

Vital and Health Statistics

Series 1, Number 40

Design and Operation of the National Survey of Early Childhood Health, 2000

Program and Collection Procedures



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

Hyattsville, Maryland
June 2002
DHHS Publication No. (PHS) 2002-1316

Copyright information

All material appearing in this report is in the public domain and may be reproduced or copied without permission; citation as to source, however, is appreciated.

Suggested citation

Blumberg SJ, Olson L, Osborn L, et al. Design and operation of the National Survey of Early Childhood Health, 2000. National Center for Health Statistics. Vital Health Stat 1(40). 2002

Library of Congress-in-Publication Data

Design and operation of the national survey of early childhood health, 2000
p. cm.— (Vital and health statistics. Ser. 1, Programs and collection
procedures ; no. 040) (DHHS publication; no. (PHS) 2002-1316)

ISBN 0-8406-0580-3

1. Children—Health and hygiene—United States—Statistics. 2. Child health
services—United States—Statistics. 3. Medical care surveys—United States.

I. National Center for Health Statistics (U.S.) II. Series. III. Series: DHHS
publication ; no. (PHS) 2002-1316

RA407.3 .D45 2002

613'.0432'0973021—dc21

2002023513

For sale by the U.S. Government Printing Office
Superintendent of Documents
Mail Stop: SSOP
Washington, DC 20402-9328
Printed on acid-free paper.

Acknowledgments

The National Survey of Early Childhood Health (NSECH) was sponsored by the American Academy of Pediatrics and was made possible with funding from The Gerber Foundation. Additional funding was provided by the Maternal and Child Health Bureau of the Health Resources and Services Administration and by the American Academy of Pediatrics Friends of Children Fund. The principal investigator is Lynn Olson, Ph.D.

The survey was conducted by the National Center for Health Statistics (NCHS) of the Centers for Disease Control and Prevention (CDC). The project director is Marcie Cynamon.

The University of California, Los Angeles (UCLA), Center for Healthier Children, Families, and Communities, and the National Center for Infancy and Early Childhood Health Policy at UCLA contributed to the design of the questionnaire and the study. The principal investigator is Neal Halfon, M.D., M.P.H. Additional design assistance was provided by the American Academy of Pediatrics, NCHS, and the Foundation for Accountability. The National Immunization Program of CDC graciously permitted the use of the National Immunization Survey sampling frame for this survey.

National Center for Health Statistics

Edward J. Sondik, Ph.D., *Director*

Jack R. Anderson, *Deputy Director*

Jack R. Anderson, *Acting Associate Director for International Statistics*

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

Lawrence H. Cox, Ph.D., *Associate Director for Research and Methodology*

Jennifer H. Madans, Ph.D., *Acting Associate Director for Analysis, Epidemiology, and Health Promotion*

Edward L. Hunter, *Associate Director for Planning, Budget, and Legislation*

Jennifer H. Madans, Ph.D., *Acting Associate Director for Vital and Health Statistics Systems*

Douglas L. Zinn, *Acting Associate Director for Management*

Charles J. Rothwell, *Associate Director for Information Technology and Services*

Division of Health Interview Statistics

Jane F. Gentleman, Ph.D., *Director*

Anne K. Stratton, M.S., *Associate Director for Planning and Production*

Eve Powell-Griner, Ph.D., *Associate Director for Science*

Susan S. Jack, M.S., *Special Assistant for Data Quality and User Services*

Eve Powell-Griner, Ph.D., *Acting Chief, Illness and Disability Statistics Branch*

Howard Riddick, Ph.D., *Chief, Survey Planning and Development Branch*

Robert A. Hill, *Chief, Systems and Programming Branch*

Robert A. Wright, *Chief, Utilization and Expenditure Statistics Branch*

American Academy
of Pediatrics



DEDICATED TO THE HEALTH OF ALL CHILDREN™



Contents

Abstract	1
Introduction	1
The National Immunization Survey	1
The State and Local Area Integrated Telephone Survey	1
Key Features of the National Survey of Early Childhood Health	2
Background	2
Sample Design	3
Sample Selection	3
Drawing the National Immunization Survey Sample	3
The National Survey of Early Childhood Health Sample Allocation	3
Questionnaire	4
Computer-Assisted Telephone Interviewing Programming	5
Spanish Version	6
Pretest of Survey Instrument	6
Survey Operations	6
Interviewer Training	6
Advance Letter	6
Informed Consent	6
Assurance of Confidentiality	7
Interview Length	7
Other Languages	7
Toll-Free Telephone Number	7
Cases Pending at the Close of Data Collection	8
Break-offs and Refusals	8
Response Rates	8
Efforts to Maximize Response Rates	9
Data Files	9
Editing	9
Imputation	10
Edits to Protect Confidentiality	10
Additional Edits	11
Dummy Variables	11
Estimation Procedures	11
Base Sampling Weight	11
Households with Multiple Telephone Lines	12
The First Form of Nonresponse: Unknown Household Status	12
Separation of the Telephone Lines Into the Main Sample and the Oversample	12
The Second Form of Nonresponse: Unknown Household Eligibility	13
Adjustment for Subsampling in the Oversample	13
The Third Form of Nonresponse: Eligible Households Who Do Not Complete the Interview	13
The Child-Level Weight	14

Poststratification	14
Interpretation of Weighted Estimates	15
Variance Estimation and Hypothesis Testing	15
Variance Estimation Using SUDAAN	15
Variance Estimation Using STATA.....	15
Quality Control	15
Quality Control of Interviewing	15
Sample Monitoring and Quality Control	16
Data Quality Control.....	16
Estimation Quality Control.....	16
Guidelines for Data Use	16
References	16

Appendix I

Sampling and Sampling Weights Technical Summary	18
Sampling Design	18
Drawing the National Immunization Survey Sample	18
National Survey of Early Childhood Health Sample Allocation.....	19
Sample Selection	20
Sample Weights	21
Base Sampling Weight	21
Multiple-Telephone Households	21
Unit Nonresponse Adjustment 1 (Residential Status Unknown)	21
Unit Nonresponse Adjustment 2 (Households of Unknown Eligibility).....	21
Subsampling Adjustment.....	22
An Example of Subsampling Adjustment	23
Unit Nonresponse Adjustment 3 (Nonresponse by Eligible Households).....	23
Adjustment of Household Weights to Known Control Totals	23
Child Weights	23
Adjustment for Noncoverage of Nontelephone Households	23
Poststratification	24

Appendix II

Related Survey Content and Sources of Questions	26
---	----

Appendix III

Computer-Assisted Telephone Interviewing Specifications.....	35
--	----

Appendix IV

Advance Letter	91
----------------------	----

Appendix V

Disposition Code Frequencies and Response Rate Calculations	92
---	----

Abstract

Objectives

This report presents the development, plan, and operation of the National Survey of Early Childhood Health, a module of the State and Local Area Integrated Telephone Survey, conducted by the National Center for Health Statistics, Centers for Disease Control and Prevention. This survey was designed to assess parents' perceptions of their children's pediatric care. In addition, data were collected that can be used to examine relationships between the promotion of health in the pediatric office and promotion of health in the home. Funding for the survey was provided by The Gerber Foundation, the American Academy of Pediatrics, and the Maternal and Child Health Bureau, Health Resources and Services Administration. The UCLA Center for Healthier Children, Families, and Communities contributed to the design of the study and the questionnaire.

Methods

A national random-digit-dialed (RDD) sample of households with children 4–35 months of age was selected. The study included an oversample of households having an eligible black non-Hispanic or Hispanic child. In households with more than one eligible child, one was randomly selected to be the subject of the interview. The respondent was the parent or guardian who was most responsible for the child's health care. A computer-assisted telephone interviewing (CATI) system was used to collect the data.

Results

A total of 2,068 interviews were completed during the first half of 2000. The response rate was 65.6%. A data file has been released that contains demographic information on the focal child and respondent, substantive health and health-related data, and sampling weights. Estimates based on the sampling weights generalize to the entire U.S. population of children 4–35 months of age.

Design and Operation of the National Survey of Early Childhood Health, 2000

Stephen J. Blumberg, Ph.D., Centers for Disease Control and Prevention and Lorayn Olson, Ph.D.; Larry Osborn, M.P.H.; K. P. Srinath, Ph.D.; and Holly Harrison, M.A., Abt Associates Inc.

Introduction

The National Survey of Early Childhood Health (NSECH) detailed in this report was designed to collect data regarding parents' perceptions of their children's pediatric care, and to examine relationships between the promotion of health in the pediatric office and promotion of health in the home. This survey was conducted as a module of the State and Local Area Integrated Telephone Survey (SLAITS), which uses the same sampling frame as the Centers for Disease Control and Prevention's (CDC) National Immunization Survey (NIS).

The National Immunization Survey

Though State laws requiring children to be vaccinated before entering school were thought to result in high vaccination rates in the school-age population, as of the early 1990s preschool children in the United States were not adequately vaccinated against preventable diseases. This shortfall became evident according to a variety of different measures. To address the problem, grants were awarded to 78

Keywords: National Survey of Early Childhood Health • State and Local Area Integrated Telephone Survey • pediatric care • health provider contacts • quality of care • child development

States and local areas called Immunization Action Plan (IAP) areas, which encompassed the entire United States. These grants were targeted toward improving vaccination levels of children by age 2. The National Immunization Program at CDC manages these grants. NIS was established to monitor the use of these grant funds and to monitor the vaccination levels of very young children within the IAP areas and across the United States. (1)

With respect to data collection, the NIS presents an extraordinary challenge. The survey must screen an extremely large number of households to find its relatively rare target population of households with children between 19–35 months of age. Each year, nearly 1 million households are screened by telephone to obtain 34,000 completed household interviews. Fortunately, the large initial sample of telephone numbers in the NIS provides a cost-effective opportunity to survey other populations in addition to the rare population that eventually screens into the NIS.

The State and Local Area Integrated Telephone Survey

The survey mechanism that uses the NIS sample frame for collecting data about these other populations is known as SLAITS. The SLAITS program, sponsored by the National Center for Health Statistics (NCHS), CDC, is a broad-based, ongoing surveillance system available at State and local

levels for tracking and monitoring the health and well-being of children and adults. It began in 1997 with a pilot test in two States—Iowa and Washington—with a series of questions on health, including issues of access to care, health status, and insurance. In 1998, a SLAITS module concerning child well-being and welfare issues was implemented using three samples: A general Texas sample, known Medicaid program participants in Texas, and known Medicaid and MinnesotaCare program participants in Minnesota.

The survey detailed in this report is the third study in the SLAITS series.

Key Features of the National Survey of Early Childhood Health

- Use of the first two calendar quarters of the NIS random-digit-dial (RDD) sampling frame for 2000
- Questionnaire to collect data on one child regarding: Health care utilization; parental perceptions of pediatric care; interactions with health care providers; family interactions and home safety; parental and child health; financial welfare and health insurance; and demographic and household information
- Computer-assisted telephone interview (CATI) instrument
- An average interview length of approximately 30 minutes
- One child 4–35 months of age randomly selected from households with age-eligible children to be the target of the interview
- Respondent is the adult household member who is primarily responsible for the sampled child's medical care
- Over 2,000 completed interviews (more than 1,200 interviews in a national sample, plus an oversample of more than 800 black non-Hispanic or Hispanic children)
- NIS screener and interview completed before the SLAITS portion of the interview
- Households requiring the administration of the screener and/or interview in Spanish included through the use of a Spanish translation of the questionnaire administered by bilingual interviewers
- Survey estimates include a weight adjustment strategy to allow for the representation of households without telephones

Background

Before they reach age 3, most children in the United States will have seen a doctor 12 times for routine and sick visits. As a result, pediatricians and other health care providers are in a critical position to identify developmental issues for children within their care and to disseminate information to parents. Despite this opportunity, however, there is little research that seeks to gain information on pediatric care from the parents' perspective. NSECH was designed to collect that information.

Two recent national surveys have examined parental concerns, needs, and expectations surrounding the development of their children. In the Zero to Three Survey of Parents, sponsored by the nonprofit National Center for Infants, Toddlers, and Families, the data showed that parents were unsure about their specific role in their child's development, although they recognized their importance in the process. In the Survey of Parents of Young Children, sponsored by the Commonwealth Fund, parents reported that they received very little guidance on such topics as how to discipline their child, how to encourage their child to learn, and how to deal with their child's sleeping patterns. Combined, these surveys suggest that there is a need and demand for information, guidance, and interventions to help ensure the optimal development of children.

In surveys conducted by the American Academy of Pediatrics, pediatricians agreed that early intervention programs are important in

promoting children's development and improving parents' understanding of development issues. These surveys also suggest that pediatricians routinely assess children's developmental milestones and parental concerns regarding development. Still, pediatricians had significant concerns about the economic feasibility of providing such developmental services in the context of their pediatric practices.

NSECH sought to determine the primary issues and concerns that parents of young children face, the degree to which parents believe that these issues and worries should be addressed by pediatricians, and the extent to which they are presently being addressed. Previous surveys of parents have demonstrated that parents can provide reliable data on developmental services received and that these data can be used to evaluate the performance of health care systems in the promotion of the healthy development of young children (2).

The major research questions addressed by the NSECH were:

- What are the concerns of parents and what are the health care needs of young children?
- Are these health care needs and these parental concerns being addressed when children visit health care providers?
- What is the quality of developmental and psychosocial care that young children receive?
- What factors are associated with the receipt of better quality, more comprehensive pediatric care?
- What is the prevalence of selected home health behaviors in early childhood?
- What is the relationship between parental/home health behaviors and experiences with pediatric health care delivery?

The primary purpose of the survey, as indicated by the research questions, was to characterize the content of care and the parent's (and child's) experiences with pediatric preventive health care. This preventive health care can be provided by any pediatric health

care providers (broadly defined) and is not limited to care provided by pediatricians, pediatric specialists, or medical doctors. The second purpose of the study was to assist in understanding the relationship between the promotion of health in the pediatric office and promotion of health in the home.

Sample Design

As mentioned, SLAITS is a program of surveys designed to take advantage of the large number of screening calls required for the CDC surveillance study, the NIS.

Sample Selection

Each quarter NIS selects a random sample of telephone numbers in each of 78 IAP areas (including the District of Columbia and 27 other urban areas) that cover the United States. NIS screens these samples to identify households that contain children 19–35 months of age and interviews a household respondent about each age-eligible child's immunization history and the demographic characteristics of the household. With consent, NIS then contacts the immunization providers of those children (in a mail survey) to obtain vaccination information from the child's medical record, to compensate for possible biases in the vaccination information reported by households. Because the data from providers are the primary basis for estimates of vaccination coverage, the target sample sizes are designed to yield approximately the same number of children with provider data in each IAP area. Those sample sizes vary among IAP areas, in response to the NIS' experience in completing household interviews and obtaining data from providers.

NSECH used the NIS sample to investigate parental perceptions of pediatric care for children age 4–35 months of age. The goal was to complete at least 2,000 interviews for children in this age range and to collect enough data on black non-Hispanic and Hispanic children to yield precise

estimates. To accomplish this, a random subsample of the NIS sample was selected and telephone numbers were randomly designated for either an NSECH national sample or for an NSECH oversample. The oversample was designed to collect data only from those households with an age-eligible Black non-Hispanic or Hispanic child.

Regardless of the NSECH sample for which the telephone numbers were selected, all telephone numbers designated for NSECH were selected from the numbers randomly generated for the NIS sample. Further, when these telephone numbers were first called, identified households were screened for NIS before screening for NSECH. Therefore, the procedures for drawing the NIS sample were the first steps in the procedures for drawing the NSECH sample.

The next two sections describe the basic NIS sample design and the NSECH sample allocation procedures. These sections are intended to serve as a nontechnical description of the NSECH sample design procedures. [Appendix I](#) includes a more technical description of the NSECH sample design and weighting plan. For more detail on the NIS sample design, readers are encouraged to obtain chapter 3 of the 1999 NIS Sample Design Report (3), which is available from NCHS.

Drawing the National Immunization Survey Sample

Each quarter NIS screens a sample of households in each of the 78 IAP areas, which cover the 50 States and 28 metropolitan areas, to identify households that contain at least one child between 19–35 months of age. Because only 5% of households in the United States contain children between 19–35 months of age, a large number of households are screened to identify households with eligible children. Households are selected for screening through list-assisted RDD. This sampling method involves selecting telephone numbers at random from the frame of all possible telephone numbers.

In the United States, telephone numbers consist of an area code (3 digits), a prefix or exchange (3 digits), and a suffix (4 digits). A random sample of telephone numbers can be chosen by randomly selecting an area code and prefix combination currently in use and appending a four-digit number chosen randomly between 0000 and 9999. This sample is a simple random sample of telephone numbers from the frame of all possible telephone numbers. Before the selection of the sample of telephone numbers, banks of 100 consecutive numbers in the same area code and prefix combination that contain zero directory-listed telephone numbers—that is, banks of 100 numbers that have a low probability of containing working residential numbers—are deleted from the sampling frame. For this step, the GENESYS Sampling System (a proprietary product of Marketing Systems Group) uses a file of directory-listed residential numbers from Donnelley Marketing Information Services (DMIS). As indicated earlier, a simple random sample of 10-digit telephone numbers is then drawn from the retained banks of 100 numbers and residential numbers are identified by calling these numbers.

In each IAP area, the number of households that needs to be screened is calculated first based on the required sample size and using the expected eligibility rate for the IAP area, and then the number of telephone numbers that need to be called is computed using the expected working residential number rate. The number of telephone numbers drawn is increased to compensate for the fact that not all respondents will agree to participate and therefore there will be some degree of nonresponse.

The National Survey of Early Childhood Health Sample Allocation

Main Sample—For NIS, the goal is to generate a sample that will be representative of the IAP-specific population of children 19–35 months of age and to generate a sufficient sample to permit an equivalent number of completed interviews from each IAP. In

contrast, for the main sample of the NSECH, the goal was to generate a sample representative of the national population of children 4–35 months of age. To do so, equal size samples were not drawn from every geographic area, because this allocation would yield too many children in some States and not enough children from other States. Rather, samples were drawn from each geographic area in rough proportion to the number of young children in each area. This way, for example, more telephone numbers were selected from Los Angeles than from Wyoming, because the Los Angeles population includes more young children than does the Wyoming population.

From NIS, estimates were obtained of the approximate number of telephone lines to be called in each geographic area to find each household with an age-eligible child. In some geographic areas, more telephone numbers must be sampled to find each child. Therefore, even when the goal was to sample the same number of children in two geographic areas, more telephone numbers may have been sampled in one area than in another.

The end result was that randomly generated telephone numbers were selected in such a way that every young child selected to participate in the survey represented approximately the same number of young children not selected to participate in the survey, and that the young children selected were randomly distributed across the country in the same proportion that all young children are distributed across the country.

Each selected telephone number was then called, and if it belonged to a household, the person answering the telephone was asked if there were any children under 3 years of age living or staying in the household. If NIS age-eligible children were in the household, the NIS interview was conducted before the NSECH interview. Otherwise, the interviewer asked for the birth dates of all children living or staying in the household who were under 3 years of age. In households with more than one NSECH age-eligible child, one was randomly selected for the interview.

As with all sample surveys, random sampling error could result in finding more or fewer children than expected in one geographic area. This minor imbalance is adjusted when the sampling weights are generated.

Oversample—Likewise, the goal of the oversample was to generate a sample representative of the national population of black non-Hispanic or Hispanic children 4–35 months of age. (For reading ease, these children are referred to as minority children, though this population is not inclusive of all minority races and ethnicities.) As before, equal size samples were not drawn from every geographic area, because then the sample would include too many minority children from States with few minority children and not enough children from States with a large number of minority children. So, samples were drawn from each geographic area in rough proportion to the number of minority young children in each area.

All prefix areas, regardless of their minority status, were eligible for the oversample. However, randomly generated telephone numbers from these telephone banks were selected so that more telephone numbers were selected from geographic areas with more young minority children and fewer telephone numbers were selected from geographic areas with fewer young minority children.

Again, from the NIS, estimates were obtained of the approximate number of telephone lines to be called in each geographic area to find each household with an age-eligible minority child. Therefore, more telephone numbers may have been sampled in one area than in another.

The end result was that randomly generated telephone numbers were selected in such a way that every young minority child selected to participate in the survey represented approximately the same number of young minority children not selected to participate in the survey in each IAP area, and that the young minority children selected were randomly distributed across the country in approximately the same proportion that all young minority children are

distributed across the country. (It should be noted that the sample allocation for the oversample was not a true proportional allocation. Instead, the allocation was modified slightly to reduce the number of screening interviews required to reach a household with age-eligible black non-Hispanic or Hispanic children. See [appendix I](#).)

Each selected telephone number was then called, and if it belonged to a household, the person answering the telephone was asked if there were any NIS age-eligible children living in the household. If NIS age-eligible children were in the household, the NIS interview was conducted first. Otherwise, the interviewer asked for the birth dates, race, and ethnicity of all children living or staying in the household who were under 3 years of age. If young minority children lived in the household, one was randomly selected for the interview.

Random sampling error could result in finding more or fewer minority children than expected in one geographic area. This minor imbalance is adjusted when the sampling weights are generated.

Because some geographic areas have very small minority populations (e.g., Iowa), very few randomly generated telephone numbers may have been selected in these areas for the minority oversample. And because of random sampling error, it is possible that young minority children were not identified in some areas. But telephone numbers for the minority oversample were called in every geographic area.

Questionnaire

The NSECH questionnaire includes questions from a variety of other studies. These include surveys from the Foundation for Accountability (e.g., the Promoting Healthy Development Survey and the Promoting Healthy Development Survey Plus), the Commonwealth Fund (e.g., the Pediatric Developmental Services Survey and the Survey of Families with Young Children), the Institute for Social Research at the University of Michigan

(e.g., the Panel Study of Income Dynamics Child Development Supplement), NCHS (e.g., the National Health Interview Survey and the National Survey of Children with Special Health Care Needs), and other Federal agencies (e.g., the Consumer Assessment of Health Plans Survey, the Early Childhood Longitudinal Survey, and the Medical Expenditure Panel Survey). The correspondence of NSECH items to other surveys is listed in [appendix II](#).

The NSECH questionnaire was designed to immediately follow a completed NIS interview in households with an NIS-eligible child or the NIS screener in households without an NIS-eligible child. The questionnaire was divided into seven parts, summarized in this section, and provided in [appendix III](#). Questions were answered by the parent or guardian who was primarily responsible for the sample child's medical care.

Health Care Utilization—This section addressed the number of visits made to a health care provider, provider demographics, and how providers were initially identified.

Parental Perception of Pediatric Care—This section assessed the length of the last visit to a health care provider, whether the parent asked all the questions he or she wanted to ask at that visit, rating of the quality of the visit on a 10-point scale, and a general description of the child's health.

Interactions with Health Care Providers—In this section, the majority of the questions were age-specific, with the age of the sampled child determining questions to be asked. The age ranges were defined as 4–10, 11–18, and 19–35 months old. For the youngest children, between 4–10 months, questions were asked about breast-feeding, the introduction of solid foods into the diet, sleeping positions, burn prevention, car seat use, childcare, and immunizations. For older children, questions focused on food and feeding, sleeping with a bottle, weaning the child from the bottle, guidance and discipline, toilet training, reading to the child, and bedtime routines. Additional questions

asked in all age groups examined the style and level of attention given by the health care provider, the environment in which the child is being reared, developmental issues, birthing and parenting classes, and questions about the child's infancy and birth.

Family Interactions and Home Safety—This section addressed the level of interaction that occurs between the child and other family members, the extent to which the parent has childproofed the home and the level and type of childcare that is used. Topics covered also included bedtimes, nap times, mealtimes, outings, and the parents' approach to discipline.

Parental and Child Health—The goal of this section was to determine the status of the parents' health, identify concerns about child development and health, and assess the state of the child's health. This section included questions from the Parent's Evaluation of Developmental Status (PEDS), by Dr. Frances Glascoe (4). The PEDS is a tool to identify children at risk for developmental, behavioral, or social delays. Therefore, it was used in this section as a risk assessment tool to identify children who either have or are more likely to have problems. Researchers interested in analyzing the PEDS data should consult the PEDS documentation for scoring instructions (5). (Health care providers wishing to use PEDS in practice to assess risk status, or to make decisions about developmental status for individual children, must use the clinical version of the test, which can be obtained from Ellsworth & Vandermeer Press, LLC, (4) and was not used for the NSECH.)

Financial Welfare and Health Insurance—The goal of this section was to determine the degree of difficulty the household members encountered in paying for the child's expenses. In addition, it detailed the level and types of insurance available to the sampled child. Additional topics included any time gaps in health insurance coverage and whether the child received benefits from the Federal Women, Infants, and Children program.

Demographic and Household

Information—This section provided the following basic demographic information:

- The number of people in the household
- The race and ethnicity of the child and the child's mother
- The mother's educational level, current employment, and marital status.

In addition, the questions addressed the household income, the household location, and consistency of household telephone service.

Computer-Assisted Telephone Interviewing Programming

The survey was conducted using CATI. This data collection method employs computer software that presents the questionnaire on computer screens 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 whether the selected response is within an allowable range, checks it for consistency against other data collected during the interview, and saves the responses into a survey data file. On-line help facilities are available to aid interviewers in administering the CATI questionnaire. This data collection technology reduces the time required for transferring, processing, and releasing data.

The questionnaire was programmed as a module of the NIS, making full use of the CATI system's ability to follow skip patterns and to employ pick-lists to present response categories. Certain demographic questions and the question series regarding multiple telephone lines were identical for the NIS and NSECH portions of the interview. These questions were asked during the NIS interview for NIS-eligible households and were administered at the end of the NSECH interview for NIS-ineligible households.

Once initial programming was completed, the instrument underwent rigorous testing to ensure correct functioning.

Spanish Version

The questionnaire was translated into Spanish by one translator and then back-translated into English by another translator. The use of two contractors assured that each translation was done independently of the other. Discrepancies were resolved in consultation with the two translators. The Spanish version was then incorporated into the CATI questionnaire.

In addition, a team of experienced Spanish-language telephone interviewers and supervisors reviewed the Spanish CATI instrument for accuracy and cultural appropriateness. Issues raised by the interview team were also resolved in consultation with the original translators.

Pretest of Survey Instrument

A nine-case pretest of the CATI instrument was performed from February 4–7, 2000, using a convenience sample of volunteers with children in the NSECH age range. Nine cases with focal children of various ages provided an initial test of the entire instrument. The length of these interviews ranged from 25–34 minutes. Findings from this pretest were incorporated into the CATI questionnaire.

Survey Operations

Telephone interviewing began on February 16, 2000. Data collection was completed on July 31, 2000, with 2,068 completed interviews, 860 of which were from the oversample. The number of calls made to complete an interview ranged from 1 to 99, with a mean of 7 calls and a median of 3 calls. The respondent was the parent or guardian who was identified by the person answering the

telephone as primarily responsible for the sampled child's medical care.

Interviewing was conducted by staff of Abt Associates Inc. under contract to CDC and performed from Abt Associates Inc.'s telephone centers in Chicago, Illinois, and Las Vegas, Nevada.

Interviewer Training

The data collection staff for the NSECH was recruited during January and February 2000. All of the staff had previous NIS interviewing experience. Full coverage of interviewing hours (9 a.m.–9 p.m. in each time zone) was ensured. The interviewers were selected based on their NIS experience, interviewing skills, supervisor evaluations, and production rates on the NIS.

Interviewer training materials were prepared, including a study manual, question-by-question specifications, and refusal aversion responses specific to this module. Interviewer training began on February 14, 2000. Eleven training sessions were held for the study, resulting in the successful training of 127 interviewers. The material covered in the training session included an overview of the project, introduction of CATI screens, review of question-by-question instructions and help screens, and review of refusal aversion techniques. During the course of the training session, formal mock interviews were completed, and interviewers practiced administration with a partner. The training session concluded with evaluation of interviewers, using a mock interview conducted with experienced telephone center supervisors.

Advance Letter

Advance letters have been shown to decrease nonresponse by increasing study legitimacy (6). An advance letter was mailed when a mailing address for sampled telephone numbers could be identified from residential telephone number databases. Letters were mailed to 49.2% of the sampled telephone numbers. Recipients were asked to participate in a voluntary study on the

health of young children and their experiences with doctors. The letter described the NIS and the NSECH, advised recipients that their telephone numbers had been chosen randomly, and indicated that they might be called in the next few weeks. (See [appendix IV](#).) The interview length for eligible households was estimated at 20–25 minutes. Recipients were assured that any information that they might give was confidential. Toll-free telephone numbers were provided for those who wished to learn more about the study and to obtain information about their rights as study participants. The letter was printed in English on one side and Spanish on the other side.

Informed Consent

Consent from respondents to participate in the survey was obtained twice. The initial consent was obtained after the respondents indicated that an NIS or NSECH age-eligible child lived in the household, but before they provided the children's birth dates and other demographic information. An additional consent procedure was included after completion of the NIS screening or interview (depending on NIS age eligibility). During both occasions, respondents were informed about the voluntary nature of the survey, the authorizing legislation, and confidentiality of data collected. The second informed-consent process provided more information about the content of the survey and the expected duration. The second informed-consent process also ensured that the person most knowledgeable about the sample child's health had received the consent information and agreed to participate; this person may not have been the respondent who first answered the telephone and provided the initial demographic information for the children. The Institutional Review Boards of CDC and Abt Associates Inc. approved these procedures.

Assurance of Confidentiality

Participation in surveys conducted by NCHS is voluntary, and information collected on individuals is confidential. For the NSECH, assurance of confidentiality was provided to potential respondents as part of the informed consent procedures. In the CATI system, interviewers acknowledged that they read the following script to potential respondents:

Any answers that identify you or your family like your name or phone number will be kept strictly private. No one other than survey staff can ever look at them. That's because this survey is being conducted under the authority of the Public Health Service Act. I can provide the specific legal citation if you want me to.

Respondents requesting the specific legal citation were informed that:

The Public Health Service Act is Volume 42 of the U.S. Code, Section 242k. The collection of information in this survey is authorized by Section 306 of this Act. The confidentiality of your responses is assured by Section 308d of this Act.

Section 308d of the Public Health Service Act (42 U.S.C. 242m) states that:

No information, if an establishment or person supplying the information or described in it is identifiable, obtained in the course of activities undertaken or supported under section . . . 306, . . . may be used for any purpose other than the purpose for which it was supplied unless such establishment or person has consented (as determined under regulations of the Secretary) to its use for such other purpose and in the case of information obtained in the course of health statistical or epidemiological activities under section . . . 306, such information may not be published or released in other form if the particular establishment or person supplying

the information or described in it is identifiable unless such establishment or person has consented (as determined under regulations of the Secretary) to its publication or release in other form.

Strict procedures are utilized to prevent disclosure of confidential data in survey operations and data dissemination.

