National Immunization Survey

A User's Guide for the 2002 Public-Use Data File

Centers for Disease Control and Prevention

National Immunization Program
and
National Center for Health Statistics

Prepared by Abt Associates Inc.
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Acknowledgments

The development and production of the NIS public-use files is a team effort that has included contributions from many individuals (listed in alphabetical order) in the three organizations:

National Immunization Program, CDC – Lawrence E. Barker, Ali H. Mokdad, and Philip J. Smith.

National Center for Health Statistics, CDC – Marcie L. Cynamon, Meena Khare, and Robert A. Wright (retired).

Abt Associates Inc. – Annabella A. Battaglia, Michael P. Battaglia, Francine Cannarozzi, David C. Hoaglin, David Izrael, and Mary Cay Murray.

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1. Introduction

In 1992 the Childhood Immunization Initiative (CII) (CDC 1994) was established to 1) improve the delivery of vaccines to children; 2) reduce the cost of vaccines for parents; 3) enhance awareness, partnerships, and community participation; 4) improve vaccinations and their use; and 5) monitor vaccination coverage and occurrences of disease. Subsequently the Healthy People 2000 and 2010 objectives established the goal of having at least 90% of 2-year-old children fully vaccinated with the recommended schedule of vaccines. To fulfill the CII mandate of monitoring vaccination coverage and marking progress toward achieving those goals, the National Immunization Survey (NIS) has been implemented by the National Immunization Program and the National Center for Health Statistics, Centers for Disease Control and Prevention (CDC), and its contractor, Abt Associates Inc.

The target population for the NIS is children aged 19 to 35 months living in the United States at the time of the interview. The official coverage estimates reported from the NIS are rates of being up-to-date with respect to the recommended numbers of doses of all recommended vaccines (CDC 2002a). These vaccines and their recommended numbers of doses are: diphtheria and tetanus toxoids and pertussis vaccine (DTP), 4 doses; poliovirus vaccine (polio), 3 doses; measles/mumps/rubella vaccine (MMR), 1 dose*; Haemophilus influenzae* type b vaccine (Hib), 3 doses; hepatitis B vaccine (Hep B), 3 doses; varicella zoster vaccine, 1 dose; and pneumococcal vaccine, 4 doses. In addition to these vaccines, interest focuses on coverage rates for 1 dose of measles- containing vaccine (MCV) and for vaccine series, including the 4:3:1:3:3 series (4+ DTP, 3+ polio, 1+ MCV, 3+ Hib, and 3+ Hep B). The NIS collects data on each of these vaccines. All except for varicella and pneumococcal have been

included in the NIS from its start in 1994. Varicella vaccine was added in the third quarter of 1996. Pneumococcal vaccine was added in the fourth quarter of 2000. In October 2000 the Advisory Committee on Immunization Practices recommended that all children aged 2-23 months receive 4 doses of pneumococcal vaccine (CDC 2000). The pneumococcal vaccine is relatively new; there was a supply problem, and a catch-up schedule that provided for some children to be fully compliant despite having received fewer than 4 doses. Unlike the 2001 NIS, all children in the 2002 NIS were eligible to receive pneumococcal vaccine. Also, shortages of some of the routinely recommended vaccines began in early 2001 (CDC 2002b). Many of the children sampled in 2002 would have received vaccinations during 2001. For more information on the impact of those shortages on vaccination coverage in 2002, see CDC (2003).

The NIS uses a random-digit-dialing (RDD) telephone survey to identify households containing children in the target age range and interview an adult who is most knowledgeable about the child's vaccinations. With the consent of the child's parent or guardian, the NIS also contacts (by mail) the child's health care providers to request information on vaccinations from the child's medical records.

Samples of telephone numbers are drawn independently, for each calendar quarter, within 78 Immunization Action Plan (IAP) areas. Of the 78 IAP areas, 28 (including the District of Columbia) are urban areas. The remaining 50 are either an entire state or a "rest of state" IAP area (where the state contains one or more urban IAP areas). This design makes it possible to produce annualized estimates of vaccination coverage levels within each of the 78 IAP areas with a specified degree of precision (a coefficient of variation of no more than

5%). Further, by using the same data collection methodology and survey instruments in all IAP areas, the NIS produces vaccination coverage levels that are comparable among IAP areas and over time.

