
3. The screening interview was not completed, and the eligibility of the household was unknown.

The last category included some age-eligible households, however, the exact number of age-eligible households in this category was unknown. The completed household interviews needed to represent the age-eligible households in this unknown category. The size of the adjustment was based on the size of the first two categories. The proportion of age-eligible households in the unknown category was assumed to be the same as the proportion of age-eligible households among all households where the screening interview for the presence of children was completed. This adjustment varied based on geographic area, proportion of the population from minorities, MSA status, number of call attempts to resolution (cell sample only), median age, and whether the telephone number was directory-listed within sample type. Based on the frequency of nonresponse to the age-eligible screening interview in a given area and a given sample, compensation was made for this nonresponse by proportionately increasing the weights for those

interviews that were completed in that area, thus representing the age-eligible households in the unknown category.

Adjustment for Subsampling of Children Within Households

One child was randomly selected from among all children in the household to be the subject of the NSCH interview. In households with multiple eligible children, the randomly selected child represented all of the nonselected children in the household. Therefore, the sampling weight for the completed interview was increased to reflect the fact that the completed interview represented multiple children in that household. This adjustment multiplied the adjusted child weight by the number of eligible children in the household.

Adjustment for Nonresponse to NSCH Interview

When a child had been sampled, two results were possible:

1. An interview was completed.
2. An interview was not completed.

The completed child interviews needed to represent the children who were sampled but had not completed the interview. The size of the adjustment was based on the size of the two categories and calculated as the ratio of the total number of sampled children to the number of completed interviews. In other words, based on the frequency of nonresponse among sampled children in a given area, compensation was made for this nonresponse by proportionately increasing the weights for those interviews that were completed in that area. The completed interviews, therefore, represented the sampled children with incomplete interviews.

Adjustment for Households With Multiple Cell-phone Lines

Among the households that completed the interview within the cell sample, some reported more than one cell-phone line for personal use by adults. An adjustment to the weight was required for these households to compensate for their multiple chances of selection. This adjustment divided the adjusted interview weight by the number of personal cell-phone lines used by adults in the household. This approach excluded lines used solely by minors, and was not applied to the landline sample or USVI.

Trimming of Extreme Weights

Within the cell-phone sample, significant movement occurred from sample state to respondent-reported state because the area code of the cell-phone number did not sufficiently indicate the true state of residence in many cases. As a result, when the sample was stratified by true state, large variability occurred in the weights due to cases sampled from State A (sample state) being combined with cases from State B (respondent-reported state). Therefore, extreme weights were trimmed to reduce the variability of the weights.

Adjustment for Combined Landline and Cell-phone Samples and for Noncovered Populations

The full-sample household weights were adjusted within each state to accomplish these goals:

1. Adjustment for noncoverage of age-eligible children.
2. Adjustment for overlap of the landline and cell-phone samples.
3. Adjustment to residual landline population controls.
4. Adjustment to residual cell phone-only population controls.
5. Trimming of extreme weights.

Adjustment for noncoverage of age-eligible children. A Keeter adjustment (20) was carried out to adjust weights to account for households with children not covered by the combined landline and cell-phone samples (i.e., phoneless households). In the Keeter adjustment, weights for landline households with an interruption in telephone service were adjusted to represent phoneless households with children. The method was based on empirical evidence suggesting that landline households with an interruption in telephone service are more similar to phoneless households than are households with no interruptions, with respect to the variables under study (20,21).

Adjustment for overlap of the landline and cell-phone samples. The landline and cell-phone samples, while selected from distinct sampling frames, partially overlapped in their coverage of the population. The landline sample included dual landline and cell-phone households, while the cell-phone sample also included dual landline and cell-phone households. Thus, survey weights for dual landline and cell-phone cases from the two sampling frames were adjusted to account for this overlap.

Adjustment to residual landline population controls. A ratio adjustment was carried out to adjust weights to population controls for the residual set of landline-only households with children.

Adjustment to residual cell phone-only population controls. A ratio adjustment was carried out to adjust weights to population controls for the residual set of cell phone-only households with children.

Poststratification of Child Interview Weight

Despite the weighting efforts and nonresponse adjustments, the estimated number of children was unlikely to match the population sampled. Any discrepancies were likely to be due to random sampling error and nonrandom response biases. These biases included increased nonresponse based on age, sex, or race of the child. Poststratification adjusted the weights to match population

control totals for key demographic variables obtained from an independent source. For the child interview weight, the independent source was the 2011 ACS count of children, stratified by sex, age, and race and ethnicity. The following demographic subgroups were used as population control totals:

- Number of male and female children in five age groups: 0–2 years, 3–5 years, 6–8 years, 9–12 years, and 13–17 years.
- Number of children of various racial and ethnic backgrounds: Hispanic; non-Hispanic Asian, Hawaiian, or Pacific Islander; non-Hispanic American Indian or Alaska Native; and children of all other backgrounds including non-Hispanic white and multiple-race children (categories with small number of cases were collapsed with the predominant race category within each state).
- Number of children in one-child households, two-child households, and three-plus-child households.
- Number of children in households that had a household income of: less than \$10,000, \$10,000–\$19,999, \$20,000–\$39,999, \$40,000–\$59,999, or \$60,000 or more.
- Number of children in households where the highest reported education of parents was: less than a high school education, high school, or more than high school.
- Number of children in owner-occupied households, renter-occupied households, or in neither owner- nor renter-occupied households (in another arrangement).
- Number of children in households by telephone status: CPO, CPM, All Other (AO).

Extremely large weights were truncated to prevent a small number of cases with large weights from having undue influence on the estimates. The technical appendix ([Appendix I](#)) describes how the weights were truncated.

For USVI, detailed population control totals were not available, because ACS was not conducted in USVI and the detailed 2010 census files had not been released at the time of weighting.

The 2010 census totals for age group by sex were available, however, and a post-stratification was done using those results. The age groups used for USVI are: 0–4 years, 5–9 years, 10–14 years, and 15–17 years.

Quality Control

Staff compared the formulas for the weights and adjustments developed by the sampling statistician with the actual weights and adjustments constructed by the statistical programmer. Thorough review of both programs and data outputs were reviewed by senior statisticians for accuracy. In addition, univariate statistics were produced and reviewed for the adjustments and weights.

Estimation and Hypothesis Testing

NSCH data were obtained through a complex sample design involving clustering of children within households, stratification of households within states, and separate sample frames for landline telephone and cell-phone numbers. To produce estimates representative of children nationally and within each state, sampling weights must be used. These sampling weights account for the unequal probability of selection of each household and child, and they include adjustments for multiple-telephone households, unit nonresponse, and noncoverage of nontelephone households, as well as adjustments to known population control estimates. As described earlier, a single sampling weight (NSCHWT) has been developed for NSCH. This weight should be used for both national and state-level analysis.

Interpretation of Weighted Estimates

Estimates based on the sampling weights generalize only to the population of U.S. noninstitutionalized children aged 0–17 years at the time of interview. These estimates do not generalize to the population of parents, mothers, or

children’s health care providers.

Two examples may help make this distinction clearer. Weighted estimates based on K8Q11 can be interpreted as the proportion of children whose families regularly eat meals together, but should not be interpreted as the proportion of families who regularly eat meals together. Similarly, weighted estimates based on K8Q30 can be interpreted as the proportion of children whose parents are coping well with the demands of parenthood, but should not be interpreted as the proportion of parents who are coping well.

Variables Used for Variance Estimation

Because of the complex design of NSCH, the interviewed cases have unequal weights. Therefore, statistical software programs that assume simple random sampling will most often compute standard errors that are too low. Tests of statistical hypotheses may then suggest statistically significant differences or associations that are misleading. However, computer programs are available that provide the capability of variance estimation for complex sample designs (e.g., SUDAAN, Stata, WesVar). To provide the user with the capability of estimating the complex sample variances for the NS–CSHCN data, sample type and stratum identifiers and primary sampling unit (PSU) codes are provided on the data files. These variables and the sample weights are necessary to properly calculate variances.

The stratum identifiers reported on the data set are not identical to the strata used to draw the main sample. In states with multiple estimation areas, independent samples were selected from each estimation area in proportion to the total number of households with children in each estimation area. Therefore, these estimation areas should be considered strata for variance estimation. However, disclosure of the specific estimation area for each child (even if the code were scrambled) could increase the risk of disclosure of a respondent’s identity. In the absence of estimation area-specific identifiers, data users should use the

state identifier (STATE) as the stratum identifier. By using the state identifier rather than the suppressed estimation area identifier, standard errors for national and state estimates with key variables are affected only slightly and not in a consistent direction. The PSU for NSCH is the household, represented on the data sets by the unique household identifier, IDNUMR. The sample type (landline or cell phone) is represented on the data sets by the identifier SAMPLE.

The overall number of persons in this survey is sufficient for most statistical inference purposes. However, analyses of some rare responses and analyses of subclasses can lead to estimators that are unreliable. Small sample sizes used in the variance calculations may also produce unstable estimates of the variances. Consequently, these analyses require that the user pay particular attention to the variability of estimates of means, proportions, and totals.

Variance Estimation Using SUDAAN or Stata

Standard errors of estimates from NSCH can be obtained using the Taylor-series approximation method, available in software such as SUDAAN, SAS, and Stata. The state and sample type should be identified as stratum variables, and the household should be identified as the PSU. The simplifying assumption that PSUs have been sampled with replacement allows most complex survey sample design computer programs to calculate Taylor-series standard errors in a straightforward way. This method requires no recoding of design variables but is statistically less efficient (and therefore more conservative) than some other methods, because the PSU unit is treated as being sampled with replacement within the stratum unit. For SUDAAN, the data file needs to be sorted by stratum (STATE), sample type (SAMPLE), and PSU (IDNUMR). The default number of stratum and PSU variables to be included in the NEST statement is two; because three such variables occur here, the PSULEV statement is included to indicate that PSU is the third variable in the list. The

following SUDAAN design statements are then used for analyses at the household level:

```
PROC . . . DESIGN = WR;
  NEST STATE SAMPLE IDNUMR /
  PSULEV = 3;
  WEIGHT NSCHWT;
```

For Stata, the following design statements are used. Because Stata only allows for a single strata variable, STATE and SAMPLE should first be combined into a single variable with ($51 \times 2 = 102$) levels (here called STATESAMP):

```
svyset strata STATESAMP
svyset psu IDNUMR
svyset pweight NSCHWT
svyset
```

Other variance estimation procedures are also applicable to NSCH. Specifically, the jackknife method with replicate weights, and the bootstrap resampling method with replicate weights, can also be used (via software such as WesVar) to obtain standard errors that fully reflect the impact of the weighting adjustments on standard errors.

Variance Estimation for Subsets of Data

Many analyses of NSCH data will focus on specific population subgroups, such as children in only one state or living in poverty. Some analysts will therefore be tempted to delete all records outside of the domain of interest in order to work with smaller data files and run computer jobs more quickly. This procedure of keeping only selected records and listwise deleting other records is called *subsetting the data*. Subsetted data that are appropriately weighted can be used to generate correct point estimates (e.g., estimates of population subgroup frequencies or means), but many software packages that analyze complex survey data will incorrectly compute standard errors for subsetted data. When complex survey data are subsetted, the sample design structure is often compromised because the complete design information is not available. Subsetting the data can delete important design information needed

for variance estimation (e.g., deleting all records for certain subgroups may result in entire PSUs being removed from the design structure).

The NSCH sample was designed to provide independent data sets for each of the 50 states and D.C. Subsetting the survey data to a particular state does not compromise the design structure of the survey. That is, standard errors calculated in SUDAAN for a particular state will not be affected if the data set has been subsetted to that particular state.

However, subsetting to specific population subgroups (within or across states) can result in incorrect standard errors. For example, subsetting the data to those children who live in poverty within a specific state will result in incorrectly calculated standard errors. Typically, the standard errors for subsetted data will be inflated, resulting in a higher probability of type-II error (i.e., failing to detect significant differences that do, in fact, exist). SUDAAN has a SUBPOPN option that allows the user to target specific subpopulations for analysis while retaining the full unsubsetted data set that includes the full sample design information; Stata has a similar option called SUBPOP. Analysts interested in specific population subgroups must use these subpopulation options rather than subsetting the data sets.

Weighted Frequencies, Prevalence Estimates, and Standard Errors

Unweighted and weighted estimates of the frequency and prevalence of children with excellent or very good health as assessed by the survey respondent appear in [Appendix XV](#). Weighted frequencies, prevalence estimates, and standard errors for other survey measures are available from the Data Resource Center for Child and Adolescent Health. This online center is led by the Child and Adolescent Health Measurement Initiative and is supported through a cooperative agreement with MCHB. The data resource center is accessible from: <https://www.childhealthdata.org>.

Guidelines for Data Use

With the goal of mutual benefit, NCHS requests that recipients of data files cooperate in certain actions related to their use. Any published material derived from the data should acknowledge NCHS as the original source. The suggested citation, “Data Source: National Center for Health Statistics, State and Local Area Integrated Telephone Survey, National Survey of Children’s Health, 2011–2012,” should appear at the bottom of all tables and figures. Published material derived from the data should also include a disclaimer that credits any analyses, interpretations, or conclusions reached to the author and not to NCHS, which is responsible only for the initial data. Consumers who wish to publish a technical description of the data should make a reasonable effort to ensure that the description is consistent with that published by NCHS. A disclaimer should also be including crediting any analyses, interpretations, or conclusions reached to the author(s) (i.e., recipients of the data file). NCHS and SLAITS are responsible only for the initial data.

Using the acronyms NSCH and SLAITS in titles, keywords, and abstracts of journal articles, documents, PowerPoint slides, and publications facilitates retrieval in bibliographic searches.

CIPSEA and the Public Health Service Act (Section 308d) provide that these data collected by NCHS may be used only for the purpose of health statistical reporting and analysis. Any effort to determine the identity of any reported case is prohibited by these laws. NCHS takes extraordinary measures to assure that the identity of survey subjects cannot be disclosed. All direct identifiers, as well as any characteristics that might lead to identification, have been omitted from the data set. Any intentional identification or disclosure of a person or establishment violates the assurances of confidentiality given to the providers of the information. Therefore, users must:

- Use the data in this data set for statistical reporting and analysis only.
- Make no use of the identity of any person discovered, inadvertently or otherwise, and advise the director of NCHS of any such discovery (301–458–4500).
- Not link this data set with individually identifiable data from any other NCHS or non-NCHS data sets.

Use of the data set signifies users’ agreement to comply with the above-stated statutory-based requirements.

Further Information

Data users can obtain the latest information about SLAITS by periodically checking the SLAITS website: <https://www.cdc.gov/nchs/slaits.htm>. This site features downloadable data files and documentation for SLAITS modules, as well as important information about any modifications and updates to data or documentation. Data users will also find current contact information for any additional questions. Data users with questions may also send an e-mail to slaits@cdc.gov.

Note, however, that SLAITS staff cannot respond to questions about individual medical cases, provide second medical opinions, or make specific recommendations regarding therapy. These issues should be addressed directly with personal health care providers.

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Appendix I. Sampling and Weighting Technical Summary

Sample Design

The basic design objective of the National Survey of Children's Health (NSCH) sample was to select a sample to achieve 1,800 completed interviews of children under age 18 years in each state and Washington, D.C. (D.C.). Of the 1,800 completed interviews, 600 were targeted to be completed from cell-phone lines. The landline telephone and cell-phone samples were selected by first identifying households with children under age 18. For households with children, the ages of all children living or staying in the household were then rostered. If a household had only one child, that child was selected as the focus of the interview by default. In households with multiple children, one child was randomly selected by the computer-assisted telephone interview (CATI) system to be the focus of the interview.

Drawing National Immunization Survey sample

The sample of households selected to be screened for NSCH was a subsample of the households screened for the National Immunization Survey (NIS), a continuous list-assisted random-digit-dial (RDD) survey. Starting in 2007, the base NIS estimation areas included 56 regions (50 state or "rest of state" areas plus 6 grantee urban areas). The 6 grantee urban areas were: Chicago, Ill.; Philadelphia, Pa.; New York City, N.Y.; Bexar and Houston counties, Tex.; and D.C. Also starting in 2007, state immunization programs could identify cities or counties of interest on an annual basis to be oversampled. In 2011, four regions were selected and added to the base NIS estimation areas to equal a total of 60 estimation areas. These areas were Prince George's County, Md.; Dallas and El Paso counties, Tex.; and U.S. Virgin Islands (USVI).

Associating telephone numbers with sampling areas

Drawing a sample of telephone numbers in a sampling area requires compiling a list of all telephone numbers that belong to that area. For some sampling areas, this step is straightforward. For example, when the sampling area is a state, the list would consist of all telephone numbers within the central-office codes that are in service in the area codes assigned to that state. (Combined, an area code and a central-office code form a "prefix area." For example, 312-555-xxxx is the prefix area corresponding to the 555 central office in the 312 area code.)

For other sampling areas, however, this step is more complicated. When the sampling area is a city, county, or combination of counties, some prefix areas may cover part of the sampling area and part of an adjacent sampling area. In such situations, NIS applies a majority rule: If at least 50% of the directory-listed households in a prefix area fall inside a sampling area, the prefix area is assigned to that sampling area.

The sampling area for the landline sample was defined as the NIS sampling area. The sampling area for the cell-phone sample was defined as the state (based on area code) and estimated NIS sample area (based on the federal information processing standard or FIPS code, which was associated with the wire-center geographic location). This resulted in a 51-state by 59 NIS sampling-area matrix, although certain State*NIS sampling areas had neither universe counts nor released sample (e.g., Wyoming State by El Paso NIS sampling area).

Drawing initial NIS sample

The sampling frame of landline telephone numbers for a sampling area consists of banks of 100 consecutive telephone numbers within the prefix areas assigned to the sampling area. To exclude banks that contain zero directory-listed residential telephone numbers, the

Genesys Sampling System (a proprietary product of Marketing Systems Group [MSG]) uses a file of directory-listed residential numbers from Donnelley Marketing Information Services. The result is a file that lists the remaining banks ("1+ working banks," or banks that contain one or more directory-listed numbers). From the 1+ working banks, a random sample of complete 10-digit telephone numbers is drawn for each quarter in such a way that each number has a known and equal probability of selection within each sampling area.

This process is not applicable to the cell-phone sample, because no comparable directory-listed file exists for this sample. Therefore, a sample from all known cell-phone numbers is drawn for each quarter in such a way that each number has a known and equal probability of selection within each state.

Updating NIS sampling frame

The set of telephone banks with at least one directory-listed residential telephone number changes over time. Therefore, the sampling frame is updated on a quarterly basis. Area-code splits produce additional changes to the sampling frame. MSG maintains a separate sampling frame for each sampling area. Each quarter, MSG examines the database to determine whether any currently included banks should be assigned to different sampling areas, and to assign newly included banks to sampling areas. The rules for assignment are the same as in the initial definitions of the sampling areas.

Once all modifications have been made to the Genesys database, NORC at the University of Chicago performs a number of checks to ensure that all changes have been applied correctly and that the new database produces samples consistent with those produced prior to the changes. These checks compare the numbers of active banks and RDD-selectable lines in each sampling area before and after the update. In parallel, the numbers of exchanges assigned to each sampling area before and after the

update are compared. Small changes are expected, because new banks are put into service as new numbers are assigned. In the event of a major discrepancy in any of these checks, MSG is notified of the difference and asked to provide documentation of the reasons for the change. Similar checks are performed on the cell-phone sample where applicable, although these updates do not happen as frequently on the cell-phone frame.

Forming NIS sample replicates

Instead of releasing all sample lines within a sampling area at the same time, NIS divides the sample in each area into 26 equally sized groups called replicates. This procedure permits smoother release of the sample, at the rate of one or two replicates per week, for each sampling area separately, as needed. Toward the end of the quarter, half-size replicates allow tighter control over the total amount of sample that is released. The aim is to produce an even distribution of work in the telephone center over the course of a quarter.

Preparation of sample

Coordinated management of the sample follows a sequence of steps. Before a replicate is loaded into the CATI system, several stages of processing remove as many business and nonworking numbers as possible. A separate step identified phone numbers on NIS' "do not call list" for removal from the sample. For each quarter, any duplicate phone numbers (i.e., numbers that had appeared in the sample in the 3 prior quarters) also were identified and omitted from the sample files.

Removing business and nonworking numbers from landline sample

The majority of selected landline telephone numbers typically are businesses or unassigned. It would be incredibly inefficient to require the interviewers to dial and classify all of these landline numbers. To prevent such potential expense, NIS used another MSG product (a companion to the Genesys

Sampling System) to quickly and accurately reduce the size of this task.

First, the selected landline sample was matched against a Genesys file containing telephone numbers that are directory-listed in a business Yellow Pages and not directory-listed in a residential White Pages. Any business numbers so identified were removed from the sample. Second, landline numbers listed in residential White Pages were identified and temporarily set aside. Third, a hardware system screened the remaining landline sample to remove a portion of the nonworking numbers. Using personal computers with special hardware and software, this system (the autodialer) automatically dialed the landline telephone numbers to detect nonworking landline numbers, which are indicated by the familiar tritone signal for out-of-service numbers, by an extended period of silence, or by continuous noise on the line. Finally, the directory-listed residential landline numbers were combined with the landline numbers that were not removed by the autodialer to produce the landline sample for the telephone center. The landline numbers removed within released replicates were considered released, and they were also considered prescreened and assigned disposition codes indicating that they were resolved, nonresidential landline numbers.

"Do not call" requests

A file was maintained containing phone numbers of people who had been contacted for NIS and had requested that they not be called. Throughout NSCH data collection, new requests to not be called resulted in updates to the list. Each quarter's sample was compared with this file, and numbers that had been added to the "do not call" list within 2 years prior to the current survey year were not included in the quarterly sample of numbers loaded into the CATI system.

Duplicate phone numbers

Because of the repeated quarterly sampling operations in each sampling area by sample type (landline and cell phone), some telephone numbers may

have been selected more than once. To avoid any respondent problems created by recontacts for the same survey, a further sampling step identified duplicate numbers. Each quarterly sample file was compared with all sample files for the 3 prior quarters, and duplicate numbers were excluded from the quarterly sample file.

Obtaining addresses for advance letters

To obtain addresses that correspond to telephone numbers in the landline sample, the numbers for each replicate were sent to a vendor, TARGUSinfo (now Neustar Information Services). Neustar maintains a large database, updated daily, for its PhoneData Express program that contains more than 160 million residential and business landline telephone numbers, including unpublished landline numbers. Sources for the data include call centers and companies in telecommunications, consumer goods, and the insurance and credit industries. No similar database exists for cell-phone numbers.

Following the preresolution operations described in the previous three sections, the use of TARGUSinfo yielded addresses for about 42.2% of the landline telephone numbers loaded into the CATI system. Advance letters were sent to this set of landline numbers. The mailing was issued approximately 10 days, or 2 weekends, prior to the time when the telephone numbers in the corresponding replicates were scheduled to be called. No advance letters were mailed to the cell-phone sample.

Ported cell phones

A significant development in the telecommunications industry was the Federal Communications Commission (FCC) regulation on portability. Local number portability allows wireless phone customers to switch from one company to another while retaining the same phone number. Landline sampling typically includes automated dialing procedures to reduce data collection costs, but FCC rules bar automated calls to wireless phone numbers. Consumers

could take advantage of the wireless number portability provisions in three ways: 1) wireless-to-wireless, 2) wireless-to-landline, and 3) landline-to-wireless. The first two ways did not affect the RDD landline sampling strategy, because cell-phone numbers were not in the RDD landline sampling frame. However, the third way—the porting of landline numbers to wireless service providers—created the possibility of inadvertently including wireless phone numbers in the RDD landline sample. To preidentify landlines that have been ported to wireless, the selected landline sample was matched to the Neustar database, which contains the national list of ported phone numbers. Each quarterly sample was compared with the database, and the ported numbers were flagged accordingly. The flagged numbers were assigned an out-of-scope disposition code and were not called as part of the landline sample. Classifying such cases as out-of-scope for landline dialing did not remove those numbers from the overall universe, because they still could have been randomly selected for the cell-phone sample. Rather, classifying them as out-of-scope for the landline sample prevented the landline and cell-phone sample frames from overlapping. The landline numbers in released replicates were also matched to the Neustar database daily to identify any new ports that had not already been finalized within the phone center.

Because any number selected for the cell-phone sample was not autodialed, ported numbers were not an issue for the cell-phone sample.

Weighting and Estimation

This section summarizes the methodology used for weighting the 2011–2012 NSCH sample. The weighting scheme involves the following steps:

1. Base sampling weight
2. Derivation of annual sampling weight
3. Adjustment for nonresolution of released telephone numbers
4. Adjustment for incomplete cell phone-only/mainly (CPO/M) screener (affects Q1/2011 cell-phone sample only)

5. Adjustment for incomplete S_KIDS screener (affects Q3/2011, Q4/2011, and Q1/2012 augmentation cell-phone sample only)
6. Adjustment for incomplete age-eligibility screener
7. Adjustment for subsampling of children within households
8. Adjustment for nonresponse to NSCH interview
9. Adjustment for multiple cell-phone lines
10. Trimming of extreme weights
11. Adjustment for combined landline and cell-phone sample and noncovered children
12. Raking adjustment of child weights

Each individual weighting step is discussed in detail below.

Step 1: Base weights

The weighting process started with computing the base sampling weights of the sampled telephone numbers, where the base weight is the reciprocal of the selection probability of a phone number. Sample cases were selected from both landline and cell-phone numbers. Sample source was designated by $t = 1$ (landline) and 2 (cell). The base weight for the k -th telephone number from the t -th source type in the released sample for a sampling area, A_t , was defined by:

$$W_{1tkq} = \frac{1}{\pi_{tkq}} = \frac{N_{tq}}{n_{tq}}$$

where

π_{tkq} = probability of selecting the k -th telephone number from the t -th source type in the initial release for quarter q ,

n_{tq} = sample size (in initial released replicates) for the quarter q from the t -th source type in the sampling area, and

N_{tq} = total telephone numbers on the sampling frame for quarter q from the t -th source type in the sampling area, as determined by Genesys.

For the landline sample, the base weight was a constant for all telephone numbers within a quarter, source type, and sampling area.

Step 2: Derivation of annual sampling weight

In this step, all quarterly samples were combined for the landline and cell-phone samples separately, and the quarterly base weights were adjusted so that the samples from all quarters jointly represented the corresponding full population within each state. Because the base weights were calculated for each quarter separately, the sum of base weights in each quarter represents the full population for each state. The annual sample weights were computed from quarterly weights by applying composition factors proportional to the number of released sample telephone numbers in a quarter. The annual weights were defined as:

$$W_{2tk} = \frac{W_{1tk}}{R_{2tk}} \text{ if } k \in t, q$$

where

$$R_{2tk} = \frac{\sum_{q=1}^5 n_{1q}}{n_{1q}}, \text{ for } t = 1$$

$$\frac{\sum_{q=1}^5 n_{2q}}{n_{2q}}, \text{ for } t = 2$$

and

n_{tq} = sample size for the q -th quarter in the t -th source type in the sampling area.

Note that USVI had sample released only during one quarter of data collection; therefore, no adjustment was done during this step for the USVI sample.

Step 3: Adjustment for nonresolution of released telephone numbers

Once the sample of telephone numbers was released, the first step was to identify whether the number was a working residential number (WRN) for landlines or an active personal cell number (APCN) for cell phones. However, even after repeated callbacks, the WRN–APCN status of many telephone numbers remained unresolved. An adjustment to the weight of resolved

cases was necessary to account for cases in which the WRN–APCN status was unknown.

To make the adjustment, a number of adjustment cells within each sampling area were formed by controlling for known covariates. The adjustment in each cell was made by assuming that the rate of WRNs to APCNs among unresolved numbers was the same as the rate of WRNs to APCNs among resolved numbers. Within each sampling area, the adjusted weights were computed as:

$$W_{3tk} = \frac{W_{2tk}}{R_{3t\ell}} \text{ if } k \in t, B_v, \ell$$

$$= 0 \text{ otherwise}$$

where

$$R_{3t\ell} = \frac{\sum_{k \in t, B_t} \delta_{3tk\ell} W_{2tk}}{\sum_{k \in t, A_t} \delta_{3tk\ell} W_{2tk}}$$

B_t = subset in A_t of resolved telephone numbers from the t -th source type (WRN or non-WRN/APCN or non-APCN), and

$\delta_{3tk\ell} = 1$ if the k -th number from the t -th source type was in the ℓ -th cell and

$$= 0 \text{ otherwise.}$$

The covariates used to define the adjustment cells (ℓ) for the landline sample within each sampling area are shown in Table I by census region of the sampling area. Different sets of variables were used for sampling areas in different census regions. The variables were identified through an analysis using the interim 2011–2012 NSCH data. Each cell included at least 20 resolved cases to enable stable estimation of the adjustment factor $R_{3t\ell}$.

To define the adjustment cells (ℓ) for the cell-phone sample, only metropolitan statistical area (MSA) status associated with the released case was used, due to smaller sample sizes for the cell-phone sample and the smaller correlation between exchange and geographic area for cell-phone numbers relative to landline numbers. The adjustment cells needed to include at least 20 resolved cases to enable stable estimation of the adjustment factor, $R_{3t\ell}$.

Step 4: Adjustment for incomplete CPO/M screener

Some resolved cases in the cell-phone sample did not complete the cell phone-only/mainly, or CPO/M, screener. This step applied only to Q1/2011, because the remainder of the cell-phone sample released was no longer screened for specific cell-phone status. To account for the cases for which CPO/M status was unknown, the weights of the resolved cell-phone sample cases were adjusted. The adjustment in each cell was made by assuming that the rate of CPO/M among screener-completed APCNs is the same as the rate of CPO/M among those that had not completed the CPO/M screener. Within each state, the adjusted weights were computed as:

$$W_{4tk} = \frac{W_{32vk}}{R_{42v\ell}} \text{ if } k \in t = 2, v, D_v, \ell$$

and

$$= W_{3tk} \text{ otherwise}$$

where

$$R_{42v\ell} = \frac{\sum_{k \in t=2, v, D_2} \delta_{42k\ell} W_{32vk}}{\sum_{k \in t=2, v, C_{12}} \delta_{42k\ell} W_{32vk}}$$

$v = 2$ if the k -th cell number was in $Aug_{Q4,c}$ and
 $= 1$ otherwise (including for landline telephone numbers),

D_t = set of cell-phone numbers for the quarter from the t -th source type in C_{1t} that completed the CPO/M screener in the state,

C_{1t} = set of telephone numbers for the quarter from the t -th source type in B_t that were WRNs or APCNs in the state, and, if in $Aug_{Q4,c}$, were also in C_{AugS_Kids} (i.e., had yet to screen out), and

$\delta_{42k\ell} = 1$ if the k -th cell number was in the ℓ -th cell and

$$= 0 \text{ otherwise.}$$

To define the adjustment cells (ℓ) for cell-phone sample within each state, the number of call attempts to resolve the telephone number (1, 2+) was used. The adjustment cells needed to include at least 20 resolved cases to enable stable estimation of the adjustment factor, $R_{4t\ell}$. To achieve this goal when the number of resolved cases was less than 20, adjustment cells were broadened by collapsing the number of call attempts. For all sample cases other than the Q1/2011 cell-phone sample, the adjustment factor was 1.

Step 5: Adjustment for incomplete S_KIDS screener

In Q3/2011, Q4/2011, and Q1/2012, additional cell-phone sample was released for NSCH to augment the NIS cell-phone sample that had been released. This augmentation sample asked an additional screener question at the beginning of the

Table I. Covariates used to create nonresolution adjustment cells within sampling area, by census region and directory-listed status: Landline sample

Sampling area							
Northeast		Midwest		South		West	
Listed	Unlisted	Listed	Unlisted	Listed	Unlisted	Listed	Unlisted
Rent	Rent	Income	Rent	Rent	Grad	Rent	Rent
Grad	Minority	Grad	Owner	Owner	Rent	Minority	Age
Income	MSA	Rent	MSA	Age	Owner	Income	Minority

NOTES: Covariates are listed in order of importance within a group, based on the strength of the relationship between the covariate and observed nonresponse rates. Listed and Unlisted refer to the directory-listed status of the phone number. The remaining covariates are telephone exchange-level measures: Percentage renting (Rent), percentage who own their homes (Owner), percentage college-educated (Grad), percentage Hispanic or nonwhite (Minority), percentage in income and age categories (Income, Age), and percentage living in a metropolitan statistical area (MSA).

interview to determine whether a child lived in the household. This screener question (labeled “S_KIDS”) was asked in an attempt to reduce the overall screening cost and was separate from the full age-eligibility screener conducted later in the interview. Therefore, an adjustment for the cell augmentation sample (Aug_c) was necessary to account for incomplete S_KIDS screener cases. To compensate for this, the weights of the phone numbers from the cell augmentation sample with completed S_KIDS screeners were adjusted. The adjusted weight for the k -th number from the t -th source type is derived as:

$$W_{5tk} = \frac{W_{42k}}{R_{52\ell}} \text{ if } k \in t = 2, C_{Aug, S_Kids}, Aug_c, \ell$$

and
 $= W_{4tk}$ otherwise

where

$$R_{52\ell} = \frac{\sum_{k \in t, C_{Aug, S_Kids}, Aug_{Q3,c}} \delta_{52k\ell} W_{42k}}{\sum_{k \in t = 2, B_{1t}, Aug_{Q3,c}} \delta_{52k\ell} W_{42k}}$$

Aug_c = subset of telephone numbers from the augmentation cell-phone sample,

C_{AugS_Kids} = set of augmentation cell-phone numbers from B_{1Aug} that completed the S_KIDS screener in the state,

B_{1Aug} = set of augmentation cell-phone numbers for the quarter from B_t that were APCNs in the state, and

$\delta_{52k\ell} = 1$ if the k -th augmentation cell number was in the ℓ -th cell and
 $= 0$ otherwise.

To define the adjustment cells (ℓ) for the cell-phone sample within each state, MSA status associated with the released case was used. The adjustment cells included at least 20 resolved cases to enable stable estimation of the adjustment factor, $R_{52\ell}$.

For all sample cases other than the augmentation cell-phone sample, the adjustment factor was 1.

Step 6: Adjustment for incomplete age-eligibility screener

Among the resolved landline WRNs and cell-phone APCNs, some sample cases did not complete the age-eligibility screener. For such cases, it was not known if any age-eligible children lived in the household. To compensate for this, the weights of the telephone numbers from the t -th source type with completed age-eligibility screeners were adjusted. The adjusted weight for the k -th number from the t -th source type was calculated as:

$$W_{6tk} = \frac{W_{5vk}}{R_{6tv\ell}} \text{ if } k \in t, v, E_t, \ell$$

and
 $= 0$ otherwise

where

$$R_{6tv\ell} = \frac{\sum_{k \in t, v, E_t} \delta_{6tvk\ell} W_{5vk}}{\sum_{k \in t, v, D_{1t}} \delta_{6tvk\ell} W_{5vk}}$$

E_t = subset of telephone numbers for the quarter from the t -th source type in D_{1t} that completed the age-eligibility screener in the state,

D_{1t} = set of landline telephone numbers for the quarter that are WRNs (if $t = 1$) or set of cell-phone numbers for the quarter that are APCNs (if $t = 2$) in the state, and

$\delta_{6tk\ell} = 1$ if the k -th number from the t -th source type is in the ℓ -th cell and
 $= 0$ otherwise.

To define the adjustment cells (ℓ) for landline sample within each state, the covariates listed in Table II were used by census region of the state. The adjustment

for age screening was made within each state (as opposed to the sampling area used for the nonresolution adjustment), due to smaller sample sizes at this stage. The adjustment cells included at least 20 resolved cases to enable stable estimation of the adjustment factor.

To define the adjustment cells (ℓ) for the cell-phone sample within each state, the number of call attempts to resolve the telephone number (1, 2+) was used. Each cell included at least 20 resolved cases to enable stable estimation of the adjustment factor, $R_{6t\ell}$, by collapsing across call attempts when necessary.

For this step, cell augmentation sample and NIS cell-phone sample were treated separately, due to prescreening for the presence of children for the augmentation cell-phone sample. After this step, the cell-phone samples were treated together.

Step 7: Adjustment for subsampling of children within households

In households with more than one child, only one child was selected randomly for the NSCH interview. The child age-eligibility screener weights were adjusted to account for the children who were not selected. The subsampling weight for the j -th child was defined by:

$$W_{7j} = n_k W_{6j} \text{ if } j \in F \text{ and} \\ = 0 \text{ otherwise}$$

where

F = subset of children that are subsampled for NSCH interview,

n_k^* = the number of children in household k where, $j \in F$ and

$$n_k = \min(3, n_k^*).$$

Table II. Covariates used to create nonresponse adjustment cells for age-eligibility screener within state, by census region and directory-listed status: Landline sample

Census region			
Northeast	Midwest	South	West
Minority Listed MSA	Listed Minority MSA	Listed Age Minority	Minority Listed Age

NOTES: Covariates are listed in order of importance within a group, based on the strength of the relationship between the covariate and observed nonresponse rates. Listed refers to the directory-listed status of the phone number. The remaining covariates are telephone exchange-level measures: Percentage Hispanic or nonwhite (Minority), percentage in age categories (Age), and percentage living in a metropolitan statistical area (MSA).

The factor to adjust for number of children in a household was capped at 3 to control variability. The resulting weight is the basic child-level weight for the NSCH interview.

Step 8: Adjustment for nonresponse to NSCH interview

Not all households with children that completed the age-eligibility screener completed the interview. The weights assigned to households responding to the NSCH interview were adjusted to account for the nonresponse of other households. The adjustment was made by forming nonresponse adjustment cells (ℓ). The nonresponse-adjusted weight for the j -th child was calculated as:

$$W_{8jk} = \frac{W_{7jk}}{R_{8j\ell}} \text{ if } j \in G, \ell$$

and
= 0 otherwise

where

$$R_{8j\ell} = \frac{\sum_{k \in F} \delta_{8j\ell} W_{7k}}{\sum_{k \in E} \delta_{8j\ell} W_{7k}}$$

G = subset of all children with a completed NSCH interview, and

$\delta_{8j\ell} = 1$ if the j -th child is in the ℓ -th adjustment cell and
= 0 otherwise.

The adjustment cells (ℓ) were formed from categories of age group and total number of children in the household. Any adjustment cell with less than 20 responding records was collapsed with a neighboring cell.

Step 9: Adjustment for multiple cell-phone lines

Among the households that completed the interview within the cell-phone sample, some households reported more than one cell-phone number for adult use. An adjustment to the weight was required for these households to compensate for their multiple chances of selection. The adjusted weight for the k -th cell-phone number with a complete age-eligibility screener is defined by:

$$W_{9tk} = \frac{W_{8tk}}{P_{k,c}}$$

where

$P_{k,c}$ = number of cell-phone numbers for adult use in the household of the k -th cell-phone number with a completed NSCH interview, and

$$P_{k,c} = \min(3, P_{k,c}')$$

The number of adult cell-phone lines was capped at 3 for purposes of the weight adjustment, both to control variability and to guard against reporting bias.

For all landline and USVI sample cases, the adjustment factor was 1.

The remaining weighting adjustments were done using true state of residence as opposed to sampling state.

Step 10: Trimming of extreme weights

Within the cell-phone sample, significant movement occurred from sample state to state of residence because, in many cases, the area code of the cell-phone number had not sufficiently indicated the true state of residence. As a result, when the sample was stratified by true state, large variability occurred in the weights due to cases sampled from State A being combined with cases from State B. Therefore, extreme weights were trimmed as:

$$W_{10j} = \min(W_{9j}, W_{t, Threshold}) \text{ if } j \in t$$

where

$$W_{t, Threshold} = \text{median}_t(W_{9,t}) + 4 \cdot \text{InterQuartileRange}_t(W_{9,t})$$

and

$W_{9,t}$ = weights of all cases associated with the t -th source type within the true state.

Step 11: Adjustments for combined landline and cell-phone samples and for noncovered populations

The full-sample child weights (W_{10tk}) with a complete NSCH interview were adjusted to accomplish six goals:

1. Adjustment for noncoverage of age-eligible children
2. Adjustment for overlap of the landline and cell-phone samples

3. Adjustment to residual landline population totals
4. Adjustment to residual cell-phone-only population totals
5. Trimming of extreme weights
6. Adjustment for USVI

Adjustment for noncoverage of age-eligible children—A Keeter adjustment (20) was carried out to adjust weights to account for households with children not covered by the combined landline and cell-phone samples (i.e., phoneless households). In the Keeter adjustment, weights for landline households with an interruption in telephone service are adjusted to represent phoneless households with children. The method was based on empirical evidence suggesting that landline households with an interruption in telephone service are more similar to phoneless households than are households with no interruptions, with respect to the variables under study (20,21). The adjustment is given as:

$$\hat{Y}_{NP} = \omega \hat{Y}_{LL(Int)}$$

where

ω = adjustment factor, and
 $\hat{Y}_{LL(Int)}$ = estimated prevalence of service interruption based on sample households from the landline sampling frame, where the household had a noncell/mostly telephone status and for which a household interview was completed.

The adjustment factor can be expressed as:

$$\omega_{LL(Int)} = \frac{N_{NP}}{\sum_{k \in LL(Int)} W_{10k}}$$

where

N_{NP} = population control for phoneless households with children.

The adjusted weights for noncell/mostly landline sample households with a telephone service interruption, controlled to the total population of phoneless households with children, can then be expressed as:

$$W_{11k} = \omega_{LL(Int)} W_{10k}, k \in LL(Int)$$

Adjustment for overlap of the landline and cell-phone samples—The

landline and cell-phone samples, while selected from distinct sampling frames, partially overlap in their coverage of the population. The landline sample includes dual landline and cell-phone households, while the cell-phone sample includes dual landline and cell-phone households self-identifying as cell phone-mainly (i.e., they said they were unlikely to be reached through their landline). Thus, survey weights for dual landline and cell-phone cases from the two sampling frames must be adjusted to account for this overlap. For purposes of weighting, cell phone-mainly cases were treated as cell phone-mostly because the majority of cell phone-mainly cases also self-identified as being cell phone-mostly (i.e., they said that they received all or almost all calls on their cell phone). However, the cell phone-mainly sample cases were assumed to be biased when estimating for the cell phone-mostly population.

The sum of the annualized weights for the landline sample (which estimated the number of landline households with children) and the sum for the cell-phone sample (which estimated the number of cell-phone households with children) both include some dual landline and cell-phone households that were cell phone-mostly. Thus, when combining the landline and cell-phone samples, the annualized weights for cell phone-mostly households must be adjusted so the sum of the adjusted weights across landline and cell-phone samples provides an appropriate estimate of cell phone-mostly households. The composite adjustment factor was derived based on the relative sample size of completed interviews within each frame, within each telephone status (Cell-Mostly, Other Dual Users).

The adjusted weights for cell phone-mostly sample cases, controlled to the total population of cell phone-mostly households with a child, can be expressed as:

$$W_{11k} = \begin{cases} \frac{N_{CM}}{\sum_{k \in CP(CM)} W_{10k}} \lambda W_{10k}, & k \in CP(CM) \\ \frac{N_{CM}}{\sum_{k \in LL(CM)} W_{10k}} (1 - \lambda) W_{10k}, & k \in LL(CM) \end{cases}$$

where

N_{CM} = population control for cell phone-

mostly households with children, and

$$\lambda = \frac{W_{10,t}}{\sum_{k \in CM(LLandCP)} W_{10t}}$$

The adjusted weights for Other Dual Users sample cases, controlled to the total population of other dual-users households with a child, can then be expressed as:

$$W_{11k} = \begin{cases} \frac{N_{CM}}{\sum_{k \in CP(ODU)} W_{10k}} \lambda W_{10k}, & k \in CP(ODU) \\ \frac{N_{CM}}{\sum_{k \in LL(ODU)} W_{10k}} (1 - \lambda) W_{10k}, & k \in LL(ODU) \end{cases}$$

where

N_{CM} = population control for other dual-users households with children, and

$$\lambda = \frac{\sum_{k \in ODU(CP)} W_{10,t}}{\sum_{k \in ODU(LLandCP)} W_{10t}}$$

Adjustment to residual landline population controls—A ratio adjustment was carried out to adjust weights to population controls for the residual set of landline households with children. The adjusted weights for landline-only sample households controlled to the total population of landline-only households with children was defined as:

$$W_{11k} = \Psi_{LLO} W_{10k}, \quad k \in LLO$$

where

$$\Psi_{LLO} = \frac{N_{LLO}}{\sum_{k \in LLO} W_{10k}} \quad \text{and}$$

N_{LLO} = population control for landline-only households with children.

Adjustment to residual cell-phone-only population controls—A ratio adjustment was carried out to adjust weights to population controls for the residual set of cell-phone-only households with children. The adjusted weights for cell-phone-only sample households controlled to the total population of cell-phone-only households with children was defined as:

$$W_{11k} = \Psi_{CPO} W_{10k}, \quad k \in CPO$$

where

$$\Psi_{CPO} = \frac{N_{CPO}}{\sum_{k \in CPO} W_{10k}} \quad \text{and}$$

N_{CPO} = population control for landline-only households with children.

Trimming of extreme weights—After the adjustment, extreme weights were again trimmed. The upper threshold for the weights was again defined as the median of the weight + 4 • (Inter Quartile Range).

Adjustment for USVI—A Keeter adjustment was not possible for USVI, because no current accurate information was available on the number of children in phoneless households. Additionally, because no cell-phone sample was fielded in USVI, there was no need for the above steps to be applied. Therefore, this adjustment was not carried out for USVI and the adjustment factor was 1.

Step 12: Raking adjustment of child weights

The combined landline and cell-phone sample weights (W_{11k}) were raked within each state, such that the sums of the weights at the household level agreed with the control totals in each category of each margin used for raking. The required demographic control totals were obtained from the public-use 2011 American Community Survey (ACS) data, and the raking adjustments within each state and D.C. were made using the following margins and categories:

- Number of households with male and female children in five nonoverlapping age groups
- Number of households with children in five nonoverlapping race and ethnicity categories
- Number of households with one child, two children, and three or more children
- Number of households with children that have a household income in five nonoverlapping categories
- Number of households with children in which the highest reported education is in each of three nonoverlapping categories
- Number of households that own their housing unit, rent their housing unit, and neither own nor rent their housing unit (other arrangement)
- Number of households with children

by telephone status: cell phone-only, cell phone-mostly, and all others.

The categories of raking dimensions were collapsed where the number of cases was small (less than 40) or if any difficulty occurred in raking convergence. In some cases, the values of the raking variables mentioned above may have been missing. The missing values for all of these variables were imputed using weighted sequential hot-deck imputation method after forming appropriate imputation classes.

To allow for raking to telephone status, the combined landline and cell-phone sample weights were decomposed into respective component weights for each telephone status type (cell phone-only, cell phone-mostly, and all others). This decomposition was not applied to USVI because no cell-phone sample occurred there.

For USVI, detailed population control totals for the dimensions described above were not available, because the 2011 ACS was not completed in USVI and the detailed 2010 census files were not released at the time of weighting. The 2010 census totals for age group by sex were available, and a simple poststratification was done using those results.

The raked weight for the k -th household was

$$W_{12k} = R_{12k} W_{11k} \text{ if } k \in G \text{ and} \\ = 0 \text{ otherwise}$$

where R_{12k} was the raking adjustment factor for the k -th household, which was determined iteratively, and G was the set of all telephone numbers that completed the NSCH interview as defined above.

At this stage, the weights were checked and all extreme weights were trimmed to avoid any undue influence on the variances of the estimate. The raking adjustment was rerun after truncating the extreme weights.

The raked household weight is the final weight to be used for obtaining all estimates.

Appendix II. 2011–2012 National Survey of Children’s Health Questionnaire

The following public burden estimate statement will be available as a CATI screen:

Public reporting burden for this collection of information is estimated to average 27 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments regarding this burden estimate or any other aspect of the collection of this information, including suggestions for reducing this burden, to CDC/ATSDR Reports Clearance Officer, 1600 Clifton Road, MS D-74, Atlanta, GA 30333, ATTN: PRA (0920-0406).

Data collection conducted under contract to the CDC by NORC at the University of Chicago

Form approved
OMB No. 0920-0406
Exp. Date 04/30/14

All information which would permit identification of any individual, a practice, or an establishment will be held confidential, will be used for statistical purposes only by NCHS staff, contractors, and agents only when required and with necessary controls, and will not be disclosed or released to other persons without the consent of the individual or the establishment in accordance with section 308(d) of the Public Health Service Act (42 USC 242m) and the Confidential Information Protection and Statistical Efficiency Act (PL-107-347).

2011 NATIONAL SURVEY OF CHILDREN’S HEALTH

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NIS/SLAITS Screening

INTRO_1 Hello, my name is_____. I'm calling on behalf of the Centers for Disease Control and Prevention. We're conducting a nationwide immunization study to find out how many children under 4 years of age, are receiving all of the recommended vaccinations for childhood diseases. Your telephone number has been selected at random to be included in the study.

(1) CONTINUE SEE LOGIC BELOW

IF INTRO_1=1 AND RDD_NCCELL_CCELL = 1, GO TO S1
 ELSE IF INTRO_1=1 AND RDD_NCCELL_CCELL = 2 OR 3 AND TXFLG = 1 , GO TO S_CELL
 ELSE IF INTRO_1=1 AND RDD_NCCELL_CCELL = 2 OR 3 AND TXFLG = 0 or 2 AND S_KIDS_FLAG=0, GO TO S_WARM
 ELSE IF (INTRO_1=1 AND RDD_NCCELL_CCELL = 2 OR 3 AND TXFLG = 0 or 2 AND SAMPLE_USE_CODE=3,5,6 AND PRE_KIDS=1 AND S_KIDS=NULL AND S_UNDR18=NULL) THEN GO TO S_KIDS
 ELSE IF (INTRO_1=1 AND RDD_NCCELL_CCELL = 2 OR 3 AND TXFLG = 0 or 2 AND SAMPLE_USE_CODE=3,5,6 AND PRE_KIDS=1 AND S_KIDS NOT MISSING) GO TO S_WARM.
 ELSE IF (INTRO_1=1 AND RDD_NCCELL_CCELL = 2 OR 3 AND TXFLG = 0 or 2 AND SAMPLE_USE_CODE=1,2,4 AND PRE_KIDS=1) GO TO S_WARM.

(2) CONFIRM BUSINESS..... GO TO SALZ
 (3) OUT OF SCOPE GO TO THANK_YOU_OOS
 (4) TERMINATE THE INTERVIEW GO TO T1

IF RDD_NCCELL_CCELL = 1 DISPLAY:

(5) CELL PHONE..... GO TO CELL_1

ELSE IF RDD_NCCELL_CCELL = 2, 3 AND TXFLG = 1 DISPLAY:

(5) LANDLINE - YOU WILL NOT TERMINATE GO TO S1 and set
 RDD_NCCELL_CCELL = 1

ELSE IF RDD_NCCELL_CCELL = 2, 3 AND TXFLG = 0 DISPLAY:

(5) LANDLINE..... GO TO LANDLINE EXIT -
 set ITS=88

(6) ANSWERING MACHINE [FILL] GO TO S1

If message is to be left then GO TO SASERV else hang up and set ITS =35

(7) R WILL CALL 800 LINE/VERIFY WEBSITE GO TO P1/VERIFY_INFO
 set ITS =69

(8) R ASKS FOR LETTER..... GO TO M1_NAME

(9) SUPERVISOR REVIEW Set ITS = 49

(15) Test sample - use only if respondent instruct that this call was a test => set ITS=119

(16) CONTINUE THE CASE WITH LANGUAGE LINE

IF RDD_NCCELL_CCELL = 2, 3 DISPLAY:

(17) DROPPED CALL..... GO TO CNOTES_1_1> set
ITS=81(SCHEDULE A CALL
BACK FOR 1 MINUTE)

INTRO_1_HUDI Hello, my name is____. I'm calling on behalf of the Centers for Disease Control and Prevention. We're conducting a nationwide study to prevent future outbreaks of childhood diseases.

CONTINUE WITH INTERVIEW.....1 GO TO S1
CONFIRM BUSINESS.....2 GO TO SALZ
ANSWERING MACHINE4 GO TO MSG_Y

INTRO_1
(for partial
completes)

Hello, my name is_____and I am calling on behalf of the Centers for Disease Control and Prevention. We recently spoke to (MKR / an adult in this household) and began an important nationwide immunization study regarding (child's name or initials)'s vaccinations. I'm calling to complete the interview now, may I please speak with (MKR / that adult)?

CONTINUE WITH INTERVIEW.....1 GO TO S1
CONFIRM BUSINESS.....2 GO TO SALZ
Out of scope3 GO TO THANK_YOU_OOS
Terminate the Interview4 GO TO UNIVERSAL EXIT-T1
Cell phone5 GO TO UNIVERSAL EXIT-CELL_1
Answering machine6 GO TO MSG_Y
R will call 800 line/verify website7 GO TO CNOTES_1_1
R asks for letter8 GO TO UNIVERSAL EXIT M1_NAME
Supervisor review.....9 GO TO CNOTES_1_1
(Raise your hand to get permission before using this code)

INTRO_1

[Incentives_10/Address Available]
Hello. I'm calling on behalf of the Centers for Disease Control and Prevention to follow up on a letter that was sent to your home. Earlier, we had contacted your household to participate in a survey regarding the immunizations of the [IF S_NUMB=1, THEN "child who lives"{IF S_NUMB>1, THEN "children who live"}] there. I'm calling back to continue the interview. In appreciation for your time, we will send you \$10.

CONTINUE WITH INTERVIEW.....1 GO TO S1
CONFIRM BUSINESS.....2 GO TO SALZ
Out of scope3 GO TO THANK_YOU_OOS
Terminate the Interview4 GO TO UNIVERSAL EXIT-T1
Cell phone5 GO TO UNIVERSAL EXIT-CELL_1
Answering machine6 GO TO MSG_Y
R will call 800 line/verify website7 GO TO CNOTES_1_1
R asks for letter8 GO TO UNIVERSAL EXIT M1_NAME
Supervisor review.....9 GO TO CNOTES_1_1
(Raise your hand to get permission before using this code)

INTRO_1

[Incentives_15/Telephone Only]

Hello. I'm calling on behalf of the Centers for Disease Control and Prevention. Earlier, we had contacted your household to participate in a survey regarding the immunizations of the [IF S_NUMB=1, THEN "child who lives"/IF S_NUMB>1, THEN "children who live"] there. I'm calling back to continue the interview. In appreciation for your time, we will send you \$15.

CONTINUE WITH INTERVIEW.....	1	GO TO S1
CONFIRM BUSINESS.....	2	GO TO SALZ
Out of scope	3	GO TO THANK_YOU_OOS
Terminate the Interview	4	GO TO UNIVERSAL EXIT-T1
Cell phone	5	GO TO UNIVERSAL EXIT-CELL_1
Answering machine	6	GO TO MSG_Y
R will call 800 line/verify website	7	GO TO CNOTES_1_1
R asks for letter	8	GO TO UNIVERSAL EXIT M1_NAME
Supervisor review.....	9	GO TO CNOTES_1_1

(Raise your hand to get permission before using this code)

[IF MOST KNOWLEDGEABLE PARENT HAS NOT BEEN IDENTIFIED:
May I please speak with the parent or guardian who knows the most about the health of the child[ren] in the household?]

[IF MOST KNOWLEDGEABLE PARENT HAS BEEN DETERMINED:
May I please speak with [NAME]/the person who had started the interview?]

THANK_YOU
_OOS

We are only interviewing families living in their usual place of residence, those are all the questions I have. Thank you.

SALZ

Is this telephone number for business use only?		
Yes	1	GO TO SALZ_BUS
No.....	2	GO TO INTRO_1
DORM/PRISON/HOSTEL	3	GO TO SALZ_BUS
PAGING SERVICE	4	GO TO SALZ_BUS

SASERV

WAS THIS A BUSINESS, HOUSEHOLD, [IF RDD_NCCELL_CCELL = 1 DISPLAY "CELL PHONE"], OR COULD NOT BE DETERMINED?

- (1) Business – set to business disposition (ITS 38)
- (3) See the logic in the Additional skip logic
- (4) Could not determine – set as call back - ITS = 37
- (5) Answering Machine said "Take Me Off Your List"
- (9) See the logic in the Additional skip logic

Additional skip logic:

Response Option (3):

IF RDD_NCCELL_CCELL = 1, 2, OR 3 AND TXFLG = 0 or 2 DISPLAY
(3) Household – set to call back - ITS = 36

ELSE IF RDD_NCCELL_CCELL = 2 OR 3 AND TXFLG = 1 DISPLAY
(3) LANDLINE - ITS = 37 - SET RDD_NCCELL_CCELL = 1

Response Option (9):

IF RDD_NCCELL_CCELL = 1 display
(9) Cell phone

IF TXFLG = 1 THEN SET RDD_NCCELL_CCELL = 3 AND SET ITS = 37, ELSE
TERMINATE AS ITS = 41

S_KIDS Are there any children living in your household?

- (1) YES [GO TO S_WARM]
- (0) NO [GO TO NOCHILD]
- (6) DON'T KNOW [GO TO S_WARM]
- (7) REFUSED [GO TO S_WARM]

S_CELL Am I speaking to you on your cell phone?

- (1) YES [GO TO S_WARM]
- (0) NO [GO TO S1 - SET RDD_NCCELL_CCELL=1]

S_WARM If you are currently driving a car or doing any activity that requires your full attention I need to call you back at a later time.

[If RDD_NCCELL_CCELL=2,3 and NEWPHONE_FLAG=1 display "INTERVIEWER NOTE:
THE NUMBER FOR THIS CASE WAS CHANGED BY THE RESPONDENT ON A
PREVIOUS CALL. THE ORIGINAL NUMBER IS [OLD_NUMBER].

- (1) CONTINUE [GO TO S1]
- (2) R UNABLE TO CONTINUE [GO TO S_ATTN]
- (3) NOT A CELL PHONE [GO TO S1]

S_ATTN For your safety, we will call you back at another time.

EVEN IF THE RESPONDENT IS USING A HANDS-FREE DEVICE WHILE DRIVING, YOU
MUST END THE CALL.

- (1) CALL BACK ANOTHER TIME [GO TO CB1]
- (2) CALL BACK AT ANOTHER NUMBER REQUESTED [GO TO CB1N_WARNING]
- (3) WRONG TIME ZONE FOR CELL PHONE [GO TO CELL_TZ_1]
- (4) GO BACK TO S_WARM

CELL_TZ_1 In what time zone would you like to be called?

- (1) ATLANTIC TIME [Change TZ variable to 58 and GO TO CB1]
- (2) EASTERN STANDARD TIME [Change TZ variable to 62 and GO TO CB1]
- (3) CENTRAL STANDARD TIME [Change TZ variable to 65 and GO TO CB1]
- (4) STANDARD MOUNTAIN TIME [Change TZ variable to 69 and GO TO CB1]
- (5) US STANDARD MOUNTAIN TIME (AZ) [Change TZ variable to 68 & GO TO CB1]
- (6) PACIFIC STANDARD TIME [Change TZ variable to 70 and GO TO CB1]
- (7) ALASKAN STANDARD TIME [Change TZ variable to 71 and GO TO CB1]
- (8) HAWAIIAN STANDARD TIME [Change TZ variable to 72 and GO TO CB1]
- (10) Go Back to INTRO_1 [GO TO INTRO_1 ELSE GO TO
N_INTRO1]
- (12) RESPONDENT DOESN'T KNOW / KEEP OLD TIME ZONE [GO TO CB1]
- (97) Refused to continue/ hung up [TERMINATE, SET ITS=41]

CELL_1 I have called (READ PHONE NUMBER FROM TOP SCREEN) is this your cell phone number or has this number been forwarded to your cell phone?

DO NOT USE THE HAND ON THIS SCREEN. IF YOU DON'T KNOW HOW TO CODE THIS CASE, ASK A SUPERVISOR FOR HELP.

- (1) Cell phone [GO TO CELL_EXIT]
- (2) Number forwarded to cell phone [GO TO CB1]
- (3) Respondent Hung Up Before Confirmation [TERMINATE, set ITS = 41]
- (4) Go Back to INTRO_1

CELL_EXIT We are not interviewing cell telephone numbers at the moment, sorry for the interruption. Thank you very much.

No Call Notes; TERMINATE INTERVIEW and Set ITS=41

S1 IF TXFLG=1 READ: Am I speaking to someone who lives in this household who is over 17 years old?

ELSE READ: Am I speaking to someone [IF RDD_NCCELL_CCELL = 1 "who lives in this household"] who is over 17 years old?

[IF RDD_NCCELL_CCELL=1 then display: "IF THE RESPONDENT SAYS NO: ASK TO SPEAK WITH SOMEONE OVER 17 WHO LIVES IN THE HOUSEHOLD."]

I AM THAT PERSON.....1 IF RDD_NCCELL_CCELL = 2 OR 3 AND
 TAKE_ALL_CELL_FLAG = 0, GO TO LANDLINE, ELSE
 GO TO S_NUMB
 THIS IS A BUSINESS2 GO TO SALZ
 NEW PERSON COMES TO PHONE.....3 GO TO INTRO_1

IF RDD_NCCELL_CCELL = 1 OR TXFLG = 1 DISPLAY:
 DOESN'T LIVE IN HOUSEHOLD.....8 GO TO CALLBACK, SET
 DISP AND TERMINATE -
 Set ITS=27, 28 or 29

ELSE IF RDD_NCCELL_CCELL = 2 or 3 DISPLAY:
 DOESN'T USUALLY USE THIS PHONE.....8 GO TO CALLBACK, SET
 DISP AND TERMINATE -
 Set ITS=27, 28 or 29

IF RDD_NCCELL_CCELL = 1 OR TXFLG = 1 DISPLAY:
 NO PERSON AT HOME WHO IS OVER 17.....9 GO TO S2_B

ELSE IF RDD_NCCELL_CCELL = 2 or 3 DISPLAY:
 NO, R IS NOT 18 OR OLDER.....9 GO TO S2_B

REFUSED.....97 GO TO UNIVERSAL EXIT
 R1

SALZ_BUS We are interviewing only private residences. Thank you very much.

[TERMINATE INTERVIEW]

S2_B Does anyone [IF RDD_NCCELL_CCELL =1 live in your household/ IF RDD_NCCELL_CCELL = 2, 3 use this cell phone] who is over 17 years old?

IF THE RESPONDENT SAYS NO, READ. "Just to clarify, no one 18 years of age or older [IF RDD_NCCELL_CCELL = 1 lives in this household / IF RDD_NCCELL_CCELL = 2, 3 uses this cell phone]?"

- (1) Yes, They are coming to the phone GO TO appropriate INTRO
- (2) Yes, But no one is home, so set a callback..... GO TO S2_B_1_WARNING_TEXT
- (3) No, No adults [IF RDD_NCCELL_CCELL=1 live in the household at any time / IF RDD_NCCELL_CCELL =2,3 use this cell phone] [GO TO MINOR_EXIT]

IF RDD_NCCELL_CCELL=1 DISPLAY:

- (4) Teen Line (Collect another telephone number) GO TO

S2_C (97) REFUSED GO TOR1

S2_B_WARNING_TEXT

Thank you, we'll try back another time.
[CREATE AN APPOINTMENT OR SET GENERAL CALL BACK. ENTER DATE/TIME AND CONTACT NAME IF KNOWN]

MINOR_EXIT Those are all the questions I have. I'd like to thank you on behalf of the Centers for Disease Control and Prevention for the time and effort you've spent answering these questions.
IF RDD_NCCELL_CCELL = 2, 3 THEN TERMINATE AND ASSIGN ITS 79

ELSE IF RDD_NCCELL_CCELL = 1 TERMINATE AND ASSIGN ITS 60 - [If call count of ITS 60 =1 delay it for 7 days or 21 shifts else if call count of ITS 60 >1 then finalize the case]

S2_C Is there another telephone number that I should call? _____

GO TO INSTRUCTION: WARNING: THE PHONE NUMBER FOR THIS INTERVIEW IS CHANGED NOW FROM X TO X.

GO TO CB1 (APPOINTMENT SCREEN) THEN C_NOTES_1_1

NIS Screening

S_NUMB How many children between the ages of 12 months and 3 years old are living or staying in your household?

IF ONE OR MORE, ENTER # OF CHILDREN (ENTER 01 to 09)
IF NO CHILDREN ENTER 0 (SEE ADDITIONAL SKIP INSTRUCTIONS BELOW)
(96) DON'T KNOW GO TO SOFTCHECK_77
(97) REFUSED GO TO UNIVERSAL EXIT-R1

IF S_NUMB=0 THEN:
IF SUC=1 & ASK_TEEN=0, THEN (GO TO LF_INTRO)
ELSE IF ASK_TEEN=1, THEN GO TO TIS_UNDER18
IF SUC=2, THEN GO TO S_UNDER18 (CSHCN-SCREENER)
IF SUC=4 & ASK_TEEN=0 THEN GO TO S_UNDER18
ELSE IF ASK_TEEN=1 THEN GO TO TIS_UNDER18

SOFT
CHECK_77 ASK FOR ANOTHER PERSON OR SCHEDULE APPOINTMENT ON THE NEXT SCREEN

(1) CONTINUE..... GO TO S_NUMB
(2) APPOINTMENT..... GO TO UNIVERSAL EXIT-CB1

Augmentation Sample

INTRO_AUG IF SAMPLE_USE_CODE = 3, READ INTRO_AUG.

Hello, my name is_____. I am calling on behalf of the Centers for Disease Control and Prevention. We are doing a national survey [IF RDD_NCCELL_CCELL=2, 3 "on cell phones"] about the health of children and teenagers. Your [IF RDD_NCCELL_CCELL=2,3 "cell phone"; ELSE "telephone"] number has been selected at random to be included in the study.

(1) CONTINUE SEE LOGIC BELOW

IF INTRO_1=1 AND RDD_NCCELL_CCELL = 1, GO TO S1
 ELSE IF INTRO_1=1 AND RDD_NCCELL_CCELL = 2 OR 3 AND TXFLG = 1 , GO TO S_CELL
 ELSE IF INTRO_1=1 AND RDD_NCCELL_CCELL = 2 OR 3 AND TXFLG = 0 or 2 AND S_KIDS_FLAG=0, GO TO S_WARM
 ELSE IF (INTRO_1=1 AND RDD_NCCELL_CCELL = 2 OR 3 AND TXFLG = 0 or 2 AND SAMPLE_USE_CODE=3,5,6 AND PRE_KIDS=1 AND S_KIDS=NULL AND S_UNDR18=NULL) THEN GO TO S_KIDS
 ELSE IF (INTRO_1=1 AND RDD_NCCELL_CCELL = 2 OR 3 AND TXFLG = 0 or 2 AND SAMPLE_USE_CODE=3,5,6 AND PRE_KIDS=1 AND S_KIDS NOT MISSING) GO TO S_WARM.
 ELSE IF (INTRO_1=1 AND RDD_NCCELL_CCELL = 2 OR 3 AND TXFLG = 0 or 2 AND SAMPLE_USE_CODE=1,2,4 AND PRE_KIDS=1) GO TO S_WARM.

(2) CONFIRM BUSINESS..... GO TO SALZ
 (3) OUT OF SCOPE GO TO THANK_YOU_OOS
 (4) TERMINATE THE INTERVIEW GO TO T1

IF RDD_NCCELL_CCELL = 1 DISPLAY :

(5) CELL PHONE..... GO TO CELL_1

ELSE IF RDD_NCCELL_CCELL = 2, 3 AND TXFLG = 1 DISPLAY:

(5) LANDLINE - YOU WILL NOT TERMINATE..... GO TO S1 and set RDD_NCCELL_CCELL=1

ELSE IF RDD_NCCELL_CCELL = 2, 3 AND TXFLG = 0 DISPLAY:

(5) LANDLINE..... GO TO LANDLINE EXIT and set ITS=88

(6) ANSWERING MACHINE [FILL] GO TO S1

If message is to be left then GO TO SASERV else hang up and set ITS =35

(7) R WILL CALL 800 LINE/VERIFY WEBSITE GO TO P1/VERIFY_INFO / Set ITS =69

(8) R ASKS FOR LETTER..... GO TO M1_NAME

(9) SUPERVISOR REVIEW Set ITS = 49

(15) Test sample - use only if respondent instruct that this call was a test - Set ITS =119

(16) CONTINUE THE CASE WITH LANGUAGE LINE

IF RDD_NCCELL_CCELL = 2, 3 DISPLAY:

(17) DROPPED CALL GO TO CNOTES_1_1> set ITS=81
 (SCHEDULE A CALL BACK FOR 1 MINUTES)

S_KIDS Are there any children living in your household?

HELP TEXT DISPLAYED FOR SLAITS-ONLY CASES:

A CHILD IS COUNTED AS "LIVING IN THE HOUSEHOLD" IF THE CHILD:

- HAS BEEN STAYING THERE (OR IS EXPECTED TO STAY THERE) FOR AT LEAST TWO MONTHS
- THE LENGTH OF THE CURRENT STAY IS UNKNOWN, BUT THERE IS NO OTHER PLACE WHERE THE CHILD USUALLY STAYS
- USUALLY STAYS IN THE HOUSEHOLD, BUT IS CURRENTLY AWAY FOR LESS THAN TWO MONTHS (WHETHER TRAVELING, IN THE HOSPITAL, OR AWAY FOR ANY OTHER REASON)
- USUALLY STAYS IN THE HOUSEHOLD, BUT IS CURRENTLY AWAY FOR TWO MONTHS OR MORE BECAUSE THEY ARE AT SCHOOL (COLLEGE, BOARDING SCHOOL, MILITARY ACADEMY, PREP SCHOOL, ETC.)
- ONLY LIVES PART-TIME IN THE HOUSEHOLD BECAUSE OF CUSTODY ISSUES, BUT IS STAYING THERE AT THE TIME OF THE CALL

- (1) YES [GO TO S_WARM]
- (0) NO..... [GO TO NOCHILD]
- (6) DON'T KNOW..... [GO TO S_WARM]
- (7) REFUSED [GO TO S_WARM]

S_CELL Am I speaking to you on your cell phone?