Interview Length

The interviews averaged 35 minutes and 36 seconds in length among NIS-ineligible households and 32 minutes and 40 seconds (excluding the actual NIS interview) for NIS-eligible households. The timings differ by NIS-eligibility because NIS-eligible households received some demographic and household questions during NIS administration rather than during NSECH. [Table A](#) shows mean and median lengths, in minutes and seconds, by section and NIS eligibility.

In the main sample, 48.1% (580) of the sampled children were also NIS-eligible. In the oversample, 52.2% (448) of sampled children were NIS-eligible. The average NIS interview length is approximately 27.5 minutes.

Other Languages

From the 457 eligible households where Spanish was spoken in the household, 400 Spanish-language interviews were completed (19.4% of all completed interviews). Given the sample size, the estimated number of

interviews that would have been performed in any one language other than English or Spanish was quite small. For that reason, interviews were not conducted in households where a language other than English or Spanish was spoken. A total of 183 telephone numbers could not be resolved as households because of a language barrier, and 1,382 households were identified where a language other than English or Spanish was spoken.

The NIS uses the AT&T Language Line to conduct interviews in languages other than English or Spanish. Because of confidentiality and translation concerns, interviews for NSECH were not conducted using the AT&T Language Line. However, when the AT&T Language Line was used to determine eligibility for the NIS interview, eligibility for the NSECH interview could also be determined for some households. Eligibility for the NSECH was confirmed in 28 of these households. An additional 1,275 households were determined to be ineligible, whereas eligibility was not determined in 79 households.

Toll-Free Telephone Number

A toll-free number was provided in the advance letter and in messages explaining the study that were left on answering machines. Potential respondents could use this line to alert the contractor that there were no children in the study's age range living

Table A. Average length of National Survey of Early Childhood Health interview in minutes and seconds, by National Immunization Survey eligibility

Section of NSECH ¹ interview	NIS-eligible ²		NIS-ineligible ²	
	Mean	Median	Mean	Median
Overall	32:40	28:03	35:36	31:32
Screener / Introduction	3:01	0:58	2:53	1:31
Section 1: Health care utilization	2:53	2:31	3:01	2:46
Section 2: Parental perception of care	1:48	1:38	1:50	1:38
Section 3: Interactions with healthcare providers.	9:25	8:55	9:06	8:33
Section 4: Family interactions and home safety	5:25	5:07	4:54	4:38
Section 5: Parental and child health	5:49	5:31	5:56	5:28
Section 6: Financial welfare and health insurance	2:39	2:28	3:26	3:13
Section 7: Demographic and household information	1:40	0:55	4:30	3:45

¹NSECH is National Survey of Early Childhood Health.

²NIS is National Immunization Survey.

or staying in their household, to ask questions about the study, or to complete an interview. During the course of data collection, 1,588 calls were received on this line, of which 82.6% were from people calling to indicate that they did not have a child eligible for the study. This line was used to complete a total of 43 interviews.

Cases Pending at the Close of Data Collection

Most of the cases pending at the end of the field period were those in which the number had not yet been resolved as residential or nonresidential (83.3% of the pending cases and 12.4% of the total sample). A smaller number of cases had been resolved as households without respondent eligibility being determined, or as households with an eligible respondent who did not complete the interview (2.2% and 0.3% of the sample, respectively).

Break-offs and Refusals

There were 126 interviews completed with households that had originally refused to participate (6.1% of completed interviews). Of the cases that were finalized as refusals, 54.5% refused or broke off the interview during NIS screening or interview administration, which occurred before the NSECH interview.

For cases that progressed past NIS screening and interviewing, the most common break-off point was at the initial NSECH introduction, which accounted for 26.3% of NSECH refusals. This introduction to the NSECH portion of the interview was read to NIS-eligible and NIS-ineligible cases, and included the second informed-consent process. The next most common break-off point in the interview was at the question that confirmed an NIS-eligible child’s age if that child was also sampled for the NSECH interview. This break-off point accounted for 10.0% of refusal cases. The item that asked for the most knowledgeable person in the household regarding the sampled child’s health in

order to establish the survey respondent was the third most common break-off point, accounting for 5.6% of the break-offs. Finally, an additional 3.6% ended the interview at the first survey question, which asked about the number of times the sampled child had ever seen a doctor or other health care professional. Among the refusal cases that had progressed past this first survey question when the respondent ended the interview, there was little commonality in the last question answered before ending the interview.

Response Rates

The interview completion rate, a measure of completed interviews among households with age-eligible children, was 79.2%. The screener completion rate, which measures the proportion of known households where a resident reported whether or not the household included an age-eligible child, was 94.5%. The resolution rate, indicating the proportion of telephone numbers that could be positively identified as either residential or nonresidential, was 87.6%. The Council of American Survey Research Organizations (CASRO) response rate, derived from the product of these three rates, was 65.6%. This rate is equivalent to the American Association for Public Opinion Research’s (7) Response Rate #3 using the assumptions detailed in *An alternative measure of response rate in random-digit-dialing surveys that screen for eligible subpopulations* (8). Rates calculated separately for the main sample and the oversample are presented in [table B](#).

These response rates assume that, in the main sample, screening is complete as soon as it is known that there are NIS age-eligible or NSECH age-eligible children in the household. This assumption is critical, because it is possible to calculate screening completion rates for the main sample of the NSECH using two alternative methods. Because of different screening procedures used for the main RDD sample and the oversample, only one method is possible for oversample cases. For oversample cases, the NSECH screener was considered to be complete only after all NIS-eligible children had gone through an NIS interview and any NSECH-eligible children in the household who were not NIS-eligible were screened for race and ethnicity following the NIS screener or interview. Thus, any partial NIS cases (i.e., cases that were eligible for the NIS but did not complete the entire NIS interview) had not completed an NSECH screener in the oversample.

For partial NIS cases in the main sample, the screener could be considered complete at one of two critical points. Because the NIS age-eligibility range is a subset of the NSECH age-eligibility range, and because race/ethnicity data are not needed to determine eligibility for the main RDD sample, main sample screening could be considered complete as soon as it was known that there were NIS age-eligible children in the household. This information is gathered in the initial screening before any NIS interviewing. If these cases are considered as having been screened to be eligible at that point, all partial NIS cases would be considered screened as

Table B. Response rates

	Oversample	Main sample screened by rostered dates of birth	Total sample, with main sample screened by rostered dates of birth
Number of telephone lines.	111,563	71,009	182,572
Rate			
Interview completion rate	82.1%	77.3%	79.2%
Screener completion rate	94.4%	94.8%	94.5%
Resolution rate.	87.2%	88.2%	87.6%
CASRO ¹ rate.	67.6%	64.7%	65.6%

¹CASRO is Council of American Survey Research Organizations.

eligible for the NSECH. The response rates reported previously are based on screening completion rates using this strategy.

Alternatively, screening for the main sample could be consistent with the screening process used for the oversample. If this were the case, partial NIS cases in the main sample would not be considered as having completed an NSECH screener. An NSECH screener would be considered to be complete only after the NIS interview was complete. With this alternative strategy for calculating screening completion rates, the screener completion rate decreases to 94.3%, the interview completion rate increases to 85.2%, and the CASRO rate increases to 70.4%. Rates calculated separately for the main sample and the oversample are presented in [table C](#).

Detailed information regarding call outcome coding appears in [appendix V](#).

Efforts to Maximize Response Rates

A number of approaches were used to maximize response rates for the NSECH. These approaches included:

- Careful attention to the introductory questionnaire script to ensure that it engaged the interest of potential respondents and provided clear information regarding the study sponsor
- Thorough pretesting of the survey instrument to ensure that it was clear to respondents and did not place an undue burden on them

- An advance mailing to households having directory-listed telephone numbers to lay the groundwork for obtaining cooperation on first contact
- A toll-free telephone number to allow respondents to contact Abt Associates Inc. staff, encouraging potential respondents to obtain information about the study, immediately establish study eligibility, and voice any concerns
- A Spanish-language version of the survey instrument to reduce nonresponse bias in Spanish-speaking households
- A sample management plan that ensured that the correct number of cases were in the field at any given time, and provided daily review of appointment and refusal case status to ensure timely recontact
- An interviewer training program in refusal aversion to reduce the number of unresolved cases and refusals to participate
- Refusal conversion attempts by specially trained interviewers who prepared case-specific strategies for each conversion call based on call history

Data Files

A SAS (v6) data file containing all completed interviews (n = 2,068) was created. This file contains one record per sample child, with all information about the household on that record.

Editing

Concurrent with the development of the CATI questionnaire for the NSECH data collection phase, a detailed plan for checking and editing the data in the CATI instrument was developed. The intention was to design into the CATI software consistency checks across data elements, valid range codes, and a method to identify incorrect codes entered by interviewers. To the extent that the CATI software could be developed to perform these tasks, the efficiency of postsurvey data cleaning and processing was increased.

The CATI system was designed to perform a number of edits as an interviewer enters data into the computer system. These edits dealt with errors that could be reconciled while the respondent was on the telephone and focused, in particular, on items critical to the conduct of the study. The CATI edit specifications were designed to correct respondent error during the interview (for example, a respondent saying two children under 3 years of age lived in the household, but only listing one name on the roster) and to identify and correct data-entry error by interviewers (for example, a 9-month old child is reported as being introduced to solid foods when she was 4 months old, but the interviewer attempts to enter 14 months). 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.

The two main types of CATI edits were range checks and consistency checks. A range violation would result in visual notification to the CATI interviewer (a pop-up box). In most cases the interviewer would have to enter a valid response to continue the interview (such situations constitute “hard edits”). However, some out-of-range responses would produce a warning, and the interviewer would be instructed to verify the answer provided

Table C. Alternative response rates

	Oversample	Main sample screened upon completion of NIS screener/interview ¹	Total sample, with main sample screened on completion of NIS screener/interview ¹
Number of telephone lines.	111,563	71,009	182,572
Rate			
Interview completion rate	82.1%	87.5%	85.2%
Screener completion rate	94.4%	94.1%	94.3%
Resolution rate.	87.2%	88.2%	87.6%
CASRO ² rate.	67.6%	72.7%	70.4%

¹NIS is National Immunization Survey.

²CASRO is Council of American Survey Research Organizations.

by the respondent. If the respondent confirmed the out-of-range value, the interviewer was allowed to continue (these were “soft edits”). A consistency violation would also result in a pop-up box indicating that an inconsistency between two responses had been detected. The interviewer would then have the opportunity to change one or both of the values entered. In some cases the interviewer had the option to proceed if the respondent confirmed the inconsistent values. There are trade-offs between, on the one hand, incorporating every possible type of error check into a CATI system and, on the other hand, overall performance of the CATI system and the use of development resources. To reconcile this trade-off, post-CATI edits were developed to resolve problems that did not require access to the respondent. Any problems that could not be resolved without further access to the respondent were left inconsistent.

After the preprogrammed edits were run, frequency distributions of all the variables in the file were produced and reviewed. Each variable’s range of permissible values was examined for any additional invalid values or unusual distributions. Invalid values, where they occurred, were blanked out. If blank values already existed for a variable, they were checked to determine whether they were allowable, due to legitimate skips, or occurred in excessive numbers. When blank values were the result of skip patterns, a “legitimate skip” code was used. Other records that were missing responses for unknown reasons were left missing. When necessary for later calculating sampling weights, some missing values were imputed (see “Imputation” section).

One variable (A7Q12_A) was dropped from the data set because of the unreliability of the data collected. The question asked about the number of times the child moved since he/she was born and was asked only if the respondent indicated that the child’s mother did not live at the same address as she did when the child was born. Using information about the mother’s mobility as the basis for asking about the child’s mobility was inappropriate as several respondents reported that the mother had moved but the child had

not. Therefore, data from this question were suppressed.

Imputation

Because race, ethnicity, and mother’s education were used in the sampling weights, these variables were imputed for children for whom such information was missing. Imputation was conducted using a hot-deck procedure; that is, the data for these variables were borrowed from another record that closely matched the record for which these variables were missing. The variable KFLG_RAC indicates which cases have an imputed race for the child, KFLG_HIS indicates which cases have an imputed ethnicity for the child, and KFLG_EDU indicates which cases have an imputed education for the mother.

Edits to Protect Confidentiality

NCHS takes extraordinary measures to assure that the identity of data subjects cannot be disclosed. The risk of inadvertent disclosure of confidential information about individual respondents is higher with a publicly released data set having both detailed geography variables and a detailed and extensive set of other survey observations. Coarsening a data set by suppressing survey variables, collapsing multiple variables into one, collapsing response categories for other variables, and/or introduction of noise in the data are common techniques to reduce the risk of inadvertent disclosure.

In this data set, the child’s date of birth has been suppressed, but the child’s age (in months) at the time of the interview has been reported. Geographic information that would identify the specific IAP area in the United States has been dropped from the data set. It has been replaced with a four-category variable representing U.S. Census Bureau regions. The responses for the race variable have been reduced to five categories (white, African American or black, Asian, Native American or Alaska Native, and other). Hispanic origin (yes or no) has been reported separately from race, but

specific Hispanic origin (e.g., Mexican) has been suppressed. Education level for the child’s mother has been recoded to three categories (less than high school, high school graduate, and more than high school). Family income has been reported as eight categories (less than \$7,500, \$7,501–\$17,500, \$17,501–\$25,000, \$25,001–\$35,000, \$35,001–\$45,000, \$45,001–\$60,000, \$60,001–\$75,000, and \$75,001 and over).

The child’s weight at birth was recoded into grams (if reported as pounds and ounces) and then reduced to seven categories (less than 1,500, 1,500–2,499, 2,500–2,999, 3,000–3,499, 3,500–3,999, 4,000–4,499, and 4,500 and over). For mothers who breastfed for less than 1 month, the duration of breastfeeding is reported in days. The duration for mothers who breastfed for more than 1 month was recoded into months, with a top code of 12 months or longer. In addition, many other frequency variables have been topcoded to suppress outliers at the high end of the distribution of responses. Because of their unusual characteristics, these outliers might have been more readily identifiable. Therefore, the following variables have been topcoded:

- For number of doctor visits for any reason in past year, 16 visits or more is the maximum reported.
- For number of well-child visits in past year, 11 well-child visits or more is the maximum reported.
- For number of hours child spends in childcare, 60 hours or more is the maximum reported.
- For number of visits to the emergency room in past year, seven visits or more is the maximum reported.
- For number of overnight hospital stays in past year, seven stays or more is the maximum reported.
- For number of telephone calls to a doctor in past year, 50 calls or more is the maximum reported.

Some demographic variables have also been topcoded to suppress outliers at the high end of the distribution of responses. The maximum number of children under 18 years of age reported as living in the household has been limited to four or more; the maximum

number of adults reported as living in the household has been limited to six or more; and the total number of persons in the household has been suppressed. Finally, the exact age (in years) of the child's mother has been restricted to 18–48 years of age, with codes for ages 17 or under and 49 or over.

Additional Edits

- A1Q02R was created from A2Q02 and A1Q02_A.
- A1Q04R was created from A1Q04, A1Q05, and A1Q05_A. For example, when respondents indicated a place rather than a provider in A1Q05_A, A1Q04 was recoded to “no.”
- A1Q05R to A1Q10_AR and A1Q10BZ1 to A1Q10BZ4 were created as a result of the edit that created A1Q04R. For all records where respondents indicated a place rather than a provider in A1Q05_A, these follow-up questions were coded to “legitimate skip.”
- In addition, A1Q05R was further edited based on A1Q05 and A1Q05_A. For example, when respondents indicated a kind of provider in A1Q05_A that could be coded as one of the A1Q05 options, we changed the response in A1Q05 from “other” to that option.
- A7Q01_AR was created from A7Q01_A.
- A7Q08R was created from A7Q08 and A7Q08_A.
- A7Q11R was created from A7Q11 and A7Q11_A.
- BASE9 is an indicator of how many respondents reported either the child not getting needed care or the child getting delayed care. This variable serves as the denominator for estimates derived from A5Q09_C.
- BFEEDR was created from A3Q54, A3Q54_A, and A3Q54_B.
- EDUCMOM was created from A7Q06.
- I_HISP_K was created from A7Q02.
- I_RACEKR was created from A7Q03 and A7Q04.
- IND_OTH was created from A6Q07 and A6Q08.
- INSURE was derived from responses to questions A6Q02 through A6Q09_A. Any child with insurance coverage reported in questions A6Q02 through A6Q08, or in A6Q09_A, is considered insured.
- MED_SCHP was created from A6Q02 and A6Q04.
- MOMHISP was created from A7Q09.
- MOMRACER was created from A7Q10 and A7Q10_A.
- NUMCHILR was created from A7Q01 and A7Q01_A.
- XBESTINC was created from variables A7Q13 to A7Q26.

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” is reported for each of the dummy variables.

- A1Q10B is represented by A1Q10BZ1 to A1Q10BZ4.
- A2Q04 is represented by A2Q05X01 to A2Q04X06.
- A3Q47_A is represented by A3Q47A01 to A3Q47A07.
- A3Q48_A is represented by A3Q48A01 to A3Q48A04.
- A5Q09_C is represented by A5Q09CX1 to A5Q09CX4.

When questions were repeated because they referred to different subjects, it was necessary to distinguish the referenced subjects in the data file. Questions A5Q09_D and A5Q09_E could be repeated for each of four different types of problems or concerns (A5Q09_C).

- A5Q09_D_X01 is represented by A5Q09D11 to A5Q09D14. A5Q09D11 refers to a medical problem or concern (A5Q09_C = 1), A5Q09D12 refers to a behavioral problem or concern (A5Q09_C = 2), A5Q09D13 refers to a speech problem or concern (A5Q09_C = 3), and so on.
- A5Q09_D_X02 is represented by A5Q09D21 to A5Q09D24.

- A5Q09_D_X03 is represented by A5Q09D31 to A5Q09D34.
- A5Q09_D_X04 is represented by A5Q09D41 to A5Q09D44.
- A5Q09_D_X05 is represented by A5Q09D51 to A5Q09D54.
- A5Q09_E_X01 is represented by A5Q09E11 to A5Q09E14.
- A5Q09_E_X02 is represented by A5Q09E21 to A5Q09E24.
- A5Q09_E_X03 is represented by A5Q09E31 to A5Q09E34.

Estimation Procedures

The NSECH took its sample cases from another survey, the NIS. The NIS is designed to collect an equal number of completed interviews from 78 different areas (the 50 States, the District of Columbia, and an additional 27 localities of interest to policymakers). The NIS collects data quarterly. There is enough sample each quarter to obtain between 101 and 129 completed NIS interviews in each of the 78 areas. To reach this number of completed interviews, the total number of telephone lines randomly generated and screened for eligibility in each area ranges, for example, from 3,547 to 15,863 (Q1/2000). To manage this large sample, these lines are randomly divided into smaller groups called sample replicates.

Base Sampling Weight

The goal of the NSECH was to complete at least 2,000 interviews. First, the total number of telephone lines required to obtain this number of completes was estimated. Staff then selected enough sample replicates from the NIS sample to obtain the requisite number of completes for the NSECH.

Thus, the telephone lines selected to be screened for the NSECH was a random sample of the lines selected to be screened for the NIS, which in turn was a random sample of all possible telephone lines in each geographic area. The probability that any given telephone line will be selected from the population of all possible telephone lines can be calculated:

If there were 1,000 total telephone lines in a given area, and 100 of those lines were selected for the study, the probability that any single telephone line would be selected is 100/1000, or .10.

Each telephone line selected for the NSECH represents some larger number of telephone lines in the geographic area. This number can be calculated as the inverse of the probability of selection for any single telephone line:

If the probability of selection for any single telephone line was .10, each telephone line selected represents 1/.10, or 10, telephone lines in the geographic area.

This number—the inverse of the probability of selection for any single telephone line—is the base sampling weight and was associated with each completed interview in that geographic area. The base sampling weights vary by geographic area, but were the same for every completed interview from that geographic area. Because the population of telephone numbers did not change much by quarter, the base sampling weight was calculated for the overall survey and not separately for each quarter.

Households with Multiple Telephone Lines

If a household has multiple voice-use telephone lines, this household has a greater chance of being included in the survey than does a household with only a single voice-use telephone line. Because the NSECH is a survey of households and of children in those households, each household should have an equal probability of being in the sample. To adjust for the increased probability of multiple telephone households being included in the sample, the base sampling weight is divided by the number of voice-use telephone lines in the household:

If a household had two voice-use telephone lines, this household could be included in the sample 2 times. If it were included twice, the household would represent, say, 10

(base sampling weight) \times 2 (number of telephone lines) = 20 households. To adjust the weight so that the multiple-telephone household in the sample represents the same number of households in the geographic area as does a single-line household in the sample, the base sampling weight (10) is divided by the number of telephone lines (2). With an adjusted weight of 5, this household (had it been selected twice) would still represent only 10 households ($5 \times 2 = 10$).

The First Form of Nonresponse: Unknown Household Status

When the selected telephone lines are called, three results are possible:

- It is determined that the telephone line belongs to a household.
- It is determined that the telephone line is not a working residential number, but rather is a business number or is nonworking.
- The status is undetermined because the telephone rings without an answer, the person answering the telephone hangs up immediately, or the telephone answering device does not indicate whether the telephone line belongs to a household.

This third category includes some household telephone lines. The exact number of household telephone lines in this category is unknown. Still, the completed household interviews must represent the households in this “unknown” category. When the number of households in the unknown category is large, the weight for each completed household interview must be increased a great deal. When the number of households in the unknown category is small, the weight for each completed household interview must be increased only a little bit. This proportional adjustment is the first unit nonresponse adjustment.

The size of the adjustment is based on the size of the “unknown” category after all numbers have been called several times, and is based on previous research in which telephone company

business offices reported on the number of households among the “unknown” numbers. This adjustment varies based on geographic area, telephone area code, and whether the telephone line was directory-listed. When many telephone numbers in a geographic area and area code go unanswered, and most of these numbers are highly likely to be households, the weights for completed interviews in that geographic area and area code are increased greatly. When few telephone numbers in a geographic area and area code go unanswered, or few of these numbers are likely to be households, the weights for completed interviews in that geographic area and area code are increased only slightly.

In other words, based on the frequency of the nonresponse in a given area, compensation is made for this nonresponse by proportionately increasing the weights for those interviews that could be completed in that area. The completed interviews, therefore, represent the households in the “unknown” category.

Separation of the Telephone Lines Into the Main Sample and the Oversample

After the telephone lines were selected, they were divided into two samples, including a general sample to collect data on all children 4–35 months of age (the “main sample”); and a sample that was to collect data only from households that had a black non-Hispanic or Hispanic child 4–35 months of age (the “oversample”).

The total number of telephone lines needed to obtain a certain number of completes in the main sample was approximated by reviewing the proportion of children 19–35 months of age historically observed in the NIS (this is the age range targeted by the NIS). The number of telephone lines selected for the main sample in each of the 78 areas was proportional to the number of children we expected to find in that area.

The number of telephone lines needed for the oversample was estimated in the same fashion, except

that we also took into consideration the proportion of the population that is black non-Hispanic or Hispanic to guide how the expected total number of completes should spread across the 78 geographic areas. The number of telephone lines selected for the oversample in each of the 78 areas was proportional to the number of black non-Hispanic or Hispanic children we expected to find in that area. This way, the number of telephone lines selected in localities with low proportions of black non-Hispanics and Hispanics was minimized.

Operationally, certain NSECH sample telephone numbers were flagged as being part of the main sample and some as part of the oversample. If a telephone number was flagged as part of the main sample, the household was screened for any child between 4–35 months old. If the telephone number was flagged as part of the oversample, the household was further screened for a black non-Hispanic or Hispanic child within the age range. Therefore, in the main sample, all households with children of this age were asked to complete the survey, as opposed to the oversample telephone numbers, which were asked to complete an interview only if there was a black non-Hispanic or Hispanic child between 4–35 months old.

The Second Form of Nonresponse: Unknown Household Eligibility

When a household has been identified, three results are possible:

- It is determined that the household includes an eligible child;
- It is determined that the household does not include an eligible child; or
- The screening interview is not completed, and the eligibility of the household is unknown.

This third category includes some eligible households. The exact number of eligible households in this category is unknown. Still, the completed household interviews must represent the eligible households in this “unknown” category.

When the number of eligible households in the unknown category is large, the weight for each completed household interview must be increased a great deal. When the number of eligible households in the unknown category is small, the weight for each completed household interview must be increased only a little bit. This proportional adjustment is the second unit nonresponse adjustment.

The size of the adjustment is based on the size of the first two categories. That is, the proportion of eligible households in the unknown category is assumed to be the same as the proportion of eligible households among all households where the screening interview was completed. This adjustment varies based on geographic area. Additionally, because the eligibility criteria are different for a main sample household than for an oversample household, the adjustment varies by sample type. When the eligibility for many households in a geographic area and particular sample is unknown, and a high proportion of the completed eligibility interviews in that area revealed eligible children, the weights for completed interviews in that geographic area and sample are increased greatly. When the eligibility for only a few households in a geographic area and sample is unknown, or few of the completed eligibility interviews in that area revealed eligible children, the weights for completed interviews in that geographic area and sample are increased only slightly.

In other words, based on the frequency of nonresponse to the screening interview in a given area and in a given sample, compensation is made for this nonresponse by proportionately increasing the weights for those interviews that could be completed in that area and within that sample. The completed interviews, therefore, represent the eligible households in the “unknown” category.

Adjustment for Subsampling in the Oversample

Because telephone numbers were not selected independently for the

national sample and the oversample, an adjustment compensates for the exclusion of age-eligible nonminority children from the oversample. This adjustment increases the weight for nonminority children in the main sample so that they also represent the nonminority children we did not interview in the oversample. This adjustment is the subsampling adjustment.

The Third Form of Nonresponse: Eligible Households Who Do Not Complete the Interview

When an eligible household has been identified, two results are possible:

- An interview is completed
- An interview is not completed

To be considered a completed interview, the interviewer must have asked all questions for which the household was eligible, up to and including the Parental and Child Health section (i.e., through question A5Q12). Completed interviews may include item nonresponse.

The completed household interviews from the first category must represent the eligible households in the “incomplete” second category. When the number of incomplete interviews is large, the weight for each completed household interview must be increased a great deal. When the number of incomplete interviews is small, the weight for each completed household interview must be increased only a little bit. This proportional adjustment is the third unit nonresponse adjustment.

The size of the adjustment is based on the size of the two categories, and is calculated simply as the ratio of the total number of eligible households to the number of completed interviews. This adjustment varies based on geographic area and sample type (main sample or oversample).

In other words, based on the frequency of nonresponse among eligible households in a given area and in a given sample, compensation is made for this nonresponse by proportionately increasing the weights for those interviews that could be

completed in that area and within that sample. The completed interviews, therefore, represent the eligible households with incomplete interviews.

The Child-Level Weight

In the main sample, one child 4–35 months of age was randomly selected from among all of the children within that age range. In the oversample, one black non-Hispanic or Hispanic child 4–35 months of age was randomly selected from among all of the black non-Hispanic or Hispanic children within that age range. In households with multiple eligible children, the randomly selected child represents all of the nonselected children in the household. Therefore, the sampling weight for this completed interview must be increased to reflect the fact that this completed interview “represents” multiple children in that household.

This adjustment simply multiplies the household weight (as adjusted for multiple telephone lines and by all three nonresponse factors) by the number of eligible children in the household. For completed interviews in the main sample, the multiplier was the number of children 4–35 months of age. For completed interviews in the oversample, the multiplier was the number of black non-Hispanic and Hispanic children in the household 4–35 months of age.

Poststratification

Despite the weighting efforts and the nonresponse adjustments, the estimated proportion of children by race, sex, and age are unlikely to perfectly match the population sampled. Any discrepancies are likely to be due to random sampling error and nonrandom response biases. Among these biases may be increased nonresponse based on race, sex, age, or mother’s education. The previous nonresponse adjustments used completed interviews to adjust for incomplete interviews, and therefore assume that the children in households with completed interviews are similar to children in households with incomplete interviews (within the bounds of geographic areas, area codes, sample types, and willingness to list the

telephone number in the directory). Poststratification adjusts the weights to match population control totals for key demographics (race, sex, age, and mother’s education) obtained from an independent source.

For the NSECH, the independent source was the National Vital Statistics System counts of children born in the United States between May and December of 1997 and all months of 1998 and 1999. This range of birth months is 4–35 months before the midpoint of the NSECH data collection, April 2000. Adjusting the weights based on these population control totals for age, sex, race, and mother’s education helps compensate for any potential response biases within these groups.

These counts were adjusted for infant mortality and immigration. The adjustments to the vital statistics data are the same ones used by the NIS to poststratify the NIS weights (see chapter 8 of the 1994 *NIS Methodology Report* (9)). These adjustments are necessary because the use of the raw (unadjusted) natality data file to form the required population control totals for the NIS has two significant limitations.

First, the natality file will not reflect children born outside the United States who immigrate to this country before reaching 19–35 months of age. This immigration will increase the population size of children, but the effect is likely to vary considerably from IAP area to IAP area. For the NIS, the Public Use Microdata Samples (PUMS) from the 1990 Census are used to estimate by race group the number of 2-year-olds in each State who were born outside the United States.

Second, the natality file provides a universe of live births, and therefore it does not reflect infant mortality. To adjust for this reduction in the population, 1989 State-specific infant

mortality rates (deaths under 1 year) by race group (white versus nonwhite) were applied to the vital statistics data. Of course, these rates do not relate directly to the 1997–99 birth cohort, but were used because they relate directly to the 1990 Census data used for the immigration adjustment. It should be noted that mortality in the second and third years of life has not been taken into account. However, this mortality is unlikely to have much impact on the population control totals.

In total, the immigration and infant mortality adjustments have a small impact on the vital statistics control totals as shown in [table D](#).

The poststratification adjustment also adjusts for the potential bias that may exist because the NSECH, as a telephone survey, could not select households without a telephone at the time of the survey. To make this adjustment, the poststratification control totals from the vital statistics were split: One control total for households with telephones and one control total for households without telephones or with an interruption in telephone service for at least 1 week during the past 12 months. The proportion allocated to each group was based on 2000 Current Population Survey data for households without telephones and NSECH data for households with interrupted telephone service. The relative size of the race, age, sex, and education categories were the same within each telephone service group.

There is evidence to suggest that households with telephones at the time of the survey, but with interruptions in telephone service during the year, are more similar to households with no telephone service at the time of the survey than households with uninterrupted telephone service during the year (10, 11, and 12). Therefore,

Table D. Unadjusted and adjusted vital statistics control totals

	Unadjusted control total	Adjusted control total	Percent difference
Total	10,537,670	10,726,319	1.8
Racial group			
White	8,338,886	8,423,726	1.0
Nonwhite	2,198,784	2,302,593	4.7

some compensation for nonresponse by nontelephone households can be made by proportionately increasing the weights for those interviews that could be completed in households with interrupted service. In this way, completed interviews in households with interrupted service represent the incomplete interviews in households without telephone service at the time of the interview.

Household size was considered for poststratification control totals of the NSECH household weights. However, we were unable to locate stable control totals for household size at the time of the survey.

Interpretation of Weighted Estimates

Data users are urged to use caution when interpreting estimates based on the sampling weights. Estimates based on the sampling weights generalize only to the U.S. population of children 4–35 months of age. These estimates do not generalize to the population of parents, the population of mothers, or the population of children’s health care providers.

Variance Estimation and Hypothesis Testing

The NSECH data were obtained through a complex sample design involving clustering and stratification. Because of the complex design, the direct application of standard statistical analysis methods for variance estimation and hypothesis testing may yield misleading results.

There are computer programs available that provide the capability of variance estimation for complex sample designs. For example, SUDAAN is one program that calculates the variance-covariance matrix using the linearization approach (Taylor series expansion). To provide the user with the capability of estimating the complex sample variances in the SLAITS data, we have provided stratum identifiers and primary sampling unit (PSU) codes on the data files. (The PSU for the NSECH is the household.)

These variables and the sample weights are necessary for the calculation of variances.

It should be noted that the stratum identifiers reported on the data set are not specific to IAP areas. Independent samples were selected from each IAP area in proportion to the total number of households with young children and the total number of households with young black non-Hispanic or Hispanic children in each IAP area. Therefore, these IAP areas should be considered strata for variance estimation. However, disclosure of the specific IAP area for each child (even if the code is scrambled) could increase the risk of disclosure of a respondent’s identity. For example, the IAP area with the highest frequency of responses in the West region would be readily identifiable as California. Therefore, the 78 IAP areas have been collapsed into 18 strata by systematically combining 3–6 IAP areas into each stratum. At no point were IAP areas in one census region collapsed with IAP areas in another census region, so regional estimates will be possible. But all strata now contain data from at least three States, which limits the risk of disclosure. However, in some cases, limited reporting of strata can affect statistical inferences drawn from the data. The IAP areas were combined in a systematic fashion developed to minimize the impact on variance calculations. The standard errors for national estimates with key variables were affected only slightly and not in a consistent direction. The Office of Research and Methodology at NCHS has confirmed that the restricted strata identifiers do not have a considerable impact on variance calculations or statistical inferences.

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. Consequently, these analyses require that the user pay particular attention to the coefficient of variation for the estimates of means, proportions, and totals. In addition, small sample sizes or a small number of strata used in the variance calculations may produce unstable

estimates of the variances using the aforementioned computer programs.

Variance Estimation Using SUDAAN

This method requires no recoding of design variables and may be applicable to many complex survey sample design computer programs, 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. The data file needs to be sorted only by stratum and PSU (i.e., household identifier) before invoking SUDAAN. The following SUDAAN design statements are used:

```
PROC . . . DESIGN = WR;
  NEST STRATUM PSU;
  WEIGHT FINALRKW;
```

Variance Estimation Using STATA

The following STATA design statements are used:

```
svyset strata STRATUM
svyset psu PSU
svyset pweight FINALRKW
svyset
```

Quality Control

To ensure high quality data, program staff continually monitored the interviewers, the sample selection procedures, the consistency of the data, and the estimation procedures.

Quality Control of Interviewing

Telephone center supervisors were available to interviewing staff at all times to resolve any questions or concerns about a case. Supervisors regularly observed the interviewing floor to informally monitor interviewers. In addition, supervisory staff used remote

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

Selection of interviewers for monitoring was automated using an algorithm that ensured that newly trained interviewers were monitored more often than experienced interviewers. Experienced interviewers were prioritized for monitoring based upon the length of time since their last monitoring session and recent monitoring scores. Each interviewer was typically monitored at least once a week; however, some interviewers were monitored more often depending on the rules of prioritization. Supervisory staff monitored 5% of all calls made for the NSECH.

Sample Monitoring and Quality Control

The prepared sample of telephone numbers was checked to ensure that it met the sample design specifications. The sample was monitored daily to ensure that the pace of data collection was consistent across the data collection period and to prevent the unnecessary release to CATI of excess cases. Daily analyses of the dynamics in the CATI sample were produced to assist in timely sample management decision-making.

Data Quality Control

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.

Estimation Quality Control

Formulas developed by the sampling statistician for the weights and adjustments were compared with the actual weights and adjustments constructed by the statistical programmer. The variables delivered by the data collection staff to the statistical programmer were used to create independent calculations of the weights to check the programmer's implementation of the statistician's weighting specifications.

In addition to this independent check, univariate statistics were produced and reviewed for the adjustments and weights. Reviewers used general knowledge about the size of the population and expectations for IAP area behavior. For example, interview cooperation rates are typically lower in certain IAP areas (e.g., urban centers) than others (e.g., States in the South and Midwest); the NSECH weights reflect this difference. In addition, the sums of the various weights were compared to ensure that the differences were in the expected direction (e.g., the sum of the child weights is larger than the sum of the household weights).

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: Centers for Disease Control and Prevention, National Center for Health Statistics, State and Local Area Integrated Telephone Survey, National Survey of Early Childhood Health,

2000," should appear at the bottom of all tables. It should also include a disclaimer that credits any analyses, interpretations, or conclusions reached to the author (recipient of the file) 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 not inconsistent with that published by NCHS.

The Public Health Service Act (Section 308d) provides that 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 this law. NCHS takes extraordinary measures to ensure that the identity of data subjects cannot be disclosed. All direct identifiers, as well as any characteristics that might lead to identification, are 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 or establishment discovered inadvertently or otherwise, and advise the Director, NCHS, of any such discovery
- 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 aforementioned stated statutory-based requirements.

References

1. Zell ER, Ezzati-Rice TM, Battaglia MP, Wright RA. National immunization survey: The methodology of a vaccination surveillance system. *Public Health Reports* 115:65-77. 2000.
2. Bethell C, Peck C, Schor E. Assessing health system provision of well-child

- care: The promoting healthy development survey. *Pediatrics* 107:1084–93. 2001.
3. Abt Associates Inc. The National Immunization Survey (NIS): 1999 annual methodology report. Cambridge, MA: Abt Associates Inc. In preparation.
 4. Glascoe FP. Parents' evaluation of developmental status: a method for detecting and addressing developmental and behavioral problems in children. Nashville, TN: Ellsworth & Vandermeer Press, LLC. 1997.
 5. Glascoe FP. Collaborating with parents: using parent's evaluation of developmental status to detect and address developmental and behavioral problems. Nashville, TN: Ellsworth & Vandermeer Press, LLC. 1998.
 6. Camburn DP, Lavrakas PJ, Battaglia MP, et al. Using advance respondent letters in random-digit dialing telephone surveys. Presentation for American Association for Public Opinion Research Conference. May 1995.
 7. American Association for Public Opinion Research. Standard definitions: Final dispositions of case codes and outcome rates for surveys. Ann Arbor, MI: Author. 2000.
 8. Ezzati-Rice TM, Frankel MR, et al. An alternative measure of response rate in random-digit-dialing surveys that screen for eligible subpopulations. *Journal of Economic and Social Measurement* 26:99–109. 2000.
 9. Abt Associates Inc. The National Immunization Survey (NIS): 1994 annual methodology report. Chicago: Abt Associates Inc., 1995.
 10. Brick MJ, Waksburg J, Starer A. Bias in list-assisted telephone samples. *Public Opinion Quarterly* 59:218–235. 1995.
 11. Frankel MR, Srinath KP, Battaglia MP, et al. Using data on interruptions in telephone service to reduce nontelephone bias in a random-digit-dialing survey. In *Proceedings of the Section on Survey Research Methods*. Alexandria VA: American Statistical Association. In press.
 12. Keeter S. Estimating telephone noncoverage bias with a telephone survey. *Public Opinion Quarterly* 59:196–217. 1995.
 13. Srinath, KP. Allocation to strata when sample selection is through screening a larger sample. In *Proceedings of the Section on Survey Research Methods* 1999. Alexandria, VA: American Statistical Association. 351–4. 1999.
 14. Shapiro G, Battaglia M, Camburn D, et al. Calling local telephone company business offices to determine the residential status of a wide class of unresolved telephone numbers in a random-digit-dialing sample. In *Proceedings of the Section on Survey Research Methods*. Alexandria, VA: American Statistical Association. 975–80. 1995.
 15. Brick JM, Waksberg J, Keeter S. Using data on interruptions in telephone service as coverage adjustments. *Survey Methodology* 22 (2). 185–97. 1996.

Appendix I

Sampling and Sampling Weights Technical Summary

Sampling Design

The objective for the State and Local Area Integrated Telephone Survey (SLAITS) National Survey of Early Childhood Health (NSECH) was to select a national sample of 1,200 children between 4–35 months of age and an additional sample of 800 black non-Hispanic or Hispanic children in the same age group. The main sample of 1,200 children included children from all racial and ethnic backgrounds. The selection of children in the two samples was done in two stages. First, a sample of households was selected and then screened to identify households containing at least one eligible child for the survey; then one child was selected at random from each such household. The sample of households selected for screening for the NSECH was a subsample of the households screened for the National Immunization Survey (NIS). Therefore, the sampling design for the selection of households in the NSECH is essentially the same as the design for the selection of households in the NIS.

Drawing the National Immunization Survey Sample

This section describes the process for drawing the NIS sample, including how the frame is updated, how telephone numbers are associated with Immunization Action Plan (IAP) areas, and how the NIS replicates are formed. The process for removing businesses, nonworking lines, and duplicate telephone numbers from the frame is also explained. This section is designed for readers interested in how the NIS frame is developed and maintained. The description of the NSECH sample design appears in the “National Survey of Early Childhood Health Sample Allocation” section.

Associating Telephone Numbers with Immunization Action Plan Areas—To draw a sample of telephone numbers in an IAP area, one must, in effect, compile a list of all telephone numbers that belong to that area. For some IAP areas this step is straightforward. For example, when the IAP area has a single area code, the list would consist of all telephone numbers within the central office codes that are in service in that area code. (Combined, an area code and a central-office code form a “prefix area.” For example, when a telephone number is 617–555-1234, 617–555 is the prefix area corresponding to the 555 central office in the 617 area code.)

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

Drawing the Initial National Immunization Survey Sample—The sample frame for an IAP area consists of banks of 100 consecutive telephone numbers within the prefix areas assigned to the IAP area. For example, the numbers from 617–555-7100 to 617–555-7199 constitute a working bank in the 617–555 prefix area. Banks that contain zero directory-listed residential telephone numbers are excluded from the frame because they have very little chance of containing working residential numbers. For this preliminary step, the GENESYS Sampling System (a proprietary product of Marketing Systems Group) uses a file of directory-listed residential numbers from Donnelley Marketing Information Services (DMIS). The result is a file that lists the remaining banks (the “1+ working banks”). 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 being selected.

Updating the National Immunization Survey Sampling Frame—The set of telephone banks with at least one directory-listed residential telephone number changes over time. As a result, the sampling frame of 1+ working banks also needs to be updated. The recent phenomenon of frequent area-code splits has produced additional changes to the sampling frame. The GENESYS database reflects those changes in a quarterly update. Marketing Systems Group has developed a separate sampling frame for each IAP area. Quarterly, the database is examined to determine whether currently included banks should be assigned to different IAP areas and to assign newly included banks to IAP areas. The rules for assignment are the same as in the initial definitions of the IAP areas.

Once all modifications have been made to the GENESYS database, a number of checks ensure that all changes have been applied correctly and that the new database produces samples that are consistent with those produced before the changes. These checks compare the number of active banks and RDD-selectable lines in each IAP area before and after the update. In parallel, the actual exchanges assigned to each IAP area before and after the update are compared. Small changes are expected—new banks are put into service as new numbers are assigned. In the event of a major discrepancy in any of these checks, Marketing Systems Group is notified of the difference and asked to provide documentation of the reasons for the change.

Forming National Immunization Survey Sample Replicates—The total size of the initial sample selected for an IAP area is calculated according to the formula:

Total sample size = $(1.5)T/(AC)$,
where:

- T is the quarterly target number of completed NIS interviews for the IAP area (this target number of completes ranges from 101 to 129);
- A is the proportion of telephone numbers that remain after identifiable business and

nonworking numbers have been removed (as discussed below); and

C is the proportion of telephone numbers sent to the interviewers in the telephone center that result in a completed interview.

In the formula, A and C are specific to the IAP area, and they are adjusted each quarter, taking into account the results from previous quarters. The target, T, may also reflect the results in the previous quarters; for example, if the three previous quarters have not produced their target total of completes, T is raised accordingly. The factor 1.5 allows for variation in actual performance among IAP areas and among quarters.

The total sample selected is then randomly divided into 26 replicates; the first 24 are equal in size, and the last 2 are one-half that size. Each replicate is, in effect, a random sample of the randomly selected overall sample. Because replicates are released to the telephone center individually, this procedure permits smoother release of the sample (at the rate of one or two replicates per week) for each IAP area separately, as needed. Toward the end of the quarter, the half-size replicates allow tighter control over the total amount of sample released. The aim is to produce an even distribution of work in the telephone center over the course of a quarter and to give all cases an equal probability of being completed.

Removing Business and Nonworking Numbers—In a traditional random-digit-dialed (RDD) survey, all sampled telephone numbers are given to interviewers for dialing. Because over one-half of all selected telephone numbers are businesses or are unassigned, a large part of the interviewers' efforts may be directed simply to identifying and removing these numbers from the active sample. Marketing Systems Group has produced companion products to their GENESYS Sampling System that can quickly and accurately reduce the size of this task.

First, the selected sample is matched against a GENESYS data file that contains telephone numbers that are directory-listed in a business yellow

pages and are not directory-listed in a residential white pages. Any business numbers so identified are removed from the sample.

Second, numbers listed in residential white pages are identified and temporarily set aside.

Third, a hardware system, GENESYS-ID Plus, screens the remaining sample to remove a portion of the nonworking numbers. Using personal computers with special hardware and software, this system (the "autodialer") automatically dials the telephone numbers to detect nonworking numbers. This is indicated by the familiar tritone signal for out-of-service numbers, by an extended period of silence, or by continuous noise on the line. If the telephone number being dialed starts to ring, GENESYS-ID Plus hangs up immediately. (Fewer than 4% of the numbers dialed actually ring at the receiving end.) To further reduce the chance of annoyance if a residential number rings, the white pages directory-listed numbers identified in step two are not dialed, and the GENESYS-ID Plus equipment is operated only during daytime hours on weekdays.

Finally, the residential white pages directory-listed numbers are combined with those that were not removed by the auto-dialers to produce the sample for the telephone center. Together these steps cull out approximately 18 to 20% of the sampled lines in the NIS sample.

Obtaining Addresses for Advance Letters—To obtain addresses that correspond to telephone numbers in the sample, the numbers for each replicate are sent to a computerized name-and-address-locating service. This commercial service uses a database of over 140 million residential and business telephone numbers, and includes approximately 30 million unpublished telephone numbers. In some instances, by customer preference, a listing may not contain a street address. The resulting file contains both numbers with and without listing matches. Matched listings contain a business or residential identifier.

"Do Not Call" Requests—The NIS maintains a file containing telephone numbers of people who have requested that they not be called. Each quarter's sample is compared with this file, and numbers in the "Do Not Call List" are not included in the quarterly sample of numbers loaded into the CATI system.

Duplicate Telephone Numbers—Because of the repeated quarterly selection of sample in each IAP area, it is possible that some telephone numbers will be selected more than once. To avoid respondent problems created by recontacts for the same survey, a further processing step unduplicates the sample numbers selected for the NIS. Each complete replicate sample file is compared with all sample files released during the four previous quarters. Detailed records are kept of all area code splits to ensure accurate unduplication. The duplicate numbers are then classified into one of four categories, based on final disposition codes from earlier quarters:

- 1) Immunization interview fully or partially completed
- 2) Ineligible household
- 3) Final refusal household
- 4) All other final dispositions, such as nonworking, out-of-scope, nonresidential, and noncontact.

Lines in category 4 are not permanently resolved, so they are combined with the unique numbers and are treated as such by telephone interviewers. Lines in category 3 remain in the sample, but they are marked for the current quarter as final refusals. This procedure ensures that those households will not be disturbed, but they are still counted in the study's statistics. Duplicate lines in categories 1 and 2 receive special handling by interviewers.

National Survey of Early Childhood Health Sample Allocation

To determine the number of telephone numbers that the NSECH should select, it was necessary to determine the number of completed interviews required in each IAP area to produce national estimates. First, the

national sample of 1,200 children (households) was allocated among IAP areas in proportion to the estimated number of households with children between 19–35 months of age in the IAP area, based on data from the National Immunization Survey.

Let M_h denote the estimated number of households with children between 19–35 months of age in the h th IAP area, and let

$$M = \sum_{h=1}^{78} M_h$$

denote the estimated total number of households with children over all 78 IAP areas.

Let m_h denote the number of children that we want to select in the h th IAP area. Under proportional allocation,

$$m_h = 1200 \frac{M_h}{M}$$

Assuming that the ratio of the number of children between 4–35 months of age to the number of children between 19–35 months of age varies little among IAP areas, this allocation gives every household with children between 4–35 months of age approximately the same probability of being included in the main sample.

Two different allocation schemes were considered for the NSECH sample of the 800 black non-Hispanic or Hispanic children. (For reading ease, these children will hereafter be referred to as minority children, though this population is not inclusive of all minority races and ethnicities.) The first scheme was simply to allocate the sample among IAP areas in proportion to the estimated number of households with minority children. However, from a practical standpoint, this allocation does not take into account the density of minority households in each IAP area. Therefore, in some IAP areas in which the *proportion* of minority households is low, a very large number of households would have to be screened to identify those with minority children, thus increasing the time and cost for the survey.

The second allocation scheme that was considered (and adopted) takes into

account the density of the minority population in each IAP area. In this approach, the density-eligibility rate is defined as the number of minority households with eligible children in an IAP area divided by the total number of eligible households. This eligibility rate varies widely among IAP areas. For the same number of telephone numbers dialed, this second allocation scheme will yield a larger number of eligible households with minority children than the first scheme (proportional allocation). In other words, for the same overall sample of minority households, a smaller screener sample of households is needed. The allocation is described as follows:

Let N_h be the number of minority households with children between 19–35 months of age in the h th IAP area. Let $e_h = N_h / M_h$ be the eligibility rate or the proportion of minority households in the h th IAP area.

Then the number of minority children between 4–35 months of age needed to sample from the h th IAP area is given by

$$n_h = 800 \frac{N_h \sqrt{e_h}}{\sum_{h=1}^{78} N_h \sqrt{e_h}}$$

This allocation gives a larger sample than proportional allocation in IAP areas in which the eligibility rates are high. Because greater variability is generally expected among minority children in IAP areas with larger proportions of minority households, this allocation helps to reduce the variance of the overall estimates for the minority children, as it allocates a slightly larger sample to those areas.

As indicated earlier, this scheme yields more minority households than proportional allocation for the same number of sampled telephone numbers (13). In other words, a smaller number of screener calls is needed to identify the same number of minority households without losing much precision in the estimates. This allocation actually minimizes both cost and variance (that is, this allocation minimizes cost when the target variance is held constant, and minimizes variance when the total cost

is held constant). It was initially estimated that 15% fewer telephone calls would be made than otherwise using proportional allocation of the total sample of minority households.

The number of households required to be screened to achieve the desired number of households in the main sample and the oversample, was computed using the NIS eligibility rates for households with children and households with minority children in each IAP area. Then the initial number of telephone numbers required to obtain the desired number of screener households in each IAP area was determined.

This sample of telephone numbers was selected from the sample already selected for the NIS in each IAP area. These numbers were designated as belonging to both the NSECH sample and the NIS sample.

Sample Selection

A subsample of the telephone numbers designated for the NSECH survey was selected for the main sample. These numbers were called in an attempt to identify households and to establish study eligibility in those households. For the main sample, any household with at least one child between 4–35 months of age was considered eligible. An eligible child was then selected at random from the household. The remaining telephone numbers were designated for the oversample, and were used to identify households with minority children between 4–35 months of age; one minority child was selected at random from these eligible households.

In some IAP areas, the NSECH required more than one quarter of NIS sample. Because sample selection in each quarter is independent in the NIS, some numbers were selected in the first quarter of 2000 and some numbers in the second quarter. The split between the two quarters varied among IAP areas.

The population of telephone numbers changed little between the two quarters. Therefore, for computing base sampling weights, the overall probability of selection was computed assuming

that there were no major changes in the sample (and population of telephone numbers) between the two quarters. Computing weights independently in the two quarters would have resulted in large and widely varying weights within an IAP area, with no indication that the numbers called in either quarter were different with respect to characteristics under study.

Sampling Weights

To produce population-based estimates, each respondent child for whom complete data were available was assigned a sampling weight. These sampling weights compensate for varying probabilities of selection of children because of stratification by IAP area and clustering of children within households. Also, the weights are needed to account for nonresponding households and for noncoverage of households without telephones (i.e., only households with telephones are included in the sampling frame).

The sampling weight combines the following:

- The IAP area base weight, which reflects the probability of selecting the household telephone number
- An adjustment for households with multiple telephone numbers
- Adjustments for unit nonresponse at various phases of identification and data collection

The method of determining the overall weight for each respondent child in the survey is described in the following section.

Base Sampling Weight

As indicated earlier, first a single sample of telephone numbers was selected in each IAP area. The base sampling weight is determined by first computing the probability of selection of the household either in the first quarter or in the second quarter, and then the reciprocal of this probability. A telephone number selected in the first quarter is not again selected for data collection in the second quarter. Therefore, if the probability of selection of a telephone number in the h th IAP

area in the first quarter is p_{1h} , the probability of selection of the same number in the second quarter is $(1 - p_{1h}) p_{2h}$, where p_{2h} is the conditional probability of being selected in the second quarter (given nonselection in the first). If w_{1h} and w_{2h} are the reciprocals of p_{1h} and p_{2h} , respectively, the base weight for a respondent child in the h th IAP area is computed as

$$w_h = \frac{w_{1h}w_{2h}}{(w_{1h} + w_{2h} - 1)}$$

Because the selection of telephone numbers uses simple random sampling, the probabilities of selection in each IAP area are simply the number of telephone numbers selected divided by the total number of telephone numbers available for selection.

Multiple-Telephone Households

The base sampling weight of eligible households that have multiple voice-use telephone lines was adjusted to compensate for the higher probability of selection of these households. The adjustment divides the base sampling weight by the number of telephone lines in that household.

Let the number of telephone lines in household i in IAP area h be A_{hi} . The adjusted weight is

$$w_{hi} = \frac{w_h}{A_{hi}}$$

If the household has only one telephone line, the adjusted weight is the same as the base sampling weight.

Unit Nonresponse Adjustment 1 (Residential Status Unknown)

When a selected telephone number is called, three results are possible:

- The number called is determined to be a household
- The number called is determined not to be a working residential number (It could be a business number or nonworking number.)
- There is nonresponse to the screening attempt, and therefore the status of the telephone number is unknown

The determination that the number called is not a working residential number, or that the status is unknown, was made only after several call attempts. The method of adjusting the base sampling weight to account for possible residential numbers in the third category described earlier was the same as the method used in the NIS. This is described in detail in the *1994 NIS Methodology Report* (9). In the NIS, information external to the survey is used to reallocate these unknown numbers to either residential or nonresidential numbers.

Let the number of telephone numbers in each of the three categories be n_{h1} , n_{h2} , n_{h3} , respectively.

The first nonresponse adjustment factor is

$$b_h = \frac{n_{h1} + \hat{n}_{h31}}{n_{h1}}$$

where \hat{n}_{h31} is the estimated number of households in the “status unknown” category. The procedure for estimating \hat{n}_{h31} is based on a study conducted in 1994 in which telephone company business offices were asked to report on the status of a sample of category 3 telephone numbers (14). The results of the study showed that the proportion of residential numbers varies according to the region, whether the telephone number was directory-listed, and the type of noncontact (e.g., ring-no-answer versus an answering machine).

Therefore, the nonresponse adjustment b_h was calculated within each IAP area for a set of cells defined by region, disposition code and whether the number is directory-listed. To keep the notation simple, the adjustment factor is still denoted by b_h though it could differ for households within the IAP area.

The nonresponse-adjusted base sampling weight after nonresponse adjustment 1 is $b_h w_{hi}$.

Unit Nonresponse Adjustment 2 (Households of Unknown Eligibility)

A second form of nonresponse may occur because a household does not complete the screener questions. For these telephone numbers, identified as

belonging to a household, there was no determination of eligibility. A description of the adjustment for this form of nonresponse follows.

First, the total number of households screened from both the main sample and the oversample was identified. Let the number of households screened in the main sample be m_{h1} and in the oversample be m_{h2} . We have

$$n_{h1} = m_{h1} + m_{h2}$$

Next, the total number of eligible households for the *main* sample was determined. Screening the households in the main sample produced three groups of households.

Main Sample Group 1—Eligible households. These are households containing at least one child between 4–35 months of age. Let the number of such known households be q_{h1} . It is not possible at this stage to divide this group into minority and nonminority households, as no information was collected on race/ethnicity of children in the household.

Main Sample Group 2—Ineligible households. These are households not containing a child 4–35 months of age. Let q_{h2} denote the number of ineligible households.

Main Sample Group 3—Households of unknown eligibility. Let q_{h3} be the number of households whose eligibility is unknown. We then have

$$m_{h1} = q_{h1} + q_{h2} + q_{h3}$$

Let \hat{q}_{h31} denote the estimated number of households with eligible children in the third group. This is estimated by applying the proportion of eligible households among known eligible and ineligible households in group 3.

The nonresponse adjustment for the main sample is given by

$$c_h = \frac{q_{h1} + \hat{q}_{h31}}{q_{h1}}$$

where

$$\hat{q}_{31} = \left[\frac{q_{h1}}{q_{h1} + q_{h2}} \right] q_{h3}$$

c_h can also be expressed as

$$c_h = \frac{m_{h1}}{q_{h1} + q_{h2}}$$

The nonresponse-adjusted sampling weight for households in the main sample after nonresponse adjustment 2 is $c_h b_h w_{hi}$.

Similarly, as a result of screening the households in the oversample, we have four groups:

Oversample Group 1—Eligible minority households, i.e., those eligible to be included in the oversample. Let the number of such households be u_{h1} .

Oversample Group 2—Nonminority households with an age-eligible child, i.e., those not eligible to be included in the oversample because of nonminority status. Let the number of such households be u_{h2A} .

Oversample Group 3—Age-ineligible households. Let the number of such households be u_{h2B} . Let $u_{h2} = u_{h2A} + u_{h2B}$ represent the number of ineligible households in the oversample.

Oversample Group 4—Households of unknown eligibility. These households may contain age-eligible minority children, age-eligible nonminority children, or no children of eligible age. Let the number of such households be u_{h3} .

The adjustment factor for possible eligible households in group 4 is

$$d_h = \frac{u_{h1} + \hat{u}_{h31}}{u_{h1}}$$

where

$$\hat{u}_{h31} = \left(\frac{u_{h1}}{u_{h1} + u_{h2}} \right) u_{h3}$$

d_h can also be written as

$$d_h = \frac{m_{h2}}{u_{h1} + u_{h2}}$$

The nonresponse-adjusted base sampling weight for households in the oversample is $d_h b_h w_{hi}$.

Subsampling Adjustment

This adjustment accounts for the fact that households with age-eligible minority children were selected in both

the main and the oversample, whereas households with only nonminority children were selected only in the main sample. Therefore, the base sampling household weights for nonminority children in the main sample have to be increased to account for nonminority households in the oversample. The subsampling adjustment was determined as follows.

First, we estimated the number of nonminority households among the estimated number of eligible households in the main sample by applying the proportion of number of nonminority interviewed children among all interviewed children in the main sample to the total estimated number of eligible households in the main sample.

Among the children interviewed in the main sample in an IAP area, let the number of nonminority children be z_{hx} and the number of minority children be z_{hy} . The estimated number of nonminority households in the main sample is given by

$$\hat{q}_{h1A} = \left[\frac{z_{hx}}{z_{hx} + z_{hy}} \right] [q_{h1} + \hat{q}_{h31}]$$

Second, we estimated the number of eligible nonminority households in the oversample.

The estimated number of eligible nonminority households among households in group 4 (households with unknown eligibility) is given by

$$\hat{u}_{h2A} = \left[\frac{u_{h2A}}{u_{h1} + u_{h2}} \right] u_{h3}$$

An adjustment to the household weight for households with nonminority children in the main sample to account for the fact that we did not select households with nonminority children in the oversample is given by

$$ss_{ha} = \frac{\hat{q}_{h1A} + u_{h2A} + \hat{u}_{h2A}}{\hat{q}_{h1A}}$$

The adjusted base sampling household weight for nonminority children in the main sample is

$$ss_{ha} c_h b_h w_{hi}$$

The adjusted sampling household weight for minority children in the main sample is unchanged and is $c_h b_h w_{hi}$.

An Example of Subsampling Adjustment

Assume that there are 100 identified households in the total sample. Let 60 of these households be in the main sample and 40 of them be in the oversample. These are households to be screened for the study.

Main Sample Adjustments—The 60 main sample households are screened with the following results:

- 20 eligible households,
- 30 ineligible households, and
- 10 households of unknown eligibility.

The estimated number of eligible households in the unknown category is $(20/50) \times 10 = 4$. Therefore, the estimated number of eligible households in the main sample is $20 + 4 = 24$. The nonresponse adjustment 2 for the main sample is $(24)/20 = 1.2$.

Assume that after the children in the selected households in the main sample have been interviewed, there are 15 nonminority and 5 minority children in the main sample. The proportion of nonminority children is $15/20$. If this proportion is applied to the estimated 24 households in the main sample, the estimated number of nonminority households in the main sample is $(15/20) \times 24 = 18$.

Oversample Adjustments—The 40 oversample households are screened with the following results:

- 5 minority households
- 10 nonminority households
- 10 age-ineligible households
- 15 households of unknown eligibility

The estimated number of nonminority households in the unknown category is $(10/25) \times 15 = 6$.

Therefore, the estimated number of nonminority households in the oversample is $10 + 6 = 16$.

To account for 34 ($18 + 16$) households using the 18 in the main sample, the subsampling adjustment for nonminority children in the main sample is $(18 + 16)/18 = 1.89$.

When the nonresponse 2 adjustment of 1.2 in the main sample and the

subsampling adjustment of 1.89 to the 15 children in the main sample are both applied, the estimated total number of nonminority households in the overall sample is 34.

Unit Nonresponse Adjustment 3 (Nonresponse by Eligible Households)

A household in the main sample was considered a nonrespondent if it was eligible, but data regarding a child from the household were not obtained. The weights of other responding households were increased to account for this nonresponse. These adjustments are made within an IAP area.