- (1) YES [GO TO S_WARM]
- (0) NO [GO TO S1 - SET RDD_NCCELL=1]

S_WARM If you are currently driving a car or doing any activity that requires your full attention I need to call you back at a later time.

- (1) CONTINUE [GO TO S1]
- (2) R UNABLE TO CONTINUE [GO TO S_ATTN]
- (3) NOT A CELL PHONE [GO TO S1]

S_ATTN For your safety, we will call you back at another time.

EVEN IF THE RESPONDENT IS USING A HANDS-FREE DEVICE WHILE DRIVING, YOU MUST END THE CALL.

- (1) CALL BACK ANOTHER TIME [GO TO CB1]
- (2) CALL BACK AT ANOTHER NUMBER REQUESTED [GO TO CB1N_WARNING]
- (3) WRONG TIME ZONE FOR CELL PHONE [GO TO CELL_TZ_1]
- (4) GO BACK TO S_WARM

CELL_TZ_1 In what time zone would you like to be called?

- (1) ATLANTIC TIME [Change TZ variable to 58 and GO TO CB1]
- (2) EASTERN STANDARD TIME [Change TZ variable to 62 and GO TO CB1]
- (3) CENTRAL STANDARD TIME [Change TZ variable to 65 and GO TO CB1]
- (4) STANDARD MOUNTAIN TIME [Change TZ variable to 69 and GO TO CB1]
- (5) US STANDARD MOUNTAIN TIME (ARIZONA) [Change TZ variable to 68 & GO TO CB1]
- (6) PACIFIC STANDARD TIME [Change TZ variable to 70 and GO TO CB1]
- (7) ALASKAN STANDARD TIME [Change TZ variable to 71 and GO TO CB1]
- (8) HAWAIIAN STANDARD TIME [Change TZ variable to 72 and GO TO CB1]

- (10) Go Back to INTRO_1 [GO TO INTRO_1 ELSE GO TO N_INTRO1]
- (12) RESPONDENT DOESN'T KNOW / KEEP OLD TIME ZONE [GO TO CB1]
- (97) Refused to continue/ hung up [TERMINATE , SET ITS=41]

CELL_1 I have called (READ PHONE NUMBER FROM TOP SCREEN), is this your cell phone number or has this number been forwarded to your cell phone?

DO NOT USE THE HAND ON THIS SCREEN. IF YOU DON'T KNOW HOW TO CODE THIS CASE, ASK A SUPERVISOR FOR HELP.

- (1) Cell phone [GO TO CELL_EXIT]
- (2) Number forwarded to cell phone [GO TO CB1]
- (3) Respondent Hung Up Before Confirmation [TERMINATE, set ITS = 41]
- (4) Go Back to INTRO_1

CELL_EXIT We are not interviewing cell telephone numbers at the moment, sorry for the interruption. Thank you very much.

[No Call Notes; TERMINATE INTERVIEW and Set ITS=41]

S1 IF TXFLG=1 READ: Am I speaking to someone who lives in this household who is over 17 years old?

ELSE READ: Am I speaking to someone [IF RDD_NCCELL_CCELL = 1 "who lives in this household"] who is over 17 years old?

[IF RDD_NCCELL_CELL=1 then display: "IF THE RESPONDENT SAYS NO: ASK TO SPEAK WITH SOMEONE OVER 17 WHO LIVES IN THE HOUSEHOLD."]

I AM THAT PERSON.....1	IF [S.C.] IS SELECTED,GO TO REMIND1/ ELSE CONTINUE WITH INTERVIEW
THIS IS A BUSINESS .....2	GO TO SALZ
NEW PERSON COMES TO PHONE.....3	GO TO INTRO_1
IF RDD_NCCELL_CCELL = 1 OR TXFLG = 1 DISPLAY: DOESN'T LIVE IN HOUSEHOLD.....8	GO TO CALLBACK, SET DISP AND TERMINATE - Set ITS=27, 28 or 29
ELSE IF RDD_NCCELL_CCELL = 2 or 3 DISPLAY: DOESN'T USUALLY USE THIS PHONE.....8	GO TO CALLBACK, SET DISP AND TERMINATE - Set ITS=27, 28 or 29
IF RDD_NCCELL_CCELL = 1 OR TXFLG = 1 DISPLAY: NO PERSON AT HOME WHO IS OVER 17.....9	GO TO S2_B
ELSE IF RDD_NCCELL_CCELL = 2 or 3 DISPLAY: NO, R IS NOT 18 OR OLDER.....9	GO TO S2_B
REFUSED.....97	GO TO UNIVERSAL EXIT R1

S2_B Does anyone [IF RDD_NCCELL_CCELL =1 live in your household/ IF RDD_NCCELL_CCELL = 2, 3 use this cell phone] who is over 17 years old?

IF THE RESPONDENT SAYS NO, READ. "Just to clarify, no one 18 years of age or older [IF RDD_NCCELL_CCELL = 1 lives in this household / IF RDD_NCCELL_CCELL = 2, 3 uses this cell phone]?"

(1) Yes, They are coming to the phone GO TO appropriate INTRO
(2) Yes, But no one is home, so set a callback..... GO TO S2_B_1_WARNING_TEXT
(3) No, No adults [IF RDD_NCCELL_CCELL=1 live in the household at any time / IF RDD_NCCELL_CCELL =2,3 use this cell phone] [GO TO MINOR_EXIT]

IF RDD_NCCELL_CCELL=1 DISPLAY:
(4) Teen Line (Collect another telephone number) GO TO S2_C
(7) REFUSED GO TOR1

CP_LANDLINE

IF PAN_BANK=1 then skip to CP_CELLUSE, ELSE GO TO LANDLINE

LANDLINE Do you have a landline telephone in your household?

READ AS NECESSARY: Please do not include:

- modem-only lines,
- fax-only lines,
- lines used just for home security systems,
- beepers,
- Skype
- pagers, or
- cell phones.

Please include Voice Over I.P. or VOIP numbers.

- (1) YES [GO TO CELLUSE]
- (0) NO [GO TO CP_CELLUSE]
- (6) DON'T KNOW [GO TO CP_CELLUSE]
- (7) REFUSED [GO TO CP_CELLUSE]

CELLUSE Thinking just about the land line home phone, not your cell phone, if that telephonerang and someone were home, under normal circumstances how likely is it that it would be answered? Would you say extremely likely, somewhat likely, somewhat unlikely, or not at all likely?

- (1) EXTREMELY LIKELY [GO TO LANDLINE_EXIT]
- (2) SOMEWHAT LIKELY [GO TO LANDLINE_EXIT]
- (3) SOMEWHAT UNLIKELY [GO TO CP_CELLUSE]
- (4) NOT AT ALL LIKELY [GO TO CP_CELLUSE]
- (6) DON'T KNOW [GO TO LANDLINE_EXIT]
- (7) REFUSED [GO TO LANDLINE_EXIT]

IF CELLUSE = 3 OR 4 OR LANDLINE 0,6,7 SET CELL_OM=1, ELSE CELL_OM=NULL (default)

CP_CELLUSE IF SAMPLE_USE_CODE = 3,5,6, FOLLOW AUGMENTION PATHWAYS.

S_UNDR18 [IF S_NUMB GE 1 AND NIS IS DONE, FILL S_UNDR18 FROM NIS DATA
S_UNDR18 = C1 - C1A. C1 - C1A CANNOT BE LE 0. IF THAT IS THE CASE, ASK
S_UNDR18]

[(IF RDD_NCCELL_CCELL=2,3 and PRE_KIDS=1 and S_KIDS=1) then display: "Please tell me how many people less than 18 years old live in this household."

ELSE IF (RDD_NCCELL_CCELL=1 OR (RDD_NCCELL_CCELL=2,3 and S_KIDS_FLAG=0)) then display "How many people less than 18 years old live in this household?"]

1 OR GREATER [SKIP TO ISC200]
(0) ZERO [SKIP TO NOCHILD]
(6) DON'T KNOW [GO TO ASK_ANOTHER]
(7) REFUSED [TERMINATE AND SET AS REFUSAL ((IF INCENTIVE > 0 THEN GO TO ADDRESS COLLECTION), THEN GO TO R1, SET ITS = 23)]

A CHILD IS COUNTED AS "LIVING IN THE HOUSEHOLD" IF THE CHILD:
- HAS BEEN STAYING THERE (OR IS EXPECTED TO STAY THERE) FOR AT LEAST TWO MONTHS
- THE LENGTH OF THE CURRENT STAY IS UNKNOWN, BUT THERE IS NO OTHER PLACE WHERE THE CHILD USUALLY STAYS
- USUALLY STAYS IN THE HOUSEHOLD, BUT IS CURRENTLY AWAY FOR LESS THAN TWO MONTHS (WHETHER TRAVELING, IN THE HOSPITAL, OR AWAY FOR ANY OTHER REASON)
- USUALLY STAYS IN THE HOUSEHOLD, BUT IS CURRENTLY AWAY FOR TWO MONTHS OR MORE BECAUSE THEY ARE AT SCHOOL (COLLEGE, BOARDING SCHOOL, MILITARY ACADEMY, PREP SCHOOL, ETC.)
- ONLY LIVES PART-TIME IN THE HOUSEHOLD BECAUSE OF CUSTODY ISSUES, BUT IS STAYING THERE AT THE TIME OF THE CALL

NUMBER OF CHILDREN = 0 [GO TO NOCHILD]
NUMBER OF CHILDREN > 1 AND HH NIS-ELIGIBLE [GO TO SL_INTRO]
NUMBER OF CHILDREN > 1 AND HH NIS-INELIGIBLE [GO TO ISC200]

S_UNDR18_CONF

WARNING: ACCORDING TO NIS THERE [IF S_NUMB=1 THEN FILL: IS / IF S_NUMB > 1 THEN FILL: ARE] AT LEAST [FILL S_NUMB] [if S_NUMB=1 THEN FILL: CHILD / IF S_NUMB > 1 THEN FILL: CHILDREN] IN THE HOUSEHOLD.

PLEASE RE-ASK S_UNDR18 ASKING FOR ALL OF THE CHILDREN IN THE HOUSEHOLD.

(1) Count incorrect - change total number of children [SKIP BACK TO S_UNDR18]
(2) Total number of children confirmed as correct [GO TO LL_TYPE if Language Line case, ELSE go to CHECKPOINT.]

LL_TYPE WHAT LANGUAGE WAS NEEDED TO COMPLETE THIS INTERVIEW?

(1) KOREAN [Go to LL_END]
(2) MANDARIN [Go to LL_END]
(3) CANTONESE [Go to LL_END]

- | | |
|---------------------------|------------------------------------|
| (4) VIETNAMESE | [Go to LL_END] |
| (5) ARABIC | [Go to LL_END] |
| (6) FRENCH/CREOLE/HAITIAN | [Go to LL_END] |
| (7) ITALIAN | [Go to LL_END] |
| (8) JAPANESE | [Go to LL_END] |
| (9) POLISH | [Go to LL_END] |
| (10) PORTUGUESE | [Go to LL_END] |
| (11) TAGALOG/FILIPINO | [Go to LL_END] |
| (12) ENGLISH | [CONTINUE WITH INTERVIEW AS USUAL] |
| (13) SPANISH | [CONTINUE WITH INTERVIEW AS USUAL] |
| (14) ANOTHER LANGUAGE | [Go to LL_END] |

LL_END IF LL_TYPE = 1,2,3, or 4 DISPLAY:

Those are all the questions I have at this time. Someone who speaks [IF LL_TYPE=1 display "Korean"; IF LL_TYPE=2 display "Mandarin"; IF LL_TYPE=3 display "Cantonese"; IF LL_TYPE=4 display "Vietnamese"] will call you back to complete the interview as soon as possible. I'd like to thank you on behalf of the Centers for Disease Control and Prevention for the time and effort you've spent answering these questions. If you have any questions about this survey, you may call my supervisor toll-free at [IF SUC = 1, 2, 4 FILL 1 - 8 6 6 - 9 9 9 - 3 3 4 0 / IF SUC = 3, 5, 6 FILL 1 - 8 8 8 - 9 9 0 - 9 9 8 6]. If you have questions about your rights as a survey participant, you may call the chairman of the Research Ethics Review Board at 1-800-223-8118. Thank you again.

ELSE, DISPLAY:

Those are all the questions I have. I'd like to thank you on behalf of the Centers for Disease Control and Prevention for the time and effort you've spent answering these questions. If you have any questions about this survey, you may call my supervisor toll-free at [IF SUC = 1, 2, 4 FILL 1 - 8 6 6 - 9 9 9 - 3 3 4 0 / IF SUC = 3, 5, 6 FILL 1 - 8 8 8 - 9 9 0 - 9 9 8 6]. If you have questions about your rights as a survey participant, you may call the chairman of the Research Ethics Review Board at 1-800-223-8118. Thank you again.

- (1) EXIT SCRIPT READ
- (2) ASIAN LANGUAGE INTERVIEWERS CONTINUE INTERVIEW

ASK_ANOTHER

Is there anyone in your household who knows how many people in this household are less than 18 years old?

- | | |
|-------------------------------|---|
| (1) NEW PERSON COMES TO PHONE | [GO TO INTRO_SWITCH] |
| (0) NO | [IF INCENTIVE>0 THEN GO TO ADDRESS COLLECTION THEN GO TO NSCH_TERM] |

NSCH_TERM Thank you, we'll try back another time.

INTRO_SWITCH

Hello, my name is _____. I'm calling on behalf of the Centers for Disease Control and Prevention. We are doing a national survey about the health of children and teenagers, and I was told that you were the person to talk with about the health of the [IF S_UNDR18 =1, INSERT "child"; IF S_UNDR18 > 1 INSERT "children"] in the household.

- (0) CONTINUE

GO TO S_UNDR18

NOCHILD (IF INCENTIVE > 0 THEN GO TO ADDRESS COLLECTION), THEN READNOCHILD

Those are all the questions I have. We are only interviewing in households with children. I'd like to thank you on behalf of the Centers for Disease Control and Prevention for the time and effort you've spent answering these questions.

TERMINATE [SET ITS = 61]

NEW_RESP Hello, my name is _____. I'm calling on behalf of the Centers for Disease Control and Prevention. We are doing a national survey about the health of children and teenagers, and I was told that you were the person to talk with about the health of the [IF S_UNDR18 =1, INSERT "child"; IF S_UNDR18 > 1 INSERT "children"] in the household.

(1) CONTINUE

S3_NSCH_LTR

IF NO ADVANCE LETTER SENT, THEN SKIP TO SL_INTRO

A letter describing this survey may have been sent to your home recently. Do you remember seeing the letter?

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

AGE_X CATI INSTRUCTION (AGE GRID) IF S_UNDR18 = 1, FILL "age" AND "child". ELSE, FILL "ages" AND "children".

IF S_NUMB = 0, DISPLAY THIS TEXT WHEN ASKING ABOUT FIRST CHILD: "Many of my questions are only for children of certain ages. So I'll know which questions to ask, please tell me the [age/ages] of the [child/children] less than 18 years old living in this household." FOR ALL SUBSEQUENT CHILDREN (LOOP UNTIL # OF CHILDREN=S_UNDR18) DISPLAY: (READ IF NECESSARY): "Please tell me the age of the next child who lives in this household."

ELSE IF (S_NUMB=S_UNDR18 then FILL AGE_1 (and AGE_1Y_X as needed) with age of child and skip to AGE_CONF.

ELSE IF S_NUMB > 0 AND S_UNDR18 - S_NUMB > 0, FILL: "You have already given me (FILL NAME OF NIS-ELIGIBLE CHILD OR CHILDREN)'s birth date(s). Now, would you please tell me the [age/ages] of the other [IF S_UNDR18 - S_NUMB = 1, INSERT "child"; IF S_UNDR18 - S_NUMB > 1, INSERT "children"] living in this household." FOR ALL SUBSEQUENT CHILDREN (LOOP UNTIL # OF CHILDREN=S_UNDR18 - S_NUMB) DISPLAY: (**READ IF NECESSARY**): "Please tell me the age of the next child who lives in this household.")

Display for AGE_1

INTERVIEWER: IF R PROVIDES AGES FOR ALL CHILDREN UP FRONT, TYPE IN THE AGES AS CATI PROMPTS FOR THEM.

ENTER 77 FOR DON'T KNOW AND 99 FOR REFUSED

IF AGE IS LESS THAN 1 MONTH OLD, RECORD 0 MONTHS. A CHILD IS COUNTED AS "LIVING IN THE HOUSEHOLD" IF THE CHILD:

- HAS BEEN STAYING THERE (OR IS EXPECTED TO STAY THERE) FOR AT LEAST TWO MONTHS
- THE LENGTH OF THE CURRENT STAY IS UNKNOWN, BUT THERE IS NO OTHER PLACE WHERE THE CHILD USUALLY STAYS
- USUALLY STAYS IN THE HOUSEHOLD, BUT IS CURRENTLY AWAY FOR LESS THAN TWO MONTHS (WHETHER TRAVELING, IN THE HOSPITAL, OR AWAY FOR ANY OTHER REASON)
- USUALLY STAYS IN THE HOUSEHOLD, BUT IS CURRENTLY AWAY FOR TWO MONTHS OR MORE BECAUSE THEY ARE AT SCHOOL (COLLEGE, BOARDING SCHOOL, MILITARY ACADEMY, PREP SCHOOL, ETC.)
- ONLY LIVES PART-TIME IN THE HOUSEHOLD BECAUSE OF CUSTODY ISSUES, BUT IS STAYING THERE AT THE TIME OF THE CALL
____ ENTER VALUE

[IF 77 GO TO WHEN_CALL,
IF 99 GO TO AGE_REF]

AGES SHOULD BE STORED IN AGE_1 - AGE_9.

PLEASE VERIFY THAT TEEN "BACKGROUND" VARIABLES FOR ROSTER FILL APPROPRIATELY TO CSHCN. PLEASE ALSO VERIFY THAT MAGE AND YAGE FILL CORRECTLY.

IF SAMPLE_USE_CODE = 4: FILL AGE ROSTER FROM TEEN ROSTER.

AGE1_X _____(1) MONTHS
 _____(2) YEARS

CONTINUE TO LOOP FOR ALL REMAINING CHILDREN

IF MONTHS, RANGE CHECK = 1-24;
IF YEARS, RANGE CHECK = 1-17

THESE SHOULD APPEAR ON THE SAME SCREEN AS AGE_X.
AFTER LOOP ENDS, GO TO AGE_1Y_1.

WHEN_CALL What would be a good time to reach a person who knows the child's age?

- (1) SET APPOINTMENT FOR CALLBACK [GO TO CB1]
- (2) PERSON AVAILABLE [GO TO INTRO_AGE]

ON A CALL-BACK, POR IS AGE_X.

AGE_REF The reason we need your child's age is to know which health and health care questions to ask. The information you provide is completely confidential.

- (1) YES [GO TO AGE_X]
- (0) NO [GO TO AGE_TERM]

AGE_TERM IF INCENTIVE>0 THEN GO TO ADDRESS COLLECTION THEN READ AGE_TERM.
Those are all the questions I have. I'd like to thank you on behalf of the Centers for Disease Control and Prevention for the time and effort you've spent answering these questions.

INTRO_AGE Hello, my name is _____. I'm calling on behalf of the Centers for Disease Control and Prevention. We are doing a nationwide survey about the health of children and teenagers, and I was told that you were the person to talk with about the health of the (IF S_UNDR18 =1, INSERT "child"; IF S_UNDR18 > 1 INSERT "children") in your household

(1) CONTINUE [RETURN TO AGE_X]

AGE_1Y_1 IF EXACTLY 1 AGE_X=1 YEAR OLD OR 0 YEARS OLD, THEN ASK "Because some of our questions are only for children of certain ages, can you please tell me the age of the [1-year-old/0-year-old] child in months? "

ELSE IF > 1 AGE_X = 1 YEAR OLD OR 0 YEARS OLD, THEN ASK "Because some of our questions are only for children of certain ages, can you please tell me the age of the first [1-year-old/0-year-old] child in months? "

ELSE IF 0 AGE_X = 1 YEAR OLD THEN SKIP TO AGE_CONF.
_____MONTHS [RANGE: 0-24]

IF EXACTLY 1 AGE_X = 1 YEAR OLD, GO TO AGE_CONF, ELSE IF > 1 AGE_X = 1 YEAR OLD GO TO AGE_1Y_2-9.

AGE_1Y_2-
AGE_1Y_9 And how about the next [1 year old / 0 year old]?

_____MONTHS [RANGE: 0-24]

CONTINUE TO LOOP FOR ALL REMAINING 1 YEAR OLDS. THEN GO TO AGE_CONF.

AGE_CONF So, you have a [FILL WITH AGE IN YEARS FOR ALL CHILDREN 2 YEARS OLD OR OLDER, AND AGE IN MONTHS FOR ALL CHILDREN UNDER 24 MONTHS OLD., INCLUDING AGES FOR ANY NIS-ELIGIBLE CHILDREN. E.G., 16 month old, 10 year old, and 15 year old/ IF > 1 CHILD, INSERT 'and' BEFORE THE LAST AGE_X] living at this address all or most of the time. Is that correct?

(1) YES [SKIP TO MULTIAGE]
(2) NO, WRONG AGES [RETURN TO AGE_X]
(3) NO, WRONG NUMBER OF CHILDREN [SKIP TO S_UNDR18]
(4) NO, NOT ALL CHILDREN LIVING AT THIS ADDRESS ALL OR MOST OF THE TIME [RETURN TO S_UNDR18]

MULTIAGE CATI INSTRUCTION (MULTIAGE): IF NO CHILDREN ARE THE SAME AGE, SKIP TO C2Q03_X, ELSE ASK

Since you have more than one child who is [FILL DUPLICATE AGES FROM AGE_CONF, E.G. 3 years old], I need a way to refer to each of them during the interview.

(1) CONTINUE [RECORD NAMES IN NAME_1 – NAME_9]

(6) DON'T KNOW [GO TO REFNAME1]
(7) REFUSED [GO TO REFNAME1]

IF SUC=4 THEN FILL FROM TIS_MULTIAGE.
CATI INSTRUCTION: loop for all NAME_X. GO TO NSCH RANDOM SELECTION
PROCESS.

NAME_1 -NAME_9

CATI INSTRUCTION: loop for all NAME_X. GO TO NSCH RANDOM SELECTION
PROCESS.

IF REFNAME1=99 THEN DISPLAY: INTERVIEWER INSTRUCTION: RESPONDENT
REFUSED CHILD'S NAME, ENTER 99

IF REFNAME1 not equal 99 THEN DISPLAY: What is the [other] [FILL AGE] year old child's
name or initials?

For all cases display the following in red:

ENTER NAME
(6) DON'T KNOW
(7) REFUSED

NAME: _____

IF SUC=4 THEN FILL FROM TIS_NAME_X.

FILL FROM NIS IF APPROPRIATE.

IF NAME_x = 77 or 99 then the AGEID for that child="[FILL AGE] CHILD [FILL x]" (where x
is the roster position for that child).

REFNAME1 I would like to assure you that ALL information will be kept in strict confidence and will be
summarized for research purposes only. Since you have two or more children of the same age, we
must have some way to tell them apart. You could give me a first name, nickname, or their
initials.

(1) RESPONDENT WILL GIVE NAMES [RETURN TO NAME_1 THROUGH
NAME_9 AND ENTER]
(2) REFUSED [GO TO REFNAME2]

REFNAME2 (IF INCENTIVE > 0 THEN GO TO ADDRESS COLLECTION), THEN READREFNAME2.
Those are all the questions I have. I'd like to thank you on behalf of the Centers for Disease
Control and Prevention for the time and effort you've spent answering these questions.

TERMINATE > SET ITS = 23; POINT OF RETURN SHOULD BE MULTIAGE

CPNIS_ELIG IF SAMPLE_USE_CODE = 2: IF AGE_X= 19-35 MONTHS AND S3_3M/D/Y_x =NULL, GO
TO S2Q02A; ELSE SKIP TO NSCH RANDOM SELECTION PROCESS
ELSE IF SAMPLE_USE_CODE = 3, 4, 5, OR 6: IGNORE LOGIC ABOVE.

S2Q02A Based on the ages you have given me, I now have some questions about [AGEID OR AGEIDs].

(1) CONTINUE [GO TO S3_X]

FILL S_NUMB APPROPRIATELY AND GO TO S3_X. ASK
NIS FOR ALL CHILDREN THAT HAVE QUALIFIED.
AFTER NIS COMPLETE, SKIP TO NSCH SELECTION PROCESS

NSCH RANDOM SELECTION PROCESS

AT THIS POINT, A SAMPLE CHILD MUST BE SELECTED FOR THE REST OF THE INTERVIEW FROM ALL CHILDREN ROSTERED. IF ONLY ONE CHILD UNDER 18 YEARS OLD (AGE_GRID HAS 1 CHILD LISTED), THAT CHILD IS THE SAMPLE CHILD [S.C.] FROM THIS POINT. IF THERE IS MORE THAN ONE CHILD UNDER THE AGE OF 18 (AGE_X HAS > 1 CHILD LISTED), ONE OF THESE CHILDREN SHOULD BE RANDOMLY SAMPLED AND THAT CHILD IS THE SAMPLE CHILD [S.C.] FROM THIS POINT.

STORE SAMPLED CHILD IN VARIABLE: SC_NSCH

S.C. = "your N month/year old" or name from NAME_1 - NAME_9

IF SAMPLE_USE_CODE=4: PERFORM NEW RANDOM SELECTION OF CHILD FROM FULL ROSTER COMPLETELY INDEPENDENT OF TEEN SELECTION

Informed consent

SCQ02 IF S_NUMB=0 or SUC=3,5 or 6 or no ELIG_1-9 =1, SKIP TO SCQ05. IF SAMPLE_USE_CODE=4 AND NOT NIS OR TEEN ELIGIBLE, SKIP TO SCQ05. ELSE IF NIS INTERVIEW WAS CONDUCTED BUT [S.C.] WAS NOT NIS-ELIGIBLE, SKIP TO SCQ03 AND DISPLAY SCRIPT 1. IF SAMPLE_USE_CODE=4 AND NIS OR TEEN DONE, BUT [S.C.] WAS NOT NIS OR TEEN-ELIGIBLE, SKIP TO SCQ03 AND DISPLAY SCRIPT 1. ELSE IF ELIG_1-9 NOT EQ 1, AND S3_INTRO DISPLAYED, SKIP TO SCQ03 AND DISPLAY SCRIPT 2. IF SAMPLE_USE_CODE=4 AND ELIG_1-9 NOT EQ 1, AND S3_INTRO DISPLAYED, AND TEEN NOT DONE, SKIP TO SCQ03 AND DISPLAY SCQ03 SCRIPT 2.

IF S_UNDR18 = 01, SAY: "Next, I have some other questions about the health and health care of [S.C.]. As before, you may choose not to answer any questions you don't wish to answer, or end the interview at any time with no impact on the benefits you may receive. [IF NSCH INCENTIVE CASE DISPLAY: In appreciation for your time, we will send you \$[MONEY_1/MONEY_2].] This part of the survey will take about [IF NSCH_TIME=0 THEN DISPLAY "half an hour"; ELSE IF NSCH_TIME=1 THEN DISPLAY "[MINUTES_1] minutes"; ELSE IF NSCH_TIME=2 THEN DISPLAY "[MINUTES_2] minutes"]. I'd like to continue now unless you have any questions."

IF S_UNDR18 > 01, SAY: "I appreciate your answers about the immunizations of [NIS-ELIGIBLE CHILDREN, IF SAMPLE_USE_CODE=4 AND TEEN INTERVIEW COMPLETE FILL WITH TEEN S.C., ELSE FILL WITH NIS-ELIGIBLE CHILDREN]. The next questions are about the health and health care of [S.C.]. As before, you may choose not to answer any questions you don't wish to answer, or end the interview at any time with no impact on the benefits you may receive. [IF NSCH INCENTIVE CASE DISPLAY: In appreciation for your time, we will send you \$[MONEY_1/MONEY_2].] This part of the survey will take about [IF NSCH_TIME=0 THEN DISPLAY "half an hour"; ELSE IF NSCH_TIME=1 THEN DISPLAY "[MINUTES_1] minutes"; ELSE IF NSCH_TIME=2 THEN DISPLAY "[MINUTES_2] minutes"]. I'd like to continue now unless you have any questions."

(1) CONTINUE [SKIP TO K1Q01]

SCQ03 SCRIPT 1:

I appreciate your answers about the immunizations of [IF SAMPLE_USE_CODE = 2 then fill with NIS-ELIGIBLE CHILDREN, IF SAMPLE_USE_CODE=4 AND NIS DONE BUT NO TEEN THEN FILL WITH NIS-ELIGIBLE CHILDREN, IF SAMPLE_USE_CODE=4 AND TEEN INTERVIEW DONE THEN FILL WITH ST]. The next questions are about the health and health care of [S.C.]. We need to talk to a parent or guardian who lives in this household who knows about the health and health care of [S.C.]. Who would that be?

SCRIPT 2:

Most of this survey will be about the health and health care of [S.C.]. We need to talk to a parent or guardian who lives in this household who knows about the health and health care of [S.C.]. Who would that be?

(1) MYSELF [SKIP TO SCQ04]

(2) SOMEONE ELSE [SKIP TO SCQ06]

- SCQ04 As before, you may choose not to answer any questions you don't wish to answer, or end the interview at any time with no impact on the benefits you may receive. [IF NSCH INCENTIVE CASE DISPLAY: In appreciation for your time, we will send you \$[MONEY_1/MONEY_2].] This part of the survey will take about [IF NSCH_TIME=0 THEN DISPLAY "half an hour"; ELSE IF NSCH_TIME=1 THEN DISPLAY "[MINUTES_1] minutes"; ELSE IF NSCH_TIME=2 THEN DISPLAY "[MINUTES_2] minutes"]. I'd like to continue now unless you have any questions.
- (1) CONTINUE [SKIP TO K1Q01]
- SCQ05 Most of this survey will be about the health and health care of [S.C.]. We need to talk to a parent or guardian who lives in this household who knows about the health and health care of [S.C.]. Who would that be?
- (1) MYSELF [SKIP TO S3_NSCH_LTR]
(2) SOMEONE ELSE [SKIP TO SCQ06]
- SCQ06 May I speak with that person now?
- (1) YES [SKIP TO NEW_RESP]
(0) NO [SET APPOINTMENT FOR CALLBACK, GO TO CB1]

NEW_RESP Hello, my name is _____. I'm calling on behalf of the Centers for Disease Control and Prevention. We are doing a nationwide survey about the health of children and teenagers, and I was told that you were the person to talk with about the health and health care of [S.C.].

(1) CONTINUE

S3_NSCH_LTR *IF NO ADVANCE LETTER SENT, THEN SKIP TO SL_INTRO.*

A letter describing this survey may have been sent to your home recently. Do you remember seeing the letter?

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

SL_INTRO Before we continue, I'd like you to know that taking part in this research is voluntary. You may choose not to answer any questions you don't wish to answer, or end the interview at any time with no impact on the benefits you may receive. We are required by Federal law to develop and follow strict procedures to protect the confidentiality of your information and use your answers only for statistical research. I can describe these laws if you wish. [IF NSCH INCENTIVE CASE DISPLAY: In appreciation for your time, we will send you \$[MONEY_1/MONEY_2].] The survey will take about [IF NSCH_TIME=0 THEN DISPLAY "half an hour"; ELSE IF NSCH_TIME=1 THEN DISPLAY "[MINUTES_1] minutes"; ELSE IF NSCH_TIME=2 THEN DISPLAY "[MINUTES_2] minutes"]. In order to review my work, this call will be recorded and my supervisor may listen as I ask the questions. I'd like to continue now unless you have any questions.

READ IF NECESSARY: The Public Health Service Act is Title 42 of the US Code, Section 242k. The collection of information in this survey is authorized by Section 306 of this Act. Through the National Center for Health Statistics, the confidentiality of your responses is assured by Section 308d of this Act and by the Confidential Information Protection and Statistical Efficiency Act. Would you like me to read the Confidential Information Protection provisions to you?

IF RESPONDENT WOULD LIKE TO HEAR PROVISIONS, READ: The information you provide will be used for statistical purposes only. In accordance with the Confidential Information Protection provisions of Title V, Subtitle A, Public Law 107-347 and other applicable Federal laws, your responses will be kept confidential and will not be disclosed in identifiable form to anyone other than employees or agents. By law, every employee of the National Center for Health Statistics, the National Center for Immunization and Respiratory Diseases, and its agent, N-O-R-C at the University of Chicago, who works on this survey has taken an oath and is subject to a jail term of up to 5 years, a fine of up to \$250,000, or both, if he or she willingly discloses ANY identifiable information about you or your household members.

- (1) CONTINUE, RECORDING ACCEPTABLE
- (2) CONTINUE, DO NOT RECORD

Section 1: Initial Demographics

K1Q01_INTRO

[SKIP TO K1Q01 IF NAME OF S.C. ALREADY GATHERED NAME_1-NAME_9 OR NIS INTERVIEW]

I can continue to refer to your child as (your N month/year old) for the rest of the interview, or if you prefer, you could give me a first name or initials.

- (1) CONTINUE TO USE AGE REFERENCE [GO TO K1Q01]
- (2) USE NAME [GO TO SELECTION1_NAME_A]

SELECTION

1_NAME_A ENTER NAME/INITIALS: _____[GO TO K1Q01]

K1Q01

Is [S.C.] male or female?

- (1) MALE
- (2) FEMALE
- (6) DON'T KNOW
- (7) REFUSED

K1Q02

What is your relationship to [S.C.]?

PARENT

- (1) MOTHER (BIOLOGICAL, STEP, FOSTER, ADOPTIVE)
- (2) FATHER (BIOLOGICAL, STEP, FOSTER, ADOPTIVE)

OLDER RELATIVES OR GUARDIANS

- (11) GRANDMOTHER
- (12) GRANDFATHER
- (13) AUNT
- (14) UNCLE
- (15) FEMALE GUARDIAN
- (16) MALE GUARDIAN

OTHER RELATIVES

- (17) SISTER (BIOLOGICAL, STEP, FOSTER, HALF, ADOPTIVE)
- (18) BROTHER (BIOLOGICAL, STEP, FOSTER, HALF, ADOPTIVE)
- (19) COUSIN
- (20) IN-LAW OF ANY TYPE
- (22) OTHER RELATIVE / FAMILY MEMBER

OTHER NON-RELATIVES

- (23) PARENT'S BOYFRIEND / MALE PARTNER
- (24) PARENT'S GIRLFRIEND / FEMALE PARTNER
- (25) PARENT'S PARTNER, but SEX REFUSED
- (26) OTHER NON-RELATIVE OR FRIEND

- (96) DON'T KNOW
- (97) REFUSED

K1Q03

What is the primary language spoken in your home?

- (1) ENGLISH
- (2) SPANISH
- (3) ARABIC
- (4) CHINESE
- (5) FRENCH
- (6) ITALIAN
- (7) JAPANESE
- (8) KOREAN
- (9) POLISH
- (10) RUSSIAN
- (11) TAGALOG
- (12) VIETNAMESE
- (13) ANY OTHER LANGUAGE
- (96) DON'T KNOW
- (97) REFUSED

Section 2: Health and Functional Status

Subdomain 1: General health status

K2Q01 In general, how would you describe [S.C.]’s health? Would you say [his/her] health is excellent, very good, good, fair, or poor?

- (1) EXCELLENT
- (2) VERY GOOD
- (3) GOOD
- (4) FAIR
- (5) POOR
- (6) DON'T KNOW
- (7) REFUSED

IF AGE < 12 MONTHS, SKIP TO K2Q02.

K2Q01_D How would you describe the condition of [S.C.]’s teeth: excellent, very good, good, fair, or poor?

- (1) EXCELLENT
- (2) VERY GOOD
- (3) GOOD
- (4) FAIR
- (5) POOR
- (6) HAS NO NATURAL TEETH
- (96) DON'T KNOW
- (97) REFUSED

K2Q02 How tall is [S.C.] now?

___ FEET / ___ INCHES / ___ CENTIMETERS /
 (96) DON'T KNOW
 (97) REFUSED

K2Q03 How much does [S.C.] weigh now?

___ POUNDS / ___ KILOGRAMS /
 (96) DON'T KNOW
 (97) REFUSED

K2Q04 What was [S.C.]’s birth weight?

___ POUNDS / ___ OUNCES / ___ GRAMS /
 (96) DON'T KNOW
 (97) REFUSED

K2Q05 Was [S.C.] born prematurely, that is, more than 3 weeks before [his/her] due date?

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

READ IF NECESSARY: Most pregnancies last about 40 weeks. A premature birth is when a baby is born more than three weeks before the due date.

Subdomain 2: Presence of a special health care need

K2Q10_INTRO The next questions are about any kind of health problems, concerns, or conditions that may affect [S.C.]’s behavior, learning, growth, or physical development.

K2Q10 Does [S.C.] currently need or use medicine prescribed by a doctor, other than vitamins?

READ IF NECESSARY: This only applies to medications prescribed by a doctor. Over-the-counter medications such as cold or headache medication, or other vitamins, minerals, or supplements purchased without a prescription are not included.

HELP TEXT: THIS QUESTION REFERS ONLY TO CURRENT NEED FOR PRESCRIPTION MEDICINE. THE RESPONDENT SHOULD REPLY WITH “YES” IF THE CHILD CURRENTLY NEEDS OR USES PRESCRIPTION MEDICINE.

- (1) YES [SKIP TO K2Q11]
- (0) NO [SKIP TO K2Q13]
- (6) DON’T KNOW [SKIP TO K2Q13]
- (7) REFUSED [SKIP TO K2Q13]

K2Q11 Is [his/her] need for prescription medicine because of ANY medical, behavioral, or other health condition?

- (1) YES [SKIP TO K2Q12]
- (0) NO [SKIP TO K2Q13]
- (6) DON’T KNOW [SKIP TO K2Q13]
- (7) REFUSED [SKIP TO K2Q13]

K2Q12 Is this a condition that has lasted or is expected to last 12 months or longer?

- (1) YES [SKIP TO K2Q13]
- (0) NO [SKIP TO K2Q13]
- (6) DON’T KNOW [SKIP TO K2Q13]
- (7) REFUSED [SKIP TO K2Q13]

K2Q13 Does [S.C.] need or use more medical care, mental health, or educational services than is usual for most children of the same age?

READ IF NECESSARY: The child requires more medical care, the use of more mental health services, or the use of more educational services than most children the same age.

HELP TEXT: THIS QUESTION REFERS ONLY TO CURRENT NEED FOR SERVICES. THE RESPONDENT SHOULD REPLY WITH “YES” IF THE CHILD CURRENTLY NEEDS OR USES SERVICES

- (1) YES [SKIP TO K2Q14]
- (0) NO [SKIP TO K2Q16]
- (6) DON’T KNOW [SKIP TO K2Q16]
- (7) REFUSED [SKIP TO K2Q16]

K2Q14 Is [his/her] need for medical care, mental health or educational services because of ANY medical, behavioral, or other health condition?

- | | |
|----------------|-----------------|
| (1) YES | [SKIP TO K2Q15] |
| (0) NO | [SKIP TO K2Q16] |
| (6) DON'T KNOW | [SKIP TO K2Q16] |
| (7) REFUSED | [SKIP TO K2Q16] |

K2Q15 Is this a condition that has lasted or is expected to last 12 months or longer?

HELP TEXT: IF THE CONDITION, NEED, OR PROBLEM LASTS FOR SHORT PERIODS OF TIME BUT IS EXPECTED TO KEEP COMING BACK FOR 12 MONTHS OR LONGER, THE ANSWER SHOULD BE "YES."

- | | |
|----------------|-----------------|
| (1) YES | [SKIP TO K2Q15] |
| (0) NO | [SKIP TO K2Q16] |
| (6) DON'T KNOW | [SKIP TO K2Q16] |
| (7) REFUSED | [SKIP TO K2Q16] |

K2Q16 Is [S.C.] limited or prevented in any way in [his/her] ability to do the things most children of the same age can do?

READ IF NECESSARY: A child is limited or prevented when there are things the child can't do as much or can't do at all that most children the same age can.

HELP TEXT: THIS QUESTION REFERS ONLY TO CURRENT LIMITATIONS. THE RESPONDENT SHOULD REPLY WITH "YES" IF THE CHILD IS CURRENTLY LIMITED.

- | | |
|----------------|-----------------|
| (1) YES | [SKIP TO K2Q17] |
| (0) NO | [SKIP TO K2Q19] |
| (6) DON'T KNOW | [SKIP TO K2Q19] |
| (7) REFUSED | [SKIP TO K2Q19] |

K2Q17 Is [his/her] limitation in abilities because of ANY medical, behavioral, or other health condition?

- | | |
|----------------|-----------------|
| (1) YES | [SKIP TO K2Q18] |
| (0) NO | [SKIP TO K2Q19] |
| (6) DON'T KNOW | [SKIP TO K2Q19] |
| (7) REFUSED | [SKIP TO K2Q19] |

K2Q18 Is this a condition that has lasted or is expected to last 12 months or longer?

HELP TEXT: IF THE CONDITION, NEED, OR PROBLEM LASTS FOR SHORT PERIODS OF TIME BUT IS EXPECTED TO KEEP COMING BACK FOR 12 MONTHS OR LONGER, THE ANSWER SHOULD BE "YES."

- | | |
|----------------|-----------------|
| (1) YES | [SKIP TO K2Q19] |
| (0) NO | [SKIP TO K2Q19] |
| (6) DON'T KNOW | [SKIP TO K2Q19] |
| (7) REFUSED | [SKIP TO K2Q19] |

K2Q19 Does [S.C.] need or get special therapy, such as physical, occupational, or speech therapy?

READ IF NECESSARY: Special therapy includes physical, occupational, or speech therapy. Do not include psychological therapy.

HELP TEXT: THIS QUESTION REFERS ONLY TO CURRENT NEED FOR SPECIAL THERAPY. THE RESPONDENT SHOULD REPLY WITH "YES" IF THE CHILD CURRENTLY NEEDS OR USES SPECIAL THERAPY.

- (1) YES [SKIP TO K2Q20]
- (0) NO [SKIP TO K2Q22]
- (6) DON'T KNOW [SKIP TO K2Q22]
- (7) REFUSED [SKIP TO K2Q22]

K2Q20 Is [his/her] need for special therapy because of ANY medical, behavioral, or other health condition?

- (1) YES [SKIP TO K2Q21]
- (0) NO [SKIP TO K2Q22]
- (6) DON'T KNOW [SKIP TO K2Q22]
- (7) REFUSED [SKIP TO K2Q22]

K2Q21 Is this a condition that has lasted or is expected to last 12 months or longer?

HELP TEXT: IF THE CONDITION, NEED, OR PROBLEM LASTS FOR SHORT PERIODS OF TIME BUT IS EXPECTED TO KEEP COMING BACK FOR 12 MONTHS OR LONGER, THE ANSWER SHOULD BE "YES."

- (1) YES [SKIP TO K2Q22]
- (0) NO [SKIP TO K2Q22]
- (6) DON'T KNOW [SKIP TO K2Q22]
- (7) REFUSED [SKIP TO K2Q22]

K2Q22 Does [S.C.] have any kind of emotional, developmental, or behavioral problem for which [he/she] needs treatment or counseling?

READ IF NECESSARY: These are remedies, therapy, or guidance a child may receive for his/her emotional, developmental, or behavioral problem.

- (1) YES [SKIP TO K2Q23]
- (0) NO [SKIP TO CATI INSTRUCTION BELOW]
- (6) DON'T KNOW [SKIP TO CATI INSTRUCTION BELOW]
- (7) REFUSED [SKIP TO CATI INSTRUCTION BELOW]

K2Q23 Has [his/her] emotional, developmental or behavioral problem lasted or is it expected to last 12 months or longer?

HELP TEXT: IF THE CONDITION, NEED, OR PROBLEM LASTS FOR SHORT PERIODS OF TIME BUT IS EXPECTED TO KEEP COMING BACK FOR 12 MONTHS OR LONGER, THE ANSWER SHOULD BE "YES."

- (1) YES
- (0) NO
- (6) DON'T KNOW

(7) REFUSED

CATI INSTRUCTION (SECTION 2, SUBDOMAIN 2): CREATE CATI SYSTEM FLAG (CSHCN) INDICATING WHETHER THE CHILD HAS A SPECIAL HEALTH CARE NEED. THIS FLAG SHOULD BE POSITIVE (CSHCN = 1) IF K2Q12 = 1, K2Q15 = 1, K2Q18 = 1, K2Q21 = 1, OR K2Q23 = 1.

Subdomain 3: Common chronic conditions

IF S.C. < 36 MONTHS, SKIP TO K2Q31_INTRO.

K2Q30A Has a doctor, health care provider, teacher, or school official ever told you [S.C.] had a learning disability?

- (1) YES [SKIP TO K2Q30B]
- (0) NO [SKIP TO K2Q31_INTRO]
- (6) DON'T KNOW [SKIP TO K2Q31_INTRO]
- (7) REFUSED [SKIP TO K2Q31_INTRO]

K2Q30B Does [S.C.] currently have a learning disability?

- (1) YES [SKIP TO K2Q30C]
- (0) NO [SKIP TO K2Q31_INTRO]
- (6) DON'T KNOW [SKIP TO K2Q31_INTRO]
- (7) REFUSED [SKIP TO K2Q31_INTRO]

K2Q30C Would you describe [his/her] learning disability as mild, moderate, or severe?

- (1) MILD
- (2) MODERATE
- (3) SEVERE
- (6) DON'T KNOW
- (7) REFUSED

K2Q31_INTRO Now I am going to read you a list of conditions. For each condition, please tell me if a doctor or other health care provider ever told you that [S.C.] had the condition, even if [he/she] does not have the condition now.

INTERVIEWER INSTRUCTION: IF THE RESPONDENT HAS NEVER HEARD OF THE MEDICAL CONDITION OR DOES NOT KNOW WHAT THE CONDITION IS, THEN A DOCTOR OR OTHER HEALTH CARE PROVIDER PROBABLY HAS NOT TOLD THE RESPONDENT THAT THE S.C. HAS THE CONDITION. IF A DOCTOR OR OTHER HEALTH CARE PROVIDER HAS NOT TOLD THE RESPONDENT THAT THE S.C. HAS THE CONDITION, BUT THE RESPONDENT INSISTS THAT THE S.C. HAS THE CONDITION, WE STILL NEED TO CODE THE ANSWER AS "NO."

IF AGE_NSCH < 24 MONTHS SKIP TO K2Q40A.

(READ IF NECESSARY: Has a doctor or other health care provider ever told you that [S.C.] had...)

K2Q31A Attention Deficit Disorder or Attention-Deficit/Hyperactivity Disorder, that is, ADD or ADHD?

HELP SCREEN: A child with Attention Deficit Disorder or Attention Deficit Hyperactive Disorder has problems paying attention or sitting still. It may cause the child to be easily distracted.

K2Q32A Depression?

HELP SCREEN: Depression is an illness that involves the body, mood, and thoughts. It is marked by persistent sadness or an anxious or empty mood. It affects how a person feels, and the way a person eats, sleeps, and functions.

K2Q33A Anxiety problems?

HELP SCREEN: Anxiety is a feeling of constant worrying. Children with severe anxiety problems may be diagnosed as having anxiety disorders. Anxiety disorders include panic disorder, obsessive-compulsive disorder, post-traumatic stress disorder, and phobias.

K2Q34A Behavioral or conduct problems, such as oppositional defiant disorder or conduct disorder?

HELP SCREEN: Oppositional defiant disorder is an ongoing pattern of defiant and hostile behavior that interferes with a child's life and daily activities.

K2Q35A Autism, Asperger's Disorder, pervasive developmental disorder, or other autism spectrum disorder?

HELP SCREEN: Children with autism have delays in language, communication, and social skills, as well as routine repetitive behaviors or movements. They may have an intense interest in a single subject or topic. Children with Asperger's disorder have impaired social skills but may not have speech or language delays. Children with pervasive developmental disorder have severe and persistent delays in language, communication, and social skills.

INTERVIEWER INSTRUCTION: IF THE DOCTOR OR OTHER HEALTH CARE PROVIDER IS UNSURE ABOUT THE DIAGNOSIS AND HAS NOT OFFICALLY DIAGNOSED S.C., ALSO CODE RESPONSE AS “NO”.

K2Q36A Any developmental delay?

HELP SCREEN: A child with a developmental delay does not achieve certain skills as quickly other children of the same age. A developmental delay is a major delay in motor, language, social, or thinking skills.

K2Q60A Intellectual disability or mental retardation?

HELP SCREEN: Children with intellectual disabilities or mental retardation learn and develop more slowly than a typical child.

K2Q61A Cerebral palsy?

HELP SCREEN: Cerebral palsy is caused by damage that occurs to the brain prior to or shortly after birth that can affect body movement and muscle coordination.

K2Q37A Speech or other language problems?

K2Q38A Tourette Syndrome?

HELP SCREEN: Tourette Syndrome is a disorder that causes frequent sudden movements or sounds.

K2Q40A Asthma?

HELP SCREEN: Asthma is a disease that causes swelling in the tubes that carry air to the lungs. Sometimes asthma blocks or restricts the airways making it difficult to breathe.

K2Q41A Diabetes?

HELP SCREEN: Diabetes is a disease in which the body does not properly make or use insulin.

K2Q42A Epilepsy or seizure disorder?

HELP SCREEN: Epilepsy is a brain disease that involves recurrent seizures.

K2Q43A Hearing problems?

K2Q44A Vision problems that cannot be corrected with standard glasses or contact lenses?

K2Q45A Bone, joint, or muscle problems?

K2Q46A

A brain injury or concussion?

HELP SCREEN: A concussion is an injury of the brain that causes a brief disruption in brain function. Developmental and neurological conditions (such as autism or cerebral palsy) should not be included as head or brain injuries.

BRAIN TUMORS SHOULD NOT BE CONSIDERED BRAIN INJURIES.

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

FOR EACH ITEM

BEGIN LOOP TO BE ASKED FOR EACH CONDITION IDENTIFIED BY PARENT. USE THE FOLLOWING TEXT FOR CONDITION FILLS:

[ADD or ADHD]	[developmental delay]
[depression]	[intellectual disability or mental retardation]
[anxiety problems]	[cerebral palsy]
[behavioral or conduct problems]	[speech or other language problems]
[autism or autism spectrum disorder]	[Tourette Syndrome]

K2QXXA_1 *SKIP TO K2QXXB IF CONDITION IS DEPRESSION OR ANXIETY PROBLEMS.*

Earlier you told me that [S.C.] has been diagnosed with [CONDITION].

How old was [S.C.] when you were first told by a doctor or other health care provider that [he/she] had [CONDITION]?

RECORD AGE IN YEARS OR MONTHS

(96) DON'T KNOW

(97) REFUSED

SKIP TO K2QXXB IF CONDITION IS NOT AUTISM OR ASD.

K2Q35A_1 Earlier you told me that [S.C.] has been diagnosed with Autism or an autism spectrum disorder, such as Asperger's disorder or pervasive developmental disorder.

How old was [S.C.] when you were first told by a doctor or other health care provider that [he/she] had autism or autism spectrum disorder?

HELP TEXT: AUTISM SPECTRUM DISORDER INCLUDES AUTISTIC DISORDER, ASPERGER'S DISORDER, AND PERVASIVE DEVELOPMENTAL DISORDER.

RECORD AGE IN YEARS OR MONTHS

(96) DON'T KNOW

(97) REFUSED

K2Q35D What type of doctor or other health care provider first told you that [S.C.] had autism or autism spectrum disorder?

HELP TEXT: AUTISM SPECTRUM DISORDER INCLUDES AUTISTIC DISORDER, ASPERGER'S DISORDER, AND PERVASIVE DEVELOPMENTAL DISORDER.

- (1) PEDIATRICIAN OR OTHER GENERAL PEDIATRIC HEALTH CARE PROVIDER (SUCH AS NURSE PRACTITIONER OR PHYSICIAN'S ASSISTANT IN PEDIATRIC CLINIC)
- (2) ANOTHER TYPE OF GENERAL HEALTH CARE PROVIDER (SUCH AS FAMILY PRACTICE DOCTOR OR NURSE PRACTITIONER OR PHYSICIAN'S ASSISTANT IN GENERAL PRACTICE)
- (3) A SPECIALIST PEDIATRICIAN SUCH AS A DEVELOPMENTAL PEDIATRICIAN
- (4) SCHOOL PSYCHOLOGIST / COUNSELOR
- (5) OTHER PSYCHOLOGIST (NON-SCHOOL)
- (6) PSYCHIATRIST (MEDICAL DOCTOR)
- (7) NEUROLOGIST
- (8) SCHOOL NURSE
- (9) PHYSICAL, OCCUPATIONAL, SPEECH, OR OTHER THERAPIST
- (10) A SPECIALIST DOCTOR (OTHER THAN A DEVELOPMENTAL PEDIATRICIAN, PSYCHIATRIST, OR NEUROLOGIST)
- (11) OTHER [RECORD VERBATIM RESPONSE]
- (12) WASN'T TOLD BY A DOCTOR OR OTHER HEALTH CARE PROFESSIONAL

- (96) DON'T KNOW
 (97) REFUSED

K2QXXB *IF CONDITION IS DEPRESSION OR ANXIETY PROBLEM, DISPLAY:*
 Earlier you told me that [S.C.] has been diagnosed with [CONDITION].

Does [S.C.] currently have [CONDITION]?

- (1) YES
 (0) NO
 (6) DON'T KNOW
 (7) REFUSED

END OF LOOP IF K2QXXB = DK/RF.

END OF LOOP IF K2QXXB = NO AND CONDITION IS NOT AUTISM.

SKIP TO K2Q35E IF K2QXXB = NO AND CONDITION IS AUTISM.

SKIP TO K2Q61C IF CONDITION IS CEREBRAL PALSY.

IF CONDITION IS AUTISM OR AUTISM SPECTRUM DISORDER, THEN DISPLAY:
HELP TEXT: AUTISM SPECTRUM DISORDER INCLUDES AUTISTIC DISORDER,
ASPERGER'S DISORDER, AND PERVASIVE DEVELOPMENTAL DISORDER.

K2QXXC Would you describe [his/her] [CONDITION] as mild, moderate, or severe?

- (1) MILD
 (2) MODERATE
 (3) SEVERE
 (6) DON'T KNOW
 (7) REFUSED

END OF LOOP IF CONDITION IS NOT ADD/ADHD IF CONDITION IS AUTISM OR AUTISM
SPECTRUM DISORDER, THEN DISPLAY:

HELP TEXT: AUTISM SPECTRUM DISORDER INCLUDES AUTISTIC DISORDER,
ASPERGER'S DISORDER, AND PERVASIVE DEVELOPMENTAL DISORDER.

K2Q31D Is [S.C.] currently taking medication for ADD or ADHD?

- (1) YES
 (0) NO
 (6) DON'T KNOW
 (7) REFUSED

END OF LOOP. RETURN TO K2QXXA_1 FOR EACH ADDITIONAL CONDITION.

K2Q61C How would you describe [his/her] usual ability to walk?

Would you say [he/she]...

walks without a cane, crutches or walker,

walks with a cane, crutches or walker,

or has limited or no walking?

HELP TEXT: SOME CHILDREN USE MORE THAN ONE METHOD. FOR EXAMPLE, A CHILD MAY WALK WITH A CANE, CRUTCHES, OR A WALKER AT HOME BUT DO LIMITED OR NO WALKING OUTDOORS. FOR CHILDREN WHO USE MORE THAN ONE METHOD, READ THE FOLLOWING PROMPT "Please tell me what [he/she] does in the setting where [he/she] spends the most time in a typical weekday. This could be the child's at home, school, or other community setting."

HELP TEXT: WHETHER OR NOT A CHILD WEARS BRACES SHOULD NOT BE CONSIDERED IN DETERMINING [HIS/HER] USUAL ABILITY TO WALK. CHILDREN AT ALL THREE LEVELS OF WALKING ABILITY CAN WEAR BRACES.

- (1) WALKS WITHOUT A CANE, CRUTCHES, OR A WALKER
- (2) WALKS WITH A CANE, CRUTCHES, OR A WALKER
- (3) LIMITED OR NO WALKING
- (6) DON'T KNOW
- (7) REFUSED

K2Q35E To the best of your knowledge, did [S.C.] ever have autism or autism spectrum disorder?

- (1) YES
- (0) NO [SKIP TO K2Q35H_1]
- (6) DON'T KNOW [END LOOP]
- (7) REFUSED [END LOOP]

HELP TEXT: AUTISM SPECTRUM DISORDER INCLUDES AUTISTIC DISORDER, ASPERGER'S DISORDER, AND PERVASIVE DEVELOPMENTAL DISORDER.

K2Q35F_INTRO

I am going to read a list of reasons why [S.C.] may no longer have autism or autism spectrum disorder. For each reason, please tell me if it applies to [S.C.].

HELP TEXT: AUTISM SPECTRUM DISORDER INCLUDES AUTISTIC DISORDER, ASPERGER'S DISORDER, AND PERVASIVE DEVELOPMENTAL DISORDER.

- K2Q35F_1. Treatment helped the condition go away
- K2Q35F_2. The condition seemed to go away on its own
- K2Q35F_3. The behaviors or symptoms changed
- K2Q35F_4. A doctor or health care provider changed the diagnosis

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

FOR EACH ITEM

K2Q35G Are there any other reasons why you think [S.C.] may no longer have autism or autism spectrum disorder?

HELP TEXT: AUTISM SPECTRUM DISORDER INCLUDES AUTISTIC DISORDER, ASPERGER'S DISORDER, AND PERVASIVE DEVELOPMENTAL DISORDER.

- (1) YES [RECORD VERBATIM RESPONSE, THEN END LOOP]
- (0) NO [END LOOP]
- (6) DON'T KNOW [END LOOP]
- (7) REFUSED [END LOOP]

K2Q35H_INTRO

I am going to read a list of reasons why a doctor, health care provider, or school professional may have told you that [S.C.] had a condition that (he/she) never had. For each reason, please tell me if it applies to [S.C.].

- K2Q35H_1. With more information, the diagnosis was changed
- K2Q35H_2. The diagnosis was given so that [S.C.] could receive needed services
- K2Q35H_3. You disagree with the doctor or other health provider about his or her opinion that [S.C.] had autism or autism spectrum disorder.

HELP TEXT: AUTISM SPECTRUM DISORDER INCLUDES AUTISTIC DISORDER, ASPERGER'S DISORDER, AND PERVASIVE DEVELOPMENTAL DISORDER.

- (1) YES

- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

FOR EACH ITEM

K2Q35J

Are there any other reasons why a doctor or other health care provider may have told you that [S.C.] had autism or autism spectrum disorder when [he/she] never had it?

HELP TEXT: AUTISM SPECTRUM DISORDER INCLUDES AUTISTIC DISORDER, ASPERGER'S DISORDER, AND PERVASIVE DEVELOPMENTAL DISORDER.

- (1) YES [RECORD VERBATIM RESPONSE, THEN END LOOP]
- (0) NO [END LOOP]
- (6) DON'T KNOW [END LOOP]
- (7) REFUSED [END LOOP]

END OF LOOP. RETURN TO K2QXXA_1 FOR EACH ADDITIONAL CONDITION.

BEGIN LOOP TO BE ASKED FOR EACH CONDITION IDENTIFIED BY PARENT. USE THE FOLLOWING TEXT FOR CONDITION FILLS:

[asthma]	[vision problems]
[diabetes]	[bone, joint, or muscle problems]
[epilepsy or seizure disorder]	[brain injury]
[hearing problems]	

K2Q44A_1 *SKIP TO K2QXXB IF CONDITION IS NOT VISION PROBLEMS.*

Earlier you told me that [S.C.] has been diagnosed with vision problems.

How old was [S.C.] when you were first told by a doctor or other health care provider that [he/she] had vision problems that cannot be corrected with standard glasses or contact lenses?

RECORD AGE IN YEARS OR MONTHS /
(96) DON'T KNOW
(97) REFUSED

K2QXXB Does [S.C.] currently have [CONDITION]?

(1) YES
(0) NO
(6) DON'T KNOW
(7) REFUSED
[END OF LOOP IF NO/DK/RF]

K2QXXC Would you describe [his/her] [CONDITION] as mild, moderate, or severe?

(1) MILD
(2) MODERATE
(3) SEVERE
(6) DON'T KNOW
(7) REFUSED

END OF LOOP. RETURN TO K2QXXB FOR EACH ADDITIONAL CONDITION.

Section 3: Health Insurance Coverage

Subdomain 1: Current coverage and past year coverage

K3Q01_INTRO The next questions are about health insurance.

K3_STATE Because many health insurance programs are state specific, can you please tell me what state you live in?

_____ (DROP DOWN MENU OF STATE NAMES)

(96) DON'T KNOW

(97) REFUSED

IF VIRGIN ISLAND CASE, THEN SKIP K3_STATE; ELSE FOLLOW LOGIC BELOW.

THE STATE GIVEN AT K3_STATE SHOULD DETERMINE THE MEDICAID/CHIP TEXT FILLS FOR K3Q02, K11Q60 AND FOR ALL QUESTIONS IN SECTION 12. THE STATE GIVEN AT K3_STATE SHOULD ALSO DETERMINE WHICH POVERTY TABLE IS REFERENCED DURING THE INCOME CASCADE. THE PRELOAD VARIABLE "STATE" SHOULD NO LONGER BE USED EXCEPT WHEN K3_STATE HAS A VALUE OF "DON'T KNOW" OR "REFUSED"

K3Q01 Does [S.C.] have any kind of health care coverage, including health insurance, prepaid plans such as HMOs, or government plans such as Medicaid?

- (1) YES [SKIP TO K3Q02]
- (0) NO [SKIP TO K3Q01_CONF]
- (6) DON'T KNOW [SKIP TO K3Q02]
- (7) REFUSED [SKIP TO K3Q02]

K3Q01_CONF Just to confirm, I entered that [S.C.] is not covered by any type of health insurance. Is this correct?

- (1) CONFIRMED - CHILD IS NOT COVERED BY ANY TYPE OF HEALTHINSURANCE [SKIP TO K3Q04]
- (2) NOT CORRECT - CHILD HAS INSURANCE - RETURN TO K3Q01 AND ENTER CORRECT RESPONSE [SKIP TO K3Q01]

K3Q02 IF K3Q01 = 1 THEN FILL "Is that coverage". ELSE, fill "Is [he/she] insured by...]"

[Is that coverage/Is [he/she] insured by] Medicaid or the Children's Health Insurance Program, CHIP? [IF VIRGIN ISLANDS CASE, DISPLAY "In this area," ELSE DISPLAY "In this state,"], the program is sometimes called [FILL MEDICAID NAME, CHIP NAME].

READ IF NECESSARY: CHIP, also known as S-CHIP, is a type of state-sponsored health insurance coverage that a child may have. The name of the plan varies from state-to-state.

READ IF R MENTIONS THAT HE/SHE DOES NOT LIVE IN THE STATE MENTIONED IN THE QUESTION: Please think about the Medicaid or state-sponsored Children's Health Insurance Program specific to the state in which you live.

- (1) YES
- (0) NO

- (6) DON'T KNOW
- (7) REFUSED

K3Q03 IF [(K3Q01 = 6, or 7) AND (K3Q02 = 0, 6, or 7)], SKIP TO K3Q04; ELSE,SKIP TO K3Q03.

[During the past 12 months / Since [his/her] birth], was there any time when [he/she] was not covered by ANY health insurance?

- (1) YES
 - (0) NO
 - (6) DON'T KNOW
 - (7) REFUSED
- [ALL SKIP TO K3Q20]

K3Q04 [During the past 12 months / Since [his/her] birth], was there anytime when [he/she] had health care coverage?

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

[ALL SKIP TO K3Q25]

Subdomain 2: Adequacy of health insurance

K3Q20 [IF K3Q01 OR K3Q02 OR K3Q03 ASKED AND NOT FILLED FROM NIS OR TEEN, then display: "The next questions are about [S.C.]'s health insurance or health care plans."] Does [S.C.]'s health insurance offer benefits or cover services that meet [his/her] needs? Would you say never, sometimes, usually, always?

- (1) NEVER
- (2) SOMETIMES
- (3) USUALLY
- (4) ALWAYS
- (6) DON'T KNOW
- (7) REFUSED

K3Q22 Does [S.C.]'s health insurance allow [him/her] to see the health care providers [he/she] needs? Would you say never, sometimes, usually, always?

- (1) NEVER
- (2) SOMETIMES
- (3) USUALLY
- (4) ALWAYS
- (6) DON'T KNOW
- (7) REFUSED

K3Q21A Not including health insurance premiums or costs that are covered by insurance, do you pay any money for [S.C.]'s health care?

READ IF NECESSARY: Include out-of-pocket payments for all types of health-related needs such as co-payments, dental or vision care, medications, and any kind of therapy.

- (1) YES [SKIP TO K3Q21B]
- (0) NO [SKIP TO K3Q25]
- (6) DON'T KNOW [SKIP TO K3Q25]
- (7) REFUSED [SKIP TO K3Q25]

K3Q21B How often are these costs reasonable? Would you say never, sometimes, usually, always?

- (1) NEVER
- (2) SOMETIMES
- (3) USUALLY
- (4) ALWAYS
- (5) NO OUT OF POCKET COSTS
- (6) DON'T KNOW
- (7) REFUSED

INTERVIEWER INSTRUCTION: IF THE PARENT SEEMS CONFUSED BY HOW TO ANSWER, ASK: Do you have any out-of-pocket costs for your child's health care? IF YES, THEN ASK: How often are those costs reasonable?

Subdomain 3: Expenses and Barriers to Care

K3Q25 In the past 12 months did your family have problems paying or were unable to pay any of [S.C.]'s medical bills? Include bills for doctors, dentists, hospitals, therapists, medication, equipment, or home care.

- (1) YES
- (0) NO
- (3) NO EXPENSES
- (6) DON'T KNOW
- (7) REFUSED

C4Q04 [During the past 12 months / [WHEN S.C. IS YOUNGER THAN 12 MONTHS] Since [his/her] birth], how often have you been frustrated in your efforts to obtain health care services for [S.C.]? Would you say never, sometimes, usually, or always?

- (1) NEVER
- (2) SOMETIMES
- (3) USUALLY
- (4) ALWAYS
- (6) DON'T KNOW
- (7) REFUSED

Section 4: Health Care Access and Utilization

Subdomain 1: Usual place for care

K4Q01 Is there a place that [S.C.] USUALLY goes when [he/she] is sick or you need advice about [his/her] health?

- (1) YES
- (0) NO [SKIP TO K4Q04]
- (3) THERE IS MORE THAN ONE PLACE
- (6) DON'T KNOW [SKIP TO K4Q04]
- (7) REFUSED [SKIP TO K4Q04]

K4Q02 IF K4Q01 = 1, SAY "What kind of place is it?"
IF K4Q01 = 3, SAY "What kind of place does [S.C.] go to most often?"
Is it a doctor's office, emergency room, hospital outpatient department, clinic, or some other place?

- (1) DOCTOR'S OFFICE
- (2) HOSPITAL EMERGENCY ROOM
- (3) HOSPITAL OUTPATIENT DEPARTMENT
- (4) CLINIC OR HEALTH CENTER
- (5) RETAIL STORE CLINIC OR "MINUTE CLINIC"
- (6) SCHOOL (NURSE, ATHLETIC TRAINER, ETC)
- (7) FRIEND/RELATIVE
- (8) MEXICO/OTHER LOCATIONS OUT OF US
- (9) SOME OTHER PLACE [RECORD VERBATIM RESPONSE]
- (10) DOES NOT GO TO ONE PLACE MOST OFTEN
- (96) DON'T KNOW
- (97) REFUSED

K3Q03 READ IF NECESSARY: (IF K4Q01 = 1, READ "WHAT KIND OF PLACE IS IT?"; IF K4Q01 = 3, READ: "What kind of place does [S.C.] go to most often?")

RECORD VERBATIM RESPONSE

K4Q04 A personal doctor or nurse is a health professional who knows your child well and is familiar with your child's health history. This can be a general doctor, a pediatrician, a specialist doctor, a nurse practitioner, or a physician's assistant. Do you have one or more persons you think of as [S.C.]'s personal doctor or nurse?

- (1) YES, ONE PERSON
- (2) YES, MORE THAN ONE PERSON
- (3) NO
- (6) DON'T KNOW
- (7) REFUSED

Subdomain 2: Utilization of services

S4Q01 [During the past 12 months/Since [his/her] birth], did [S.C.] see a doctor, nurse, or other health care professional for any kind of medical care, including sick-child care, well-child check-ups, physical exams, and hospitalizations?

- (1) YES
- (0) NO [SKIP TO K4Q30]
- (6) DON'T KNOW [SKIP TO K4Q30]
- (7) REFUSED [SKIP TO K4Q30]

K4Q20 [During the past 12 months/Since [his/her] birth], how many times did [S.C.] see a doctor, nurse, or other health care provider for *preventive* medical care such as a physical exam or well-child checkup?

- _____TIMES
- (96) DON'T KNOW
 - (97) REFUSED

K4Q30 [During the past 12 months/Since [his/her] birth], did [S.C.] see a dentist for any kind of dental care, including check-ups, dental cleanings, x-rays, or filling cavities?

- (1) YES
- (0) NO [SKIP TO K4Q39]
- (6) DON'T KNOW [SKIP TO K4Q39]
- (7) REFUSED [SKIP TO K4Q39]

K4Q21 [During the past 12 months/Since [his/her] birth], how many times did [S.C.] see a dentist for *preventive* dental care, such as check-ups and dental cleanings?