Among the known eligible households in the *main* sample (q_{h1}), let q_{h1}^* be the number of households who completed an interview. In the oversample, let u_{h1}^* be the number of responding households out of u_{h1} . The adjustment factors for nonresponse to data collection in the main sample and the oversample are then

$$\frac{q_{h1}}{q_{h1}^*} \quad \text{and} \quad \frac{u_{h1}}{u_{h1}^*}$$

The final nonresponse-adjusted household weight for *nonminority* children in the main sample is the product of the adjustments and weights described thus far:

$$w_{hi}^* = c_h b_h w_{hi} s_{ha} \left(\frac{q_{h1}}{q_{h1}^*} \right)$$

and the household weight for a *minority* child in the main sample is

$$w_{hi}^m = c_h b_h w_{hi} \left(\frac{q_{h1}}{q_{h1}^*} \right)$$

The nonresponse-adjusted household weight for minority children in the *oversample* is

$$w_{hi}^o = d_h b_h w_{hi} \left(\frac{u_{h1}}{u_{h1}^*} \right)$$

Adjustment of Household Weights to Known Control Totals

Adjusting the household weights so that the sum of the weights agrees with known population control totals was

considered. One characteristic considered for the control total was household size. The weighted household size of households containing children between 0–2 years of age from the Current Population Survey (CPS) for 1999 and 2000 was compared with the weighted household size in the NSECH.

There are no large differences between the NSECH and the CPS in the distribution of households by size. In fact, the estimated distributions from the CPS also vary from 1 year to the next. Because these are estimates and cannot be considered as solid control totals, it was decided not to adjust the household weights at this stage.

Child Weights

Next, the *child*-level nonresponse-adjusted sampling weights were created. Let the number of children between 4–35 months of age in a selected household (say the *i*th household) in the main sample be t_{hi} . Because one child is selected at random, the weight for a nonminority child in the main sample is given by

$$w_{hi}^{*c} = w_{hi}^* t_{hi}$$

Note that the weight is the same as the adjusted household weight (w_{hi}^*) except that households with more than one eligible child are given proportionately a greater weight than households with only one eligible child. If the child is a minority child, the weight is given by

$$w_{h1}^{mc} = w_{hi}^m t_{hi}$$

Let t_{hi}^o be the number of minority children in a household in the oversample. The child weight for a respondent child in the oversample is then

$$w_{hi}^{oc} = w_{hi}^o t_{hi}^o$$

Adjustment for Noncoverage of Nontelephone Households

The NSECH is a survey of telephone households, so the probability of selection for households with no telephones at the time of the survey is zero. Therefore, the results of this survey may be biased if no adjustment

is made for noncoverage of nontelephone households. Although the customary poststratification adjustments by race, age, and sex will adjust to some degree for noncoverage, it assumes that telephone and nontelephone households in each cell are similar with respect to the characteristics under study. Therefore, the sampling weights are adjusted to account for households that did not have telephone service at the time of the survey in addition to the poststratification adjustments. Evidence suggests that households with telephones at the time of the survey, but with interruptions in telephone service during the preceding year, are more similar to households with no telephone service at the time of the survey than households with uninterrupted telephone service during the year (12). The adjustment for noncoverage of nontelephone households uses data on interruption in telephone service obtained from the respondent households in the sample. The procedure for adjusting the weights consisted of the following steps (11, 15).

Step 1—The weighted percent of children between 4–35 months of age coming from households with interruptions in telephone service was obtained. This is estimated by taking the ratio of the estimated number of children from households with interruption to the estimated total number of children between 4–35 months of age. This survey estimate was obtained using the child-level nonresponse-adjusted sampling weights. Let the proportion with interruptions in service be I_t .

Step 2—From 2000 CPS data, the percent of children between 0–2 years of age coming from households with telephones and without telephones was obtained. Let r_t be the proportion of children from telephone households.

Step 3—The total number of children between 4–35 months of age was obtained from the National Vital Statistics System control totals counting children born in the United States between May 1997 and December 1999. Let N be the total number of children between 4–35 months of age from the

vital statistics records.

Step 4—The percent of children from telephone households was applied to the total obtained in step 3 and the total number of children was split into two groups. The numbers of children in telephone and nontelephone households are given, respectively, by $N_t = Nr_t$ and $N_o = N - N_t$.

Step 5—The following two control totals were formed:

- The number of children in telephone households with no interruptions in service during the entire year
- The number of children in nontelephone households or in telephone households that had an interruption in service.

The two totals are $N_t - N_t I_t$ and $N_o + N_t I_t$. These totals are used to adjust the weights of children from households with interruptions in telephone service along with poststratification weight adjustments.

Poststratification

To compensate for potential biases due to noncoverage and nonresponse, poststratification adjusts the weights to match population control totals for combinations of key demographic variables (such as race, sex, age, mother's education, and income) obtained from an independent source. Two sources were considered for the number of children between 4–35 months of age by age, sex, and race. The first was the U.S. Census Bureau projection by single years of age by race/ethnicity and sex. The other was the vital statistics records, which also give information on age, race/ethnicity, and sex. In addition to this information, data are also available on mother's education in the vital statistics records. No independent source could be identified that would provide income data using questions similar to those used in this survey.

In the U.S. Census Bureau projections, the number of children between 0–12 months of age were adjusted to get the number between 4–35 months of age. More importantly, no information on mother's education is

available through the U.S. Census Bureau. Therefore, if the U.S. Census Bureau source were used, an additional source, such as the CPS, would be required for data on mother's education. It was thought that mother's education might be an important poststratification variable in the absence of poststratification on household income. Household income may be correlated with mother's education and many of the health characteristics of interest in the survey may also be related to mother's education. For these reasons and because the NIS currently uses vital statistics records to create control totals for poststratification adjustment, the vital statistics records were used to derive the control totals.

For NSECH, the independent source was the vital statistics count of children born in the United States between May and December of 1997 and all months of 1998 and 1999. This range of birth months was obtained by using the midpoint of the NSECH data collection, April 2000. Adjusting the weights based on these population control totals for age, sex, race, and mother's education helps compensate for any potential noncoverage and nonresponse biases.

These counts were adjusted for infant mortality, immigration, and migration between IAP areas. The adjustments to the vital statistics data are the same ones used by the NIS to poststratify the NIS weights. See chapter 8 of the *1994 NIS Methodology Report* (9). These adjustments are necessary because the use of the raw (unadjusted) natality data file to form the required population control totals for the NIS has three significant limitations. The third limitation is not applicable to NSECH, but is mentioned here in the interest of full disclosure. The adjustment based on this limitation has no effect on the population control totals used for NSECH.

First, the natality file provides a universe of live births, and therefore it does not reflect a reduction in the population of children from infant mortality. To adjust for this reduction in the population, 1989 State-specific infant mortality rates (deaths under 1 year) by race group (white versus nonwhite) were applied to the vital

statistics data. Of course, these rates do not relate directly to the 1997–99 birth cohort, but were used because they relate directly to the 1990 Census data used for the immigration adjustment (see next paragraph). It should be noted that mortality in the second and third years of life has not been taken into account. However, this mortality is unlikely to have much impact on the population control totals.

Second, the natality file will not reflect children born outside the United States who immigrate to this country before reaching 19–35 months of age. This immigration will increase the population size of children, but the effect is likely to vary considerably from IAP area to IAP area. For the NIS, the Public Use Microdata Samples (PUMS) from the 1990 Census were used to estimate by age group the number of 2-year-olds in each State who were born outside the United States.

Third, the natality file records State, county, and city of residence at time of birth. Children may move from one IAP area to another by the time they reach 19–35 months of age. 1990 Census data were used to estimate the percentage of 2-year-old children who had been born outside their state of residence at the time of the 1990 Census enumeration. A different State would indicate migration over the 2-year period or that the child was born in a hospital outside the State of residence (e.g., the State of residence is Maryland, but the child was born in a hospital in the District of Columbia). In general, a nontrivial percentage of 2-year-old children were born in a different State than their State of residence. This inter-IAP-area migration might reduce or inflate the population control totals for a given IAP area. The 1990 Census data, however, allow us to estimate net migration only for states, and not for individual IAP areas. Given the limitations of the data, a simple State-by-State adjustment for net migration was made for each race group.

To estimate in-migration, the 1990 PUMS was used to estimate the proportion of 2-year-olds living in State X that were born in a different State in the United States. This proportion reflects in-migration and also mothers

who resided in State X at the time of the birth but gave birth in a different State. To remove the latter component, this proportion was multiplied by the vital statistics proportion of births to mothers residing in State X who gave birth in State X. To estimate out-migration, the PUMS was used to estimate the proportion of 2-year-olds born in State X but who no longer live in State X. This proportion reflects out-migration and also mothers living outside State X who gave birth in State X. To remove the latter component, this proportion was multiplied by the vital statistics proportion of births occurring in State X among mothers who resided in State X. Net migration then equals in-migration minus out-migration. This NIS Vital Statistics adjustment does not affect the national control totals for the NSECH.

The infant mortality and immigration adjustments have a small impact on the vital statistics control totals, as shown in [table D](#).

Fifty-four cells were created by taking the cross-classification of three categories of mother's education, three age categories for children, three race/ethnicity categories, and two categories for sex of child. The 54 cells were collapsed into 39 categories because the sample sizes in some cells were too small, giving rise to very large weights.

The totals by age x race x sex x mother's education are known, but the corresponding subtotals for the telephone and nontelephone categories are unknown. Therefore, the weights are adjusted to agree with the known totals through raking. Raking is a poststratification procedure that can be used when poststrata (control totals) are formed using more than one variable and only the marginal totals are known. It consists of adjusting the weights iteratively so that the sum of the weights agrees with the totals in the margins. For example, first the weights in each cell are adjusted such that the sum of the weights equals the 39 poststratification totals in one margin. Then, weights are adjusted such that they agree with the column totals. After a few iterations, the sums of the weights agree with row totals and column totals.

In the NSECH, the sums of the weights agree with row totals by race x sex x education x age and the total telephone and nontelephone populations in the columns. The total weighted number of children is the same as the control total of 10,726,319.

After raking, the weights were examined to identify any extremely large weights. These weights affect the variance of the estimates. A decision was made to trim weights that exceeded the median weight plus roughly 6 times the interquartile range. The outlier weights were trimmed to be equal to the median plus 5.8 times the interquartile range. The raking procedure was applied again using the trimmed weights to ensure that the sums of the weights agree with the known control totals.

Appendix II

Related Survey Content and Sources of Questions

Item#	Question Content	Item Text	Source for Item, or Surveys with Related Content
<i>Health Care Utilization</i>			
A1Q01	Number of total health care visits	How many times has (CHILD) been to any doctor or other healthcare provider for any reason? Please include all visits that were made when (CHILD) was sick, or needed a shot or a check-up.	MEPS, NHIS, PHDS+, PSID-CD
A1Q02	# of well child check ups	Well-child care visits are visits that are made to a doctor or healthcare provider who takes care of (CHILD) when (his/her) is not sick, but needs a check-up or a shot. (In the last 12 months/ Since CHILD's birth), how many times has (he/she) had a well-child visit for a check-up or shot?	NHIS
A1Q03	Location of well-child care	When (CHILD) needs a shot or a check-up, where do you usually take (him/her)?	CWF-SPYC, NS-CSHCN
A1Q04	Is there any regular provider	Is there a particular doctor or other healthcare provider that you usually take (CHILD) to for well-child care? By healthcare provider I mean any nurse, nurse practitioner, physician assistant or other person who may have provided healthcare to (CHILD).	NHIS, PHDS+
A1Q05	Usual kind of regular provider	What kind of healthcare provider(s) does (CHILD) usually see for well-child care, that is for check-ups and shots? Is (his/her) healthcare provider a pediatrician, family practitioner, pediatric nurse practitioner, physician's assistant, or some other health professional?	NHIS, PHDS+
A1Q06	Urban/rural of usual provider	Which of the following would best describe the location of your child's (HEALTHCARE PROVIDER)'s clinic or practice?	CWF-PDS
A1Q07	Gender of provider	Is this (HEALTHCARE PROVIDER) a man or a woman?	PHDS+
A1Q10	Selection of provider	How did YOU start taking (CHILD) to (his/her) current (HEALTHCARE PROVIDER)?	CPRQ, MEPS

Our appreciation is extended to Moira Inkelas, Ph.D.; Harvinder Sareen, M.P.H.; and Janel Wright, from the University of California, Los Angeles, for preparing this appendix.

Item#	Question Content	Item Text	Source for Item, or Surveys with Related Content
<i>Parental Perception of Care</i>			
A2Q01	Visit length	Let's talk about the well-child care (CHILD) has received (in the last 12 months/since [his/her] birth). Think about the last time you took (CHILD) for a check-up. How long was the doctor or healthcare provider who examined (CHILD) in the room with you?	CWF-PDS, MEPS
A2Q03	Ability to ask questions	During (CHILD)'s last check-up, did you ask all the questions you wished to ask?	NHIS
A2Q05	Satisfaction w/check ups on 1–10 scale	How would you rate (CHILD)'s check-ups (during the last 12 months/since [his/her] birth). Please include all the doctors, nurses, and other health providers that (CHILD) may have seen. Use any number from 0 to 10 where 0 is the worst healthcare possible and 10 is the best healthcare possible.	CAHPS
A2Q08	Child's health rated	In general, how would you describe (CHILD)'s health? Would you say (his/her) health is excellent, very good, good, fair, or poor?	CAHPS, CWF-SPYC, MEPS, NHIS, PHDS+, PSID-CD
<i>Interactions with Healthcare Providers</i>			
A3Q01	Breastfeeding (<i>under 10 months</i>)	Since (CHILD)'s birth, have (his/her) doctors or other healthcare providers talked with you about breast-feeding?	PHDS, PHDS+
A3Q02	Issues related to food/feeding (<i>under 10 months</i>)	Since (CHILD)'s birth, did (his/her) doctors or other healthcare providers talk with you about issues related to food or feeding (CHILD) such as the introduction of solid foods?	PHDS, PHDS+
A3Q03	Child's sleeping positions (<i>under 10 months</i>)	Since (CHILD)'s birth, did (his/her) doctors or other health care providers talk with you about (CHILD)'s sleeping positions?	PHDS, PHDS+
A3Q04 / A3Q13	Night waking and fussing (<i>4 to 18 months</i>)	Since (CHILD)'s birth, did (his/her) doctors or other health care providers talk with you about night waking and fussing?	PHDS, PHDS+
A3Q05	How child communicates needs (<i>under 10 months</i>)	Since (CHILD)'s birth, did (his/her) doctors or other health care providers talk with you about how (CHILD) communicates (his/her) needs?	PHDS, PHDS+
A3Q06	Burn prevention (<i>under 10 months</i>)	Since (CHILD)'s birth, did (his/her) doctors or other health care providers talk with you about burn prevention methods, such as changing hot water temperatures in your home?	PHDS, PHDS+
A3Q07/ A3Q20/ A3Q33	Using a car seat (<i>all ages</i>)	Since (CHILD)'s birth, did (his/her) doctors or other health care providers talk with you about using a car-seat?	PHDS, PHDS+
A3Q08/ A3Q21/ A3Q34	Child care arrangements (<i>all ages</i>)	Since (CHILD)'s birth, did (his/her) doctors or other health care providers talk with you about childcare arrangements?	PHDS, PHDS+
A3Q09/ A3Q22/ A3Q35	Importance of reading (<i>all ages</i>)	Since (CHILD)'s birth, did (his/her) doctors or other health care providers talk with you about the importance of reading to (CHILD)?	PHDS, PHDS+
A3Q12/ A3Q25	Issues related to food/feeding (<i>10 to 35 months</i>)	(In the last 12 months/since [his/her] birth), did (CHILD)'s doctors or other health care providers talk with you about issues related to food or feeding (him/her)?	PHDS, PHDS+
A3Q14	Sleeping with a bottle (<i>10 to 18 months</i>)	(In the last 12 months/since [his/her] birth), did (CHILD)'s doctors or other health care providers talk with you about [his/her] sleeping with a bottle?	PHDS, PHDS+
A3Q15	Weaning from a bottle (<i>10 to 18 months</i>)	(In the last 12 months/since [his/her] birth), did (CHILD)'s doctors or other health care providers talk with you about taking (him/her) off of the bottle?	PHDS, PHDS+
A3Q16/ A3Q29	Words and phrases child understands (<i>10 to 35 months</i>)	(In the last 12 months/since [his/her] birth), did (CHILD)'s doctors or other health care providers talk with you about the words and phrases (CHILD) uses and understands?	PHDS, PHDS+

Item#	Question Content	Item Text	Source for Item, or Surveys with Related Content
A3Q17/ A3Q31	Guidance and discipline (10 to 35 months)	(In the last 12 months/since [his/her] birth), did (CHILD)'s doctors or other health care providers talk with you about guidance and discipline techniques to use with (CHILD)?	PHDS, PHDS+
A3Q18/ A3Q32	Toilet training (10 to 35 months)	(In the last 12 months/since [his/her] birth), did (CHILD)'s doctors or other health care providers talk with you about toilet training?	PHDS, PHDS+
A3Q19	Ipecac-poison prevention (10 to 18 months)	(In the last 12 months/since (his/her) birth), did (CHILD)'s doctors or other health care providers talk with you about the use of syrup of Ipecac if your child swallows some poison?	PHDS, PHDS+
A3Q26	Bedtime routines (19 to 35 months)	In the last 12 months, did (CHILD)'s doctors or other health care providers talk with you about (CHILD)'s bedtime routines?	PHDS, PHDS+
A3Q27	Dangerous situations (19 to 35 months)	In the last 12 months, did (CHILD)'s doctors or other health care providers talk with you about ways to teach (him/her) about dangerous situations, places or items like electrical sockets, the stove, climbing on things, or running into the street?	PHDS, PHDS+
A3Q28	Things child can start to do for self (19 to 35 months)	In the last 12 months, did (CHILD)'s doctors or other health care providers talk with you about things (CHILD) may start to do for (himself/herself) like washing or dressing?	PHDS
A3Q30	How child learning to get along w/other children (19 to 35 months)	In the last 12 months, did (CHILD)'s doctors or other health care providers talk with you about how (CHILD) is learning to get along with other children?	PHDS, PHDS+
A3Q38A	Provider takes time to understand specific needs of child	(In the last 12 months/since [his/her] birth), how often did (CHILD)'s doctors or other healthcare providers take time to understand the specific needs of (CHILD)? Would you say always, usually, sometimes, or never?	PHDS, PHDS+
A3Q38B	Provider respects parent as expert on child	(In the last 12 months/since [his/her] birth), how often did (CHILD)'s doctors or other healthcare providers respect that you are the expert on your child? Would you say always, usually, sometimes, or never?	MEPS, PHDS, PHDS+
A3Q38C	Provider asks about feelings as parent	(In the last 12 months/since [his/her] birth), how often did (CHILD)'s doctors or other healthcare providers ask you about how you are feeling as a parent? Would you say always, usually, sometimes, or never?	PHDS, PHDS+
A3Q38D	Provider understands your family	(In the last 12 months/since [his/her] birth), how often did (CHILD)'s doctors or other healthcare providers understand you and your family and how you prefer to raise (CHILD)? Would you say always, usually, sometimes, or never?	PHDS, PHDS+
A3Q39	Did provider ask about violence	(In the last 12 months/since [his/her] birth), have (CHILD)'s doctors or other health care providers ever asked you about violence in your community?	PHDS, PHDS+
A3Q41	Did provider ask about smoker in household	(In the last 12 months/since [his/her] birth), have (CHILD)'s doctors or other health care providers ever asked whether you or someone in your household smokes?	PHDS, PHDS+
A3Q42	Did provider ask about alcohol/drugs	(In the last 12 months/since [his/her] birth), have (CHILD)'s doctors or other health care providers ever asked whether you or someone in your household drinks alcohol and/or uses drugs?	PHDS, PHDS+
A3Q43	Did provider ask about parental emotional support?	(In the last 12 months/since [his/her] birth), have (CHILD)'s doctors or other health care providers ever asked you if you have someone to turn to for emotional support?	PHDS, PHDS+
A3Q46	Did physician do develop. assessment?	Did (CHILD)'s doctors or other health care providers ever tell you that they were carrying out—what doctors call—a “developmental assessment” of (CHILD)?	PHDS, PHDS+

Item#	Question Content	Item Text	Source for Item, or Surveys with Related Content
A3Q46A	Did physician do content of develop. assessment	Did (CHILD)'s doctors or other health care providers ever have (him/her) pick up small objects or stack blocks or throw a ball or recognize different colors?	PHDS, PHDS+
A3Q47	Referrals to specialists by physician	Doctors sometimes provide referrals to specialists or to educational or developmental programs. (In the last 12 months/since [his/her] birth) has (CHILD)'s doctors or other health care providers referred (him/her) to any specialist?	CWF-PDS, PHDS, PHDS+
A3Q47A	Kind of specialist referred to	What kind of specialist was that?	CWF-PDS
A3Q48	Referrals to programs and classes	(In the last 12 months/since [his/her] birth) has (CHILD)'s doctors or other health care providers referred you to any program or class?	CWF-PDS, PHDS+
A3Q48A	Kind of program referred to	What kind of program/class was that?	PHDS+
A3Q49	Childbirth class attendance	Did you attend a childbirth class before the birth of (CHILD)?	CWF-SPYC
A3Q50	Parenting class attendance	Did you attend a parenting class after the birth of (CHILD)?	CWF-SPYC, PHDS+
A3Q50A	Insurance payment for parenting class attendance	Was this parenting class paid for or covered by a health insurance plan?	PHDS+
A3Q51B	Parenting class attendance for other children	Did you attend a parenting class after the birth of your other child or children?	PHDS+
A3Q52	Premature birth of child	Now I would like you to think back to the time (CHILD) was born. Was (he/she) born prematurely, that is, was (he/she) more than 4 weeks early?	CWF-SPYC, ECLS, PHDS+, PSID-CD
A3Q53	Birth weight of child	What was (CHILD)'s birth weight?	ECLS, NHIS, PHDS+, PSID-CD
A3Q54	Breastfeeding ever	Now I am going to ask you a few questions about breastfeeding. Was (CHILD) breastfed for any length of time	CWF-SPYC, NHIS, PHDS+, PSID-CD
A3Q54A	Duration of breastfeeding	For how many days, weeks, or months was (CHILD) breastfed?	NHIS, PHDS, PHDS+, PSID-CD
A3Q55	Doctor encourage breastfeeding	Did (CHILD)'s doctors or other health care providers give you any help or encouragement for breastfeeding?	CWF-SPYC
<i>Family Interactions and Home Safety</i>			
A4Q01A	Consistent bedtimes	Is (CHILD)'s bedtime usually the same everyday, or does it change from day to day?	CWF-SPYC, ECLS, PSID-CD
A4Q01B	Consistent nap times	Is (CHILD)'s nap-time usually the same everyday, or does it change from day to day?	CWF-SPYC, ECLS, PHDS+
A4Q01C	Consistent meal times	Are (CHILD)'s mealtimes usually the same everyday, or do they change from day to day?	CWF-SPYC, ECLS, PSID-CD
A4Q02	Frequency of activities w/child	Now I would like to talk to you about (CHILD)'s activities with you and other family members. Please tell me the number of days in a typical week that you or any other family members do the following things.	CWF-SFYC, ECLS, PHDS+, PSID-CD
A4Q02X01	Read stories	Read stories to (CHILD).	CWF-SPYC, ECLS, PHDS, PHDS+, PSID-CD,

Item#	Question Content	Item Text	Source for Item, or Surveys with Related Content
A4Q02X02	Play music/sing	Play music or sing songs with (CHILD).	CWF-SPYC, ECLS, PHDS+
A4Q02X03	Take child out	Take (CHILD) on any kind of outing such as to the park, grocery store, a church or a playground.	ECLS
A4Q02X04	Eat midday/evening meal together	Eat a mid-day or evening meal together?	ECLS
A4Q02X05	Eat breakfast together	Eat breakfast together?	ECLS
A4Q03	Time spent watching TV	In a typical day, about how many hours does (CHILD) spend watching TV or videos?	ECLS, PSID-CD
A4Q04	# of books in home	About how many children's books are there in your house, including library books? Please only include books that are for children.	ECLS, PSID-CD
A4Q05	Frustration w/child's behavior	In a typical day, how often would you say you feel frustrated or aggravated with (CHILD)'s behavior?	CWF-SPYC, ECLS, PSID-CD
A4Q06	Satisfaction w/amt. of time spent w/child	Now I would like to ask you about the amount of time you spend with (CHILD). Would you say that you spend the right amount of time with (CHILD), or would like to spend a lot more time, a little more time, a little less time, or a lot less time?	CWF-SPYC
A4Q07	Discipline techniques used	I am going to read a list of methods of discipline parents might use with children (CHILD)'s age. For each, please tell me if you use that method often, sometimes, rarely, or never with (CHILD).	CWF-SPYC
A4Q07X01	Raising voice	First, how about raising your voice or yelling?	CWF-SPYC
A4Q07X02	Spanking	How about spanking?	CWF-SPYC
A4Q07X03	Taking away toy/treat	How about taking away a toy or treat?	CWF-SPYC
A4Q07X04	Time out	How about giving a time-out, that is, making (CHILD) take a break from whatever activity (he/she) is involved in?	CWF-SPYC
A4Q07X05	Explaining	How about explaining to (CHILD) why [his/her] behavior is not appropriate.	CWF-SPYC
A4Q08X01	Specific actions to childproof home: baby gates	I am now going to read you a list of things that parents sometimes do to childproof their home or make it safe. For each item, tell me if you ever did that in your home: Put up baby gates, window guards or other barriers.	PHDS
A4Q08X02	Locks	Put locks or safety latches on cabinets where things such as cleaning agents or medicines are kept.	PHDS, PHDS+
A4Q08X05	Hot water	Turned down the hot water thermostat setting.	PHDS, PHDS+
A4Q09	Syrup of Ipecac	Syrup of Ipecac can be used if (CHILD) swallows something poisonous. Do you have Syrup of Ipecac at home?	PHDS, PHDS+
A4Q10	Hours in childcare	In a typical week, how many hours does (CHILD) spend in the care of someone other than a parent or guardian?	ECLS, LACHS
A4Q11	Relative or nonrelative childcare	Is the person who usually cares for (CHILD) a relative or a non-relative?	ECLS
A4Q12	Location of childcare	[Where] Is (CHILD) mostly cared for?	ECLS, LACHS, PSID-CD
<i>Parental and Child Health</i>			
A5Q01X01	Nervous (MH15)	How much of the time during the past month have you been a very nervous person? Would you say all of the time, most of the time, a good bit of the time, some of the time, a little of the time or none of the time?	