- _____TIMES
- (96) DON'T KNOW
 - (97) REFUSED

K4Q39 *IF AGE < 12 MONTHS, SKIP TO K4Q24.*

[During the past 12 months/Since [his/her] birth], did [S.C.] have a toothache, decayed teeth, or unfilled cavities?

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

IF AGE < 24 MONTHS, SKIP TO K4Q24.

K4Q22 Mental health professionals include psychiatrists, psychologists, psychiatric nurses, and clinical social workers. During the past 12 months, has [S.C.] received any treatment or counseling from a mental health professional?

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

IF K2Q31D = 1, SKIP TO K4Q24.

- K4Q23 During the past 12 months, has [S.C.] taken any medication because of difficulties with [his/her] emotions, concentration, or behavior?
- (1) YES
 - (0) NO
 - (6) DON'T KNOW
 - (7) REFUSED
- K4Q24 Specialists are doctors like surgeons, heart doctors, allergy doctors, skin doctors, and others who specialize in one area of health care. [During the past 12 months/Since [his/her] birth], did [S.C.] see a specialist [IF K4Q22 = 1, THEN INSERT: other than a mental health professional]?
- (1) YES [SKIP TO K4Q26]
 - (0) NO
 - (6) DON'T KNOW
 - (7) REFUSED
- K4Q25 [During the past 12 months/Since [his/her] birth], did you or a doctor think that [he/she] needed to see a specialist?
- (1) YES
 - (0) NO [SKIP TO K4Q31]
 - (6) DON'T KNOW [SKIP TO K4Q31]
 - (7) REFUSED [SKIP TO K4Q31]
- K4Q26 [During the past 12 months/Since [his/her] birth], how much of a problem, if any, was it to get the care from the specialists that [S.C.] needed? Would you say it was a big problem, a small problem, or not a problem?
- (1) BIG PROBLEM
 - (2) SMALL PROBLEM
 - (3) NOT A PROBLEM
 - (6) DON'T KNOW
 - (7) REFUSED
- K4Q31 IF AGE < 5 YEARS, READ: Has [S.C.] ever had [his/her] vision tested with pictures, shapes, or letters?
- IF AGE 5+ YEARS, READ: During the past 2 years, that is, since [FILL INTDATE – 48 MONTHS], has [S.C.] had [his/her] vision tested with pictures, shapes, or letters?
- (1) YES
 - (0) NO [SKIP TO K4Q27]
 - (6) DON'T KNOW [SKIP TO K4Q27]
 - (7) REFUSED [SKIP TO K4Q27]
- K4Q32 What kind of place or places did [S.C.] have [his/her] vision tested? Was it an eye doctor's office, a general doctor's office, clinic, school, or some other place? [Mark all that apply]
- (1) EYE DOCTOR OR EYE SPECIALIST (OPHTHALMOLOGIST, OPTOMETRIST) OFFICE
 - (2) PEDIATRICIAN OR OTHER GENERAL DOCTOR'S OFFICE
 - (3) CLINIC OR HEALTH CENTER
 - (4) SCHOOL
 - (5) OTHER [RECORD VERBATIM RESPONSE]

(6) DON'T KNOW

(7) REFUSED

K4Q27

Sometimes people have difficulty getting health care when they need it. By health care, I mean medical care as well as other kinds of care like dental care, vision care, and mental health services. [During the past 12 months/Since [his/her] birth], was there any time when [S.C.] needed health care but it was delayed or not received?

(1) YES

(0) NO [SKIP TO K4Q35]

(6) DON'T KNOW [SKIP TO K4Q35]

(7) REFUSED [SKIP TO K4Q35]

K4Q28

What type of care was delayed or not received? Was it medical care, dental care, vision care, mental health services, or something else? [*Mark all that apply*]

(1) MEDICAL CARE

(2) DENTAL CARE

(3) VISION CARE

(4) MENTAL HEALTH SERVICES

(5) SOMETHING ELSE

(6) DON'T KNOW

(7) REFUSED

*Note: In the dataset, this variable will appear as variables K4Q28X01-K4Q28X05 where:

(1) YES

(0) NO

(6) DON'T KNOW

(7) REFUSED

K4Q35 *ASK K4Q35 ONLY IF AGE=0-3 YEARS*

Some new parents are helped by programs that send nurses, healthcare workers, social workers, or other professionals to their home to help prepare for the new baby or take care of the baby or mother. Between the time [you were / [his/her] mother was] pregnant with [S.C.] and up until the present day, did someone from such a program visit your home?

INTERVIEWER INSTRUCTION: IF R HAS ADOPTED S.C., SAY "Please think about the time between adopting [S.C.] and up until the present day."

- (1) YES [GO TO K4Q35A]
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

IF 0,6,7 THEN GO TO K4Q36

K4Q35A How many different professionals came to your home?

_____ ENTER VALUE
(96) DON'T KNOW
(97) REFUSED

IF >4 GO TO SC_K4Q35A; ELSE GO TO K4Q35B_INTRO

K4Q35B_INTRO

Parents, especially new parents, often have concerns about their children and families. Please tell me if [the professional / any of the professionals] who visited your home talked about any of the following:

- K4Q35B_1. [Your/[S.C.]'s mother's] emotional well-being?
- K4Q35B_2. Smoking or alcohol use in your home?
- K4Q35B_3. How to build a close relationship with [S.C.]?
- K4Q35B_4. How to use toys, playtime, and story time to help [S.C.] learn, grow, and develop?
- K4Q35B_5. How to make sure that [S.C.] is safe and does not get hurt?
- K4Q35B_6. How to get the health care that [S.C.] needs?
- K4Q35B_7. Other services that might help your family, such as public assistance, transportation, or job training?

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

Subdomain 3: Use of developmental services

SKIP TO NEXT SECTION IF CHILD HAS NEVER BEEN DIAGNOSED WITH ASD OR DEV DELAY.

K4Q36 Earlier you told me that you had been told by a doctor or other health care provider that [S.C.] had (a condition / conditions) that affected [his/her] learning or development. Has [S.C.] *ever* received therapy services to meet [his/her] developmental needs, such as Early Intervention, occupational therapy, speech therapy, or behavioral therapy?

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

INTERVIEWER INSTRUCTION: IF A PARENT ASKS WHICH CONDITIONS ARE BEING REFERRED TO, YOU MAY READ THIS LIST: [LIST]

CATI PROGRAMMER INSTRUCTION: K4Q36 IS ONLY TO BE ASKED IF CHILD HAS BEEN DIAGNOSED WITH AUTISM/ASD AND/OR DEVELOPMENTAL DELAY. HOWEVER, IN LIST, INCLUDE ALL CONDITIONS THAT HAD A YES TO "EVER TOLD" FROM: ADHD, BEHAVIORAL/CONDUCT PROBLEMS, AUTISM/ASD, DEVELOPMENTAL DELAY, TOURETTE SYNDROME, CEREBRAL PALSY, INTELLECTUAL DISABILITY, SPEECH OR OTHER LANGUAGE PROBLEMS. USE NUMBER OF CONDITIONS IN THIS LIST TO DETERMINE WHETHER TO FILL "CONDITION" OR "CONDITIONS."

K4Q37 How old was [S.C.] when [he/she] began receiving services?

_____ ENTER VALUE

- (96) DON'T KNOW
- (97) REFUSED

RECORD AGE IN MONTHS FOR 0 TO 23 MONTHS. IF 2 YEARS OR OLDER AND MONTHS NOT GIVEN, RECORD AGE IN YEARS.

K4Q38 Is [S.C.] currently receiving therapy services?

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

Section 5: Medical Home

Subdomain 1: Referrals

K5Q10 [During the past 12 months / Since [his/her] birth], did [S.C.] need a referral to see any doctors or receive any services?

- (1) YES
- (0) NO [SKIP TO K5Q20]
- (6) DON'T KNOW [SKIP TO K5Q20]
- (7) REFUSED [SKIP TO K5Q20]

K5Q11 Was getting referrals a big problem, a small problem, or not a problem?

- (1) BIG PROBLEM
- (2) SMALL PROBLEM
- (3) NOT A PROBLEM
- (6) DON'T KNOW
- (7) REFUSED

Subdomain 2: Care coordination

SUM UP THE NUMBER OF SERVICES FROM SECTION 4, SUBDOMAIN 2 AND ASSIGN TO VARIABLE NUMB_SERVICES.

IF NUMB_SERVICES = 0 AND AGE ≤ 5 YEARS, THEN SKIP TO K6Q01.

IF NUMB_SERVICES = 0 AND AGE ≥ 6 YEARS, THEN SKIP TO K7Q01.

IF NUMB_SERVICES = 1, THEN SKIP TO K5Q31.

K5Q20 Does anyone help you arrange or coordinate [S.C.]'s care among the different doctors or services that [he/she] uses?

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

READ IF NECESSARY: By "arrange or coordinate," I mean: Is there anyone who helps you make sure that [S.C.] gets all the health care and services [he/she] needs, that health care providers share information, and that these services fit together and are paid for in a way that works for you?

READ IF NECESSARY: Anyone means anyone.

K5Q21 [During the past 12 months / Since [his/her] birth], have you felt that you could have used extra help arranging or coordinating [S.C.]'s care among the different health care providers or services?

- (1) YES
- (0) NO [SKIP TO K5Q30]
- (6) DON'T KNOW [SKIP TO K5Q30]
- (7) REFUSED [SKIP TO K5Q30]

K5Q22

[During the past 12 months / Since [his/her] birth], how often did you get as much help as you wanted with arranging or coordinating [S.C.]'s care? Would you say never, sometimes, or usually?

- (1) NEVER
- (2) SOMETIMES
- (3) USUALLY
- (6) DON'T KNOW
- (7) REFUSED

Subdomain 3: Provider communication

K5Q30 Overall, are you very satisfied, somewhat satisfied, somewhat dissatisfied, or very dissatisfied with the communication among [S.C.]’s doctors and other health care providers?

- (1) VERY SATISFIED
- (2) SOMEWHAT SATISFIED
- (3) SOMEWHAT DISSATISFIED
- (4) VERY DISSATISFIED
- (5) NO COMMUNICATION NEEDED OR WANTED
- (6) DON’T KNOW
- (7) REFUSED

K5Q31 Do [S.C.]’s doctors or other healthcare providers need to communicate with [his/her]

[IF AGE < 36 MONTHS, INSERT: child care providers or early intervention program?]

[IF AGE ≥ 36 MONTHS AND < 72 MONTHS, INSERT: child care providers, school, or special education program?]

[IF AGE ≥ 72 MONTHS AND CHILD DOES NOT HAVE SPECIAL HEALTH CARE NEEDS, INSERT: school or special education program?]

[IF AGE ≥ 72 MONTHS AND < 144 MONTHS AND CHILD DOES HAVE SPECIAL HEALTH CARE NEEDS, INSERT: school or special education program?]

[IF AGE ≥ 144 MONTHS AND CHILD DOES HAVE SPECIAL HEALTH CARE NEEDS, INSERT: school, special education program, or vocational education program?]

- (1) YES
- (0) NO [SKIP TO K5Q40]
- (6) DON’T KNOW [SKIP TO K5Q40]
- (7) REFUSED [SKIP TO K5Q40]

K5Q32 Overall, are you very satisfied, somewhat satisfied, somewhat dissatisfied, or very dissatisfied with that communication?

- (1) VERY SATISFIED
- (2) SOMEWHAT SATISFIED
- (3) SOMEWHAT DISSATISFIED
- (4) VERY DISSATISFIED
- (5) NO COMMUNICATION NEEDED OR WANTED
- (6) DON’T KNOW
- (7) REFUSED

Subdomain 4: Compassionate, culturally effective, family-centered care

K5Q40 [During the past 12 months / Since [his/her] birth], how often did [S.C.]’s doctors and other health care providers spend enough time with [him/her]? Would you say never, sometimes, usually, or always?

READ IF NECESSARY: This question refers to doctors or any other health care providers including nurses, dentists, mental health professionals, or medical specialists.

- (1) NEVER
- (2) SOMETIMES
- (3) USUALLY
- (4) ALWAYS
- (6) DON’T KNOW
- (7) REFUSED

K5Q41 [During the past 12 months / Since [his/her] birth], how often did [S.C.]’s doctors and other health care providers listen carefully to you? Would you say never, sometimes, usually, or always?

READ IF NECESSARY: This question refers to doctors or any other health care providers including nurses, dentists, mental health professionals, or medical specialists.

- (1) NEVER
- (2) SOMETIMES
- (3) USUALLY
- (4) ALWAYS
- (6) DON’T KNOW
- (7) REFUSED

K5Q42 When [S.C.] is seen by doctors or other health care providers, how often are they sensitive to your family’s values and customs? Would you say never, sometimes, usually, or always?

READ IF NECESSARY: This question refers to doctors or any other health care providers including nurses, dentists, mental health professionals, or medical specialists.

- (1) NEVER
- (2) SOMETIMES
- (3) USUALLY
- (4) ALWAYS
- (6) DON’T KNOW
- (7) REFUSED

K5Q43 Information about a child’s health or health care can include things such as the causes of any health problems, how to care for a child now, and what changes to expect in the future. [During the past 12 months / Since [his/her] birth], how often did you get the specific information you needed from [S.C.]’s doctors and other health care providers? Would you say never, sometimes, usually, or always?

READ IF NECESSARY: This question refers to doctors or any other health care providers including nurses, dentists, mental health professionals, or medical specialists.

- (1) NEVER
- (2) SOMETIMES
- (3) USUALLY
- (4) ALWAYS
- (6) DON’T KNOW

(7) REFUSED

K5Q44

[During the past 12 months / Since [his/her] birth], how often did [S.C.]'s doctors or other health care providers help you feel like a partner in [his/her] care? Would you say never, sometimes, usually, or always?

READ IF NECESSARY: This question refers to doctors or any other health care providers including nurses, dentists, mental health professionals, or medical specialists.

- (1) NEVER
- (2) SOMETIMES
- (3) USUALLY
- (4) ALWAYS
- (6) DON'T KNOW
- (7) REFUSED

IF AGE \leq 5 YEARS, THEN SKIP TO K6Q01.

IF AGE \geq 6 YEARS, THEN SKIP TO K7Q01.

Section 6: Early Childhood (0-5 years)

Subdomain 1: Parent's Evaluation of Developmental Status

Questions K6Q01-K6Q09 are from the Parent's Evaluation of Developmental Status (PEDS) child development screening test. The PEDS is protected by U.S. and international copyright law. All rights are reserved by Frances Page Glascoe. Permission to use these items in the NSCH has been granted by Dr. Glascoe. Permission must be requested from the publisher (forepath.org, PO Box 23186, Washington, DC, 20026, www.forepath.org, support@forepath.org) before using these items for other purposes.

K6Q01 Do you have any concerns about [S.C.]'s learning, development, or behavior?

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

IF AGE < 4 MONTHS, SKIP TO K6Q10.

K6Q02_INTRO [IF K6Q01 = NO, READ: Although you told me you have no concerns, I need to ask a few specific questions about concerns that some parents may have. Please tell me if you are currently concerned a lot, a little, or not at all about the following.]

[ELSE, READ: The next section asks about specific concerns some parents may have. Please tell me if you are currently concerned a lot, a little, or not at all about the following.]

(READ IF NECESSARY: Are you concerned a lot, a little, or not at all about...)

K6Q02 How [S.C.] talks and makes speech sounds?
 K6Q03 How [he/she] understands what you say?
 K6Q04 How [he/she] uses [his/her] hands and fingers to do things?
 K6Q05 How [he/she] uses [his/her] arms and legs?
 K6Q06 How [he/she] behaves?
 K6Q07 How [he/she] gets along with others?

IF AGE < 10 MONTHS, SKIP TO K6Q10.

K6Q08 How [he/she] is learning to do things for (himself/herself)?

IF AGE < 18 MONTHS, SKIP TO K6Q10.

K6Q09 How [he/she] is learning pre-school or school skills?

- (1) A LOT
- (2) A LITTLE
- (3) NOT AT ALL
- (6) DON'T KNOW
- (7) REFUSED

FOR EACH ITEM

Subdomain 2: Developmental screening

K6Q10 *IF NUMB_SERVICES = 0, THEN SKIP TO K6Q15.*

[During the past 12 months / Since [S.C.]’s birth], did [S.C.]’s doctors or other health care providers ask if you have concerns about [his/her] learning, development, or behavior?

- (1) YES
- (0) NO
- (6) DON’T KNOW
- (7) REFUSED

K6Q12 *IF AGE_NSCH < 10 MONTHS, SKIP TO K6Q15.*

Sometimes a child’s doctor or other health care provider will ask a parent to fill out a questionnaire at home or during their child’s visit. During the past 12 months, did a doctor or other health care provider have you fill out a questionnaire about specific concerns or observations you may have about [S.C.]’s development, communication, or social behaviors?

- (1) YES
- (0) NO
- (6) DON’T KNOW
- (7) REFUSED [SKIP TO K6Q15 IF NO/DK/RF]

INTERVIEWER INSTRUCTION: IF ANOTHER PERSON READ THE QUESTIONNAIRE TO THE PARENT AND FILLED IN THE ANSWERS FOR THE PARENT, THEN THIS QUESTION SHOULD BE ANSWERED YES. BUT IF A DOCTOR OR NURSE JUST ASKED ABOUT CONCERNS AND DID NOT FILL OUT A QUESTIONNAIRE, THEN THIS QUESTION SHOULD BE ANSWERED NO.

IF AGE_NSCH = 24-71 MONTHS, SKIP TO K6Q14A.

K6Q13A Did this questionnaire ask about your concerns or observations about how [S.C.] talks or makes speech sounds?

- (1) YES
- (0) NO
- (6) DON’T KNOW
- (7) REFUSED

K6Q13B Did this questionnaire ask about your concerns or observations about how [S.C.] interacts with you and others?

- (1) YES
- (0) NO
- (6) DON’T KNOW
- (7) REFUSED [ALL SKIP TO K6Q15]

K6Q14A Did this questionnaire ask about your concerns or observations about words and phrases [S.C.] uses and understands?

- (1) YES
- (0) NO
- (6) DON’T KNOW
- (7) REFUSED

K6Q14B Did this questionnaire ask about your concerns or observations about how [S.C.] behaves and gets along with you and others?

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

K6Q15 Does [S.C.] have any developmental problems for which [he/she] has a written intervention plan called an [IF AGE < 36 MONTHS, INSERT: Individualized Family Services Plan or an IFSP?; IF AGE ≥ 36 MONTHS, INSERT: Individualized Education Program or IEP?]

READ IF NECESSARY: Some young children have developmental delays or other problems for which they receive services from a program called Early Intervention Services or Special Education. Children receiving these services have a written intervention plan called an IFSP if the child is under 3 years old, or an IEP if 3 years or older. Services on an IFSP or an IEP might include things such as special instruction; speech language therapy; vision and hearing services; psychological services; health services; social work services; family counseling and support; transportation; service coordination or other services needed to support the child's development.

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

Subdomain 3: Child care

K6Q20 The next questions are about child care. Does [S.C.] receive care for at least 10 hours per week from someone not related to [him/her]? This could be a day care center, preschool, Head Start program, nanny, au pair, or any other non-relative.

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

READ IF NECESSARY: Child care should be reported regardless of whether care is paid or unpaid, or provided by certified or uncertified providers. Occasional babysitting is not included.

Head Start is a federally-funded program to help young children from low-income families get ready for kindergarten and grade school. Children who participate are usually between three and five years old, but there are Head Start programs for even younger children.

K6Q27 [During the past 12 months / Since [S.C.]'s birth], did you or anyone in the family have to quit a job, not take a job, or greatly change your job because of problems with child care for [S.C.]?

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

Subdomain 4: Breastfeeding

K6Q40 Was [S.C.] ever breastfed or fed breast milk?

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED [SKIP TO NEXT SUBDOMAIN IF NO/DK/RF]

K6Q41 How old was [he/she] when [he/she] completely stopped breastfeeding or being fed breast milk?

- RECORD AGE /
- (995) STILL BREASTFEEDING
- (996) DON'T KNOW
- (997) REFUSED

K6Q42 How old was [S.C.] when [he/she] was first fed formula?

- RECORD AGE /
- ENTER 994 FOR "AT BIRTH"
- (995) "CHILD HAS NEVER BEEN FED FORMULA"
- (996) DON'T KNOW
- (997) REFUSED

K6Q43 This next question is about the first thing that [S.C.] was given other than breast milk or formula. Please include juice, cow's milk, sugar water, baby food, or anything else that [S.C.] might have been given, even water. How old was [S.C.] when [he/she] was first fed anything other than breast milk or formula?

- RECORD AGE /
- ENTER 994 FOR "AT BIRTH"
- (995) "CHILD HAS NEVER BEEN FED ANYTHING OTHER THAN BREAST MILK OR FORMULA"
- (996) DON'T KNOW
- (997) REFUSED

Subdomain 5: Flourishing

SKIP TO K6Q65 IF AGE < 6 MONTHS

INTRO I am going to read a list of items that sometimes describe children. For each item, please tell me how often this was true for [S.C.] during the past month.

K6Q70 [He/She] is affectionate and tender with you. Would you say never, rarely, sometimes, usually, or always true for [S.C.] during the past month?

K6Q73 [He/She] bounces back quickly when things don't go [his/her] way. Would you say never, rarely, sometimes, usually, or always true for [S.C.] during the past month?

K6Q71 [He/She] shows interest and curiosity in learning new things. Would you say never, rarely, sometimes, usually, or always true for [S.C.] during the past month?

K6Q72 [He/She] smiles and laughs a lot.

READ AS NECESSARY: Would you say never, rarely, sometimes, usually, or always true for [S.C.] during the past month?

- (1) NEVER
- (2) RARELY
- (3) SOMETIMES
- (4) USUALLY
- (5) ALWAYS
- (6) DON'T KNOW
- (7) REFUSED

FOR EACH ITEM

Subdomain 6: Time use

K6Q65 On an average weekday, about how much time does [S.C.] usually spend in front of a TV watching TV programs, videos, or playing video games?

RECORD NUMBER OF HOURS OR MINUTES /
ENTER 0 FOR NO TIME SPENT IN FRONT OF TV

- (995) DON'T OWN A TV
- (996) DON'T KNOW
- (997) REFUSED

IF 1-665, THEN GO TO K6Q65A; ELSE GO TO K6Q66

K6Q66 On an average weekday, about how much time does [S.C.] usually spend with computers, cell phones, handheld video games, and other electronic devices?

RECORD NUMBER OF HOURS OR MINUTES /
ENTER 0 FOR NO TIME SPENT IN FRONT OF THESE DEVICES

- (995) DON'T OWN ANY OF THESE DEVICES
- (996) DON'T KNOW
- (997) REFUSED

IF 1-665, THEN GO TO K6Q65A; ELSE GO TO K6Q66

K6Q60 During the past week, how many days did you or other family members read to [S.C.]?

_____ NUMBER OF DAYS

- (96) DON'T KNOW
- (97) REFUSED

READ IF NECESSARY: Reading stories includes books with words or pictures but not books read by an audio tape, record, CD, or computer.

READ IF NECESSARY: "During the past week" means "during the last seven days."

K6Q61 During the past week, how many days did you or other family members tell stories or sing songs to [S.C.]?

_____NUMBER OF DAYS
(96) DON'T KNOW
(97) REFUSED

READ IF NECESSARY: "During the past week" means "during the last seven days."

K6Q63

During the past week, how many days did [S.C.] play with other children [his/her] age?

_____NUMBER OF DAYS
(96) DON'T KNOW
(97) REFUSED

READ IF NECESSARY: "During the past week" means "during the last seven days."

K6Q64

During the past week, how many days did you or any family member take [S.C.] on any kind of outing, such as to the park, library, zoo, shopping, church, restaurants, or family gatherings?

_____NUMBER OF DAYS
(96) DON'T KNOW
(97) REFUSED

READ IF NECESSARY: "During the past week" means "during the last seven days."

Section 7: Middle Childhood and Adolescence (6-17 years)

Subdomain 1: School enrollment

K7Q01 IF CURRENT MONTH IS JUNE, JULY, OR AUGUST, ASK: “During the last school year, what kind of school was [S.C.] enrolled in? Is it a public school, private school, or home-school?”
ELSE ASK: “What kind of school is [S.C.] currently enrolled in? Is it a public school, private school, or home-school?”

- | | |
|---------------------------------------|------------------|
| (1) PUBLIC | [SKIP TO K7Q02] |
| (2) PRIVATE | [SKIP TO K7Q02] |
| (3) HOME-SCHOOLED | [SKIP TO K7Q05] |
| (4) [S.C.] IS NOT ENROLLED IN SCHOOL. | [SKIP TO K7Q01F] |
| (6) DON'T KNOW | [SKIP TO K7Q02] |
| (7) REFUSED | [SKIP TO K7Q02] |

INTERVIEWER INSTRUCTION: IF THE CHILD WAS ENROLLED IN MORE THAN ONE TYPE OF SCHOOL DURING THE CURRENT OR LAST SCHOOL YEAR, ASK THE TYPE OF SCHOOL THAT THE CHILD HAS MOST RECENTLY ATTENDED.

K7Q01F At any time during the past 12 months, was [S.C.] enrolled in a public school, a private school, or home school?

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

[SKIP TO K7Q05 IF NO/DK/RF]

K7Q02 During the past 12 months, that is since [FILL: CURRENT MONTH, 1 YEAR AGO], about how many days did [S.C.] miss school because of illness or injury?

ENTER THE FOLLOWING AS NEEDED:

- (000) NONE
- (993) ENTIRE SCHOOL YEAR
- (994) HOME SCHOOLED
- (995) DID NOT GO TO SCHOOL
- (996) DON'T KNOW
- (997) REFUSED

INCLUDE ANSWER CHOICES FOR ENTIRE SCHOOL YEAR (993), HOME SCHOOLED (994), OR DID NOT GO TO SCHOOL (995). INCLUDE QUESTION CONFIRMING ANSWER IF NUMBER OF DAYS IS GREATER THAN 20.

SKIP TO K7Q05 IF CHILD WAS HOME SCHOOLED OR DID NOT GO TO SCHOOL.

K7Q04 During the past 12 months, how many times has [S.C.]’s school contacted you or another adult in your household about any problems [he/she] is having with school?

_____TIMES

- (96) DON'T KNOW

(97) REFUSED

IF 21-76 GO TO SC_K7Q04
ELSE IF 1-20, 96, 97 GO TO K7Q05

READ IF NECESSARY: This includes school related problems but not health related problems.

INTERVIEWER INSTRUCTION: THIS INCLUDES SCHOOL RELATED PROBLEMS BUT NOT HEALTH RELATED PROBLEMS.

K7Q05 Since starting kindergarten, has [he/she] repeated any grades?

- (1) YES
- (0) NO [SKIP TO K7Q11]
- (6) DON'T KNOW [SKIP TO K7Q11]
- (7) REFUSED [SKIP TO K7Q11]

K7Q05_A Which grade or grades did [he/she] repeat? [Mark all that apply.]

- (1) FIRST GRADE
 - (2) SECOND GRADE
 - (3) THIRD GRADE
 - (4) FOURTH GRADE
 - (5) FIFTH GRADE
 - (6) SIXTH GRADE
 - (7) SEVENTH GRADE
 - (8) EIGHTH GRADE
 - (9) NINTH GRADE (FRESHMAN YEAR)
 - (10) TENTH GRADE (SOPHMORE YEAR)
 - (11) ELEVENTH GRADE (JUNIOR YEAR)
 - (12) TWELFTH GRADE (SENIOR YEAR)
 - (13) KINDERGARTEN
- (96) DON'T KNOW
(97) REFUSED

K7Q11 Does [S.C.] have a health problem, condition, or disability for which [he/she] has a written intervention plan called an Individualized Education Program or IEP?

READ IF NECESSARY: Some children have difficulty in school because of a health problem, condition, or a disability. These children may receive services from a program called Special Education and have a written intervention plan called an Individualized Education Program or IEP. Services on an IEP might include things such as special instruction; speech language therapy; vision and hearing services; psychological services; health services; social work services; family counseling and support; transportation; or other services needed to support the child's educational performance.

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

Subdomain 2: After-school activities and parental involvement

K7Q30 During the past 12 months, was [S.C.] on a sports team or did [he/she] take sports lessons after school or on weekends?

READ IF NECESSARY: Include any teams run by your child's school or community groups.

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

K7Q31 During the past 12 months, did [he/she] participate in any clubs or organizations after school or on weekends?

READ IF NECESSARY: Examples of clubs or organizations are scouts, arts, religious groups, and boys/girls clubs.

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

K7Q32 During the past 12 months, did [he/she] participate in any other organized activities or lessons, such as music, dance, language, or other arts?

READ IF NECESSARY: This question can include organized lessons in music, dance, foreign languages, performing arts, computers, and more.

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

SKIP TO K7Q34 IF K7Q30, K7Q31, AND K7Q32 ARE ALL NO/DK/RF.

K7Q33 During the past 12 months, how often did you attend events or activities that [S.C.] participated in? Would you say never, sometimes, usually or always?

- (1) NEVER
- (2) SOMETIMES
- (3) USUALLY
- (4) ALWAYS
- (6) DON'T KNOW
- (7) REFUSED

K7Q34 Regarding [S.C.]'s friends, would you say that you have met all of [his/her] friends, most of [his/her] friends, some of [his/her] friends, or none of [his/her] friends?

- (1) ALL OF [HIS/HER] FRIENDS
- (2) MOST OF [HIS/HER] FRIENDS
- (3) SOME OF [HIS/HER] FRIENDS
- (4) NONE OF [HIS/HER] FRIENDS
- (5) CHILD HAS NO FRIENDS
- (6) DON'T KNOW
- (7) REFUSED

IF AGE < 144 MONTHS (12 YEARS), SKIP TO K7Q40.

K7Q37 During the past 12 months, how often has [S.C.] been involved in any type of community service or volunteer work at school, church, or in the community? Would you say once a week or more, a few times a month, a few times a year, or never?

- (1) ONCE A WEEK OR MORE
- (2) A FEW TIMES A MONTH
- (3) A FEW TIMES A YEAR
- (4) NEVER
- (6) DON'T KNOW
- (7) REFUSED

K7Q38 During the past week, did [S.C.] earn money from any work, including regular jobs as well as babysitting, cutting grass, or other occasional work?

- (1) YES [SKIP TO K7Q39]
- (0) NO [SKIP TO K7Q40]
- (6) DON'T KNOW [SKIP TO K7Q40]
- (7) REFUSED [SKIP TO K7Q40]

READ AS NECESSARY: Do not include household chores.

READ IF NECESSARY: "During the past week" means "during the last seven days."

K7Q39 During the past week, how many hours did [S.C.] work for pay?

- (995) MORE THAN ZERO BUT LESS THAN 1 HOUR
- (996) DON'T KNOW
- (997) REFUSED

READ IF NECESSARY: "During the past week" means "during the last seven days."

Subdomain 3: Sleep and exercise

K7Q40 During the past week, on how many nights did [S.C.] get enough sleep for a child [his/her] age?

_____NUMBER OF DAYS

- (96) DON'T KNOW
- (97) REFUSED

READ IF NECESSARY: "Enough sleep" is whatever you define it as for this child.

READ IF NECESSARY: "During the past week" means "during the last seven days."

K7Q41

During the past week, on how many days did [S.C.] exercise, play a sport, or participate in physical activity for at least 20 minutes that made [him/her] sweat and breathe hard?

_____ NUMBER OF DAYS

(96) DON'T KNOW

(97) REFUSED

READ IF NECESSARY: Include active sports such as baseball, softball, basketball, swimming, soccer, tennis, or football; riding a bike or rollerskating; walking or jogging; jumping rope; gymnastics; and active dance such as ballet.

READ IF NECESSARY: "During the past week" means "during the last seven days."

Subdomain 4: Reading

K7Q50 On an average weekday, about how much time does [he/she] usually spend reading for pleasure?

ENTER 0 FOR NO TIME SPENT READING
(995) FOR CHILD CAN'T READ
(996) FOR DON'T KNOW
(997) FOR REFUSED

INTERVIEWER NOTE: RESPONSE MUST BE IN EITHER HOURS OR MINUTES

READ IF NECESSARY: Time spent reading includes the time a child spends reading to themselves or being read to by another person.

IF THE PARENT ASKS WHAT TIME FRAME THE QUESTION REFERS TO, SAY: It refers to average weekdays "recently."

Subdomain 5: Media consumption

K7Q60 On an average weekday, about how much time does [S.C.] usually spend in front of a TV watching TV programs, videos, DVDs, or playing video games?

READ IF NECESSARY: Do not include time spent watching TV programs, videos, or DVDs at school.

READ IF NECESSARY: Do not include time spent doing any of these activities in front of a computer.

RECORD NUMBER OF HOURS OR MINUTES
(995) DON'T OWN A TV
(996) DON'T KNOW
(997) REFUSED

K7Q91 On an average weekday, about how much time does [S.C.] usually spend with computers, cell phones, handheld video games, and other electronic devices, doing things other than schoolwork?

ENTER 0 FOR NO TIME SPENT IN FRONT OF A TV
_____ ENTER NUMBER
(995) DON'T OWN A TV
(996) DON'T KNOW
(997) REFUSED

IF K7Q60 IN (000, 995, 996, 997) [SKIP TO K7Q61 K7Q91]
ELSE, [SKIP TO K7Q60A]

K7Q61A Do you monitor the content of what [he/she] watches on TV, plays on the computer, or does on electronic devices?

READ IF RESPONDENT ASKS WHAT "MONITOR" MEANS: We want to know if you check or pre-screen these media for topics you might not approve of, such as violence, drugs or alcohol, fighting, guns, or sexual content.

INTERVIEWER INSTRUCTION: IF A RESPONDENT STATES THAT HE/SHE USES THESE MEDIA TOGETHER WITH THE CHILD (SUCH AS WATCHING TV SHOWS OR MOVIES TOGETHER) TO EXPLAIN THE CONTENT TO THE CHILD, CODE THIS AS A

“YES” RESPONSE.

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

K7Q61 Do you limit the amount of time [he/she] spends watching TV, playing on the computer, or using electronic devices?

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

K7Q62 Does [he/she] have a TV, computer, or access to electronic devices in [his/her] bedroom?

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

Subdomain 6: Bullying and emotional difficulties

K7Q70_INTRO I am going to read a list of items that sometimes describe children. For each item, please tell me how often this was true for [S.C.] during the past month.

K7Q70 [He/She] argues too much. Would you say never, rarely, sometimes, usually, or always true for [S.C.] during the past month?

K7Q71 [He/She] bullies or is cruel or mean to others. Would you say never, rarely, sometimes, usually, or always true for [S.C.] during the past month?

K7Q79 [He/She] is unhappy, sad, or depressed. Would you say never, rarely, sometimes, usually, or always true for [S.C.] during the past month?

- (1) NEVER
- (2) RARELY
- (3) SOMETIMES
- (4) USUALLY
- (5) ALWAYS
- (6) DON'T KNOW
- (7) REFUSED

FOR EACH ITEM

Subdomain 7: Flourishing

K7Q84 [He/She] finishes the tasks [he/she] starts and follows through with what [he/she] says [he'll/she'll] do.

K7Q85 [He/She] stays calm and in control when faced with a challenge.

K7Q86 [He/She] shows interest and curiosity in learning new things.

K7Q82 [He/She] cares about doing well in school.

K7Q83 [He/She] does all required homework.

(READ IF NECESSARY: Would you say never, rarely, sometimes, usually, or always true for [S.C.] during the past month?)

- (1) NEVER
- (2) RARELY
- (3) SOMETIMES
- (4) USUALLY
- (5) ALWAYS
- (6) DON'T KNOW
- (7) REFUSED

FOR EACH ITEM

Section 8: Family Functioning

Subdomain 1: Family activities

K8Q12 About how often does [S.C.] attend a religious service?

ENTER (000) NEVER OR ZERO TIMES OR DOES NOT ATTEND
 _____ [ENTER NUMBER]

(96) DON'T KNOW

(97) REFUSED

K8Q11 During the past week, on how many days did all the family members who live in the household eat a meal together?

_____ DAYS
 (96) DON'T KNOW

(97) REFUSED

READ IF NECESSARY: "During the past week" means "during the last seven days."

Subdomain 2: Parent/child relationship

IF AGE < 72 MONTHS (6 YEARS), SKIP TO K8Q30.

K8Q21 How well can you and [S.C.] share ideas or talk about things that really matter? Would you say very well, somewhat well, not very well, or not very well at all?

(1) VERY WELL

(2) SOMEWHAT WELL

(3) NOT VERY WELL

(4) NOT WELL AT ALL

(6) DON'T KNOW

(7) REFUSED

Subdomain 3: Family stress

K8Q30 IF RESPONDENT IS MOTHER/FATHER, FILL "parenthood". ELSE FILL "raising children".

In general, how well do you feel you are coping with the day to day demands of [parenthood / raising children]? Would you say that you are coping very well, somewhat well, not very well, or not well at all?

- (1) VERY WELL
- (2) SOMEWHAT WELL
- (3) NOT VERY WELL
- (4) NOT VERY WELL AT ALL
- (6) DON'T KNOW
- (7) REFUSED

K8Q31 During the past month, how often have you felt [S.C.] is much harder to care for than most children [his/her] age? Would you say never, rarely, sometimes, usually, or always?

- (1) NEVER
- (2) RARELY
- (3) SOMETIMES
- (4) USUALLY
- (5) ALWAYS
- (6) DON'T KNOW
- (7) REFUSED

K8Q32 During the past month, how often have you felt [he/she] does things that really bother you a lot?

READ IF NECESSARY: Would you say never, rarely, sometimes, usually, or always?

- (1) NEVER
- (2) RARELY
- (3) SOMETIMES
- (4) USUALLY
- (5) ALWAYS
- (6) DON'T KNOW
- (7) REFUSED

K8Q34 During the past month, how often have you felt angry with [him/her]?

READ IF NECESSARY: Would you say never, rarely, sometimes, usually, or always?

- (1) NEVER
- (2) RARELY
- (3) SOMETIMES
- (4) USUALLY
- (5) ALWAYS
- (6) DON'T KNOW
- (7) REFUSED

K8Q35

IF RESPONDENT IS MOTHER/FATHER, FILL "parenthood". ELSE FILL "raising children".

Is there someone that you can turn to for day-to-day emotional help with [parenthood/raising children]?

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

READ IF NECESSARY: This can be any person, including your spouse.

Section 9: Parental Health

Subdomain 1: Household composition

K9Q00 Including the adults and all the children, how many people live in this household?

RECORD NUMBER OF PEOPLE.

[Answer must be greater than the number of children to proceed.]

INTERVIEWER INSTRUCTION: EACH PERSON IN THE HOUSEHOLD MUST BE A CURRENT RESIDENT OF THE HOUSEHOLD. A CURRENT RESIDENT IS DEFINED AS A PLACE WHERE THE PERSON IS STAYING FOR MORE THAN TWO MONTHS AT THE TIME OF THE SURVEY CONTACT. IF A PERSON HAS NO PLACE WHERE HE OR SHE USUALLY STAYS, THE PERSON SHOULD BE CONSIDERED A CURRENT RESIDENT REGARDLESS OF THE LENGTH OF THE CURRENT STAY.

PERSONS AWAY FROM THEIR RESIDENCE FOR TWO MONTHS OR LESS, WHETHER TRAVELING OR IN THE HOSPITAL, ARE CONSIDERED "IN RESIDENCE."

PERSONS AWAY FROM THEIR RESIDENCE FOR MORE THAN TWO MONTHS ARE CONSIDERED "NOT IN RESIDENCE" UNLESS THE PERSON IS AWAY AT SCHOOL (I.E., BOARDING SCHOOL, MILITARY ACADEMY, PREP SCHOOL, ETC.).

CHILDREN WHO ONLY LIVE PART-TIME IN THE HOUSEHOLD BECAUSE OF CUSTODY ISSUES SHOULD BE INCLUDED IF THEY ARE STAYING THERE WHEN CONTACT WITH THE HOUSEHOLD IS MADE.

ENTER NUMBER; _____

(96) DON'T KNOW

(97) REFUSED

CP_K9Q10A IF K1Q02=96, 97 GO TO C10Q02A

ELSE GO TO K9Q10A

K9Q10A I have that you are [S.C.]'s [FILL FROM K1Q02]. Is that correct?

(1) YES [GO TO CP_C10Q02A]

(0) NO [GO TO CP_C10Q02A]

(6) DON'T KNOW [GO TO CP_C10Q02A]

(7) REFUSED [GO TO CP_C10Q02A]

CP_C10Q02A IF K9Q10A=0, 6, 7 THEN GO TO C10Q02A

IF K9Q10A=01 and K1Q02=01, 02 THEN GO TO C10Q02A

IF K9Q10A=01 and K1Q02=11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 22, 23, 24, 25, 26 THEN GO TO C10Q02B and fill C10Q02A with C10Q02A=K1Q02 value

C10Q02A IF K1Q02=96, 97 OR K9Q10A=0, 6, 7 THEN DISPLAY:

What is your relationship to [S.C.]?

IF R RESPONDS "Mother" or "Father," YOU MUST PROBE: Are you [S.C.]'s biological, step, foster, or adoptive mother/father?

IF R RESPONDS "Parent's Partner," PROBE IF NOT SURE: Are you male or female?

IF K9Q10A=01 AND K1Q02=01 THEN DISPLAY:

Are you [S.C.]'s biological, adoptive, step, or foster mother?

IF K9Q10A=01 AND K1Q02=02 THEN DISPLAY:

Are you [S.C.]'s biological, adoptive, step, or foster father?

PARENT

- (1) BIOLOGICAL MOTHER
- (2) STEP MOTHER
- (3) FOSTER MOTHER
- (4) ADOPTIVE MOTHER
- (5) MOTHER, but TYPE REFUSED
- (6) BIOLOGICAL FATHER
- (7) STEP FATHER
- (8) FOSTER FATHER
- (9) ADOPTIVE FATHER
- (10) FATHER, but TYPE REFUSED

OLDER RELATIVES OR GUARDIANS

- (11) GRANDMOTHER
- (12) GRANDFATHER
- (13) AUNT
- (14) UNCLE
- (15) FEMALE GUARDIAN
- (16) MALE GUARDIAN

OTHER RELATIVES

- (17) SISTER (BIOLOGICAL, STEP, FOSTER, HALF, ADOPTIVE)
- (18) BROTHER (BIOLOGICAL, STEP, FOSTER, HALF, ADOPTIVE)
- (19) COUSIN
- (20) IN-LAW OF ANY TYPE
- (22) OTHER RELATIVE / FAMILY MEMBER

OTHER NON-RELATIVES

- (23) PARENT'S BOYFRIEND / MALE PARTNER
- (24) PARENT'S GIRLFRIEND / FEMALE PARTNER
- (25) PARENT'S PARTNER, but SEX REFUSED
- (26) OTHER NON-RELATIVE OR FRIEND

(96) DON'T KNOW

(97) REFUSED

SC_C10Q02A [IF K1Q02 = 01 AND C10Q02A NOT IN (1, 2, 3, 4, 5)] OR [IF K2Q02 = 02 AND C10Q02A NOT IN (6, 7, 8, 9, 10)] OR [IF K9Q10A=0, 6, 7] THEN DISPLAY:

INTERVIEWER CHECK:

YOU ARE CHANGING THE RESPONDENT FROM [FILL WITH ANSWER FROM K1Q02] TO [FILL WITH ANSWER FROM C10Q02A] . IS THIS CORRECT?

- (1) YES [GO TO C10Q02B]
- (2) NO - RETURN TO C10Q02A AND ENTER CORRECT RESPONSE [GO BACK TO C10Q02A]

C10Q02B IF K9Q00 = 2 THEN SKIP TO C10Q02B_CONF

IF K9Q00 = DK/RF, THEN READ:

For the other people that live in your household with you and [S.C.], what is their relationship to [S.C.]? *[Mark all that apply]*

IF K9Q00 > 2, THEN READ:

In addition to you and [S.C.], I have that [FILL: K9Q00 - 2] [other person lives/other people live] in your household. What is their relationship to [S.C.]? *[Mark all that apply]*

IF R RESPONDS "Mother" or "Father," YOU MUST PROBE: Is that [S.C.]'s biological, step, foster, or adoptive mother/father?

IF R RESPONDS "Partner," PROBE: Is the partner male or female?

PARENT

- | | |
|------------------------------|-------------------------------|
| (1) BIOLOGICAL MOTHER | (6) BIOLOGICAL FATHER |
| (2) STEP MOTHER | (7) STEP FATHER |
| (3) FOSTER MOTHER | (8) FOSTER FATHER |
| (4) ADOPTIVE MOTHER | (9) ADOPTIVE FATHER |
| (5) MOTHER, but TYPE REFUSED | (10) FATHER, but TYPE REFUSED |

OLDER RELATIVES OR GUARDIANS

- | | |
|------------------|----------------------|
| (11) GRANDMOTHER | (14) UNCLE |
| (12) GRANDFATHER | (15) FEMALE GUARDIAN |
| (13) AUNT | (16) MALE GUARDIAN |

OTHER RELATIVES

- (17) SISTER
- (18) BROTHER
- (19) COUSIN
- (20) IN-LAW OF ANY TYPE
- (21) [S.C.]'S CHILD, SON, OR DAUGHTER
- (22) OTHER RELATIVE / FAMILY MEMBER

OTHER NON-RELATIVES

- (23) PARENT'S BOYFRIEND / MALE PARTNER
- (24) PARENT'S GIRLFRIEND / FEMALE PARTNER
- (25) PARENT'S PARTNER, but SEX REFUSED
- (26) OTHER NON-RELATIVE OR FRIEND

- (96) DON'T KNOW
- (97) REFUSED

C10Q02B_
CONF

I am now going to list all the people that live in your household.

I have that [LIST OF RELATIONSHIPS ROSTERED] live in this household with [S.C.].

Is this a correct list of everyone living in your household?

- (1) CONFIRMED - THIS LIST IS CORRECT
- (2) NOT CORRECT - RETURN TO K9Q00 AND START AGAIN

C10Q02B_
WARNING

Earlier you told me that there are [VALUE FROM K9Q00] people living in your household. However, based on the relationships you just gave, I have [COUNT OF RELATIONSHIPS INCLUDING R & S.C.] people living in your household. Let's re-confirm your answers.

(1) RETURN TO RE-CONFIRM ANSWERS [GO TO K9Q00]

USE RARELY:

(2) ISSUE CANNOT BE RESOLVED - CONTINUE ON [GO TO C10Q02C]

SKIP TO K9Q16 IF ANY BIOLOGICAL MOTHER OR BIOLOGICAL FATHER IN HOUSEHOLD.

SKIP TO K9Q16 IF RESPONDENT IS ADOPTIVE MOTHER OR ADOPTIVE FATHER.

C10Q02C Have you legally adopted [S.C.]?

(1) YES

(0) NO

(6) DON'T KNOW

(7) REFUSED

Subdomain 2: Age and marital status of adults in household

K9Q16 *SKIP TO C10Q14 IF NO MOTHER-TYPE IN HOUSEHOLD*

IF C10Q02A=1-5 OR C10Q02B=1-5 ASK K9Q16. ELSE, SKIP TO C10Q14.

IF C10Q02A=1-5 FILL "are you". ELSE, FILL "is [S.C.]'s [MOTHER TYPE]"

How old [are you / is [S.C.]'s [MOTHER TYPE]]?

NOTE TO INTERVIEWER: AT THIS QUESTION, COLLECT INFORMATION ABOUT THE MOTHER (BIOLOGICAL, STEP, FOSTER, ADOPTIVE) LIVING IN THIS HOUSE.

_____ YEARS

(996) DON'T KNOW

(997) REFUSED

C10Q14 What is the age of the oldest adult living in the household?

_____ YEARS

(996) DON'T KNOW

(997) REFUSED

IF HOUSEHOLD INCLUDES A MOTHER AND A FATHER, ASK C10Q10. ELSE, SKIP TO C10Q11A.

SC_C10Q14 INTERVIEWER CHECK: YOU ENTERED [FILL WITH ANSWER FROM C10Q14] FOR THE OLDEST ADULT LIVING IN THE HOUSEHOLD. IS THAT CORRECT?

(1) YES [GO TO C10Q10]

(2) NO [GO BACK TO C10Q14]

C10Q10 IF THE RESPONDENT IS THE MOTHER, THEN READ: Are you and [S.C.]'s [FATHER TYPE] currently married, separated, divorced, or never married?

IF THE RESPONDENT IS THE FATHER, THEN READ: Are you and [S.C.]'s [MOTHER TYPE] currently married, separated, divorced, or never married?

IF THE RESPONDENT IS NEITHER THE MOTHER NOR THE FATHER, THEN READ: Are [S.C.]’s [MOTHER TYPE] and [FATHER TYPE] currently married, separated, divorced, or never married?

- (1) CURRENTLY MARRIED [SKIP TO K9Q18]
- (2) SEPARATED
- (3) DIVORCED
- (4) NEVER MARRIED
- (6) DON’T KNOW
- (7) REFUSED

C10Q10A IF THE RESPONDENT IS THE MOTHER, THEN READ: Are you and [S.C.]’s [FATHER TYPE] currently living together as partners?

IF THE RESPONDENT IS THE FATHER, THEN READ: Are you and [S.C.]’s [MOTHER TYPE] currently living together as partners?

IF THE RESPONDENT IS NEITHER THE MOTHER NOR THE FATHER, THEN READ: Are [S.C.]’s [MOTHER TYPE] and [FATHER TYPE] currently living together as partners?

- (1) YES
- (0) NO
- (6) DON’T KNOW
- (7) REFUSED [ALL SKIP TO K9Q18]

C10Q11A *IF HOUSEHOLD INCLUDES A MOTHER BUT NOT A FATHER, ASK C10Q11A. ELSE, SKIP TO C10Q12A.*

IF THE RESPONDENT IS THE MOTHER, THEN READ: Are you currently married, separated, divorced, widowed, or never married?

IF THE RESPONDENT IS NOT THE MOTHER, THEN READ: Is [S.C.]’s [MOTHER TYPE] currently married, separated, divorced, widowed, or never married?

- (1) MARRIED
- (2) SEPARATED
- (3) DIVORCED
- (4) WIDOWED
- (5) NEVER MARRIED
- (6) DON’T KNOW
- (7) REFUSED

*SKIP TO C10Q11C IF NOT MARRIED.
SKIP TO K9Q18 IF MOTHER TYPE IS FOSTER OR ADOPTIVE*

C10Q11B IF RESPONDENT IS THE MOTHER (C10Q02A = 1, 2, or 5), FILL “Are you”; ELSE FILL “Is [S.C.]’S [MOTHER TYPE]”.

(Are you / Is [S.C.]’s [MOTHER TYPE]) married to [S.C.]’s biological father?

- (1) YES
- (0) NO
- (6) DON’T KNOW
- (7) REFUSED [ALL SKIP TO K9Q18]

C10Q11C IF THE RESPONDENT IS THE MOTHER (C10Q02A = 1-5), THEN READ: Are you currently

living with anyone as partners?

IF THE RESPONDENT IS NOT THE MOTHER, THEN READ: Is [S.C.]'s [MOTHER TYPE] currently living with anyone as partners?

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED [ALL SKIP TO K9Q18]

C10Q12A *IF HOUSEHOLD INCLUDES A FATHER BUT NOT A MOTHER, ASK C10Q12A. ELSE, SKIP TO C10Q13A.*

IF THE RESPONDENT IS THE FATHER (C10Q02A= 6-10), THEN READ: Are you currently married, separated, divorced, widowed, or never married?

IF THE RESPONDENT IS NOT THE FATHER, THEN READ: Is [S.C.]'s [FATHER TYPE] currently married, separated, divorced, widowed, or never married?

- (1) MARRIED
- (2) SEPARATED
- (3) DIVORCED
- (4) WIDOWED
- (5) NEVER MARRIED
- (6) DON'T KNOW
- (7) REFUSED

*SKIP TO C10Q12C IF NOT MARRIED.
SKIP TO K9Q18 IF FATHER TYPE IS FOSTER OR ADOPTIVE*

C10Q12B IF RESPONDENT IS THE FATHER (C10Q02A = 6, 7, or 10) FILL "Are you"; ELSE FILL "Is [S.C.]'s [FATHER TYPE]".

(Are you / Is [S.C.]'s [FATHER TYPE]) married to [S.C.]'s biological mother?

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED [ALL SKIP TO K9Q18]

C10Q12C IF THE RESPONDENT IS THE FATHER (C10Q02A= 6-10), THEN READ: Are you currently living with anyone as partners?

IF THE RESPONDENT IS NOT THE FATHER, THEN READ: Is [S.C.]'s [FATHER TYPE] currently living with anyone as partners?

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED
[ALL SKIP TO K9Q18]

C10Q13A Are you currently married, separated, divorced, widowed, or never married?

- (1) MARRIED
- (2) SEPARATED

- (3) DIVORCED
- (4) WIDOWED
- (5) NEVER MARRIED
- (6) DON'T KNOW
- (7) REFUSED

SKIP TO C10Q13C IF NOT MARRIED.

C10Q13B Does your spouse currently live in the household with [S.C.]?

- (1) YES [SKIP TO K9Q18]
- (0) NO [SKIP TO K9Q18]
- (6) DON'T KNOW [SKIP TO K9Q18]
- (7) REFUSED [SKIP TO K9Q18]

C10Q13C Are you currently living with a partner?

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

K9Q19 IF HOUSEHOLD INCLUDES A MOTHER OR FATHER OF ANY TYPE (THAT IS, 1<=C10Q02A<=10 OR 1<=C10Q02B<=10), SKIP TO K9Q18. ELSE, IF HOUSEHOLD INCLUDES NEITHER A MOTHER NOR A FATHER OF ANY TYPE, BUT INCLUDES ANY OLDER RELATIVE/GUARDIAN TYPES (THAT IS, 11<=C10Q02A<=16 OR 11<=C10Q02B<=16) AND C10Q02C NOT EQUAL TO "1" THEN ASK K9Q19. ELSE, SKIP TO K9Q18.

Is [S.C.] currently in foster care? That is, are you or another adult in the household acting as a foster parent to [S.C.] under the supervision of a state or county child welfare agency?

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

K9Q18 *ASK K9Q18 ONLY IF RESPONDENT HAS A SPOUSE OR PARTNER ((C10Q02A=1-10 AND ((C10Q10=1 OR C10Q10A=1 OR C10Q11A=1 OR C10Q11C=1 OR C10Q12A=1 OR C10Q12C=1)) OR (C10Q02A NOT EQ 1-10 AND (C10Q13A=1 OR C10Q13C=1))) ; ELSE SKIP TO K9Q20.*

The next question is about your relationship with your spouse or partner. Would you say that your relationship is completely happy, very happy, fairly happy, or not too happy?

- (1) COMPLETELY HAPPY
- (2) VERY HAPPY
- (3) FAIRLY HAPPY
- (4) NOT TOO HAPPY
- (6) DON'T KNOW
- (7) REFUSED

Subdomain 3: General health status

K9Q20 *IF (C10Q02A=1-5 OR C10Q02B=1-5) ASK K9Q20. ELSE, SKIP TO K9Q21.*

IF C10Q02A=1-5 FILL "your". ELSE, FILL "[S.C.]'s [MOTHER TYPE]'s/your"

Would you say that, in general, ([S.C.]'s [MOTHER TYPE]'s/your) health is excellent, very good, good, fair, or poor?

NOTE TO INTERVIEWER: AT THIS QUESTION, COLLECT INFORMATION ABOUT THE MOTHER (BIOLOGICAL, STEP, FOSTER, ADOPTIVE) LIVING IN THIS HOUSE.

- (1) EXCELLENT
- (2) VERY GOOD
- (3) GOOD
- (4) FAIR
- (5) POOR
- (6) DON'T KNOW
- (7) REFUSED

K9Q21 *IF (C10Q02A=6-10 OR C10Q02B=6-10) ASK K9Q21. ELSE, SKIP TO K9Q22.*

IF C10Q02A=6-10, FILL "your". ELSE, "[S.C.]'s [FATHER TYPE]'s"

Would you say that, in general, ([S.C.]'s [FATHER TYPE]'s/your) health is excellent, very good, good, fair, or poor?

NOTE TO INTERVIEWER: AT THIS QUESTION, COLLECT INFORMATION ABOUT THE FATHER (BIOLOGICAL, STEP, FOSTER, ADOPTIVE) LIVING IN THIS HOUSE.

- (1) EXCELLENT
- (2) VERY GOOD
- (3) GOOD
- (4) FAIR
- (5) POOR
- (6) DON'T KNOW
- (7) REFUSED

K9Q22 *IF (C10Q02A NE 1-10) ASK K9Q22. ELSE SKIP TO K9Q23.*

Would you say that, in general, your health is excellent, very good, good, fair, or poor?

NOTE TO INTERVIEWER: AT THIS QUESTION, COLLECT INFORMATION ABOUT THE [TEXTFILL: answer from C10Q02A] LIVING IN THIS HOUSE.

- (1) EXCELLENT
- (2) VERY GOOD
- (3) GOOD
- (4) FAIR
- (5) POOR
- (6) DON'T KNOW
- (7) REFUSED

K9Q23 *IF (C10Q02A=1-5 OR C10Q02B=1-5) ASK K9Q23. ELSE, SKIP TO K9Q24.*

IF C10Q02A=1-5 FILL "your". ELSE, FILL [MOTHER TYPE].

Would you say that, in general, ([S.C.]'s [MOTHER TYPE]'s/your) mental and emotional health is excellent, very good, good, fair, or poor?

NOTE TO INTERVIEWER: AT THIS QUESTION, COLLECT INFORMATION ABOUT THE MOTHER (BIOLOGICAL, STEP, FOSTER, ADOPTIVE) LIVING IN THIS HOUSE.

- (1) EXCELLENT
- (2) VERY GOOD
- (3) GOOD
- (4) FAIR
- (5) POOR
- (6) DON'T KNOW
- (7) REFUSED

K9Q24 *IF (C10Q02A=6-10 OR C10Q02B=6-10), ASK K9Q24. ELSE, SKIP TO K9Q25.*

IF C10Q02A=6-10 FILL "your". ELSE, FILL [FATHER TYPE].

Would you say that, in general, ([S.C.]'s [FATHER TYPE]'s/your) mental and emotional health is excellent, very good, good, fair, or poor?

NOTE TO INTERVIEWER: AT THIS QUESTION, COLLECT INFORMATION ABOUT THE FATHER (BIOLOGICAL, STEP, FOSTER, ADOPTIVE) LIVING IN THIS HOUSE.

- (1) EXCELLENT
- (2) VERY GOOD
- (3) GOOD
- (4) FAIR
- (5) POOR
- (6) DON'T KNOW
- (7) REFUSED

K9Q25 *IF C10Q02A NE (1-10), ASK K9Q25. ELSE SKIP TO K9Q30.*

Would you say that, in general, your mental and emotional health is excellent, very good, good, fair, or poor?

NOTE TO INTERVIEWER: AT THIS QUESTION, COLLECT INFORMATION ABOUT THE [TEXTFILL: answer from C10Q02A] LIVING IN THIS HOUSE.

- (1) EXCELLENT
- (2) VERY GOOD
- (3) GOOD
- (4) FAIR
- (5) POOR
- (6) DON'T KNOW
- (7) REFUSED

Subdomain 4: Smoking

K9Q40 Does anyone living in your household use cigarettes, cigars, or pipe tobacco?

- (1) YES
- (0) NO [SKIP TO INTRO_ACE]
- (6) DON'T KNOW [SKIP TO INTRO_ACE]
- (7) REFUSED [SKIP TO INTRO_ACE]

K9Q41 Does anyone smoke inside [S.C.]'s home?

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

Subdomain 5: Adverse family experiences

INTRO_ACE I'd like to ask you some questions about events that may have happened during [S.C.]'s life. These things that can happen to any family, but some people may feel uncomfortable with these questions. You can ask me to skip any question you do not want to answer.

ACE1 Since [S.C.] was born, how often has it been very hard to get by on your family's income, for example, it was hard to cover the basics like food or housing? Would you say very often, somewhat often, not very often, or never?

- (1) VERY OFTEN
- (2) SOMEWHAT OFTEN
- (3) RARELY
- (4) NEVER
- (6) DON'T KNOW
- (7) REFUSED

ACE3 Did [S.C.] ever live with a parent or guardian who got divorced or separated after [S.C.] was born?

ACE4 Did [S.C.] ever live with a parent or guardian who died?

ACE5 Did [S.C.] ever live with a parent or guardian who served time in jail or prison after [S.C.] was born?

ACE6 Did [S.C.] ever see or hear any parents, guardians, or any other adults in [his/her] home slap, hit, kick, punch, or beat each other up?

ACE7 Was [S.C.] ever the victim of violence or witness any violence in [his/her] neighborhood?

ACE8 Did [S.C.] ever live with anyone who was mentally ill or suicidal, or severely depressed for more than a couple of weeks?

ACE9 Did [S.C.] ever live with anyone who had a problem with alcohol or drugs?

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

FOR EACH ITEM

ACE10 Was [S.C.] ever treated or judged unfairly because of [his/her] race or ethnic group?

- (1) YES [SKIP TO ACE11]
- (0) NO [SKIP TO K9Q96]
- (6) DON'T KNOW [SKIP TO K9Q96]
- (7) REFUSED [SKIP TO K9Q96]

ACE11 During the past year, how often was [S.C.] treated or judged unfairly? Would you say very often, somewhat often, rarely, or never?

READ AS NECESSARY: This question refers to how often [S.C.] was treated or judged unfairly because of [his/her] race or ethnic group.

- (1) VERY OFTEN
- (2) SOMEWHAT OFTEN
- (3) RARELY
- (4) NEVER
- (6) DON'T KNOW
- (7) REFUSED

Subdomain 6: Presence of adult mentor

SKIP TO NEXT SECTION IF AGE < 6 YEARS.

K9Q96 Other than adults in your home or [S.C.]'s parents, is there at least one other adult in [S.C.]'s school, neighborhood, or community who knows [him/her] well and who [he/she] can rely on for advice or guidance?

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

Section 10: Neighborhood and Community Characteristics

Subdomain 1: Neighborhood amenities

INTRO Now, I have a few questions about your neighborhood and community. Please tell me if the following places and things are available to children in your neighborhood, even if [S.C.] does not actually use them.

- | | |
|--------|---|
| K10Q11 | Sidewalks or walking paths? |
| K10Q12 | A park or playground area? |
| K10Q13 | A recreation center, community center, or boys' or girls' club? |
| K10Q14 | A library or bookmobile? |

READ IF NECESSARY: Do those exist in your neighborhood?

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

FOR EACH ITEM

Subdomain 2: Neighborhood condition

- | | |
|--------|---|
| K10Q20 | In your neighborhood, is there litter or garbage on the street or sidewalk? |
| K10Q22 | How about poorly kept or rundown housing? |
| K10Q23 | How about vandalism such as broken windows or graffiti? |

READ IF NECESSARY: Does that exist in your neighborhood?

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

FOR EACH ITEM

Subdomain 3: Social capital

INTRO Now, for the next questions, I am going to ask how much you agree or disagree with each of these statements about your neighborhood or community.

- | | |
|--------|--|
| K10Q30 | "People in this neighborhood help each other out." |
| K10Q31 | "We watch out for each other's children in this neighborhood." |
| K10Q32 | "There are people I can count on in this neighborhood." |
| K10Q34 | "If my child were outside playing and got hurt or scared, there are adults nearby who I trust to help my child." |

IF RESPONDENT SAYS THEIR CHILD IS TOO YOUNG TO PLAY OUTSIDE, SAY: Please answer the question as IF your child were playing outside.

- (1) DEFINITELY AGREE
- (2) SOMEWHAT AGREE
- (3) SOMEWHAT DISAGREE
- (4) DEFINITELY DISAGREE

- (6) DON'T KNOW
- (7) REFUSED

FOR EACH ITEM

Subdomain 4: Perceived safety

K10Q40 How often do you feel [S.C.] is safe in your community or neighborhood? Would you say never, sometimes, usually, or always?

- (1) NEVER
- (2) SOMETIMES
- (3) USUALLY
- (4) ALWAYS
- (6) DON'T KNOW
- (7) REFUSED

IF SC_NSCH < 6 YEARS, SKIP TO K11Q01_INTRO. IF K7Q01F = 0, 6, 7, OR K7Q02 = 994, 995, OR K7Q01 = 3 [I.E. NOT ENROLLED IN PAST 12 MONTHS/HOME-SCHOOLED], SKIP TO K11Q01_INTRO.

K10Q41 How often do you feel [he/she] is safe at school?

- (1) NEVER
- (2) SOMETIMES
- (3) USUALLY
- (4) ALWAYS
- (6) DON'T KNOW
- (7) REFUSED

Section 11: Additional Demographics

Subdomain 1: Race and ethnicity of child

K11Q01_INTRO Now I have a few more general questions about [S.C.] and your household.

K11Q01 Is [S.C.] of Hispanic, Latino or Spanish origin?

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

HISPANIC OR LATINO INCLUDES MEXICAN, MEXICAN-AMERICAN, CENTRAL AMERICAN, SOUTH AMERICAN OR PUERTO RICAN, CUBAN, OR OTHER SPANISH-CARIBBEAN.

K11Q02 Now, I'm going to read a list of categories. Please choose one or more of the following categories to describe [S.C.]'s race. Is [S.C.] White, Black or African American, American Indian, Alaska Native, Asian, or Native Hawaiian or other Pacific Islander? *[Mark all that apply]*

- (1) WHITE / CAUCASIAN
- (2) BLACK/AFRICAN-AMERICAN
- (3) AMERICAN INDIAN / NATIVE AMERICAN
- (4) ALASKA NATIVE
- (5) ASIAN
- (6) NATIVE HAWAIIAN
- (7) PACIFIC ISLANDER
- (8) OTHER [RECORD VERBATIM RESPONSE AT K11Q02_OS]
- (96) DON'T KNOW
- (97) REFUSED

INTERVIEWER INSTRUCTION: BE SURE TO READ THE ENTIRE QUESTION AS WRITTEN, INCLUDING ALL RESPONSE CATEGORIES. RACE INFORMATION IS COLLECTED BY SELF-IDENTIFICATION. IT IS "WHATEVER RACE YOU CONSIDER YOURSELF TO BE." DO NOT TRY TO EXPLAIN OR DEFINE ANY OF THE GROUPS. MULTIPLE RACES MAY BE SELECTED.

SKIP TO K11Q20 IF CHILD IS NOT AMERICAN INDIAN OR ALASKA NATIVE.

K11Q02_OS RECORD VERBATIM RESPONSE _____

INTERVIEWER NOTE: IF RESPONDENT SAYS "INDIAN" PLEASE PROBE, "Do you mean Asian Indian or American Indian"?

INTERVIEWER NOTE: IF RESPONDENT SAYS "EUROPEAN" PLEASE PROBE, "Can you be more specific"?

K11Q03 IF NOT A VIRGIN ISLAND CASE AND (K11Q02 = 03 OR K11Q02 = 04) THEN ASK K11Q03. ELSE, SKIP TO K11Q20.

At any time during the past 12 months, did [S.C.] receive services from any Indian Health Service hospital or clinic?

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

Subdomain 2: Education of parents

K11Q20 IF HOUSEHOLD INCLUDES A MOTHER (C10Q02A=1-5 OR C10Q02B=1-5) ASK K11Q20. ELSE, SKIP TO K11Q21.

IF C10Q02A=1-5, FILL “you have”. ELSE, FILL “[S.C.]’s [MOTHER TYPE] has”

What is the highest grade or year of school [you have / [S.C.]’s [MOTHER TYPE] has completed?

NOTE TO INTERVIEWER: AT THIS QUESTION, COLLECT INFORMATION ABOUT THE MOTHER (BIOLOGICAL, STEP, FOSTER, ADOPTIVE) LIVING IN THIS HOUSE.

- (1) 8th GRADE OR LESS
- (2) 9th-12th GRADE NO DIPLOMA
- (3) HIGH SCHOOL GRADUATE OR GED COMPLETED
- (4) COMPLETED A VOCATIONAL, TRADE, OR BUSINESS SCHOOL PROGRAM
- (5) SOME COLLEGE CREDIT BUT NO DEGREE
- (6) ASSOCIATE DEGREE (AA, AS)
- (7) BACHELOR’S DEGREE (BA, BS, AB)
- (8) MASTER’S DEGREE (MA, MS, MSW, MBA)
- (9) DOCTORATE (PhD, EdD) or PROFESSIONAL DEGREE (MD, DDS, DVM, JD)
- (96) DON’T KNOW
- (97) REFUSED

K11Q21 IF K11Q20 NOT BLANK AND C10Q02A=6-10, ASK: “And how about you?”

READ AS NECESSARY: “What is the highest grade or year of school you have completed?”

IF K11Q20 NOT BLANK AND (C10Q02A NE 6-10) ASK: “And how about [S.C.]’s [FATHER TYPE]?”

READ AS NECESSARY: “What is the highest grade or year of school [S.C.]’s [FATHER TYPE] has completed?”

IF K11Q20 IS BLANK AND C10Q02A=6-10 ASK: “What is the highest grade or year of school you have completed?”

IF K11Q20 IS BLANK AND (C10Q02A NE 6-10), ASK: “What is the highest grade or year of school [S.C.]’s [FATHER TYPE] has completed?”

If K11Q20 filled from NIS and C10Q02A=6-10, Ask : "What is the highest grade or year of school you have completed?"

IF K11Q20 FILLED FROM NIS OR TEEN AND (C10Q02A NE 6-10), ASK: "What is the highest grade or year of school [S.C.]’s [FATHER TYPE] has completed?"

NOTE TO INTERVIEWER: AT THIS QUESTION, COLLECT INFORMATION ABOUT THE FATHER (BIOLOGICAL, STEP, FOSTER, ADOPTIVE) LIVING IN THIS HOUSE.

- (1) 8th GRADE OR LESS
- (2) 9th-12th GRADE NO DIPLOMA
- (3) HIGH SCHOOL GRADUATE OR GED COMPLETED
- (4) COMPLETED A VOCATIONAL, TRADE, OR BUSINESS SCHOOL PROGRAM
- (5) SOME COLLEGE CREDIT BUT NO DEGREE
- (6) ASSOCIATE DEGREE (AA, AS)

- (7) BACHELOR'S DEGREE (BA, BS, AB)
- (8) MASTER'S DEGREE (MA, MS, MSW, MBA)
- (9) DOCTORATE (PhD, EdD) or PROFESSIONAL DEGREE (MD, DDS, DVM,JD)
- (96) DON'T KNOW
- (97) REFUSED

K11Q22 IF R IS NOT MOTHER OR FATHER (C10Q02A NE 1-10) ASK K11Q22. ELSE SKIP TO K11Q22A.

IF K11Q20 IS NOT BLANK and not filled from NIS or Teen, OR K11Q21 IS NOT BLANK, ASK: "And how about you"?

READ AS NECESSARY: "What is the highest grade or year of school you have completed"?

IF K11Q20 AND K11Q21 ARE BLANK, OR K11Q20 filled from NIS or TEEN AND K11Q21 is blank, ASK: "What is the highest grade or year of school you have completed"?

READ AS NECESSARY: "What is the highest grade or year of school you have completed?"

NOTE TO INTERVIEWER: AT THIS QUESTION, COLLECT INFORMATION ABOUT THE [TEXTFILL: answer from C10Q02A (see TEXTFILL logic)] LIVING IN THIS HOUSE.

- (1) 8th GRADE OR LESS
- (2) 9th-12th GRADE NO DIPLOMA
- (3) HIGH SCHOOL GRADUATE OR GED COMPLETED
- (4) COMPLETED A VOCATIONAL, TRADE, OR BUSINESS SCHOOL PROGRAM
- (5) SOME COLLEGE CREDIT BUT NO DEGREE
- (6) ASSOCIATE DEGREE (AA, AS)
- (7) BACHELOR'S DEGREE (BA, BS, AB)
- (8) MASTER'S DEGREE (MA, MS, MSW, MBA)
- (9) DOCTORATE (PhD, EdD) or PROFESSIONAL DEGREE (MD, DDS, DVM,JD)
- (96) DON'T KNOW
- (97) REFUSED

K11Q22A Thinking back to who you lived with when you were about 13 years old, what was the highest grade or year of school completed by your mother, father, or main guardian? If you lived with more than one parent or guardian, please tell me about the one who had the most education.

- (1) 8th GRADE OR LESS
- (2) 9th-12th GRADE NO DIPLOMA
- (3) HIGH SCHOOL GRADUATE OR GED COMPLETED
- (4) COMPLETED A VOCATIONAL, TRADE, OR BUSINESS SCHOOL PROGRAM
- (5) SOME COLLEGE CREDIT BUT NO DEGREE
- (6) ASSOCIATE DEGREE (AA, AS)
- (7) BACHELOR'S DEGREE (BA, BS, AB)
- (8) MASTER'S DEGREE (MA, MS, MSW, MBA)
- (9) DOCTORATE (PhD, EdD) or PROFESSIONAL DEGREE (MD, DDS, DVM,JD)
- (96) DON'T KNOW
- (97) REFUSED

Subdomain 3: Birthplace of child and parents

K11Q30 IF C10Q02A=1-5, FILL "Were you". ELSE, FILL "Was [S.C.]'s [MOTHER TYPE]"

[Were you / Was [S.C.]'s [MOTHER TYPE]] born in the United States [IF IAP=095 DISPLAY, "including the Virgin Islands"]?

NOTE TO INTERVIEWER: AT THIS QUESTION, COLLECT INFORMATION ABOUT THE MOTHER (BIOLOGICAL, STEP, FOSTER, ADOPTIVE) LIVING IN THIS HOUSE.

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

K11Q31 IF K11Q30 NOT BLANK AND C10Q02A=6-10 ASK: "And how about you?"

READ AS NECESSARY: "Were you born in the United States [IF IAP=095 DISPLAY, "including the Virgin Islands"]?"

IF K11Q30 NOT BLANK AND (C10Q02A NE 6-10), ASK: "And how about [S.C.]'s [FATHER TYPE]?"

READ AS NECESSARY: "Was [S.C.]'s [FATHER TYPE] born in the United States [IF IAP=095 DISPLAY, "including the Virgin Islands"]?"

IF K11Q30 IS BLANK AND C10Q02A=6-10, ASK: "Were you born in the United States [IF IAP=095 DISPLAY, "including the Virgin Islands"]?"

IF K11Q30 IS BLANK AND (C10Q02A NE 6-10), ASK: "Was [S.C.]'s [FATHER TYPE] born in the United States [IF IAP=095 DISPLAY, "including the Virgin Islands"]?"

NOTE TO INTERVIEWER: AT THIS QUESTION, COLLECT INFORMATION ABOUT THE FATHER (BIOLOGICAL, STEP, FOSTER, ADOPTIVE) LIVING IN THIS HOUSE.

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

K11Q32 IF K11Q30 OR K11Q31 ARE NOT BLANK, ASK: "And how about you?"

READ AS NECESSARY: "Were you born in the United States [IF IAP=095 DISPLAY, "including the Virgin Islands"]?"

IF K11Q30 AND K11Q31 ARE BLANK, ASK: "Were you born in the United States [IF IAP=095 DISPLAY, "including the Virgin Islands"]?"

NOTE TO INTERVIEWER: AT THIS QUESTION, COLLECT INFORMATION ABOUT THE [TEXTFILL: answer from C10Q02A (see TEXTFILL logic)] LIVING IN THIS HOUSE.

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

K11Q33 And how about [S.C.]?

READ AS NECESSARY: Was [S.C.] born in the United States [IF IAP=095 DISPLAY, "including the Virgin Islands"]?

- (1) YES
- (0) NO

(6) DON'T KNOW
(7) REFUSED

K11Q34A IF C10Q02A=1-5, FILL "have you". ELSE, FILL "has [S.C.]'s [MOTHER TYPE]"

How long [have you / has [S.C.]'s [MOTHER TYPE]] been in the United States [IF IAP=095 DISPLAY, "including the Virgin Islands"]?
NOTE TO INTERVIEWER: AT THIS QUESTION, COLLECT INFORMATION ABOUT THE MOTHER (BIOLOGICAL, STEP, FOSTER, ADOPTIVE) LIVING IN THIS HOUSE.

RECORD LENGTH OF TIME IN DAYS OR WEEKS OR MONTHS OR YEARS /
(96) DON'T KNOW
(97) REFUSED

K11Q35A IF K11Q34A NOT BLANK AND C10Q02A=6-10 ASK: "And how about you?"

READ AS NECESSARY: "How long have you been in the United States [IF IAP=095 DISPLAY, "including the Virgin Islands"]?"

IF K11Q34A NOT BLANK AND (C10Q02A NE 6-10), ASK: "And how about [S.C.]'s [FATHER TYPE]?"

READ AS NECESSARY: "How long has [S.C.]'s [FATHER TYPE] been in the United States [IF IAP=095 DISPLAY, "including the Virgin Islands"]?"

IF K11Q34A IS BLANK AND C10Q02A=6-10, ASK: "How long have you been in the United States [IF IAP=095 DISPLAY, "including the Virgin Islands"]?"

IF K11Q34A IS BLANK AND (C10Q02A NE 6-10) ASK: "How long has [S.C.]'s [FATHER TYPE] been in the United States [IF IAP=095 DISPLAY, "including the Virgin Islands"]?"

NOTE TO INTERVIEWER: AT THIS QUESTION, COLLECT INFORMATION ABOUT THE FATHER (BIOLOGICAL, STEP, FOSTER, ADOPTIVE) LIVING IN THIS HOUSE.

RECORD LENGTH OF TIME IN DAYS OR WEEKS OR MONTHS OR YEARS /
(96) DON'T KNOW
(97) REFUSED

K11Q36A IF K11Q34A OR K11Q35A ARE NOT BLANK, ASK: "And how about you?"

READ AS NECESSARY: "How long have you been in the United States [IF IAP=095 DISPLAY, "including the Virgin Islands"]?"

IF K11Q34A AND K11Q35A ARE BLANK, ASK: "How long have you been in the United States [IF IAP=095 DISPLAY, "including the Virgin Islands"]?"

NOTE TO INTERVIEWER: AT THIS QUESTION, COLLECT INFORMATION ABOUT THE [TEXTFILL: answer from C10Q02A (see TEXTFILL logic)] LIVING IN THIS HOUSE.

RECORD LENGTH OF TIME IN DAYS OR WEEKS OR MONTHS OR YEARS /
(96) DON'T KNOW
(97) REFUSED

K11Q37A IF K11Q33 = 2, ASK K11Q37A. ELSE SKIP TO K11Q40

IF K11Q34A, K11Q35A, OR K11Q36A ARE NOT BLANK, ASK: “And how about [S.C.]?”

READ AS NECESSARY: “How long has [S.C.] been in the United States [IF IAP=095 DISPLAY, “including the Virgin Islands”]?”

IF K11Q34A, K11Q35A, AND K11Q36A ARE BLANK, ASK: “How long has [S.C.] been in the United States [IF IAP=095 DISPLAY, “including the Virgin Islands”]?”

RECORD LENGTH OF TIME IN DAYS OR WEEKS OR MONTHS OR YEARS /
(96) DON'T KNOW
(97) REFUSED

K11Q38

IF ANY BIOLOGICAL MOTHER OR BIOLOGICAL FATHER IN HOUSEHOLD, SKIP TO K11Q43. IF NO BIOLOGICAL PARENT IN HOUSEHOLD AND IF ANY ADOPTIVE PARENT OR GUARDIAN IN HOUSEHOLD, ASK K11Q38. ELSE, SKIP TO K11Q43.

Was [S.C.] adopted from another country?
[IF IAP=095 DISPLAY: HELP TEXT: IF S.C. WAS ADOPTED FROM THE UNITED STATES, CODE THIS QUESTION AS 'NO'. THE VIRGIN ISLANDS ARE CONSIDERED PART OF THE UNITED STATES.]

- (1) YES [SKIP TO K11Q41]
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

Subdomain 4: Residential mobility

K11Q40 *IF ANY BIOLOGICAL MOTHER OR BIOLOGICAL FATHER IN HOUSEHOLD, SKIP TO K11Q43. IF NO BIOLOGICAL PARENT IN HOUSEHOLD AND IF ANY ADOPTIVE PARENT OR GUARDIAN IN HOUSEHOLD, ASK K11Q40. ELSE, SKIP TO K11Q43.*

Prior to being adopted, was [S.C.] in the legal custody of a state or county child welfare agency in the United States [IF IAP=095 DISPLAY, “including the Virgin Islands”]? That is, was [S.C.] in the U.S. [IF IAP=095 DISPLAY “or Virgin Islands”] foster care system?

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

K11Q41 Has [S.C.]’s adoption been finalized?

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

K11Q43 [IF CHILD WAS ADOPTED, INSERT: Since [he/she] was adopted,] How many times has [S.C.] ever moved to a new address?

RECORD NUMBER OF MOVES /
(996) DON'T KNOW
(997) REFUSED

READ IF NECESSARY: Please include any and all times a child has changed their primary residence. Do not include temporary changes in residence such as a child visiting another residence during summer vacation or other breaks in the school year.

Subdomain 5: Employment and income

K11Q50 Was anyone in the household employed at least 50 weeks out of the past 52 weeks?

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

C10Q41 Do you own or rent your home?

HELP SCREEN: IF THE HOME IS OWNED OR BEING BOUGHT BY SOMEONE IN THE HOUSEHOLD, THE ANSWER SHOULD BE MARKED AS "OWNED." IF THE HOME IS NOT OWNED BY SOMEONE IN THE HOUSEHOLD AND IS BEING OCCUPIED WITHOUT PAYMENT OF RENT, THE ANSWER SHOULD BE MARKED AS "SOME OTHER ARRANGEMENT."

- (1) OWNED OR BEING BOUGHT
- (2) RENTED
- (3) SOME OTHER ARRANGEMENT
- (6) DON'T KNOW
- (7) REFUSED

K11Q51 Now I am going to ask you a few questions about your income. Please think about your total combined *family* income during (FILL LAST CALENDAR YEAR) for all members of the family. Can you tell me that amount before taxes?

HELP SCREEN: INCLUDE MONEY FROM JOBS, CHILD SUPPORT, SOCIAL SECURITY, RETIREMENT INCOME, UNEMPLOYMENT PAYMENTS, PUBLIC ASSISTANCE, AND SO FORTH. ALSO, INCLUDE INCOME FROM INTEREST, DIVIDENDS, NET INCOME FROM BUSINESS, FARM, OR RENT, AND ANY OTHER MONEY INCOME RECEIVED.

RECORD INCOME AMOUNT /

- (6) DON'T KNOW
- (7) REFUSED [SKIP TO K11Q52 IF DK/RF]

K11Q52 For the purposes of this survey, it is important to get at least a range for the total income received by all members of your household in [LAST CALENDAR YEAR]. Would you say that the total combined family income, before taxes, was above or below \$20,000?

- (1) MORE THAN \$20,000 [SKIP TO K11Q56]
- (2) \$20,000 [SKIP TO K11Q60]
- (3) LESS THAN \$20,000 [SKIP TO K11Q53]
- (6) DON'T KNOW [SKIP TO K11Q60]
- (7) REFUSED [SKIP TO K11Q60]

K11Q53 Was the total combined family income more or less than \$10,000?

- (1) MORE THAN \$10,000 [SKIP TO K11Q55]
- (2) \$10,000 [SKIP TO K11Q60]
- (3) LESS THAN \$10,000 [SKIP TO K11Q54]
- (6) DON'T KNOW [SKIP TO K11Q60]
- (7) REFUSED [SKIP TO K11Q60]

K11Q54 Was it more than \$7,500?

- (1) YES [SKIP TO K11Q59]
- (0) NO [SKIP TO K11Q59]
- (6) DON'T KNOW [SKIP TO K11Q60]
- (7) REFUSED [SKIP TO K11Q60]

K11Q55 Was it more than \$15,000?

- (1) YES [SKIP TO K11Q55A]
- (0) NO [SKIP TO K11Q55B]
- (6) DON'T KNOW [SKIP TO K11Q60]
- (7) REFUSED [SKIP TO K11Q60]

K11Q55A Was it more than \$17,500?

- (1) YES [SKIP TO K11Q59]
- (0) NO [SKIP TO K11Q59]
- (6) DON'T KNOW [SKIP TO K11Q60]
- (7) REFUSED [SKIP TO K11Q60]

K11Q55B Was it more than \$12,500?

- (1) YES [SKIP TO K11Q59]
- (0) NO [SKIP TO K11Q59]
- (6) DON'T KNOW [SKIP TO K11Q60]
- (7) REFUSED [SKIP TO K11Q60]

K11Q56 Was it more or less than \$40,000?

- (1) MORE THAN \$40,000 [SKIP TO K11Q56A]
- (2) \$40,000 [SKIP TO K11Q60]
- (3) LESS THAN \$40,000 [SKIP TO K11Q57]
- (6) DON'T KNOW [SKIP TO K11Q60]
- (7) REFUSED [SKIP TO K11Q60]

K11Q56A More or less than \$60,000?

- (1) MORE THAN \$60,000 [SKIP TO K11Q58]
- (2) \$60,000 [SKIP TO K11Q60]
- (3) LESS THAN \$60,000 [SKIP TO K11Q56B]
- (6) DON'T KNOW [SKIP TO K11Q60]
- (7) REFUSED [SKIP TO K11Q60]

K11Q56B More or less than \$50,000?

- (1) MORE THAN \$50,000 [SKIP TO K11Q59]
- (2) \$50,000 [SKIP TO K11Q60]
- (3) LESS THAN \$50,000 [SKIP TO K11Q56C]
- (6) DON'T KNOW [SKIP TO K11Q60]
- (7) REFUSED [SKIP TO K11Q60]

K11Q56C More or less than \$45,000?

- (1) MORE THAN \$45,000 [SKIP TO K11Q59]
- (2) \$45,000 [SKIP TO K11Q60]
- (3) LESS THAN \$45,000 [SKIP TO K11Q59]

(6) DON'T KNOW [SKIP TO K11Q60]
 (7) REFUSED [SKIP TO K11Q60]

K11Q57 More or less than \$30,000?

(1) MORE THAN \$30,000 [SKIP TO K11Q57A]
 (2) \$30,000 [SKIP TO K11Q60]
 (3) LESS THAN \$30,000 [SKIP TO K11Q57B]
 (6) DON'T KNOW [SKIP TO K11Q60]
 (7) REFUSED [SKIP TO K11Q60]

K11Q57A More or less than \$35,000?

(1) MORE THAN \$35,000 [SKIP TO K11Q59]
 (2) \$35,000 [SKIP TO K11Q60]
 (3) LESS THAN \$35,000 [SKIP TO K11Q59]
 (6) DON'T KNOW [SKIP TO K11Q60]
 (7) REFUSED [SKIP TO K11Q60]

K11Q57B More or less than \$25,000?

(1) MORE THAN \$25,000 [SKIP TO K11Q59]
 (2) \$25,000 [SKIP TO K11Q60]
 (3) LESS THAN \$25,000 [SKIP TO K11Q59]
 (6) DON'T KNOW [SKIP TO K11Q60]
 (7) REFUSED [SKIP TO K11Q60]

K11Q58 More or less than \$75,000?

(1) MORE THAN \$75,000 [SKIP TO K11Q59]
 (2) \$75,000 [SKIP TO K11Q60]
 (3) LESS THAN \$75,000 [SKIP TO K11Q59]
 (6) DON'T KNOW [SKIP TO K11Q60]
 (7) REFUSED [SKIP TO K11Q60]

K11Q59 *IF NIS OR TEEN INTERVIEW INCOME SECTION COMPLETED, SKIP TO K11Q60*

ELSE READ: Was the total combined family income more or less than [\$REF]?

[\$REF IS BASED ON A POVERTY REFERENCE TABLE]

(1) MORE THAN [\$REF]
 (2) EXACTLY [\$REF]
 (3) LESS THAN [\$REF]
 (6) DON'T KNOW
 (7) REFUSED

SKIP TO K11Q60 IF ANSWER IS EXACTLY/LESS THAN/DK/RF OR IF THERE WAS ONLY ONE VALUE IN THE POVERTY REFERENCE TABLE.

K11Q59A Would you say this income was MORE or LESS than [\$REF]?

- (1) MORE THAN [\$REF]
- (2) EXACTLY [\$REF]
- (3) LESS THAN [\$REF]
- (6) DON'T KNOW
- (7) REFUSED

Subdomain 6: Program participation

CATI INSTRUCTION: Calculate household poverty level from household size and reported income, or from the income cascade.

SKIP TO SECTION 12 IF HOUSEHOLD POVERTY LEVEL > 300%

K11Q60 At any time during the past 12 months, even for one month, did anyone in this household receive any cash assistance from a state or county welfare program, such as [STATE TANFNAME]?

READ IF R MENTIONS THAT HE/SHE DOES NOT LIVE IN THE STATE MENTIONED IN THE QUESTION: Please think about the state or county welfare programs that are specific to the state in which you live.

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

K11Q61 IF S_UNDR18 > 1, FILL "any child in the household". ELSE, FILL [S.C.].

During the past 12 months, did [[S.C.]/ any child in the household] receive Food Stamps or Supplemental Nutrition Assistance Program benefits?

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

SKIP TO S9Q34 IF ONLY ONE CHILD IN HOUSEHOLD AND AGE < 24 MONTHS.

K11Q62 During the past 12 months, did [[S.C.]/any child in the household] receive free or reduced-cost breakfasts or lunches at school?

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

S9Q34 Does anyone who lives in the household currently receive benefits from the Women, Infants, and Children (WIC) Program?

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

Section 12: Additional Health Insurance Questions

SKIP TO NEXT SECTION IF CHILD IS INSURED (K3Q01 = YES), IF INSURANCE STATUS IS UNKNOWN (K3Q01 IS DK/RF AND K3Q02 IS NO/DK/RF), OR IF INCOME IS 400% OF FPL OR GREATER.

INTERVIEWER TRAINING NOTE: Throughout this section, the lists of answer choices should not be read to the respondent. Individual answer choices may be repeated back to the respondent if confirming the respondent's answer. It is important that a concerted effort is made to find the appropriate answer for each question. Too many "Other" responses will make it difficult to analyze the data.

INTERVIEWER NOTE: PLEASE USE "OTHER" RESPONSE OPTIONS RARELY IN THIS SECTION. PROMPT RESPONDENT TO FIND AN APPROPRIATE ANSWER FOR EACH QUESTION. YOU MAY REPEAT RESPONSE OPTIONS BACK TO RESPONDENT IF YOU ARE CONFIRMING THE RESPONDENT'S ANSWER.

Subdomain 1: Reasons for Uninsurance

K12Q01 Earlier, you told me that [S.C.] does not have health insurance. What is the main reason [S.C.] does not have health insurance now?

COST

- (01) COSTS TOO MUCH
- (02) HEALTH INSURANCE NOT WORTH THE MONEY IT COSTS

EMPLOYMENT/MOVING

- (03) NO ONE IN FAMILY CURRENTLY EMPLOYED / JOB WAS LOST
- (04) CAN'T GET INSURANCE THROUGH EMPLOYER
- (05) CHANGING JOBS OR INSURANCE POLICIES
- (06) MOVING BETWEEN STATES OR REGIONS

ELIGIBILITY

- (07) INSURANCE COMPANY REFUSED TO COVER / PREEXISTING CONDITION
- (08) INSURANCE COMPANY TERMINATED COVERAGE / RULE VIOLATION
- (09) INCOME TOO HIGH FOR PUBLIC PROGRAM
- (10) AGE / CHILD IS TOO OLD OR TOO YOUNG TO BE ELIGIBLE
- (11) CANNOT MEET RESIDENCY/CITIZENSHIP REQUIREMENTS, LACK OF SSN
- (12) INELIGIBLE DUE TO OTHER PROGRAM REQUIREMENT

APPLICATION PROCESS

- (13) DID NOT REAPPLY WHEN COVERAGE ENDED
- (14) ISSUES WITH THE APPLICATION OR PAPERWORK

IN TRANSITION BETWEEN COVERAGE

- (15) HAVE APPLIED – NOW JUST WAITING
- (16) INTEND TO APPLY BUT JUST HAVEN'T DONE SO
- (17) DON'T KNOW HOW TO GET INSURANCE

OTHER

- (18) CHILD DOES NOT NEED INSURANCE / DOES NOT GET SICK
- (19) OTHER PARENT'S RESPONSIBILITY, LACK OF LEGAL CUSTODY
- (20) OTHER [RECORD VERBATIM RESPONSE]
- (96) DON'T KNOW
- (97) REFUSED

K12Q02 About how long has it been since [S.C.] last had any kind of health insurance?

- (1) SIX MONTHS OR LESS
- (2) MORE THAN 6 MONTHS, BUT NOT MORE THAN 1 YEAR AGO
- (3) MORE THAN 1 YEAR, BUT NOT MORE THAN 3 YEARS AGO
- (4) MORE THAN 3 YEARS
- (5) NEVER [SKIP TO K12Q11]
- (6) DON'T KNOW
- (7) REFUSED

K12Q03 Has [S.C.] ever been covered by health insurance that was provided through an employer or union?

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

K12Q04 Has [S.C.] ever been covered by health insurance that was purchased directly from an insurance company?

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

Subdomain 2: History with Medicaid

K12Q11 Before today, had you ever heard of Medicaid [or STATE MEDICAIDNAME]?

READ IF R MENTIONS THAT HE/SHE DOES NOT LIVE IN THE STATE MENTIONED IN THE QUESTION: Please think about the Medicaid program specific to the state in which you live.

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

IF 0,6,7 SKIP TO K12Q21.

K12Q12 Has [S.C.] ever been enrolled in Medicaid [or STATE MEDICAIDNAME]?

READ IF R MENTIONS THAT HE/SHE DOES NOT LIVE IN THE STATE MENTIONED IN THE QUESTION: Please think about the Medicaid program specific to the state in which you live.

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

IF 0,6,7 SKIP TO K12Q15.

K12Q13 When was the last time that [S.C.] was enrolled in Medicaid [or STATE MEDICAIDNAME]?

READ IF R MENTIONS THAT HE/SHE DOES NOT LIVE IN THE STATE MENTIONED IN THE QUESTION: Please think about the Medicaid program specific to the state in which you live.

RECORD DATE ___/___/____

(95) RECORD LENGTH OF TIME (MONTHS OR YEARS) [SKIP TO K12Q13_1]

(96) DON'T KNOW

(97) REFUSED

K12Q14 What is the main reason that [S.C.]'s enrollment ended?

COST

(01) COST TOO MUCH

(02) FORGOT TO PAY THE PREMIUM

ELIGIBILITY

(03) MOVING BETWEEN STATES OR REGIONS

(04) INSURANCE TERMINATED BY INSURER / RULE VIOLATION

(05) CHILD BECAME TOO OLD TO BE ELIGIBLE

(06) FINANCIAL SITUATION CHANGED / NO LONGER QUALIFIED FOR MEDICAID

(07) CHILD OBTAINED OTHER INSURANCE: CHIP / OTHER PUBLIC

(08) CHILD OBTAINED OTHER INSURANCE: EMPLOYER / UNION / PRIVATE

APPLICATION PROCESS

(09) DID NOT REAPPLY WHEN COVERAGE ENDED

(10) ISSUES WITH PAPERWORK

PROBLEMS WITH SERVICE OR AVAILABILITY

(11) DID NOT LIKE THE DOCTORS / MEDICAL STAFF / CLINICS / QUALITY OF CARE WHERE CHILD RECEIVED SERVICES

(12) SERVICES PROVIDED NOT CONVENIENTLY LOCATED OR NOT AVAILABLE WHEN NEEDED

(13) COULD NOT FIND DOCTORS WHO WOULD ACCEPT MEDICAID

OTHER

(14) CHILD DOES NOT NEED INSURANCE / DOES NOT GET SICK

(15) OTHER [SKIP TO K12Q14_OTHER]

(96) DON'T KNOW

(97) REFUSED

ALL EXCEPT 15 SKIP TO K12Q21.

K12Q15 Have you ever applied for Medicaid [or STATE MEDICAID NAME] for [S.C.]?

READ IF R MENTIONS THAT HE/SHE DOES NOT LIVE IN THE STATE MENTIONED IN THE QUESTION: Please think about the Medicaid program specific to the state in which you live.

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

IF 0,6,7 SKIP TO K12Q21.

K12Q16 When was the last time that you applied?

RECORD DATE /_/_____

- (95) RECORD LENGTH OF TIME (MONTHS OR YEARS) [SKIP TO K12Q16_1]
- (96) DON'T KNOW
- (97) REFUSED

K12Q17 What is the main reason that you were unable to enroll [S.C.] in Medicaid [or STATE NAME]?

READ IF R MENTIONS THAT HE/SHE DOES NOT LIVE IN THE STATE MENTIONED IN THE QUESTION: Please think about the Medicaid program specific to the state in which you live.

COST

- (01) EARNED TOO MUCH MONEY

ELIGIBILITY

- (02) ASSETS/RESOURCES TOO HIGH
- (03) CHILD WAS TOO OLD
- (04) CHILD NEEDED TO BE UNINSURED FOR LONGER PERIOD OF TIME TO QUALIFY
- (05) CHILD DID NOT MEET RESIDENCY OR CITIZENSHIP REQUIREMENTS
- (06) CHILD WAS ALREADY INSURED BY OTHER INSURANCE

APPLICATION PROCESS

- (07) DID NOT PROVIDE ALL PAPERWORK / DOCUMENTS NEEDED

OTHER

- (08) CHILD QUALIFIED FOR CHIP INSTEAD OF MEDICAID
- (09) APPLICATION RECENTLY SUBMITTED / NOW JUST WAITING
- (10) OTHER [SKIP TO K12Q17_OTHER]
- (96) DON'T KNOW
- (97) REFUSED

Subdomain 3: History with CHIP

SKIP TO NEXT SUBDOMAIN (K12Q30) IF STATE USES THE SAME OR SUBSTANTIALLY THE SAME NAME FOR THEIR MEDICAID AND CHIP PROGRAMS.

K12Q21 Before today, had you ever heard of [STATE CHIP NAME]?

READ IF R MENTIONS THAT HE/SHE DOES NOT LIVE IN THE STATE MENTIONED IN THE QUESTION: Please think about the state-sponsored Children's Health Insurance Program specific to the state in which you live.

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

IF 0,6,7 SKIP TO K12Q30.

K12Q22 Has [S.C.] ever been enrolled in [STATE CHIP NAME]?

READ IF R MENTIONS THAT HE/SHE DOES NOT LIVE IN THE STATE MENTIONED IN THE QUESTION: Please think about the state-sponsored Children's Health Insurance Program specific to the state in which you live.

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

IF 0,6,7 SKIP TO K12Q25.

K12Q23 When was the last time that [S.C.] was enrolled in [STATE CHIP NAME]?

READ IF R MENTIONS THAT HE/SHE DOES NOT LIVE IN THE STATE MENTIONED IN THE QUESTION: Please think about the state-sponsored Children's Health Insurance Program specific to the state in which you live.

RECORD DATE __/__/____

- (95) RECORD LENGTH OF TIME (MONTHS OR YEARS) [SKIP TO K12Q23_1]
- (96) DON'T KNOW
- (97) REFUSED

K12Q24 What is the main reason that [S.C.]'s enrollment ended?

COST

- (01) COST TOO MUCH
- (02) FORGOT TO PAY THE PREMIUM

ELIGIBILITY

- (03) MOVING BETWEEN STATES OR REGIONS
- (04) INSURANCE TERMINATED BY INSURER / RULE VIOLATION
- (05) CHILD BECAME TOO OLD TO BE ELIGIBLE
- (06) FINANCIAL SITUATION CHANGED / NO LONGER QUALIFIED FOR CHIP
- (07) CHILD OBTAINED OTHER INSURANCE: MEDICAID / OTHER PUBLIC

(08) CHILD OBTAINED OTHER INSURANCE: EMPLOYER / UNION / PRIVATE

APPLICATION PROCESS

(09) DID NOT REAPPLY WHEN COVERAGE ENDED

(10) ISSUES WITH PAPERWORK

PROBLEMS WITH SERVICE OR AVAILABILITY

(11) DID NOT LIKE THE DOCTORS / MEDICAL STAFF / CLINICS / QUALITY OF CARE WHERE CHILD RECEIVED SERVICES

(12) SERVICES PROVIDED NOT CONVENIENTLY LOCATED OR NOT AVAILABLE WHEN NEEDED

(13) COULD NOT FIND DOCTORS WHO WOULD ACCEPT CHIP

OTHER

(14) CHILD DOES NOT NEED INSURANCE / DOES NOT GET SICK

(15) OTHER [SKIP TO K12Q24_OTHER]

(96) DON'T KNOW

(97) REFUSED

SKIP TO K12Q30.

K12Q25 Have you ever applied for [STATE CHIP NAME] for [S.C.]?

READ IF R MENTIONS THAT HE/SHE DOES NOT LIVE IN THE STATE MENTIONED IN THE QUESTION: Please think about the state-sponsored Children's Health Insurance Program specific to the state in which you live.

(1) YES

(0) NO

(6) DON'T KNOW

(7) REFUSED

IF 0,6,7 SKIP TO K12Q30.

K12Q26 When was the last time that you applied?

RECORD DATE / /

(95) RECORD LENGTH OF TIME (MONTHS OR YEARS) [SKIP TO K12Q26_1]

(96) DON'T KNOW

(97) REFUSED

K12Q27 What is the main reason that you were unable to enroll [S.C.] in [STATE CHIPNAME]?

READ IF R MENTIONS THAT HE/SHE DOES NOT LIVE IN THE STATE MENTIONED IN THE QUESTION: Please think about the state-sponsored Children's Health Insurance Program specific to the state in which you live.

COST

(01) EARNED TOO MUCH MONEY

ELIGIBILITY

(02) ASSETS/RESOURCES TOO HIGH

(03) CHILD WAS TOO OLD

(04) CHILD NEEDED TO BE UNINSURED FOR LONGER PERIOD OF TIME TO QUALIFY

(05) CHILD DID NOT MEET RESIDENCY OR CITIZENSHIP REQUIREMENTS

(06) CHILD WAS ALREADY INSURED BY OTHER INSURANCE

APPLICATION PROCESS

(07) DID NOT PROVIDE ALL PAPERWORK / DOCUMENTS NEEDED

OTHER

(08) CHILD QUALIFIED FOR MEDICAID INSTEAD OF CHIP

(09) APPLICATION RECENTLY SUBMITTED / NOW JUST WAITING

(10) OTHER [RECORD VERBATIM RESPONSE]

(96) DON'T KNOW

(97) REFUSED

Subdomain 4: Interest in Enrolling in Medicaid/CHIP

SKIP TO NEXT SUBDOMAIN (K12Q40) IF K12Q11 = NO/DK/RF AND K12Q21 = NO/DK/RF/MISSING.

FOR PROGRAM FILLS IN THIS SUBDOMAIN,

- IF K12Q11 = YES AND K12Q21 = NO/DK/RF/MISSING, USE: Medicaid [or STATE MEDICAID NAME]
- IF K12Q11 = NO/DK/RF AND K12Q21 = YES, USE: [STATE CHIPNAME]
- IF K12Q11 = YES AND K12Q21 = YES, USE: Medicaid [or STATEMEDICAID NAME] or [CHIP NAME]

K12Q30 If you wanted to get more information about [PROGRAM], do you know where to go to get that information?

READ IF R MENTIONS THAT HE/SHE DOES NOT LIVE IN THE STATE MENTIONED IN THE QUESTION: Please think about the Medicaid or state-sponsored Children's Health Insurance Program specific to the state in which you live.

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

K12Q31 If you wanted to enroll [S.C.] in [PROGRAM], do you know how to do that?

READ IF R MENTIONS THAT HE/SHE DOES NOT LIVE IN THE STATE MENTIONED IN THE QUESTION: Please think about the Medicaid or state-sponsored Children's Health Insurance Program specific to the state in which you live.

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

K12Q32 *IF K12Q11=0,6,7 THEN SKIP TO K12Q33.*

IF K12Q12=1 THEN ASK: Based on what you know about Medicaid [or STATE MEDICAID NAME], how easy or difficult do you think it is to re-enroll? Would you say very easy, somewhat easy, somewhat difficult, or very difficult?

ELSE ASK: Based on what you know about Medicaid [or STATE MEDICAID NAME], how easy or difficult do you think it is to complete an application? Would you say very easy, somewhat easy, somewhat difficult, or very difficult?

READ IF R MENTIONS THAT HE/SHE DOES NOT LIVE IN THE STATE MENTIONED IN THE QUESTION: Please think about the Medicaid program specific to the state in which you live.

- (1) VERY EASY
- (2) SOMEWHAT EASY
- (3) SOMEWHAT DIFFICULT
- (4) VERY DIFFICULT
- (6) DON'T KNOW
- (7) REFUSED

K12Q33 *SKIP TO K11Q34 IF RESPONDENT HAS NEVER HEARD OF CHIP (K12Q21=0,6,7) OR IF STATE USES THE SAME OR SUBSTANTIALLY THE SAME NAME FOR THEIR MEDICAID AND CHIP PROGRAMS (CATEGORY "C" IN MEDICAID TABLE)*

IF K12Q22=1 THEN ASK: Based on what you know about [STATE CHIP NAME], how easy or difficult do you think it is to re-enroll? Would you say very easy, somewhat easy, somewhat difficult, or very difficult?

ELSEASK: Based on what you know about [STATE CHIP NAME], how easy or difficult do you think it is to complete an application? Would you say very easy, somewhat easy, somewhat difficult, or very difficult?

READ IF R MENTIONS THAT HE/SHE DOES NOT LIVE IN THE STATE MENTIONED IN THE QUESTION: Please think about the state-sponsored Children's Health Insurance Program specific to the state in which you live.

- (1) VERY EASY
- (2) SOMEWHAT EASY
- (3) SOMEWHAT DIFFICULT
- (4) VERY DIFFICULT
- (6) DON'T KNOW
- (7) REFUSED

K12Q34 Based on what you know about [PROGRAM], do you think [S.C.] is eligible now?

READ IF R MENTIONS THAT HE/SHE DOES NOT LIVE IN THE STATE MENTIONED IN THE QUESTION: Please think about the Medicaid or state-sponsored Children's Health Insurance Program specific to the state in which you live.

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

K12Q35 If you were told that [S.C.] was eligible for [PROGRAM], would you want to enroll [him/her]?

READ IF R MENTIONS THAT HE/SHE DOES NOT LIVE IN THE STATE MENTIONED IN THE QUESTION: Please think about the Medicaid or state-sponsored Children's Health Insurance Program specific to the state in which you live.

- (1) YES
- (0) NO [SKIP TO K12Q36]
- (6) DON'T KNOW
- (7) REFUSED

IF K12Q35 = YES AND K12Q34 = YES, THEN SKIP TO K12Q37.

IF K12Q35 = YES AND K12Q34 = NO, THEN SKIP TO K12Q38.

IF K12Q35 = 6,7 OR IF (K12Q35 = 1 AND K12Q34 = 6,7), THEN SKIP TO K12Q40.

K12Q36 What is the main reason you would NOT want to enroll [S.C.]?

- COST**
- (01) COSTS TOO MUCH

APPLICATION PROCESS

- (02) APPLICATION PROCESS TOO DIFFICULT, TAKES TOO MUCH TIME
- (03) DON'T WANT TO MEET PROGRAM APPLICATION REQUIREMENTS
- (04) DON'T LIKE PEOPLE AT APPLICATION OFFICE
- (05) WORRIES ABOUT CITIZENSHIP

NEGATIVE VIEWS OF PROGRAM

- (06) DON'T ACCEPT WELFARE, DON'T WANT TO BE IN PUBLIC PROGRAM
- (07) HEARD BAD THINGS ABOUT PROGRAM
- (08) DO NOT LIKE THE DOCTORS / MEDICAL STAFF / CLINICS WHERE CHILD WOULD RECEIVE SERVICES
- (09) SERVICES PROVIDED NOT CONVENIENTLY LOCATED OR NOT AVAILABLE WHEN NEEDED

OTHER

- (10) CHILD DOES NOT NEED INSURANCE / DOES NOT GET SICK
- (11) EXPECT TO HAVE INSURANCE FROM ANOTHER SOURCE SOON
- (12) OTHER [SKIP TO K12Q36_OTHER]
- (96) DON'T KNOW
- (97) REFUSED

ALL EXCEPT 12 SKIP TO K12Q40.

K12Q37

What is the main reason [S.C.] is not enrolled in [PROGRAM]?

READ IF R MENTIONS THAT HE/SHE DOES NOT LIVE IN THE STATE MENTIONED IN THE QUESTION: Please think about the Medicaid or state-sponsored Children's Health Insurance Program specific to the state in which you live.

COST

- (01) COSTS TOO MUCH

ELIGIBILITY

- (02) MOVING BETWEEN STATES OR REGIONS
- (03) INELIGIBLE DUE TO INCOME TOO HIGH FOR PUBLIC PROGRAM
- (04) INELIGIBLE DUE TO AGE
- (05) INELIGIBLE DUE TO RESIDENCY, CITIZENSHIP, OR LACK OF SSN
- (06) INELIGIBLE DUE TO OTHER PROGRAM REQUIREMENT

APPLICATION PROCESS

- (07) DON'T HAVE THE NECESSARY DOCUMENTS
- (08) APPLICATION PROCESS TOO DIFFICULT, TAKES TOO MUCH TIME
- (09) DON'T WANT TO MEET PROGRAM APPLICATION REQUIREMENTS
- (10) WORRIES ABOUT CITIZENSHIP

IN TRANSITION BETWEEN COVERAGE

- (11) HAVE APPLIED – NOW JUST WAITING
- (12) INTEND TO APPLY BUT JUST HAVEN'T DONE SO
- (13) DON'T KNOW WHERE OR HOW TO APPLY

OTHER

- (14) CHILD DOES NOT NEED INSURANCE / DOES NOT GET SICK
- (15) OTHER [SKIP TO K12Q37]
- (96) DON'T KNOW
- (97) REFUSED

ALL EXCEPT 08 SKIP TO K12Q40.

K12Q38

What is the main reason that you think [S.C.] is not eligible for [PROGRAM]?

READ IF R MENTIONS THAT HE/SHE DOES NOT LIVE IN THE STATE MENTIONED IN THE QUESTION: Please think about the Medicaid or state-sponsored Children's Health Insurance Program specific to the state in which you live.

INCOME

- (01) EARN TOO MUCH MONEY
- (02) ASSETS/RESOURCES TOO HIGH

ELIGIBILITY

- (03) CHILD IS TOO OLD
- (04) CHILD NEEDS TO BE UNINSURED FOR LONGER PERIOD OF TIME TO QUALIFY
- (05) CHILD DOES NOT MEET RESIDENCY OR CITIZENSHIP REQUIREMENTS
- (06) CHILD IS ALREADY INSURED BY OTHER INSURANCE

OTHER

- (07) CANNOT OR WILL NOT PROVIDE ALL PAPERWORK / DOCUMENTS NEEDED
- (08) OTHER [SKIP TO K12Q38_OTHER]
- (96) DON'T KNOW
- (97) REFUSED

SKIP TO NEXT SUBDOMAIN (K12Q40).

Subdomain 5: Parents' Coverage and Availability of Employer-Sponsored Insurance

K12Q40 *SKIP TO K12Q50 IF NO MOTHER-TYPE IN HOUSEHOLD ((C10Q02A NE 1-5) AND (C10Q02B NOT EQ 1-5))*

IF (C10Q02A=1-5), FILL "do you" ELSE, FILL "does S.C.'s [MOTHER TYPE]".

At this time, [do you / does S.C.'s MOTHER TYPE] have any kind of health care coverage, including health insurance, prepaid plans such as HMOs, or government plans such as Medicaid or Medicare?

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

IF 0,6,7 SKIP TO K12Q42.

K12Q41 *IF C10Q02A=1-5, FILL "your" ELSE, FILL "her".*

Is that health insurance provided through [your/her] current employer, former employer, union, or some other source?

- (1) HER CURRENT EMPLOYER [SKIP TO K12Q43]
- (2) HER FORMER EMPLOYER
- (3) HER UNION [SKIP TO K12Q43]
- (4) SOME OTHER SOURCE
- (6) DON'T KNOW
- (7) REFUSED

INTERVIEWER NOTE: IF THE RESPONDENT REPORTS THAT INSURANCE IS PROVIDED THROUGH MULTIPLE SOURCES, ASK WHICH SOURCE PROVIDES PRIMARY COVERAGE FOR BOTH DOCTOR VISITS AND HOSPITAL STAYS.

K12Q42 *IF (C10Q02A=1-5), FILL "are you" ELSE, FILL "does [S.C.]'s [MOTHER TYPE]"*.

At this time, [are you/is S.C.'s MOTHER TYPE's] eligible for health insurance through [your/her] current employer or union?

- (1) YES, HER CURRENT EMPLOYER
- (2) YES, HER UNION
- (3) YES, BOTH
- (4) NO [SKIP TO K12Q50]
- (6) DON'T KNOW
- (7) REFUSED [SKIP TO K12Q50]

INTERVIEWER NOTE: IF THE RESPONDENT REPORTS NOT BEING EMPLOYED, RECORD ANSWER AS NO.

K12Q43 *IF K12Q41 OR K12Q42 = 1, FILL WITH "employer"*
IF K12Q41 = 3 OR K12Q42 = 2, FILL WITH "union"
IF K12Q42 = 3 or 6, FILL WITH "employer or union"

Does this [employer/union/employer or union] offer health insurance that could help pay for doctor visits and hospital stays for [S.C.]?

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

NOTE TO INTERVIEWER: AT THIS QUESTION, COLLECT INFORMATION ABOUT THE [MOTHER TYPE]'S EMPLOYER.

IF 0,6,7 SKIP TO K12Q46.

K12Q44 If [S.C.] was covered by insurance provided through this [employer/union/employer or union], would this [employer/union/employer or union] pay for all, some, or none of [his/her] health insurance premium?

- (1) ALL
- (2) SOME
- (3) NONE
- (6) DON'T KNOW
- (7) REFUSED

NOTE TO INTERVIEWER: AT THIS QUESTION, COLLECT INFORMATION ABOUT THE [MOTHER TYPE]'S EMPLOYER.

K12Q45 What is the main reason that [S.C.] is not covered by insurance provided through this [employer/union/employer or union]?

COST

- (1) COST IS TOO HIGH
- (2) TRADED HEALTH INSURANCE FOR HIGHER PAY

ELIGIBILITY

- (3) INSURER REFUSED TO COVER / PREEXISTING CONDITION
- (4) CHILD NOT ELIGIBLE DUE TO TYPE OF JOB
- (5) CHILD NOT ELIGIBLE DUE TO NUMBER OF HOURS WORKED
- (6) CHILD NOT ELIGIBLE DUE TO LENGTH OF TIME AT JOB
- (7) CHILD NOT ELIGIBLE FOR SOME OTHER REASON

APPLICATION PROCESS

- (8) HAVE APPLIED – NOW JUST WAITING
- (9) INTEND TO APPLY BUT JUST HAVEN'T DONE SO
- (10) DON'T KNOW WHERE OR HOW TO APPLY
- (11) APPLICATION PROCESS TOO DIFFICULT, TAKES TOO MUCH TIME

NEGATIVE VIEWS OF PROGRAM

- (12) HEARD BAD THINGS ABOUT INSURANCE PROGRAM
- (13) DO NOT LIKE DOCTORS / MEDICAL STAFF / CLINIC IN HEALTH PLAN
- (14) SERVICES PROVIDED NOT CONVENIENTLY LOCATED OR NOT AVAILABLE WHEN NEEDED

OTHER

- (15) DOES NOT NEED INSURANCE / DOES NOT GET SICK
- (16) EXPECT TO HAVE INSURANCE FROM ANOTHER SOURCE SOON
- (17) OTHER [SKIP TO K12Q45]

(96) DON'T KNOW

(97) REFUSED

NOTE TO INTERVIEWER: AT THIS QUESTION, COLLECT INFORMATION ABOUT THE [MOTHER TYPE]'S EMPLOYER.

K12Q46 *IF K12Q41 = 3 OR K12Q42 = 2, SKIP TO K12Q50.*

IF C10Q02A=1-5, FILL "your" ELSE, FILL "[S.C.]'s [MOTHER TYPE]".

Think about all locations where [your/ S.C.'s MOTHER TYPE's] employer operates. Would you say that the total number of persons who work for this employer is above or below 100?

(1) MORE THAN 100

(2) EXACTLY 100

(3) LESS THAN 100

(4) NOT EMPLOYED

(6) DON'T KNOW

(7) REFUSED

K12Q47 *ASK K12Q47 ONLY IF ANSWER TO K12Q46 IS "LESS THAN 100." OTHERWISE, SKIP TO K12Q50.*

Is the total number of persons who work for [your/her] employer above or below 50?

(1) MORE THAN 50

(2) EXACTLY 50

(3) LESS THAN 50

(6) DON'T KNOW

(7) REFUSED

NOTE TO INTERVIEWER: AT THIS QUESTION, COLLECT INFORMATION ABOUT THE [MOTHER TYPE]'S EMPLOYER.

K12Q50 *SKIP TO K12Q60 IF NO FATHER-TYPE IN HOUSEHOLD((C10Q02A NE 6-10) AND (C10Q02B NOT EQ 6-10)*

IF C10Q02A=6-10, FILL "do you". ELSE, FILL "does [S.C.]'s [FATHER TYPE]".

At this time, [do you / does S.C.'s FATHER TYPE] have any kind of health care coverage, including health insurance, prepaid plans such as HMOs, or government plans such as Medicaid or Medicare?

(1) YES

(0) NO

(6) DON'T KNOW

(7) REFUSED

IF 0,6,7 SKIP TO K12Q52.

K12Q51 *IF C10Q02A=6-10, FILL "your" ELSE, FILL "does [S.C.]'s [FATHER TYPE]"*.

Is that health insurance provided through [your/his] current employer, former employer, union, or some other source?

(1) CURRENT EMPLOYER [SKIP TO K12Q53]

(2) FORMER EMPLOYER

- (3) UNION [SKIP TO K12Q53]
- (4) SOME OTHER SOURCE
- (6) DON'T KNOW
- (7) REFUSED

INTERVIEWER NOTE: IF THE RESPONDENT REPORTS THAT INSURANCE IS PROVIDED THROUGH MULTIPLE SOURCES, ASK WHICH SOURCE PROVIDES PRIMARY COVERAGE FOR BOTH DOCTOR VISITS AND HOSPITAL STAYS.

K12Q52 At this time, [are you/is S.C.'s FATHER TYPE's] eligible for health insurance through [your/his] current employer or union?

- (1) YES, CURRENT EMPLOYER
- (2) YES, UNION
- (3) YES, BOTH
- (4) NO [SKIP TO K12Q60]
- (6) DON'T KNOW
- (7) REFUSED [SKIP TO K12Q60]

INTERVIEWER NOTE: IF THE RESPONDENT REPORTS NOT BEING EMPLOYED, RECORD ANSWER AS NO.

K12Q53 *IF K12Q51 OR K12Q52 = 1, FILL WITH "employer"*
IF K12Q51 = 3 OR K12Q52 = 2, FILL WITH "union"
IF K12Q52 = 3 or 6, FILL WITH "employer or union"

Does this [employer/union/employer or union] offer health insurance that could help pay for doctor visits and hospital stays for [S.C.]?

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

NOTE TO INTERVIEWER: AT THIS QUESTION, COLLECT INFORMATION ABOUT THE [FATHER TYPE]'S EMPLOYER.

IF 0,6,7 SKIP TO K12Q56.

K12Q54 If [S.C.] was covered by insurance provided through this [employer/union/employer or union], would this [employer/union/employer or union] pay for all, some, or none of [his/her] health insurance premium??

- (1) ALL
- (2) SOME
- (3) NONE
- (6) DON'T KNOW
- (7) REFUSED

NOTE TO INTERVIEWER: AT THIS QUESTION, COLLECT INFORMATION ABOUT THE [FATHER TYPE]'S EMPLOYER.

K12Q55 What is the main reason that [S.C.] is not covered by insurance provided through this [employer/union/employer or union]?

COST

- (01) COST IS TOO HIGH
- (02) TRADED HEALTH INSURANCE FOR HIGHER PAY

ELIGIBILITY

- (03) INSURER REFUSED TO COVER / PREEXISTING CONDITION
- (04) CHILD NOT ELIGIBLE DUE TO TYPE OF JOB
- (05) CHILD NOT ELIGIBLE DUE TO NUMBER OF HOURS WORKED
- (06) CHILD NOT ELIGIBLE DUE TO LENGTH OF TIME AT JOB
- (07) CHILD NOT ELIGIBLE FOR SOME OTHER REASON

APPLICATION PROCESS

- (08) HAVE APPLIED – NOW JUST WAITING
- (09) INTEND TO APPLY BUT JUST HAVEN'T DONE SO
- (10) DON'T KNOW WHERE OR HOW TO APPLY
- (11) APPLICATION PROCESS TOO DIFFICULT, TAKES TOO MUCH TIME

NEGATIVE VIEWS OF PROGRAM

- (12) HEARD BAD THINGS ABOUT INSURANCE PROGRAM
- (13) DO NOT LIKE DOCTORS / MEDICAL STAFF / CLINIC IN HEALTH PLAN
- (14) SERVICES PROVIDED NOT CONVENIENTLY LOCATED OR NOT AVAILABLE WHEN NEEDED

OTHER

- (15) DOES NOT NEED INSURANCE / DOES NOT GET SICK
- (16) EXPECT TO HAVE INSURANCE FROM ANOTHER SOURCE SOON
- (17) OTHER [SKIP TO K12Q45]
- (96) DON'T KNOW
- (97) REFUSED

NOTE TO INTERVIEWER: AT THIS QUESTION, COLLECT INFORMATION ABOUT THE [FATHER TYPE]'S EMPLOYER.

K12Q56 *IF K12Q51 = 3 OR K12Q52 = 2, SKIP TO K12Q60.*

Think about all locations where [your/ S.C.'s FATHER TYPE's] employer operates. Would you say that the total number of persons who work for this employer is above or below 100?

- (1) MORE THAN 100
- (2) EXACTLY 100
- (3) LESS THAN 100
- (4) NOT EMPLOYED
- (6) DON'T KNOW
- (7) REFUSED

K12Q57 *ASK K12Q57 ONLY IF ANSWER TO K12Q56 IS "LESS THAN 100." OTHERWISE, SKIP TO K12Q60.*

IF C10Q02A=6-10, FILL "do you", ELSE, FILL "his".

Is the total number of persons who work for [your/his] employer above or below 50?

- (1) MORE THAN 50
- (2) EXACTLY 50
- (3) LESS THAN 50
- (6) DON'T KNOW
- (7) REFUSED

NOTE TO INTERVIEWER: AT THIS QUESTION, COLLECT INFORMATION ABOUT THE [FATHER TYPE]'S EMPLOYER.

K12Q60 *SKIP TO CPC11Q14 IF RESPONDENT IS MOTHER OR FATHER (C10Q02A=1-10). QUESTIONS ABOUT THE RESPONDENT'S INSURANCE ARE ONLY ASKED HERE IF THE RESPONDENT HAS NOT ALREADY ANSWERED FOR HIMSELF/HERSELF IN K12Q40 OR K12Q50.*

At this time, do you have any kind of health care coverage, including health insurance, prepaid plans such as HMOs, or government plans such as Medicaid or Medicare?

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

IF 0,6,7 SKIP TO K12Q62.

K12Q61 Is that health insurance provided through your current employer, former employer, union, or some other source?

- (1) CURRENT EMPLOYER [SKIP TO K12Q63]
- (2) FORMER EMPLOYER
- (3) UNION [SKIP TO K12Q63]
- (4) SOME OTHER SOURCE
- (6) DON'T KNOW
- (7) REFUSED

INTERVIEWER NOTE: IF THE RESPONDENT REPORTS THAT INSURANCE IS PROVIDED THROUGH MULTIPLE SOURCES, ASK WHICH SOURCE PROVIDES PRIMARY COVERAGE FOR BOTH DOCTOR VISITS AND HOSPITAL STAYS.

K12Q62 At this time, are you eligible for health insurance through your current employer or union?

- (1) YES, CURRENT EMPLOYER
- (2) YES, UNION
- (3) YES, BOTH
- (4) NO [SKIP TO NEXT SECTION]
- (6) DON'T KNOW
- (7) REFUSED [SKIP TO NEXT SECTION]

INTERVIEWER NOTE: IF THE RESPONDENT REPORTS NOT BEING EMPLOYED, RECORD ANSWER AS NO.

K12Q63 *IF K12Q61 OR K12Q62 = 1, FILL WITH "employer"*
IF K12Q61 = 3 OR K12Q62 = 2, FILL WITH "union"
IF K12Q62 = 3 or 6, FILL WITH "employer or union"

Does this [employer/union/employer or union] offer health insurance that could help pay for doctor visits and hospital stays for [S.C.]?

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

NOTE TO INTERVIEWER: AT THIS QUESTION, COLLECT INFORMATION ABOUT THE RESPONDENT'S EMPLOYER.

IF 0,6,7 SKIP TO K12Q66.

K12Q64 If [S.C.] was covered by insurance provided through this [employer/union/employer or union], would this [employer/union/employer or union] pay for all, some, or none of [his/her] health insurance premium?

- (1) ALL
- (2) SOME
- (3) NONE
- (6) DON'T KNOW
- (7) REFUSED

NOTE TO INTERVIEWER: AT THIS QUESTION, COLLECT INFORMATION ABOUT THE RESPONDENT'S EMPLOYER.

K12Q65 What is the main reason that [S.C.] is not covered by insurance provided through this [employer/union/employer or union]?

COST

- (01) COST IS TOO HIGH
- (02) TRADED HEALTH INSURANCE FOR HIGHER PAY

ELIGIBILITY

- (03) INSURER REFUSED TO COVER / PREEXISTING CONDITION
- (04) CHILD NOT ELIGIBLE DUE TO TYPE OF JOB
- (05) CHILD NOT ELIGIBLE DUE TO NUMBER OF HOURS WORKED
- (06) CHILD NOT ELIGIBLE DUE TO LENGTH OF TIME AT JOB
- (07) CHILD NOT ELIGIBLE FOR SOME OTHER REASON

APPLICATION PROCESS

- (08) HAVE APPLIED – NOW JUST WAITING
- (09) INTEND TO APPLY BUT JUST HAVEN'T DONE SO
- (10) DON'T KNOW WHERE OR HOW TO APPLY
- (11) APPLICATION PROCESS TOO DIFFICULT, TAKES TOO MUCH TIME

NEGATIVE VIEWS OF PROGRAM

- (12) HEARD BAD THINGS ABOUT INSURANCE PROGRAM
- (13) DO NOT LIKE DOCTORS / MEDICAL STAFF / CLINIC IN HEALTHPLAN
- (14) SERVICES PROVIDED NOT CONVENIENTLY LOCATED OR NOT AVAILABLE WHEN NEEDED

OTHER

- (15) DOES NOT NEED INSURANCE / DOES NOT GET SICK
- (16) EXPECT TO HAVE INSURANCE FROM ANOTHER SOURCE SOON
- (17) OTHER [SKIP TO K12Q45]
- (96) DON'T KNOW
- (97) REFUSED

NOTE TO INTERVIEWER: AT THIS QUESTION, COLLECT INFORMATION ABOUT THE RESPONDENT'S EMPLOYER.

K12Q66 *IF K12Q61 = 3 OR K12Q62 = 2, SKIP TO NEXT SECTION.*

Think about all locations where your employer operates. Would you say that the total number of persons who work for this employer is above or below 100?

- (1) MORE THAN 100
- (2) EXACTLY 100
- (3) LESS THAN 100
- (4) NOT EMPLOYED
- (6) DON'T KNOW
- (7) REFUSED

K12Q67

ASK K12Q67 ONLY IF K12Q66=3 OTHERWISE, SKIP TO NEXTSECTION.

Is the total number of persons who work for your employer above or below 50?

- (1) MORE THAN 50
- (2) EXACTLY 50
- (3) LESS THAN 50
- (6) DON'T KNOW
- (7) REFUSED

NOTE TO INTERVIEWER: AT THIS QUESTION, COLLECT INFORMATION ABOUT THE RESPONDENT'S EMPLOYER.

Section 13: Locating Information

Subdomain 1: Telephone line information

CPC11Q14 IF (RDD_NCCELL_CCELL=2,3 AND TAKE_ALL_CELL_FLAG=1) THEN ASK
SL_LANDLINE; ELSE SKIP TO C11Q15_CELL

SL_LANDLINE The next few questions are about the telephones in your household.

Do you have a landline telephone in your household?

READ AS NECESSARY: Please do not include:

- modem-only lines,
- fax-only lines,
- lines used just for home security systems,
- beepers,
- Skype
- pagers, or
- cell phones.

Please include Voice Over I.P. or VOIP numbers.

- (1) YES
- (0) NO
- (6) DON'T KNOW
- (7) REFUSED

C11Q15_CELL [IF SL_LANDLINE NOT DISPLAYED, THEN DISPLAY: The next few questions are about the telephones in your household.]

In total, how many working cell phones do you and your household members have available for personal use? Please do not count cell phones that are used exclusively for business purposes [If RDD_NCCELL_CCELL=2,3 and NEWPHONE_FLAG=0 then display: "and please include the number we called." ELSE If RDD_NCCELL_CCELL=2,3 and NEWPHONE_FLAG=1 then display: "and please include [OLD_NUMBER]."]]

[If RDD_NCCELL_CCELL=2,3 and NEWPHONE_FLAG=1 display "INTERVIEWER NOTE: THE NUMBER FOR THIS CASE WAS CHANGED BY THE RESPONDENT ON A PREVIOUS CALL."]

- (1) ONE
- (2) TWO
- (3) THREE OR MORE
- (4) NONE [GO TO C11Q20]
- (6) DON'T KNOW
- (7) REFUSED

CP_CELLUSUALLY

*IF ((NIS OR TEEN COMPLETED) AND (C21_06Q3_CELL = 1, 2, 3, 6, 7 OR
TIS_C21_06Q3_CELL = 1, 2, 3, 6, 7)), GO TO C11Q15_CELL_USUALLY*

*ELSE IF (NIS OR TEEN COMPLETED) AND (C21_06Q3_CELL = 4 OR
TIS_C21_06Q3_CELL = 4), GO TO C11Q20*

ELSE GO TO C11Q15_CELL_USUALLY

C11Q15_CELL_USUALLY

[IF NIS OR TEEN COMPLETED AND (C21_06Q3_CELL = 1, 2, 3 or TIS_C21_06Q3_CELL =
1, 2, 3) AND SAMPLE_USE_CODE IN (2,4) READ: Earlier you told me that you have at least
one cell phone in your household.]

[IF NIS OR TEEN COMPLETED AND (C21_06Q3_CELL = 6, 7 or TIS_C21_06Q3_CELL =
6, 7) AND SAMPLE_USE_CODE IN (2,4) READ: The next few questions are about the
telephones in your household.]

How many [IF C11Q15_CELL = 1, 2, 3 THEN DISPLAY: "of these"] cell phones do the adults in
this household usually use? [If RDD_NCCELL_CELL=2,3 and NEWPHONE_FLAG=0 then
display: "Please include the number we called." ELSE If RDD_NCCELL_CCELL=2,3 and
NEWPHONE_FLAG=1 then display "Please include [OLD_NUMBER]."]

[IF RDD_NCCELL_CELL=2,3 then display: "INTERVIEWER NOTE: THE NUMBER WE
CALLED IS ASSUMED TO BE USUALLY USED, SO THE ANSWER MUST BE AT LEAST
"ONE""]

[If RDD_NCCELL_CCELL=2,3 and NEWPHONE_FLAG=1 display "INTERVIEWER NOTE:
THE NUMBER FOR THIS CASE WAS CHANGED BY THE RESPONDENT ON A
PREVIOUS CALL.]

- (1) ONE
- (2) TWO
- (3) THREE OR MORE
- (0) NONE
- (6) DON'T KNOW
- (7) REFUSED

CP_C11Q16 *IF (RDD_NCCELL_CCELL=2,3 AND (SL_LANDLINE=2 OR LANDLINE=2)) THEN SKIP
TO CPC11_AWAY; ELSE ASK C11Q16*

C11Q16 Of all the telephone calls that you and your household receive, are nearly all received on cell
phones, nearly all received on regular phones, or some received on cell phones and some received
on regular phones?

HELP TEXT: "REGULAR PHONES" REFERS TO LANDLINE PHONES

- (1) NEARLY ALL RECEIVED ON CELL PHONES
- (2) NEARLY ALL RECEIVED ON REGULAR PHONES
- (3) SOME RECEIVED ON CELL PHONES AND SOME RECEIVED ON REGULAR PHONES
- (6) DON'T KNOW
- (7) REFUSED

CPC11_AWAY *IF (RDD_NCCELL_CELL=2,3 AND CELL_AWAY = 1) THEN GO TO C11_AWAY; ELSE GO
TO SL_CELLUSE*

C11_AWAY Would you mind telling me if I reached you today away from home or at home?

INTERVIEWER NOTE: IF THE RESPONDENT WAS AWAY FROM HOME DURING ANY PART OF THE CALL, THEN CODE AS AWAY FROM HOME.

- (1) AWAY FROM HOME
- (2) AT HOME
- (6) DON'T KNOW
- (7) REFUSED

SL_CELLUSE *IF [(RDD_NCCEL_CCELL=1 AND C11Q15_CELL=1,2,3,6,7) OR (TAKE_ALL_CELL_FLAG=1 AND RDD_NCCEL_CCELL=2,3 AND SL_LANDLINE=1,6,7)] THEN ASK SL_CELLUSE; ELSE SKIP TO CP_CELLONLY*

Thinking just about the landline home phone, not your cell phone, if that telephone rang and someone were home, under normal circumstances how likely is it that it would be answered? Would you say extremely likely, somewhat likely, somewhat unlikely, or not at all likely?

- (1) EXTREMELY LIKELY
- (2) SOMEWHAT LIKELY
- (3) SOMEWHAT UNLIKELY
- (4) NOT AT ALL LIKELY
- (6) DON'T KNOW
- (7) REFUSED

CP_CELLONLY *IF (RDD_NCCEL_CELL=2,3 AND (SL_LANDLINE=2 OR LANDLINE=2) THEN GO TO CPV_ISLAND; ELSE GO TO C11Q20*

C11Q20 Not including cellular telephones, has your family been without telephone service for 1 week or more during the past 12 months?

- (1) YES [SKIP TO CPV_ISLAND]
- (0) NO [SKIP TO CPV_ISLAND]
- (6) DON'T KNOW [SKIP TO CPV_ISLAND]
- (7) REFUSED [SKIP TO CPV_ISLAND]

Subdomain 2: ZIP Code

CPV_ISLAND *IF IAP=95 THEN GO TO V_ISLAND, ELSE GO TO C11Q22.*

V_ISLAND *IF NIS COMPLETE FILL FROM C_ISLAND.*

IF TEEN COMPLETE FROM TIS_C_ISLAND.

On what island do you live?

- (1) SAINT CROIX [GO TO CP_ADDRESS]
- (2) SAINT THOMAS [GO TO CP_ADDRESS]
- (3) SAINT JOHN [GO TO CP_ADDRESS]
- (4) WATER ISLAND [GO TO CP_ADDRESS]
- (5) DON'T LIVE IN VIRGIN ISLANDS [GO TO C11Q22]
- (6) DON'T KNOW [GO TO C11Q22]

(7) REFUSED [GO TO C11Q22]

C11Q22 [Filled from C19A, C19A_NEW_ZIP, TIS_C19A, or TIS_C19A_NEW_ZIP if it is not equal to missing, '99996', or '99997'.]

Please tell me your zip code.
[CATI: 5 NUMERIC-CHARACTER-FIELD, RANGE 00001-99998]
_____ (00001-99998)
(99996) DON'T KNOW
(99997) REFUSED

C11Q22_CONF [IF C11Q22 FILLED FROM C19A or TIS_C19A, THEN "Earlier you told me your zip code is" / IF C11Q22 ASKED, THEN "I entered"] [FILL C11Q22], is that correct?

(1) YES [GO TO LOC_STATE]
(2) NO [GO TO C11Q22]

LOC_STATE What state do you live in?

_____ (DROP DOWN MENU OF STATE NAMES) [THIS DOES NOT CHANGE 'STATE' FROM THE SAMPLE PRE-FILL TABLE]

(96) DON'T KNOW
(97) REFUSED

Subdomain 3: Locating questions

CP_ADDRESS IF LOCATE_FLAG = 1 THEN GO TO LOCATE_TRANSITION

IF LOCATE_FLAG = 0 AND CASE DID NOT QUALIFY FOR NIS OR NSCH INCENTIVES, GO TO K_END

ELSE IF LOCATE_FLAG = 0 AND CASE DID QUALIFY FOR NIS OR NSCH INCENTIVES, GO TO NSCH_ADDRESS_CONF

LOCATE_TRANSITION We may want to contact you in the future to ask questions about the health and health care of [S.C.]. By participating in future surveys, you will help us better understand the health and health care needs of children and adolescents in your state and the nation.

LOCATE_NUMBER Is there another number where we can reach you if this number isn't working for some reason?

INTERVIEWER INSTRUCTION: IF THE RESPONDENT SAYS NO, PROBE THE RESPONDENT FURTHER BY SAYING: "An alternate number can be a work or cell phone number, or even a number for a relative who you keep in touch with."

READ AS NECESSARY: We will only call you back to participate in future surveys about the health or health care of [S.C.], and will not sell or disclose your telephone number to any other party. If we do contact you in the future, you can choose whether or not to participate at that time.

(1) YES [GO TO LOCATE_NUMBERGIVEN]
(2) NO OR REFUSED [GO TO LOCATE_ADDRESS]

LOCATE_

NUMBERGIVEN ENTER TELEPHONE NUMBER (____ - ____ - _____)

LOCATE_ NUMBERGIVEN_A (1) TELEPHONE NUMBER COMPLETE [GO TO TELETYPE]
 (2) ENTER TELEPHONE EXTENSION [GO TO LOCATE_NUMBER_EXT]

LOCATE_ NUMBER_EXT ENTER EXTENSION TO TELEPHONE NUMBER. (ALLOW FOR UP TO FIVE NUMBERS)

TELETYPE Is this telephone number a cell phone, landline, work number or othertype?
 (1) CELL
 (2) WORK
 (3) OTHER
 (6) DON'T KNOW
 (7) REFUSED

LOCATE_ADDRESS If we call you back in the future, we may want to mail you a letter explaining more about the survey and the questions we will ask.
 IF CASE QUALIFIED FOR NSCH INCENTIVE THEN READ: We'd also like to mail you [\$XX] as a token of our appreciation for taking the time to answer our questions.
 If AC_NIS_INCENT_EXIT not previously read, READ: In addition, the National Immunization Study will be sending you \$[X], which you may have already received.
 IF NO ADDRESS, READ: Would you please give me your address?
 IF ADDRESS ALREADY OBTAINED, READ: Would you please verify your address?
PROCEED THROUGH ADDRESS COLLECTION OR VERIFICATION.
IF NAME OF S.C. GIVEN DURING SURVEY, THEN SKIP TO PNAME.