Item#	Question Content	Item Text	Source for Item, or Surveys with Related Content
A5Q01X02	Calm and peaceful (MHI5)	How much of the time during the past month have you felt calm and peaceful? Would you say all of the time, most of the time, a good bit of the time, some of the time, a little of the time or none of the time?	
A5Q01X03	Downhearted and blue (MHI5)	How much of the time during the past month have you felt downhearted and blue?	
A5Q01X04	Down in the dumps (MHI5)	How much of the time during the past month have you felt so down in the dumps that nothing could cheer you up?	
A5Q01X05	Happy (MHI5)	How much of the time during the past month have you been a happy person?	
A5Q02	How well coping w/day-to-day parenting	In general, how well do you feel you are coping with the day-to-day demands of parenthood?	CWF-SPYC
A5Q05X01	Concerns about speech sounds (PEDS)	Sometimes parents have concerns about their children. Are you concerned a lot, a little, or not at all about: how (CHILD) talks and makes speech sounds (RESPONSE OPTIONS: A lot; A little; Not at all; Don't know)?	PHDS, PHDS+
A5Q05X02	Concerns about vision or hearing	How your child sees or hears?	PHDS, PHDS+
A5Q05X03	Concerns about child's understanding (PEDS)	How your child understands what you say?	PHDS, PHDS+
A5Q05X04	Concerns about ability to use hands and fingers (PEDS)	How your child uses his or her hands and fingers to do things?	PHDS, PHDS+
A5Q05X05	Concerns about ability to use arms and legs (PEDS)	How your child uses his or her arms and legs?	PHDS, PHDS+
A5Q05X06	Concerns about behavior (PEDS)	How your child behaves?	PHDS, PHDS+
A5Q05X07	Concerns about ability to get along (PEDS)	How your child gets along with others?	PHDS, PHDS+
A5Q05X08	Concerns about learning to do things (PEDS)	How your child is learning to do things for himself/herself?	PHDS, PHDS+
A5Q05X09	Concerns about learning school skills (PEDS)	How your child is learning preschool or school skills?	PHDS, PHDS+
A5Q05X10	Concerns about limitations of activities (PEDS)	Whether your child can do what other children his or her age can do?	PHDS, PHDS+
A5Q05X11	Concerns about emotional well-being	Child's emotional well-being?	PHDS, PHDS+
A5Q06	Types of conditions child has	Now I would like to ask a few questions about (CHILD)'s health. In the last 12 months, did (he/she) have any of the following conditions:	PSID-CD
A5Q07	Prescription medicine (CSHCN Screener)	Does your child currently need or use medicine prescribed by a doctor, other than vitamins?	CAHPS, MEPS, NS-CSHCN, PHDS, PHDS+
A5Q07A	Due to condition (CSHCN Screener)	Is this because of any medical, behavioral or other health condition?	CAHPS, MEPS, NS-CSHCN, PHDS, PHDS+

Item#	Question Content	Item Text	Source for Item, or Surveys with Related Content
A5Q07B	Lasting 12+ months (<i>CSHCN Screener</i>)	Is this a condition that has lasted or is expected to last for at least 12 months?	CAHPS, MEPS, NS-CSHCN, PHDS, PHDS+
A5Q08	Increased service use (<i>CSHCN Screener</i>)	Does your child need or use more medical care, mental health or educational services than is usual for most children of the same age	CAHPS, MEPS, NS-CSHCN, PHDS, PHDS+
A5Q08A	Due to condition (<i>CSHCN Screener</i>)	Is this because of any medical, behavioral, or other health condition?	CAHPS, MEPS, NS-CSHCN, PHDS, PHDS+
A5Q08B	Lasting 12+ months (<i>CSHCN Screener</i>)	Is this a condition that has lasted or is expected to last for at least 12 months?	CAHPS, MEPS, NS-CSHCN, PHDS, PHDS+
A5Q09A	Missed care for any reason	(During the past 12 months/since [his/her] birth) was there any time that (CHILD) needed health care for a problem or concern but did not get it?	MEPS, NHIS, PHDS+
A5Q09B	Delayed care	(During the past 12 months/since [his/her] birth) was there any time that (CHILD) received care for a problem or concern, but got the care later than you would have liked?	MEPS, NHIS, NS-CSHCN, PHDS+
A5Q09C	Kind of care	Why did (CHILD) need health care?	NHIS, PHDS+
A5Q09DX01	Reason for missed care	Why didn't (CHILD) receive care for ___/Why was (CHILD)'s care delayed for ___? Was it because: You could not afford it or had no health insurance?	MEPS, NHIS, PHDS+
A5Q09DX02	Reason for missed care	You had no provider to go to for (CHILD)?	MEPS, PHDS+
A5Q09DX03	Reason for missed care	(CHILD)'s provider did not consider it a problem?	MEPS, PHDS+
A5Q09DX04	Reason for delayed care	You had transportation or childcare problems or problems related to work?	MEPS, PHDS+
A5Q09EX01	Concerns about child's development	Did the (lack of/delay in) healthcare for (CHILD)'s ____ : Create concerns about your child's future development?	PHDS+
A5Q09EX02	Problems attending day care	Did the (lack of/delay in) healthcare for (CHILD)'s ____ : Create problems for your child attending day care?	PHDS+
A5Q09EX03	Problems meeting work responsibilities	Did the (lack of/delay in) healthcare for (CHILD)'s ____ : Create problems for you or your spouse or partner meeting work responsibilities?	PHDS+
A5Q10	Emergency room utilization	During the past 12 months, how many times has (CHILD) gone to a hospital emergency room about (his/her) health? Please include emergency room visits that resulted in hospital admission.	CAHPS, PHDS+
A5Q11	Hospital utilization	During the past 12 months, how many times has (CHILD) had to stay in the hospital overnight?	NHIS, PHDS+
A5Q12	# of calls to doctor's office for infor	During the past 12 months, how many times have you called (CHILD)'s doctor's office to ask a question or get some information?	CAHPS
<i>Financial Welfare and Health Insurance</i>			
A6Q01X01	Trouble paying for prenatal care	For each of the items in the list, please tell me if you had a lot of trouble, some trouble, or no trouble at all paying for that item. First, how about prenatal care during pregnancy?	CWF-SPYC, PHDS+
A6Q01X02	Birth expenses	How about the medical expenses for (CHILD)'s birth?	CWF-SPYC, PHDS+
A6Q01X03	Child's health/medical expenses	How about (CHILD)'s health and medical expenses?	CWF-SPYC, PHDS+

Item#	Question Content	Item Text	Source for Item, or Surveys with Related Content
A6Q01X04	Supplies (e.g., diapers)	How about supplies like formula, food, diapers, clothes, and shoes?	CWF-SPYC, PHDS+
A6Q01X05	Child care	How about childcare?	CWF-SPYC
A6Q02	Medicaid	Is (CHILD) covered by Medicaid, in this state called (FILL IN NAME), a health insurance program for low-income families?	NS-CSHCN
A6Q03	Title V	Is (CHILD) covered by (FILL STATE TITLE V PLAN NAME)?	NS-CSHCN
A6Q04	S-CHIP	Is (CHILD) covered by (FILL STATE CHIP NAME)?	NS-CSHCN
A6Q05	Private health insurance	Is (CHILD) covered by private insurance, that is, health insurance obtained through employment or unions or purchased directly?	NS-CSHCN
A6Q06	Military health care	Is (CHILD) covered by military health care, CHAMPUS, CHAMP-VA, or TRICARE?	NS-CSHCN
A6Q07	I.H.S.	Is (CHILD) covered by the Indian Health Service?	NS-CSHCN
A6Q08	Other	Is (CHILD) covered by any other kind of health insurance or health care plan that pays for services obtained from hospitals, doctors, and other health professionals?	NS-CSHCN
A6Q09	No health insurance	It appears that (CHILD) does not have any health insurance coverage to help pay for services from hospitals, doctors, and other health professionals. Is that correct?	NS-CSHCN
A6Q09A	What kind of insurance	What kind of health coverage does (CHILD) have?	NS-CSHCN
A6Q09B	Time without insurance	Was there any time (during the past 12 months/since [his/her] birth) when (CHILD) did have health insurance or was covered by a health plan?	PSID-CD
A6Q09C	Amount of time with insurance	How many months (during the past 12 months/since [his/her] birth) did (CHILD) have health insurance?	PSID-CD
A6Q10	Any period without insurance	Was there any time (during the past 12 months/since [his/her] birth) when (CHILD) did not have health insurance or was not covered by a health plan?	NS-CSHCN
A6Q10A	Amount of time with no insurance	How many months (during the past 12 months/since [his/her] birth) did (CHILD) not have health insurance?	NS-CSHCN
A6Q11	Limited access plan	Are you required by your health insurance company to sign up with a certain primary care doctor, group of doctors, or certain clinic which (CHILD) must go to for all of his/her routine care?	MEPS, PSID-CD
A6Q12	Specialist approval required	If (CHILD) needs to go to a different doctor or place for special care, does (CHILD) need approval or a referral?	MEPS

Glossary

CAHPS—Consumer Assessment of Health Plans (sponsored by the Agency for Healthcare Research and Quality).

CSHCN Screener—Children with Special Healthcare Needs Screener (Bethell, Read, et al., 2002).

CWF-PDS—Commonwealth Fund Pediatric Developmental Services Survey.

CWF-SPYC—Commonwealth Fund Survey of Parents with Young Children

CPRQ—California Physician Referral Questionnaire.

ECLS—Early Childhood Longitudinal Study (conducted by the National Center for Education Statistics).

LACHS—Los Angeles County Health Survey (conducted by the Los Angeles County Department of Health Services).

MEPS—Medical Expenditure Panel Survey (conducted by the Agency for Healthcare Research and Quality).

MHI5—Mental Health Index (Stewart and Ware, 1992).

NHIS—National Health Interview Survey (conducted by the National Center for Health Statistics).

NS-CSHCN—National Survey of Children with Special Health Care Needs (conducted by the National Center for Health Statistics).

PEDS—Parent's Evaluation of Developmental Status (Glascoe, 1998).

PHDS—Promoting Healthy Development Survey (Bethell, Peck, and Schor, 2001).

PHDS+—Promoting Healthy Development Survey PLUS (conducted by the Foundation for Accountability).

PSID-CD—Panel Study of Income Dynamics—Child Development Supplement (conducted by the Institute for Social Research, University of Michigan).

Bibliography

Bethell C, Read D, Stein REK, Blumberg SJ, Wells N, Newacheck PW. Identifying children with special health care needs: development and evaluation of a short screening tool. *Ambulatory Pediatrics*. 2:38–48. 2002.

Bethell C, Peck C, Schor E. Assessing health system provision of well-child care: The promoting healthy development survey. *Pediatrics* 107:1084–94. 2001.

Glascoe FP. Parents' evaluation of developmental status: a method for detecting and addressing developmental and behavioral problems in children. Nashville, TN: Ellsworth & Vandermeer Press Ltd. 1997.

Stewart AL, Ware JE Jr. Measuring functioning and well-being: The medical outcomes study approach. RAND Corporation. Durham, North Carolina: Duke University Press. 373–403. 1992.

Appendix III

Computer-Assisted Telephone Interview Specifications

SLAITS: The State and Local Area Integrated Telephone Survey National Survey of Early Childhood Health

GENERAL CATI PROGRAMMING ASSUMPTIONS:

- 1) IT IS ASSUMED THAT RESPONDENTS WILL JUST GO ON TO THE NEXT QUESTION IN SEQUENCE, UNLESS THERE IS A SKIP PATTERN ASSOCIATED WITH A CURRENT OR PRIOR RESPONSE THEY HAVE GIVEN.
- 2) ITEMS IN BOLD TYPE ARE INSTRUCTIONS TO THE CATI PROGRAMMER, OR THINGS THAT NEED TO BE PROGRAMMED.
- 3) ITEMS IN CAPITAL LETTERS (THAT ARE NOT IN BOLD TYPE) ARE THINGS THAT THE INTERVIEWER WILL SEE, BUT THAT THEY ARE NOT SUPPOSED TO READ ALOUD. THE CONVENTION IS THAT THEY READ ALOUD ANYTHING IN REGULAR TYPE, BUT THINGS IN CAPITAL LETTERS ARE JUST INSTRUCTIONS, RESPONSE OPTIONS OR PROBES THAT THEY CAN USE IF NECESSARY.

- INTRO_1 Hi, my name is _____. The Centers for Disease Control and Prevention and the American Academy of Pediatrics are doing a survey about the health of young children. We want to know about parents' experiences with their children's doctors. Your telephone number was chosen at random to be included in this survey.
- | | | |
|---|---|---|
| CONTINUE WITH INTERVIEW | 1 | |
| HUDI – DURING 1 ST /2 ND SENTENCE | 2 | [GO TO REFUSAL CONVERSION QUEUE] |
| HUDI – AFTER END OF 2 ND SENTENCE | 3 | [GO TO REFUSAL CONVERSION QUEUE] |
| HUDI – AFTER END OF 3 RD SENTENCE | 4 | [GO TO REFUSAL CONVERSION QUEUE] |
| HUDI – AFTER END OF LAST SENTENCE | 5 | [GO TO REFUSAL CONVERSION QUEUE] |
- S1 Am I speaking to someone who lives in this household who is over 17 years old?
- | | | |
|----------------------------------|---|---|
| YES, I AM THAT PERSON | 1 | [SKIP TO S_NUMB] |
| THIS IS A BUSINESS | 2 | [SKIP TO BUSINESS] |
| NEW PERSON COMES TO PHONE | 3 | [SKIP BACK TO INTRO] |
| REFUSED | 7 | [GO TO REFUSAL DEBRIEFING QUESTIONS] |
| DOES NOT LIVE IN HOUSEHOLD | 8 | [SKIP TO CALLBACK1] |
| NO PERSON AT HOME WHO IS OVER 17 | 9 | [SKIP TO S2_B] |
- S1_BUS1 We are only interviewing in private residences. Thank you very much. **[TERMINATE]**
- CALLBACK1 May I speak with someone over 17 who lives in this household?
- | | | |
|-----|---|--|
| YES | 1 | (SKIP BACK TO INTRO WHEN PERSON COMES TO THE PHONE) |
| NO | 2 | |

**IF CHILDREN 4-35 MONTHS
IF NO CHILDREN 4-35 MONTHS**

SKIP TO S3_CONF

FIRST: Just to make sure that I have this correct, there are no children living in this household between 4 months and 3 years old?

THEN: These are all the questions I have. This survey is collecting information about the health of children between 4 and 35 months old only. I'd like to thank you on behalf of the Centers for Disease Control and Prevention and the American Academy of Pediatrics for the time you spent answering these questions. **[TERMINATE INTERVIEW]**

S3_CONF. Based on the birth dates you provided me earlier, that would make the **[ORDINAL # OF KID DERIVED FROM S_NUMB]** child **[AGE OF CHILD IN MONTHS]** months old; is that correct?
 YES 1
 NO 2
 DON'T KNOW 6
 REFUSED 7

S3.4. Is the child born in **[MONTH AND YEAR OF BIRTH]** male or female?
 MALE 1
 FEMALE 2
 DON'T KNOW 6
 REFUSED

S3.5. So I'll know how to refer to **[him/her]** during the interview, please tell me **[his/her]** first name or initials.
 _____ NAME
 DON'T KNOW 6
 REFUSED 7

S3_C. I have listed **[NAMES FROM S3.5]**. Have I missed any babies or small children who are less than 3 years old?
 YES 1 **[CONFIRM # AT S_NUMB, CHANGE AS NECESSARY AND REPEAT S3.MKID, S3_CONF, S3.4, S3.5, S3.H, S3.R, S3.MR FOR MISSED CHILDREN]**
 NO 2

- 1) NIS-ELIGIBLES SKIP TO NIS INTERVIEW
- 2) NIS-INELIGIBLES, SLAITS MAIN SAMPLE CASES CONTINUE TO MAIN SAMPLE INSTRUCTIONS
- 3) NIS-INELIGIBLES, SLAITS OVERSAMPLE CASES, SKIP TO SLAITS OVERSAMPLE INSTRUCTIONS

SLAITS MAIN SAMPLE

ONE CHILD

IF ONLY ONE CHILD BETWEEN 4-35 MONTHS OLD (S3.1KID), THAT CHILD IS THE FOCAL CHILD FROM THIS POINT.

MORE THAN ONE CHILD

IF THERE IS MORE THAN ONE CHILD BETWEEN 4-35 MONTHS OLD, ONE OF THESE CHILDREN SHOULD BE RANDOMLY SAMPLED FROM THE ROSTER IN S3.MKID AND THAT CHILD IS THE FOCAL CHILD FROM THIS POINT.

1) IF ONLY ONE CHILD BETWEEN 4-35 MONTHS OLD, CHILD WAS NIS-ELIGIBLE AND DATA WAS COLLECTED ABOUT THIS CHILD IN THE NIS INTERVIEW, SKIP TO A1_INTRO.

2) IF MORE THAN ONE CHILD BETWEEN 4-35 MONTHS OLD, AND NIS INTERVIEW WAS NOT DONE ABOUT FOCAL CHILD OR MULTIPLE NIS-ELIGIBLE CHILDREN WENT THROUGH NIS, SAY “Now, I have some other questions about (randomly selected SLAITS eligible child).” THEN, SKIP TO A1_INTRO.

3) IF NO NIS INTERVIEW WAS DONE, AND IF ONLY ONE CHILD BETWEEN 4-35 MONTHS, SKIP TO SL4A.

4) IF NO NIS INTERVIEW WAS DONE, AND IF MORE THAN ONE CHILD BETWEEN 4-35 MONTHS, SKIP TO SL4B.

SLAITS OVERSAMPLE**(ASK S3.H-S.3MR ONLY FOR THOSE CHILDREN WHO ARE NOT NIS-ELIGIBLE)**

S3.H	Is (CHILD) of Spanish, Hispanic, or Latino descent, that is Mexican, Mexican-American, Central American, South American, Chicano, Puerto Rican, or Cuban? [MARK ALL THAT APPLY]	
	NO, NOT SPANISH/HISPANIC	YES
	YES, MEXICAN/MEXICANO	YES
	YES, MEXICAN-AMERICAN	YES
	YES, CENTRAL AMERICAN	YES
	YES, SOUTH AMERICAN	YES
	YES, CHICANO	YES
	YES, PUERTO RICAN	YES
	YES, CUBAN/CUBAN AMERICAN	YES
	YES, OTHER SPANISH-CARRIBEAN	YES
	YES, OTHER SPANISH/HISPANIC (SPECIFY)	YES
	DON'T KNOW	96
	REFUSED	97
S.3R	Is (CHILD) White, Black or African American, Native American, Alaska Native, Asian, Native Hawaiian or other Pacific Islander, or another race? [MARK ALL THAT APPLY]	
	WHITE	YES
	BLACK/ AFRICAN AMERICAN	YES
	NATIVE AMERICAN	YES
	ALASKA NATIVE	YES
	ASIAN	YES
	NATIVE HAWAIIAN	YES
	PACIFIC ISLANDER	YES
	OTHER (SPECIFY)	YES
	DON'T KNOW	96
	REFUSED	97

[IF MORE THAN ONE ANSWER AT S.3R, ASK S.3MR]

S.3MR.	Which do you feel best describes this child's race?	
	WHITE	01
	BLACK/ AFRICAN AMERICAN	02
	NATIVE AMERICAN	03
	ALASKA NATIVE	04
	ASIAN	05
	NATIVE HAWAIIAN	06
	PACIFIC ISLANDER	07
	OTHER (SPECIFY)	08
	DON'T KNOW	96
	REFUSED	97

IF NO CHILDREN ARE BLACK/AFRICAN-AMERICAN OR HISPANIC, SKIP TO INELIG.

ONE CHILD

IF ONLY ONE BLACK/AFRICAN-AMERICAN OR HISPANIC CHILD BETWEEN 4-35 MONTHS OLD (S3.1KID), THAT CHILD IS THE FOCAL CHILD FROM THIS POINT.

MORE THAN ONE CHILD

IF THERE IS MORE THAN ONE BLACK/AFRICAN-AMERICAN OR HISPANIC CHILD BETWEEN 4-35 MONTHS OLD, ONE OF THESE CHILDREN SHOULD BE RANDOMLY SAMPLED FROM THE ROSTER IN S3.MKID AND THIS CHILD IS THE FOCAL CHILD FROM THIS POINT.

1) IF ONLY ONE CHILD BETWEEN 4-35 MONTHS OLD, CHILD WAS NIS-ELIGIBLE AND DATA WAS COLLECTED ABOUT THIS CHILD IN THE NIS INTERVIEW, SKIP TO A1_INTRO.

2) IF MORE THAN ONE CHILD BETWEEN 4-35 MONTHS OLD, AND NIS INTERVIEW WAS NOT DONE ABOUT FOCAL CHILD OR MULTIPLE NIS-ELIGIBLE CHILDREN WENT THROUGH NIS, SAY “Now, I have some other questions about (randomly selected SLAITS eligible child).” THEN, SKIP TO A1_INTRO.

3) IF NO NIS INTERVIEW WAS DONE, AND IF ONLY ONE CHILD BETWEEN 4-35 MONTHS, SKIP TO SL4A.

4) IF NO NIS INTERVIEW WAS DONE, AND IF MORE THAN ONE CHILD BETWEEN 4-35 MONTHS, SKIP TO SL4B.

INELIG Those are all of the questions I have. This survey is collecting information about the health of children with ages between 19 months and 35 months only. I'd like to thank you on behalf of the Centers for Disease Control and Prevention and the American Academy of Pediatrics for the time you spent answering these questions.

[TERMINATE INTERVIEW]

GENERAL CATI PROGRAMMING INSTRUCTIONS:

THROUGHOUT THE QUESTIONNAIRE THERE IS A SERIES OF FILLS LIKE THE FOLLOWING:

[in the past year/since {he/she} was born]

THE FILLS SHOULD BE CHILD-APPROPRIATE BASED ON:

- 1) AGE OF CHILD - <1 YEAR-OLDS SHOULD RECEIVE “SINCE HE/SHE WAS BORN” FILLS AND > 1 YEAR-OLDS SHOULD RECEIVE “IN THE PAST YEAR” FILLS;**
- 2) GENDER OF CHILD - FOR THOSE RECEIVING THE “SINCE HE/SHE WAS BORN” FILLS, THE CORRECT PRONOUN SHOULD BE USED.**

ALSO, THROUGHOUT THE QUESTIONNAIRE, THERE WILL BE OTHER FILLS BASED ON GENDER, AND THESE SHOULD BE CHILD-APPROPRIATE.

IF S3.4 = 6, 7, GENDER-SPECIFIC FILLS MUST USE CHILD’S NAME OR INITIALS FROM S3.5.

IF S3.5 = 6, 7, ALL NAME FILLS MUST USE THE WORD “CHILD”.

IF S3.4 = 6, 7 AND S3.5 = 6, 7, GENDER-SPECIFIC FILLS MUST USE THE WORD “CHILD”

- SL4A The first questions in this survey ask about the healthcare that **(CHILD)** has received [**in the past year/since {he/she} was born**]. Therefore, I would like to speak to **(CHILD)**'s parent or guardian who is primarily responsible for [**his/her**] medical care. Are you this person?
- YES 1 **(SKIP TO A1_INTRO)**
 NO 2 **(SKIP TO SL5)**
- SL4B For this survey, we randomly select one child less than three years old from each household. In this case, that child will be **(CHILD)**. The first questions in this survey ask about the healthcare that **(CHILD)** has received [**in the past year/since {he/she} was born**]. Therefore, I would like to speak to **(CHILD)**'s parent or guardian who is primarily responsible for [**his/her**] medical care. Are you this person?
- YES 1 **(SKIP TO A1_INTRO)**
 NO 2
- SL5. May I speak with this person now?
- YES 1 **(SKIP TO INTRO1, THEN A1_INTRO)**
 NO, NOT AT HOME 2
- CALLBACK3 Before we hang up, please tell me the first name of the parent or guardian who is primarily responsible for **(CHILD)**'s medical care.
(CATI: 15 ALPHANUMERIC-CHARACTER FIELD)
 FIRST NAME: _____
 REFUSED 7
- CALLBACK3_A **(CATI: 2 ALTERNATE WORDINGS OF QUESTION NEEDED)**
- (IF CALLBACK3=7)**
 When would be a good time to call back to speak with this person? **(SCHEDULE APPOINTMENT)**
- (ALL OTHERS)**
 When would be a good time to call back to speak with {NAME FROM CALLBACK3}? **(SCHEDULE APPOINTMENT)**
- CALLBACK1_D Those are all the questions I have. I'd like to thank you on behalf of the Centers for Disease Control and Prevention and the American Academy of Pediatrics for the time and effort you spent answering these questions. **[TERMINATE]**

**National Survey of Early Childhood Health
Section 1: Health Care Utilization**

A1_INTRO

(IF NO NIS INTERVIEW WAS DONE, USE THIS WORDING)

I will ask some questions that will help us describe what happens when children visit the doctor. Your answers will be combined with the answers of other people who join this survey. Any answers that identify you or your family—like your name or phone number—will be kept strictly private. No one other than survey staff can ever look at them. That’s because this survey is being conducted under the authority of the Public Health Service Act. I can provide the specific legal citation if you want me to. You may choose not to answer any questions, and you may end the questions any time you want. There is no penalty for doing this. Your participation is voluntary. This survey will take around 20 to 25 minutes. I would like to continue now unless you have any questions.

IF REQUESTED, READ: “The Public Health Service Act is Volume 42 of the U.S. Code, Section 242k. The collection of information in this survey is authorized by Section 306 of this Act. The confidentiality of your responses is assured by Section 308d of this Act.”

(IF NIS INTERVIEW WAS DONE, USE THIS WORDING)

The next questions will help us describe what happens when children visit the doctor. Your answers will be combined with the answers of other people who join this survey. Any answers that identify you or your family—like your name or phone number—will be kept strictly private. No one other than survey staff can ever look at them. That’s because this survey is being conducted under the authority of the Public Health Service Act. I can provide the specific legal citation if you want me to. You may choose not to answer any questions, and you may end the questions any time you want. There is no penalty for doing this. This part of the interview will take around 20 to 25 minutes. I would like to continue now unless you have any questions.

IF REQUESTED, READ: “The Public Health Service Act is Volume 42 of the U.S. Code, Section 242k. The collection of information in this survey is authorized by Section 306 of this Act. The confidentiality of your responses is assured by Section 308d of this Act.”

A1_CONF

For purposes of confirmation, (CHILD) is (# OF MONTHS FROM S_CONF) months old. Is that correct?

YES	1	SKIP TO A1Q01
NO	2	

(CATI: AGE IN MONTHS MUST BE BETWEEN 04-35. IF IT IS NOT, OR IF THERE IS A 6-MONTH OR MORE DISCREPANCY BETWEEN AGE AT A1_CONF AND S3_CONF, CREATE VARIABLE FOR WARNING FLAG IN DATA HERE.)

A1_CONF2

What is (CHILD)’s date of birth?

ENTER BIRTH DATE MM/DD/YYYY

(CATI: IF NEW DOB FOR SAMPLED CHILD GIVEN HERE, IT MUST BE USED TO DRIVE ALL AGE-RELATED SKIPS FROM THIS POINT. IF DOB NOT KNOWN, OR REFUSED, TERMINATE AND GO TO REFUSAL DEBRIEFING QUESTIONS.)

A1Q01 (G1)

The first questions are about the healthcare **(CHILD)** has received **(in the past year/since birth)**. How many times has **(CHILD)** been to any doctor or other healthcare provider for any reason? Please include all visits that were made when **(CHILD)** was sick, or needed a shot or a check-up.
(CATI: 3 NUMERIC-CHARACTER FIELD)

	NUMBER OF VISITS
DK	996
REFUSED	997

(CATI: IF A1Q01<30, SKIP TO A1Q02)

A1Q01_A

I have **(ANSWER FROM A1Q01)** visits. Is that correct?

YES	1	
NO	2	[SKIP BACK TO A1Q01]

A1Q02 (G2)

Well-child care visits are visits that are made to a doctor or healthcare provider who takes care of **(CHILD)** when **(he/she)** is not sick, but needs a check-up or a shot. **(In the last 12 months/Since CHILD'S birth)**, how many times has **(he/she)** had a well-child visit for a check-up or shot?
(CATI: 3 NUMERIC-CHARACTER FIELD)

	NUMBER OF VISITS
DK	996
REFUSED	997

(CATI: IF A1Q02 > A1Q01, SHOW WARNING "WELL-CHILD VISITS CANNOT BE GREATER THAN TOTAL VISITS. PLEASE VERIFY NUMBER OF VISITS." AND RETURN TO A1Q01 FOR VERIFICATION.

IF A1Q02<30, SKIP TO A1Q03)

A1Q02_A

I have **(ANSWER FROM A1Q02)** visits. Is that correct?

YES	1	
NO	2	[SKIP BACK TO A1Q02]

A1Q03 (G3)

When **(CHILD)** needs a shot or a check-up, where do you usually take **(him/her)**?

DOCTOR OR NURSE PRACTITIONER IN PRIVATE OR GROUP PRACTICE	01
URGENT CARE OR WALK-IN CLINIC	02
COMMUNITY HEALTH CENTER/PUBLIC CLINIC	03
HOSPITAL CLINIC	04
EMERGENCY ROOM	05
NO ONE PLACE	06
OTHER	07
DK	96
REFUSED	97

[IF A1Q02=0 AND IF A1Q03=5 OR 6, SKIP TO A2Q07]

A1Q04 (G4.)

Is there a particular doctor or other healthcare provider that you usually take (**CHILD**) to for well-child care? By healthcare provider I mean any nurse, nurse practitioner, physician assistant or other person who may have provided healthcare to (**CHILD**).

(PROBE: THIS SHOULD BE A PERSON, NOT A PLACE)

- YES 1
- NO 2 [SKIP TO A2Q01]
- DK 6
- REFUSED 7

A1Q05 (G4A)

What kind of healthcare provider does (**CHILD**) usually see for well-child care, that is for check-ups and shots? Is (**his/her**) healthcare provider a pediatrician, family practitioner, pediatric nurse practitioner, physician’s assistant, or some other health professional?

(SELECT ALL THAT APPLY)

- PEDIATRICIAN 01
- FAMILY PRACTITIONER 02
- PEDIATRIC NURSE PRACTITIONER 03
- PHYSICIAN’S ASSISTANT 04
- OTHER 05
- DK 96
- REFUSED 97

(CATI NOTE: FROM THIS POINT FORWARD, FOR ALL “HEALTHCARE PROVIDER” FILLS USE ANSWER FROM A1Q05.

IF A1Q05=01, 02, 96, 97 FILL WITH “DOCTOR.”

IF A1Q05=03, FILL WITH “NURSE.”

IF A1Q05=04, 05, FILL WITH “HEALTHCARE PROVIDER.”)

(IF A1Q05 NOT EQUAL TO 05, SKIP TO A1Q06)

A1Q05_A

What other kind of health provider does (**CHILD**) usually see?

(CATI: 25 ALPHANUMERIC-CHARACTER FIELD)

OTHER PLACE: _____

A1Q06 (G4B)

Which of the following would best describe the location of (**CHILD**)’s (**HEALTHCARE PROVIDER**)’s clinic or practice? Would you say :

- Urban - in a city 1
- Suburban - in the suburbs 2
- Rural - outside a city or suburbs 3
- OTHER 4
- DK 6
- REFUSED 7

A1Q07 (G4C)

Is this (**HEALTHCARE PROVIDER**) a man or a woman?

- MAN 1
- WOMAN 2
- DK 6
- REFUSED 7

A1Q08 (G4D)

Approximately how old do you think **(he/she BASED ON A1Q07)** is?
 (PROBE FOR BEST ANSWER).
(CATI: 2 NUMERIC-CHARACTER FIELD)

_____	_____	AGE
DK		96
REFUSED		97

(CATI: IF A1Q08 >26 AND <70, SKIP TO A1Q09)

A1Q08_A

I have **(ANSWER FROM A1Q08)** years old. Is that correct?

YES	1	
NO	2	[SKIP BACK TO A1Q08]

A1Q09 (G4E)

Which do you feel best describes **(CHILD)**'s **(HEALTHCARE PROVIDER)**'s race or ethnicity? Is
(he/she BASED ON A1Q07):

White	01
Black	02
Hispanic	03
American Indian	04
Asian, or	05
Some other group?	06
DK	96
REFUSED	97

A1Q10 (G5)

How did you start taking **(CHILD)** to **(his/her)** current **(HEALTHCARE PROVIDER)**? Was **(he/she BASED ON A1Q07)**
 (PROBE FOR BEST ANSWER).

Already being used by someone else in the family,	1	
Recommended by someone you trust,	2	SKIP TO A1Q10_B
Chosen by you from a list of health providers given by your health plan, or	3	SKIP TO A2Q01
Assigned to you by the clinic or practice or your health plan?	4	SKIP TO A2Q01
OTHER	5	SKIP TO A2Q01
DK	6	SKIP TO A2Q01
REFUSED	7	SKIP TO A2Q01

A1Q10_A (G5A)

When someone else in the family first went to that provider, was the provider:

(PROBE FOR BEST ANSWER)		
Recommended by someone you trust,	1	
Chosen by you from a list of health providers given by your health plan, or	2	SKIP TO A2Q01
Assigned to you by the clinic/practice or your health plan?	3	SKIP TO A2Q01
OTHER	5	SKIP TO A2Q01
DK	6	SKIP TO A2Q01
REFUSED	7	SKIP TO A2Q01

A1Q10_B (G5B)

Was that person a family member, friend, or a doctor or health care provider?

(MARK ALL THAT APPLY)

- | | |
|-------------------------------|---|
| FAMILY MEMBER | 1 |
| FRIEND | 2 |
| DOCTOR OR HEALTHCARE PROVIDER | 3 |
| OTHER | 4 |
| DK | 6 |
| REFUSED | 7 |

National Survey of Early Childhood Health
Section 2: Parental Perception of Care

A2Q01 (G6)

(IF A1Q02=0, SKIP TO A2Q06)Let's talk about the well-child care (**CHILD**) has received (**in the last 12 months/since {his/her} birth**).Think about the last time you took (**CHILD**) for a check-up. How long was the doctor or healthcare provider who examined (**CHILD**) in the room with you?

(PROBE IF NECESSARY TO INCLUDE ALL TIME THE DOCTOR SPENT WITH CHILD. IF HE/SHE WENT IN AND OUT OF ROOM, ALL TIME SHOULD BE ADDED TOGETHER).

(CATI: 3 NUMERIC-CHARACTER FIELD)

NUMBER OF MINUTES	
NO CHECK-UPS IN THE PAST 12 MONTHS	995 (SKIP TO A2Q06)
DK	996 (SKIP TO A2Q02)
REFUSED	997 (SKIP TO A2Q02)

(CATI: IF A2Q01<30, SKIP TO A2Q02)

A2Q01_A

I have (**ANSWER FROM A2Q01**) minutes. Is that correct?

YES	1	
NO	2	[SKIP BACK TO A2Q01]

A2Q02 (G7)

(IF A2Q01 = 6,7, USE "THE VISIT" FILL)Did you feel that (a {**ANSWER FROM A2Q01**} minute visit/the visit) with the doctor or healthcare provider was:

Too much time	1
About the right amount of time, or	2
Not enough time	3
DK	6
REFUSED	7

A2Q03 (G8)

During (**CHILD**)'s last check-up, did you ask all the questions you wished to ask?

YES	1	SKIP TO A2Q05
NO	5	
DK	6	SKIP TO A2Q05
REFUSED	7	SKIP TO A2Q05

A2Q04 (G8A)

Why were you not able to ask all the questions you had? Was it because:

(SELECT ALL THAT APPLY)

You did not have enough time?	01
You did not feel comfortable asking?	02
The doctor/healthcare provider did not seem open to questions?	03
There was a language barrier, or	04
You forgot?	05
OTHER	06
DK	96
REFUSED	97

A2Q05 (G9)

How would you rate **(CHILD)**'s check-ups **(during the last 12 months/since {his/her} birth)**. Please include all the doctors, nurses, and other health providers that **(CHILD)** may have seen. Use any number from 0 to 10 where 0 is the worst healthcare possible and 10 is the best healthcare possible.
(CATI: 2 NUMERIC-CHARACTER FIELD)

_____	_____	RECORD NUMBER FROM 00 TO 10
DK	96	
REFUSED	97	

A2Q06 (G10)

(IF A1Q04 = 2, SKIP TO A2Q07)

If you were asked, how likely or unlikely would you be to recommend **(CHILD)**'s **(HEALTHCARE PROVIDER)** to your friends or family? Would you say very likely, somewhat likely, somewhat unlikely or not at all likely?

VERY LIKELY	1
SOMEWHAT LIKELY	2
SOMEWHAT UNLIKELY	3
NOT AT ALL LIKELY	4
DK	6
REFUSED	7

A2Q07 (G11)

Please tell me how important or unimportant you think well-child check-ups are for the health and development of **(CHILD)**. Would you say well-child check-ups are very important, important, somewhat important, or not important at all?

VERY IMPORTANT	1
IMPORTANT	2
SOMEWHAT IMPORTANT	3
NOT IMPORTANT AT ALL	4
DK	6
REFUSED	7

A2Q08 (G12)

In general, how would you describe **(CHILD)**'s health? Would you say **(his/her)** health is excellent, very good, good, fair, or poor?

EXCELLENT	1
VERY GOOD	2
GOOD	3
FAIR	4
POOR	5
DK	6
REFUSED	7

National Survey of Early Childhood Health
Section 3: Interactions with Health Care Providers

A3_INTRO (G13)

Parents, especially new parents, often have concerns about their children and families. I'm going to read a list of concerns that parents sometimes have. Please tell me if **(CHILD)**'s doctor or health provider has talked with you about any of the following.

A3Q01 (13A-a)

IF CHILD 10-18 MONTHS OLD, SKIP TO A3Q12

IF CHILD 19-35 MONTHS OLD, SKIP TO A3Q25

ALL OTHERS, CONTINUE

Since **(CHILD)**'s birth, have **(his/her)** doctors or health providers talked with you about breast-feeding?

YES	1	SKIP TO A3Q02
NO	2	
DK	6	SKIP TO A3Q02
REFUSED	7	SKIP TO A3Q02

A3Q01_A (13A-a-i)

Would a discussion about breast-feeding have been helpful to you?

YES	1
NO	2
DK	6
REFUSED	7

A3Q02 (13A-b)

Since **(CHILD)**'s birth, did **(his/her)** doctors or health providers talk with you about issues related to food or feeding **(his/her)** such as the introduction of solid foods?

YES	1	SKIP TO A3Q03
NO	2	
DK	6	SKIP TO A3Q03
REFUSED	7	SKIP TO A3Q03

A3Q02_A (13A-b-ii)

Would a discussion of food or feeding have been helpful to you?

YES	1
NO	2
DK	6
REFUSED	7

A3Q03 (13A-c)

Since **(CHILD)**'s birth, did **(his/her)** doctors or health providers talk with you about **(CHILD)**'s sleeping positions?

YES	1	SKIP TO A3Q04
NO	2	
DK	6	SKIP TO A3Q04
REFUSED	7	SKIP TO A3Q04

A3Q03_A (13A-c-iii)

Would a discussion of **(CHILD)**'s sleeping positions have been helpful to you?

YES	1
NO	2
DK	6
REFUSED	7

A3Q04 (13A-d)

Since **(CHILD)**'s birth, did **(his/her)** doctors or health providers talk with you about night waking and fussing?

YES	1	SKIP TO A3Q05
NO	2	
DK	6	SKIP TO A3Q05
REFUSED	7	SKIP TO A3Q05

A3Q04_A (13A-d-iv)

Would a discussion of night waking and fussing have been helpful to you?

YES	1
NO	2
DK	6
REFUSED	7

A3Q05 (13A-e)

Since **(CHILD)**'s birth, did **(his/her)** doctors or health providers talk with you about how **(CHILD)** communicates **(his/her)** needs?

YES	1	SKIP TO A3Q06
NO	2	
DK	6	SKIP TO A3Q06
REFUSED	7	SKIP TO A3Q06

A3Q05_A (13A-e-v)

Would a discussion of how **(CHILD)** communicates **(his/her)** needs have been helpful to you?

YES	1
NO	2
DK	6
REFUSED	7

A3Q06 (13A-f)

Since **(CHILD)**'s birth, did **(his/her)** doctors or health providers talk with you about burn prevention methods, such as changing hot water temperatures in your home?

YES	1	SKIP TO A3Q07
NO	2	
DK	6	SKIP TO A3Q07
REFUSED	7	SKIP TO A3Q07

A3Q06_A (13A-f-vi)

Would a discussion of burn prevention have been helpful to you?

YES	1
NO	2
DK	6
REFUSED	7

A3Q07 (13A-g)

Since **(CHILD)**'s birth, did **(his/her)** doctors or health providers talk with you about using a car-seat?

YES	1	SKIP TO A3Q08
NO	2	
DK	6	SKIP TO A3Q08
REFUSED	7	SKIP TO A3Q08

A3Q07_A (13A-g-vii)

Would a discussion of using a car seat have been helpful to you?

YES	1
NO	2
DK	6
REFUSED	7

A3Q08 (13A-h)

Since **(CHILD)**'s birth, did **(his/her)** doctors or health providers talk with you about childcare arrangements?

YES	1	SKIP TO A3Q09
NO	2	
DK	6	SKIP TO A3Q09
REFUSED	7	SKIP TO A3Q09

A3Q08_A (13A-h-viii)

Would a discussion of childcare arrangements have been helpful to you?

YES	1
NO	2
DK	6
REFUSED	7

A3Q09 (13A-i)

Since **(CHILD)**'s birth, did **(his/her)** doctors or health providers talk with you about the importance of reading to **(CHILD)**?

YES	1	SKIP TO A3Q10
NO	2	
DK	6	SKIP TO A3Q10
REFUSED	7	SKIP TO A3Q10

A3Q09_A (13A-i-ix)

Would a discussion of the importance of reading to **(CHILD)** have been helpful to you?

YES	1
NO	2
DK	6
REFUSED	7

A3Q10 (13A-j)

Since **(CHILD)**'s birth, did **(his/her)** doctors or health providers talk with you about immunizations?

YES	1	SKIP TO A3Q11
NO	2	
DK	6	SKIP TO A3Q11
REFUSED	7	SKIP TO A3Q11

A3Q10_A (13A-j-x)

Would a discussion of immunizations have been helpful to you?

YES	1
NO	2
DK	6
REFUSED	7

A3Q11 (13A-k)

Since **(CHILD)**'s birth, have you delayed or not gotten **(him/her)** immunized because of concerns about the safety of vaccines?

YES	1
NO	2
DK	6
REFUSED	7

**[ALL SKIP TO A3Q38_A]
(CATI: PLACE TIME STAMP HERE)**

A3Q12 (13B-a)

(In the last 12 months/ since {his/her} birth), did (CHILD)'s doctors or health providers talk with you about issues related to food or feeding (him/her)?

YES	1	SKIP TO A3Q13
NO	2	
DK	6	SKIP TO A3Q13
REFUSED	7	SKIP TO A3Q13

A3Q12_A (13B-a-i)

Would a discussion of food or feeding have been helpful to you?

YES	1
NO	2
DK	6
REFUSED	7

A3Q13 (13B-b)

(In the last 12 months/ since {his/her} birth), did (CHILD)'s doctors or health providers talk with you about night waking and fussing?

YES	1	SKIP TO A3Q14
NO	2	
DK	6	SKIP TO A3Q14
REFUSED	7	SKIP TO A3Q14

A3Q13_A (13B-b-ii)

Would a discussion of night waking and fussing have been helpful to you?

YES	1
NO	2
DK	6
REFUSED	7

A3Q14 (13B-c)

(In the last 12 months/ since {his/her} birth), did (CHILD)'s doctors or health providers talk with you about (his/her) sleeping with a bottle?

YES	1	SKIP TO A3Q15
NO	2	
DK	6	SKIP TO A3Q15
REFUSED	7	SKIP TO A3Q15

A3Q14_A (13B-c-iii)

Would a discussion of **(CHILD)**'s sleeping with a bottle have been helpful to you?

YES	1
NO	2
CHILD DOES NOT USE A BOTTLE	3
DK	6
REFUSED	7

A3Q15 (13B-d)

(In the last 12 months/ since {his/her} birth), did (CHILD)'s doctors or health providers talk with you about taking (him/her) off of the bottle?

YES	1	SKIP TO A3Q16
NO	2	
DK	6	SKIP TO A3Q16
REFUSED	7	SKIP TO A3Q16

A3Q15_A (13B-d-iv)

Would a discussion of taking **(CHILD)** off the bottle have been helpful to you?

YES	1
NO	2
CHILD DOES NOT USE A BOTTLE	3
DK	6
REFUSED	7

A3Q16 (13B-e)

(In the last 12 months/ since {his/her} birth), did (CHILD)'s doctors or health providers talk with you about the words and phrases (CHILD) uses and understands?

YES	1	SKIP TO A3Q17
NO	2	
DK	6	SKIP TO A3Q17
REFUSED	7	SKIP TO A3Q17

A3Q16_A (13B-e-v)

Would a discussion of the words and phrases that **(CHILD)** understands have been helpful to you?

YES	1
NO	2
DK	6
REFUSED	7

A3Q17 (13B-f)

(In the last 12 months/ since {his/her} birth), did (CHILD)'s doctors or health providers talk with you about guidance and discipline techniques to use with (CHILD)?

- | | | |
|---------|---|----------------------|
| YES | 1 | SKIP TO A3Q18 |
| NO | 2 | |
| DK | 6 | SKIP TO A3Q18 |
| REFUSED | 7 | SKIP TO A3Q18 |

A3Q17_A (13B-f-vi)

Would a discussion of guidance and discipline techniques have been helpful to you?

- | | |
|---------|---|
| YES | 1 |
| NO | 2 |
| DK | 6 |
| REFUSED | 7 |

A3Q18 (13B-g)

(In the last 12 months/ since {his/her} birth), did (CHILD)'s doctors or health providers talk with you about toilet training?

- | | | |
|---------|---|----------------------|
| YES | 1 | SKIP TO A3Q19 |
| NO | 2 | |
| DK | 6 | SKIP TO A3Q19 |
| REFUSED | 7 | SKIP TO A3Q19 |

A3Q18_A (13B-g-vii)

Would a discussion of toilet training have been helpful to you?

- | | |
|---------|---|
| YES | 1 |
| NO | 2 |
| DK | 6 |
| REFUSED | 7 |

A3Q19 (13B-h)

(In the last 12 months/ since {his/her} birth), did (CHILD)'s doctors or health providers talk with you about the use of syrup of Ipecac if your child swallows some poison?

(FOR DEFINITION OF SYRUP OF IPECAC, ALWAYS GO TO HELP SCREEN)

- | | | |
|---------|---|----------------------|
| YES | 1 | SKIP TO A3Q20 |
| NO | 2 | |
| DK | 6 | SKIP TO A3Q20 |
| REFUSED | 7 | SKIP TO A3Q20 |

(CATI: ADD HELP SCREEN AS FOLLOWS)

Syrup of Ipecac is a liquid that you would give your child if you think that he or she accidentally swallowed something poisonous.

I READ THIS STATEMENT TO RESPONDENT 1

A3Q19_A (13B-h-viii)

Would a discussion of the use of syrup of Ipecac have been helpful to you?

- | | |
|---------|---|
| YES | 1 |
| NO | 2 |
| DK | 6 |
| REFUSED | 7 |

A3Q20 (13B-i)

Since **(CHILD)**'s birth, did **(his/her)** doctors or health providers talk with you about using a car-seat?

YES	1	SKIP TO A3Q21
NO	2	
DK	6	SKIP TO A3Q21
REFUSED	7	SKIP TO A3Q21

A3Q20_A (13B-i-ix)

Would a discussion of using a car seat have been helpful to you?

YES	1
NO	2
DK	6
REFUSED	7

A3Q21 (13B-j)

(In the last 12 months/ since {his/her} birth), did **(CHILD)**'s doctors or health providers talk with you about childcare arrangements?

YES	1	SKIP TO A3Q22
NO	2	
DK	6	SKIP TO A3Q22
REFUSED	7	SKIP TO A3Q22

A3Q21_A (13B-j-x)

Would a discussion of childcare arrangements have been helpful to you?

YES	1
NO	2
DK	6
REFUSED	7

A3Q22 (13B-k)

(In the last 12 months/ since {his/her} birth), did **(CHILD)**'s doctors or health providers talk with you about the importance of reading to **(CHILD)**?

YES	1	SKIP TO A3Q23
NO	2	
DK	6	SKIP TO A3Q23
REFUSED	7	SKIP TO A3Q23

A3Q22_A (13B-k-xi)

Would a discussion of the importance of reading to **(CHILD)** have been helpful to you?

YES	1
NO	2
DK	6
REFUSED	7

A3Q23 (13B-l)

(In the last 12 months/ since {his/her} birth), did **(CHILD)**'s doctors or health providers talk with you about immunizations?

YES	1	SKIP TO A3Q24
NO	2	
DK	6	SKIP TO A3Q24
REFUSED	7	SKIP TO A3Q24

A3Q23_A (13B-1-xii)

Would a discussion of immunizations have been helpful to you?

YES	1
NO	2
DK	6
REFUSED	7

A3Q24 (13B-m)

(In the last 12 months/ since {his/her} birth), have you delayed or not gotten (CHILD) immunized because of concerns about the safety of vaccines?

YES	1
NO	2
DK	6
REFUSED	7

[ALL SKIP TO A3Q38_A]

A3Q25 (13C-a)

In the last 12 months, did (CHILD)'s doctors or health providers talk with you about issues related to food or feeding (him/her)?

YES	1	SKIP TO A3Q26
NO	2	
DK	6	SKIP TO A3Q26
REFUSED	7	SKIP TO A3Q26

A3Q25_A (13C-A-i)

Would a discussion of food or feeding have been helpful to you?

YES	1
NO	2
DK	6
REFUSED	7

A3Q26 (13C-b)

In the last 12 months, did (CHILD)'s doctors or health providers talk with you about (CHILD)'s bedtime routines?

YES	1	SKIP TO A3Q27
NO	2	
DK	6	SKIP TO A3Q27
REFUSED	7	SKIP TO A3Q27

A3Q26_A (13C-b-ii)

Would a discussion of (CHILD)'s bedtime routines have been helpful to you?

YES	1
NO	2
DK	6
REFUSED	7

A3Q27 (13C-c)

In the last 12 months, did **(CHILD)**'s doctors or health providers talk with you about ways to teach **(him/her)** about dangerous situations, places or items like electrical sockets, the stove, climbing on things, or running into the street?

YES	1	SKIP TO A3Q28
NO	2	
DK	6	SKIP TO A3Q28
REFUSED	7	SKIP TO A3Q28

A3Q27_A (13C-c-iii)

Would a discussion of teaching **(CHILD)** about dangerous situations, places or items have been helpful to you?

YES	1
NO	2
DK	6
REFUSED	7

A3Q28 (13C-d)

In the last 12 months, did **(CHILD)**'s doctors or health providers talk with you about things **(CHILD)** may start to do for **(himself/herself)** like washing or dressing?

YES	1	SKIP TO A3Q29
NO	2	
DK	6	SKIP TO A3Q29
REFUSED	7	SKIP TO A3Q29

A3Q28_A (13C-d-iv)

Would a discussion of things **(CHILD)** may start to do for **(himself/herself)** have been helpful to you?

YES	1
NO	2
DK	6
REFUSED	7

A3Q29 (13C-e)

In the last 12 months, did **(CHILD)**'s doctors or health providers talk with you about the words and phrases **(CHILD)** uses and understands?

YES	1	SKIP TO A3Q30
NO	2	
DK	6	SKIP TO A3Q30
REFUSED	7	SKIP TO A3Q30

A3Q29_A (13C-e-v)

Would a discussion of the words and phrases that **(CHILD)** uses and understands have been helpful to you?

YES	1
NO	2
DK	6
REFUSED	7

A3Q30 (13C-f)

In the last 12 months, did **(CHILD)**'s doctors or health providers talk with you about how **(CHILD)** is learning to get along with other children?

YES	1	SKIP TO A3Q31
NO	2	
DK	6	SKIP TO A3Q31
REFUSED	7	SKIP TO A3Q31

A3Q30_A (13C-f-vi)

Would a discussion of how **(CHILD)** is learning to get along with other children have been helpful to you?

YES	1
NO	2
DK	6
REFUSED	7

A3Q31 (13C-g)

In the last 12 months, did **(CHILD)**'s doctors or health providers talk with you about guidance and discipline techniques to use with **(CHILD)** such as the use of time-out?

YES	1	SKIP TO A3Q32
NO	2	
DK	6	SKIP TO A3Q32
REFUSED	7	SKIP TO A3Q32

A3Q31_A (13C-g-vii)

Would a discussion of guidance and discipline techniques have been helpful to you?

YES	1
NO	2
DK	6
REFUSED	7

A3Q32 (13C-h)

In the last 12 months, did **(CHILD)**'s doctors or health providers talk with you about toilet training?

YES	1	SKIP TO A3Q33
NO	2	
DK	6	SKIP TO A3Q33
REFUSED	7	SKIP TO A3Q33

A3Q32_A (13C-h-viii)

Would a discussion of toilet training have been helpful to you?

YES	1
NO	2
DK	6
REFUSED	7

A3Q33 (13C-i)

Since **(CHILD)**'s birth, did **(his/her)** doctors or health providers talk with you about using a car-seat?

YES	1	SKIP TO A3Q34
NO	2	
DK	6	SKIP TO A3Q34
REFUSED	7	SKIP TO A3Q34

A3Q33_A (13C-i-ix)

Would a discussion of using a car seat have been helpful to you?

YES	1
NO	2
DK	6
REFUSED	7

A3Q34 (13C-j)

In the last 12 months, did **(CHILD)**'s doctors or health providers talk with you about childcare arrangements?

YES	1	SKIP TO A3Q35
NO	2	
DK	6	SKIP TO A3Q35
REFUSED	7	SKIP TO A3Q35

A3Q34_A (13C-j-x)

Would a discussion of childcare arrangements have been helpful to you?

YES	1
NO	2
DK	6
REFUSED	7

A3Q35 (13C-k)

In the last 12 months, did **(CHILD)**'s doctors or health providers talk with you about reading to **(him/her)**?

YES	1	SKIP TO A3Q36
NO	2	
DK	6	SKIP TO A3Q36
REFUSED	7	SKIP TO A3Q36

A3Q35_A (13C-k-xi)

Would a discussion of reading to **(CHILD)** have been helpful to you?

YES	1
NO	2
DK	6
REFUSED	7

A3Q36 (13C-l)

In the last 12 months, did **(CHILD)**'s doctors or health providers talk with you about immunizations?

YES	1	SKIP TO A3Q37
NO	2	
DK	6	SKIP TO A3Q37
REFUSED	7	SKIP TO A3Q37

A3Q36_A (13C-l-xii)

Would a discussion of immunizations have been helpful to you?

YES	1
NO	2
DK	6
REFUSED	7

A3Q37 (13C-m)

In the last 12 months, have you delayed or not gotten **(CHILD)** immunized because of concerns about the safety of vaccines?

YES	1
NO	2
DK	6
REFUSED	7

A3Q38_A (G14a)

Now, I'd like to ask you some different questions about **(CHILD)**'s doctors or health providers. **(In the last 12 months/ since {his/her} birth)**, how often did **(CHILD)**'s doctors or health providers take time to understand the specific needs of **(CHILD)**? Would you say always, usually, sometimes, or never?

ALWAYS	1
USUALLY	2
SOMETIMES	3
NEVER	4
DK	6
REFUSED	7

A3Q38_B (G14b)

(In the last 12 months/ since {his/her} birth), how often did **(CHILD)**'s doctors or health providers respect that you are the expert on your child? Would you say always, usually, sometimes, or never?

ALWAYS	1
USUALLY	2
SOMETIMES	3
NEVER	4
DK	6
REFUSED	7

A3Q38_C (G14c)

(In the last 12 months/ since {his/her} birth), how often did **(CHILD)**'s doctors or health providers ask how you are feeling as a parent? Would you say always, usually, sometimes, or never?

ALWAYS	1
USUALLY	2
SOMETIMES	3
NEVER	4
DK	6
REFUSED	7

A3Q38_D (G14d)

(In the last 12 months/ since {his/her} birth), how often did **(CHILD)**'s doctors or health providers understand you and your family and how you prefer to raise **(CHILD)**? Would you say always, usually, sometimes, or never?

ALWAYS	1
USUALLY	2
SOMETIMES	3
NEVER	4
DK	6
REFUSED	7

A3Q39 (G15a)

(In the last 12 months/ since {his/her} birth), have (CHILD)'s doctors or health providers ever asked you about violence in your community?

YES	1
NO	2
DK	6
REFUSED	7

A3Q39_A (G15a1)

Should a child's doctors or health providers discuss with parents violence in the community?

YES	1
NO	2
DK	6
REFUSED	7

A3Q40 (G15b)

(In the last 12 months/ since {his/her} birth), have (CHILD)'s doctors or health providers ever asked you about your physical health?

YES	1
NO	2
DK	6
REFUSED	7

A3Q40_A (G15b1)

Should a child's doctors or health providers discuss with parents the parent's physical health?

YES	1
NO	2
DK	6
REFUSED	7

A3Q41 (G15c)

(In the last 12 months/ since {his/her} birth), have (CHILD)'s doctors or health providers ever asked whether you or someone in your household smokes?

YES	1
NO	2
DK	6
REFUSED	7

A3Q41_A (G15c1)

Should a child's doctors or health providers discuss with parents whether someone in their household smokes?

YES	1
NO	2
DK	6
REFUSED	7

A3Q42 (G15d)

(In the last 12 months/ since {his/her} birth), have (CHILD)'s doctors or health providers ever asked whether you or someone in your household drinks alcohol and/or uses drugs?

YES	1
NO	2
DK	6
REFUSED	7

A3Q42_A (G15d1)

Should a child's doctors or health providers discuss with parents whether someone in their household drinks alcohol and/or uses drugs?

YES	1
NO	2
DK	6
REFUSED	7

A3Q43 (G15e)

(In the last 12 months/ since {his/her} birth), have (CHILD)'s doctors or health providers ever asked you if you have someone to turn to for emotional support?

YES	1
NO	2
DK	6
REFUSED	7

A3Q43_A (G15e1)

Should a child's doctors or health providers discuss with parents having someone to turn to for emotional support?

YES	1
NO	2
DK	6
REFUSED	7

A3Q44 (G15f)

(In the last 12 months/ since {his/her} birth), have (CHILD)'s doctors or health providers ever asked you whether your spouse or partner was supportive of your parenting efforts?

YES	1
NO	2
DK	6
REFUSED	7

A3Q44_A (G15f1)

Should a child's doctors or health providers discuss with parents whether a spouse or partner is supportive of parenting efforts?

YES	1
NO	2
DK	6
REFUSED	7

A3Q45 (G15g)

(In the last 12 months/ since {his/her} birth), have (CHILD)'s doctors or health providers ever asked you if you have had trouble paying for (CHILD)'s basic needs, such as food, diapers or other things.

YES	1
NO	2
DK	6
REFUSED	7

A3Q45_A (G15g1)

Should a child's doctors or health providers discuss with parents whether a parent has had trouble paying for a child's basic needs?

YES	1
NO	2
DK	6
REFUSED	7

A3Q46 (G16)

Did (CHILD)'s doctors or health providers ever tell you that they were carrying out - what doctors call - a "developmental assessment" of (CHILD)?

YES	1
NO	2
DK	6
REFUSED	7

A3Q46_A (G16A)

Did (CHILD)'s doctors or health providers ever have (him/her) pick up small objects or stack blocks or throw a ball or recognize different colors?

YES	1
NO	2
DK	6
REFUSED	7

A3Q47 (G17)

Doctors sometimes provide referrals to specialists or to educational or developmental programs. (In the last 12 months/ since {his/her} birth) has (CHILD)'s doctors or health providers referred (him/her) to any specialist?

YES	1	
NO	2	SKIP TO A3Q48
DK	6	SKIP TO A3Q48
REF	7	SKIP TO A3Q48

A3Q47_A (G17A)

What kind of specialist was that?

(SELECT ALL THAT APPLY)

MEDICAL OR SURGICAL SPECIALIST	01
SPEECH/LANGUAGE SPECIALIST	02
HEARING SPECIALIST	03
OCCUPATIONAL OR PHYSICAL THERAPIST	04
DENTIST OR DENTAL CARE PROVIDER	05
CHILD PSYCHOLOGIST/CHILD PSYCHIATRIST/ SOCIAL WORKER	06
OTHER	07
DK	96
REFUSED	97

A3Q48 (G18)

(In the **last 12 months/ since {his/her} birth**) has (CHILD)'s doctors or health providers referred you to any program or class?

YES	1	
NO	2	SKIP TO A3Q49
DK	6	SKIP TO A3Q49
REF	7	SKIP TO A3Q49

A3Q48_A (G18A)

What kind of program/class was that?

(SELECT ALL THAT APPLY)

BREASTFEEDING/LACTATION	1
PARENTING	2
CHILD DEVELOPMENT	3
OTHER	4
DK	6
REFUSED	7

A3Q49 (G19)

Did you attend a childbirth class before the birth of (CHILD)?

YES	1	
NO	2	SKIP TO A3Q50
DK	6	SKIP TO A3Q50
REFUSED	7	SKIP TO A3Q50

A3Q49_A (G19A)

Was this childbirth class paid for or covered by a health insurance plan?

YES	1
NO	2
DK	6
REFUSED	7

A3Q50 (G20)

Did you attend a parenting class after the birth of (CHILD)?

YES	1	
NO	2	SKIP TO A3Q51
DK	6	SKIP TO A3Q51
REFUSED	7	SKIP TO A3Q51

A3Q50_A (G20A)

Was this parenting class paid for or covered by a health insurance plan?

YES	1
NO	2
DK	6
REFUSED	7

A3Q51 (G21)

Do you have other children besides (**CHILD**)?

YES	1	
NO	2	SKIP TO A3Q52
DK	6	SKIP TO A3Q52
REFUSED	7	SKIP TO A3Q52

A3Q51_A (G21A)

Did you attend a childbirth class before your other child or children were born?

YES	1
NO	2
DK	6
REFUSED	7

A3Q51_B (G21B)

Did you attend a parenting class after the birth of your other child or children?

YES	1
NO	2
DK	6
REFUSED	7

A3Q52 (G22)

Now I would like you to think back to the time (**CHILD**) was born. Was (**he/she**) born prematurely, that is, was (**he/she**) more than 4 weeks early?

YES	1
NO	2
DK	6
REFUSED	7

A3Q53 (G23)

What was (CHILD)'s birth weight?

- POUNDS 1
- KILOGRAMS 2
- DK 6
- REFUSED 7

ENTER WEIGHT: _____ POUNDS _____ OUNCES
_____ KILOGRAMS

CATI: SCREEN WITH POUNDS/OUNCES OR WITH KILOGRAMS SHOULD COME UP, DEPENDING ON ABOVE A3Q53 ANSWER. NO CROSSOVER BETWEEN POUNDS/OUNCES AND KILOGRAMS SHOULD BE ALLOWED.

**POUNDS FIELD SHOULD BE A TWO NUMERIC-CHARACTER FIELD.
OUNCES FIELD SHOULD BE A TWO NUMERIC-CHARACTER FIELD.
IF <5 POUNDS, 0 OUNCES OR >10 POUNDS, 0 OUNCES, ASK A3Q53_A.**

**KILOGRAMS FIELD SHOULD BE A THREE ALPHANUMERIC-CHARACTER FIELD.
IF <2.5 KILOGRAMS OR >5 KILOGRAMS, ASK A3Q53_B.**

ALL OTHERS SKIP TO A3Q54

A3Q53_A

I have (POUNDS FROM A3Q53) pounds, (OUNCES FROM A3Q53) ounces. Is that correct?

- YES 1
- NO 2 [SKIP BACK TO A3Q53]

A3Q53_B

I have (KILOGRAMS FROM A3Q53) kilograms. Is that correct?

- YES 1
- NO 2 [SKIP BACK TO A3Q53]

A3Q54 (G24)

Now I am going to ask you a few questions about breastfeeding. Was (CHILD) breastfed for any length of time?

- YES 1
- NO 2 **SKIP TO A3Q55**
- DK 6 **SKIP TO A3Q55**
- REFUSED 7 **SKIP TO A3Q55**

A3Q54_A (G24A)

For how many days, weeks, or months was **(CHILD)** breastfed?

DAY(S)	1	
WEEK(S)	2	
MONTH(S)	3	
STILL BREASTFEEDING	9	SKIP TO A3Q55
DK	6	
REFUSED	7	

A3Q54_B

ENTER PERIOD _____

(CATI: 3 NUMERIC-CHARACTER FIELD**IF DAYS ARE THE CHOSEN TIME PERIOD, RANGE IS 001-365;****IF WEEKS ARE THE CHOSEN TIME PERIOD, RANGE IS 01-52;****IF MONTHS ARE THE CHOSEN TIME PERIOD, RANGE IS 01-35.****A3Q54 CANNOT BE GREATER THAN CHILD'S AGE. IF A3Q54 IS GREATER THAN CHILD'S AGE, REASK A3Q54.)**

ENTER NUMBER OF DAYS/WEEKS/MONTHS _____

A3Q55 (G25)

Did **(CHILD)**'s doctors or health providers give you any help or encouragement for breastfeeding?