LOCATING_NAME I could refer to your child as [AGEID] if we call you back, or if you prefer, you could give me a first name or initials.
 (1) CONTINUE TO USE AGE REFERENCE [GO TO PNAME]
 (2) USE NAME [GO TO LOCATING_NAME_A]

LOCATING_NAME_A ENTER NAME/INITIALS: _____

PNAME Since following up with your household maybe easier if we have your name, could you please give me your name or initials?
 (1) YES [GO TO PNAME_A]
 (0) NO [GO TO K_END]

PNAME_A ENTER NAME/INITIALS _____
 GO TO K_END

Subdomain 4: Closing Script

K_END Those are all the questions I have. You may be re-contacted in the future to participate in related studies. If you are contacted to participate in future surveys, you have the right to refuse. I'd like to thank you on behalf of the Centers for Disease Control and Prevention for the time and effort

you've spent answering these questions. If you have any questions about this survey, you may call my supervisor toll-free at [IF SUC = 1, 2, 4, 5, 6, FILL 1 - 8 6 6 - 9 9 9 - 3 3 4 0 / IF SUC =3, FILL 1 - 8 6 6 - 9 0 0 - 9 6 0 1]. If you have questions about your rights as a survey participant, you may call the chairman of the Research Ethics Review Board at 1-800-223-8118. Thank you again.

TERMINATE INTERVIEW WITH RESPONDENT.

LANG1 *APPEARS AFTER COMPLETED INTERVIEWS ONLY.*

INTERVIEWER: WAS THIS INTERVIEW COMPLETED USING ENGLISH ONLY?

- (1) YES [TERMINATE INTERVIEW, IF ITS <> 67, GO TO COMMENTS]
- (0) NO [SKIP TO LANG2]

LANG2 INTERVIEWER: WHICH LANGUAGES WERE NEEDED TO COMPLETE THIS INTERVIEW?
[Mark all that apply.]

- (1) ENGLISH
- (2) SPANISH
- (4) CANTONESE
- (8) KOREAN
- (9) MANDARIN
- (13) VIETNAMESE
- (14) ANOTHER LANGUAGE [GO TO LANG2_OTHER]

LANG2_
OTHER _____ OTHER LANGUAGE

LANG3 INTERVIEWER: WAS THIS INTERVIEW COMPLETED "MOSTLY IN ENGLISH" OR "MOSTLY IN ANOTHER LANGUAGE"?

- (1) MOSTLY IN ENGLISH
- (2) MOSTLY IN OTHER LANGUAGE
- (3) ABOUT HALF AND HALF

Callback and Refusal Conversion Scripts

INTRO_1 Hello, my name is _____. I'm calling on behalf of the Centers for Disease Control and Prevention [(NSCH11_INCENT_FLAG = 2 OR NSCH11_PASSIVE = 1 or 2) AND NSCH11_LTR_FLAG = 1 THEN, " to follow up on a letter that was sent to your home"/ ELSE NO FILL]. Earlier, we contacted your household to participate in a survey about the health of children and teenagers. I'm calling back to continue the interview.

(IF NAME WAS GIVEN FOR APPOINTMENT, ASK FOR THAT PERSON.)

INTRO_1A Hello, my name is _____. I'm calling on behalf of the Centers for Disease Control and Prevention [IF SUC=5, 6 AND NSCH11_INCENT = 5 or 6 AND (NSCH11_INCENT_FLAG = 2 OR NSCH11_PASSIVE = 1 or 2) AND NSCH11_LTR_FLAG = 1 THEN, " to follow up on a letter that was sent to your home"/ ELSE NO FILL]. Earlier we contacted your household to participate in a survey about the health of children and teenagers. After just a few questions I can determine if your household is eligible to participate. [IF SUC=5, 6 AND NSCH INCENTIVE CASE, THEN DISPLAY: "In appreciation for your time, we will send you \$[MONEY_1 / MONEY_2]."]

(IF NAME WAS GIVEN FOR APPOINTMENT, ASK FOR THAT PERSON.)

INTRO_1B Hello, my name is _____. I'm calling on behalf of the Centers for Disease Control and Prevention [IF NSCH11_INCENT = 5 or 6 AND (NSCH11_INCENT_FLAG = 2 OR NSCH11_PASSIVE = 1 or 2) AND NSCH11_LTR_FLAG = 1 THEN, " to follow up on a letter that was sent to your home"/ ELSE NO FILL]. Earlier, someone in your household started a survey about the health of children and teenagers. I'm calling back now to continue the interview. [IF NSCH INCENTIVE CASE, THEN DISPLAY: "In appreciation for your time, we will send you \$[MONEY_1 / MONEY_2]."]

(IF NAME WAS GIVEN FOR APPOINTMENT, ASK FOR THAT PERSON.)

INTRO_CLOSEDOWN

Hello, my name is _____. I'm calling on behalf of the Centers for Disease Control and Prevention [(IF NSCH11_INCENT_FLAG = 2 AND NSCH11_LTR_FLAG = 1) OR (NSCH11_PASSIVE = 1 OR 2 AND NSCH11_LTR_FLAG = 1) THEN DISPLAY "to follow up on a letter that was sent to your home"/ ELSE NO FILL]. Earlier, we contacted your household to participate in a survey about the health of children and teenagers. I'm calling back to continue the interview. The study will be over in the next few days, so we would greatly appreciate a few minutes of your time. [IF INCENTIVE CASE: "In appreciation of your time, we will send you \$[MONEY_1 / MONEY_2]."]

S1 Am I speaking to someone who lives in this household who is over 17 years old?

(1) YES, I AM THAT PERSON [IF [S.C.] IS SELECTED, GO TO REMIND1/ ELSE CONTINUE WITH INTERVIEW]
 (2) THIS IS A BUSINESS [GO TO SALZ]
 (3) NEW PERSON COMES TO PHONE [GO BACK TO INTRO_1]
 (8) DOES NOT LIVE IN HOUSEHOLD [ASK FOR ANOTHER PERSON OR SCHEDULE APPOINTMENT ON THE NEXT SCREEN]
 (9) NO PERSON AT HOME WHO IS OVER 17 [GO TO S2_B]
 (97) REFUSED [GO TO REFUSAL CONVERSION, SET DISP AND TERMINATE]

REMIND1 *[CONTINUE WITH INTERVIEW AT POINT OF BREAKOFF]*

I want to remind you that we will be asking questions about [S.C.] for the rest of this interview.

Answering Machine Scripts

MSG_AUG (PLEASE READ SLOWLY AND CLEARLY.) Hello. The Centers for Disease Control and Prevention is conducting a survey about the health of children and teenagers. Your [IF RDD_NCCELL_CCELL IN 2,3 THEN FILL "cell"] telephone number has been selected at random to participate in this survey. We're sorry we missed you and will try back at another time. Or, you can call us at [IF SUC = 1, 2, 4, 5, 6, FILL 1 - 8 6 6 - 9 9 9 - 3 3 4 0 / IF SUC = 3, FILL 1 - 8 6 6 - 9 0 0 - 9 6 0 1]. [If SUC=5,6 AND INCENTIVE CASE, DISPLAY "In appreciation for your time, we will send you \$[MONEY_1 / MONEY_2]."]. Thank you.

MSG_Y_APPT (PLEASE READ SLOWLY AND CLEARLY.) Hello. I am calling on behalf of the Centers for Disease Control and Prevention regarding a national study [IF RDD_NCCELL_CCELL IN 2,3 THEN FILL of cell telephone users] about the health of children and teenagers. I'm sorry that we've missed you. When we spoke previously about this important study, you requested that we call you back at this time. We'll try to contact you again soon but please feel free to return our call anytime at [IF SUC = 1, 2, 4, 5, 6, FILL 1 - 8 6 6 - 9 9 9 - 3 3 4 0 / IF SUC = 3, 1 - 8 6 6 - 9 0 0 - 9 6 0 1]. [If INCENTIVE CASE, DISPLAY "In appreciation for your time, we will send you \$[MONEY_1 / MONEY_2]."]. Thank you.

MSG_NSCH (PLEASE READ SLOWLY AND CLEARLY.) Hello. I'm calling on behalf of the Centers for Disease Control and Prevention [(IF NSCH_INCENT_FLAG = 2 AND NSCH_LTR_FLAG = 1) OR (NSCH_PASSIVE = 1 OR 2 AND NSCH_LTR_FLAG = 1) THEN, "to follow up on a letter that was sent to your home"/ ELSE NO FILL]. We recently contacted [IF RDD_NCCELL_CCELL IN 2,3 THEN FILL you on your cell telephone / ELSE FILL your household] and began a children's health survey. I'm calling back to continue the survey. (IF INCENTIVE CASE, DISPLAY: "In appreciation for your time, we will send you \$[MONEY_1 / MONEY_2]."). If you would like to participate right away, please call our toll-free number, at [IF SUC = 1, 2, 4,5, 6, FILL 1 - 8 6 6 - 9 9 9 - 3 3 4 0 / IF SUC = 3, FILL 1 - 8 6 6 - 9 0 0 - 9 6 0 1]. Thank you.

MSG_CLOSEDOWN

(PLEASE READ SLOWLY AND CLEARLY.) Hello. I'm calling on behalf of the Centers for Disease Control and Prevention [(IF NSCH11_INCENT_FLAG = 2 AND NSCH11_LTR_FLAG = 1) OR (NSCH11_PASSIVE = 1 OR 2 AND NSCH11_LTR_FLAG = 1) THEN, "to follow up on a letter that was sent to your home"/ ELSE NO FILL]. We recently contacted [IF RDD_NCCELL_CCELL IN 2,3 THEN FILL "you on your cell telephone" / ELSE FILL "your household"] and began a children's health survey. I'm calling back to continue the survey. The study will be over in the next few days, so we would greatly appreciate if you call us back as soon as possible. Our toll-free number is [If SAMPLE_USE_CODE=2,4,5,6 display: 1 - 8 6 6 - 9 9 9 - 3 3 4 0 / If SAMPLE_USE_CODE=3 display: 1 - 8 6 6 - 9 0 0 - 9 6 0 1]. [IF INCENTIVE CASE: "In appreciation of your time, we will send you \$[MONEY_1 / MONEY_2]."]. Thank you.

MSG_Y_APPT

_CLOSEDOWN (PLEASE READ SLOWLY AND CLEARLY.) Hello. I am calling on behalf of the Centers for Disease Control and Prevention regarding a national study about the health of children and teenagers. I'm sorry that we've missed you. When we spoke previously about this important study,

you requested that we call you back at this time. The study will be over in the next few days, so we would greatly appreciate if you call us back as soon as possible. Our toll-free number is [IF SUC = 1, 2, 4, 5, 6, FILL 1 - 8 6 6 - 9 9 9 - 3 3 4 0 / IF SUC = 3, FILL 1 - 8 6 6 - 9 0 0 - 9 6 0 1]. [If INCENTIVE CASE, DISPLAY "In appreciation for your time, we will send you \$[MONEY_1 / MONEY_2]."]. Thank you.

Appendix III. Summary of Key Differences Between 2007 and 2011–2012 Questionnaires

This appendix summarizes the key differences between the 2007 National Survey of Children’s Health (NSCH) questionnaire and the 2011–2012 questionnaire. Changes made after the start of data collection in Quarter 1, 2011, are reflected in [Appendix IV](#).

Section 2: Initial Screening

Additions

- A safety screener was added (S_WARM) to ensure that call respondents were not driving or doing anything else requiring their full attention.
- Specific language was added to the introduction script (INTRO_1) to inform respondents that they were intentionally being called on their cellular device.
- Questions were also added to assess cell-phone respondents’ phone status (LANDLINE and CELLUSE) and to screen out households that were not cell phone-only or cell phone-mainly. These questions were used only for Quarter 1, 2011, prior to modifying the cell- phone screening approach in Quarter 2, 2011.

Section 2: Health and Functional Status

Additions

- A question was added that asked if the sample child was born prematurely (K2Q05).
- Two questions on conditions were added, regarding intellectual disability or mental retardation (K2Q60A) and cerebral palsy (K2Q61A):
 - Follow-up questions included age at first diagnosis (K2Q60A_1 and K2Q61A_1), whether the child currently had the condition (K2Q60B and K2Q61B), and the severity of the current condition (K2Q60C and K2Q61C).

- Age at first diagnosis was also collected for Attention deficit disorder, Attention-deficit/hyperactivity disorder (K2Q31A_1), Behavioral or conduct problems (K2Q34A_1), Autism or autism spectrum disorder (ASD) (K2Q35A_1), Developmental delay (K2Q36A_1), Speech or other language problems (K2Q37A_1), Tourette syndrome (K2Q38A_1), and vision problems that cannot be corrected with standard glasses or contact lenses (K2Q44A_1).
- Follow-up questions were added regarding children ever diagnosed with autism or ASD, including who first told the respondent that the child had autism or ASD (K2Q35D), and if the respondent thought that the child ever had autism or ASD (K2Q35E).
- Questions assessing the reasons that the child may no longer have autism or ASD were added:
 - “Treatment helped condition go away” (K2Q35F_1).
 - “Condition went away on its own” (K2Q35F_2).
 - “Behaviors or symptoms changed” (K2Q35F_3).
 - “A doctor or health care provider changed the diagnosis” (K2Q35F_4).
 - “Any other reasons (verbatim)” (K2Q35G).
- Additional questions assessed reasons why a doctor, health care professional (HCP), or school professional may have told the respondent the child had a condition that he or she never had:
 - “With more information, diagnosis was changed” (K2Q35H_1).
 - “Diagnosis was given so child could receive needed services” (K2Q35H_2).

- “You disagree with the doctor or other HCP about [his/her] opinion that [S.C.] had autism or ASD” (K2Q35H_3), where S.C. is sampled child.
- “Any other reasons (verbatim)” (K2Q35J).

Deletions

- Children with Special Health Care Needs Screener test questions were removed regarding prescription use (K2Q12A); medical care, mental health, or education services (K2Q15A); limitations in abilities (K2Q18A); special therapy (K2Q12A); special arrangements (K2Q30D); number of visits to the doctor because of a condition (K2QTEST1); and reasons for not seeing a doctor (K2QTEST2).
- Ratings of the overall severity of several conditions (K2Q47C, K2Q48C, K2Q49C, and K2Q50C) were removed.
- The follow-up question regarding current bone, joint, or muscle problems was removed (K2Q45D).
- Dental health questions (K2Q54A and K2Q55) were removed.
- A series of questions pertaining to family activities were removed (K2Q60A through K2Q60E).
- A series of immunization questions were removed (K2Q81 through K2Q85).

Revisions

- The text “that affects [his/her] ability to learn” was dropped from the end of K2Q36A.
- The text “speech or other language problems” replaced “stuttering, stammering, or other speech problems” in K2Q37A.
- The word “standard” was added to K2Q44A.
- The 2011–2012 NSCH combined K2Q52 (toothache) and K2Q53 (decayed teeth or cavities) into one question and moved it to Section 4,

Subdomain 2. The word “unfilled” was also added to the question, and the reference period was lengthened from “past 6 months” to “past 12 months.”

Section 3: Health Insurance Coverage

Additions

- A question was added to determine if the cost of the child’s health care was causing financial problems for his or her family (K3Q25), as was a question to determine if the respondent had been frustrated in efforts to obtain health care services for the child (C4Q04).

Revisions

- Because the official program name changed, “State Children’s Health Insurance Program, S–CHIP” was replaced with “Children’s Health Insurance Program (CHIP)” in K3Q02. Help text was also added to assist respondents who did not reside in the state that the program name fill was referencing.

Section 4: Health Care Access and Utilization

Additions

- The 2011–2012 NSCH added questions regarding recent medical (S4Q01) and dental (K4Q30) care and vision screening (K4Q31 and K4Q32).
- A line of questioning was added inquiring if the child had received any home visits from nurses, health care workers, social workers, or other professionals to help prepare for the new baby or to take care of the baby or mother (K4Q35), and how many visits were made (K435A).
- Follow-up questions were added to determine topics raised by the professionals who visited the home, including the mother’s emotional well-being (K4Q35B_1), presence of smoking or alcohol use in the home (K4Q35B_2), building a relationship

with the child (K4Q35B_3), how to make sure the child is safe (K4Q35B_5), how to get the health care the child needs (K4Q35B_6), and other services (K4Q35B_7).

- A series of question were added regarding therapy services for autism or ASD or developmental delay, including the age that the child began receiving services and if he or she currently receives services (K4Q36 through K4Q38).

Revisions

- “Retail store clinic or ‘minute clinic’” was added as a response option to K4Q02.
- “Vision care” was added as a response option to K4Q28.

Section 5: Medical Home

Deletions

- A question (K5Q45) and follow-up frequency question (K5Q46) were removed regarding whether an interpreter was needed to speak with the child’s doctors or other health care professional.

Section 6: Early Childhood

Additions

- A series of flourishing questions assessing attachment (K6Q70), aspiration (K7Q71), happiness (K7Q72), and resiliency (K6Q73) were added.
- A question was added to determine the amount of time spent with computers, cell phones, handheld video games, and other electronic devices (K6Q66).

Revisions

- The text in K6Q65 was revised from “On an average weekday, about how much time does [S.C.] usually watch TV or watch videos?” to:
 - “On an average weekday, about how much time does [S.C.] usually spend in front of a TV watching TV programs, videos, or playing video games?”

Deletions

- A question pertaining to provider response to parental concerns (K6Q11), two questions regarding injury (K6Q30 and K6Q31), and a series of child care questions (K6Q20B, K6Q21, K6Q22, K6Q25B, and K6Q25C) were removed.

Section 7: Middle Childhood and Adolescence (6–17 years)

Additions

- As in Section 6, a series of flourishing questions were added to Section 7 (K6Q70 through K6Q73).
- A question was added asking which specific grades were repeated, if any (K7Q05_A).

Revisions

- Similar to Section 6, a question to determine the amount of time spent with computers, cell phones, handheld video games, and other electronic devices on an average weekday was added (K7Q91).
 - A follow-up question was added to capture whether the respondent monitors the content of the devices listed in K7Q91.
- Questions K7Q61 and K7Q62 were edited to capture information regarding the additional devices referenced in K7Q91.
- The text in question K7Q32 was revised to include “lessons, such as music dance, language, or other arts.”
- The skip logic at K7Q32 was revised so all cases that completed Section 7 received the question. The previous logic, which dictated that the question be skipped if a response of “yes” was given at K7Q30 or K7Q31, was retained through Quarter 2, 2011, due to a system error. The new logic was implemented in Quarter 3, 2011.

Deletions

- A series of social competence scale questions was removed (K7Q72 through K7Q77).
- Two questions regarding a depressed mood were also removed (K7Q78 and K7Q80).

Section 9: Parental Health*Additions*

- A question to determine the age of the oldest adult living in the household was added (C10Q14).
- A series of questions regarding adverse family experiences was added (ACE1 and ACE3 through ACE11).
- A question was added asking about the presence of at least one adult mentor in the child's school, neighborhood, or community (apart from other adults in his or her home) to rely on for advice or guidance (K9Q96).

Revisions

- The household roster (C10Q02B) was modified from a parental roster (the identification of "parents or people who act as parents") to a family roster that captured the relationships of all the people living in the household to the selected child. This change was made to align with the 2009–2010 National Survey of Children with Special Health Care Needs (NS–CSHCN) expanded roster approach.

Deletions

- Questions were removed that assessed the number of days in the past week that the mother-type, father-type, and respondent (if not the child's mother or father) exercised, played sports, or participated in physical activity for at least 20 minutes (K9Q30 through K9Q32).

Section 11: Additional Demographics*Additions*

- A question determining the highest grade or year of school completed by any of respondent's parents or guardians was added (K11Q22A).
- A question asking if anyone in household currently receives Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) benefits was added (S9Q34).

Revisions

- The text "Supplemental Nutrition Assistance Program" was added to K11Q61.

Section 12: Additional Health Insurance Questions*Additions*

- This section, supported by the Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services, was added to the 2011–2012 NSCH to obtain additional health insurance information. Only households with uninsured children received the section to determine:
 - Reasons for uninsurance.
 - The child's enrollment history with Medicaid or CHIP.
 - Attitudes toward and interest in enrolling in Medicaid or CHIP.
 - Parents' insurance coverage.
 - Availability of employer-sponsored insurance.

Section 13: Locating Information*Additions*

- Based on the 2009–2010 NS–CSHCN approach, locating questions were added to aid in contacting the household for future surveys. These questions included requesting:
 - Another phone number at which the respondent could be reached in the future (LOCATE_NUMBER).
 - The respondent's address (LOCATE_ADDRESS).
 - The respondent's name or initial (PNAME).
 - The child's first name or initials, if not already given (LOCATING_NAME).

Revisions

- Also in alignment with the 2009–2010 NS–CSHCN approach, the following questions on phone lines and household information were added:
 - A question regarding the number of working cell phones for personal use for all household members (C11Q15_CELL).
 - A question regarding cell-phone use relative to landline use for households with both services (C11Q16) was added, allowing a household to be categorized as either a "cell phone mostly" or "landline mostly" household.
 - Confirmation questions for zip code and state of residence were added for all households (C11Q22 and LOC_STATE).

Appendix IV. Summary of Questionnaire Changes During Data Collection

During the course of data collection, a number of changes were made to the National Survey of Children's Health (NSCH) questionnaire to improve the quality of data collected, accommodate methodological changes, and address concerns voiced by respondents, interviewers, and study sponsors. Questionnaire changes made following the launch of Quarter 1, 2011, are listed by the date on which they were implemented.

On April 7, 2011 (Quarter 2, 2011), the following changes were made:

- A confirmation question (K3Q01_CONF) was added after K3Q01 if the respondent answered “no.”
- The word “FAMILY” in K11Q51 was changed from all capital letters to lowercase italicized, “*family*.”
- Names of several state Medicaid programs were added to the Medicaid name fill table. Areas with updated program names were: Alabama, Arizona, Connecticut, Delaware, District of Columbia, Georgia, Idaho, Illinois, Iowa, Kansas, Kentucky, Michigan, Mississippi, Nebraska, Nevada, Oregon, Rhode Island, South Carolina, South Dakota, Virginia, Washington, West Virginia, and Wisconsin.
- A soft check after C10Q14 (“What is the age of the oldest adult living in the household?”) was added to appear when the response to C10Q14 was less than K9Q16 (the age of the mother-type in the household).
- To reduce respondent confusion, help text was added to the following questions that refer to behavior during “the past week” (K6Q60, K6Q61, K6Q63, K6Q64, K7Q38–K7Q41, and K8Q11).
- The poverty category assigned, which depends on the state in which the respondent lives, was previously determined by the sampled state as a preload variable (STATE). An update was made so that the respondent's reported state (K3_STATE) was used for the poverty category assignment as well as for the state-specific Medicaid and Children's Health Insurance Program or CHIP program names.
- The following help text was added to K4Q35, where R is respondent and S.C. is sample child: “INTERVIEWER INSTRUCTION: IF R HAS ADOPTED S.C., SAY ‘Please think about the time between adopting [S.C.] and up until the present day.’ ”
- Skip logic was added to K9Q19 so that the question was not asked when the respondent had legally adopted the sample child.
- K7Q60 was updated to include the use of DVDs, and help text was added to accurately capture data: READ IF NECESSARY: Do not include time spent watching television shows, videos, or DVDs at school. READ IF NECESSARY: Do not include time spent doing any of these activities in front of a computer.
- The skip logic at K11Q59 was modified so that additional NSCH income follow-up questions (K11Q59 and K11Q59A) would not appear when the income cascade was completed in the National Immunization Survey (NIS–Child or NIS–Teen).
- K2Q61C was modified to include response options in the text of the question. Additionally, help text was added for further clarification for the respondent.
- The word “ever” in K4Q36 was italicized for emphasis to increase respondent and interviewer clarity.
- The word “preventive” in both K4Q20 and K4Q21 was italicized for added emphasis and respondent and interviewer clarity.
- To improve clarity in coding for interviewers, category headings (such as “Cost,” “Employment/Moving,” “Eligibility,” “Application Process,” and “Other”) were added to long-response option lists at insurance section variables that ask the reasons why the sample child is not enrolled in an insurance type. The variables affected were K12Q01, K12Q14, K12Q17, K12Q24, K12Q27, K12Q36–K12Q38, K12Q45, K12Q55, and K12Q65.
- To align with the protocol for similar questions, the response options at K6Q73 and K6Q72 were made a mandatory read rather than “READ AS NECESSARY.”
- The text “who visited your home” was added into the stem of the follow-up questions to K4Q35_INTRO.
- For series of questions with identical response options, response options were read to the respondent for the first three questions in the series and then provided as “READ AS NECESSARY” text for the remaining questions. The following questions were edited so that they corresponded with this convention used throughout the survey: K6Q70–K7Q79 and K7Q84–K7Q83.
- The word “things” in INTRO_ACE was changed to “events.”
- The dash in ACE1 was replaced with “for example, it was.”
- The text “after [S.C.] was born” was added to the end of ACE5.
- The text “guardians, or any other” was added to ACE6 for improved respondent understanding.
- Help text was added to ACE11 to specify that the question is referring to racial or ethnic group.
- The help text at K2Q35A was updated to more accurately describe the conditions referenced.
- The help text “ ‘REGULAR PHONES’ REFERS TO LANDLINE PHONES” was added to C11Q16.

Also on April 7, 2011 (Quarter 2, 2011), the following changes were made to accommodate the newly adopted “take-all” cell-phone approach:

- A question (SL_LANDLINE) was added for all cell-phone cases following Section 12 if not already answered in the NIS–Child or NIS–Teen surveys.
- The lead-in text at C11Q15_CELL was edited to display only if the case did not receive SL_LANDLINE, where the same lead-in text appears.
- Skip logic was changed for C11Q16 so that the question was administered only to cell-phone cases with a landline in the household or landline cases with at least one cell phone in the household.
- A question (SL_CELLUSE) was added to be administered to cell-phone cases with a landline in the household or landline cases with at least one cell phone in the household that did not answer the question in either NIS survey.
- A modification was made to the skip logic surrounding C11Q20 to ensure that the question was not administered to cell phone-only households.

On July 7, 2011 (Quarter 3, 2011), the following changes were made:

- To reduce interviewer miscodes, a soft check was added after C10Q02A to require the interviewer to confirm the respondent's relationship to child if the relationship given at C10Q02A differed from the relationship given at the beginning of the interview at K1Q02.
- Help text was added to K2Q35A.
- All questions mentioning “Autism or ASD” (K2Q35A_1, K2Q35D, K2Q35B, K2Q35C, K2Q35E, K2Q35F_INTRO, K2Q35G, K2Q35H_3, K2Q35J) were modified to clarify the question for both the respondent and the interviewer as follows:
 - “ASD” was changed to “autism spectrum disorder.”
 - Help text was added for the interviewer: “AUTISM SPECTRUM DISORDER INCLUDES AUTISTIC DISORDER, ASPERGER’S DISORDER, AND PERVASIVE DEVELOPMENTAL DISORDER.”

- After reporting that the sample child had been diagnosed with certain conditions in Section 2, the respondent received follow-up questions for each diagnosis at the end of the section. To ease the transition for these questions, the following lead-in text was added to the first of the follow-up questions pertaining to each condition: “Earlier you told me that S.C. has been diagnosed with [condition]” This affected the following variables: K2Q31A_1, K2Q32B, K2Q33B, K2Q34A_1, K2Q36A_1, K2Q60A_1, K2Q61A_1, K2Q37A_1, K2Q38A_1, K2Q38A_2, K2Q38B, K2Q38C, K2Q40B, K2Q41B, K2Q42B, K2Q43B, K2Q44A_1, K2Q45B, and K2Q46B.
- Word changes were made to several questions in Section 11 to accommodate dialing in the U.S. Virgin Islands (USVI) for these cases.
 - The text “, including the Virgin Islands” was added to questions determining birth inside the United States or USVI for the mother-type, father-type, respondent (if not the mother or father), and sample child (K11Q30– K11Q33), and to questions determining how long the mother-type, father-type, respondent (if not the mother or father), and sample child have lived in the United States or USVI if born outside of the country (K11Q34A, K11Q35A, K11Q36A, K11Q37A).
 - The following help text was added to K11Q38: “IF S.C. WAS ADOPTED FROM THE UNITED STATES, CODE THIS QUESTION AS ‘NO.’ THE VIRGIN ISLANDS ARE CONSIDERED PART OF THE UNITED STATES.”
 - The text “, including the Virgin Islands” and “or Virgin Islands” was added to K11Q40: “Prior to being adopted, was [S.C.] in the legal custody of a state or county child welfare agency in the United States [IF IAP=095 DISPLAY, “including the Virgin Islands”]?”

That is, was [S.C.] in the U.S. [IF IAP=095 DISPLAY “or Virgin Islands”] foster care system?”

- Logic was added to K3_STATE to skip K3_STATE for USVI cases.
- Skip logic was added to K11Q03 so that the question was not asked for USVI cases.
- The following text was removed from MSG_AUG: “For most people, this will only take a few minutes.”
- An experiment was conducted on cases released in Quarter 3, 2011, to determine the difference in language used in the time estimate of the survey length provided in the introduction. Logic and text were added so that respondents were randomly told either “half an hour” or “30 minutes.” Based on results of the experiment, all cases in Quarter 4, 2011, and Quarter 1, 2012, were told “half an hour.”
- Spanish translations of state Temporary Assistance for Needy Families or TANF program names were edited with correct translations of “or” to “o” during a Spanish interview.

On August 16, 2011, the following change was made:

- The telephone number given as a contact for questions about the survey at the closing script for augmentation sample cases that exit through the NIS flu module was updated to provide a unique number for NSCH-only cases.

On October 6, 2011 (Quarter 4, 2011), the following changes were made:

- To ease respondent confusion, help text was added to follow-up questions regarding being seen by a doctor or other health care provider in K5Q40–K5Q44.
- The Spanish versions of K6Q01–K6Q09 were updated to more closely align with the standard Parents’ Evaluation of Developmental Status or PEDS text from which the questions originated.
- For cases that received both NIS and the State and Local Area Integrated Telephone Survey (SLAITS), when

an eligible NIS child was rostered but the birth dates provided indicated that no NIS-eligible children were in the household, the case then received the NIS consent language and the full SLAITS consent language very close together. In such instances, the logic was modified so that shortened consent language was displayed (SCQ02 and SCQ04) rather than SL_INTRO.

On January 5, 2012 (Quarter 1, 2012), the following changes were made:

- To assist the interviewer in capturing accurate data, help text was added to the following Section 12 questions specifying if the question was referring to the mother-type in the household, father-type in the household, or respondent (if another relation to the sample child was reported): K12Q43–K12Q45, K12Q47, K12Q53–K12Q55, K12Q57, K12Q63–K12Q65, and K12Q67.
- The fill logic at C11Q22 was updated so that a fill from the same question in the NIS–Child or NIS–Teen questionnaire was excluded if these variables have a value of “Don’t know” or “Refused.” For these cases, the question was asked again.
- The READ IF NECESSARY text at K6Q15 was edited to accurately define the age ranges for Individual Family Service Plan, or IFSP, and Individualized Education Program, or IEP, written interventions plans.

Appendix V. Program Names Used for Medicaid and Children’s Health Insurance Program Questions

For survey questions regarding Medicaid and Children’s Health Insurance Program (CHIP), the state-specific program names for each type of coverage were included in the question text, in case respondents recognized the state program name but not the national program affiliation. These program names are shown in [Table III](#).

States could be divided into two classes depending on how they named the expanded or created programs that use Title XXI funds. During 2011–2012,

26 states had distinct Medicaid and CHIP (known as S–CHIP prior to 2011) programs and used different names for their CHIP programs compared with their Medicaid programs. The remaining 24 states, as well as Washington, D.C., and U.S. Virgin Islands, had distinct Medicaid and CHIP programs but used the same name (or substantially similar names) for both programs.

Eligibility for specific health insurance questions and the use of state-specific program names were based

on this classification. Because a single question (K3Q02) was asked about both Medicaid and S-CHIP, survey analysts will not be able to distinguish between Medicaid and S-CHIP coverage in national or regional analyses. Analysts may be required to report on “public” insurance only.

Table III. State-specific program names for Medicaid and Children’s Health Insurance Program

Area	Type of program	Category ¹	Name used with Medicaid questions	Name used with CHIP questions	Name used with combination questions
Alabama	Separate	A	Patient 1st or SOBRA	ALL Kids	...
Alaska	Medicaid expansion	C	...	...	Denali KidCare
Arizona	Separate	A	Arizona Health Care Cost Containment System (AHCCCS) or SOBRA	KidsCare	...
Arkansas	Combination	C	...	...	ARKids
California	Combination	A	Medi-Cal	Healthy Families	...
Colorado	Separate	A	...	Child Health Plan Plus (CHP+)	...
Connecticut	Separate	C	...	...	HUSKY Health or Medical Assistance
Delaware	Combination	A	Diamond State Health Plan	Delaware Healthy Children Program	...
District of Columbia	Medicaid expansion	C	...	...	DC Healthy Families or Medical Assistance
Florida	Combination	A	...	Florida KidCare, which includes Healthy Kids and MediKids	...
Georgia	Separate	A	Right from the Start	PeachCare for Kids	...
Hawaii	Medicaid expansion	C	...	...	Hawaii QUEST
Idaho	Combination	A	Medical Assistance	Idaho Children’s Health Insurance Program (CHIP)	...
Illinois	Combination	C	...	...	All Kids or Medical Assistance
Indiana	Combination	C	...	...	Hoosier Healthwise
Iowa	Combination	A	Medical Assistance	Healthy and Well Kids in Iowa (HAWK-I)	...
Kansas	Separate	C	...	...	HealthWave or Kansas Medical Assistance Program (KMAP)
Kentucky	Combination	C	...	...	KyHealth Choices or Family Choices or Kentucky Children’s Health Insurance Program (KCHIP)

See footnotes at end of table.

Table III. State-specific program names for Medicaid and Children's Health Insurance Program—Con.

Area	Type of program	Category ¹	Name used with Medicaid questions	Name used with CHIP questions	Name used with combination questions
Louisiana	Combination	A	...	Louisiana Children's Health Insurance Program (LaCHIP)	...
Maine	Combination	C	...	...	MaineCare
Maryland	Combination	A	Maryland Medical Assistance	Maryland Children's Health Insurance Program (MCHP)	...
Massachusetts	Combination	C	...	...	MassHealth
Michigan	Combination	A	Healthy Kids or Medical Assistance	MIChild	...
Minnesota	Combination	C	...	...	Medical Assistance or MinnesotaCare
Mississippi	Separate	A	Medical Assistance	Mississippi Children's Health Insurance Program (CHIP)	...
Missouri	Combination	C	...	...	MO HealthNet for Kids
Montana	Separate	C	...	...	Healthy Montana Kids
Nebraska	Medicaid expansion	C	...	...	Kids Connection or Medical Assistance
Nevada	Separate	A	Child Health Assurance Program (CHAP)	Nevada Check Up	...
New Hampshire	Combination	A	Healthy Kids Gold	Healthy Kids Silver	...
New Jersey	Combination	C	...	...	NJ FamilyCare
New Mexico	Medicaid expansion	C	...	...	New Mexico SALUD! or New MexiKids/New MexiTeens
New York	Separate	A	...	Child Health Plus	...
North Carolina	Separate	A	...	Health Choice for Children	...
North Dakota	Combination	A	...	Healthy Steps	...
Ohio	Medicaid expansion	C	...	...	Healthy Start and Healthy Families
Oklahoma	Combination	C	...	...	SoonerCare
Oregon	Separate	C	...	...	Oregon Healthy Kids or Oregon Health Plan
Pennsylvania	Separate	A	...	Pennsylvania Children's Health Insurance Program (CHIP)	...
Rhode Island	Combination	C	...	...	RItCare or Rhode Island Medical Assistance Program
South Carolina	Combination	C	...	...	Healthy Connections Kids or Partners for Healthy Children
South Dakota	Combination	A	Medical Assistance	South Dakota Children's Health Insurance Program (CHIP)	...
Tennessee	Combination	A	TennCare	Tennessee CoverKids	...
Texas	Separate	A	Children's Medicaid	Texas Children's Health Insurance Program (CHIP)	...
Utah	Separate	A	...	Utah Children's Health Insurance Program (CHIP)	...
Vermont	Separate	A	...	Dr. Dynasaur	...

See footnotes at end of table.

Table III. State-specific program names for Medicaid and Children’s Health Insurance Program—Con.

Area	Type of program	Category ¹	Name used with Medicaid questions	Name used with CHIP questions	Name used with combination questions
Virginia	Combination	C	...	...	FAMIS
Washington.	Separate	C	...	...	Apple Health for Kids or Basic Health Plus
West Virginia.	Separate	A	Medical Assistance	West Virginia Children's Health Insurance Program (WVCHIP)	...
Wisconsin	Combination	C	...	...	BadgerCare Plus or Medical Assistance or Healthy Start
Wyoming.	Separate	A	Equality Care	Wyoming Kid Care or Kid Care CHIP	...
U.S. Virgin Islands. . . . .	...	C	...	...	Medical Assistance Program (MAP)

... Category not applicable.

¹States in category A had separate programs for Medicaid and CHIP and used different names for CHIP than for their Medicaid programs. States in category C had separate programs for Medicaid and CHIP, but they used the same (or substantially similar) name for both programs. For all cases, a single question about public insurance coverage was asked using the program name(s).

NOTE: CHIP is Children's Health Insurance Program.

Appendix VI. Program Names Used for Questions on Temporary Assistance for Needy Families

When respondents were asked if their household received any cash assistance from a state or county welfare program within the past year (K11Q60), state-specific Temporary Assistance for Needy Families (TANF) program names were included in the question text, in case respondents recognized the state program name but not the welfare program affiliation. TANF program names are shown in [Table IV](#).

Table IV. State-specific program names for Temporary Assistance for Needy Families

Area	TANF program name
Alabama	Family Assistance Program
Alaska	Alaska Temporary Assistance Program (ATAP)
Arizona	Employing and Moving People off Welfare and Encouraging Responsibility (EMPOWER)
Arkansas	Transitional Employment Assistance (TEA)
California	California Work Opportunity and Responsibility to Kids (CalWORKS)
Colorado	Colorado Works
Connecticut	Jobs First
Delaware	A Better Chance (ABC)
District of Columbia	Temporary Assistance for Needy Families (TANF)
Florida	Welfare Transition Program
Georgia	Temporary Assistance for Needy Families (TANF)
Hawaii	Temporary Assistance for Needy Families (TANF)
Idaho	Temporary Assistance for Families in Idaho (TAFI)
Illinois	Temporary Assistance for Needy Families (TANF)
Indiana	Temporary Assistance for Needy Families (TANF)
Iowa	Family Investment Program (FIP)
Kansas	Kansas Works
Kentucky	Kentucky Transitional Assistance Program (K-TAP)
Louisiana	Family Independence Temporary Assistance Program (FITAP)
Maine	Temporary Assistance for Needy Families (TANF)
Maryland	Family Investment Program (FIP)
Massachusetts	Transitional Aid to Families with Dependent Children (TAFDC)
Michigan	Family Independence Program (FIP)
Minnesota	Minnesota Family Investment Program (MFIP)
Mississippi	Temporary Assistance for Needy Families (TANF)
Missouri	Beyond Welfare
Montana	Families Achieving Independence in Montana (FAIM)
Nebraska	Employment First
Nevada	Temporary Assistance for Needy Families (TANF)
New Hampshire	Family Assistance Program (FAP) or New Hampshire Employment Program (NHEP)
New Jersey	WorkFirst NJ
New Mexico	NMWorks
New York	Family Assistance Program (FAP)
North Carolina	Work First
North Dakota	Training, Employment, and Education Management (TEEM)
Ohio	Ohio Works First (OWF)
Oklahoma	Temporary Assistance for Needy Families (TANF)
Oregon	Jobs Opportunity and Basic Skills (JOBS)
Pennsylvania	Pennsylvania Temporary Assistance for Needy Families (TANF)
Rhode Island	Family Independence Program (FIP)
South Carolina	Family Independence
South Dakota	Temporary Assistance for Needy Families (TANF)
Tennessee	Families First
Texas	Texas Works
Utah	Family Employment Program (FEP)
Vermont	Aid to Needy Families with Children (ANFC)
Virginia	Virginia Initiative for Employment Not Welfare (VIEW)
Washington	WorkFirst
West Virginia	WV Works
Wisconsin	Wisconsin Works (W-2)
Wyoming	Personal Opportunities With Employment Responsibilities (POWER)
U.S. Virgin Islands	Family Improvement Program (FIP)

NOTE: TANF is Temporary Assistance for Needy Families.

Appendix VII. Procedures for Assigning Household Poverty Status

The U.S. Department of Health and Human Services (HHS) publishes federal poverty guidelines for the determination of household poverty status, available from: <https://aspe.hhs.gov/poverty>. These guidelines are produced annually and developed separately for the 48 contiguous states plus Washington, D.C. (D.C.), Alaska, and Hawaii.

The 2011–2012 National Survey of Children’s Health (NSCH) used the

HHS guidelines to assign poverty status. Year 2011 guidelines (Table V for the 48 contiguous states and D.C., Table VI for Alaska, and Table VII for Hawaii) were used with 2010 income for interviews conducted from February 28, 2011, through February 8, 2012. Year 2012 guidelines (Tables VIII, IX, and X) were used with 2011 income for interviews conducted from February 9, 2012, through June 25, 2012.

The tables were used to group households into the following poverty status categories:

- Category AA—At or below 50% poverty level
- Category A—Above 50% up to and including 100% poverty level
- Category B—Above 100% up to and including 138% poverty level
- Category C—Above 138% up to and including 150% poverty level

Table V. Year 2011 Federal Poverty Guidelines for families in the 48 contiguous states and Washington, D.C.

Family size	Percent of federal poverty level and status category							
	50	100	138	150	185	200	300	400
	AA	A	B	C	D	E	F	G
2	\$7,355	14,710	20,300	22,065	27,214	29,420	44,130	58,840
3	\$9,265	18,530	25,571	27,795	34,281	37,060	55,590	74,120
4	\$11,175	22,350	30,843	33,525	41,348	44,700	67,050	89,400
5	\$13,085	26,170	36,115	39,255	48,415	52,340	78,510	104,680
6	\$14,995	29,990	41,386	44,985	55,482	59,980	89,970	119,960
7	\$16,905	33,810	46,658	50,715	62,549	67,620	101,430	135,240
8	\$18,815	37,630	51,929	56,445	69,616	75,260	112,890	150,520
9	\$20,725	41,450	57,201	62,175	76,683	82,900	124,350	165,800
10	\$22,635	45,270	62,473	67,905	83,750	90,540	135,810	181,080
11	\$24,545	49,090	67,744	73,635	90,817	98,180	147,270	196,360
12	\$26,455	52,910	73,016	79,365	97,884	105,820	158,730	211,640
13	\$28,365	56,730	78,287	85,095	104,951	113,460	170,190	226,920
14	\$30,275	60,550	83,559	90,825	112,018	121,100	181,650	242,200
15	\$32,185	64,370	88,831	96,555	119,085	128,740	193,110	257,480
16	\$34,095	68,190	94,102	102,285	126,152	136,380	204,570	272,760
17	\$36,005	72,010	99,374	108,015	133,219	144,020	216,030	288,040
18	\$37,915	75,830	104,645	113,745	140,286	151,660	227,490	303,320

NOTE: See Appendix VII for full definitions of poverty status categories.

Table VI. Year 2011 Federal Poverty Guidelines for families in Alaska

Family size	Percent of federal poverty level and status category							
	50	100	133	150	185	200	300	400
	AA	A	B	C	D	E	F	G
2	\$9,190	18,380	25,364	27,570	34,003	36,760	55,140	73,520
3	\$11,580	23,160	31,961	34,740	42,846	46,320	69,480	92,640
4	\$13,970	27,940	38,557	41,910	51,689	55,880	83,820	111,760
5	\$16,360	32,720	45,154	49,080	60,532	65,440	98,160	130,880
6	\$18,750	37,500	51,750	56,250	69,375	75,000	112,500	150,000
7	\$21,140	42,280	58,346	63,420	78,218	84,560	126,840	169,120
8	\$23,530	47,060	64,943	70,590	87,061	94,120	141,180	188,240
9	\$25,920	51,840	71,539	77,760	95,904	103,680	155,520	207,360
10	\$28,310	56,620	78,136	84,930	104,747	113,240	169,860	226,480
11	\$30,700	61,400	84,732	92,100	113,590	122,800	184,200	245,600
12	\$33,090	66,180	91,328	99,270	122,433	132,360	198,540	264,720
13	\$35,480	70,960	97,925	106,440	131,276	141,920	212,880	283,840
14	\$37,870	75,740	104,521	113,610	140,119	151,480	227,220	302,960
15	\$40,260	80,520	111,118	120,780	148,962	161,040	241,560	322,080
16	\$42,650	85,300	117,714	127,950	157,805	170,600	255,900	341,200
17	\$45,040	90,080	124,310	135,120	166,648	180,160	270,240	360,320
18	\$47,430	94,860	130,907	142,290	175,491	189,720	284,580	379,440

NOTE: See Appendix VII for full definitions of poverty status categories.

- Category D—Above 150% up to and including 185% poverty level
- Category E—Above 185% up to and including 200% poverty level
- Category F—Above 200% up to and including 300% poverty level
- Category G—Above 300% up to and including 400% poverty level
- Category H—Above 400% poverty level

Two variables were used to determine an NSCH household's poverty status: the number of people residing

in the household and the household's income during the prior year. Income data were gathered using one of three methods during NSCH administration: A respondent could provide 1) an exact income, 2) an income range based on a closed-ended series of questions, or 3) an income range using a set of cascade questions revised to allow exact determination of household poverty status in cases where that would not otherwise be possible. A brief description of each method and the household poverty status assignment process follows:

Respondent reported exact income—Poverty status was assigned by comparing the number of household members and the exact income reported with the appropriate guidelines table.

Respondent reported income range based on a closed-ended series of questions—When respondents did not supply a specific dollar amount for household income, a series of questions was asked on whether the household income was below, exactly at, or above threshold amounts. A matrix was then created to categorize responses. Each cell

Table VII. Year 2011 Federal Poverty Guidelines for families in Hawaii

Family size	Percent of federal poverty level and status category							
	50	100	133	150	185	200	300	400
	AA	A	B	C	D	E	F	G
2	\$8,465	16,930	23,363	25,395	31,321	33,860	50,790	67,720
3	\$10,660	21,320	29,422	31,980	39,442	42,640	63,960	85,280
4	\$12,855	25,710	35,480	38,565	47,564	51,420	77,130	102,840
5	\$15,050	30,100	41,538	45,150	55,685	60,200	90,300	120,400
6	\$17,245	34,490	47,596	51,735	63,807	68,980	103,470	137,960
7	\$19,440	38,880	53,654	58,320	71,928	77,760	116,640	155,520
8	\$21,635	43,270	59,713	64,905	80,050	86,540	129,810	173,080
9	\$23,830	47,660	65,771	71,490	88,171	95,320	142,980	190,640
10	\$26,025	52,050	71,829	78,075	96,293	104,100	156,150	208,200
11	\$28,220	56,440	77,887	84,660	104,414	112,880	169,320	225,760
12	\$30,415	60,830	83,945	91,245	112,536	121,660	182,490	243,320
13	\$32,610	65,220	90,004	97,830	120,657	130,440	195,660	260,880
14	\$34,805	69,610	96,062	104,415	128,779	139,220	208,830	278,440
15	\$37,000	74,000	102,120	111,000	136,900	148,000	222,000	296,000
16	\$39,195	78,390	108,178	117,585	145,022	156,780	235,170	313,560
17	\$41,390	82,780	114,236	124,170	153,143	165,560	248,340	331,120
18	\$43,585	87,170	120,295	130,755	161,265	174,340	261,510	348,680

NOTE: See Appendix VII for full definitions of poverty status categories.

Table VIII. Year 2012 Federal Poverty Guidelines for families in the 48 contiguous states and Washington, D.C.

Family size	Percent of federal poverty level and status category							
	50	100	133	150	185	200	300	400
	AA	A	B	C	D	E	F	G
2	\$7,565	15,130	20,879	22,695	27,991	30,260	45,390	60,520
3	\$9,545	19,090	26,344	28,635	35,317	38,180	57,270	76,360
4	\$11,525	23,050	31,809	34,575	42,643	46,100	69,150	92,200
5	\$13,505	27,010	37,274	40,515	49,969	54,020	81,030	108,040
6	\$15,485	30,970	42,739	46,455	57,295	61,940	92,910	123,880
7	\$17,465	34,930	48,203	52,395	64,621	69,860	104,790	139,720
8	\$19,445	38,890	53,668	58,335	71,947	77,780	116,670	155,560
9	\$21,425	42,850	59,133	64,275	79,273	85,700	128,550	171,400
10	\$23,405	46,810	64,598	70,215	86,599	93,620	140,430	187,240
11	\$25,385	50,770	70,063	76,155	93,925	101,540	152,310	203,080
12	\$27,365	54,730	75,527	82,095	101,251	109,460	164,190	218,920
13	\$29,345	58,690	80,992	88,035	108,577	117,380	176,070	234,760
14	\$31,325	62,650	86,457	93,975	115,903	125,300	187,950	250,600
15	\$33,305	66,610	91,922	99,915	123,229	133,220	199,830	266,440
16	\$35,285	70,570	97,387	105,855	130,555	141,140	211,710	282,280
17	\$37,265	74,530	102,851	111,795	137,881	149,060	223,590	298,120
18	\$39,245	78,490	108,316	117,735	145,207	156,980	235,470	313,960

NOTE: See Appendix VII for full definitions of poverty status categories.

in the matrix was assigned to one of the following income categories:

- Less than \$7,500
- \$7,500–\$9,999
- \$10,000–\$12,499
- \$12,500–\$14,999
- \$15,000–\$17,499
- \$17,500–\$19,999
- \$20,000–\$24,999
- \$25,000–\$29,999
- \$30,000–\$34,999
- \$35,000–\$39,999
- \$40,000–\$44,999

- \$45,000–\$49,999
- \$50,000–\$59,999
- \$60,000–\$74,999
- \$75,000 or higher

Respondents who went through the cascade of income questions were assigned a household poverty status by comparing the number of household members and the assigned income range with the appropriate guidelines table. For example, a respondent living in Alaska reporting a household size of three persons and an income (based on

the cascade) of \$35,000–\$39,000 would be classified into Category D (above 150% up to and including 185% of poverty level), based on the 2011 federal guidelines in [Table VI](#). When respondents did not complete the income cascade, either because they refused or did not know the answer to one of the cascade questions, household poverty status could not be assigned.

Respondent reported income range based on revised series of cascade questions—In some cases, the income categories described above encompassed

Table IX. Year 2012 Federal Poverty Guidelines for families in Alaska

Family size	Percent of federal poverty level and status category							
	50	100	133	150	185	200	300	400
	AA	A	B	C	D	E	F	G
2	\$9,460	18,920	26,110	28,380	35,002	37,840	56,760	75,680
3	\$11,935	23,870	32,941	35,805	44,160	47,740	71,610	95,480
4	\$14,410	28,820	39,772	43,230	53,317	57,640	86,460	115,280
5	\$16,885	33,770	46,603	50,655	62,475	67,540	101,310	135,080
6	\$19,360	38,720	53,434	58,080	71,632	77,440	116,160	154,880
7	\$21,835	43,670	60,265	65,505	80,790	87,340	131,010	174,680
8	\$24,310	48,620	67,096	72,930	89,947	97,240	145,860	194,480
9	\$26,785	53,570	73,927	80,355	99,105	107,140	160,710	214,280
10	\$29,260	58,520	80,758	87,780	108,262	117,040	175,560	234,080
11	\$31,735	63,470	87,589	95,205	117,420	126,940	190,410	253,880
12	\$34,210	68,420	94,420	102,630	126,577	136,840	205,260	273,680
13	\$36,685	73,370	101,251	110,055	135,735	146,740	220,110	293,480
14	\$39,160	78,320	108,082	117,480	144,892	156,640	234,960	313,280
15	\$41,635	83,270	114,913	124,905	154,050	166,540	249,810	333,080
16	\$44,110	88,220	121,744	132,330	163,207	176,440	264,660	352,880
17	\$46,585	93,170	128,575	139,755	172,365	186,340	279,510	372,680
18	\$49,060	98,120	135,406	147,180	181,522	196,240	294,360	392,480

NOTE: See Appendix VII for full definitions of poverty status categories.

Table X. Year 2012 Federal Poverty Guidelines for families in Hawaii

Family size	Percent of federal poverty level and status category							
	50	100	133	150	185	200	300	400
	AA	A	B	C	D	E	F	G
2	\$8,705	17,410	24,026	26,115	32,209	34,820	52,230	69,640
3	\$10,980	21,960	30,305	32,940	40,626	43,920	65,880	87,840
4	\$13,255	26,510	36,584	39,765	49,044	53,020	79,530	106,040
5	\$15,530	31,060	42,863	46,590	57,461	62,120	93,180	124,240
6	\$17,805	35,610	49,142	53,415	65,879	71,220	106,830	142,440
7	\$20,080	40,160	55,421	60,240	74,296	80,320	120,480	160,640
8	\$22,355	44,710	61,700	67,065	82,714	89,420	134,130	178,840
9	\$24,630	49,260	67,979	73,890	91,131	98,520	147,780	197,040
10	\$26,905	53,810	74,258	80,715	99,549	107,620	161,430	215,240
11	\$29,180	58,360	80,537	87,540	107,966	116,720	175,080	233,440
12	\$31,455	62,910	86,816	94,365	116,384	125,820	188,730	251,640
13	\$33,730	67,460	93,095	101,190	124,801	134,920	202,380	269,840
14	\$36,005	72,010	99,374	108,015	133,219	144,020	216,030	288,040
15	\$38,280	76,560	105,653	114,840	141,636	153,120	229,680	306,240
16	\$40,555	81,110	111,932	121,665	150,054	162,220	243,330	324,440
17	\$42,830	85,660	118,211	128,490	158,471	171,320	256,980	342,640
18	\$45,105	90,210	124,490	135,315	166,889	180,420	270,630	360,840

NOTE: See Appendix VII for full definitions of poverty status categories.

one or more income category limits for determining household poverty status. In such cases, additional income cascade questions beyond the standard set were asked to permit definitive assignment of poverty status. For these questions, customized income reference values, based on household size and state of residence, were used to obtain a range that would fit into the poverty-level table. For example, the income category cutoff indicating that a two-person household in the contiguous 48 states was below 150% poverty level (using the 2011 guidelines) was \$22,065. This income category cutoff is encompassed in the income category of “\$25,000 or less.” Therefore, for respondents who went through the cascade and reported income less than \$25,000, an additional cascade question asked whether the household was above, at, or below \$22,100 (based on rounding

rules described in the notes to the poverty guideline tables). If the household reported an income below \$22,100 but above \$20,000, their assigned household poverty status would be Category C (below 150% poverty level).

Using HHS guidelines, tables were developed to provide reference values for the additional income cascade questions. Reference values using the 2011 guidelines are presented in [Tables XI, XII, and XIII](#). Reference values using the 2012 guidelines are presented in [Tables XIV, XV, and XVI](#).

Table XI. Year 2011 reference table for additional income cascade questions for families in the 48 contiguous states and Washington, D.C.

Family size	Reported range of household income														
	Less than \$7,500	\$7,500–\$9,999	\$10,000–\$12,499	\$12,500–\$14,999	\$15,000–\$17,499	\$17,500–\$19,999	\$20,000–\$24,999	\$25,000–\$29,999	\$30,000–\$34,999	\$35,000–\$39,999	\$40,000–\$44,999	\$45,000–\$49,999	\$50,000–\$59,999	\$60,000–\$74,999	\$75,000 and over
2	AA	A	A	A	B	B	22,100	27,200	F	F	F	G	58,800	H	H
3	AA	AA	A	A	A	18,500	B	27,800	D	37,100	F	F	55,600	G	H
4	AA	AA	11,200	A	A	A	22,400	B	33,500	D	41,300	F	F	67,000	90,000
5	AA	AA	AA	A	A	A	A	26,200	B	36,100	D	48,400	52,300	F	80,000/ 105,000
6	AA	AA	AA	AA	A	A	A	A	B	B	41,400	D	55,500	F	90,000/ 120,000
7	AA	AA	AA	AA	16,900	A	A	A	33,800	B	B	46,700	D	62,500/ 67,600	100,000/ 135,000
8	AA	AA	AA	AA	AA	18,800	A	A	A	37,600	B	B	51,900/ 56,400	69,600	115,000/ 150,000
9	AA	AA	AA	AA	AA	AA	A	A	A	A	41,500	B	57,200	62,200	85,000/ 125,000
10	AA	AA	AA	AA	AA	AA	22,600	A	A	A	A	B	B	62,500/ 67,900	90,000/ 135,000
11	AA	AA	AA	AA	AA	AA	AA	A	A	A	A	A	B	67,700/ 73,600	100,000/ 150,000
12	AA	AA	AA	AA	AA	AA	AA	26,500	A	A	A	A	52,900	73,000	105,000/ 160,000
13	AA	AA	AA	AA	AA	AA	AA	28,400	A	A	A	A	56,700	B	115,000/ 170,000
14	AA	AA	AA	AA	AA	AA	AA	AA	A	A	A	A	A	B	120,000/ 180,000
15	AA	AA	AA	AA	AA	AA	AA	AA	32,200	A	A	A	A	64,400	130,000/ 195,000
16	AA	AA	AA	AA	AA	AA	AA	AA	AA	A	A	A	A	68,200	135,000/ 205,000
17	AA	AA	AA	AA	AA	AA	AA	AA	AA	36,000	A	A	A	72,000	145,000/ 215,000
18	AA	AA	AA	AA	AA	AA	AA	AA	AA	37,900	A	A	A	A	150,000/ 225,000

NOTES: When the reported range of household income was included within two or more poverty ranges, additional questions (K11Q59 and K11Q59A) were asked to determine the poverty range for the household. Values in this table represent the border between two poverty ranges. Additional income questions were asked with such values (“Would you say this income was above or below [value]?”) to identify the proper poverty range for the household. Values were rounded to the nearest \$100 if income was below \$75,000, and to the nearest \$5,000 if income was over \$75,000. The additional income questions were not asked if the value (i.e., the range border) was less than \$900 from either endpoint of the reported range of household income. Letters in this table signify that the reported range of household income was entirely within one poverty range; see Appendix VII for full definitions of poverty status categories.

Table XII. Year 2011 reference table for additional income cascade questions for families in Alaska

Family size	Reported range of household income														
	Less than \$7,500	\$7,500–\$9,999	\$10,000–\$12,499	\$12,500–\$14,999	\$15,000–\$17,499	\$17,500–\$19,999	\$20,000–\$24,999	\$25,000–\$29,999	\$30,000–\$34,999	\$35,000–\$39,999	\$40,000–\$44,999	\$45,000–\$49,999	\$50,000–\$59,999	\$60,000–\$74,999	\$75,000 and over
2	AA	AA	A	A	A	18,400	B	27,600	34,000	36,800	F	F	55,100	73,500	H
3	AA	AA	11,600	A	A	A	23,200	B	32,000	D	42,800	46,300	F	69,500	95,000
4	AA	AA	AA	14,000	A	A	A	27,900	B	38,600	41,900	D	51,700/ 55,900	F	85,000/ 110,000
5	AA	AA	AA	AA	16,400	A	A	A	32,700	B	B	C	D	65,400	100,000/ 130,000
6	AA	AA	AA	AA	AA	18,800	A	A	A	37,500	B	B	51,800/ 56,300	69,400	115,000/ 150,000
7	AA	AA	AA	AA	AA	AA	21,100	A	A	A	42,300	B	58,300	63,400	85,000/ 125,000
8	AA	AA	AA	AA	AA	AA	23,500	A	A	A	A	47,100	B	64,900/ 70,600	95,000/ 140,000
9	AA	AA	AA	AA	AA	AA	AA	25,900	A	A	A	A	51,800	71,500	105,000/ 155,000
10	AA	AA	AA	AA	AA	AA	AA	28,300	A	A	A	A	56,600	B	115,000/ 170,000
11	AA	AA	AA	AA	AA	AA	AA	AA	A	A	A	A	A	61,400	125,000/ 185,000
12	AA	AA	AA	AA	AA	AA	AA	AA	33,100	A	A	A	A	66,200	130,000/ 200,000
13	AA	AA	AA	AA	AA	AA	AA	AA	AA	A	A	A	A	71,000	140,000/ 215,000
14	AA	AA	AA	AA	AA	AA	AA	AA	AA	37,900	A	A	A	A	150,000/ 225,000
15	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	A	A	A	A	160,000/ 240,000
16	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	42,700	A	A	A	170,000/ 255,000
17	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	A	A	A	180,000/ 270,000
18	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	47,400	A	A	190,000/ 285,000

NOTES: When the reported range of household income was included within two or more poverty ranges, additional questions (K11Q59 and K11Q59A) were asked to determine the poverty range for the household. Values in this table represent the border between two poverty ranges. Additional income questions were asked with such values ("Would you say this income was above or below [value]?") to identify the proper poverty range for the household. Values were rounded to the nearest \$100 if income was below \$75,000, and to the nearest \$5,000 if income was over \$75,000. The additional income questions were not asked if the value (i.e., the range border) was less than \$900 from either endpoint of the reported range of household income. Letters in this table signify that the reported range of household income was entirely within one poverty range; see Appendix VII for full definitions of poverty status categories.

Table XIII. Year 2011 reference table for additional income cascade questions for families in Hawaii

Family size	Reported range of household income														
	Less than \$7,500	\$7,500–\$9,999	\$10,000–\$12,499	\$12,500–\$14,999	\$15,000–\$17,499	\$17,500–\$19,999	\$20,000–\$24,999	\$25,000–\$29,999	\$30,000–\$34,999	\$35,000–\$39,999	\$40,000–\$44,999	\$45,000–\$49,999	\$50,000–\$59,999	\$60,000–\$74,999	\$75,000 and over
2	AA	8,500	A	A	16,900	B	23,400	D	31,300/ 33,900	F	F	F	G	67,700	H
3	AA	AA	A	A	A	A	21,300	B	32,000	D	42,600	F	F	64,000	85,000
4	AA	AA	AA	A	A	A	A	B	B	38,600	D	47,600	51,400	F	105,000
5	AA	AA	AA	AA	A	A	A	A	B	B	41,500	D	55,700	F	90,000/ 120,000
6	AA	AA	AA	AA	AA	A	A	A	A	B	B	47,600	51,700	63,800/ 69,000	105,000/ 140,000
7	AA	AA	AA	AA	AA	AA	A	A	A	39,000	B	B	53,700/ 58,300	71,900	80,000/ 115,000
8	AA	AA	AA	AA	AA	AA	21,600	A	A	A	43,300	B	B	64,900	85,000/ 130,000
9	AA	AA	AA	AA	AA	AA	23,800	A	A	A	A	47,700	B	65,800/ 71,500	95,000/ 145,000
10	AA	AA	AA	AA	AA	AA	AA	26,000	A	A	A	A	52,000	71,800	105,000/ 155,000
11	AA	AA	AA	AA	AA	AA	AA	28,200	A	A	A	A	56,400	B	115,000/ 170,000
12	AA	AA	AA	AA	AA	AA	AA	AA	A	A	A	A	A	B	120,000/ 180,000
13	AA	AA	AA	AA	AA	AA	AA	AA	32,600	A	A	A	A	65,200	130,000/ 195,000
14	AA	AA	AA	AA	AA	AA	AA	AA	AA	A	A	A	A	69,600	140,000/ 210,000
15	AA	AA	AA	AA	AA	AA	AA	AA	AA	37,000	A	A	A	74,000	150,000/ 220,000
16	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	A	A	A	A	155,000/ 235,000
17	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	41,400	A	A	A	165,000/ 250,000
18	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	43,600	A	A	A	175,000/ 260,000

NOTES: When the reported range of household income was included within two or more poverty ranges, additional questions (K11Q59 and K11Q59A) were asked to determine the poverty range for the household. Values in this table represent the border between two poverty ranges. Additional income questions were asked with such values ("Would you say this income was above or below [value]?") to identify the proper poverty range for the household. Values were rounded to the nearest \$100 if income was below \$75,000, and to the nearest \$5,000 if income was over \$75,000. The additional income questions were not asked if the value (i.e., the range border) was less than \$900 from either endpoint of the reported range of household income. Letters in this table signify that the reported range of household income was entirely within one poverty range; see Appendix VII for full definitions of poverty status categories.

Table XIV. Year 2012 reference table for additional income cascade questions for families in the 48 contiguous states and Washington, D.C.

Family size	Reported range of household income														
	Less than \$7,500	\$7,500–\$9,999	\$10,000–\$12,499	\$12,500–\$14,999	\$15,000–\$17,499	\$17,500–\$19,999	\$20,000–\$24,999	\$25,000–\$29,999	\$30,000–\$34,999	\$35,000–\$39,999	\$40,000–\$44,999	\$45,000–\$49,999	\$50,000–\$59,999	\$60,000–\$74,999	\$75,000 and over
2	AA	A	A	A	B	B	22,700	28,000	F	F	F	G	G	H	H
3	AA	AA	A	A	A	19,100	B	26,300/ 28,600	D	38,200	F	F	57,300	G	H
4	AA	AA	11,500	A	A	A	23,000	B	31,800	D	42,600	46,100	F	69,200	90,000
5	AA	AA	AA	13,500	A	A	A	27,000	B	37,300	D	D	54,000	F	80,000/ 11,0000
6	AA	AA	AA	AA	A	A	A	A	31,000	B	42,700	46,500	57,300	61,900	95,000/ 125,000
7	AA	AA	AA	AA	AA	A	A	A	A	B	B	48,200	52,400	64,600/ 69,900	105,000/ 140,000
8	AA	AA	AA	AA	AA	AA	A	A	A	38,900	B	B	53,700/ 58,300	71,900	115,000/ 155,000
9	AA	AA	AA	AA	AA	AA	21,400	A	A	A	42,900	B	B	64,300	85,000/ 130,000
10	AA	AA	AA	AA	AA	AA	23,400	A	A	A	A	46,800	B	64,600/ 70,200	95,000/ 140,000
11	AA	AA	AA	AA	AA	AA	AA	A	A	A	A	A	B	70,000	100,000/ 150,000
12	AA	AA	AA	AA	AA	AA	AA	27,400	A	A	A	A	54,700	B	110,000/ 165,000
13	AA	AA	AA	AA	AA	AA	AA	AA	A	A	A	A	58,700	B	120,000/ 175,000
14	AA	AA	AA	AA	AA	AA	AA	AA	31,300	A	A	A	A	62,700	125,000/ 190,000
15	AA	AA	AA	AA	AA	AA	AA	AA	33,300	A	A	A	A	66,600	135,000/ 200,000
16	AA	AA	AA	AA	AA	AA	AA	AA	AA	A	A	A	A	70,600	140,000/ 210,000
17	AA	AA	AA	AA	AA	AA	AA	AA	AA	37,300	A	A	A	A	150,000/ 225,000
18	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	A	A	A	A	155,000/ 235,000

NOTES: When the reported range of household income was included within two or more poverty ranges, additional questions (K11Q59 and K11Q59A) were asked to determine the poverty range for the household. Values in this table represent the border between two poverty ranges. Additional income questions were asked with such values ("Would you say this income was above or below [value]?") to identify the proper poverty range for the household. Values were rounded to the nearest \$100 if income was below \$75,000, and to the nearest \$5,000 if income was over \$75,000. The additional income questions were not asked if the value (i.e., the range border) was less than \$900 from either endpoint of the reported range of household income. Letters in this table signify that the reported range of household income was entirely within one poverty range; see Appendix VII for full definitions of poverty status categories.

Table XV. Year 2012 reference table for additional income cascade questions for families in Alaska

Family size	Reported range of household income														
	Less than \$7,500	\$7,500–\$9,999	\$10,000–\$12,499	\$12,500–\$14,999	\$15,000–\$17,499	\$17,500–\$19,999	\$20,000–\$24,999	\$25,000–\$29,999	\$30,000–\$34,999	\$35,000–\$39,999	\$40,000–\$44,999	\$45,000–\$49,999	\$50,000–\$59,999	\$60,000–\$74,999	\$75,000 and over
2	AA	AA	A	A	A	18,900	B	26,100/ 28,400	D	37,800	F	F	56,800	G	H
3	AA	AA	11,900	A	A	A	23,900	B	32,900	D	D	47,700	F	71,600	95,000
4	AA	AA	AA	AA	A	A	A	28,800	B	B	43,200	D	53,300/ 57,600	F	85,000/ 115,000
5	AA	AA	AA	AA	16,900	A	A	A	33,800	B	B	46,600	D	62,500/ 67,500	100,000/ 135,000
6	AA	AA	AA	AA	AA	AA	A	A	A	38,700	B	B	53,400/ 58,000	71,600	115,000/ 155,000
7	AA	AA	AA	AA	AA	AA	21,800	A	A	A	43,700	B	B	65,500	85,000/ 130,000
8	AA	AA	AA	AA	AA	AA	AA	A	A	A	A	48,600	B	67,000/ 72,900	95,000/ 145,000
9	AA	AA	AA	AA	AA	AA	AA	26,800	A	A	A	A	53,600	73,900	105,000/ 160,000
10	AA	AA	AA	AA	AA	AA	AA	AA	A	A	A	A	58,500	B	115,000/ 175,000
11	AA	AA	AA	AA	AA	AA	AA	AA	31,700	A	A	A	A	63,500	125,000/ 190,000
12	AA	AA	AA	AA	AA	AA	AA	AA	AA	A	A	A	A	68,400	135,000/ 205,000
13	AA	AA	AA	AA	AA	AA	AA	AA	AA	36,700	A	A	A	73,400	145,000/ 220,000
14	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	A	A	A	A	155,000/ 235,000
15	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	41,600	A	A	A	165,000/ 250,000
16	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	A	A	A	175,000/ 265,000
17	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	46,600	A	A	185,000/ 280,000
18	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	A	A	195,000/ 295,000

NOTES: When the reported range of household income was included within two or more poverty ranges, additional questions (K11Q59 and K11Q59A) were asked to determine the poverty range for the household. Values in this table represent the border between two poverty ranges. Additional income questions were asked with such values ("Would you say this income was above or below [value]?") to identify the proper poverty range for the household. Values were rounded to the nearest \$100 if income was below \$75,000, and to the nearest \$5,000 if income was over \$75,000. The additional income questions were not asked if the value (i.e., the range border) was less than \$900 from either endpoint of the reported range of household income. Letters in this table signify that the reported range of household income was entirely within one poverty range; see Appendix VII for full definitions of poverty status categories.