YES	1
NO	2
DK	6
REFUSED	7

A3Q56 (G26)

How old was **(CHILD)** when you introduced solid foods? When I say solid foods here I mean anything other than milk, formula or juice.

(RECORD AGE OF CHILD IN MONTHS)

(CATI: 2 NUMERIC-CHARACTER FIELD, RANGE IS 00-35 MONTHS AS USED IN NIS.**A3Q56 CANNOT BE GREATER THAN CHILD'S AGE. IF A3Q56 IS GREATER THAN CHILD'S AGE, REASK A3Q56.)**

_____ MONTHS OLD

NOT INTRODUCED YET	95
DK	96
REFUSED	97

(IF A3Q56 > 1 AND <13, SKIP TO A4Q01)

A3Q56_A

I have **(ANSWER FROM A3Q56)** month(s) old. Is that correct?

YES	1	
NO	2	[SKIP BACK TO A3Q56]

**National Survey of Early Childhood Health
Section 4: Family Interaction and Home Safety**

A4Q01_A (G27a)

Now I am going to read some statements about things that may occur in your family. Is **(CHILD)**'s bedtime usually the same everyday or does it change from day to day?

- SAME EVERY DAY 1
- CHANGES FROM DAY TO DAY 2
- DK 6
- REFUSED 7

A4Q01_B (G27b)

Is **(CHILD)**'s nap-time usually the same everyday or does it change from day to day?

- SAME EVERY DAY 1
- CHANGES FROM DAY TO DAY 2
- NOT APPLICABLE 3
- DK 6
- REFUSED 7

A4Q01_C (G27c)

Are **(CHILD)**'s mealtimes usually the same everyday or do they change from day to day?

- SAME EVERY DAY 1
- CHANGES FROM DAY TO DAY 2
- DK 6
- REFUSED 7

A4Q02 (G28)

Now I would like to talk to you about **(CHILD)**'s activities with you and other family members. Please tell me the number of days in a typical week that you or any other family members do the following things.

A4Q02_X01 (G28a)	Read stories to (CHILD) .	EVERY DAY 1 3-6 DAYS 2 1-2 DAYS 3	NEVER 4 DK 6 REF 7
A4Q02_X02 (G28b)	Play music or sing songs with (CHILD) .	EVERY DAY 1 3-6 DAYS 2 1-2 DAYS 3	NEVER 4 DK 6 REF 7
A4Q02_X03 (G28c)	Take (CHILD) on any kind of outing such as to the park, grocery store, a church or a playground.	EVERY DAY 1 3-6 DAYS 2 1-2 DAYS 3	NEVER 4 DK 6 REF 7
A4Q02_X04 (G28d)	How many days in a typical week does everyone in the household eat a mid-day or evening meal together?	EVERY DAY 1 3-6 DAYS 2 1-2 DAYS 3	NEVER 4 DK 6 REF 7
A4Q02_X05 (G28e)	Eat breakfast together?	EVERY DAY 1 3-6 DAYS 2 1-2 DAYS 3	NEVER 4 DK 6 REF 7

A4Q03 (G29)

In a typical day, about how many hours does **(CHILD)** spend watching TV or videos?

(NOTE: ROUND PARTIAL HOURS UP)

(CATI: 2 NUMERIC-CHARACTER FIELD, RANGE IS 00-24)

_____ HOURS	
NONE	00
DK	96
REFUSED	97

A4Q04 (G30)

About how many children's books are there in your house, including library books? Please only include books that are for children.

(CATI: 3 NUMERIC-CHARACTER FIELD)

_____ NUMBER OF BOOKS	
DK	996
REFUSED	997

(IF A4Q04 < 100 AND >13, SKIP TO A4Q05)

A4Q04_A

I have (ANSWER FROM A4Q04) books Is that correct?

YES	1	
NO	2	[SKIP BACK TO A4Q04]

A4Q05 (G31)

In a typical day, how often would you say you feel frustrated or aggravated with **(CHILD)**'S behavior?

Would you say:

Always	1
Sometimes	2
Rarely, or	3
Never?	4
DK	6
REFUSED	7

A4Q06 (G32)

Now I would like to ask you about the amount of time you spend with **(CHILD)**. Would you say that you spend the right amount of time with **(CHILD)**, or would you like to spend a lot more time, a little more time, a little less time, or a lot less time?

RIGHT AMOUNT OF TIME	1
A LOT MORE TIME	2
A LITTLE MORE TIME	3
A LITTLE LESS TIME	4
A LOT LESS TIME	5
DK	6
REFUSED	7

A4Q07 (G33) The next questions are about discipline. Parents vary a lot in how they discipline and children also vary in their response to being disciplined. I am going to read a list of methods of discipline parents might use with children (**CHILD**)’s age. For each, please tell me if you use that method often, sometimes, rarely, or never with (**CHILD**).

A4Q07_X01 (G33a)	First, how about raising your voice or yelling?	OFTEN 1 RARELY 3 DK 6	SOMETIMES 2 NEVER 4 REFUSED 7
A4Q07_X02 (G33b)	How about spanking? (IF CHILD IS 18 MONTHS OF AGE OR YOUNGER, SKIP TO A4Q08)	OFTEN 1 RARELY 3 DK 6	SOMETIMES 2 NEVER 4 REFUSED 7
A4Q07_X03 (G33c)	How about taking away a toy or treat?	OFTEN 1 RARELY 3 DK 6	SOMETIMES 2 NEVER 4 REFUSED 7
A4Q07_X04 (G33d)	How about giving a time-out, that is making (CHILD) take a break from whatever activity {he/she} is involved in?	OFTEN 1 RARELY 3 DK 6	SOMETIMES 2 NEVER 4 REFUSED 7
A4Q07_X05 (G33e)	How about explaining to (CHILD) why {his/her} behavior is not appropriate.	OFTEN 1 RARELY 3 DK 6	SOMETIMES 2 NEVER 4 REFUSED 7

A4Q08 (G34)

I am now going to read a list of things that parents sometimes do to childproof their home or make it safe. For each item, tell me if you ever did that in your home.
(PROBE FOR “NOT APPLICABLE” RESPONSE)

A4Q08_X01 (G34a)	Put up baby gates, window guards or other barriers. (PROBE FOR BEST ANSWER)	YES 1 NA 3 DK 6	NO 2 REF 7
A4Q08_X02 (G34b)	Put locks or safety latches on cabinets where things such as cleaning agents or medicines are kept.	YES 1 NA 3 DK 6	NO 2 REF 7
A4Q08_X03 (G34c)	Put padding around hard surfaces or sharp edges.	YES 1 NA 3 DK 6	NO 2 REF 7
A4Q08_X04 (G34d)	Put stoppers or plugs in electrical outlets.	YES 1 NA 3 DK 6	NO 2 REF 7
A4Q08_X05 (G34e)	Turned down the hot water thermostat setting. (PROBE FOR BEST ANSWER)	YES 1 NA 3 DK 6	NO 2 REF 7

A4Q09 (G35)

Syrup of Ipecac can be used if **(CHILD)** swallows something poisonous. Do you have Syrup of Ipecac at home?

YES	1
NO	2
DK	6
REFUSED	7

(CATI: ADD HELP SCREEN AS FOLLOWS)

Syrup of Ipecac is a liquid that you would give your child if you think that he or she accidentally swallowed something poisonous.

I READ THIS STATEMENT TO RESPONDENT 1

A4Q10 (G36)

Now I am going to ask you a few questions regarding childcare. In a typical week, how many hours does **(CHILD)** spend in the care of someone other than a parent or guardian?

(CATI: 3 NUMERIC-CHARACTER FIELD)

_____ HOURS		
DOES NOT SPEND ANY TIME WITH CHILDCARE PROVIDER	995	SKIP TO A5Q01
DK	996	SKIP TO A5Q01
REFUSED	997	SKIP TO A5Q01

(IF A4Q10 <60, SKIP TO A4Q011)

A4Q10_A

I have **(ANSWER FROM A4Q10)** hours. Is that correct?

YES	1	
NO	2	[SKIP BACK TO A4Q10]

A4Q11 (G37)

Is the person who usually cares for **(CHILD)** a relative or a non-relative?

RELATIVE	1
NON-RELATIVE	2
DK	6
REFUSED	7

A4Q12 (G38)

Is **(CHILD)** mostly cared for:

in your home	1
in someone else's home, or	2
in a daycare center?	3
DK	6
REFUSED	7

National Survey of Early Childhood Health
Section 5: Parental and Child Health

A5Q01 (G39) Now I am going to ask you a few questions about how you have been feeling lately.

A5Q01_X01 (G39a)	How much of the time during the <u>past month</u> have you been a very nervous person? Would you say all of the time, most of the time, a good bit of the time, some of the time, a little of the time or none of the time?	ALL OF THE TIME 01 MOST OF THE TIME 02 A GOOD BIT OF THE TIME 03 SOME OF THE TIME 04 A LITTLE OF THE TIME 05 NONE OF THE TIME 06 DK 96 REFUSED 97
A5Q01_X02 (G39b)	How much of the time during the <u>past month</u> have you felt calm and peaceful? Would you say all of the time, most of the time, a good bit of the time, some of the time, a little of the time or none of the time?	ALL OF THE TIME 01 MOST OF THE TIME 02 A GOOD BIT OF THE TIME 03 SOME OF THE TIME 04 A LITTLE OF THE TIME 05 NONE OF THE TIME 06 DK 96 REFUSED 97
A5Q01_X03 (G39c)	How much of the time during the <u>past month</u> have you felt downhearted and blue?	ALL OF THE TIME 01 MOST OF THE TIME 02 A GOOD BIT OF THE TIME 03 SOME OF THE TIME 04 A LITTLE OF THE TIME 05 NONE OF THE TIME 06 DK 96 REFUSED 97
A5Q01_X04 (G39d)	How much of the time during the <u>past month</u> have you felt so down in the dumps that nothing could cheer you up?	ALL OF THE TIME 01 MOST OF THE TIME 02 A GOOD BIT OF THE TIME 03 SOME OF THE TIME 04 A LITTLE OF THE TIME 05 NONE OF THE TIME 06 DK 96 REFUSED 97
A5Q01_X05 (G39e)	How much of the time during the <u>past month</u> have you been a happy person?	ALL OF THE TIME 01 MOST OF THE TIME 02 A GOOD BIT OF THE TIME 03 SOME OF THE TIME 04 A LITTLE OF THE TIME 05 NONE OF THE TIME 06 DK 96 REFUSED 97

A5Q02 (G40)

In general, how well do you feel you are coping with the day to day demands of parenthood? Would you say that you are coping very well, somewhat well, not very well or not well at all?

VERY WELL	1
SOMEWHAT WELL	2
NOT VERY WELL	3
NOT WELL AT ALL	4
DK	6
REFUSED	7

A5Q03 (G41)

Is there someone you can turn to for day to day emotional help while parenting?

YES 1
 NO 2
 DK 6
 REFUSED 7

A5Q04 (G42)

Is there someone you can count on to watch **(CHILD)** if you need a break?

YES 1
 NO 2
 DK 6
 REFUSED 7

A5Q05 (G43)

Sometimes parents have concerns about their children. Are you concerned a lot, a little, or not at all about:

A5Q05_X01 (G43a)	How (CHILD) talks and makes speech sounds?	A LOT 1 A LITTLE 2 NOT AT ALL 3	NOT APPLICABLE 4 DK 6 REFUSED 7
A5Q05_X02 (G43b)	How (CHILD) sees or hears?	A LOT 1 A LITTLE 2 NOT AT ALL 3	NOT APPLICABLE 4 DK 6 REFUSED 7
A5Q05_X03 (G43c)	How (CHILD) understands what you say?	A LOT 1 A LITTLE 2 NOT AT ALL 3	NOT APPLICABLE 4 DK 6 REFUSED 7
A5Q05_X04 (G43d)	How (CHILD) uses his or her hands and fingers to do things?	A LOT 1 A LITTLE 2 NOT AT ALL 3	NOT APPLICABLE 4 DK 6 REFUSED 7
A5Q05_X05 (G43e)	How (CHILD) uses his or her arms and legs?	A LOT 1 A LITTLE 2 NOT AT ALL 3	NOT APPLICABLE 4 DK 6 REFUSED 7
A5Q05_X06 (G43f)	How (CHILD) behaves?	A LOT 1 A LITTLE 2 NOT AT ALL 3	NOT APPLICABLE 4 DK 6 REFUSED 7
A5Q05_X07 (G43g)	How (CHILD) gets along with others?	A LOT 1 A LITTLE 2 NOT AT ALL 3	NOT APPLICABLE 4 DK 6 REFUSED 7
A5Q05_X08 (G43h)	How (CHILD) is learning to do things for himself/herself?	A LOT 1 A LITTLE 2 NOT AT ALL 3	NOT APPLICABLE 4 DK 6 REFUSED 7
A5Q05_X09 (G43i)	How (CHILD) is learning preschool or school skills?	A LOT 1 A LITTLE 2 NOT AT ALL 3	NOT APPLICABLE 4 DK 6 REFUSED 7
A5Q05_X10 (G43j)	Whether (CHILD) can do what other children his or her age can do?	A LOT 1 A LITTLE 2 NOT AT ALL 3	NOT APPLICABLE 4 DK 6 REFUSED 7
A5Q05_X11 (G43k)	(CHILD) 's emotional well-being?	A LOT 1 A LITTLE 2 NOT AT ALL 3	NOT APPLICABLE 4 DK 6 REFUSED 7

A5Q06 (G44)

Now I would like to ask a few questions about **(CHILD)**'s health. In the last 12 months, did **(he/she)** have any of the following conditions:

5Q06_X01 (G44a.)	Asthma?	YES DK	1 6	NO REFUSED	2 7
A5Q06_X02 (G44b.)	More than three ear infections in the last year?	YES DK	1 6	NO REFUSED	2 7
A5Q06_X03 (G44c.)	Eczema or any kind of skin allergy other than diaper rash?	YES DK	1 6	NO REFUSED	2 7
A5Q06_X04 (G44d.)	Any kind of food or digestive allergy?	YES DK	1 6	NO REFUSED	2 7
A5Q06_X05 (G44e.)	Any other health problems that concern you?	YES DK	1 6	NO REFUSED	2 7

(IF A5Q06_X05 = 2,6,7, SKIP TO A5Q07)

A5Q06_A What is that health problem?
(PLEASE SPECIFY) _____

A5Q07 (G45)

Does **(CHILD)** currently need or use medicine prescribed by a doctor, other than vitamins?

- YES 1
- NO 2 **(SKIP TO A5Q08)**
- DK 6 **(SKIP TO A5Q08)**
- REFUSED 7 **(SKIP TO A5Q08)**

A5Q07_A (G45A)

Is this because of any medical, behavioral or other health condition?

- YES 1
- NO 2 **(SKIP TO A5Q08)**
- DK 6 **(SKIP TO A5Q08)**
- REFUSED 7 **(SKIP TO A5Q08)**

A5Q07_B (G45B)

Is this a condition that has lasted or is expected to last for at least 12 months?

- YES 1
- NO 2
- DK 6
- REFUSED 7

A5Q08 (G46)

Does **(CHILD)** need or use more medical care, mental health or educational services than is usual for most children of the same age.

- YES 1
- NO 2 **(SKIP TO A5Q09_A)**
- DK 6 **(SKIP TO A5Q09_A)**
- REFUSED 7 **(SKIP TO A5Q09_A)**

A5Q08_A

Is this because of any medical, behavioral or other health condition?

YES	1
NO	2 (SKIP TO A5Q09_A)
DK	6 (SKIP TO A5Q09_A)
REFUSED	7 (SKIP TO A5Q09_A)

A5Q08_B

Is this a condition that has lasted or is expected to last for at least 12 months?

YES	1
NO	2
DK	6
REFUSED	7

A5Q09_A (G47a)

Sometimes people have difficulty getting medical care when they need it. **(During the past 12 months/since {his/her} birth)** was there any time that **(CHILD)** needed health care for a problem or concern but did not get it?

YES	1
NO	2
DK	6
REFUSED	7

A5Q09_B (G47b)

(During the past 12 months/since {his/her} birth) was there any time that **(CHILD)** received care for a problem or concern, but got the care later than you would have liked?

YES	1
NO	2
DK	6
REFUSED	7

(IF A5Q09_A = 2,6,7 AND A5Q09_B = 2,6,7 , SKIP TO A5Q10)

A5Q09_C (G47c)

Why did **(CHILD)** need health care? Was it for a:

(MARK ALL THAT APPLY)

Medical problem or concern	1
Behavioral problem or concern	2
Speech and/or language problem or concern or	3
Some other problem or concern	4
DK	6
REFUSED	7

(IF MORE THAN ONE PROBLEM IDENTIFIED IN A5Q09_C, LOOP THROUGH A5Q09_D AND A5Q09_E FOR EACH PROBLEM. IF DK OR REF TO ALL, SKIP TO A5Q10.)

A5Q09_D (G47d)

(CATI: IF A5Q09_A = 1, USE FIRST FILL. IF A5Q09_B = 1, USE SECOND FILL. IF BOTH A5Q09_A AND A5Q09_B = 1, USE FIRST FILL.)

(Why didn't (CHILD) receive care for {INSERT PROBLEM FROM A5Q09_C}? / Why was (CHILD)'s care delayed for {INSERT PROBLEM FROM A5Q09_C}?) Was it because:

A5Q09_D_X01 (G47d-i)	You could not afford it or had no health insurance?	YES DK	1 6	NO REFUSED	2 7
A5Q09_D_X02 (G47d-ii)	You had no doctors or health providers to go to for (CHILD)?	YES DK	1 6	NO REFUSED	2 7
A5Q09_D_X03 (G47d-iii)	(CHILD)'s doctors or health providers did not consider it a problem?	YES DK	1 6	NO REFUSED	2 7
A5Q09_D_X04 (G47d-iv)	You had transportation or childcare problems or problems related to work?	YES DK	1 6	NO REFUSED	2 7
A5Q09_D_X05 (G47d-v)	Any other reason?	YES DK	1 6	NO REFUSED	2 7

A5Q09_E (G47e)

(CATI: IF A5Q09_A = 1, USE FIRST FILL. IF A5Q09_B = 1, USE SECOND FILL. IF BOTH A5Q09_A AND A5Q09_B = 1, USE FIRST FILL.)

Did the (lack of/delay in) healthcare for (CHILD)'s (FILL PROBLEM FROM A5Q09_C):

A5Q09_E_X01 (G47e-i)	Create concerns about (his/her) future development?	YES DK	1 6	NO REFUSED	2 7
A5Q09_E_X02 (G47e-ii)	Create problems for (his/her) attending day care?	YES DK	1 6	NO REFUSED	2 7
A5Q09_E_X03 (G47e-iii)	Create problems for you or your spouse or partner meeting work responsibilities?	YES DK	1 6	NO REFUSED	2 7

A5Q10 (G48a) During the past 12 months, how many times has (CHILD) gone to a hospital emergency room about (his/her) health? Please include emergency room visits that resulted in hospital admission. (CATI: 3 NUMERIC-CHARACTER FIELD)

_____ VISITS
 DK 996
 REFUSED 997

(IF A5Q10 <11, SKIP TO A5Q11)

A5Q10_A

I have (ANSWER FROM A5Q10) visits. Is that correct?

YES 1
 NO 2 [SKIP BACK TO A5Q10]

A5Q11 (G48b) During the past 12 months, how many times has **(CHILD)** had to stay in the hospital overnight?
(CATI: 3 NUMERIC-CHARACTER FIELD)

	TIMES
DK	996
REFUSED	997

(IF A5Q11 <11, SKIP TO A5Q12)

A5Q11_A

I have **(ANSWER FROM A5Q11)** times. Is that correct?

YES	1	
NO	2	[SKIP BACK TO A5Q11]

A5Q12 (G49) During the past 12 months, how many times have you called **(CHILD)**'s doctor's office to ask a question or get some information? Please do not include calls made to get an appointment.
(CATI: 3 NUMERIC-CHARACTER FIELD)

	TIMES
DK	996
REFUSED	997

(IF A5Q12 <51, SKIP TO A6Q01)

A5Q12_A

I have **(ANSWER FROM A5Q12)** times. Is that correct?

YES	1	
NO	2	[SKIP BACK TO A5Q12]

**National Survey of Early Childhood Health
Section 6: Financial Welfare and Health Insurance**

A6Q01 (G50) Now I would like to ask how much trouble you have had paying for particular kinds of expenses for **(CHILD)**. For each of the items in the list, please tell me if you had a lot of trouble, some trouble or no trouble at all paying for that item.

A6Q01_X01 (G50a)	First, how about prenatal care during pregnancy?	LOT OF TROUBLE NO TROUBLE AT ALL DK	1 3 6	SOME TROUBLE NOT APPL REFUSED	2 4 7
A6Q01_X02 (G50b)	How about the medical expenses for (CHILD) 's birth?	LOT OF TROUBLE NO TROUBLE AT ALL DK	1 3 6	SOME TROUBLE NOT APPL REFUSED	2 4 7
A6Q01_X03 (G50c)	How about (CHILD) 's health and medical expenses?	LOT OF TROUBLE NO TROUBLE AT ALL DK	1 3 6	SOME TROUBLE NOT APPL REFUSED	2 4 7
A6Q01_X04 (G50d)	How about supplies like formula, food, diapers, clothes, and shoes?	LOT OF TROUBLE NO TROUBLE AT ALL DK	1 3 6	SOME TROUBLE NOT APPL REFUSED	2 4 7
A6Q01_X05 (G50e)	How about childcare?	LOT OF TROUBLE NO TROUBLE AT ALL DK	1 3 6	SOME TROUBLE NOT APPL REFUSED	2 4 7

(CATI NOTE: LISTS WITH STATE-SPECIFIC PROGRAM NAMES WILL BE PROVIDED. THE CORRECT PROGRAMS FOR THE RESPONDENT'S STATE WILL NEED TO BE FILLED IN A6Q02, A6Q03, A6Q04)

A6Q02 (G51)
Now I am going to ask you a few questions about health insurance and health care coverage for **(CHILD)**. Is **(CHILD)** covered by Medicaid, **(in this state called {FILL IN NAME},)** a health insurance program for low-income families?

YES 1
NO 2
DK 6
REFUSED 7

A6Q03 (G52)
Is **(CHILD)** covered by **(FILL STATE TITLE V PLAN NAME)**?

YES 1
NO 2
DK 6
REFUSED 7

A6Q04 (G53)
Is **(CHILD)** covered by **(FILL STATE SCHIP NAME)**?

(CATI NOTE: SOME STATES WILL NOT HAVE SCHIP PROGRAM, AND THESE SHOULD SKIP TO A6Q05)

YES 1
NO 2
DK 6
REFUSED 7

A6Q05 (G54)

Is **(CHILD)** covered by private insurance, that is health insurance obtained through employment or unions or purchased directly?

YES	1
NO	2
DK	6
REFUSED	7

A6Q06 (G55)

Is **(CHILD)** covered by military health care, CHAMPUS, CHAMP-VA, or TRICARE?
(PROBE: An adult's VA plan?)

YES	1
NO	2
DK	6
REFUSED	7

A6Q07 (G56)

Is **(CHILD)** covered by the Indian Health Service?

YES	1
NO	2
DK	6
REFUSED	7

A6Q08 (G57)

Is **(CHILD)** covered by any other kind of health insurance or health care plan that pays for services obtained from hospitals, doctors, and other health professionals?

YES	1
NO	2
DK	6
REFUSED	7

(IF ANY QUESTIONS FROM A6Q02-A6Q08 = 1, IN OTHER WORDS IF COVERED BY ANY INSURANCE, SKIP TO A6Q10)

A6Q09 (G58)

It appears that **(CHILD)** does not have any health insurance coverage to help pay for services from hospitals, doctors, and other health professionals. Is that correct?

YES	1	(SKIP TO AQ09_B)
NO	2	
DK	6	(SKIP TO AQ09_B)
REFUSED	7	(SKIP TO AQ09_B)

A6Q09_A

What kind of health coverage does (CHILD) have? [MARK ALL THAT APPLY]

W3Q03_01	MEDICAID	YES 1 DK 6	NO 2 REF..... 7
W3Q03_02	MEDICARE	YES 1 DK 6	NO 2 REF..... 7
W3Q03_03	MEDIGAP	YES 1 DK 6	NO 2 REF..... 7
W3Q03_04	MILITARY	YES 1 DK 6	NO 2 REF..... 7
W3Q03_05	INDIAN HEALTH SERVICE	YES 1 DK 6	NO 2 REF..... 7
W3Q03_06	PRIVATE INSURANCE	YES 1 DK 6	NO 2 REF..... 7
W3Q03_07	SINGLE SERVICE PLAN COVERING ONLY DENTAL, VISION, PRESCRIPTIONS, ETC.	YES 1 DK 6	NO 2 REF..... 7
W3Q03_08	SOME OTHER COVERAGE	YES 1 DK 6	NO 2 REF..... 7

(ALL SKIP TO A6Q10)

A6Q09_B

Was there any time (during the past 12 months /since {his/her} birth) when (CHILD) did have health insurance or was covered by a health plan?

- YES 1
- NO 2 **SKIP TO A6Q13**
- DK 6 **SKIP TO A6Q13**
- REFUSED 7 **SKIP TO A6Q13**

A6Q09_C

How many months (during the past 12 months /since {his/her} birth) did (CHILD) have health insurance?

(CATI: 2 NUMERIC-CHARACTER FIELD. VALUES CANNOT BE GREATER THAN CHILD'S AGE)

- _____ MONTHS (RANGE: 00-12) 96
- DK 97
- REFUSED 97

(ALL SKIP TO A6Q13)

A6Q10 (G59)

Was there any time **(during the past 12 months /since {his/her} birth)** when **(CHILD)** did not have health insurance or was not covered by a health plan?

YES	1	
NO	2	SKIP TO A6Q11
DK	6	SKIP TO A6Q11
REFUSED	7	SKIP TO A6Q11

A6Q10_A (G59A)

How many months **(during the past 12 months /since {his/her} birth)** did **(CHILD)** not have health insurance?

(CATI: 2 NUMERIC-CHARACTER FIELD. VALUES MUST BE <= CHILD'S AGE)

_____ MONTHS (RANGE: 00-12)	
DK	96
REFUSED	97

A6Q11 (G60)

Are you required by your health insurance company to sign up with a certain primary care doctor, group of doctors, or certain clinic which **(CHILD)** must go to for all of **(his/her)** routine care?

(PROBE IF NECESSARY: Please do not include emergency care or care from a specialist (CHILD) was referred to.)

YES	1
NO	2
DK	6
REFUSED	7

A6Q12 (G61)

If **(CHILD)** needs to go to a different doctor or place for special care, does **(CHILD)** need approval or a referral? Please do not include emergency care.

YES	1
NO	2
DK	6
REFUSED	7

A6Q13 (G62)

(IF CHILD WAS NIS-ELIGIBLE, SKIP TO A7Q01)

The following questions are about the WIC program which you or **(CHILD)** may have been on. WIC is a nutrition and health program for Women, Infants, and Children. WIC benefits include food, checks or vouchers for food, healthcare referrals, and nutrition education. Has **(CHILD)** ever received WIC benefits?

YES	01	
NO	02	SKIP TO A7Q01
DON'T KNOW ABOUT THE PROGRAM	03	SKIP TO A7Q01
DK	06	SKIP TO A7Q01
REFUSED	07	SKIP TO A7Q01

A6Q14 (G63)

Is **(CHILD)** currently receiving WIC benefits?

YES	1
NO	2
DK	6
REFUSED	7

**National Survey of Early Childhood Health
Section 7: Demographic and Household Information**

A7Q01 (G64)

**(IF FOCAL CHILD WAS NIS-ELIGIBLE, SKIP TO A7Q08
IF ANY CHILD WENT THROUGH NIS, SKIP TO A7Q02)**

Now I am going to ask you a few questions about you and your household. Including the adults and all the children, how many people live in your household?

(CATI: 2 NUMERIC-CHARACTER FIELD. USE SAME RANGE CHECKS AND VERIFICATION WARNING SCREENS AS USED IN NIS FOR A7Q01-A7Q01_B.)

	PEOPLE
DK	96
REFUSED	97

A7Q01_A (G64A)

How many of these are adults 18 years of age or older?

(CATI: 2 NUMERIC-CHARACTER FIELD)

	ADULTS
DK	96
REFUSED	97

A7Q01_B (G64B)

And that means that **(SUBTRACT A7Q01_A FROM A7Q01 AND FILL NEW NUMBER HERE)** of these people are under 18 years of age?

YES	1
NO	2
DK	6
REFUSED	7

A7Q02 (G65)

[IF CASE IS PART OF OVERSAMPLE, SKIP TO A7Q05]

Is **(CHILD)** of Spanish, Hispanic, or Latino descent, that is Mexican, Mexican-American, Central American, South American, Chicano, Puerto Rican, or Cuban?

[MARK ALL THAT APPLY]

NO, NOT SPANISH/HISPANIC	YES
YES, MEXICAN/MEXICANO	YES
YES, MEXICAN-AMERICAN	YES
YES, CENTRAL AMERICAN	YES
YES, SOUTH AMERICAN	YES
YES, CHICANO	YES
YES, PUERTO RICAN	YES
YES, CUBAN/CUBAN AMERICAN	YES
YES, OTHER SPANISH-CARRIBEAN	YES
YES, OTHER SPANISH/HISPANIC (SPECIFY)	YES
DON'T KNOW	96
REFUSED	97

A7Q03 (G66)

Is **(CHILD)** White, Black or African American, Native American, Alaska Native, Asian, Native Hawaiian or other Pacific Islander, or another race?

[MARK ALL THAT APPLY]

WHITE	YES
BLACK/ AFRICAN AMERICAN	YES
NATIVE AMERICAN	YES
ALASKA NATIVE	YES
ASIAN	YES
NATIVE HAWAIIAN	YES
PACIFIC ISLANDER	YES
OTHER (SPECIFY)	YES
DON'T KNOW	96
REFUSED	97

(IF MORE THAN ONE ANSWER FOR A7Q03, ASK A7Q04)

A7Q04 (G67) Which do you feel best describes **(CHILD)**'s race?

WHITE	01
BLACK/ AFRICAN AMERICAN	02
NATIVE AMERICAN	03
ALASKA NATIVE	04
ASIAN	05
NATIVE HAWAIIAN	06
PACIFIC ISLANDER	07
OTHER (SPECIFY)	08
DON'T KNOW	96
REFUSED	97

A7Q05 (G68)

What is your relationship to **(CHILD)**?