Table XVI. Year 2012 reference table for additional income cascade questions for families in Hawaii

Family size	Reported range of household income														
	Less than \$7,500	\$7,500–\$9,999	\$10,000–\$12,499	\$12,500–\$14,999	\$15,000–\$17,499	\$17,500–\$19,999	\$20,000–\$24,999	\$25,000–\$29,999	\$30,000–\$34,999	\$35,000–\$39,999	\$40,000–\$44,999	\$45,000–\$49,999	\$50,000–\$59,999	\$60,000–\$74,999	\$75,000 and over
2	AA	8,700	A	A	A	B	24,000	26,100	32,200	F	F	F	52,200	69,600	H
3	AA	AA	11,000	A	A	A	22,000	B	32,900	D	43,900	F	F	65,900	90,000
4	AA	AA	AA	13,300	A	A	A	26,500	B	36,900	D	49,000	53,000	F	80,000/ 105,000
5	AA	AA	AA	AA	A	A	A	A	31,100	B	42,900	46,600	57,500	62,100	95,000/ 125,000
6	AA	AA	AA	AA	AA	A	A	A	A	B	B	B	53,400	65,900/ 71,200	105,000/ 140,000
7	AA	AA	AA	AA	AA	AA	A	A	A	A	B	B	55,400	D	80,000/ 120,000
8	AA	AA	AA	AA	AA	AA	22,400	A	A	A	A	B	B	61,700/ 67,100	90,000/ 135,000
9	AA	AA	AA	AA	AA	AA	AA	A	A	A	A	A	B	68,000/ 73,900	100,000/ 150,000
10	AA	AA	AA	AA	AA	AA	AA	26,900	A	A	A	A	53,800	B	110,000/ 160,000
11	AA	AA	AA	AA	AA	AA	AA	AA	A	A	A	A	58,400	B	115,000/ 175,000
12	AA	AA	AA	AA	AA	AA	AA	AA	31,500	A	A	A	A	62,900	125,000/ 190,000
13	AA	AA	AA	AA	AA	AA	AA	AA	33,700	A	A	A	A	67,500	135,000/ 200,000
14	AA	AA	AA	AA	AA	AA	AA	AA	AA	36,000	A	A	A	72,000	145,000/ 215,000
15	AA	AA	AA	AA	AA	AA	AA	AA	AA	38,300	A	A	A	A	155,000/ 230,000
16	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	A	A	A	A	160,000/ 245,000
17	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	42,800	A	A	A	170,000/ 255,000
18	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	A	A	A	180,000/ 270,000

NOTES: When the reported range of household income was included within two or more poverty ranges, additional questions (K11Q59 and K11Q59A) were asked to determine the poverty range for the household. Values in this table represent the border between two poverty ranges. Additional income questions were asked with such values ("Would you say this income was above or below [value]?") to identify the proper poverty range for the household. Values were rounded to the nearest \$100 if income was below \$75,000, and to the nearest \$5,000 if income was over \$75,000. The additional income questions were not asked if the value (i.e., the range border) was less than \$900 from either endpoint of the reported range of household income. Letters in this table signify that the reported range of household income was entirely within one poverty range; see Appendix VII for full definitions of poverty status categories.

Appendix VIII. Letters Sent to Sampled Households

The letters sent to sampled households for the National Survey of Children's Health (NSCH), 2011–2012, are included in this appendix. Advance letters were sent prior to calling to encourage response. Thank you letters were sent after interview completion to accompany incentive payments.

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National Immunization Survey Advance Letter



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service
Centers for Disease Control and Prevention

National Center for Health Statistics
3311 Toledo Road
Hyattsville, Maryland 20782

From the Director of the National Center for Health Statistics:

I am asking for your help with an important study conducted by the Centers for Disease Control and Prevention (CDC) called the National Immunization Survey (NIS). This survey tells us which vaccines people in the U.S. have received and about other important health topics. Results from the NIS are used to help health officials in their efforts to improve health care programs. In the next few weeks, NORC at the University of Chicago will call your household to take part in this study for CDC.

For this study, we need to ask about vaccinations and about children's health. Some households also may be asked questions about the health services their children need or use. If you have a child between 17 and 37 months of age, it would be helpful to have your child's immunization records handy when answering our questions. However, you can also answer these questions without the records.

Your phone number was chosen randomly by computer. It is important for us to interview every household we call to get a complete picture of your area's immunization rates and key factors that might affect them. The study is important, but you do not have to take part, or you can decide not to answer one or more questions.

You may call this toll free number at **1-866-999-3340** if you would like to take part in the study now. You can also call this number to learn more about the study and what you will be asked. For more information, turn this letter over or go to the study's web site:
<http://www.cdc.gov/nchs/nis.htm>.

Your answers to the NIS will provide information to help improve the nation's health now and in the years ahead. We need your help to make this study a success. We hope you will decide to take part when we call.

Thank you for your cooperation. I am grateful for your help.

Sincerely,

Edward J. Sondik, Ph.D.
Director, National Center for Health Statistics
Centers for Disease Control and Prevention

What is NORC at the University of Chicago?

NORC at the University of Chicago (NORC) is an independent research organization that conducts interviews on immunizations and children's health for the CDC. Additional information on NORC can be found on its website at www.norc.org.

NORC Toll Free Number: 1-866-999-3340

You can call the NORC toll free number to take part in the study right away, learn more about the study, and hear what you will be asked.

Who sees my answers?

You will be called by a trained interviewer who enters your answers into a computer. Everyone who works on the survey must sign an oath that promises they will never give out anyone's personal information. Only a few people who work on this survey ever see any personal information. Answers that could identify you or your family in any way are separated from your other answers. Survey findings are put into summary reports that contain no names or other information that identifies you.

How do you protect my information?

Your answers are used for health research purposes only. We conduct this survey under the Public Health Service Act. It and other strict U.S. laws require that we protect your family's information and keep it confidential. If you would like to know more about how we protect your answers, these laws are described in detail at www.cdc.gov/nchs/about/policy/confidentiality.htm.

If you want to know more about your rights as a study participant you may call 1-800-223-8118, toll free. This is the number for the Research Ethics Review Board at CDC. You will be asked to leave a message. Say you are calling about Protocol 2006-04.

How do I find more about immunizations and places to get them?

You may call toll free 1-800-CDC-INFO (1-800-232-4636) for more information about vaccinations or to get the phone number of a doctor or clinic near you.

If you prefer to use a TTY



Please call the AT&T Relay Service at 1-800-855-2880 and request that NORC be called at 1-866-999-3340.

NSCH Advance Letter (Augmentation Sample)



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service
Centers for Disease Control and Prevention

National Center for Health Statistics
3311 Toledo Road
Hyattsville, Maryland 20782

Dear Resident,

The CDC needs your help!

In the next few weeks, we will call your household to participate in a study about the health of children and teenagers. Information about all children will help the U.S. Department of Health and Human Services develop programs to promote the health of children in your state and throughout the United States.

Although your participation is voluntary, it is very important that we include your household because it has been scientifically selected and cannot be replaced. It is important that we talk to your household to learn about the health of children in your community. When we call you, we will ask a few questions to see if your household is eligible for this study.

We hope you will share this important information with us by phone when an interviewer calls to ask you to take part in the study. If you do, you can choose not to answer any questions you do not wish to answer. All information collected for this study is confidential and protected by federal law. The back of this letter provides answers to some questions you may have and ways to get more information about the survey.

To learn more about the study or to take part right away, call 1-866-900-9601, toll-free. CDC has hired the NORC at the University of Chicago to conduct the survey. Our website shows how we have used the data from the previous survey conducted in 2007 - <http://mchb.hrsa.gov/nsch/>.

Thank you very much for your help with this important research.

Sincerely,

Edward J. Sondik, Ph.D.
Director, National Center for Health Statistics
Centers for Disease Control and Prevention

If you prefer to use TTY



Please call the AT&T Relay Service at 1-800-855-2880 and request that 1-866-900-9601 be called. The call is toll-free.

National Survey of Children's Health

Frequently Asked Questions

What is the purpose of this study?

This survey is designed to describe the health and health care of children and teenagers. People have very different experiences with their children's health and health care. In order to improve children's health and well-being, it is important that we learn about how children use health care services and about any problems that they have in getting care that they need.

Does this study apply to me?

We are interested in talking with all sampled households. We need your information to get a complete picture of your area's child health needs. It will take a few minutes or less to determine if you are eligible for the study.

How will you protect my privacy?

We are bound by law to maintain strict confidentiality standards. Your information and the child's information will never be associated with any results. If you would like more information about the confidentiality of the research or the federal laws that ensure the protection of your information, including the Public Health Service Act and the Confidential Information Protection and Statistical Efficiency Act, these are described in detail at:

<http://www.cdc.gov/nchs/about/policy/confidentiality.htm>. If you want to know more about your rights as a study participant you may call 1-800-223-8118, toll-free. This is the number for the Research Ethics Review Board at CDC. You will be asked to leave a message and say you are calling about Protocol 2011-05.

How will this information be used?

Maternal and child health agencies in your state will use this information to improve health care services for children and their families. The federal government will also use this information to learn about the types of support services that states need for children's health care. You may visit

<http://www.cdc.gov/nchs/slait/nsch.htm> to find general information about the study. To find results from the last time the survey was done, please visit <http://mchb.hrsa.gov/nsch/>.

Who is NORC?

NORC at the University of Chicago is the name of the organization CDC hired to conduct this survey. It is a not-for-profit, academic research organization.

NORC's Toll-Free Number: 1-866-900-9601

You can call NORC's toll-free number to take part in the study right away, learn more about the study, and hear what you will be asked.

\$1 Prepaid/\$10 Promise Refusal Conversion Letter



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service
Centers for Disease Control and Prevention

National Center for Health Statistics
3311 Toledo Road
Hyattsville, Maryland 20782

Dear Parent or Guardian,

The CDC needs your help!

Recently, your family was asked to take part in a survey about the health of children and teenagers, but we have not been able to complete the interview yet. We hope you will reconsider our request. Information about your child and other children will help the U.S. Department of Health and Human Services develop programs to promote the health of children in your state and throughout the United States.

We hope you will share this important information with us by phone when an interviewer calls to ask you to take part in the study. If you would like to participate right away or find out more about the survey, please call the toll-free telephone number 1-866-999-3340.

Your household is very important to the study because it has been scientifically selected and cannot be replaced. All information collected for this study is confidential and protected by federal law. The back of this letter provides answers to some questions you may have and ways to get more information about the survey.

Thank you very much for your help with this important research.

Sincerely,

Edward J. Sondik, Ph.D.
Director, National Center for Health Statistics
Centers for Disease Control and Prevention

P.S. In appreciation for your time and effort, we have enclosed \$1. We will send an additional \$10 in cash once you complete the interview.

National Survey of Children's Health Frequently Asked Questions

Why is this study being conducted?

The Centers for Disease Control and Prevention is committed to improving children's health and well-being. State and federal health authorities are depending on the results of this study to help them understand how best to meet children's needs.

How will this information be used?

Maternal and child health agencies in your state will use this information to improve programs and services for children and their families. The federal government will also use this information to learn about the types of support services that states need for children's health and well-being.

You may visit <http://www.cdc.gov/nchs/slait/nsch.htm> to find general information about the study. To find results from the last time the survey was done, please visit <http://mchb.hrsa.gov/nsch/>.

How will you protect my privacy?

We are bound by law to maintain strict confidentiality standards. Your information and the child's information will never be associated with any results.

If you would like more information about the confidentiality of the research, the federal laws, including the Public Health Service Act and the Confidential Information Protection and Statistical Efficiency Act, that ensure the protection of your information have been described in detail at:

<http://www.cdc.gov/nchs/about/policy/confidentiality.htm>.

If you want to know more about your rights as a study participant you may call 1-800-223-8118, toll free. This is the number for the Research Ethics Review Board at CDC. You will be asked to leave a message and say you are calling about Protocol 2011-05.

How can I find out more about this survey?

If you have any questions about this research study, please call 1-866-999-3340.

\$5 Prepaid/\$10 Promise Refusal Conversion Letter



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service
Centers for Disease Control and Prevention

National Center for Health Statistics
3311 Toledo Road
Hyattsville, Maryland 20782

Dear Parent or Guardian,

The CDC needs your help!

Recently, your family was asked to take part in a survey about the health of children and teenagers, but we have not been able to complete the interview yet. We hope you will reconsider our request. Information about your child and other children will help the U.S. Department of Health and Human Services develop programs to promote the health of children in your state and throughout the United States.

We hope you will share this important information with us by phone when an interviewer calls to ask you to take part in the study. If you would like to participate right away or find out more about the survey, please call the toll-free telephone number 1-866-999-3340.

Your household is very important to the study because it has been scientifically selected and cannot be replaced. All information collected for this study is confidential and protected by federal law. The back of this letter provides answers to some questions you may have and ways to get more information about the survey.

Thank you very much for your help with this important research.

Sincerely,

Edward J. Sondik, Ph.D.
Director, National Center for Health Statistics
Centers for Disease Control and Prevention

P.S. In appreciation for your time and effort, we have enclosed \$5. We will send an additional \$10 in cash once you complete the interview.

National Survey of Children's Health Frequently Asked Questions

Why is this study being conducted?

The Centers for Disease Control and Prevention is committed to improving children's health and well-being. State and federal health authorities are depending on the results of this study to help them understand how best to meet children's needs.

How will this information be used?

Maternal and child health agencies in your state will use this information to improve programs and services for children and their families. The federal government will also use this information to learn about the types of support services that states need for children's health and well-being.

You may visit <http://www.cdc.gov/nchs/slait/nsch.htm> to find general information about the study. To find results from the last time the survey was done, please visit <http://mchb.hrsa.gov/nsch/>.

How will you protect my privacy?

We are bound by law to maintain strict confidentiality standards. Your information and the child's information will never be associated with any results.

If you would like more information about the confidentiality of the research, the federal laws, including the Public Health Service Act and the Confidential Information Protection and Statistical Efficiency Act, that ensure the protection of your information have been described in detail at:

<http://www.cdc.gov/nchs/about/policy/confidentiality.htm>.

If you want to know more about your rights as a study participant you may call 1-800-223-8118, toll free. This is the number for the Research Ethics Review Board at CDC. You will be asked to leave a message and say you are calling about Protocol 2011-05.

How can I find out more about this survey?

If you have any questions about this research study, please call 1-866-999-3340.

\$10 Thank You Letter



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service
Centers for Disease Control and Prevention

National Center for Health Statistics
3311 Toledo Road
Hyattsville, Maryland 20782

Dear Parent or Guardian,

Thank you for taking part in the National Survey of Children's Health. The information that you gave about your child will help the Centers for Disease Control and Prevention develop programs to promote the health of children in your state and throughout the United States.

In appreciation for your time and effort spent answering our questions, we have enclosed \$10.

If you would like more information about the survey, you may visit <http://www.cdc.gov/nchs/slait/nsch.htm>, or call the toll-free telephone number for the study at 1-866-999-3340. To find results from the last time the survey was done, please visit <http://mchb.hrsa.gov/nsch/>.

Thank you again for your help with this important research.

Sincerely,

Edward J. Sondik, Ph.D.
Director, National Center for Health Statistics
Centers for Disease Control and Prevention

\$11 Thank You Letter



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service
Centers for Disease Control and Prevention

National Center for Health Statistics
3311 Toledo Road
Hyattsville, Maryland 20782

Dear Parent or Guardian,

Thank you for taking part in the National Survey of Children's Health. The information that you gave about your child will help the Centers for Disease Control and Prevention develop programs to promote the health of children in your state and throughout the United States.

In appreciation for your time and effort spent answering our questions, we have enclosed \$11.

If you would like more information about the survey, you may visit <http://www.cdc.gov/nchs/slait/nsch.htm>, or call the toll-free telephone number for the study at 1-866-999-3340. To find results from the last time the survey was done, please visit <http://mchb.hrsa.gov/nsch/>.

Thank you again for your help with this important research.

Sincerely,

Edward J. Sondik, Ph.D.
Director, National Center for Health Statistics
Centers for Disease Control and Prevention

\$15 Thank You Letter



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service
Centers for Disease Control and Prevention

National Center for Health Statistics
3311 Toledo Road
Hyattsville, Maryland 20782

Dear Parent or Guardian,

Thank you for taking part in the National Survey of Children's Health. The information that you gave about your child will help the Centers for Disease Control and Prevention develop programs to promote the health of children in your state and throughout the United States.

In appreciation for your time and effort spent answering our questions, we have enclosed \$15.

If you would like more information about the survey, you may visit <http://www.cdc.gov/nchs/slait/nsch.htm>, or call the toll-free telephone number for the study at 1-866-999-3340. To find results from the last time the survey was done, please visit <http://mchb.hrsa.gov/nsch/>.

Thank you again for your help with this important research.

Sincerely,

Edward J. Sondik, Ph.D.
Director, National Center for Health Statistics
Centers for Disease Control and Prevention

Appendix IX. Disposition Code Frequencies and Response Rate Calculations

This appendix consists of tables showing the disposition code frequencies and how response rates were calculated. [Table XVII](#) shows unweighted response rate calculations for the overall sample. [Table XVIII](#) shows calculations for the landline sample, excluding the U.S. Virgin Islands (USVI) sample; [Table XIX](#) shows calculations for the total landline sample including USVI; and [Table XX](#) shows calculations for the USVI sample only. [Table XXI](#) shows calculations for the cell-phone sample.

Table XVII. Unweighted response rate calculations for 2011–2012 National Survey of Children’s Health: All sample

Disposition category and response rate	Frequency or calculated rate	Disposition category code or formula
Total	6,152,487	Total
Not resolved as residential or nonresidential	1,705,693	A
Answering machine	685,481	A1
No contact	412,885	A2
Likely household	607,327	A3
Out of scope	3,389,715	B
Nonworking	2,876,625	B1
Nonresidential	513,090	B2
Cell-screened household, minor-only cell or landline-mainly cell	30,387	C
Known household, mainly landline (for cell screening only)	5,362	C1
Cell phone owned by minor	25,025	C2
Known household, age eligibility undetermined	165,317	D
Known household, not screened for age	152,561	D1
Known household, known cell status, not age screened	1,178	D2
S_KIDS = yes, full age eligibility undetermined	11,578	D3
Age-screened household, no age-eligible child	670,529	E
Age-ineligible household	559,701	E1
Age ineligible via S_UNDR18 (cell augmentation sample)	2,484	E2
Age ineligible via S_KIDS (cell augmentation sample)	108,344	E3
Known age-eligible household, interview not completed	92,827	F
Age-eligible household, interview incomplete	86,015	F1
Age-eligible household via NIS, not yet in SLAITS ¹	6,812	F2
Known age-eligible household, partially completed interview	2,330	G
Completed interview	95,689	H
Calculation of response rate (percent)		
Resolution rate (RR)	72.28	Total – A / Total
Screener completion rate (SCR)	84.36	(C + E + F + G + H) / (C + D + E + F + G + H)
Interview completion rate (ICR)	51.36	(G + H) / (F + G + H)
CASRO response rate	31.32	(RR * SCR * ICR)
CASRO response rate alternative	35.59	((Total – A1 – A3) / Total) * SCR * ICR

¹NIS is National Immunization Survey; SLAITS is State and Local Area Integrated Telephone Survey.

NOTE: CASRO is Council of American Survey Research Organizations.

Table XVIII. Unweighted response rate calculations for 2011–2012 National Survey of Children's Health: Landline sample, excluding U.S. Virgin Islands

Disposition category and response rate	Frequency or calculated rate	Disposition category code or formula
Total	4,143,460	Total
Not resolved as residential or nonresidential	742,085	A
Answering machine	221,198	A1
No contact	296,245	A2
Likely household	224,642	A3
Out of scope	2,778,954	B
Nonworking	2,307,653	B1
Nonresidential	471,301	B2
Cell-screened household, minor-only cell or landline-mainly cell	...	C
Known household, mainly landline (for cell screening only)	...	C1
Cell phone owned by minor	...	C2
Known household, age eligibility undetermined	75,174	D
Known household, not screened for age	75,174	D1
Known household, known cell status, not age screened	...	D2
S_KIDS = yes, full age eligibility undetermined	...	D3
Age-screened household, no age-eligible child	432,076	E
Age-ineligible household	432,076	E1
Age ineligible via S_UNDR18 (cell augmentation sample)	...	E2
Age ineligible via S_KIDS (cell augmentation sample)	...	E3
Known age-eligible household, interview not completed	51,466	F
Age-eligible household, interview incomplete	47,597	F1
Age-eligible household via NIS, not yet in SLAITS ¹	3,869	F2
Known age-eligible household, partially completed interview	1,267	G
Completed interview	62,438	H
Calculation of response rate (percent)		
Resolution rate (RR)	82.09	Total – A / Total
Screener completion rate (SCR)	87.92	(C + E + F + G + H) / (C + D + E + F + G + H)
Interview completion rate (ICR)	55.31	(G + H) / (F + G + H)
CASRO response rate	39.92	(RR * SCR * ICR)
CASRO response rate alternative	43.40	((Total – A1 – A3) / Total) * SCR * ICR

... Category not applicable.

¹NIS is National Immunization Survey; SLAITS is State and Local Area Integrated Telephone Survey.

NOTE: CASRO is Council of American Survey Research Organizations.

Table XIX. Unweighted response rate calculations for 2011–2012 National Survey of Children's Health: Landline sample, including U.S. Virgin Islands

Disposition category and response rate	Frequency or calculated rate	Disposition category code or formula
Total	4,252,193	Total
Not resolved as residential or nonresidential	755,007	A
Answering machine	223,639	A1
No contact	304,821	A2
Likely household	226,547	A3
Out of scope	2,860,125	B
Nonworking	2,376,798	B1
Nonresidential	483,327	B2
Cell-screened household, minor-only cell or landline-mainly cell	...	C
Known household, mainly landline (for cell screening only)	...	C1
Cell phone owned by minor	...	C2
Known household, age eligibility undetermined	76,320	D
Known household, not screened for age	76,320	D1
Known household, known cell status, not age screened	...	D2
S_KIDS = yes, full age eligibility undetermined	...	D3
Age-screened household, no age-eligible child	442,146	E
Age-ineligible household	442,146	E1
Age ineligible via S_UNDR18 (cell augmentation sample)	...	E2
Age ineligible via S_KIDS (cell augmentation sample)	...	E3
Known age-eligible household, interview not completed	52,548	F
Age-eligible household, interview incomplete	48,592	F1
Age-eligible household via NIS, not yet in SLAITS ¹	3,956	F2
Known age-eligible household, partially completed interview	1,326	G
Completed interview	64,721	H
Calculation of response rate (percent)		
Resolution rate (RR)	82.24	Total – A / Total
Screener completion rate (SCR)	88.02	(C + E + F + G + H) / (C + D + E + F + G + H)
Interview completion rate (ICR)	55.69	(G + H) / (F + G + H)
CASRO response rate	40.32	(RR * SCR * ICR)
CASRO response rate alternative	43.83	((Total – A1 – A3) / Total) * SCR * ICR

... Category not applicable.

¹NIS is National Immunization Survey; SLAITS is State and Local Area Integrated Telephone Survey.

NOTE: CASRO is Council of American Survey Research Organizations.

Table XX. Unweighted response rate calculations for 2011–2012 National Survey of Children's Health: Landline sample, U.S. Virgin Islands

Disposition category and response rate	Frequency or calculated rate	Disposition category code or formula
Total	108,733	Total
Not resolved as residential or nonresidential	12,922	A
Answering machine	2,441	A1
No contact	8,576	A2
Likely household	1,905	A3
Out of scope	81,171	B
Nonworking	69,145	B1
Nonresidential	12,026	B2
Cell-screened household, minor-only cell or landline-mainly cell	...	C
Known household, mainly landline (for cell screening only)	...	C1
Cell phone owned by minor	...	C2
Known household, age eligibility undetermined	1,146	D
Known household, not screened for age	1,146	D1
Known household, known cell status, not age screened	...	D2
S_KIDS = yes, full age eligibility undetermined	...	D3
Age-screened household, no age-eligible child	10,070	E
Age-ineligible household	10,070	E1
Age ineligible via S_UNDR18 (cell augmentation sample)	...	E2
Age ineligible via S_KIDS (cell augmentation sample)	...	E3
Known age-eligible household, interview not completed	1,082	F
Age-eligible household, interview incomplete	995	F1
Age-eligible household via NIS, not yet in SLAITS ¹	87	F2
Known age-eligible household, partially completed interview	59	G
Completed interview	2,283	H
Calculation of response rate (percent)		
Resolution rate (RR)	88.12	Total – A / Total
Screener completion rate (SCR)	92.17	(C + E + F + G + H) / (C + D + E + F + G + H)
Interview completion rate (ICR)	68.40	(G + H) / (F + G + H)
CASRO response rate	55.55	(RR * SCR * ICR)
CASRO response rate alternative	60.53	((Total – A1 – A3) / Total) * SCR * ICR

... Category not applicable.

¹NIS is National Immunization Survey; SLAITS is State and Local Area Integrated Telephone Survey.

NOTE: CASRO is Council of American Survey Research Organizations.

Table XXI. Unweighted response rate calculations for 2011–2012 National Survey of Children's Health: Cell-phone sample

Disposition category and response rate	Frequency or calculated rate	Disposition category code or formula
Total	1,900,294	Total
Not resolved as residential or nonresidential	950,686	A
Answering machine	461,842	A1
No contact	108,064	A2
Likely household	380,780	A3
Out of scope	529,590	B
Nonworking	499,827	B1
Nonresidential	29,763	B2
Cell-screened household, minor-only cell or landline-mainly cell	30,387	C
Known household, mainly landline (for cell screening only)	5,362	C1
Cell phone owned by minor	25,025	C2
Known household, age eligibility undetermined	88,997	D
Known household, not screened for age	76,241	D1
Known household, known cell status, not age screened	1,178	D2
S_KIDS = yes, full age eligibility undetermined	11,578	D3
Age-screened household, no age-eligible child	228,383	E
Age-ineligible household	117,555	E1
Age ineligible via S_UNDR18 (cell augmentation sample)	2,484	E2
Age ineligible via S_KIDS (cell augmentation sample)	108,344	E3
Known age-eligible household, interview not completed	40,279	F
Age-eligible household, interview incomplete	37,423	F1
Age-eligible household via NIS, not yet in SLAITS ¹	2,856	F2
Known age-eligible household, partially completed interview	1,004	G
Completed interview	30,968	H
Calculation of response rate (percent)		
Resolution rate (RR)	49.97	Total – A / Total
Screener completion rate (SCR)	78.81	(C + E + F + G + H) / (C + D + E + F + G + H)
Interview completion rate (ICR)	44.25	(G + H) / (F + G + H)
CASRO response rate	17.43	(RR * SCR * ICR)
CASRO response rate alternative	19.41	((Total – A1 – A3) / Total) * SCR * ICR

... Category not applicable.

¹NIS is National Immunization Survey; SLAITS is State and Local Area Integrated Telephone Survey.

NOTE: CASRO is Council of American Survey Research Organizations.

Appendix X. Alternative Response Rates

By definition, the response rate is the number of completed interviews as a proportion of the number of eligible units in the sample:

$$\frac{\text{Complete Interviews}}{\text{Eligibles}}$$

For the National Survey of Children’s Health (NSCH), the numerator is the number of households that completed the interview through Section 6 or Section 7 (depending on the child’s age), and the denominator is the number of eligible households in the sample. However, due to nonresponse before the screener was completed, eligibility status was not observed for all sample units, and the number of eligible units in the sample had to be estimated. The response rate formula is, therefore, often written as:

$$\frac{\text{Complete Interviews}}{\text{Observed Eligibles} + eU}$$

where U is the number of sampled telephone numbers for which the eligibility status has not been observed and e is the assumed rate of eligibility among these unobserved units. This equation is of the form of the response rate formulas from the American Association for Public Opinion Research’s (AAPOR) “Standard Definitions: Final Dispositions of Case Codes and Outcome Rates for Surveys” (22).

Setting $e = 1$ (i.e., assuming that all sample units with unobserved eligibility status were actually eligible) represents the minimum response rate and corresponds to AAPOR response rate 1 (RR1). For NSCH, the minimum response rate was 6.6% for the landline sample and 2.7% for the cell-phone sample. Setting $e = 0$ represents the maximum response rate, reflecting an assumption that all of the sample units with unobserved eligibility status are actually ineligible and corresponding to AAPOR response rate 5 (RR5). For NSCH, the maximum response rate was 54.1% for the landline sample and 41.2% for the cell-phone sample. The minimum

and maximum response rates for each state are given in [Tables XXII](#) and [XXIII](#).

Setting e between 0 and 1 corresponds to AAPOR response rate 3 (RR3). Survey researchers have used several methods to choose a value for e (23). Perhaps the most common method is to set e equal to the observed eligibility rate among those sample units for which the eligibility status has been determined, as in,

$$e = \frac{\text{Observed Eligibles}}{\text{Observed Eligibles} + \text{Observed Ineligibles}}$$

where the observed ineligibles include all types of ineligible units. For NSCH, observed ineligibles include nonworking phone numbers, businesses, households without children, cell phones that are not used by adults, and, for the Quarter 1, 2011, cell-phone sample, households that are not cell phone-only or cell phone-mainly. This proportional allocation method is sometimes called the CASRO method because it is recommended by the Council of American Survey Research Organizations (CASRO) (24). This approach yields a national response rate of 42.7% for the landline sample and 17.8% for the cell-phone sample. The rates for each state are given in [Tables XXII](#) and [XXIII](#).

The method above used a single value of e for all sample units for which eligibility status was not determined. Another method commonly used in telephone surveys divides the units with undetermined eligibility into groups corresponding to nonrespondents to different components of the survey and assumes a separate e for each group. For NSCH, the response rate formula under this approach became:

$$\frac{\text{Completed Interviews}}{\text{Observed Eligibles} + e_1e_2U_1 + e_2U_2}$$

where,

U_1 = the number of unresolved telephone numbers,

e_1 = the assumed working residential number rate among U_1 ,

U_2 = the number of known residential telephone numbers where the screener was not completed,

and

e_2 = the assumed eligibility rate among U_2 .

Again, the proportional allocation (CASRO) method is commonly used to estimate e_1 and e_2 , letting e_1 equal the observed working residential number rate among the resolved telephone numbers and e_2 equal the observed eligibility rate among the screened households. Note that under these assumptions, the response rate can be written as the product of the component completion rates given in [Tables K](#) and [M](#). This approach yielded national response rates of 38.2% for the landline sample and 15.5% for the cell-phone sample. The response rates for each state are given in [Tables XXII](#) and [XXIII](#).

The response rates above treat all telephone numbers that resulted in no contact (i.e., all attempts resulted in rings with no answer or in busy signals) as unresolved. An alternative approach that treated these noncontact numbers as nonworking resulted in national response rates of 41.9% for the landline sample and 17.2% for the cell-phone sample. The alternative response rates for each state are given in [Tables XXII](#) and [XXIII](#).

Thus far, response rates have been presented separately for the landline and cell-phone samples; however, an overall response rate is desirable that combines the sample from both sample frames. A common method for constructing a dual-frame response rate is to weight together the response rates for the landline and cell-phone samples in proportion to the distribution of eligible units across the sample frames:

$$RR_{dual} = (RR_{LL} \cdot p_a) + \left(\frac{RR_{LL} \cdot p_{ab}}{2} \right) + \left(\frac{RR_{CELL} \cdot p_{ab}}{2} \right) + (RR_{CELL} \cdot p_b)$$

where, for NSCH,

RR_{dual} = the dual-frame response rate,

RR_{LL} = the landline-frame response rate,

RR_{CELL} = the cell phone-frame response rate,

p_a = the proportion of households with children that are landline-only,

p_{ab} = the proportion of households with children that have both landline and cell phones, and

p_b = the proportion of households with children that are cell phone-only.

Because households that have both landline and cell phones appeared on both sample frames and, thus, had twice the probability of selection, their contributions to the dual-frame response rates were divided by two. This equation, with p_a , p_{ab} , and p_b estimated at the national and state levels (i.e., the same telephone status distribution estimates that were used to produce the final NSCH weights) was used to compute dual-frame response rates. The dual-frame response rates for the nation and each state are given in [Table XXIV](#).

Table XXII. Weighted National Survey of Children's Health response rates, nationally and by sampling state: Landline sample

Area	Minimum	Maximum	Single e, proportional allocation	Separate e for each type of nonrespondent, proportional allocation	Separate e for each type of nonrespondent, proportional allocation (alternative)
Total (excluding USVI)	6.6	54.1	42.7	38.2	41.9
Total (including USVI)	6.6	54.1	42.7	38.2	41.9
Alabama	6.5	58.9	46.0	41.3	46.1
Alaska	9.1	53.6	44.0	39.3	43.1
Arizona	5.5	50.7	40.0	35.6	38.9
Arkansas	6.9	56.6	47.5	43.8	47.1
California	5.5	49.4	35.9	31.4	36.7
Colorado	7.8	59.6	47.8	43.3	46.7
Connecticut	6.5	53.9	40.1	35.5	38.7
Delaware	5.2	52.5	38.9	34.9	38.7
District of Columbia	4.1	58.1	46.5	41.4	46.5
Florida	4.4	51.1	40.2	35.5	38.9
Georgia	6.5	55.0	44.0	39.1	42.7
Hawaii	5.9	49.6	40.3	35.2	38.2
Idaho	7.6	54.1	45.0	41.1	43.9
Illinois	7.6	54.3	44.1	39.7	43.1
Indiana	10.2	62.1	51.5	46.9	50.4
Iowa	8.2	60.0	50.4	46.5	49.6
Kansas	9.0	60.0	49.8	45.3	48.5
Kentucky	6.7	53.6	42.9	38.6	42.2
Louisiana	6.1	52.1	42.4	37.4	40.8
Maine	7.5	57.6	46.5	42.8	46.3
Maryland	7.2	58.3	44.5	39.3	43.5
Massachusetts	6.3	53.2	39.8	35.4	38.5
Michigan	7.2	58.2	47.7	42.9	46.3
Minnesota	9.6	57.2	47.5	43.7	46.1
Mississippi	6.6	55.2	45.6	40.7	44.1
Missouri	8.7	59.4	48.9	44.6	48.1
Montana	9.2	64.6	54.7	50.4	53.0
Nebraska	8.6	58.4	48.9	44.4	47.2
Nevada	5.3	49.6	37.9	33.5	37.4
New Hampshire	6.6	53.5	41.4	37.4	40.4
New Jersey	6.1	50.8	38.3	33.6	37.7
New Mexico	7.0	58.5	48.0	43.3	46.2
New York	5.5	46.9	36.1	31.7	35.1
North Carolina	6.9	54.8	43.4	39.2	42.9
North Dakota	9.9	56.1	48.8	44.8	47.1
Ohio	7.0	55.3	45.2	40.8	43.7
Oklahoma	5.9	51.0	40.7	36.5	40.1
Oregon	8.5	60.9	50.5	46.6	49.8
Pennsylvania	7.1	54.8	42.2	38.3	41.8
Rhode Island	6.6	55.7	42.5	38.0	41.1
South Carolina	5.5	51.8	40.8	36.6	40.4
South Dakota	8.9	57.8	50.0	45.8	48.0
Tennessee	6.7	55.1	44.4	40.3	43.8
Texas	5.7	53.2	42.1	36.9	40.7
Utah	11.2	58.7	47.9	43.6	46.7
Vermont	10.0	64.6	52.7	48.9	52.5
Virginia	7.6	58.0	44.8	40.3	44.5
Washington	8.5	58.4	47.2	42.9	45.7
West Virginia	6.8	57.1	43.7	39.8	43.6
Wisconsin	8.8	57.7	47.3	43.4	46.7
Wyoming	7.2	57.2	47.6	43.5	46.4
U.S. Virgin Islands	13.4	68.4	59.5	55.6	60.5

NOTE: USVI is U.S. Virgin Islands.

Table XXIII. Weighted National Survey of Children's Health response rates, nationally and by sampling state: Cell-phone sample

Area	Minimum	Maximum	Single e, proportional allocation	Separate e or each type of nonrespondent, proportional allocation	Separate e for each type of nonrespondent, proportional allocation (alternative)
Total (excluding USVI)	2.7	41.2	17.8	15.5	17.2
Total (including USVI) . . . . .	...	...	...	...	...
Alabama	2.7	43.0	22.3	18.9	21.0
Alaska	4.0	53.3	30.1	25.8	31.5
Arizona	2.9	44.8	18.7	16.7	19.3
Arkansas	3.4	48.2	25.0	21.5	22.8
California	2.7	37.0	14.6	12.6	13.9
Colorado	3.1	47.2	19.6	17.3	19.8
Connecticut	2.1	40.8	14.6	12.8	14.6
Delaware	2.7	44.4	17.2	15.6	18.3
District of Columbia	2.9	50.7	18.8	17.5	22.7
Florida	2.4	37.1	16.5	14.3	15.4
Georgia	2.9	41.8	20.0	17.1	19.1
Hawaii	2.8	41.2	16.0	14.3	15.8
Idaho	4.8	51.9	24.0	21.7	23.5
Illinois	2.9	38.4	17.6	14.9	16.2
Indiana	3.5	44.0	20.6	18.5	20.3
Iowa	3.7	46.7	22.7	20.2	22.7
Kansas	3.6	49.3	25.2	22.2	24.3
Kentucky	2.8	44.1	20.2	17.6	19.6
Louisiana	2.5	42.0	19.8	16.9	18.5
Maine	2.9	45.0	19.0	17.0	18.3
Maryland	2.3	41.8	13.6	12.5	15.5
Massachusetts	2.1	45.1	17.2	15.0	17.6
Michigan	2.3	41.2	18.8	16.2	18.4
Minnesota	3.3	45.8	20.8	18.7	21.0
Mississippi	3.2	42.1	22.5	19.5	21.3
Missouri	3.4	46.7	20.6	18.5	20.3
Montana	3.7	51.5	30.9	26.8	28.8
Nebraska	4.3	52.4	25.8	22.8	24.3
Nevada	2.6	43.5	17.1	15.1	17.4
New Hampshire	2.3	44.8	17.9	15.6	17.4
New Jersey	2.1	38.5	15.8	13.9	16.0
New Mexico	3.6	45.3	23.6	20.7	22.7
New York	1.9	34.0	13.6	11.6	12.8
North Carolina	3.0	43.5	20.3	17.6	19.2
North Dakota	3.4	49.2	30.4	26.2	28.7
Ohio	2.4	40.6	16.8	14.7	16.6
Oklahoma	3.1	43.5	21.9	19.1	21.0
Oregon	4.0	47.2	19.8	18.2	19.6
Pennsylvania	1.7	31.8	11.8	10.3	11.7
Rhode Island	2.5	45.5	16.9	14.9	16.6
South Carolina	2.6	41.1	19.9	17.3	18.8
South Dakota	4.2	50.1	30.5	26.9	28.2
Tennessee	3.1	44.0	19.1	16.5	17.9
Texas	3.1	39.6	16.5	14.0	15.3
Utah	4.6	51.5	22.6	20.3	24.6
Vermont	2.9	50.1	21.1	18.6	20.1
Virginia	2.7	44.2	16.3	14.7	17.9
Washington	3.2	45.7	17.0	15.5	17.4
West Virginia	2.3	42.9	17.3	15.0	16.3
Wisconsin	3.3	47.0	22.1	19.2	21.0
Wyoming	3.8	52.0	35.7	29.6	30.5
U.S. Virgin Islands . . . . .	...	...	...	...	...

... Category not applicable.

NOTE: USVI is U.S. Virgin Islands.

Table XXIV. Weighted National Survey of Children's Health response rates overall, nationally and by sampling state

Area	Minimum	Maximum	Single e, proportional allocation	Separate e for each type of nonrespondent, proportional allocation	Separate e for each type of nonrespondent, proportional allocation (alternative)
Total (excluding USVI)	4.0	45.5	26.1	23.0	25.4
Total (including USVI) . . . . .	...	...	...	...	...
Alabama	3.8	47.7	29.3	25.5	28.4
Alaska	6.2	53.4	36.0	31.6	36.5
Arizona	3.7	46.6	25.2	22.4	25.3
Arkansas	4.2	50.1	30.1	26.5	28.3
California	3.7	41.5	22.4	19.5	22.2
Colorado	4.6	51.0	28.2	25.3	28.0
Connecticut	4.2	46.9	26.6	23.5	25.9
Delaware	3.7	47.6	25.8	23.3	26.4
District of Columbia	3.2	52.5	25.5	23.2	28.5
Florida	3.0	41.4	23.8	20.8	22.6
Georgia	4.1	46.0	27.6	24.0	26.5
Hawaii	3.8	44.0	24.1	21.3	23.2
Idaho	5.5	52.4	29.1	26.4	28.5
Illinois	4.4	43.5	26.2	22.9	24.9
Indiana	5.6	49.6	30.0	27.2	29.5
Iowa	5.2	51.1	31.9	29.0	31.6
Kansas	5.2	52.5	32.5	29.1	31.5
Kentucky	4.0	47.1	27.4	24.3	26.8
Louisiana	3.5	44.9	26.3	22.7	24.9
Maine	4.5	49.3	28.5	25.9	28.0
Maryland	4.2	48.2	25.6	22.9	26.3
Massachusetts	3.8	48.4	26.5	23.4	26.2
Michigan	3.8	46.4	27.5	24.3	26.9
Minnesota	5.5	49.8	30.3	27.6	29.9
Mississippi	3.9	44.7	27.2	23.8	25.9
Missouri	5.1	50.7	29.5	26.7	29.1
Montana	5.4	55.7	38.4	34.3	36.5
Nebraska	5.7	54.4	33.4	29.8	31.8
Nevada	3.5	45.6	24.3	21.5	24.3
New Hampshire	3.9	48.1	26.7	23.8	26.0
New Jersey	3.8	43.8	25.6	22.5	25.5
New Mexico	4.5	48.9	30.2	26.8	29.0
New York	3.5	39.6	23.4	20.3	22.5
North Carolina	4.1	46.7	26.9	23.7	25.9
North Dakota	5.3	51.3	36.0	31.9	34.3
Ohio	3.9	45.1	25.5	22.7	24.9
Oklahoma	4.0	45.9	28.0	24.8	27.2
Oregon	5.5	51.8	30.1	27.7	29.7
Pennsylvania	3.7	40.4	23.2	20.8	23.0
Rhode Island	4.4	50.1	28.6	25.5	27.8
South Carolina	3.4	44.3	26.1	23.0	25.2
South Dakota	5.7	52.5	36.7	32.9	34.5
Tennessee	4.1	47.1	26.1	23.2	25.2
Texas	3.8	43.2	23.4	20.1	22.1
Utah	6.7	53.8	30.7	27.8	31.7
Vermont	5.7	55.7	33.4	30.4	32.8
Virginia	4.6	49.6	27.4	24.7	28.3
Washington	5.1	50.2	27.7	25.2	27.5
West Virginia	4.1	48.5	27.7	24.8	27.0
Wisconsin	5.2	50.6	30.6	27.3	29.6
Wyoming	4.9	53.7	39.7	34.3	35.8
U.S. Virgin Islands . . . . .	...	...	...	...	...

... Category not applicable.

NOTE: USVI is U.S. Virgin Islands.

Appendix XI. Incentive Effort

To improve the likelihood that age-eligible households would participate in the National Survey of Children's Health (NSCH) and contribute to a more complete data set, an incentive plan was developed and executed during NSCH data collection. This plan was guided by previously successful incentive efforts in the 2007 NSCH and 2009–2010 National Survey of Children with Special Health Care Needs. This appendix summarizes the design and results of the NSCH incentive model, and the results from an experiment conducted throughout Quarters 2–4, 2011, to identify best practices for the presentation of prepaid incentives.

Eligible Cases

Cases eligible for an incentive were known age-eligible households that had not completed the NSCH interview and had refused participation at least once. The incentive models included in the experiment, and those ultimately chosen, were primarily refusal-based. Refusals were defined by specific combinations of “hung up during introduction” (HUDI), active (or verbal) refusals, and passive (i.e., persistent noncontact) refusals. For cases eligible for the National Immunization Survey's NIS–Child or NIS–Teen that had refusals in either survey, those refusals counted toward NSCH incentive eligibility.

Passive refusals, or cases with zero or one active refusal in which multiple attempts resulted in no contact for 21 days, received treatment similar to incentive cases with two active refusals (or the equivalent HUDI–refusal combination). Hostile refusals and cases that requested to be taken off the list of sampled phone numbers were not eligible for incentives and not dialed again. Cases that had been previously offered an incentive by NIS were also eligible for an NSCH incentive.

Incentive Experiment

The experiment included two treatments intended to provide insight into methods of increasing the chance that a potential respondent would open the mailing: standard compared with Priority-like mailing envelope and dollar bill compared with dollar coin. To explore the effects of envelope type and dollar type, the 2011–2012 NSCH incentive experiment used a 2x2 factorial design to include variations on both the type of dollar insertion included in each mailing (either a \$1 bill or a \$1 coin), as well as the type of envelope used to mail the letter (either a standard white envelope or an envelope that resembled a U.S. Postal Service Priority Mail envelope ([Appendix XII](#))). The outside of the Priority-like envelope was designed to resemble a Priority mailer with a red, white, and blue design, but requiring only first-class postage. This variation on the standard envelope was introduced as a method to decrease postage costs while also hypothetically retaining the salience of a Priority mailer. Together with the variation in dollar type, the following four experimental groups were applied to cases that qualified for the \$1 prepaid incentive:

- Group 1: Standard envelope with a dollar coin
- Group 2: Standard envelope with a dollar bill
- Group 3: Priority-like envelope with a dollar coin
- Group 4: Priority-like envelope with a dollar bill

The experiment was designed to investigate the following questions to

determine the best incentive mailing type for the remainder of the 2011–2012 NSCH, when taking into account the effect on completion rates:

Does the envelope's appearance (standard compared with Priority-like) affect completion rates?

Does the type of dollar (coin compared with bill) affect completion rates?

Does a specific combination of each of these factors make a significant difference on completion rates?

The experiment protocol was applied to all cases released during Quarter 2, 2011. To implement the experiment, each case flagged for NSCH Quarter 2, 2011, was randomly assigned to an incentive treatment group during sample preparation. On average, each incentive group had approximately 1,650 incentive-eligible households. The experiment continued through Quarter 3, 2011, and Quarter 4, 2011; however, prior to the start of each quarter, the group with the poorest performance was eliminated from the experiment.

Incentive Models

Because addresses were not available for the cell-phone sample in advance, the incentive model for the cell-phone sample relied less on prepaid incentives. [Table XXV](#) illustrates the different incentive models for the landline and cell-phone samples.

Response Rates

A total of 61,480 cases (32.2% of all age-eligible cases) became eligible for some type of an incentive across all five

Table XXV. Incentive model, by telephone sample type

Sample type	After first refusal	After second refusal	
		With mailing address	Without mailing address
Landline	No offer (not eligible for incentive)	\$1 coin mailing with promise of \$10	Offer \$11 upon callback
Cell phone	Offer \$10 upon callback	...	Offer \$15 upon callback

... Category not applicable; addresses not available for cell-phone sample.

quarters of NSCH data collection. Active refusal cases accounted for 58.1% ($n = 35,730$) of all cases eligible for incentive treatment, and passive refusal cases accounted for the remainder (41.9% or $n = 25,750$). Of the cases eligible for an incentive treatment, 30.5% ($n = 18,728$) fully completed the NSCH survey. [Table XXVI](#) details the total incentive cases by quarter.

Response Rates by Quarter

During Quarter 2, 2011, Group 2 (standard envelope/dollar bill) provided the highest completion rate and CASRO rate for both full and partial interviews, as well as the highest overall yield rate ([Table XXVII](#)). Group 3 (Priority-like envelope/dollar coin) achieved the lowest completion rates in all categories.

Significance testing was conducted using a chi-squared statistic to compare interview completion rates between incentive groups as well as between money type and envelope type alone. Although not significant, the standard envelope groups (Groups 1 and 2) had a higher completion rate than the Priority-like envelope groups (Groups 3 and 4), $\chi^2(1, N = 6,630) = 3.23, p = 0.07$. Similarly, the dollar bill groups (Groups 2 and 4) had a higher interview completion rate than the dollar coin groups (Groups 1 and 3), although this was not found to be significant, $\chi^2(1, N = 6,630) = 2.33, p = 0.13$. No significant difference was found when comparing all four groups, $\chi^2(1, N = 6,630) = 5.79, p = 0.12$; however, when comparing the highest-performing (Group 2) and lowest-performing (Group 3) groups, Group 2 (standard envelope with dollar bill) had a significantly higher interview completion rate, $\chi^2(1, N = 3,274) = 5.60, p = 0.02$.

As a result, Group 3 (Priority-like envelope with dollar coin) was dropped from future mailings to best maximize the incentive effort as data collection approached Quarter 3, 2011. Beginning August 12, 2011, cases identified as incentive-eligible in Quarter 3, 2011, were randomly assigned to the remaining three mailing-type groups (Groups 1, 2, or 4). Each group performed similarly to what was observed in Quarter 2,

2011 ([Table XXVIII](#)). Again, Group 2 (standard envelope with dollar bill) provided the highest completion rate and CASRO rate for both partial and full interviews, as well as the highest overall yield rate. The lowest rates were found in Group 4 (Priority-like envelope with dollar bill). Significance testing revealed no significant differences between groups, money type, or envelope type.

Based on the Quarter 3, 2011, results, only the two top-performing groups (Groups 1 and 2) were included in the experiment in Quarter 4, 2011. Beginning October 21, 2011, cases identified as incentive-eligible in Quarter 4, 2011, were randomly assigned to either Group 1 (standard envelope with dollar coin) or Group 2 (standard envelope with dollar bill). The final results from Quarter 4, 2011, revealed Group 1 (standard envelope with dollar coin) achieved the highest partial completion rate, the highest partial and full interview CASRO response rates, and the highest yield rate ([Table XXIX](#)). Group 2 (standard envelope with dollar bill) achieved the highest full-interview completion rate. Significance testing revealed no significant differences between groups, money type, or envelope type.

Although Group 1 (standard envelope with dollar coin) achieved higher rates in all but full interview completion in Quarter 4, 2011, Group 2 (standard envelope with dollar bill) consistently maintained the highest rates in all categories in previous quarters. Based on this performance, NSCH proceeded with the Group 2 mailing type (standard envelope with dollar bill) for all Quarter 1, 2012, cases.

Table XXVI. Number of incentive-eligible cases and percentage completed, by quarter: 2011 and first quarter, 2012

Number of cases and percentage completed	2011				2012	Overall
	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Quarter 1	
Total	4,859	11,486	18,410	9,766	16,959	61,480
Number of completed cases	1,541	3,770	5,745	3,158	4,514	18,728
Percentage of incentive-eligible cases completed	31.71	32.82	31.21	32.34	26.62	30.46

NOTES: Incentive-eligible cases include those with one or two refusals, depending on the incentive treatment, and S_UNDR18 = 1–9; they do not include hostile refusals or requests for removal from the call list. Completed cases are those in which the entire interview was completed.

Table XXVII. Number of cases and response rates, by incentive experiment group: Second quarter, 2011

Group	Money type	Envelope type	Released cases	Age eligible	NSCH Section 7 completed	Full interview completed	Completion rate		CASRO response rate		Yield rate
							Partial interview	Full interview	Partial interview	Full interview	
Total	...	...	6,630	6,591	2,293	2,106	34.79	31.95	34.77	31.93	31.76
1	Dollar coin	Standard	1,692	1,684	589	544	34.98	32.3	34.98	32.3	32.15
2	Dollar bill	Standard	1,626	1,613	583	544	36.14	33.73	36.12	33.71	33.46
3	Dollar coin	Priority-like	1,648	1,641	539	488	32.85	29.74	32.81	29.7	29.61
4	Dollar bill	Priority-like	1,664	1,653	582	530	35.21	32.06	35.19	32.04	31.85

... Category not applicable.

NOTE: NSCH is National Survey of Children's Health; CASRO is Council of American Survey Research Organizations.

Table XXVIII. Number of cases and response rates, by incentive experiment group: Third quarter, 2011

Group	Money type	Envelope type	Released cases	Age eligible	NSCH Section 7 completed	Full interview completed	Completion rate		CASRO response rate		Yield rate
							Partial interview	Full interview	Partial interview	Full interview	
Total	...	...	7,299	7,242	2,432	2,246	33.58	31.01	33.51	30.95	30.77
1	Dollar coin	Standard	2,430	2,408	817	751	33.93	31.19	33.84	31.11	30.91
2	Dollar bill	Standard	2,436	2,421	838	779	34.61	32.18	34.56	32.12	31.98
4	Dollar bill	Priority-like	2,433	2,413	777	716	32.2	29.67	32.12	29.6	29.43

... Category not applicable.

NOTE: NSCH is National Survey of Children's Health; CASRO is Council of American Survey Research Organizations.

Table XXIX. Number of cases and response rates, by incentive group: Fourth quarter, 2011

Group	Money type	Envelope type	Released cases	Age eligible	NSCH Section 7 completed	Full interview completed	Completion rate		CASRO response rate		Yield rate
							Partial interview	Full interview	Partial interview	Full interview	
Total	...	...	2,872	2,855	974	920	34.12	32.22	34.04	32.16	32.03
1	Dollar coin	Standard	1,433	1,424	487	463	34.2	32.51	34.08	32.4	32.31
2	Dollar bill	Standard	1,439	1,431	487	457	34.03	31.94	34.01	31.91	31.76

... Category not applicable.

NOTE: NSCH is National Survey of Children's Health; CASRO is Council of American Survey Research Organizations.

Appendix XII. Envelope Types Used in Incentive Experiment

This appendix includes examples of the two envelope types used in the incentive experiment described in [Appendix XI](#). [Figure 1](#) shows the U.S. Department of Health and Human Services official business mailing envelope. [Figure 2](#) shows the Priority Processing mailing envelope.

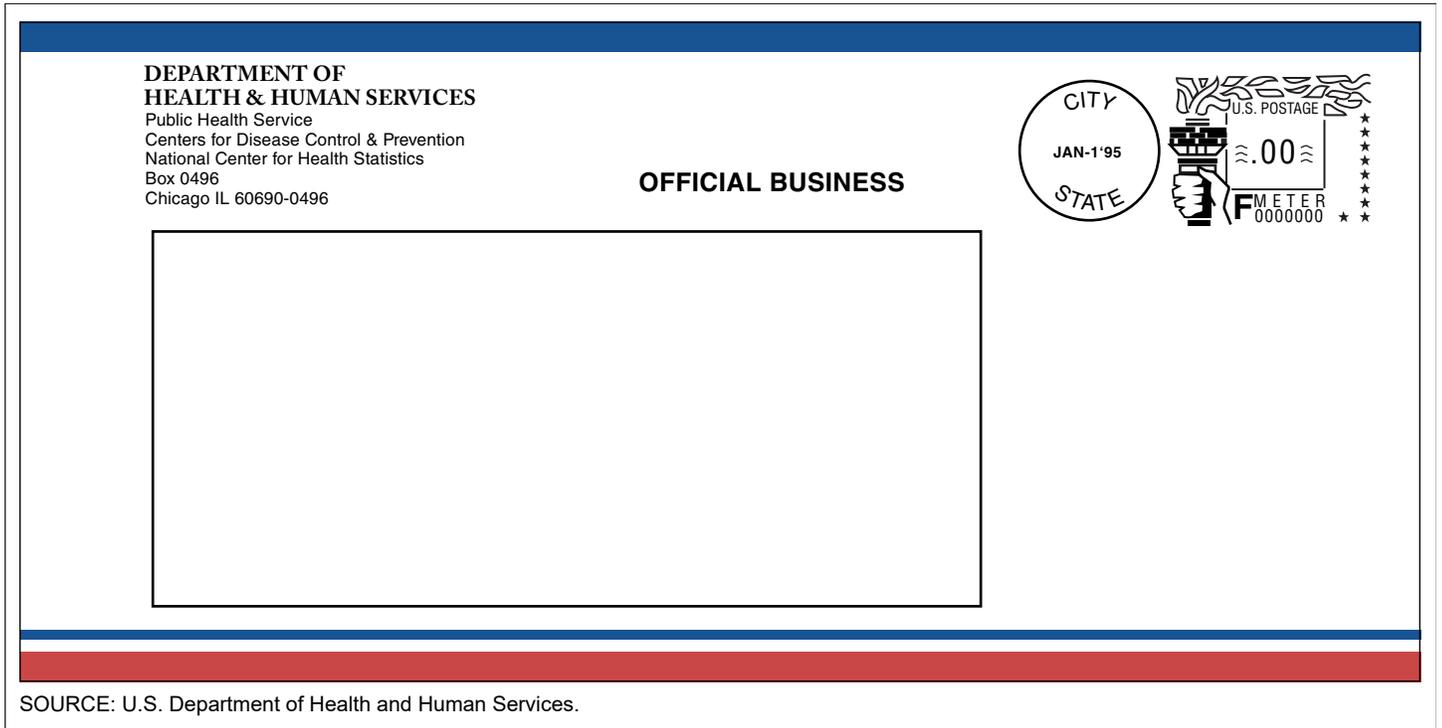
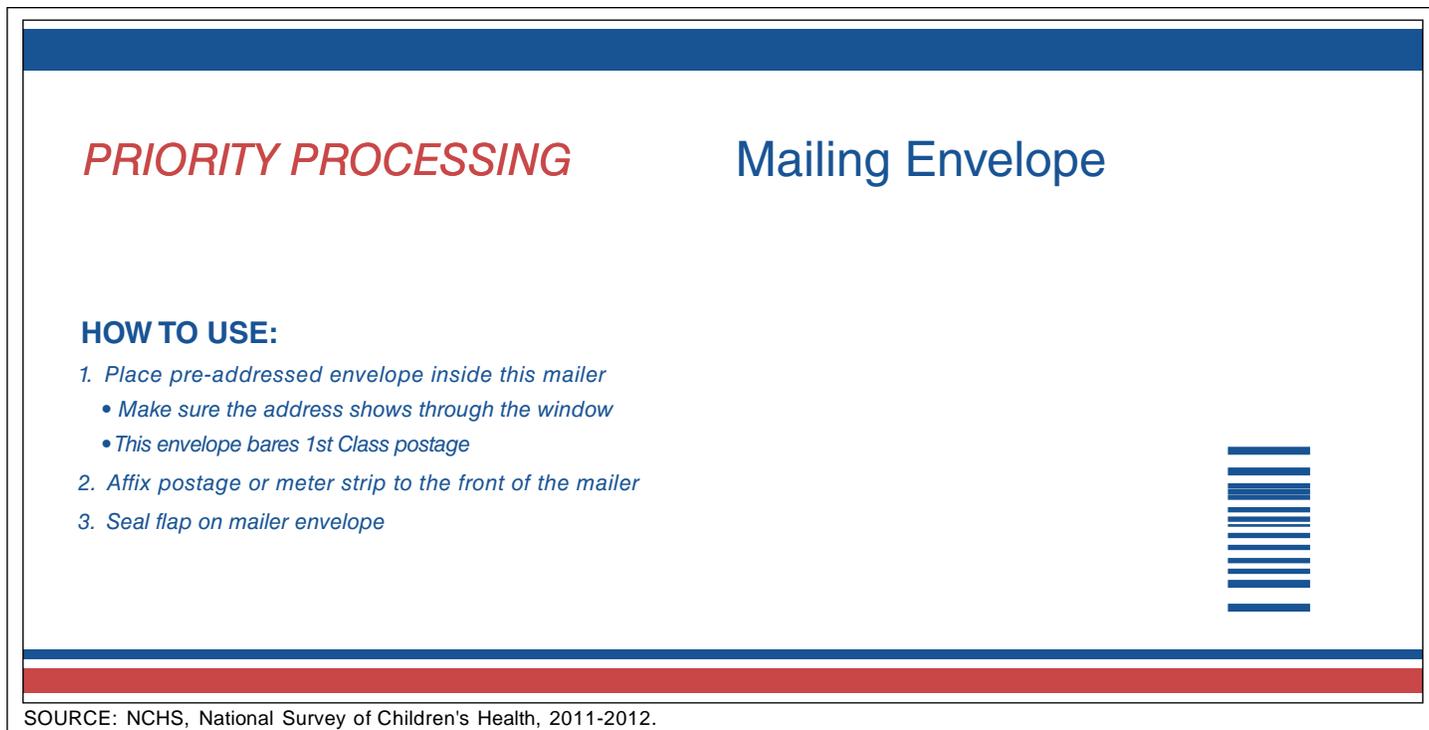


Figure 1. U.S. Department of Health and Human Services official business mailing envelope



SOURCE: NCHS, National Survey of Children's Health, 2011-2012.

Figure 2. Mailing envelope labeled Priority Processing

Appendix XIII. Nonresponse Bias Analysis

The stages of the 2011–2012 National Survey of Children’s Health (NSCH), and the types of nonrespondent associated with each stage, are shown in Figure 3. Nonresponse occurred at each stage: For some telephone numbers, it was never determined whether the number belonged to a household (i.e., some numbers remained unresolved); some identified households did not complete the age-eligibility or cell phone-status screeners; and some households that were identified as eligible did not complete the detailed interview. This appendix explores the effect of the nonrespondents—that is, unresolved telephone numbers, age- and cell phone-status screener nonrespondents, and interview nonrespondents—on key national survey estimates.

Nonresponse Bias

Nonresponse bias in a survey estimate \bar{y}_r can be expressed in two forms (25), given the data collection protocol. The first formulation assumes that each unit in the target population is, a priori, either a respondent or a nonrespondent:

$$(1) \text{ Bias } (\bar{y}_r) = \frac{M}{N} (\bar{Y}_r - \bar{Y}_m)$$

where M is the number of nonrespondents in the population, N is the total number of units in the target population, \bar{y}_r is the respondent mean in the target population, and \bar{Y}_m is the nonrespondent mean in the target population. The second formulation assumes that each unit (i) in the target population has a propensity ρ_i to respond:

$$(2) \text{ Bias } (\bar{y}_r) \approx \frac{\sigma_{yp}}{\bar{\rho}}$$

where σ_{yp} is the correlation between the survey variable and the response propensity, and $\bar{\rho}$ is the mean response propensity in the population. In either formulation, the bias is related to both the response rate and the degree to which the respondents differ from the nonrespondents with respect to the survey variable.

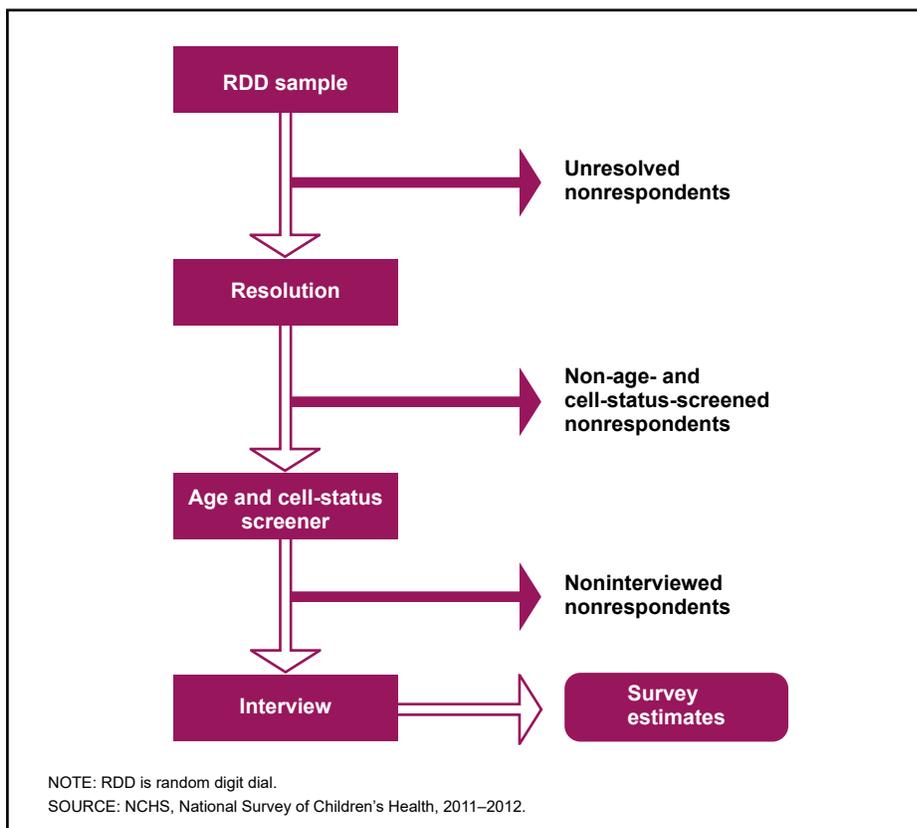


Figure 3. Survey stages and types of nonrespondents

Nonresponse rates represent a potential for substantial nonresponse bias. However, this is only a potential. In a meta-analysis of nonresponse bias studies, Robert Groves found little to no relationship between the magnitude of nonresponse and nonresponse bias; in fact, Groves found more variation in nonresponse bias between estimates from the same survey than between estimates from different surveys with differing response rates (25).

The second important factor contributing to nonresponse bias is the degree to which respondents differ from nonrespondents with respect to the survey variables. This quantity is generally unknown, and nonresponse bias analyses attempt to measure this difference either directly or indirectly. Groves summarizes the typical approaches as (25):

1. Response rate comparisons across subgroups

2. Using rich sampling frame data or supplemental matched data
3. Comparison to similar estimates from other sources
4. Studying variation within the existing survey
5. Contrasting alternative postsurvey adjustments for nonresponse

This appendix presents the results of analyses using approaches 1–4 for the 2011–2012 NSCH. (Alternative postsurvey adjustments for nonresponse are not available for NSCH.) Each of these approaches has its weaknesses; using many different approaches may arrive at conclusions that overcome the weaknesses of any individual approach and provide an accurate picture of the nonresponse bias.

Information Available on Nonrespondents

Several approaches used to assess nonresponse bias rely on the availability of information for both respondents and nonrespondents. Because NSCH is a random-digit-dial (RDD) survey, information available on nonrespondents was very limited. Table XXX shows information known for both respondents and nonrespondents in the 2011–2012 NSCH landline sample. The first two variables—residential-listed status and advance-letter status—are case-specific; the remaining variables are ecological, that is, they contain information not about each case specifically but about the telephone exchange containing the case’s telephone number. (The telephone exchange is the area code plus the first three digits of the telephone number.) For example, while the income of each case was unknown, the median income for households sharing the case’s telephone exchange was known. This ecological information is based on census tract-level data, aggregated to the telephone-exchange level. Because no directories of cell-phone numbers exist, and because cell-phone numbers are not tied to geography in the way landline numbers are, these frame variables were available only for the landline sample, not for the cell-phone sample.

Table XXX. Information available for both respondents and nonrespondents: Landline sample

Variable name	Description
Listed	Indicator of residential listed status
Advance_letter	Indicator of advance letter sent status
MSA	Indicator of metropolitan statistical area status
Median_HH_income	Median household income in telephone exchange
Median_home_val	Median home value in telephone exchange
Median_rent	Median rent in telephone exchange
Median_years_educ	Median years of education of population in telephone exchange
College_graduate	Percentage of population in telephone exchange who are college graduates
Approx_median_age	Approximate median age of population in telephone exchange
Hispanic_p	Percentage of population in telephone exchange who are Hispanic
White_p	Percentage of population in telephone exchange who are non-Hispanic white
Black_p	Percentage of population in telephone exchange who are non-Hispanic black
Asian_pacif_p	Percentage of population in telephone exchange who are non-Hispanic Asian or Pacific Islander
Household_density	Household density in telephone exchange
Percent_listed	Percentage of telephone numbers in telephone exchange that are residential listed
Owner_occupied_p	Percentage of homes in telephone exchange that are owner-occupied
Rent_other_p	Percentage of homes in telephone exchange that are rented or otherwise not owner-occupied

Key Survey Estimates

The assessment of nonresponse bias focused on 10 key survey estimates:

1. The percentage of children in excellent or very good health.
2. The percentage of children with consistent insurance coverage in the past 12 months.
3. The percentage of children with at least one medical preventive care visit in the past 12 months.
4. The percentage of children with a medical home.
5. The percentage of children whose families ate a meal together every day in the past week.
6. The percentage of children who are usually or always safe in their community or neighborhood.
7. The percentage of children with a two-parent family structure (biological or adoptive).
8. The percentage of children with a two-parent family structure (stepfamily).
9. The percentage of children with a single-mother family structure.
10. The percentage of children with another kind of family structure.