MOTHER (STEP, FOSTER, ADOPTIVE) OR FEMALE GUARDIAN	01
FATHER (STEP, FOSTER, ADOPTIVE) OR MALE GUARDIAN	02
SISTER OR BROTHER (STEP/FOSTER/HALF/ADOPTIVE)	03
IN-LAW OF ANY TYPE	04
AUNT/UNCLE	05
GRANDPARENT	06
OTHER FAMILY MEMBER	07
OTHER NON-RELATIVE	08
DK	96
REFUSED	97

(IF A7Q05 = 01, USE "YOU" FILL THROUGH A7Q12. ALL OTHERS USE "CHILD'S MOTHER" FILL THROUGH A7Q12.)

A7Q06 (G69)

(IF ANY CHILD WENT THROUGH NIS, SKIP TO A7Q08)

What is the highest grade or year of regular school [YOU/CHILD'S MOTHER] have ever completed?
(FILL IN NUMBER IF PROVIDED)

	0-16
	17+
NEVER ATTENDED/KINDERGARTEN	41
ELEMENTARY	51
HIGH SCHOOL	61
COLLEGE	71
GRADUATE	81
DK	96
REFUSED	97

A7Q07 (A7Q08) (G71)

(ARE YOU/IS CHILD'S MOTHER) now married, divorced, separated, or (HAVE YOU/HAS SHE) never been married?

MARRIED	01
WIDOWED	02
DIVORCED	03
SEPARATED	04
NEVER MARRIED	05
DECEASED	06 (SKIP TO A7Q13)
DK	96
REFUSED	97

(CATI: PLACE TIME STAMP HERE)

A7Q08 (A7Q07) (G70)

(ARE YOU/IS CHILD'S MOTHER) currently employed full- or part-time, or not employed?

EMPLOYED – FULL TIME	1
EMPLOYED – PART TIME	2
NOT EMPLOYED	3
OTHER	4
DK	6
REFUSED	7

A7Q08_A (A7Q07_A)

What is **(YOUR/CHILD'S MOTHER)**'s status other than employed full- or part-time, or not employed?
(CATI: 25 ALPHANUMERIC-CHARACTER FIELD)

A7Q09 (G72)

(IF ANY CHILD WENT THROUGH NIS, SKIP TO A7Q36)**(ARE YOU/IS CHILD'S MOTHER)** of Spanish, Hispanic, or Latino descent, that is Mexican, Mexican-American, Central American, South American, Chicano, Puerto Rican, or Cuban?

[MARK ALL THAT APPLY]

NO, NOT SPANISH/HISPANIC	YES
YES, MEXICAN/MEXICANO	YES
YES, MEXICAN-AMERICAN	YES
YES, CENTRAL AMERICAN	YES
YES, SOUTH AMERICAN	YES
YES, CHICANO	YES
YES, PUERTO RICAN	YES
YES, CUBAN/CUBAN AMERICAN	YES
YES, OTHER SPANISH-CARRIBEAN	YES
YES, OTHER SPANISH/HISPANIC (SPECIFY)	YES
DON'T KNOW	96
REFUSED	97

A7Q10 (G73)

(ARE YOU/IS CHILD'S MOTHER) White, Black or African American, Native American, Alaska Native, Asian, Native Hawaiian or other Pacific Islander, or another race? [MARK ALL THAT APPLY]

WHITE	YES
BLACK/ AFRICAN AMERICAN	YES
NATIVE AMERICAN	YES
ALASKA NATIVE	YES
ASIAN	YES
NATIVE HAWAIIAN	YES
PACIFIC ISLANDER	YES
OTHER (SPECIFY)	YES
DON'T KNOW	96
REFUSED	97

(IF MORE THAN ONE ANSWER FOR A7Q10, ASK A7Q10_A)

A7Q10_A

Which do you feel best describes **(YOUR/CHILD'S MOTHER'S)** race?

WHITE	01
BLACK/ AFRICAN AMERICAN	02
NATIVE AMERICAN	03
ALASKA NATIVE	04
ASIAN	05
NATIVE HAWAIIAN	06
PACIFIC ISLANDER	07
OTHER (SPECIFY)	08
DON'T KNOW	96
REFUSED	97

A7Q11 (G74)

What is **(YOUR/CHILD'S MOTHER'S)** current age?
(CATI: 2 NUMERIC-CHARACTER FIELD)

_____ YEARS OLD

DK 96
REFUSED 97

(IF >13 AND <51, SKIP TO A7Q12)

A7Q11_A

I have **(ANSWER FROM A7Q11)** years old. Is that correct?

YES 1
NO 2 **[SKIP BACK TO A7Q11]**

A7Q12 (G75)

[Do you/Does (CHILD)'s mother] live at the same address as **(you/she)** did when the child was born?

YES 1 **(SKIP TO A7Q13)**
NO 2
DK 6 **(SKIP TO A7Q13)**
REFUSED 7 **(SKIP TO A7Q13)**

A7Q12_A (G75A)

How many times has **(CHILD)** moved since **(he/she)** was born?
(CATI: 2 NUMERIC-CHARACTER FIELD)

_____ TIMES

(IF <11, SKIP TO A7Q13)

A7Q12_B

I have **(ANSWER FROM A7Q12)** times. Is that correct?

YES 1
NO 2 **[SKIP BACK TO A7Q12]**

A7Q13 (G76)

Now I am going to ask you a few questions about your income. Please think about your total combined FAMILY income during **(CATI: FILL LAST CALENDAR YEAR)** for all members of the family. Include money from jobs, 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. Can you tell me that amount before taxes?

(CATI: 9 NUMERIC-CHARACTER FIELD. VERIFY INCOME WITH POP-UP SCREEN EXPRESSING VALUE IN WORDS, AS DONE IN NIS)

RECORD INCOME \$ _____ **SKIP TO A7Q27**
DK 999999996 **SKIP TO A7Q13_A**
REFUSED 999999997 **SKIP TO A7Q13_B**

A7Q13_A (76DK)

You may not be able to give us an exact figure for your total combined family income, but was your total family income during **(LAST CALENDAR YEAR)** more or less than \$20,000?

More than \$20,000	1	SKIP TO A7Q19
\$20,000	2	SKIP TO A7Q27
Less than \$20,000	3	SKIP TO A7Q14
DK	6	SKIP TO A7Q27
REFUSED	7	SKIP TO A7Q27

A7Q13_B (76REF)

Income is important in analyzing information we collect. For example, this information helps us to learn whether children in one group use medical services more or less than children in another group. You may not be able to give us an exact figure for your total combined family income, but could you tell me whether your total family income during **(LAST CALENDAR YEAR)** was more or less than \$20,000?

More than \$20,000	1	SKIP TO A7Q19
\$20,000	2	SKIP TO A7Q27
Less than \$20,000	3	SKIP TO A7Q14
DK	6	SKIP TO A7Q27
REFUSED	7	SKIP TO A7Q27

A7Q14 (G77)

Was the total combined FAMILY income more or less than \$10,000?

More than \$10,000	1	SKIP TO A7Q16
\$10,000	2	SKIP TO A7Q27
Less than \$10,000	3	
DK	6	SKIP TO A7Q27
REFUSED	7	SKIP TO A7Q27

A7Q15 (G77A)

Was it more than \$7,500?

YES	1	SKIP TO A7Q27
NO	2	SKIP TO A7Q27
DK	6	SKIP TO A7Q27
REFUSED	7	SKIP TO A7Q27

A7Q16 (G78)

Was it more than \$15,000?

YES	1	
NO	2	SKIP TO A7Q18
DK	6	SKIP TO A7Q27
REFUSED	7	SKIP TO A7Q27

A7Q17 (G78A)

Was it more than \$17,500?

YES	1	SKIP TO A7Q27
NO	2	SKIP TO A7Q27
DK	6	SKIP TO A7Q27
REFUSED	7	SKIP TO A7Q27

A7Q18 (G78B)

Was it more than \$12,500?

YES	1	SKIP TO A7Q27
NO	2	SKIP TO A7Q27
DK	6	SKIP TO A7Q27
REFUSED	7	SKIP TO A7Q27

A7Q19 (G79)

Was the total combined FAMILY income more or less than \$40,000?

More than \$40,000	1	
\$40,000	2	SKIP TO A7Q27
Less than \$40,000	3	SKIP TO A7Q24
DK	6	SKIP TO A7Q27
REFUSED	7	SKIP TO A7Q27

A7Q20 (G79A)

Was the total combined FAMILY income more or less than \$60,000?

More than \$60,000	1	
\$60,000	2	SKIP TO A7Q27
Less than \$60,000	3	SKIP TO A7Q22
DK	6	SKIP TO A7Q27
REFUSED	7	SKIP TO A7Q27

A7Q21 (G79B)

Was the total combined FAMILY income more or less than \$75,000?

More than \$75,000	1	SKIP TO A7Q27
Less than \$75,000	2	SKIP TO A7Q27
DK	6	SKIP TO A7Q27
REFUSED	7	SKIP TO A7Q27

A7Q22 (G79C)

Was the total combined FAMILY income more or less than \$50,000?

More than \$50,000	1	SKIP TO A7Q27
\$50,000	2	SKIP TO A7Q27
Less than \$50,000	3	
DK	6	SKIP TO A7Q27
REFUSED	7	SKIP TO A7Q27

A7Q23 (G79D)

Was the total combined FAMILY income more or less than \$45,000?

More than \$45,000	1	SKIP TO A7Q27
Less than \$45,000	2	SKIP TO A7Q27
DK	6	SKIP TO A7Q27
REFUSED	7	SKIP TO A7Q27

A7Q24 (G80)

Was the total combined FAMILY income more or less than \$30,000?

More than \$30,000	1	
\$30,000	2	SKIP TO A7Q27
Less than \$30,000	3	SKIP TO A7Q26
DK	6	SKIP TO A7Q27
REFUSED	7	SKIP TO A7Q27

A7Q25 (G80A)

Was the total combined FAMILY income more or less than \$35,000?

More than \$35,000	1	SKIP TO A7Q27
Less than \$35,000	2	SKIP TO A7Q27
DK	6	SKIP TO A7Q27
REFUSED	7	SKIP TO A7Q27

A7Q26 (G80B)

Was the total combined FAMILY income more or less than \$25,000?

More than \$25,000	1
Less than \$25,000	2
DK	6
REFUSED	7

A7Q27 (G81A)

What is your zip code?

(CATI: 5 NUMERIC-CHARACTER FIELD. CHECK ZIPCODE AGAINST CITY/COUNTY/STATE, AS DONE IN NIS.)

DK	6
REFUSED	7

A7Q28 (G82)

The next questions are about the telephone numbers in your household. Do you have any other phone numbers in addition to [AREA CODE AND TELEPHONE NUMBER FROM SAMPLE RECORD].

YES	1	
NO	2	SKIP TO A7Q34
DK	6	SKIP TO A7Q34
REFUSED	7	SKIP TO A7Q34

A7Q29 (G82A)

Is this second number for home use only, for business use only, or for both home and business use?

HOME ONLY	1	
BUSINESS ONLY	2	SKIP TO A7Q31
BOTH HOME AND BUSINESS	3	
DK	6	
REFUSED	7	SKIP TO A7Q31

A7Q30 (G82B)

Is this second number used only for computer or fax communication?

YES	1
NO	2
DK	6
REFUSED	7

A7Q31 (G83)

Do you have a third home phone number in addition to the two you have already told me about?

YES	1	
NO	2	SKIP TO A7Q34
DK	6	SKIP TO A7Q34
REFUSED	7	SKIP TO A7Q34

A7Q32 (G83A)

Is this third number for home use only, for business use only, or for both home and business use?

- | | | |
|------------------------|---|----------------------|
| HOME ONLY | 1 | |
| BUSINESS ONLY | 2 | SKIP TO A7Q34 |
| BOTH HOME AND BUSINESS | 3 | |
| DK | 6 | |
| REFUSED | 7 | SKIP TO A7Q34 |

A7Q33 (G83B)

Is this third number used only for computer or fax communication?

- | | | |
|---------|---|--|
| YES | 1 | |
| NO | 2 | |
| DK | 6 | |
| REFUSED | 7 | |

A7Q34 (G84)

During the past 12 months, has your household been without telephone service for 1 week or more?

- | | | |
|---------|---|----------------------|
| YES | 1 | |
| NO | 2 | SKIP TO A7Q36 |
| DK | 6 | SKIP TO A7Q36 |
| REFUSED | 7 | SKIP TO A7Q36 |

A7Q35 (G84A)

For how long was your household without telephone service in the past 12 months?

(IF 1 WEEK OR LESS, ENTER 0 FOR THE NUMBER)

- | | |
|----------|----|
| WEEK(S) | 01 |
| MONTH(S) | 02 |
| DK | 96 |
| REFUSED | 97 |

A7Q35_A

(CATI: THREE NUMERIC-CHARACTER FIELD)

ENTER NUMBER _____

(IF WEEKS ARE THE CHOSEN TIME PERIOD, RANGE IS 01-52;

IF MONTHS ARE THE CHOSEN TIME PERIOD, RANGE IS 01-12.

VERIFY VALUE WITH POP-UP SCREEN EXPRESSING VALUE IN WORDS, AS DONE IN NIS INCOME QUESTION)

A7Q36 (END)

Those are all of the questions I have. I'd like to thank you again on behalf of the Centers for Disease Control and Prevention and the American Academy of Pediatrics for the time and effort you've spent answering these questions.

[TERMINATE INTERVIEW]

Appendix IV

Advance Letter

FROM THE DIRECTOR
NATIONAL CENTER FOR HEALTH STATISTICS

As part of an important study conducted by the United States Department of Health and Human Services (DHHS), in collaboration with the American Academy of Pediatrics (AAP), parents nationwide are being interviewed over the telephone about the health of young children and their experiences with doctors. The interview includes questions about vaccinations, doctor's visits, and early childhood experiences. Within the next few weeks, your household may be called to take part in this study.

We are relying on your help to make this study a success. Although participation is completely voluntary and there is no penalty for not answering any question, we hope you will agree to participate. The information we are gathering will help shape health care policy in the years ahead.

Your telephone number was selected at random using scientific methods and your address was obtained through the telephone directory. If no children under 3 years of age are living in your household, this survey will take only a few minutes. For households with children under 3 years of age, most will finish within 20–25 minutes. A few may take longer. You may skip questions you do not want to answer or end the interview at any time.

This survey is authorized by Section 306 and 2102(a)(7) of the Public Health Service Act. The information you provide is used for research purposes only and will be held in strict confidence in accordance with Section 308(d) of the Public Health Service Act [42 U.S. Code 242m(d)]. By law, the National Center for Health Statistics (NCHS), DHHS, and its contractors must keep all of your information confidential. Participation is voluntary and will in no way affect any benefits you may receive now or in the future.

If you have any questions about the study, please call our toll-free number, 1-877-587-1345 to learn more about the study. This study has been approved by the NCHS Institutional Review Board. If you have questions about your rights as a study participant, you may call Margot Palmer, Institutional Review Board chairman, toll-free at 1-800-223-8118.

We appreciate your taking the time to talk to us. Thank you for your assistance.

Sincerely,

Edward J. Sondik, Ph.D.
Director

It is important that the information we collect is as accurate as possible. If you have children between the ages of 12 months and 3 years old living in your household, we would like you to use the vaccination or shot record for each child during the interview. Please take a few minutes now to be sure you know where these records are located. Thank you.



If you prefer to contact us using a TTY, please call the AT&T Relay Service at 1-800-682-8786 and request that 1-800-247-1970 be called.

Appendix V

Disposition Code Frequencies and Response Rate Calculations

Table 1. Frequencies of disposition codes for total combined sample

Disposition code by name	Disposition category	Frequency	Percent of total
No contact	UH	13,197	7.23%
3+ Fax/modem prior to any contact	Z	8,055	4.41%
2+ Temporarily not in service	Z	2,135	1.17%
Nonworking number	Z	21,651	11.86%
Number changed	Z	1,417	0.78%
Answering machine- known HH	UO	166	0.09%
Answering machine- not HH	Z	2,027	1.11%
Answering machine- HH unknown	UH	2,911	1.59%
Answering service- not HH	Z	61	0.03%
Answering service- HH unknown	UH	29	0.02%
Spanish- HH unknown	UH	35	0.02%
Other language- HH unknown	UH	63	0.03%
Physical/mental impairment-HH unknown	UH	12	0.01%
Callback at introduction- HH status unknown	UH	376	0.21%
Appointment at introduction- HH unknown	UH	13	0.01%
Broken appointment at introduction- HH unknown	UH	232	0.13%
Hangup during introduction	UH	1,205	0.66%
Refusal at introduction	UH	4,538	2.49%
Callback- HH	UO	675	0.37%
Appointment- HH	UO	80	0.04%
Broken appointment- HH	UO	201	0.11%
Refusal- HH	UO	2,530	1.39%
Callback- partial NIS complete	R	17	0.01%
Appointment- partial NIS complete	R	10	0.01%
Broken appointment- NIS partial complete	R	7	0.00%
Break off- NIS partial complete	R	246	0.13%
Break off- NIS partial complete, minority eligibility unknown	UO	216	0.12%
Not residential	Z	14,938	8.18%
Refusal/break off- age eligibility unknown	UO	160	0.09%
Refusal/break off prior to A6Q03	R	185	0.10%
Callback prior to A6Q03	R	38	0.02%
Appointment prior to A6Q03	R	11	0.01%
Break off- partial SLAITS complete	P	3	0.00%
Eligible respondent- language barrier	Y	28	0.02%
No children in range	X	65,664	35.97%
No child sampled	X	1,406	0.77%
Completed interview	I	1,939	1.06%
Converted interview	I	126	0.07%
GENESYS-resolved numbers	Z	35,969	19.70%
Total		182,572	100.00%

HH is household.

Table 2. Response rate calculations for total combined sample

	Frequency or calculated rate	Code or formula
<i>Summary of disposition categories</i>		
Completes	2,065	C
Partial completes	3	P
Unknown HH.	22,611	UH
HH, eligibility unknown.	4,028	UO
Screened, eligible, refused	514	R
Screened, ineligible.	67,070	X
Screened, eligible, language barrier.	28	Y
Out of scope	86,253	Z
Total	182,572	
<i>Calculation of response rates</i>		
Interview completion rate	79.23%	$(C+P) / (C+P+R+Y)$
Screener completion rate	94.54%	$(C+P+R+X+Y) / (C+P+R+X+Y+UO)$
(Age for main sample)		$(C+P+R+X+Y+Z+UO) / (C+P+R+X+Y+Z+UO+UH)$
Resolution rate	87.62%	
CASRO rate	65.63%	$(ICR)(SCR)(RR)$
<i>Summary of disposition categories for calculation of alternative screener completion rate</i>		
Completes	2,065	C
Partial completes	3	P
Unknown HH.	22,611	UH
HH, eligibility unknown	4,210	UO
Screened, eligible, refused	332	R
Screened, ineligible.	67,070	X
Screened, eligible, language barrier.	28	Y
Out of scope	86,253	Z
Total	182,572	
<i>Calculation of response rates using alternative screener completion rate</i>		
Interview Completion Rate	85.17%	$(C+P) / (C+P+R+Y)$
Screener completion rate	94.29%	$(C+P+R+X+Y) / (C+P+R+X+Y+UO)$
(Post-NIS for main sample)		$(C+P+R+X+Y+Z+UO) / (C+P+R+X+Y+Z+UO+UH)$
Resolution rate	87.62%	
CASRO Rate.	70.37%	$(ICR)(SCR)(RR)$

HH is household.

CASRO is Council of American Survey Research Organizations.

Table 3. Frequencies of disposition codes for main sample

Disposition code by name	Disposition category	Frequency	Percent of total
No contact	UH	4,884	6.88%
3+ Fax/modem prior to any contact	Z	3,110	4.38%
2+ Temporarily not in service	Z	947	1.33%
Nonworking number	Z	9,331	13.14%
Number changed	Z	531	0.75%
Answering machine- known HH	UO	63	0.09%
Answering Machine- not HH	Z	750	1.06%
Answering Machine- HH unknown	UH	1,102	1.55%
Answering Service- not HH	Z	22	0.03%
Answering Service- HH unknown	UH	11	0.02%
Spanish- HH unknown	UH	13	0.02%
Other language- HH unknown	UH	22	0.03%
Physical/mental impairment-HH unknown	UH	7	0.01%
Callback at introduction- HH status unknown	UH	130	0.18%
Appointment at introduction- HH status unknown	UH	5	0.01%
Broken appointment at introduction- HH unknown	UH	78	0.11%
Hangup during introduction	UH	457	0.64%
Refusal at introduction	UH	1,664	2.34%
Callback- HH	UO	246	0.35%
Appointment- HH	UO	31	0.04%
Broken appointment- HH	UO	65	0.09%
Refusal- HH	UO	962	1.35%
Callback- NIS Partial complete	R	13	0.02%
Appointment- NIS partial complete	R	5	0.01%
Broken appointment- NIS partial complete	R	3	0.00%
Break off- NIS partial complete	R	161	0.23%
Not Residential	Z	5,790	8.15%
Refusal/break off- age eligibility unknown	UO	91	0.13%
Refusal/break off prior to A6Q03	R	121	0.17%
Callback prior to A6Q03	R	22	0.03%
Appointment prior to A6Q03	R	6	0.01%
Break off- partial SLAITS complete	P	1	0.00%
Eligible respondent- language barrier	Y	23	0.03%
No children in range	X	24,837	34.98%
Completed interview	I	1,134	1.60%
Converted interview	I	73	0.10%
GENESYS-resolved numbers	Z	14,298	20.14%
Total		71,009	100.00%

HH is household.

Table 4. Response rate calculations for main sample

	Frequency or calculated rate	Code or formula
<i>Summary of disposition categories</i>		
Completes	1,207	C
Partial completes	1	P
Unknown HH.	8,373	UH
HH, eligibility unknown.	1,458	UO
Screened, eligible, refused	331	R
Screened, ineligible.	24,837	X
Screened, eligible, language barrier.	23	Y
Out of scope	34,779	Z
Total	71,009	
<i>Calculation of response rates</i>		
Interview completion rate	77.34%	$(C+P) / (C+P+R+Y)$
Screener completion rate (Age)	94.77%	$(C+P+R+X+Y) / (C+P+R+X+Y+UO)$
Resolution rate	88.21%	$(C+P+R+X+Y+Z+UO) / (C+P+R+X+Y+Z+UO+UH)$
CASRO rate	64.65%	$(ICR)(SCR)(RR)$
<i>Summary of disposition categories for calculation of alternative screener completion rate</i>		
Completes	1,207	C
Partial completes	1	P
Unknown HH.	8,373	UH
HH, eligibility unknown.	1,640	UO
Screened, eligible, refused	149	R
Screened, ineligible.	24,837	X
Screened, eligible, language barrier.	23	Y
Out of scope	34,779	Z
Total	71,009	
<i>Calculation of response rates using alternative screener completion rate</i>		
Interview completion rate	87.53%	$(C+P) / (C+P+R+Y)$
Screener completion rate (Post-NIS)	94.11%	$(C+P+R+X+Y) / (C+P+R+X+Y+UO)$
Resolution rate	88.21%	$(C+P+R+X+Y+Z+UO) / (C+P+R+X+Y+Z+UO+UH)$
CASRO rate	72.66%	$(ICR)(SCR)(RR)$

HH is household.

CASRO is Council of American Survey Research Organizations.

Table 5. Frequencies of disposition codes for oversample

Disposition code by name	Disposition category	Frequency	Percent of total
No contact	UH	8,313	7.45%
3+ Fax/modem prior to any contact	Z	4,945	4.43%
2+ temporarily not in service	Z	1,188	1.06%
Nonworking number	Z	12,320	11.04%
Number changed	Z	886	0.79%
Answering machine- known HH	UO	103	0.09%
Answering machine- not HH	Z	1,277	1.14%
Answering machine- HH unknown	UH	1,809	1.62%
Answering service- not HH	Z	39	0.03%
Answering service- HH unknown	UH	18	0.02%
Spanish- HH unknown	UH	22	0.02%
Other language- HH unknown	UH	41	0.04%
Physical/mental impairment-HH unknown	UH	5	0.00%
Callback at introduction- HH status unknown	UH	246	0.22%
Appointment at introduction- HH unknown	UH	8	0.01%
Broken appointment at introduction- HH unknown	UH	154	0.14%
Hangup during introduction	UH	748	0.67%
Refusal at introduction	UH	2,874	2.58%
Callback- HH	UO	429	0.38%
Appointment- HH	UO	49	0.04%
Broken appointment- HH	UO	136	0.12%
Refusal- HH	UO	1,568	1.41%
Callback- NIS partial complete, eligible	R	4	0.00%
Appointment- NIS partial complete, eligible	R	5	0.00%
Broken appointment- NIS partial complete, eligible	R	4	0.00%
Break off- NIS partial complete, eligible	R	85	0.08%
Break off- NIS partial complete, minority eligibility unknown	UO	216	0.19%
Not Residential	Z	9,148	8.20%
Refusal/break off- age eligibility unknown	UO	69	0.06%
Refusal/break off prior to A6Q03	R	64	0.06%
Callback prior to A6Q03	R	16	0.01%
Appointment prior to A6Q03	R	5	0.00%
Break off- partial SLAITS complete	P	2	0.00%
Eligible respondent - language barrier	Y	5	0.00%
No children in range	X	40,827	36.60%
Child not sampled	X	1,406	1.26%
Completed interview	I	805	0.72%
Converted interview	I	53	0.05%
GENESYS-resolved numbers	Z	21,671	19.42%
Total		111,563	100.00%

HH is household.

Table 6. Response rate calculations for oversample

	Frequency or calculated rate	Code or formula
<i>Summary of disposition categories</i>		
Completes	858	C
Partial completes	2	P
Unknown HH.	14,238	UH
HH, eligibility unknown.	2,570	UO
Screened, eligible, refused	183	R
Screened, ineligible.	42,233	X
Screened, eligible, language barrier.	5	Y
Out of scope	51,474	Z
Total	111,563	
<i>Calculation of response rates</i>		
Interview completion rate	82.06%	$(C+P) / (C+P+R+Y)$
Screener completion rate	94.39%	$(C+P+R+X+Y) /$ $(C+P+R+X+Y+UO)$
Resolution rate	87.24%	$(C+P+R+X+Y+Z+UO) /$ $(C+P+R+X+Y+Z+UO+UH)$
CASRO rate	67.58%	$(ICR)(SCR)(RR)$

HH is household.

CASRO is Council of American Survey Research Organizations.

Vital and Health Statistics series descriptions

- SERIES 1. **Programs and Collection Procedures**—These reports describe the data collection programs of the National Center for Health Statistics. They include descriptions of the methods used to collect and process the data, definitions, and other material necessary for understanding the data.
- SERIES 2. **Data Evaluation and Methods Research**—These reports are studies of new statistical methods and include analytical techniques, objective evaluations of reliability of collected data, and contributions to statistical theory. These studies also include experimental tests of new survey methods and comparisons of U.S. methodology with those of other countries.
- SERIES 3. **Analytical and Epidemiological Studies**—These reports present analytical or interpretive studies based on vital and health statistics. These reports carry the analyses further than the expository types of reports in the other series.
- SERIES 4. **Documents and Committee Reports**—These are final reports of major committees concerned with vital and health statistics and documents such as recommended model vital registration laws and revised birth and death certificates.
- SERIES 5. **International Vital and Health Statistics Reports**—These reports are analytical or descriptive reports that compare U.S. vital and health statistics with those of other countries or present other international data of relevance to the health statistics system of the United States.
- SERIES 6. **Cognition and Survey Measurement**—These reports are from the National Laboratory for Collaborative Research in Cognition and Survey Measurement. They use methods of cognitive science to design, evaluate, and test survey instruments.
- SERIES 10. **Data From the National Health Interview Survey**—These reports contain statistics on illness; unintentional injuries; disability; use of hospital, medical, and other health services; and a wide range of special current health topics covering many aspects of health behaviors, health status, and health care utilization. They are based on data collected in a continuing national household interview survey.
- SERIES 11. **Data From the National Health Examination Survey, the National Health and Nutrition Examination Surveys, and the Hispanic Health and Nutrition Examination Survey**—Data from direct examination, testing, and measurement on representative samples of the civilian noninstitutionalized population provide the basis for (1) medically defined total prevalence of specific diseases or conditions in the United States and the distributions of the population with respect to physical, physiological, and psychological characteristics, and (2) analyses of trends and relationships among various measurements and between survey periods.
- SERIES 12. **Data From the Institutionalized Population Surveys**—Discontinued in 1975. Reports from these surveys are included in Series 13.
- SERIES 13. **Data From the National Health Care Survey**—These reports contain statistics on health resources and the public's use of health care resources including ambulatory, hospital, and long-term care services based on data collected directly from health care providers and provider records.
- SERIES 14. **Data on Health Resources: Manpower and Facilities**—Discontinued in 1990. Reports on the numbers, geographic distribution, and characteristics of health resources are now included in Series 13.
- SERIES 15. **Data From Special Surveys**—These reports contain statistics on health and health-related topics collected in special surveys that are not part of the continuing data systems of the National Center for Health Statistics.
- SERIES 16. **Compilations of Advance Data From Vital and Health Statistics**—Advance Data Reports provide early release of information from the National Center for Health Statistics' health and demographic surveys. They are compiled in the order in which they are published. Some of these releases may be followed by detailed reports in Series 10–13.
- SERIES 20. **Data on Mortality**—These reports contain statistics on mortality that are not included in regular, annual, or monthly reports. Special analyses by cause of death, age, other demographic variables, and geographic and trend analyses are included.
- SERIES 21. **Data on Natality, Marriage, and Divorce**—These reports contain statistics on natality, marriage, and divorce that are not included in regular, annual, or monthly reports. Special analyses by health and demographic variables and geographic and trend analyses are included.
- SERIES 22. **Data From the National Mortality and Natality Surveys**—Discontinued in 1975. Reports from these sample surveys, based on vital records, are now published in Series 20 or 21.
- SERIES 23. **Data From the National Survey of Family Growth**—These reports contain statistics on factors that affect birth rates, including contraception, infertility, cohabitation, marriage, divorce, and remarriage; adoption; use of medical care for family planning and infertility; and related maternal and infant health topics. These statistics are based on national surveys of women of childbearing age.
- SERIES 24. **Compilations of Data on Natality, Mortality, Marriage, Divorce, and Induced Terminations of Pregnancy**—These include advance reports of births, deaths, marriages, and divorces based on final data from the National Vital Statistics System that were published as supplements to the *Monthly Vital Statistics Report* (MVSR). These reports provide highlights and summaries of detailed data subsequently published in *Vital Statistics of the United States*. Other supplements to the MVSR published here provide selected findings based on final data from the National Vital Statistics System and may be followed by detailed reports in Series 20 or 21.

For answers to questions about this report or for a list of reports published in these series, contact:

Data Dissemination Branch
National Center for Health Statistics
Centers for Disease Control and Prevention
6525 Belcrest Road, Room 1064
Hyattsville, MD 20782-2003
(301) 458-4636
E-mail: nchsquery@cdc.gov
Internet: www.cdc.gov/nchs