Table XXXI. Key survey estimates: Dual-frame sample

Analysis variable	Using design weight		Using final weight	
	Estimate	95% confidence interval	Estimate	95% confidence interval
Percentage of children in excellent or very good health	84.20	(82.38, 86.02)	84.16	(82.79, 85.53)
Percentage of children with consistent insurance coverage in past 12 months	88.80	(86.76, 90.85)	88.72	(87.11, 90.33)
Percentage of children with one or more medical preventive care visits in past 12 months	95.78	(95.32, 96.23)	95.86	(95.38, 96.34)
Percentage of children with medical home	54.78	(52.20, 57.35)	53.92	(51.75, 56.09)
Percentage of children whose families ate a meal together every day in past week	48.72	(47.26, 50.18)	46.71	(45.52, 47.90)
Percentage of children usually or always safe in community or neighborhood	86.83	(85.29, 88.36)	86.57	(85.28, 87.86)
Percentage of children with two-parent family structure (biological or adoptive)	65.86	(63.73, 67.99)	65.51	(63.50, 67.53)
Percentage of children with two-parent family structure (stepfamily)	7.77	(7.16, 8.37)	8.76	(8.01, 9.50)
Percentage of children with single-mother family structure	19.87	(18.20, 21.55)	19.02	(17.66, 20.38)
Percentage of children with other family structure	6.50	(6.09, 6.90)	6.71	(6.20, 7.22)

These key survey estimates, which are computed among children with a completed interview, are shown in [Table XXXI](#). Note that in computing these estimates, “don’t know” and “refused” responses were excluded from the denominators.

NSCH Weighting

Although understanding how nonrespondents differ from respondents is important, a greater consideration for data users is how well the weighting adjustments that were made to correct for nonresponse actually did so. Thus, the following analyses attempted to answer two questions:

1. What level of bias would be present in the key survey estimates if no postsurvey adjustments for nonresponse were performed? That is, what is the effect of nonresponse on the raw estimates?
2. How well do the postsurvey adjustments for nonresponse mitigate the raw nonresponse bias?

To answer these questions, each of the analyses is presented twice, first using only the base weights—that is, the weights that reflect the probabilities of telephone number selection but do not reflect postsurvey adjustments—and then using either the nonresponse-adjusted weights (adjusted for nonresponse at each stage) or the final weights (both adjusted for nonresponse at each stage and raked to population control totals). [Table XXXII](#) shows the weight variables used in these analyses.

Assessing Nonresponse Bias in 2011–2012 NSCH

Response rate comparisons across subgroups

Comparing response rates across subgroups could reveal the presence of nonresponse bias in a survey. If the response rate is lower (or higher) for a particular subgroup relative to that of other subgroups, then it would indicate that the subgroup is underrepresented (or overrepresented) in the final sample, and,

Table XXXII. Weight variables used in nonresponse analysis

Weight name	Description
BASE_WT	Weight reflecting the initial selection probability of each telephone number in the sample (adjusted within each sampling frame in each sampling area by the proportion of released sample in each quarter). This weight is valid for all sampled telephone numbers.
DESIGN_WT	BASE_WT adjusted for number of children in household and number of telephones (landlines or cell phones in household used by adults) and for overlapping sample frames. This weight is valid for all children with completed interviews.
RES_WT	BASE_WT adjusted for nonresolution of telephone numbers. This weight is valid for all resolved telephone numbers.
AGE_SCR_WT	RES_WT adjusted for nonresponse to age- and cell-phone-status eligibility screeners. This weight is valid for all households that completed the age- and cell-status-eligibility screeners.
CH_SS_WT	AGE_SCR_WT adjusted for subsampling of children within household. This weight is valid for all households that completed the age- and cell-status-eligibility screeners.
INT_WT	CH_SS_WT adjusted for interview nonresponse. This weight is valid for all children with completed interviews.
CHILD_WT	Final raked child weight. This weight is valid for all children with completed interviews.

to the extent that the key survey estimate for that particular subgroup differs from other subgroups, bias would be indicated in the overall survey estimate. If, on the other hand, the response rate is the same across subgroups, or if the key survey estimate does not differ by these subgroups, the key survey estimate could still be biased, but unequal response rates across these subgroups will have been ruled out as a source of bias.

[Table XXXIII](#) presents the national response rates for various subgroups. The response rates are presented first using only the base weights, and then using the weights that have been sequentially adjusted for nonresponse at each stage. The subgroups were formed based on the sample frame information listed in [Table XXX](#); for each continuous variable in this table, cases were classified into two subgroups: those with values above, and those with values below, the median value of the variable for all cases in the landline sample. Because the frame information is available only for the landline sample, the response rate comparisons in [Table XXXIII](#) are presented only for the landline sample.

[Table XXXIII](#) shows that it was more difficult to interview households in urban areas, wealthier areas, and areas with larger nonwhite populations. The response rates were more than four percentage points higher for cases outside of metropolitan statistical areas (MSAs) than for cases inside MSAs, and about four percentage points lower for areas

with higher household density. Response rates were lower in areas above the median in terms of measures associated with wealth (household income, home value, and rental costs), and higher in areas with a relatively older population. Finally, the response rates were four to five percentage points higher in areas above the median in terms of percentage of the population that is white, and lower in areas above the median in terms of percentage of the population that is Hispanic, black, or Asian. As when comparing base-weighted response rates to those using adjusted weights, the weighting adjustments for nonresponse did little to remove these response rate differences. These results are nearly identical to those observed in the 2007 NSCH (3).

There are a few limitations to this approach. First, to form subgroups, each continuous sampling frame variable in [Table XXX](#) had to be categorized into groups, resulting in a loss of some of the information contained in these variables. Second, the adjusted response rates presented in [Table XXXIII](#) necessarily reflect only the weighting adjustments for nonresponse at each stage, not the final raking of the weights to population control totals; the extent to which this final raking reduced the under- or overrepresentativeness of a particular subgroup in the final weighted sample was not captured by this analysis. Finally, because the frame information is not available for the cell-phone sample,

Table XXXIII. Response rates, by subgroup: Landline sample

Frame variable	Subgroup	Response rate	
		Using base weight	Using adjusted weight
Listed	Not listed	34.60	34.21
	Listed	34.24	34.16
Advance_letter	Not sent	34.28	34.20
	Sent	32.47	32.45
MSA	Outside MSA	41.84	42.09
	In MSA	37.44	37.40
Median_HH_income	Below median	39.72	39.65
	Above median	36.80	36.84
Median_home_val	Below median	40.55	40.56
	Above median	36.07	36.07
Median_rent	Below median	40.80	40.90
	Above median	35.86	35.81
Median_years_educ	Below median	38.31	38.24
	Above median	37.99	38.02
College_graduate	Below median	38.46	38.39
	Above median	37.84	37.87
Approx_median_age	Below median	37.28	37.23
	Above median	39.08	39.15
Hispanic_p	Below median	40.67	40.87
	Above median	35.68	35.57
White_p	Below median	35.84	35.71
	Above median	40.25	40.40
Black_p	Below median	38.81	38.92
	Above median	37.45	37.29
Asian_pacif_p	Below median	40.14	40.27
	Above median	36.38	36.30
Household_density	Below median	40.60	40.63
	Above median	36.83	36.84
Percent_listed	Below median	38.27	38.13
	Above median	37.61	37.67
Owner_occupied_p	Below median	37.11	36.89
	Above median	38.96	39.12
Rent_other_p	Below median	38.96	39.12
	Above median	37.12	36.89

NOTE: MSA is metropolitan statistical area.

the analysis was limited to the landline sample.

The next section presents a similar approach that is not subject to the first limitation.

Using rich sampling frame data or supplemental matched data

Using the frame information, respondents at each stage of the survey were compared to all of the cases eligible for the stage. That is, the nonresponse bias in each frame variable was directly measured at each stage. (Because the frame information was available for both respondents and nonrespondents at each

stage, the stage-specific nonresponse bias in these variables can be measured directly.) The overall nonresponse bias for the survey was estimated for each frame variable (i.e., the stage-specific measures of bias in the frame variables were used to estimate the total nonresponse bias in each frame variable across the stages of the survey). Logistic regression models were used to translate estimated overall biases in the frame variables into estimates of bias in the key survey estimates.

Table XXXIV shows, for each stage of the survey, a comparison of the frame information for the entire landline sample eligible for the stage and the

landline sample respondents to the stage, first using the base weights only and then using the weights that have been sequentially adjusted for nonresponse at each stage. For example, for the “Listed” variable in Table XXXIV, using the base weights generated an estimate of 40.7% of the entire landline sample of telephone numbers as residential-listed, while among the landline sample resolved cases (i.e., the respondents to the resolution stage), 35.7% were residential-listed. That is, after the resolution stage, without any adjustments for nonresolution, the landline sample is biased downward 12.4% in terms of residential-listed status. However, using the weights that have been adjusted for nonresolution, 40.7% of the landline sample resolved cases are residential-listed; that is, all of the bias in residential-listed status due to nonresolution has been removed by the nonresponse adjustment. (This is no accident; residential-listed status was one of the variables used to form the landline sample nonresponse adjustment cells.)

Moving to the age-screener stage and using only the unadjusted base weights, among all landline sample resolved households, 89.5% were residential-listed, and among landline sample age-screener respondents, 90.1% were residential-listed; i.e., the age-screener respondents were 0.7% more residential-listed than they would have been if there had been full response at the age-screener stage, meaning that an upward bias of 0.7% was introduced in residential-listed status at the age-screener stage. However, using the nonresolution adjusted weights, 91.3% of resolved households were listed, and, using the weights that were adjusted for nonresponse to the age-screener, 91.3% of age-screened households were listed. The weighting adjustment for non-age-screening removed all of the bias introduced by nonresponse to the age-screener stage.

Finally, moving to the interview stage and using only the base weights, 87.0% of identified age-eligible households were residential-listed, and 88.5% of the completed interviews were residential-listed—that is, among households completing the interview, 1.7% more were residential-listed than all households that screened as eligible

Table XXXIV. Comparing respondents and nonrespondents at each stage, using frame information: Landline sample

Frame variable	Stage	Using base weight			Using nonresponse-adjusted weight from previous stage	Using nonresponse-adjusted weight	
		All cases eligible for stage	Respondents at stage	Respondent-All, percent difference	All cases eligible for stage	Respondents at stage	Respondent-All, percent difference
Listed	1. Resolution	0.407	0.357	-0.124	0.407	0.407	² 0.000
	2. Age screener	0.895	0.901	0.007	0.913	0.913	² 0.000
	3. Interview	0.870	0.885	0.017	0.884	0.896	0.013
	Overall ¹	...	...	-0.103	...	...	0.013
Advance letter sent	1. Resolution	0.241	0.192	-0.203	0.241	0.216	-0.102
	2. Age screener	0.728	0.737	0.012	0.734	0.740	0.008
	3. Interview	0.701	0.739	0.055	0.703	0.739	0.052
	Overall	...	...	-0.149	...	...	-0.048
In MSA	1. Resolution	0.821	0.815	-0.007	0.821	0.821	² 0.000
	2. Age screener	0.816	0.812	-0.005	0.819	0.819	-0.001
	3. Interview	0.843	0.836	-0.008	0.850	0.848	-0.002
	Overall	...	...	-0.019	...	...	-0.003
Median_HH_income	1. Resolution	58,048	57,552	-0.009	58,048	58,012	-0.001
	2. Age screener	59,279	59,164	-0.002	59,576	59,530	-0.001
	3. Interview	62,254	62,052	-0.003	62,695	62,793	0.002
	Overall	...	...	-0.014	...	...	² 0.000
Median_home_val	1. Resolution	223,852	220,162	-0.017	223,852	223,732	-0.001
	2. Age screener	222,173	220,718	-0.007	224,427	224,168	-0.001
	3. Interview	234,208	229,556	-0.020	237,068	236,250	-0.004
	Overall	...	...	-0.042	...	...	-0.005
Median_rent	1. Resolution	575	569	-0.011	575	575	-0.001
	2. Age screener	573	570	-0.005	577	576	-0.001
	3. Interview	599	592	-0.011	604	603	-0.002
	Overall	...	...	-0.026	...	...	-0.003
Median_years_educ	1. Resolution	13.41	13.40	-0.001	13.41	13.41	² 0.000
	2. Age screener	13.41	13.41	² 0.000	13.41	13.42	² 0.000
	3. Interview	13.47	13.49	0.001	13.47	13.48	0.001
	Overall	...	...	0.001	...	...	0.001
College_graduate	1. Resolution	0.299	0.297	-0.006	0.299	0.299	³ -0.000
	2. Age screener	0.297	0.297	0.001	0.298	0.298	0.001
	3. Interview	0.308	0.309	0.003	0.309	0.310	0.004
	Overall	...	...	-0.002	...	...	0.005
Approx_median_age	1. Resolution	37.86	37.87	² 0.000	37.86	37.86	² 0.000
	2. Age screener	37.96	38.02	0.001	37.96	37.98	0.001
	3. Interview	37.33	37.36	0.001	37.21	37.23	0.001
	Overall	...	...	0.003	...	...	0.001
Hispanic_p	1. Resolution	0.140	0.138	-0.014	0.140	0.140	-0.000
	2. Age screener	0.128	0.125	-0.026	0.130	0.129	-0.007
	3. Interview	0.137	0.131	-0.044	0.144	0.142	-0.009
	Overall	...	...	-0.081	...	...	-0.016
White_p	1. Resolution	0.662	0.664	0.002	0.662	0.662	³ -0.000
	2. Age screener	0.692	0.698	0.008	0.691	0.692	0.002
	3. Interview	0.683	0.693	0.014	0.677	0.681	0.006
	Overall	...	...	0.024	...	...	0.007
Black_p	1. Resolution	0.123	0.125	0.013	0.123	0.123	0.002
	2. Age screener	0.109	0.108	-0.013	0.108	0.108	-0.002
	3. Interview	0.104	0.103	-0.012	0.102	0.101	-0.013
	Overall	...	...	-0.012	...	...	-0.013
Asian_pacif_p	1. Resolution	0.046	0.045	-0.025	0.046	0.046	-0.003
	2. Age screener	0.042	0.042	-0.018	0.043	0.043	-0.003
	3. Interview	0.047	0.045	-0.045	0.048	0.047	-0.018
	Overall	...	...	-0.086	...	...	-0.024
Household_density	1. Resolution	2.53	2.53	-0.002	2.53	2.53	² 0.000
	2. Age screener	2.56	2.55	-0.003	2.56	2.55	-0.001
	3. Interview	2.62	2.61	-0.005	2.64	2.63	-0.002
	Overall	...	...	-0.010	...	...	-0.003

See footnotes at end of table.

Table XXXIV. Comparing respondents and nonrespondents at each stage, using frame information: Landline sample—Con.

Frame variable	Stage	Using base weight			Using nonresponse-adjusted weight from previous stage	Using nonresponse-adjusted weight	
		All cases eligible for stage	Respondents at stage	Respondent–All, percent difference	All cases eligible for stage	Respondents at stage	Respondent–All, percent difference
Percent_listed	1. Resolution	0.510	0.506	–0.009	0.510	0.508	–0.005
	2. Age screener	0.554	0.555	–0.001	0.555	0.554	–0.001
	3. Interview	0.558	0.559	0.003	0.558	0.558	² 0.000
	Overall	...	...	–0.006	...	...	–0.005
Owner_occupied_p.	1. Resolution	0.661	0.661	³ –0.000	0.661	0.662	² 0.000
	2. Age screener	0.689	0.691	0.002	0.689	0.689	² 0.000
	3. Interview	0.690	0.694	0.005	0.689	0.691	0.003
	Overall	...	...	0.007	...	...	0.003
Rent_other_p	1. Resolution	0.339	0.339	0.001	0.339	0.339	³ –0.000
	2. Age screener	0.311	0.309	–0.005	0.311	0.311	² 0.000
	3. Interview	0.310	0.306	–0.012	0.311	0.309	–0.006
	Overall	190	...	–0.016	...	...	–0.006

... Category not applicable.
¹Equal to the product of Respondent–All percent difference across the resolution, age-screener, and interview stages. This provides an estimate of the percentage difference in the frame variable between interview respondents and nonrespondents at any stage who are eligible for interview (households with children); that is, the resulting estimate is of the over- or underrepresentativeness of the interviewed households compared with eligible households as a whole. This technique assumes that the mean of the frame variable for eligible nonrespondents equals the observed mean of the frame variable for respondents. Using Residential listed as an example, this approach assumes that, among nonresolved numbers that are actually households, the proportion that are listed is equal to the proportion that are listed among resolved households; and it assumes that, among nonage-screened households that actually contain children, the proportion that are listed is equal to the proportion that are listed among age-screened-eligible households.
²0.000 quantity more than zero but less than 0.0005.
³–0.000 quantity more than –0.0005 but less than zero.

NOTES: MSA is metropolitan statistical area. Median_HH_income, Median_home_val, and Median_rent variables are in dollars.

to complete the interview—indicating an upward bias of 1.7% at the interview stage. Using the weights adjusted for screener nonresponse, 88.4% of the identified eligible households were listed, and, using the weights that were adjusted for nonresponse to the interview, 89.6% of interviewed households were listed. Thus, the interview nonresponse adjustment lowered, but did not completely eliminate, the residential-listed bias introduced due to interview nonresponse.

Multiplying together the biases at the resolution, age-screener, and interview stages, calculated using only the base weights, generated an estimate of the eligible household population identified and interviewed that is 10.3% less residential-listed than the eligible household population as a whole. (For this calculation, the proportion of residential-listed among unresolved cases that are actually households was assumed to be equal to the proportion residential-listed among the resolved households, and the proportion residential-listed among the non-age-screened households that are really age-eligible was assumed to be equal to

the proportion residential-listed among age-screened eligible households.) Doing the same calculation but using the weights that were sequentially adjusted for nonresponse to each stage generated an estimate of the eligible household population identified and interviewed that is 1.3% more residential-listed than the

eligible household population as a whole. That is, while a bias of about 10.3% in residential-listed status was introduced due to nonresponse at the resolution, age-screener, and interview stages, the weighting adjustments for nonresponse eliminated nearly all of that bias.

Table XXXIV shows that this

Table XXXV. Observed and expected means of frame variables for respondents: Landline sample

Frame variable	Through interview stage			
	Using base weight		Using nonresponse-adjusted weight	
	Observed	Expected	Observed	Expected
Listed	88.45	98.59	89.55	88.40
Advance_letter	73.94	86.92	73.94	77.66
MSA	83.64	85.27	84.75	84.97
Median_HH_income	62,052	62,913	62,793	62,783
Median_home_val	229,556	239,702	236,250	237,469
Median_rent	592	608	603	603
Median_years_educ	13.49	13.48	13.48	13.47
College_graduate	30.92	30.97	30.98	30.84
Approx_median_age	37.36	37.27	37.23	37.19
Hispanic_p	13.10	14.26	14.22	14.46
White_p	69.25	67.60	68.07	67.59
Black_p	10.29	10.41	10.09	10.22
Asian_pacif_p	4.50	4.92	4.72	4.83
Household_density	2.61	2.63	2.63	2.64
Percent_listed	55.93	56.25	55.78	56.09
Owner_occupied_p	69.38	68.88	69.13	68.94
Rent_other_p	30.62	31.12	30.87	31.06

NOTES: MSA is metropolitan statistical area. Median_HH_income, Median_home_val, and Median_rent variables are in dollars.

is generally the case for the other frame variables as well. Nonresponse introduced small biases, but the nonresponse adjustments substantially reduced those biases. The variables with the largest biases remaining after the nonresponse adjustments are advanced-letter status (-4.8%), the percentage of the population in the telephone exchange that is non-Hispanic Asian or Pacific Islander (-2.4%), the percentage of the population in the telephone exchange that is Hispanic (-1.6%), and the percentage of the population in the telephone exchange that is non-Hispanic black (-1.3%).

Table XXXV shows the observed means of the frame variables for the landline sample respondents, and the means that would be expected under full response. The biases in the frame information translate into biases in the key survey estimates only to the extent that the frame information is related to the key survey estimates. To examine these relationships for each key survey estimate, a logistic regression model was estimated of the form,

$$p_i = \frac{e^{X_i'\beta}}{1 + e^{X_i'\beta}}$$

where p_i is the probability that the i th

respondent's child is positive for the key survey variable (i.e., is in excellent or very good health, has a medical home, and so on), X_i' is a vector containing the frame information for the i th child, and β is a vector of unknown parameters to be estimated. By evaluating the fitted model first at the observed means of the frame information and then at the expected means of the frame information from Table XXXV, an estimate of the bias in each key survey estimate was generated that could be attributed to biases in the frame variables due to nonresponse. These estimates of biases in the key survey estimates using this approach are shown in Table XXXVI.

As Table XXXVI shows, the small biases in the frame information translate into small biases in the key survey estimates for the landline sample. In these analyses, the largest landline sample bias found when the base weights were used was in the percentage of children with a two-parent (stepparent) family structure (8.8% bias), but this bias was reduced to 0.4% when the nonresponse-adjusted weights were used. The largest landline sample absolute bias when the nonresponse-adjusted weights were used was in the percentage of children with a single-mother family structure (-0.8% bias).

Although these results suggest that differences between landline sample respondents and nonrespondents in terms of the frame information lead to very little bias in the key survey estimates, this does not necessarily mean that the key survey estimates are biased very little. It is possible that differences between the landline sample respondents and nonrespondents are not reflected in the frame information.

Indeed, the relationship between the frame information and the key survey variables is poor. One method of assessing how well the logistic regression model relates the frame information to the key survey variable is to examine the receiver operating characteristic (ROC) curve. For each child, the model produces a predicted probability of, for example, the child being in excellent or very good health; the ROC curve shows how well the model prediction of whether the child is in excellent or very good health agrees with whether the child truly is in excellent or very good health, using various cutoff values for turning the model's predicted probability into a binary prediction of special-needs status. If the area under the ROC curve equals 1.0, then the model perfectly predicts the response for all cutoff values; if the area under the ROC curve equals 0.5, then

Table XXXVI. Estimates of nonresponse biases in key survey estimates attributable to biases in frame information: Landline sample

Key survey variable	Using base weight			Using nonresponse-adjusted weight		
	Model evaluated at observed respondent means of frame information ¹	Model evaluated at means of frame information expected under full response	Estimated percent bias ²	Model evaluated at observed respondent means of frame information ¹	Model evaluated at means of frame information expected under full response	Estimated percent bias ²
Percentage of children in excellent or very good health	88.82	88.97	-0.17	88.56	88.46	0.12
Percentage of children with consistent insurance coverage in past 12 months	93.04	93.35	-0.34	93.07	93.04	0.03
Percentage of children with one or more medical preventive care visits in past 12 months	95.46	95.52	-0.06	95.64	95.68	-0.04
Percentage of children with medical home	60.54	61.16	-1.02	60.50	60.33	0.27
Percentage of children whose families ate a meal together every day in past week	42.85	41.84	2.42	43.30	43.25	0.12
Percentage of children usually or always safe in community or neighborhood	92.40	92.45	-0.05	92.18	92.06	0.13
Percentage of children with two-parent family structure (biological or adoptive)	74.75	76.04	-1.71	76.51	76.38	0.17
Percentage of children with two-parent family structure (stepfamily)	4.97	4.57	8.77	5.34	5.32	0.36
Percentage of children with single-mother family structure	13.76	13.19	4.33	12.46	12.55	-0.74
Percentage of children with other family structure	5.61	5.42	3.60	4.84	4.87	-0.67

¹Although the logistic regression models at the observed means of the frame information were evaluated, the results are not the observed means of the key survey variables (i.e., the final estimates of the proportion of children in excellent or very good health, the proportion of children with a medical home, and so on), as would be the case for linear regression models.
²Calculated as (model evaluated at observed means - model evaluated at expected means) / model evaluated at expected means.

Table XXXVII. Comparing demographic, socioeconomic, and health estimates with benchmarks

Characteristic	Benchmark		Using design weight		Using final weight		Design weight to benchmark difference	Final weight to benchmark difference
	Estimate	Standard error	Estimate	Standard error	Estimate	Standard error		
Age group (years) of child (ACS) ^{1,2}								
0–2	15.76	0.04	15.29	0.28	15.76	0.27	–0.47	³ 0.00
3–5	16.97	0.05	18.41	0.31	16.97	0.27	*1.44	³ 0.00
6–8	16.54	0.05	18.49	0.36	16.54	0.27	*1.95	³ 0.00
9–12	22.46	0.05	22.91	0.30	22.46	0.30	0.46	³ 0.00
13–17	28.27	0.05	24.90	0.34	28.27	0.33	*–3.37	³ 0.00
Sex of child (ACS) ^{1,2}								
Male	51.14	0.03	52.11	0.40	51.14	0.37	**0.96	³ 0.00
Female	48.86	0.03	47.89	0.40	48.86	0.37	**–0.96	³ 0.00
Race and ethnicity of child (ACS) ^{1,2}								
Hispanic	23.55	0.01	23.92	0.43	23.51	0.36	0.37	–0.04
Non-Hispanic black	13.78	0.03	11.29	0.24	13.73	0.25	*–2.49	–0.05
Non-Hispanic Asian or Hawaiian or other Pacific Islander	4.48	0.02	3.64	0.13	4.43	0.18	*–0.84	–0.04
Non-Hispanic American Indian or Alaska Native	0.78	0.01	0.98	0.05	0.95	0.05	*0.20	*0.16
Non-Hispanic other	57.41	0.04	60.17	0.41	57.38	0.37	*2.76	–0.03
Number of children in household (ACS) ^{1,2}								
One	23.23	0.20	22.12	0.24	23.23	0.27	*–1.11	³ 0.00
Two	38.33	0.12	38.62	0.36	38.33	0.35	0.28	³ 0.00
Three or more	38.44	0.26	39.26	0.43	38.44	0.38	0.83	³ 0.00
Household income (ACS) ^{1,2}								
Less than \$10,000	6.83	0.06	8.11	0.33	6.80	0.19	*1.28	–0.03
\$10,000–\$19,999	9.23	0.07	12.47	0.35	9.27	0.22	*3.23	0.03
\$20,000–\$39,999	19.28	0.09	18.96	0.33	19.28	0.30	–0.32	³ 0.00
\$40,000–\$59,999	16.35	0.09	13.23	0.25	16.35	0.29	*–3.13	³ 0.00
\$60,000 or more	48.31	0.14	47.24	0.38	48.31	0.36	*–1.07	³ 0.00
Highest education of adults in household (ACS) ^{1,2}								
Less than 12 years	11.57	0.09	11.52	0.38	11.56	0.29	–0.05	–0.01
High school graduate (12 years)	19.96	0.09	17.56	0.32	19.99	0.31	*–2.40	0.03
Some college or college graduate	68.47	0.13	70.92	0.43	68.45	0.37	*2.45	–0.02
Housing tenure (ACS) ^{1,2}								
Owner	60.96	0.19	62.67	0.42	60.96	0.37	*1.71	³ 0.00
Renter	37.25	0.20	35.61	0.42	37.34	0.37	*–1.64	0.09
Other arrangement	1.79	0.03	1.72	0.11	1.70	0.09	–0.07	–0.09
Family type (ACS) ²								
Other	33.99	0.13	33.81	0.41	33.29	0.35	–0.18	–0.69
Married parents	66.01	0.13	66.19	0.41	66.71	0.35	0.18	0.69
Insurance coverage (ACS) ²								
With insurance coverage	92.51	0.06	94.45	0.30	94.50	0.19	*1.94	*2.00
Without insurance coverage	7.49	0.06	5.55	0.30	5.50	0.19	*–1.94	*–2.00
Insurance coverage (NHIS) ²								
Yes	93.00	0.27	94.45	0.30	94.50	0.19	*1.45	*1.50
No	7.00	0.27	5.55	0.30	5.50	0.19	*–1.45	*–1.50
Health status (NHIS)								
Excellent	56.16	0.51	60.38	0.40	60.52	0.36	*4.21	*4.36
Very good	26.58	0.43	23.83	0.36	23.64	0.31	*–2.75	*–2.94
Good	15.3	0.38	12.59	0.30	12.69	0.27	*–2.71	*–2.61
Fair or poor	1.96	0.12	3.20	0.16	3.15	0.14	*1.25	*1.19

See footnotes at end of table.

Table XXXVII. Comparing demographic, socioeconomic, and health estimates with benchmarks—Con.

Characteristic	Benchmark		Using design weight		Using final weight		Design weight to benchmark difference	Final weight to benchmark difference
	Estimate	Standard error	Estimate	Standard error	Estimate	Standard error		
Health status (MEPS)								
Excellent	57.74	1.01	60.38	0.40	60.52	0.36	**2.64	*2.78
Very good	26.08	0.66	23.83	0.36	23.64	0.31	*-2.25	*-2.44
Good	13.4	0.67	12.59	0.30	12.69	0.27	-0.80	-0.71
Fair	2.35	0.20	2.78	0.15	2.73	0.13	0.43	0.37
Poor	0.44	0.09	0.42	0.05	0.43	0.05	-0.02	-0.01
Special health care needs (MEPS)								
Yes	18.48	0.61	19.89	0.30	19.8	0.28	**1.41	**1.33
No	81.52	0.62	80.11	0.30	80.2	0.28	**-1.41	-1.33
Ever told child has asthma (NHIS)								
Yes	14.04	0.39	14.11	0.25	14.65	0.25	0.07	0.61
No	85.96	0.39	85.89	0.25	85.35	0.25	-0.07	-0.61
Has usual place for health care (NHIS)								
Yes	96.70	0.19	93.78	0.22	93.58	0.21	*-2.92	*-3.12
No	3.30	0.19	6.22	0.22	6.42	0.21	*2.92	*3.12

* Statistically significant at the 0.01 level.
 ** Statistically significant at the 0.05 level.
¹Variable used in the raking adjustment of final National Survey of Children's Health weights.
²Missing values have been imputed.
³0.00 quantity more than zero but less than 0.005.

NOTE: ACS is American Community Survey, NHIS is National Health Interview Survey, and MEPS is Medical Expenditure Panel Survey.

the model does no better than random chance in predicting the response. The models relating the frame information to the key survey variables had areas under the ROC curves ranging from 0.56 to 0.71, indicating that the models do not do much better than randomly choosing the response. Therefore, while the models indicate little bias in the key survey estimates, they have little power to detect such bias because the frame information is not well-related to the key survey variables.

The results in this section include only the landline sample and do not reflect the final raking of the nonresponse-adjusted weights to population control totals. This final raking could have reduced or increased bias, but if so, that reduction or increase was not captured in the analysis in this section. The next sections present analyses that made use of the final, raked weights for the dual-frame sample.

Comparison to similar estimates from other sources

A more direct method of estimating survey bias than the methods explored so far is to compare the survey estimates

to benchmark estimates from other, potentially higher-quality sources. [Table XXXVII](#) presents demographic, socioeconomic, and health estimates for variables in common between the 2011–2012 NSCH and external sources, including the 2011 American Community Survey (ACS), 2011 National Health Interview Survey (NHIS), and 2011 Medical Expenditure Panel Survey (MEPS). Each of these external surveys included in-person interviewing and achieved a higher response rate than NSCH, and, therefore, may be higher-quality sources of estimates for these variables and serve as benchmarks.

A comparison between the NSCH estimate and the benchmark estimate from the external source was made for the following: age category of the child, sex of the child, race and ethnicity of the child, number of children in the household, household income, highest education of adults in the household, housing tenure, family type, insurance coverage, health status of the child, special health care needs status of the child, and indicators of whether the respondent has been told the child has asthma and whether the child has a usual

place for health care.

When the design weights are used to produce the NSCH estimates, a statistically significant difference between the NSCH estimate and the benchmark estimate is seen for nearly all of the comparisons, although the differences are quite small in magnitude, with most differences being less than two percentage points. The largest difference is in the proportion of children reported to be in excellent health: The NSCH estimate is 4.2 percentage points higher than the NHIS estimate (although 2.6 percentage points higher than the MEPS estimate).

When the final weights—adjusted for nonresponse and raked to population control totals—are used to produce the NSCH estimates, the differences between the NSCH estimates and the benchmark estimates fall to nearly zero for all of the demographic and socioeconomic variables (except insurance status), because nearly all of these variables were used in raking the NSCH weights, as indicated in the footnote to [Table XXXVII](#). Statistically significant differences between the NSCH estimate and the benchmark estimate remain for the percentage of children who are

Native American or Alaska Native, the percentage with insurance coverage, health status, the percentage with special health care needs, and the percentage with a usual place for health care.

While the preceding analyses aimed to describe and measure nonresponse bias, these comparisons between NSCH and benchmark estimates are measuring bias due not only to nonresponse but also to noncoverage of the sampling frames and measurement error. Moreover, these comparisons are measuring only differential bias between the NSCH and benchmark surveys—although the benchmark surveys are likely higher-quality sources, they may themselves suffer from bias due to nonresponse, noncoverage, and measurement error.

To turn these estimates of bias in the estimates common between the NSCH and benchmark surveys into estimates of bias in the NSCH key survey estimates, for each key survey estimate, a logistic regression model was fitted relating the variables in Table XXXVII to the NSCH key survey variable. The fitted model was then evaluated, first using values of the NSCH estimates and then using values of the benchmark estimates. (This is the same approach as used above to relate biases in the frame variables to biases in

the key survey variables.) The estimates of biases in the NSCH key survey estimates using this approach are shown in Table XXXVIII. Note that when fitting the model for the percentage of children in excellent or very good health, the health status variable in Table XXXVII was excluded from the covariates because that is the same variable being modeled. Similarly, when fitting the model for the percentage of children with consistent insurance, insurance status was excluded from the covariates; when fitting the model for the percentage of children with a medical home, the indicator of whether the child has a usual place for health care was excluded from the covariates; and when fitting the model for family structure, family type was excluded from the covariates. When evaluating the models using the benchmark estimates, the ACS insurance coverage estimate was used (rather than the NHIS insurance coverage estimate), and the NHIS health status estimates were used (rather than the MEPS health status estimates).

As seen in Table XXXVIII, the small differences in the demographic, socioeconomic, and health estimates between the NSCH and benchmark surveys from Table XXXVII translate into even smaller differences in the key

survey estimates. The largest absolute bias estimated using the design weights is in the percentage of children with a two-parent stepfamily structure (−2.49% bias), but this bias is reduced to −0.13% when the final weights are used. The largest absolute bias when the final weights are used is in the percentage of children with a medical home (1.37% bias).

Estimates of bias using this method rely on models relating the characteristics in Table XXXVII to the NSCH key survey variables. Biases are possible in the NSCH key survey estimates that are not related to the characteristics in Table XXXVII. The area under the ROC curve values for these models ranged from 0.65 to 0.79, indicating that while these models are somewhat better than the models described previously relating the frame information to the key survey variables, the models are not perfect.

Studying variation within the existing survey

In a “level of effort” analysis, those respondents who respond only after a great deal of interviewing effort has been applied are assumed to resemble nonrespondents. Given this assumption, a difference in a survey estimate between

Table XXXVIII. Estimates of bias in key survey estimates attributable to biases in demographic, socioeconomic, and health characteristics, based on comparisons with benchmark estimates: Dual-frame sample

Key survey variable	Using design weight			Using final weight		
	Model evaluated at NSCH estimates of characteristics ¹	Model evaluated at benchmark estimates of characteristics	Estimated percent bias ²	Model evaluated at NSCH estimates of characteristics ¹	Model evaluated at benchmark estimates of characteristics	Estimated percent bias ²
Percentage of children in excellent or very good health	88.91	89.12	−0.24	88.77	89.01	−0.27
Percentage of children with consistent insurance coverage in past 12 months	90.92	91.00	−0.09	90.74	90.95	−0.23
Percentage of children with one or more medical preventive care visits in past 12 months	96.56	96.61	−0.05	96.63	96.54	0.09
Percentage of children with medical home	54.54	53.36	2.20	53.68	52.95	1.37
Percentage of children whose families ate a meal together every day in past week	48.64	47.50	2.40	46.46	46.22	0.52
Percentage of children usually or always safe in community or neighborhood	89.90	89.71	0.22	89.40	89.32	0.09
Percentage of children with two-parent family structure (biological or adoptive)	69.44	69.48	−0.06	68.67	68.87	−0.29
Percentage of children with two-parent family structure (stepfamily)	5.50	5.64	−2.49	6.43	6.44	−0.13
Percentage of children with single-mother family structure	14.44	14.09	2.44	14.00	13.88	0.82
Percentage of children with other family structure	5.24	5.33	−1.70	5.43	5.40	0.67

¹Although the logistic regression models at the National Survey of Children’s Health (NSCH) estimates of the characteristics were evaluated, the results are not the observed estimates of the key survey variables (i.e., the final estimates of the proportion of children in excellent or very good health, the proportion of children with a medical home, and so on), as would be the case for linear regression models.

²Calculated as (model evaluated at NSCH estimates − model evaluated at benchmark estimates) / model evaluated at benchmark estimates.

Table XXXIX. Comparing non-HUDIs with converted HUDIs, by sample type

Key survey outcome	Landline sample				Cell-phone sample			
	Non-HUDIs estimate	Converted HUDIs estimate	High-effort to low-effort respondents, percent difference ¹	p value for test of no difference	Non-HUDIs estimate	Converted HUDIs estimate	High-effort to low-effort respondents, percent difference ¹	p value for test of no difference
Percentage of children in excellent or very good health.	88.26	82.16	-6.91	² 0.000000	82.99	78.96	-4.86	0.006373
Percentage of children with consistent insurance coverage in past 12 months.	92.44	90.12	-2.51	0.000005	87.05	82.96	-4.71	0.044709
Percentage of children with one or more medical preventive care visits in past 12 months.	95.33	95.25	-0.08	0.809604	96.12	96.51	0.40	0.539438
Percentage of children with medical home.	62.09	53.65	-13.60	² 0.000000	52.26	43.55	-16.66	0.000002
Percentage of children whose families ate a meal together every day in past week.	44.78	44.61	-0.37	0.845207	51.93	53.59	3.20	0.362083
Percentage of children usually or always safe in community or neighborhood.	90.97	87.44	-3.89	² 0.000000	85.05	80.18	-5.73	0.009424
Percentage of children with two-parent family structure (biological or adoptive)	75.32	71.04	-5.68	0.171837	59.69	54.03	-9.48	0.002898
Percentage of children with two-parent family structure (stepfamily)	6.04	6.55	8.39	0.171837	8.99	9.88	9.85	0.407695
Percentage of children with single-mother family structure	13.29	16.19	21.79	0.000009	23.92	29.04	21.44	0.009198
Percentage of children with other family structure	5.35	6.22	16.38	0.019321	7.40	7.04	-4.84	0.619973

¹Calculated as (converted HUDI respondent mean – non-HUDI respondent mean) / non-HUDI respondent mean.
²0.000000 quantity more than zero but less than 0.0000005.

NOTES: HUDI is hung up during introduction. Estimates in this table are weighted by the design weights.

Table XL. Comparing non-HUDIs with converted HUDIs: Dual-frame sample

Key survey outcome	Using design weight				Using final weight			
	Non-HUDIs estimate	Converted HUDIs estimate	High-effort to low-effort respondents, percent difference ¹	p value for test of no difference	Non-HUDIs estimate	Converted HUDIs estimate	High-effort to low-effort respondents, percent difference ¹	p value for test of no difference
Percentage of children in excellent or very good health.	85.42	80.61	-5.63	² 0.000000	85.26	80.99	-5.01	² 0.000000
Percentage of children with consistent insurance coverage in past 12 months.	89.54	86.65	-3.23	0.006497	89.13	87.54	-1.78	0.010425
Percentage of children with one or more medical preventive care visits in past 12 months.	95.75	95.86	0.12	0.755726	95.91	95.72	-0.20	0.583534
Percentage of children with medical home.	56.81	48.74	-14.21	² 0.000000	55.98	47.96	-14.33	² 0.000000
Percentage of children whose families ate a meal together every day in past week.	48.63	48.96	0.67	0.746665	46.83	46.35	-1.02	0.575015
Percentage of children usually or always safe in community or neighborhood.	87.80	83.94	-4.39	0.000092	87.47	83.96	-4.01	² 0.000000
Percentage of children with two-parent family structure (biological or adoptive)	66.90	62.81	-6.10	0.000123	66.13	63.73	-3.64	0.003597
Percentage of children with two-parent family structure (stepfamily)	7.63	8.16	6.91	0.345845	8.81	8.60	-2.40	0.658776
Percentage of children with single-mother family structure	19.02	22.41	17.83	0.001444	18.46	20.63	11.75	0.001777
Percentage of children with other family structure	6.46	6.62	2.57	0.682164	6.59	7.04	6.84	0.313725

¹Calculated as (converted HUDI respondent mean – non-HUDI respondent mean) / non-HUDI respondent mean.
²0.000000 quantity more than zero but less than 0.0000005.

NOTE: HUDI is hung up during introduction.

“high-effort” respondents and “low-effort” respondents would indicate that a difference exists between the respondents and nonrespondents, and, therefore, the survey estimate is biased.

“Interviewing effort” was measured in three ways: verbal refusal status, nonverbal refusal status (i.e., whether the respondent “hung up during the introduction” [HUDI]), and the number of calls placed. It was assumed that respondents who verbally refused at least once, who nonverbally refused at least once, or who required more calls before completing the interview were “high-effort” respondents and would resemble the nonrespondents with respect to the key survey variables.

Table XXXIX compares, by sample type, the key survey estimates for converted HUDI cases with those for cases that completed the interview without a HUDI, using the design weights. Table XL shows the same comparison for the dual-frame sample, first using the design weights and then using the final weights. Tables XLI and XLII show the comparisons for converted verbal refusals compared

with cases that completed without a verbal refusal. Tables XLIII and XLIV show the comparisons for households completing the interview in five or more calls compared with those completing in four or fewer calls. If high-effort respondents resemble nonrespondents, then a difference in the survey estimate between converted HUDIs and non-HUDIs, between converted refusals and nonrefusals, or between those completing in five calls or more and those completing in four calls or fewer would suggest the presence of nonresponse bias.

Findings of the level-of-effort analyses for each of the key survey estimates presented in the tables are summarized as:

- The **percentage of children in excellent or very good health** is significantly lower for converted HUDIs than non-HUDIs and for households completing in five calls or more than for those completing in fewer than five calls, and does not significantly differ by converted refusals status. These results hold both for the dual-frame estimates as well as for the landline and cell-

phone samples individually.

- The **percentage of children with consistent insurance coverage in the past 12 months** is significantly lower for converted HUDIs than for non-HUDIs, for the dual-frame estimates as well as for the landline and cell-phone samples individually. The estimate does not significantly differ by converted refusals status in the landline sample but is significantly higher for converted refusals in the cell-phone sample. For the dual-frame sample, it is significantly higher for converted refusals when the design weights are used but not significantly different for converted refusals when the final weights are used. It is not significantly different in the landline sample for households completing in five calls or more but is significantly lower for such households in the cell-phone sample; it is not significantly different for households completing in five calls or more in the dual-frame sample.
- The **percentage of children with one or more medical preventive care visits in the past 12 months**

Table XLI. Comparing nonrefusals with converted refusals, by sample type

Key survey outcome	Landline sample				Cell-phone sample			
	Nonrefusals estimate	Converted refusals estimate	High-effort to low-effort respondents, percent difference ¹	p value for test of no difference	Nonrefusals estimate	Converted refusals estimate	High-effort to low-effort respondents, percent difference ¹	p value for test of no difference
Percentage of children in excellent or very good health	86.69	86.18	-0.58	0.447945	82.32	80.63	-2.05	0.255847
Percentage of children with consistent insurance coverage in past 12 months	91.73	92.07	0.38	0.504661	85.64	88.54	3.38	0.023283
Percentage of children with one or more medical preventive care visits in past 12 months	95.34	95.16	-0.19	0.612689	96.29	95.77	-0.55	0.451086
Percentage of children with medical home	59.80	59.76	-0.07	0.959741	50.08	50.95	1.73	0.648161
Percentage of children whose families ate a meal together every day in past week	44.98	43.79	-2.65	0.163179	52.15	53.20	2.01	0.565239
Percentage of children usually or always safe in community or neighborhood	90.05	89.85	-0.22	0.737948	84.02	83.40	-0.73	0.678775
Percentage of children with two-parent family structure (biological or adoptive)	74.28	73.59	-0.93	0.258397	59.11	54.33	-8.08	0.012286
Percentage of children with two-parent family structure (stepfamily)	6.08	6.55	7.72	0.258397	9.17	9.40	2.51	0.802020
Percentage of children with single-mother family structure	14.33	13.15	-8.24	0.041193	24.67	27.49	11.42	0.165187
Percentage of children with other family structure	5.30	6.70	26.47	0.000686	7.05	8.78	24.57	0.046685

¹Calculated as (converted refusal respondent mean – nonrefusal respondent mean) / nonrefusal respondent mean.

NOTE: Estimates in this table are weighted by the design weights.

Table XLII. Comparing nonrefusals with converted refusals: Dual-frame sample

Key survey outcome	Using design weight				Using final weight			
	Nonrefusals estimate	Converted refusals estimate	High-effort to low-effort respondents, percent difference ¹	p value for test of no difference	Nonrefusals estimate	Converted refusals estimate	High-effort to low-effort respondents, percent difference ¹	p value for test of no difference
Percentage of children in excellent or very good health	84.32	83.64	-0.80	0.387218	84.34	83.37	-1.15	0.212067
Percentage of children with consistent insurance coverage in past 12 months	88.44	90.46	2.28	0.002985	88.52	89.61	1.23	0.086810
Percentage of children with one or more medical preventive care visits in past 12 months	95.85	95.44	-0.43	0.274216	95.99	95.31	-0.71	0.103692
Percentage of children with medical home	54.56	55.77	2.22	0.226337	53.86	54.18	0.60	0.735497
Percentage of children whose families ate a meal together every day in past week	48.86	48.09	-1.57	0.437109	46.72	46.65	-0.17	0.933623
Percentage of children usually or always safe in community or neighborhood	86.81	86.92	0.14	0.879602	86.78	85.62	-1.34	0.131287
Percentage of children with two-parent family structure (biological or adoptive)	66.09	64.82	-1.92	0.224943	65.59	65.20	-0.59	0.669436
Percentage of children with two-parent family structure (stepfamily)	7.75	7.85	1.29	0.837928	8.69	9.04	4.01	0.532538
Percentage of children with single-mother family structure	19.92	19.68	-1.18	0.823169	19.17	18.38	-4.12	0.299814
Percentage of children with other family structure	6.24	7.65	22.50	0.002362	6.55	7.38	12.65	0.088420

¹Calculated as (converted refusal respondent mean – nonrefusal respondent mean) / nonrefusal respondent mean.

Table XLIII. Comparing low-call-attempt respondents with high-call-attempt respondents, by sample type

Key survey outcome	Landline sample				Cell-phone sample			
	Respondents with four calls or fewer estimate	Respondents with five calls or more estimate	High-effort to low-effort respondents, percent difference ¹	p value for test of no difference	Respondents with four calls or fewer estimate	Respondents with five calls or more estimate	High-effort to low-effort respondents, percent difference ¹	p value for test of no difference
Percentage of children in excellent or very good health	88.63	85.23	-3.84	² 0.000000	83.68	80.69	-3.58	0.006375
Percentage of children with consistent insurance coverage in past 12 months	91.89	91.74	-0.16	0.726831	87.63	84.81	-3.21	0.020603
Percentage of children with one or more medical preventive care visits in past 12 months	94.86	95.60	0.78	0.010992	95.73	96.62	0.94	0.127282
Percentage of children with medical home	62.09	58.27	-6.15	² 0.000000	52.31	48.46	-7.35	0.005593
Percentage of children whose families ate a meal together every day in past week	47.33	43.03	-9.09	² 0.000000	53.06	51.69	-2.59	0.307987
Percentage of children usually or always safe in community or neighborhood	90.69	89.55	-1.26	0.017422	84.69	83.28	-1.66	0.260514
Percentage of children with two-parent family structure (biological or adoptive)	73.85	74.33	0.64	0.451926	57.91	58.75	1.45	0.543220
Percentage of children with two-parent family structure (stepfamily)	6.54	5.94	-9.19	0.083627	9.63	8.85	-8.11	0.315847
Percentage of children with single-mother family structure	13.72	14.33	4.45	0.223155	24.89	25.30	1.63	0.758344
Percentage of children with other family structure	5.88	5.40	-8.21	0.139186	7.57	7.11	-6.13	0.451419

¹Calculated as (five or more calls respondent mean – four or fewer calls respondent mean) / (four or fewer calls respondent mean).

²0.000000 quantity more than zero but less than 0.0000005.

NOTE: Estimates in this table are weighted by the design weights.

is not significantly different for converted HUDIs or converted refusals. It is significantly higher for households completing in five calls or more in the landline sample but not significantly different for such households in the cell-phone sample; it is significantly higher for households completing in five calls or more in the dual-frame sample.

- The **percentage of children with a medical home** is significantly lower for converted HUDIs and households completing in five calls or more, but is not significantly different for converted refusals. These results hold for both the dual-frame estimates and the landline and cell-phone samples individually.
- The **percentage of children whose families ate a meal together every day in the past week** is not significantly different for converted refusals or converted HUDIs, but it is significantly lower for households completing in five calls or more in the landline and dual-frame samples (although not in the cell-phone sample).
- The **percentage of children who are usually or always safe in the community or neighborhood** is

significantly lower for converted HUDIs, not significantly different for converted refusals, significantly lower for households completing in five calls or more in the landline sample, and not significantly different for households completing in five calls or more in the cell-phone and dual-frame samples.

- The **percentage of children with a two-parent family structure (biological or adoptive)** is significantly lower for converted HUDIs in the cell-phone and dual-frame samples (although not in the landline sample), significantly lower for converted refusals in the cell-phone sample (although not in the landline or dual-frame samples), and significantly higher for households completing in five calls or more in the dual-frame sample (although not in the landline or cell-phone samples).
- The **percentage of children with a two-parent family structure (stepfamily)** is not significantly different for converted HUDIs or converted refusals but is significantly lower for households completing in five calls or more in the dual-frame sample (although not in the landline

or cell-phone samples).

- The **percentage of children with a single-mother family structure** is significantly higher for converted HUDIs, significantly lower for converted refusals in the landline sample (although not in the cell-phone or dual-frame samples), and significantly lower for households completing in five calls or more in the dual-frame sample when the final weights are used (although not when the design weights are used and not in the landline or cell-phone samples).
- The **percentage of children with other family structures** is significantly higher for converted HUDIs in the landline sample (although not in the cell-phone or dual-frame samples), significantly higher for converted refusals (although not in the dual-frame sample when the final weights are used), and not significantly different for households completing in five calls or more.

The conclusions that might be drawn from this level-of-effort analysis rely on the assumption that high-effort respondents resemble nonrespondents with respect to the survey variables.

Table XLIV. Comparing low-call-attempt respondents with high-call-attempt respondents: Dual-frame sample

Key survey outcome	Using design weight				Using final weight			
	Respondents with four calls or fewer estimate	Respondents with five calls or more estimate	High-effort to low-effort respondents, percent difference ¹	p value for test of no difference	Respondents with four calls or fewer estimate	Respondents with five calls or more estimate	High-effort to low-effort respondents, percent difference ¹	p value for test of no difference
Percentage of children in excellent or very good health	85.86	82.96	-3.38	0.000005	85.72	83.04	-3.13	0.000004
Percentage of children with consistent insurance coverage in past 12 months	89.50	88.28	-1.37	0.067697	88.97	88.54	-0.48	0.414014
Percentage of children with one or more medical preventive care visits in past 12 months	95.34	96.10	0.80	0.025285	95.49	96.14	0.68	0.035131
Percentage of children with medical home	56.63	53.39	-5.73	0.000066	55.73	52.61	-5.59	0.000036
Percentage of children whose families ate a meal together every day in past week	50.54	47.35	-6.30	0.000059	48.76	45.23	-7.24	0.000002
Percentage of children usually or always safe in community or neighborhood	87.35	86.43	-1.05	0.190661	87.15	86.15	-1.15	0.076770
Percentage of children with two-parent family structure (biological or adoptive)	64.94	66.55	2.48	0.045331	63.91	66.67	4.33	0.000111
Percentage of children with two-parent family structure (stepfamily)	8.27	7.39	-10.59	0.047262	9.42	8.28	-12.11	0.009306
Percentage of children with single-mother family structure	19.97	19.81	-0.80	0.830853	19.70	18.53	-5.93	0.048567
Percentage of children with other family structure	6.83	6.25	-8.42	0.109683	6.97	6.52	-6.57	0.248930

¹Calculated as (five or more calls respondent mean - four or fewer calls respondent mean) / (four or fewer calls respondent mean).

The validity of this assumption is questionable, and some studies have found that it does not hold (26,27). As part of the nonresponse bias analysis of the 2005–2006 National Survey of Children with Special Health Care Needs and the 2007 NSCH, this assumption was tested using the frame information, which is available for both respondents and nonrespondents at each stage of the survey. In both tests, converted refusals were not found to resemble nonrespondents in terms of the frame information, and while converted HUDIs resembled nonrespondents better than converted refusals, respondents completing in five calls or more most resembled nonrespondents in terms of the frame information.

The tests of the assumptions, then, supported the idea that high-effort respondents resemble nonrespondents when effort is defined in terms of the number of call attempts. Under the assumption that respondents requiring five calls or more to complete resemble nonrespondents, the analysis of key survey variables by the number of calls needed to complete the survey suggests that the final survey estimates of the percentage of children with one or more

medical preventive care visits in the past 12 months and the percentage of children with a two-parent family structure (biological or adoptive) are too low (i.e., they are biased downward). It would also appear that the other key survey estimates are too high (i.e., they are biased upward).

To translate the differences between those completing in five calls or more and those completing in four calls or fewer into numerical estimates of bias for each key survey estimate, the five-or-more-calls respondent mean of the key survey estimate was assigned to all nonrespondents. The results are presented in [Table XLV](#). For example, when using the design weights, the percentage of children in excellent or very good health based on all respondents is 84.2%, and [Table XLIV](#) shows that this rate for respondents completing in five calls or more is 83.0%. The overall dual-frame response rate is 23.0% (and, therefore, the nonresponse rate is 77.0%). Assigning a weight of 0.23 to the 84.2% estimate for respondents, and assuming an estimate of 83.0% for the nonrespondents and assigning them a weight of 0.77, derives an overall estimate for the percentage of children in excellent or very good health

for both respondents and nonrespondents of 83.2%.

This method results in estimates of bias in the key survey estimates that range in absolute value from 0.16% to 4.38%. Since the estimates of the biases are similar when the design weights and final weights are used, the weighting adjustments seem to have had little effect on the bias.

Conclusions

Assessing the extent to which nonresponse produces biased survey estimates is difficult, particularly in a multistage RDD survey where little information about the nonrespondents is known. This analysis has applied the most commonly used methods, each of which has its shortcomings. By taking multiple approaches, it was hoped that reasonably accurate conclusions about the level of nonresponse bias in key survey estimates could be drawn.

Generally, the interviewed landline sample population was found more likely to live in rural and other areas with lower household density compared with the nonresponding population. The same sample population was also more likely to live in areas associated with higher

Table XLV. Estimates of nonresponse biases in key survey estimates, based on comparing respondents with five or more calls with all respondents: Dual-frame sample

Key survey outcome	Using design weight				Using final weight			
	All respondents estimate	Respondents with five calls or more estimate	Respondents and nonrespondents estimate ¹	Estimated percent bias ²	All respondents estimate	Respondents with five calls or more estimate	Respondents and nonrespondents estimate ¹	Estimated percent bias ²
Percentage of children in excellent or very good health.	84.20	82.96	83.24	1.15	84.16	83.04	83.29	1.04
Percentage of children with consistent insurance coverage in past 12 months.	88.80	88.28	88.40	0.46	88.72	88.54	88.58	0.16
Percentage of children with one or more medical preventive care visits in past 12 months.	95.78	96.10	96.03	-0.26	95.86	96.14	96.07	-0.22
Percentage of children with medical home.	54.78	53.39	53.71	1.99	53.92	52.61	52.91	1.90
Percentage of children whose families ate a meal together every day in past week.	48.72	47.35	47.67	2.20	46.71	45.23	45.57	2.50
Percentage of children usually or always safe in community or neighborhood.	86.83	86.43	86.52	0.35	86.57	86.15	86.25	0.38
Percentage of children with two-parent family structure (biological or adoptive)	65.86	66.55	66.39	-0.80	65.51	66.67	66.41	-1.34
Percentage of children with two-parent family structure (stepfamily)	7.77	7.39	7.48	3.85	8.76	8.28	8.39	4.38
Percentage of children with single-mother family structure.	19.87	19.81	19.82	0.26	19.02	18.53	18.65	2.02
Percentage of children with other family structure.	6.50	6.25	6.31	3.00	6.71	6.52	6.56	2.25

¹Calculated as (all respondents estimate • response rate) + (respondents with five or more calls estimate • nonresponse rate).
²Calculated as (all respondents estimate - respondents and nonrespondents estimate) / respondents and nonrespondents estimate.

levels of homeownership, lower home values, and greater percentage of non-Hispanic white persons. Even when the nonresponse-adjusted weights are used, minor differences by homeownership, home values, and race remained.

In terms of the NSCH key survey estimates, estimates of bias were generally small but depended on the method used to estimate the bias. **Table XLVI** presents estimates of bias for each key survey estimate; conclusions regarding the presence of nonresponse bias in each are summarized below, along with some limitations.

Percentage of children in excellent or very good health

The estimate of the percentage of children in excellent or very good health may be biased upward slightly.

The final NSCH estimate and 95% confidence limits are 84.2% (82.8%, 85.5%), and the estimates of bias in this estimate are 0.12% (from the frame analysis based on only the landline sample), 1.04% (from the level-of-effort analysis), and -0.27% (from the

benchmark analysis). For this variable, direct estimates are available from the 2011 NHIS (82.7%) and the 2011 MEPS (83.8%); this suggests that the bias in the NSCH estimate is 1.72% or 0.42%, depending on whether the 2011 NHIS or 2011 MEPS estimate is used as the benchmark. (Note that here, as elsewhere in this report, biases are presented in percentage terms, not absolute terms, so that a 1.04% bias in an estimate of 84.16% means that the estimate is 1.04% higher than the benchmark; i.e., the true value is $84.16\% / 1.0104 = 83.29\%$.)

Percentage of children with consistent insurance coverage in past 12 months

Little bias was detected in the estimate of the percentage of children with consistent insurance coverage in the past 12 months.

The final NSCH estimate is 88.7% (87.1%, 90.3%), and the estimates of bias in this estimate are 0.03% (from the frame analysis based only on the landline sample), 0.16% (from the level-of-effort analysis), and -0.23% (from the benchmark analysis).

Percentage of children with one or more medical preventive care visits in past 12 months

The analysis found no evidence of bias in the percentage of children with one or more medical preventive care visit in the past 12 months.

The final NSCH estimate is 95.9% (95.4%, 96.3%). The estimate of the bias in this estimate is -0.04% from the frame analysis, -0.22% from the level-of-effort analysis, and 0.09% from the benchmark analysis.

Percentage of children with a medical home

The estimate of the percentage of children with a medical home may be biased upward slightly.

The final NSCH estimate is 53.9% (51.8%, 56.1%), and the bias was estimated to be 0.27% (frame analysis), 1.90% (level-of-effort analysis), and 1.37% (benchmark analysis).

Percentage of children whose families ate a meal together every day in the past week

The estimate of the percentage of children whose families ate a meal together every day in the past week may be biased upward slightly.

The final NSCH estimate is 46.7% (45.5%, 47.9%). The bias in this estimate was estimated to be 0.12% (frame analysis), 2.50% (level-of-effort analysis), and 0.52% (benchmark analysis).

Percentage of children usually or always safe in the community or neighborhood

Little bias was found in the estimate of the percentage of children usually or always safe in the community or neighborhood.

The final NSCH estimate is 86.6% (85.3%, 87.9%). The bias in this estimate was estimated to be 0.13% (frame analysis), 0.38% (level-of-effort analysis), and 0.09% (benchmark analysis).

Table XLVI. Estimates of survey bias in key survey variables, by method used to estimate bias

Key survey variable	Key survey estimate ¹ (95% confidence interval)	Estimates of bias in key survey estimate, by method used ²		
		Frame information analysis ³	Level-of-effort analysis	Benchmark analysis
Percentage of children in excellent or very good health	84.16 (82.79, 85.53)	0.12	1.04	-0.27
Percentage of children with consistent insurance coverage in past 12 months	88.72 (87.11, 90.33)	0.03	0.16	-0.23
Percentage of children with one or more medical preventive care visits in past 12 months	95.86 (95.38, 96.34)	-0.04	-0.22	0.09
Percentage of children with medical home	53.92 (51.75, 56.09)	0.27	1.90	1.37
Percentage of children whose families ate a meal together every day in past week	46.71 (45.52, 47.90)	0.12	2.50	0.52
Percentage of children usually or always safe in community or neighborhood	86.57 (85.28, 87.86)	0.13	0.38	0.09
Percentage of children with two-parent family structure (biological or adoptive)	65.51 (63.50, 67.53)	0.17	-1.34	-0.29
Percentage of children with two-parent family structure (stepfamily)	8.76 (8.01, 9.50)	0.36	4.38	-0.13
Percentage of children with single-mother family structure	19.02 (17.66, 20.38)	-0.74	2.02	0.82
Percentage of children with other family structure	6.71 (6.20, 7.22)	-0.67	2.25	0.67

¹Using final weights adjusted for nonresponse and raked to population control totals.

²Using nonresponse-adjusted or raked weights, depending on the analysis. Biases are presented in percentage terms, not absolute terms; for example, a 0.12% bias in an estimate of 84.16 means that the reported estimate is 0.12% higher than the true value, that is, the true value is $84.16 / 1.0012 = 84.06$.

³Bias estimates apply only to the landline sample, due to frame information availability.

Family structure

The results for family structure distribution are mixed, with the frame analysis and benchmark analysis methods showing little to no bias, and the level-of-effort analysis showing small biases.

The final NSCH estimate of the percentage of children with a two-parent family structure (biological or adoptive) is 65.5% (63.5%, 67.5%). The bias in this estimate was estimated to be 0.17% (frame analysis), -1.34% (level-of-effort analysis), and -0.29% (benchmark analysis).

The final NSCH estimate of the percentage of children with a two-parent family structure (stepfamily) is 8.8% (8.0%, 9.5%), and the bias was estimated to be 0.36% (frame analysis), 4.38% (level-of-effort analysis), and -0.13% (benchmark analysis).

The final NSCH estimate of the percentage of children with a single-mother family structure is 19.0% (17.7%, 20.4%), and the bias was estimated to be -0.74% (frame analysis), 2.02% (level-of-effort analysis), and 0.82% (benchmark analysis).

The final NSCH estimate of the percentage of children with other family structures is 6.7% (6.2%, 7.2%), and the bias was estimated to be -0.67% (frame analysis), 2.25% (level-of-effort analysis), and 0.67% (benchmark analysis).

Limitations

Any nonresponse bias analysis is limited by the information available about the nonrespondents, and this report is no exception. In transforming the measured bias in the frame information into bias in the key survey estimates, models were used to relate the frame information to the key survey estimates. However, the frame variables (which are nearly all measured at the telephone-exchange level and not the case level, and which are not available for the cell-phone sample) are not strongly related to the key survey estimates, so the models may not have had much power to detect bias in the key survey estimates. The level-of-effort analysis relied on the assumption that those responding

only after five call attempts or more resemble nonrespondents with respect to the key survey variables; although past analysis has found this to be true with respect to the frame variables for landline samples, it is not necessarily true for the key survey variables and may not be true for cell-phone samples. Finally, the comparison of demographic, socioeconomic, and health estimates to those from external sources (benchmarks) relied on the assumption that the estimates from these external sources are accurate, which may not be the case—the benchmark estimates are based on survey data and can suffer from their own biases. Moreover, models were used to translate the differences between the NSCH and benchmark estimates into estimates of bias in the NSCH key survey estimates, and these models may not be accurate or complete. To the extent that the models and assumptions used in this report's analyses are not valid, conclusions may not be correct.

Appendix XIV. Multiple Imputation of Income and Household Size

As in many household interview surveys, item nonresponse in the 2011–2012 National Survey of Children’s Health (NSCH) was high for the question on total combined household income for the previous calendar year. Answers to this question, along with answers to a question about the number of people living in the household, were used to create an index of income following the U.S. Department of Health and Human Services federal poverty guidelines. If data for either of these two components were missing, refused, or had a “don’t know” response, the household poverty status indicator was assigned a missing-value code. (Further details about the procedures for assigning household poverty status are available in [Appendix V](#)).

For the 2011–2012 NSCH, poverty status was missing for 9.3% of the households (8,856 of 95,677). Missing values for poverty status were predominantly the result of missing data for income rather than missing data for household size. A total of 409 households (0.4%) did not report household size.

Nonresponse analysis shows that income nonresponse is related to several variables including items pertaining to health, neighborhood and community characteristics, and demographics. Thus, the respondents cannot be treated as a random subset of the original sample. It follows that the most common method for handling missing data in software packages, complete-case analysis (also known as listwise deletion), will generally be biased, because this method deletes cases that are missing any of the variables involved in the analysis. Moreover, since deletion of incomplete cases discards some of the observed data, complete-case analysis is generally inefficient as well; that is, it produces inferences that are less precise than those produced by methods that use all of the observed data.

Imputation is a more appropriate approach to handling nonresponse on items in a survey for several reasons. First, imputation adjusts for observed differences between item nonrespondents

and respondents; such an adjustment is generally not made by complete-case analysis. Second, imputation results in a completed data set, so that the data can be analyzed using standard software packages without discarding any observed values. Third, when a data set is being produced for analysis by the public, imputation by the data producer allows the incorporation of specialized knowledge about the reasons for missing data in the imputation procedure, including confidential information that cannot be released to the public. Moreover, the nonresponse problem is addressed in the same way for all users, so that analyses will be consistent across users.

Although single imputation (i.e., imputing one value for each missing datum) derives the benefits listed above, analysis of a singly imputed data set using standard software generally fails to reflect the uncertainty that although the imputed values are plausible replacements for the missing values, they are not the true values themselves. As a result, analyses of singly imputed data tend to produce estimated standard errors that are too small, confidence intervals that are too narrow, and significance tests that reject the null hypothesis too often when it is true.

Multiple imputation is a technique that retains the advantages of single imputation while also allowing the uncertainty due to imputation to be reflected in the analysis. The idea is to first simulate $M > 1$ plausible sets of replacements for the missing values, which are then combined with the nonmissing values to generate M complete data sets. The M complete data sets are then analyzed separately using a standard method for analyzing complete data. Finally, results of the M analyses are combined in a way that reflects the uncertainty due to imputation.

Imputation Procedures

Income and household size were each imputed five times. The literature on multiple imputation suggests that this

is a sufficient number of imputations unless the amount of missing information is extreme (28). As noted earlier, the number of survey records with missing household size values was much smaller than the number of survey records with missing household income values. Because very little data were missing for household size, predictors for household size were not explored separately from predictors for household income. Therefore, household size was imputed using the same predictors used for household income. If both household size and household income were missing for a single case, five *pairs* of imputed values were produced.

The imputation of household income and household size was complicated by two issues. First, neither household income nor size was normally distributed. This is a disadvantage because linear regression modeling assumes that the dependent variable being modeled has a normal distribution. Therefore, a transformed variable for modeling and imputation was used. To determine the suitable transformation to conform to the normality assumption in the imputation model, Box-Cox transformations (29) were estimated from the observed data. For household size, the log transformation led to normality. For income, the optimal transformation was to the 0.15 power, which was rounded to the power of 0.20 (the fifth root). After the imputation procedure was completed, the imputed values were transformed back to their original scale.

Second, in some cases, the imputed values of household income and household size needed to be constrained within certain bounds. Household respondents were asked to provide an exact household income. However, when respondents did not provide an exact household income, a series (i.e., cascade) of questions asking whether the household income was below, exactly at, or above threshold amounts was then asked. The multiple imputation procedures for NSCH imputed the income value so that it was consistent with any information gathered from

the cascade questions. For households with missing data on household size, the imputed values needed to be restricted for consistency with other information provided in the survey (for example, household size is greater than the number of children in the household).

The software IVEware, available from: <http://www.isr.umich.edu/src/smp/ive>, allows the user to specify lower and upper limits of imputed values, constraining the imputation distribution from which draws are made. This software has been used to impute family income and family earnings for the National Health Interview Survey and to impute household income and household size (to derive household poverty status) for the 2001, 2005–2006, and 2009–2010 National Surveys of Children with Special Health Care Needs as well as the 2003 and 2007 NSCH. IVEware uses sequential regression multivariate imputation (SRMI). With sequential regression imputations, income and household size had separate models that used the same covariates, including each other. This technique was not as robust as some other imputation techniques that specify a joint model for both income and household size conditional on the predictor variables. However, this slight disadvantage of using SRMI is outweighed by IVEware’s ability to constrain the imputed values within specified lower and upper limits.

IVEware builds regression models and then multiply imputes variables based on the models built. For understanding relationships between variables, parsimony is desired, but in prediction (imputation can be thought of as “predicting” the missing values), more complicated models are often better for two reasons. First, using more variables leads to a higher correlation between the observed and predicted values for a model. Second, the validity of analyses conducted on multiply imputed data sets is broader when more variables are included in the model.

As many predictors as possible were included in this imputation model. To produce high-quality imputations, variables that were potentially related to household income and potentially

Table XLVII. Analysis of variance table for linear regression model

Source	Degrees of freedom	Sum of squares	Mean square	F value
Model	282	112,044	397.32	210.53
Error	73,451	138,619	1.89	...
Corrected total	73,733	250,663	...	...

... Category not applicable.

related to the missing status of household income were included. Another important consideration was to include variables that account for features of the sampling design, so that approximately valid inferences would be obtained when the multiply imputed data are analyzed.

The imputation model included variables related to the questionnaire items on demographics (for the child and household), health and functional status of the child, health insurance coverage, health care access and utilization, medical home, and characteristics of the telephone exchange. For most of the variables, the “refused” or “don’t know” answers were recoded to missing. For some variables having logical skips, logical imputation was used to obtain more complete variables. For example, the variable K11Q60 (receipt of cash assistance) is missing when the household’s income does not qualify for the cash assistance. Therefore, it was recoded as a “no” response for such households. Some categorical variables also were recoded or collapsed to reduce the number of rarer categories. For example, for the variable K4Q20 (number of doctor visits), the values ranged from 0 to 365, with small frequencies for values greater than 10. The number of categories was reduced to 11, with category 10 defined as 10 visits or more.

Because fitting the regressions in the SRMI procedure does not automatically account for features of the sample design, variables reflecting the design were included as predictors in the regression models. The strata for this design were the 50 states and Washington, D.C. To account for the stratum effect, states, in the form of 50 indicator variables, and state-level income summary variables (mean and standard deviation with log transformation) were considered as possible covariates in the imputation

model. Survey weights were also considered as covariates in the model, after transforming the weights to a logarithmic scale. Ultimately, the state-level income summary variables were dropped before the final imputations were carried out, while the state indicator variables and the weight variable were retained in the final model.

Results of Modeling

Tables XLVII and XLVIII present the results from a linear regression of transformed family income (tincome) on the 118 selected predictors. Table XLVII shows that the model is highly significant $F(282,73,451) = 210.53, p < 0.0001$. The *R*-squared value for this model was 0.447, and the adjusted *R*-squared was 0.445. Table XLVIII shows the linear regression parameters for the 118 independent variables. The variables are ordered by their contribution to the *R*-squared value of the model; variables with larger partial *R*-squared values are listed first. Those with negative parameters are associated with decreased predicted income, whereas those with positive parameters are associated with increased predicted income.

Due to missing values for the variables (especially tincome), only 74,734 observations were used in the regression model (no U.S. Virgin Islands cases had any complete cases on all variables, so none of these cases appear in Table XLVIII).

Note that the imputed values for family income were not obtained from this regression model. The imputed values were drawn from the posterior distribution of missing family income based on the model derived from this regression.

Table XLVIII. Parameter estimates for linear regression model on transformed family income, sorted from largest partial R-squared to smallest

Parameter or level	Label	Degrees of freedom	Estimate	Standard error	t value	p value
Intercept	...	1	6.8962	0.2976	23.1694	¹ 0.0000
EDUC4 1	Derived. Highest level of education attained by mother, father, nonparent respondent in household (4 categories)	1	-1.1602	0.0301	-38.5145	¹ 0.0000
EDUC4 2	Derived. Highest level of education attained by mother, father, nonparent respondent in household (4 categories)	1	-0.8518	0.0176	-48.4678	¹ 0.0000
EDUC4 3	Derived. Highest level of education attained by mother, father, nonparent respondent in household (4 categories)	1	-0.5614	0.0136	-41.2782	¹ 0.0000
EDUC4 4 (reference)	Derived. Highest level of education attained by mother, father, nonparent respondent in household (4 categories)	...	...	...	...	...
ACE1 1	Since [s.c.] was born, how often has it been very hard to get by on your family's income, for example, it was hard to cover the basics like food or housing?	1	-0.9187	0.0261	-35.1660	¹ 0.0000
ACE1 2	Since [s.c.] was born, how often has it been very hard to get by on your family's income, for example, it was hard to cover the basics like food or housing?	1	-0.7136	0.0169	-42.3366	¹ 0.0000
ACE1 3	Since [s.c.] was born, how often has it been very hard to get by on your family's income, for example, it was hard to cover the basics like food or housing?	1	-0.4486	0.0125	-35.9933	¹ 0.0000
ACE1 4 (reference)	Since [s.c.] was born, how often has it been very hard to get by on your family's income, for example, it was hard to cover the basics like food or housing?	...	...	...	...	...
C10Q41 1	Do you own or rent your home?	1	0.8822	0.0414	21.3073	¹ 0.0000
C10Q41 2	Do you own or rent your home?	1	0.2219	0.0424	5.2293	¹ 0.0000
C10Q41 3 (reference)	Do you own or rent your home?	...	...	...	...	...
K11Q50 0	Was anyone in the household employed at least 50 weeks out of the past 52 weeks?	1	-0.7935	0.0178	-44.5447	¹ 0.0000
K11Q50 1 (reference)	Was anyone in the household employed at least 50 weeks out of the past 52 weeks?	...	...	...	...	...
Inc_75_p_q 1	Percentage of income \$75,000 or more by exchange (quartiles)	1	-0.0227	0.0587	-0.3864	0.6992
Inc_75_p_q 2	Percentage of income \$75,000 or more by exchange (quartiles)	1	0.0438	0.0510	0.8580	0.3909
Inc_75_p_q 3	Percentage of income \$75,000 or more by exchange (quartiles)	1	0.0407	0.0416	0.9780	0.3281
Inc_75_p_q 4 (reference)	Percentage of income \$75,000 or more by exchange (quartiles)	...	...	...	...	...
C11Q15_CELL	In total, how many working cell phones do you and your household members have available for personal use?	1	0.2502	0.0098	25.4331	¹ 0.0000
TELEPHONE_STATUS 1	Derived. Telephone status for household	1	-0.2658	0.0413	-6.4320	¹ 0.0000
TELEPHONE_STATUS 2	Derived. Telephone status for household	1	0.0453	0.0393	1.1526	0.2491
TELEPHONE_STATUS 3	Derived. Telephone status for household	1	-0.0348	0.0370	-0.9392	0.3476
TELEPHONE_STATUS 4	Derived. Telephone status for household	1	-0.2337	0.0375	-6.2273	¹ 0.0000
TELEPHONE_STATUS 5 (reference)	Derived. Telephone status for household	...	...	...	...	...
RACEARRAY_11CAT 1	Race and ethnicity of the selected child (11 categories)	1	0.0758	0.0792	0.9569	0.3386
RACEARRAY_11CAT 2	Race and ethnicity of the selected child (11 categories)	1	-0.3538	0.0813	-4.3509	¹ 0.0000
RACEARRAY_11CAT 3	Race and ethnicity of the selected child (11 categories)	1	0.1201	0.0853	1.4083	0.1590
RACEARRAY_11CAT 4	Race and ethnicity of the selected child (11 categories)	1	-0.1963	0.0884	-2.2210	0.0264
RACEARRAY_11CAT 5	Race and ethnicity of the selected child (11 categories)	1	-0.0447	0.1006	-0.4443	0.6568
RACEARRAY_11CAT 6	Race and ethnicity of the selected child (11 categories)	1	-0.1792	0.0871	-2.0562	0.0398
RACEARRAY_11CAT 7	Race and ethnicity of the selected child (11 categories)	1	0.2039	0.0897	2.2725	0.0231
RACEARRAY_11CAT 8	Race and ethnicity of the selected child (11 categories)	1	-0.0789	0.0878	-0.8979	0.3693
RACEARRAY_11CAT 9	Race and ethnicity of the selected child (11 categories)	1	-0.1886	0.1006	-1.8749	0.0608
RACEARRAY_11CAT 10	Race and ethnicity of the selected child (11 categories)	1	-0.0669	0.1107	-0.6045	0.5455

See footnotes at end of table.

Table XLVIII. Parameter estimates for linear regression model on transformed family income, sorted from largest partial R-squared to smallest—Con.

Parameter or level	Label	Degrees of freedom	Estimate	Standard error	t value	p value
RACEARRAY_11CAT 11 (reference)	Race and ethnicity of the selected child (11 categories)	...	...	...	...	...
TRUEST AK	True state of residence	1	0.1161	0.0572	2.0304	0.0423
TRUEST AL	True state of residence	1	-0.0240	0.0579	-0.4151	0.6781
TRUEST AR	True state of residence	1	0.0120	0.0559	0.2142	0.8304
TRUEST AZ	True state of residence	1	-0.0206	0.0575	-0.3573	0.7209
TRUEST CA	True state of residence	1	0.1459	0.0658	2.2154	0.0267
TRUEST CO	True state of residence	1	-0.0246	0.0554	-0.4442	0.6569
TRUEST CT	True state of residence	1	0.1235	0.0581	2.1265	0.0335
TRUEST DC	True state of residence	1	0.4474	0.0612	7.3136	0.0000
TRUEST DE	True state of residence	1	0.0003	0.0582	0.0044	0.9965
TRUEST FL	True state of residence	1	0.0528	0.0591	0.8930	0.3719
TRUEST GA	True state of residence	1	0.0240	0.0586	0.4091	0.6825
TRUEST HI	True state of residence	1	-0.0913	0.0648	-1.4085	0.1590
TRUEST IA	True state of residence	1	-0.0635	0.0545	-1.1653	0.2439
TRUEST ID	True state of residence	1	-0.1567	0.0538	-2.9150	0.0036
TRUEST IL	True state of residence	1	0.0212	0.0552	0.3840	0.7010
TRUEST IN	True state of residence	1	-0.0361	0.0569	-0.6331	0.5267
TRUEST KS	True state of residence	1	-0.0477	0.0547	-0.8715	0.3835
TRUEST KY	True state of residence	1	-0.1121	0.0565	-1.9825	0.0474
TRUEST LA	True state of residence	1	0.0192	0.0581	0.3301	0.7413
TRUEST MA	True state of residence	1	0.1797	0.0587	3.0630	0.0022
TRUEST MD	True state of residence	1	0.3085	0.0580	5.3158	0.0000
TRUEST ME	True state of residence	1	-0.1086	0.0579	-1.8753	0.0608
TRUEST MI	True state of residence	1	-0.0695	0.0579	-1.2007	0.2299
TRUEST MN	True state of residence	1	0.0266	0.0553	0.4805	0.6309
TRUEST MO	True state of residence	1	-0.0515	0.0559	-0.9211	0.3570
TRUEST MS	True state of residence	1	-0.0585	0.0591	-0.9890	0.3227
TRUEST MT	True state of residence	1	-0.0971	0.0535	-1.8141	0.0697
TRUEST NC	True state of residence	1	-0.0351	0.0571	-0.6144	0.5390
TRUEST ND	True state of residence	1	0.1497	0.0559	2.6763	0.0074
TRUEST NE	True state of residence	1	-0.0037	0.0546	-0.0678	0.9460
TRUEST NH	True state of residence	1	-0.0407	0.0578	-0.7053	0.4807
TRUEST NJ	True state of residence	1	0.1151	0.0601	1.9145	0.0556
TRUEST NM	True state of residence	1	-0.0398	0.0589	-0.6759	0.4991
TRUEST NV	True state of residence	1	-0.0324	0.0590	-0.5494	0.5827
TRUEST NY	True state of residence	1	0.1648	0.0595	2.7684	0.0056
TRUEST OH	True state of residence	1	-0.0850	0.0570	-1.4921	0.1357
TRUEST OK	True state of residence	1	-0.0469	0.0564	-0.8310	0.4060
TRUEST OR	True state of residence	1	-0.1211	0.0559	-2.1674	0.0302
TRUEST PA	True state of residence	1	0.0634	0.0581	1.0909	0.2753
TRUEST RI	True state of residence	1	-0.0574	0.0588	-0.9764	0.3289
TRUEST SC	True state of residence	1	-0.1178	0.0577	-2.0399	0.0414
TRUEST SD	True state of residence	1	-0.0598	0.0552	-1.0837	0.2785
TRUEST TN	True state of residence	1	-0.0408	0.0569	-0.7160	0.4740
TRUEST TX	True state of residence	1	0.0776	0.0588	1.3199	0.1869
TRUEST UT	True state of residence	1	-0.1693	0.0561	-3.0186	0.0025
TRUEST VA	True state of residence	1	0.1420	0.0573	2.4786	0.0132
TRUEST VT	True state of residence	1	-0.0405	0.0578	-0.7006	0.4835
TRUEST WA	True state of residence	1	0.0570	0.0564	1.0093	0.3128
TRUEST WI	True state of residence	1	-0.0085	0.0555	-0.1528	0.8786
TRUEST WV	True state of residence	1	-0.0389	0.0585	-0.6658	0.5056
TRUEST WY (reference)	True state of residence	...	...	...	...	...
RELATION 1	Derived. Respondent's relationship to selected child	1	-0.0052	0.0434	-0.1201	0.9044
RELATION 2	Derived. Respondent's relationship to selected child	1	0.2231	0.0443	5.0347	0.0000
RELATION 3	Derived. Respondent's relationship to selected child	1	0.0885	0.0491	1.8024	0.0715
RELATION 5 (reference)	Derived. Respondent's relationship to selected child	...	...	...	...	...
language_hh 1	Primary language of the household	1	0.2463	0.0434	5.6773	0.0000
language_hh 2	Primary language of the household	1	-0.1296	0.0569	-2.2781	0.0227
language_hh 3 (reference)	Primary language of the household	...	...	...	...	...
K8Q11 0	During the past week, on how many days did all the family members who live in the household eat a meal together?	1	0.1356	0.0301	4.5097	0.0000

See footnotes at end of table.

Table XLVIII. Parameter estimates for linear regression model on transformed family income, sorted from largest partial R-squared to smallest—Con.

Parameter or level	Label	Degrees of freedom	Estimate	Standard error	t value	p value
K8Q11 1	During the past week, on how many days did all the family members who live in the household eat a meal together?	1	0.1261	0.0311	4.0567	0.0000
K8Q11 2	During the past week, on how many days did all the family members who live in the household eat a meal together?	1	0.1390	0.0225	6.1704	0.0000
K8Q11 3	During the past week, on how many days did all the family members who live in the household eat a meal together?	1	0.1328	0.0192	6.9069	0.0000
K8Q11 4	During the past week, on how many days did all the family members who live in the household eat a meal together?	1	0.1437	0.0173	8.2892	0.0000
K8Q11 5	During the past week, on how many days did all the family members who live in the household eat a meal together?	1	0.1005	0.0151	6.6624	0.0000
K8Q11 6	During the past week, on how many days did all the family members who live in the household eat a meal together?	1	0.1167	0.0203	5.7490	0.0000
K8Q11 7 (reference)	During the past week, on how many days did all the family members who live in the household eat a meal together?	...	...	...	...	...
College_Graduate_q 1	Number of college graduates by exchange (quartiles)	1	-0.0782	0.0400	-1.9558	0.0505
College_Graduate_q 2	Number of college graduates by exchange (quartiles)	1	-0.0369	0.0327	-1.1283	0.2592
College_Graduate_q 3	Number of college graduates by exchange (quartiles)	1	-0.0379	0.0245	-1.5489	0.1214
College_Graduate_q 4 (reference)	Number of college graduates by exchange (quartiles)	...	...	...	...	...
K10Q30 1	People in this neighborhood help each other out.	1	0.1499	0.0382	3.9245	0.0001
K10Q30 2	People in this neighborhood help each other out.	1	0.1115	0.0367	3.0373	0.0024
K10Q30 3	People in this neighborhood help each other out.	1	0.0777	0.0391	1.9883	0.0468
K10Q30 4 (reference)	People in this neighborhood help each other out.	...	...	...	...	...
K4Q30 0	[During the past 12 months / since [his/her] birth], did [s.c.] see a dentist for any kind of dental care, including check-ups, dental cleanings, x-rays, or filling cavities?	1	-0.1054	0.0323	-3.2598	0.0011
K4Q30 1 (reference)	[During the past 12 months / since [his/her] birth], did [s.c.] see a dentist for any kind of dental care, including check-ups, dental cleanings, x-rays, or filling cavities?	...	...	...	...	...
ACE3 0	Did [s.c.] ever live with a parent or guardian who got divorced or separated after [s.c.] was born?	1	0.1163	0.0156	7.4512	0.0000
ACE3 1 (reference)	Did [s.c.] ever live with a parent or guardian who got divorced or separated after [s.c.] was born?	...	...	...	...	...
K4Q02 1	What kind of place is it? / what kind of place does [s.c.] go to most often?	1	0.0525	0.0485	1.0818	0.2793
K4Q02 2	What kind of place is it? / what kind of place does [s.c.] go to most often?	1	-0.1046	0.0680	-1.5393	0.1237
K4Q02 3	What kind of place is it? / what kind of place does [s.c.] go to most often?	1	-0.0273	0.0598	-0.4565	0.6481
K4Q02 4	What kind of place is it? / what kind of place does [s.c.] go to most often?	1	-0.0550	0.0499	-1.1013	0.2708
K4Q02 9 (reference)	What kind of place is it? / what kind of place does [s.c.] go to most often?	...	...	...	...	...
K10Q20 0	In your neighborhood, is there litter or garbage on the street or sidewalk?	1	0.1266	0.0160	7.9241	0.0000
K10Q20 1 (reference)	In your neighborhood, is there litter or garbage on the street or sidewalk?	...	...	...	...	...
lhsize	Number of people in a household (after log transformation)	1	0.8924	0.0799	11.1655	0.0000
K2Q01 1	In general, how would you describe [s.c.]'s health?	1	0.1177	0.0390	3.0210	0.0025
K2Q01 2	In general, how would you describe [s.c.]'s health?	1	0.0260	0.0387	0.6705	0.5025
K2Q01 3	In general, how would you describe [s.c.]'s health?	1	-0.0102	0.0401	-0.2554	0.7984

See footnotes at end of table.

Table XLVIII. Parameter estimates for linear regression model on transformed family income, sorted from largest partial R-squared to smallest—Con.

Parameter or level	Label	Degrees of freedom	Estimate	Standard error	t value	p value
K2Q01 4 (reference)	In general, how would you describe [s.c.]'s health?	...	...	...	...	...
K4Q24 0	[During the past 12 months / since [his/her] birth], did [s.c.] see a specialist [other than a mental health professional]?	1	-0.1032	0.0295	-3.4940	0.0005
K4Q24 1 (reference)	[During the past 12 months / since [his/her] birth], did [s.c.] see a specialist [other than a mental health professional]?	...	...	...	...	...
K9Q40 0	Does anyone living in your household use cigarettes, cigars, or pipe tobacco?	1	0.0985	0.0133	7.3895	0.0000
K9Q40 1 (reference)	Does anyone living in your household use cigarettes, cigars, or pipe tobacco?	...	...	...	...	...
K8Q34 1	During the past month, how often have you felt angry with [him/her]?	1	-0.0913	0.0454	-2.0127	0.0441
K8Q34 2	During the past month, how often have you felt angry with [him/her]?	1	-0.0108	0.0443	-0.2436	0.8076
K8Q34 3	During the past month, how often have you felt angry with [him/her]?	1	-0.0140	0.0434	-0.3227	0.7469
K8Q34 4 (reference)	During the past month, how often have you felt angry with [him/her]?	...	...	...	...	...
K4Q04 1	Do you have one or more persons you think of as [s.c.]'s personal doctor or nurse?	1	0.1243	0.0220	5.6630	0.0000
K4Q04 2	Do you have one or more persons you think of as [s.c.]'s personal doctor or nurse?	1	0.1521	0.0230	6.6065	0.0000
K4Q04 3 (reference)	Do you have one or more persons you think of as [s.c.]'s personal doctor or nurse?	...	...	...	...	...
Inc_50_75p_q 1	Percentage of income \$50,000–\$75,000 by exchange (quartiles)	1	0.1662	0.0235	7.0832	0.0000
Inc_50_75p_q 2	Percentage of income \$50,000–\$75,000 by exchange (quartiles)	1	0.0707	0.0194	3.6468	0.0003
Inc_50_75p_q 3	Percentage of income \$50,000–\$75,000 by exchange (quartiles)	1	0.0407	0.0159	2.5653	0.0103
Inc_50_75p_q 4 (reference)	Percentage of income \$50,000–\$75,000 by exchange (quartiles)	...	...	...	...	...
Age_35_54_p_q 1	Percentage of people aged 35–54 by exchange (quartiles)	1	-0.0858	0.0237	-3.6164	0.0003
Age_35_54_p_q 2	Percentage of people aged 35–54 by exchange (quartiles)	1	-0.0355	0.0199	-1.7799	0.0751
Age_35_54_p_q 3	Percentage of people aged 35–54 by exchange (quartiles)	1	-0.0011	0.0168	-0.0638	0.9491
Age_35_54_p_q 4 (reference)	Percentage of people aged 35–54 by exchange (quartiles)	...	...	...	...	...
SAMPLE 1	Telephone sample type	1	0.1156	0.0183	6.3263	0.0000
SAMPLE 2 (reference)	Telephone sample type	...	...	...	...	...
Median_Rent_q 1	Median rent by exchange (quartiles)	1	-0.0977	0.0380	-2.5698	0.0102
Median_Rent_q 2	Median rent by exchange (quartiles)	1	-0.0664	0.0282	-2.3570	0.0184
Median_Rent_q 3	Median rent by exchange (quartiles)	1	-0.0456	0.0196	-2.3266	0.0200
Median_Rent_q 4 (reference)	Median rent by exchange (quartiles)	...	...	...	...	...
K8Q35 0	Is there someone that you can turn to for day-to-day emotional help with [parenthood / raising children]?	1	-0.0834	0.0213	-3.926	0.0001
K8Q35 1 (reference)	Is there someone that you can turn to for day-to-day emotional help with [parenthood / raising children]?	...	...	...	...	...
ACE4 0	Did [s.c.] ever live with a parent or guardian who died?	1	0.1465	0.0316	4.6329	0.0000
ACE4 1 (reference)	Did [s.c.] ever live with a parent or guardian who died?	...	...	...	...	...
K8Q30 1	In general, how well do you feel you are coping with the day to day demands of [parenthood / raising children]?	1	-0.1140	0.0479	-2.3774	0.0174
K8Q30 2	In general, how well do you feel you are coping with the day to day demands of [parenthood / raising children]?	1	-0.0484	0.0476	-1.0155	0.3099
K8Q30 3 (reference)	In general, how well do you feel you are coping with the day to day demands of [parenthood / raising children]?	...	...	...	...	...
K11Q43	(Since [he/she] was adopted,) how many times has [s.c.] ever moved to a new address?	1	0.0155	0.0028	5.5439	0.0000

See footnotes at end of table.

Table XLVIII. Parameter estimates for linear regression model on transformed family income, sorted from largest partial R-squared to smallest—Con.

Parameter or level	Label	Degrees of freedom	Estimate	Standard error	t value	p value
ACE5 0	Did [s.c.] ever live with a parent or guardian who served time in jail or prison after [s.c.] was born?	1	0.1426	0.0254	5.6081	0.0000
ACE5 1 (reference)	Did [s.c.] ever live with a parent or guardian who served time in jail or prison after [s.c.] was born?	...	...	...	...	...
TOTKIDS	Derived. Total number of children in household aged 0–17 years	1	–0.1598	0.0189	–8.4413	0.0000
TOTADULT	Derived. Total number of adults in household	1	–0.1483	0.0197	–7.5084	0.0000
K5Q40 1	[During the past 12 months / since [his/her] birth], how often did [s.c.]’s doctors and other health care providers spend enough time with [him/her]?	1	–0.0507	0.0313	–1.6200	0.1052
K5Q40 2	[During the past 12 months / since [his/her] birth], how often did [s.c.]’s doctors and other health care providers spend enough time with [him/her]?	1	–0.0855	0.0198	–4.3193	0.0000
K5Q40 3	[During the past 12 months / since [his/her] birth], how often did [s.c.]’s doctors and other health care providers spend enough time with [him/her]?	1	–0.0321	0.0148	–2.1666	0.0303
K5Q40 4 (reference)	[During the past 12 months / since [his/her] birth], how often did [s.c.]’s doctors and other health care providers spend enough time with [him/her]?	...	...	...	...	...
ACE10 0	Was [s.c.] ever treated or judged unfairly because of [his/her] race or ethnic group?	1	–0.1583	0.0301	–5.2517	0.0000
ACE10 1 (reference)	Was [s.c.] ever treated or judged unfairly because of [his/her] race or ethnic group?	...	...	...	...	...
Median_HH_Income_q 1	Median household income by exchange (quartiles)	1	–0.1540	0.0608	–2.5334	0.0113
Median_HH_Income_q 2	Median household income by exchange (quartiles)	1	–0.1146	0.0506	–2.2660	0.0235
Median_HH_Income_q 3	Median household income by exchange (quartiles)	1	–0.0773	0.0403	–1.9197	0.0549
Median_HH_Income_q 4 (reference)	Median household income by exchange (quartiles)	...	...	...	...	...
Black_p_q 1	Percentage of black by exchange (quartiles)	1	0.0015	0.0295	0.0523	0.9583
Black_p_q 2	Percentage of black by exchange (quartiles)	1	–0.0504	0.0248	–2.0341	0.0419
Black_p_q 3	Percentage of black by exchange (quartiles)	1	–0.0146	0.0205	–0.7098	0.4778
Black_p_q 4 (reference)	Percentage of black by exchange (quartiles)	...	...	...	...	...
K2Q16 0	Is [s.c.] limited or prevented in any way in [his/her] ability to do the things most children of the same age can do?	1	0.1216	0.0265	4.5934	0.0000
K2Q16 1 (reference)	Is [s.c.] limited or prevented in any way in [his/her] ability to do the things most children of the same age can do?	...	...	...	...	...
K10Q40 1	How often do you feel [s.c.] is safe in your community or neighborhood?	1	–0.0598	0.0472	–1.2647	0.2060
K10Q40 2	How often do you feel [s.c.] is safe in your community or neighborhood?	1	–0.0712	0.0223	–3.1920	0.0014
K10Q40 3	How often do you feel [s.c.] is safe in your community or neighborhood?	1	–0.0200	0.0123	–1.6319	0.1027
K10Q40 4 (reference)	How often do you feel [s.c.] is safe in your community or neighborhood?	...	...	...	...	...
K10Q13 0	Does a recreation center, community center, or boys’ or girls’ club exist in your community?	1	–0.0412	0.0125	–3.2966	0.0010
K10Q13 1 (reference)	Does a recreation center, community center, or boys’ or girls’ club exist in your community?	...	...	...	...	...
Median_Home_Val_q 1	Median home value by exchange (quartiles)	1	–0.1295	0.0361	–3.5883	0.0003
Median_Home_Val_q 2	Median home value by exchange (quartiles)	1	–0.0892	0.0281	–3.1723	0.0015
Median_Home_Val_q 3	Median home value by exchange (quartiles)	1	–0.0609	0.0194	–3.1371	0.0017
Median_Home_Val_q 4 (reference)	Median home value by exchange (quartiles)	...	...	...	...	...
C10Q14	What is the age of the oldest adult living in the household?	1	–0.0020	0.0006	–3.2122	0.0013

See footnotes at end of table.

Table XLVIII. Parameter estimates for linear regression model on transformed family income, sorted from largest partial R-squared to smallest—Con.

Parameter or level	Label	Degrees of freedom	Estimate	Standard error	t value	p value
S4Q01 0	[During the past 12 months / since [his / her] birth], did [s.c.] see a doctor, nurse, or other health care professional for any kind of medical care, including sick-child care, well-child check-ups, physical exams, and hospitalizations?	1	-0.0670	0.0348	-1.9256	0.0542
S4Q01 1 (reference)	[During the past 12 months/ since [his/her] birth], did [s.c.] see a doctor, nurse, or other health care professional for any kind of medical care, including sick-child care, well-child check-ups, physical exams, and hospitalizations?	...	...	...	...	...
White_p_q 1	Percentage of white by exchange (quartiles)	1	0.0630	0.0352	1.7904	0.0734
White_p_q 2	Percentage of white by exchange (quartiles)	1	0.0492	0.0283	1.7343	0.0829
White_p_q 3	Percentage of white by exchange (quartiles)	1	0.0254	0.0206	1.2348	0.2169
White_p_q 4 (reference)	Percentage of white by exchange (quartiles)	...	...	...	...	...
K10Q34 1	If my child were outside playing and got hurt or scared, there are adults nearby who I trust to help my child.	1	0.0271	0.0344	0.7871	0.4312
K10Q34 2	If my child were outside playing and got hurt or scared, there are adults nearby who I trust to help my child.	1	-0.0131	0.0340	-0.3843	0.7008
K10Q34 3	If my child were outside playing and got hurt or scared, there are adults nearby who I trust to help my child.	1	-0.0123	0.0396	-0.3108	0.7559
K10Q34 4 (reference)	If my child were outside playing and got hurt or scared, there are adults nearby who I trust to help my child.	...	...	...	...	...
K8Q32 1	During the past month, how often have you felt [he/she] does things that really bother you a lot?	1	0.0082	0.0525	0.1558	0.8762
K8Q32 2	During the past month, how often have you felt [he/she] does things that really bother you a lot?	1	0.0239	0.0521	0.4594	0.6460
K8Q32 3	During the past month, how often have you felt [he/she] does things that really bother you a lot?	1	-0.0229	0.0512	-0.4476	0.6545
K8Q32 4	During the past month, how often have you felt [he/she] does things that really bother you a lot?	1	-0.0513	0.0567	-0.9053	0.3653
K8Q32 5 (reference)	During the past month, how often have you felt [he/she] does things that really bother you a lot?	...	...	...	...	...
ACE9 0	Did [s.c.] ever live with anyone who had a problem with alcohol or drugs?	1	-0.0780	0.0202	-3.8655	0.0001
ACE9 1 (reference)	Did [s.c.] ever live with anyone who had a problem with alcohol or drugs?	...	...	...	...	...
Age_18_34_p_q 1	Percentage of people aged 18–34 by exchange (quartiles)	1	0.0241	0.0245	0.9853	0.3245
Age_18_34_p_q 2	Percentage of people aged 18–34 by exchange (quartiles)	1	0.0130	0.0202	0.6406	0.5218
Age_18_34_p_q 3	Percentage of people aged 18–34 by exchange (quartiles)	1	-0.0042	0.0171	-0.2422	0.8086
Age_18_34_p_q 4 (reference)	Percentage of people aged 18–34 by exchange (quartiles)	...	...	...	...	...
Owner_Occupied_p_q 1	Percentage of housing ownership by exchange (quartiles)	1	0.1261	0.1769	0.7129	0.4759
Owner_Occupied_p_q 2	Percentage of housing ownership by exchange (quartiles)	1	0.0642	0.1328	0.4832	0.6290
Owner_Occupied_p_q 3	Percentage of housing ownership by exchange (quartiles)	1	-0.0711	0.0873	-0.8148	0.4152
Owner_Occupied_p_q 4 (reference)	Percentage of housing ownership by exchange (quartiles)	...	...	...	...	...
Inc_25_50_p_q 1	Percentage of income \$25,000–\$50,000 by exchange (quartiles)	1	0.0963	0.0331	2.9051	0.0037
Inc_25_50_p_q 2	Percentage of income \$25,000–\$50,000 by exchange (quartiles)	1	0.0196	0.0229	0.8574	0.3912
Inc_25_50_p_q 3	Percentage of income \$25,000–\$50,000 by exchange (quartiles)	1	-0.0050	0.0181	-0.2763	0.7823
Inc_25_50_p_q 4 (reference)	Percentage of income \$25,000–\$50,000 by exchange (quartiles)	...	...	...	...	...

See footnotes at end of table.

Table XLVIII. Parameter estimates for linear regression model on transformed family income, sorted from largest partial R-squared to smallest—Con.

Parameter or level	Label	Degrees of freedom	Estimate	Standard error	t value	p value
K5Q44 1	[During the past 12 months / since [his/her] birth], how often did [s.c.]'s doctors or other health care providers help you feel like a partner in [his/her] care?	1	0.0506	0.0393	1.2890	0.1974
K5Q44 2	[During the past 12 months / since [his/her] birth], how often did [s.c.]'s doctors or other health care providers help you feel like a partner in [his/her] care?	1	0.0720	0.0266	2.7037	0.0069
K5Q44 3	[During the past 12 months / since [his/her] birth], how often did [s.c.]'s doctors or other health care providers help you feel like a partner in [his/her] care?	1	0.0281	0.0161	1.7436	0.0812
K5Q44 4 (reference)	[During the past 12 months / since [his/her] birth], how often did [s.c.]'s doctors or other health care providers help you feel like a partner in [his/her] care?	...	...	...	...	...
K5Q42 1	When [s.c.] is seen by doctors or other health care providers, how often are they sensitive to your family's values and customs?	1	-0.1375	0.0481	-2.8567	0.0043
K5Q42 2	When [s.c.] is seen by doctors or other health care providers, how often are they sensitive to your family's values and customs?	1	-0.0666	0.0276	-2.4153	0.0157
K5Q42 3	When [s.c.] is seen by doctors or other health care providers, how often are they sensitive to your family's values and customs?	1	-0.0146	0.0158	-0.9230	0.3560
K5Q42 4 (reference)	When [s.c.] is seen by doctors or other health care providers, how often are they sensitive to your family's values and customs?	...	...	...	...	...
C4Q04 1	[During the past 12 months / since [his/her] birth], how often have you been frustrated in your efforts to get services for [s.c.]?	1	-0.0245	0.0363	-0.6743	0.5001
C4Q04 2	[During the past 12 months / since [his/her] birth], how often have you been frustrated in your efforts to get services for [s.c.]?	1	-0.0571	0.0369	-1.5479	0.1216
C4Q04 3	[During the past 12 months / since [his/her] birth], how often have you been frustrated in your efforts to get services for [s.c.]?	1	0.0272	0.0488	0.5562	0.5781
C4Q04 4 (reference)	[During the past 12 months / since [his/her] birth], how often have you been frustrated in your efforts to get services for [s.c.]?	...	...	...	...	...
Inc_0_25_p_q 1	Percentage of income \$0–\$25,000 by exchange (quartiles)	1	0.0903	0.0447	2.0180	0.0436
Inc_0_25_p_q 2	Percentage of income \$0–\$25,000 by exchange (quartiles)	1	0.0840	0.0366	2.2946	0.0218
Inc_0_25_p_q 3	Percentage of income \$0–\$25,000 by exchange (quartiles)	1	0.0746	0.0276	2.7067	0.0068
Inc_0_25_p_q 4 (reference)	Percentage of income \$0–\$25,000 by exchange (quartiles)	...	...	...	...	...
K5Q10 0	[During the past 12 months / since [his/her] birth], did [s.c.] need a referral to see any doctors or receive any services?	1	0.0432	0.0154	2.8088	0.0050
K5Q10 1 (reference)	[During the past 12 months / since [his/her] birth], did [s.c.] need a referral to see any doctors or receive any services?	...	...	...	...	...
CSHCN 0	Child with special health care need	1	-0.0986	0.0226	-4.3659	0.0000
CSHCN 1 (reference)	Child with special health care need	...	...	...	...	...
K2Q10 0	Does [s.c.] currently need or use medicine prescribed by a doctor, other than vitamins?	1	0.0475	0.0190	2.4930	0.0127
K2Q10 1 (reference)	Does [s.c.] currently need or use medicine prescribed by a doctor, other than vitamins?	...	...	...	...	...
Total_HHn_q 1	Total number of exchange households (quartiles)	1	0.1460	0.0865	1.6875	0.0915
Total_HHn_q 2	Total number of exchange households (quartiles)	1	0.0695	0.0410	1.6944	0.0902
Total_HHn_q 3	Total number of exchange households (quartiles)	1	0.0306	0.0233	1.3147	0.1886
Total_HHn_q 4 (reference)	Total number of exchange households (quartiles)	...	...	...	...	...

See footnotes at end of table.

Table XLVIII. Parameter estimates for linear regression model on transformed family income, sorted from largest partial R-squared to smallest—Con.

Parameter or level	Label	Degrees of freedom	Estimate	Standard error	t value	p value
oldest	Age of the oldest child in the household	1	-0.0106	0.0029	-3.6276	0.0003
K4Q31 0	Has [s.c.] ever had [his/her] vision tested with pictures, shapes, or letters?	1	-0.0435	0.0131	-3.3186	0.0009
K4Q31 1 (reference)	Has [s.c.] ever had [his/her] vision tested with pictures, shapes, or letters?	...	...	...	...	...
K8Q31 1	During the past month, how often have you felt [s.c.] is much harder to care for than most children [his/her] age?	1	0.0619	0.0377	1.6421	0.1006
K8Q31 2	During the past month, how often have you felt [s.c.] is much harder to care for than most children [his/her] age?	1	0.0362	0.0387	0.9361	0.3492
K8Q31 3	During the past month, how often have you felt [s.c.] is much harder to care for than most children [his/her] age?	1	0.0456	0.0385	1.1827	0.2369
K8Q31 4	During the past month, how often have you felt [s.c.] is much harder to care for than most children [his/her] age?	1	0.0967	0.0461	2.0996	0.0358
K8Q31 5 (reference)	During the past month, how often have you felt [s.c.] is much harder to care for than most children [his/her] age?	...	...	...	...	...
K4Q27 0	[During the past 12 months / since [his/her] birth], was there any time when [s.c.] needed health care but it was delayed or not received?	1	0.0591	0.0245	2.4183	0.0156
K4Q27 1 (reference)	[During the past 12 months / since [his/her] birth], was there any time when [s.c.] needed health care but it was delayed or not received?	...	...	...	...	...
youngest	Age of youngest child in the household	1	0.0061	0.0029	2.1151	0.0344
Percent_Listed_q 1	Percentage in white pages by exchange (quartiles)	1	-0.0357	0.0245	-1.4577	0.1449
Percent_Listed_q 2	Percentage in white pages by exchange (quartiles)	1	-0.0083	0.0171	-0.4828	0.6292
Percent_Listed_q 3	Percentage in white pages by exchange (quartiles)	1	-0.0283	0.0139	-2.0414	0.0412
Percent_Listed_q 4 (reference)	Percentage in white pages by exchange (quartiles)	...	...	...	...	...
TRUEMSA3 1	True MSA status (3 categories)	1	0.1578	0.0338	4.6724	0.0000
TRUEMSA3 2	True MSA status (3 categories)	1	0.1487	0.0317	4.6948	0.0000
TRUEMSA3 ³	True MSA status (3 categories)	...	...	...	...	...
Msa 1	MSA Type (4 categories)	1	-0.1274	0.0345	-3.6893	0.0002
Msa 2	MSA Type (4 categories)	1	-0.1210	0.0334	-3.6218	0.0003
Msa 3	MSA Type (4 categories)	1	-0.1360	0.0347	-3.9181	0.0001
Msa 4 (reference)	MSA Type (4 categories)	...	...	...	...	...
K5Q41 1	[During the past 12 months / since [his/her] birth], how often did [s.c.]'s doctors and other health care providers listen carefully to you?	1	0.0396	0.0494	0.8010	0.4232
K5Q41 2	[During the past 12 months / since [his/her] birth], how often did [s.c.]'s doctors and other health care providers listen carefully to you?	1	0.0142	0.0280	0.5065	0.6125
K5Q41 3	[During the past 12 months / since [his/her] birth], how often did [s.c.]'s doctors and other health care providers listen carefully to you?	1	0.0360	0.0160	2.2454	0.0247
K5Q41 4 (reference)	[During the past 12 months / since [his/her] birth], how often did [s.c.]'s doctors and other health care providers listen carefully to you?	...	...	...	...	...
ACE8 0	Did [s.c.] ever live with anyone who was mentally ill or suicidal, or severely depressed for more than a couple of weeks?	1	0.0436	0.0197	2.2087	0.0272
ACE8 1 (reference)	Did [s.c.] ever live with anyone who was mentally ill or suicidal, or severely depressed for more than a couple of weeks?	...	...	...	...	...
HISPANIC 0	Derived. Indicates whether child is of Hispanic origin/ ethnicity (after back coding)	1	0.0483	0.0209	2.3155	0.0206

See footnotes at end of table.

Table XLVIII. Parameter estimates for linear regression model on transformed family income, sorted from largest partial R-squared to smallest—Con.

Parameter or level	Label	Degrees of freedom	Estimate	Standard error	t value	p value
HISPANIC 1 (reference)	Derived. Indicates whether child is of Hispanic origin/ ethnicity (after back coding)	...	...	...	...	...
K11Q33 0	And how about [s.c.]? (Born in the United States?)	1	-0.0836	0.0360	-2.3261	0.0200
K11Q33 1 (reference)	And how about [s.c.]? (Born in the United States?)	...	...	...	...	...
K3Q25 0	In the past 12 months did your family have problems paying or were unable to pay any of [s.c.]'s medical bills? Include bills for doctors, dentists, hospitals, therapists, medication, equipment, or home care.	1	0.0422	0.0191	2.2136	0.0269
K3Q25 1 (reference)	In the past 12 months did your family have problems paying or were unable to pay any of [s.c.]'s medical bills? Include bills for doctors, dentists, hospitals, therapists, medication, equipment, or home care.	...	...	...	...	...
K5Q43 1	[During the past 12 months / since [his/her] birth], how often did you get the specific information you needed from [s.c.]'s doctors and other health care providers?	1	0.0283	0.0326	0.8671	0.3859
K5Q43 2	[During the past 12 months / since [his/her] birth], how often did you get the specific information you needed from [s.c.]'s doctors and other health care providers?	1	0.0132	0.0231	0.5725	0.5670
K5Q43 3	[During the past 12 months / since [his/her] birth], how often did you get the specific information you needed from [s.c.]'s doctors and other health care providers?	1	0.0307	0.0147	2.0951	0.0362
K5Q43 4 (reference)	[During the past 12 months / since [his/her] birth], how often did you get the specific information you needed from [s.c.]'s doctors and other health care providers?	...	...	...	...	...
K2Q19 0	Does [s.c.] need or get special therapy, such as physical, occupational, or speech therapy?	1	0.0682	0.0254	2.6808	0.0073
K2Q19 1 (reference)	Does [s.c.] need or get special therapy, such as physical, occupational, or speech therapy?	...	...	...	...	...
K2Q45A 0	Has a doctor or other health care provider ever told you that [s.c.] had bone, joint, or muscle problems?	1	-0.0635	0.0294	-2.1559	0.0311
K2Q45A 1 (reference)	Has a doctor or other health care provider ever told you that [s.c.] had bone, joint, or muscle problems?	...	...	...	...	...
K2Q35A 0	Has a doctor or other health care provider ever told you that [s.c.] had autism, Asperger's disorder, pervasive developmental disorder, or other autism spectrum disorder?	1	-0.0787	0.0413	-1.9054	0.0567
K2Q35A 1 (reference)	Has a doctor or other health care provider ever told you that [s.c.] had autism, Asperger's disorder, pervasive developmental disorder, or other autism spectrum disorder?	...	...	...	...	...
K2Q31A 0	Has a doctor or other health care provider ever told you that [s.c.] had attention deficit disorder or attention deficit hyperactive disorder, that is, ADD or ADHD?	1	0.0471	0.0222	2.1204	0.0340
K2Q31A 1 (reference)	Has a doctor or other health care provider ever told you that [s.c.] had attention deficit disorder or attention deficit hyperactive disorder, that is, ADD or ADHD?	...	...	...	...	...
K10Q22 0	How about poorly kept or [dilapidated/ rundown] housing?	1	0.0299	0.0158	1.8881	0.0590
K10Q22 1 (reference)	How about poorly kept or [dilapidated/ rundown] housing?	...	...	...	...	...
K10Q32 1	There are people I can count on in this neighborhood.	1	0.0662	0.0361	1.8317	0.0670
K10Q32 2	There are people I can count on in this neighborhood.	1	0.0467	0.0348	1.3416	0.1797
K10Q32 3	There are people I can count on in this neighborhood.	1	0.0263	0.0384	0.6835	0.4943

See footnotes at end of table.

Table XLVIII. Parameter estimates for linear regression model on transformed family income, sorted from largest partial R-squared to smallest—Con.

Parameter or level	Label	Degrees of freedom	Estimate	Standard error	t value	p value
K10Q32 4 (reference)	There are people I can count on in this neighborhood.	...	...	...	...	...
Hispanic_p_q 1	Percentage of Hispanic by exchange (quartiles)	1	-0.0524	0.0293	-1.7888	0.0737
Hispanic_p_q 2	Percentage of Hispanic by exchange (quartiles)	1	-0.0436	0.0241	-1.8048	0.0711
Hispanic_p_q 3	Percentage of Hispanic by exchange (quartiles)	1	-0.0283	0.0199	-1.4232	0.1547
Hispanic_p_q 4 (reference)	Percentage of Hispanic by exchange (quartiles)	...	...	...	...	...
K10Q31 1	We watch out for each other's children in this neighborhood.	1	0.0074	0.0387	0.1922	0.8476
K10Q31 2	We watch out for each other's children in this neighborhood.	1	0.0296	0.0375	0.7904	0.4293
K10Q31 3	We watch out for each other's children in this neighborhood.	1	0.0132	0.0401	0.3291	0.7421
K10Q31 4 (reference)	We watch out for each other's children in this neighborhood.	...	...	...	...	...
Age_55_p_q 1	Percentage of people aged 55 and over by exchange (quartiles)	1	-0.0497	0.0311	-1.6016	0.1092
Age_55_p_q 2	Percentage of people aged 55 and over by exchange (quartiles)	1	-0.0304	0.0252	-1.2079	0.2271
Age_55_p_q 3	Percentage of people aged 55 and over by exchange (quartiles)	1	0.0033	0.0202	0.1617	0.8715
Age_55_p_q 4 (reference)	Percentage of people aged 55 and over by exchange (quartiles)	...	...	...	...	...
Age_0_17_p_q 1	Percentage of people aged 0-17 years by exchange (quartiles)	1	-0.0487	0.0260	-1.8740	0.0609
Age_0_17_p_q 2	Percentage of people aged 0-17 years by exchange (quartiles)	1	-0.0589	0.0210	-2.8036	0.0051
Age_0_17_p_q 3	Percentage of people aged 0-17 years by exchange (quartiles)	1	-0.0356	0.0172	-2.0722	0.0383
Age_0_17_p_q 4 (reference)	Percentage of people aged 0-17 years by exchange (quartiles)	...	...	...	...	...
Household_Density_q 1	Household density by exchange (quartiles)	1	0.0427	0.0251	1.7023	0.0887
Household_Density_q 2	Household density by exchange (quartiles)	1	0.0376	0.0213	1.7648	0.0776
Household_Density_q 3	Household density by exchange (quartiles)	1	0.0271	0.0176	1.5344	0.1249
Household_Density_q 4 (reference)	Household density by exchange (quartiles)	...	...	...	...	...
Rent_Other_p_q 1	Percentage of nonowners by exchange (quartiles)	1	0.0736	0.1770	0.4158	0.6776
Rent_Other_p_q 2	Percentage of nonowners by exchange (quartiles)	1	0.1671	0.1540	1.0850	0.2779
Rent_Other_p_q 3	Percentage of nonowners by exchange (quartiles)	1	0.0704	0.1169	0.6022	0.5471
Rent_Other_p_q 4 (reference)	Percentage of nonowners by exchange (quartiles)	...	...	...	...	...
K2Q03	How much does [s.c.] weigh now?	1	0.0003	0.0002	1.4748	0.1403
Annual_wt.	Annual sample weight for each case	1	-0.0001	-	-1.5382	0.1240
K2Q36A 0	Has a doctor or other health care provider ever told you that [s.c.] had any developmental delay that affects [his/her] ability to learn?	1	-0.0408	0.0296	-1.3787	0.1680
K2Q36A 1 (reference)	Has a doctor or other health care provider ever told you that [s.c.] had any developmental delay that affects [his/her] ability to learn?	...	...	...	...	...
K2Q40A 0	Has a doctor or other health care provider ever told you that [s.c.] had asthma?	1	0.0235	0.0164	1.4347	0.1514
K2Q40A 1 (reference)	Has a doctor or other health care provider ever told you that [s.c.] had asthma?	...	...	...	...	...
K10Q12 0	Does a park or playground area exist in your neighborhood?	1	-0.0158	0.0160	-0.9858	0.3243
K10Q12 1 (reference)	Does a park or playground area exist in your neighborhood?	...	...	...	...	...
SEX 1	Derived. Sex of selected child	1	0.0127	0.0104	1.2221	0.2217
SEX 2 (reference)	Derived. Sex of selected child	...	...	...	...	...
K4Q01 0	Is there a place that [s.c.] usually goes when [he/she] is sick or you need advice about [his/her] health?	1	0.0519	0.0624	0.8321	0.4054
K4Q01 1	Is there a place that [s.c.] usually goes when [he/she] is sick or you need advice about [his/her] health?	1	0.0393	0.0318	1.2360	0.2165

See footnotes at end of table.

Table XLVIII. Parameter estimates for linear regression model on transformed family income, sorted from largest partial R-squared to smallest—Con.

Parameter or level	Label	Degrees of freedom	Estimate	Standard error	t value	p value
K4Q01 2 (reference)	Is there a place that [s.c.] usually goes when [he/she] is sick or you need advice about [his/her] health?	...	...	...	...	...
Listed_HHn_q 1	Households in white pages by exchange (quartiles)	1	-0.0404	0.0575	-0.7028	0.4822
Listed_HHn_q 2	Households in white pages by exchange (quartiles)	1	-0.0131	0.0306	-0.4290	0.6679
Listed_HHn_q 3	Households in white pages by exchange (quartiles)	1	-0.0173	0.0185	-0.9354	0.3496
Listed_HHn_q 4 (reference)	Households in white pages by exchange (quartiles)	...	...	...	...	...
ACE7 0	Was [s.c.] ever the victim of violence or witnessed any violence in [his/her] neighborhood?	1	0.0222	0.0221	1.0072	0.3138
ACE7 1 (reference)	Was [s.c.] ever the victim of violence or witnessed any violence in [his/her] neighborhood?	...	...	...	...	...
Median_Years_Educ_q 1	Median years of education by exchange (quartiles)	1	0.0072	0.0389	0.1859	0.8526
Median_Years_Educ_q 2	Median years of education by exchange (quartiles)	1	-0.0049	0.0317	-0.1559	0.8761
Median_Years_Educ_q 3	Median years of education by exchange (quartiles)	1	-0.0141	0.0241	-0.5849	0.5586
Median_Years_Educ_q 4 (reference)	Median years of education by exchange (quartiles)	...	...	...	...	...
K3Q01 0	Does [s.c.] have any kind of health care coverage, including health insurance, prepaid plans such as HMOs, or government plans such as Medicaid?	1	0.0279	0.0294	0.9491	0.3426
K3Q01 1 (reference)	Does [s.c.] have any kind of health care coverage, including health insurance, prepaid plans such as HMOs, or government plans such as Medicaid?	...	...	...	...	...
K8Q12	About how often does [s.c.] attend a religious service? (frequency)	1	0.0012	0.0014	0.9083	0.3637
Asian_Pacif_p_q 1	Percentage of Asian or Pacific Islander by exchange (quartiles)	1	-0.0193	0.0287	-0.6714	0.5020
Asian_Pacif_p_q 2	Percentage of Asian or Pacific Islander by exchange (quartiles)	1	-0.0152	0.0227	-0.6700	0.5029
Asian_Pacif_p_q 3	Percentage of Asian or Pacific Islander by exchange (quartiles)	1	-0.0032	0.0176	-0.1807	0.8566
Asian_Pacif_p_q 4 (reference)	Percentage of Asian or Pacific Islander by exchange (quartiles)	...	...	...	...	...
K2Q46A 0	Has a doctor or other health care provider ever told you that [s.c.] had a brain injury or concussion?	1	-0.0255	0.0296	-0.8620	0.3887
K2Q46A 1 (reference)	Has a doctor or other health care provider ever told you that [s.c.] had a brain injury or concussion?	...	...	...	...	...
K2Q22 0	Does [s.c.] have any kind of emotional, developmental, or behavioral problem for which [he/she] needs treatment or counseling?	1	0.0263	0.0286	0.9213	0.3569
K2Q22 1 (reference)	Does [s.c.] have any kind of emotional, developmental, or behavioral problem for which [he/she] needs treatment or counseling?	...	...	...	...	...
K2Q13 0	Does [s.c.] need or use more medical care, mental health, or educational services than is usual for most children of the same age?	1	-0.0211	0.0216	-0.9782	0.3280
K2Q13 1 (reference)	Does [s.c.] need or use more medical care, mental health, or educational services than is usual for most children of the same age?	...	...	...	...	...
K10Q11 0	Do sidewalks or walking paths exist in your neighborhood?	1	-0.0120	0.0138	-0.869	0.3848
K10Q11 1 (reference)	Do sidewalks or walking paths exist in your neighborhood?	...	...	...	...	...
Total_Population_q 1	Total population by exchange (quartiles)	1	-0.0519	0.0827	-0.6268	0.5308
Total_Population_q 2	Total population by exchange (quartiles)	1	-0.0213	0.0394	-0.5423	0.5876
Total_Population_q 3	Total population by exchange (quartiles)	1	-0.0027	0.0229	-0.1184	0.9058
Total_Population_q 4 (reference)	Total population by exchange (quartiles)	...	...	...	...	...

See footnotes at end of table.

Table XLVIII. Parameter estimates for linear regression model on transformed family income, sorted from largest partial R-squared to smallest—Con.

Parameter or level	Label	Degrees of freedom	Estimate	Standard error	t value	p value
K10Q14 0	Does a library or bookmobile exist in your community?	1	0.0123	0.0191	0.6442	0.5194
K10Q14 1 (reference)	Does a library or bookmobile exist in your community?	...	...	...	...	...
K2Q33A 0	Has a doctor or other health care provider ever told you that [s.c.] had anxiety problems?	1	-0.0193	0.0281	-0.6858	0.4929
K2Q33A 1 (reference)	Has a doctor or other health care provider ever told you that [s.c.] had anxiety problems?	...	...	...	...	...
K2Q43A 0	Has a doctor or other health care provider ever told you that [s.c.] had hearing problems?	1	0.0165	0.0289	0.5710	0.5680
K2Q43A 1 (reference)	Has a doctor or other health care provider ever told you that [s.c.] had hearing problems?	...	...	...	...	...
K10Q23 0	How about vandalism such as broken windows or graffiti?	1	0.0102	0.0197	0.5178	0.6046
K10Q23 1 (reference)	How about vandalism such as broken windows or graffiti?	...	...	...	...	...
AGEYR_CHILD	Selected child's age in years at interview	1	-0.0016	0.0033	-0.4746	0.6351
INC_YR 2010	Income reference year	1	0.0060	0.0138	0.4327	0.6652
INC_YR 2011 (reference)	Income reference year	...	...	...	...	...
K2Q05 0	Was [s.c.] born prematurely, that is, more than 3 weeks before [his/her] due date?	1	-0.0064	0.0162	-0.3963	0.6919
K2Q05 1 (reference)	Was [s.c.] born prematurely, that is, more than 3 weeks before [his/her] due date?	...	...	...	...	...
K2Q34A 0	Has a doctor or other health care provider ever told you that [s.c.] had behavioral or conduct problems, such as oppositional defiant disorder or conduct disorder?	1	0.0118	0.0348	0.3401	0.7338
K2Q34A 1 (reference)	Has a doctor or other health care provider ever told you that [s.c.] had behavioral or conduct problems, such as oppositional defiant disorder or conduct disorder?	...	...	...	...	...
K2Q37A 0	Has a doctor or other health care provider ever told you that [s.c.] had stuttering, stammering, or other speech problems?	1	0.0073	0.0237	0.3086	0.7576
K2Q37A 1 (reference)	Has a doctor or other health care provider ever told you that [s.c.] had stuttering, stammering, or other speech problems?	...	...	...	...	...
K5Q31 0	Do [s.c.]'s doctors or other health care providers need to communicate with [his/her] [child care providers, early intervention program, school, special education program, vocational education program]?	1	0.0048	0.0173	0.2770	0.7818
K5Q31 1 (reference)	Do [s.c.]'s doctors or other health care providers need to communicate with [his/her] [child care providers, early intervention program, school, special education program, vocational education program]?	...	...	...	...	...
K2Q32A 0	Has a doctor or other health care provider ever told you that [s.c.] had depression?	1	0.0039	0.0343	0.1123	0.9106
K2Q32A 1 (reference)	Has a doctor or other health care provider ever told you that [s.c.] had depression?	...	...	...	...	...
K4Q22 0	During the past 12 months, has [s.c.] received any treatment or counseling from a mental health professional?	1	0.0018	0.0378	0.0472	0.9624
K4Q22 1 (reference)	During the past 12 months, has [s.c.] received any treatment or counseling from a mental health professional?	...	...	...	...	...
ACE6 0	Did [s.c.] ever see or hear any parents or adults in [his/her] home slap, hit, kick, punch, or beat each other up?	1	-0.0009	0.0253	-0.0372	0.9703
ACE6 1 (reference)	Did [s.c.] ever see or hear any parents or adults in [his/her] home slap, hit, kick, punch, or beat each other up?	...	...	...	...	...
NUMB_SERVICES	Number of services required	1	0.0008	0.0288	0.0273	0.9782

... Category not applicable.
 *0.0000 quantity more than zero but less than 0.00005.
 NOTE: s.c. is selected child.

Use of Multiply Imputed Values

The derived poverty level variable available for public use was calculated from household income and household size. When either or both were missing, the derived poverty level was calculated from the imputed values. A flag (POVLEVEL_F) indicates whether the derived poverty level was based on reported or imputed values.

When missing, household income and household size were imputed five times. Therefore, the resulting data set contains five times as many observations as in the original data set. For the 2011–2012 NSCH, the data sets have $5(95,677) = 478,385$ records. Each complete set of derived poverty-level values is distinguished by the SAS variable IMPUTATION. Therefore, each IDNUMR appears five times in the file, with IMPUTATION having values of 1, 2, 3, 4, and 5 corresponding to the five separate complete sets of derived poverty-level values.

The public-use data files for NSCH do not include household income, to protect against inadvertent disclosure of survey subjects' identities. Only poverty level is reported on the public-use data files. Similarly, imputed household income is not released as public-use data. Researchers interested in accessing the original and imputed household income data may access the data through the National Center for Health Statistics' Research Data Center (visit <https://www.cdc.gov/rdc>).

Three possible ways to analyze the data are described below; one invalid way that researchers should not attempt is also described.

Considering valid methods, a complete-case (only) analysis is the simplest, using only those cases with observed values. This can be done by using the poverty-level variable (POVERTY_LEVELR) in the NSCH data file. Any analysis using this variable could be biased due to nonresponse, and the variability will likely be larger due to smaller sample size.

The second possible way of analyzing the data is to use only a single

imputation from the multiple imputation files. Each of the five imputations has been drawn from a valid distribution based on a regression model, but this model and the distribution are slightly different for each imputation. To analyze only one imputation, choose only the subset of cases with IMPUTATION = c , where c is 1, 2, 3, 4, or 5. Single imputation analyses result in estimated standard errors that tend to be too small, because the imputed values are treated as if they were observed. This ignores the inherent uncertainty resulting from lack of knowledge about the true (unobserved) value, but it is superior to the complete-case analysis. Note that slightly different results will be obtained depending on which subset of cases is chosen, but no subset is superior to another.

The most statistically valid way to analyze the data is to analyze all five imputed data sets together. To do this, five separate analyses are conducted—one on each of the five imputed data sets. These analyses are then combined, following the standard multiple-imputation combining rules (28). This is superior to the previous two methods.

An invalid way to analyze the data is to combine the five imputed values into one analysis. For example, taking the average poverty level (which might not be an integer) to derive one "average" poverty status value per case is invalid. Poverty status should be analyzed as a multiply imputed variable with SAS, SUDAAN, IVEware, or another appropriate statistical software package to make use of the multiply imputed data.

Regardless of the statistical software used to analyze the data, analysts must merge the survey data from the public-use analysis files with the data from the multiple imputation file by the unique household identifier (IDNUMR). To combine these files, analysts must first sort both files by IDNUMR and then merge them, using this identifier as the merge variable.

For SAS analyses, it is also very important to have the data set sorted by IMPUTATION, because analyses of the multiply imputed data need to be done separately by IMPUTATION. Separate analyses are specified in SAS

by using the procedure option keyword BY ("BY IMPUTATION;" should be one line within the analysis). In SAS, the two basic steps to using the multiply imputed data are to 1) analyze the data separately by IMPUTATION as if each were a separate data set, and 2) combine the results from the different imputed data sets using PROC MIANALYZE. In the first step, separate analyses are done with options set to keep the covariances that are needed to combine the analyses. Then, PROC MIANALYZE combines the different analyses using the standard multiple-imputation combining rules.

For SUDAAN analyses, a separate analytical file is necessary for each of the five imputations. The five data sets should then be sorted by the stratum variables (STATE and SAMPLE) and the primary sampling unit (IDNUMR) variable (see "Estimation and Hypothesis Testing" section of main report). To analyze the data using the five imputation files, the MI_COUNT command should be added to the SUDAAN procedure call. The MI_COUNT command tells SUDAAN how many imputation files to expect (MI_COUNT = 5).

Appendix XV. Key Prevalence Estimates and Weighted Frequencies

This appendix consists of [Table XLIX](#), which shows weighted frequencies of the number of children with excellent or very good health by state. Prevalence estimates and standard errors are also provided. Analysts may wish to replicate this table to determine if they are using the weights correctly.

Table XLIX. Unweighted and weighted estimates of frequency and prevalence of children with excellent or very good health, as assessed by National Survey of Children's Health respondent

Area	Total children		Children with excellent or very good health				
	Unweighted number	Weighted estimate	Unweighted number	Weighted estimate	Standard error of weighted estimate	Percentage ¹	Standard error of percentage
Total (excluding U.S. Virgin Islands)	95,677	73,716,714	83,985	62,014,809	370,442	84.13	0.30
Alabama	1,820	1,121,493	1,572	954,999	23,699	85.15	1.23
Alaska	1,846	187,218	1,653	165,753	4,462	88.53	1.14
Arizona	1,845	1,620,552	1,555	1,297,338	35,446	80.06	1.46
Arkansas	1,849	709,031	1,557	579,654	15,632	81.75	1.42
California	1,903	9,248,443	1,549	7,179,542	222,937	77.63	1.51
Colorado	1,820	1,224,557	1,623	1,065,436	29,629	87.01	1.22
Connecticut	1,888	801,603	1,670	687,642	14,450	85.78	1.14
Delaware	1,824	204,471	1,602	171,920	4,898	84.08	1.34
District of Columbia	1,861	104,927	1,603	85,391	3,159	81.38	1.68
Florida	1,855	3,984,726	1,609	3,328,052	90,121	83.52	1.33
Georgia	1,848	2,484,940	1,620	2,116,791	55,891	85.18	1.20
Hawaii	1,881	304,085	1,644	261,333	6,000	85.94	1.12
Idaho	1,857	427,810	1,635	375,691	10,099	87.82	1.18
Illinois	2,071	3,088,140	1,782	2,594,254	64,610	84.01	1.23
Indiana	1,829	1,591,416	1,588	1,336,131	34,935	83.96	1.32
Iowa	1,847	720,096	1,659	636,689	14,064	88.42	1.06
Kansas	1,836	720,400	1,621	624,437	14,535	86.68	1.18
Kentucky	1,864	1,019,825	1,620	871,888	21,253	85.49	1.19
Louisiana	1,846	1,116,814	1,580	954,553	25,931	85.47	1.23
Maine	1,823	268,807	1,635	238,752	5,380	88.82	1.01
Maryland	2,181	1,343,898	1,941	1,160,287	34,421	86.34	1.23
Massachusetts	1,861	1,399,869	1,691	1,239,090	27,183	88.51	1.10
Michigan	1,833	2,284,102	1,632	2,012,250	51,151	88.1	1.12
Minnesota	1,830	1,277,521	1,646	1,118,907	27,998	87.58	1.19
Mississippi	1,883	749,413	1,618	632,531	17,740	84.40	1.33
Missouri	1,859	1,406,516	1,667	1,262,287	27,926	89.75	0.95
Montana	1,824	220,046	1,660	197,292	4,560	89.66	1.04
Nebraska	1,818	457,759	1,616	399,322	8,960	87.23	1.11
Nevada	1,901	661,419	1,588	522,315	16,145	78.97	1.52
New Hampshire	1,934	280,057	1,780	254,807	5,651	90.98	1.00
New Jersey	1,858	2,036,617	1,605	1,705,082	43,389	83.72	1.28
New Mexico	1,847	517,036	1,567	421,029	12,588	81.43	1.48
New York	1,989	4,266,861	1,733	3,547,871	80,350	83.15	1.25
North Carolina	1,852	2,287,997	1,617	1,937,842	54,301	84.70	1.37
North Dakota	1,835	150,969	1,684	137,914	3,553	91.35	0.95
Ohio	1,916	2,682,054	1,712	2,327,596	61,241	86.78	1.21
Oklahoma	1,886	932,265	1,592	786,661	19,903	84.38	1.21
Oregon	1,846	859,845	1,620	715,649	16,630	83.23	1.32
Pennsylvania	1,886	2,752,138	1,686	2,400,525	73,298	87.22	1.28
Rhode Island	1,889	218,241	1,675	189,346	4,737	86.76	1.14
South Carolina	1,930	1,078,316	1,653	927,052	24,438	85.97	1.14
South Dakota	1,811	201,731	1,647	185,027	3,990	91.72	0.84
Tennessee	1,862	1,486,878	1,619	1,249,445	32,924	84.03	1.33
Texas	2,200	6,946,024	1,831	5,697,388	177,883	82.02	1.41
Utah	1,823	878,099	1,633	763,361	17,202	86.93	1.17
Vermont	1,856	126,393	1,701	114,033	2,470	90.22	0.97
Virginia	1,909	1,849,178	1,747	1,643,230	46,173	88.86	1.18
Washington	1,843	1,575,209	1,607	1,329,923	36,289	84.43	1.31
West Virginia	1,827	384,491	1,579	331,763	7,420	86.29	1.07
Wisconsin	1,838	1,322,180	1,644	1,161,993	27,219	87.88	1.08
Wyoming	1,837	134,238	1,617	116,747	2,718	86.97	1.09

¹Denominator includes children for whom health status was not reported because the respondent did not know or refused to answer the health status question.

Vital and Health Statistics Series Descriptions

Active Series

- Series 1. Programs and Collection Procedures**
Reports describe the programs and data systems of the National Center for Health Statistics, and the data collection and survey methods used. Series 1 reports also include definitions, survey design, estimation, and other material necessary for understanding and analyzing the data.
- Series 2. Data Evaluation and Methods Research**
Reports present new statistical methodology including experimental tests of new survey methods, studies of vital and health statistics collection methods, new analytical techniques, objective evaluations of reliability of collected data, and contributions to statistical theory. Reports also include comparison of U.S. methodology with those of other countries.
- Series 3. Analytical and Epidemiological Studies**
Reports present data analyses, epidemiological studies, and descriptive statistics based on national surveys and data systems. As of 2015, Series 3 includes reports that would have previously been published in Series 5, 10–15, and 20–23.

Discontinued Series

- Series 4. Documents and Committee Reports**
Reports contain findings of major committees concerned with vital and health statistics and documents. The last Series 4 report was published in 2002; these are now included in Series 2 or another appropriate series.
- Series 5. International Vital and Health Statistics Reports**
Reports present analytical and descriptive comparisons of U.S. vital and health statistics with those of other countries. The last Series 5 report was published in 2003; these are now included in Series 3 or another appropriate series.
- Series 6. Cognition and Survey Measurement**
Reports use methods of cognitive science to design, evaluate, and test survey instruments. The last Series 6 report was published in 1999; these are now included in Series 2.
- Series 10. Data From the National Health Interview Survey**
Reports present statistics on illness; accidental injuries; disability; use of hospital, medical, dental, and other services; and other health-related topics. As of 2015, these are included in Series 3.
- Series 11. Data From the National Health Examination Survey, the National Health and Nutrition Examination Surveys, and the Hispanic Health and Nutrition Examination Survey**
Reports present 1) estimates of the medically defined prevalence of specific diseases in the United States and the distribution of the population with respect to physical, physiological, and psychological characteristics and 2) analysis of relationships among the various measurements. As of 2015, these are included in Series 3.
- Series 12. Data From the Institutionalized Population Surveys**
The last Series 12 report was published in 1974; these reports were included in Series 13, and as of 2015 are in Series 3.
- Series 13. Data From the National Health Care Survey**
Reports present statistics on health resources and use of health care resources based on data collected from health care providers and provider records. As of 2015, these reports are included in Series 3.

- Series 14. Data on Health Resources: Manpower and Facilities**
The last Series 14 report was published in 1989; these reports were included in Series 13, and are now included in Series 3.
- Series 15. Data From Special Surveys**
Reports contain statistics on health and health-related topics from surveys that are not a part of the continuing data systems of the National Center for Health Statistics. The last Series 15 report was published in 2002; these reports are now included in Series 3.
- Series 16. Compilations of Advance Data From Vital and Health Statistics**
The last Series 16 report was published in 1996. All reports are available online; compilations are no longer needed.
- Series 20. Data on Mortality**
Reports include analyses by cause of death and demographic variables, and geographic and trend analyses. The last Series 20 report was published in 2007; these reports are now included in Series 3.
- Series 21. Data on Natality, Marriage, and Divorce**
Reports include analyses by health and demographic variables, and geographic and trend analyses. The last Series 21 report was published in 2006; these reports are now included in Series 3.
- Series 22. Data From the National Mortality and Natality Surveys**
The last Series 22 report was published in 1973. Reports from sample surveys of vital records were included in Series 20 or 21, and are now included in Series 3.
- Series 23. Data From the National Survey of Family Growth**
Reports contain statistics on factors that affect birth rates, factors affecting the formation and dissolution of families, and behavior related to the risk of HIV and other sexually transmitted diseases. The last Series 23 report was published in 2011; these reports are now included in Series 3.
- Series 24. Compilations of Data on Natality, Mortality, Marriage, and Divorce**
The last Series 24 report was published in 1996. All reports are available online; compilations are no longer needed.

For answers to questions about this report or for a list of reports published in these series, contact:

Information Dissemination Staff
National Center for Health Statistics
Centers for Disease Control and Prevention
3311 Toledo Road, Room 5419, MS P08
Hyattsville, MD 20782

Tel: 1-800-CDC-INFO (1-800-232-4636)
TTY: 1-888-232-6348

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National Center for Health Statistics
3311 Toledo Road, Room 4551, MS P08
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