For the 2002 NIS the RDD interviews of households began on January 8, 2002 and ended on February 14, 2003 (January 1, 2003 - February 14, 2003 was the survey close-down period), and provider data collection extended from March 11, 2002 to May 9, 2003. A total sample of approximately 3.4 million telephone numbers yielded household interviews for 31,693 children, and 21,410 of those children had provider data that were adequate to determine whether the child was up-to-date with respect to the recommended immunization schedule. The 2002 NIS public-use file (PUF) contains data for the 31,693 children with completed household interviews (and more extensive data for the 21,410 children with adequate provider data).

Major changes to the NIS in 2002 included the introduction of a new Immunization History Questionnaire (see Section 3), a revision to the random-digit-dialing sampling weights (see Section 6), and the inclusion of unvaccinated children in the definition of children with adequate provider data (see Section 6).

Published tables of estimates of vaccination coverage for 2002 are available on the National Immunization Program (NIP) Web site, http://www.cdc.gov/nip/coverage, and are discussed in an *MMWR* article (CDC 2003).

The accompanying code book (*National Immunization Survey 2002 Public-Use Data File: Documentation, Code Book and Frequencies*) documents the contents of the 2002 NIS public-use data file. For reference Appendix H reproduces the table of contents and the alphabetical index of variables from the code book.

Additional information on the NIS is available at:

www.cdc.gov/nis/
www.cdc.gov/nip/coverage
www.nisabt.org

For additional information on the NIS data file, please contact the NCHS staff:

Data Dissemination Branch, NCHS
3311 Toledo Road
Hyattsville, MD 20782
Phone: 301-458-INFO (301-458-4636)
E-mail: nchsquery@cdc.gov
Internet: http://www.cdc.gov/nchs/

2. Sample Design

The NIS uses two phases of data collection to obtain vaccination information for a large national probability sample of young children: a random-digit-dialing survey designed to identify households with children 19 to 35 months of age, followed by the Provider Record Check study (PRC), which obtains provider-reported vaccination histories for these children. This section gives a summary of these two phases of data collection. Other descriptions of the sample design are given by Ezzati-Rice et al. (1995), Zell et al. (2000), and Smith et al. (2001a).

The NIS RDD Sample

The NIS RDD sampling phase uses independent quarterly samples of telephone numbers in the 78 IAP areas. Table I.1 (in Appendix I) lists the 78 IAP areas by state and shows the estimated number of children living in each state and IAP area in 2002.

The NIS uses the list-assisted method of random-digit dialing (Lepkowski 1988). This method selects a random sample of telephone numbers from "banks" of 100 consecutive telephone numbers (e.g., 617-495-0000 to 617-495-0099) that contain one or more directory-listed residential telephone numbers. The sampling frame of telephone numbers is updated each quarter in order to include new telephone exchanges and area codes. Although the number of cellular telephone users in the U.S. has increased rapidly, most households continue to maintain land-line telephone service. Also, most cellular telephone users pay for incoming calls. Therefore, the NIS sampling frame excluded cellular telephone exchanges in 2002.

The target sample size of completed telephone interviews in each IAP area is designed to achieve an approximately equal number of children with adequate provider-reported vaccination histories. Approximately 68% of children with completed telephone interviews had adequate provider data. The phrase "adequate provider data" means that sufficient vaccination history information was obtained from the providers to determine whether the child is up-to-date with respect to the recommended vaccination schedule. The percentage of children with adequate provider data varies among the IAP areas. **Starting with the 2002 PUF, the definition of children with adequate provider data was expanded to include**

unvaccinated children. These are children for whom the respondent reported during the household interview that the child had received no vaccinations, and that the child has no immunization providers; or the child was reported as having one or more immunization providers, but those providers reported administering no vaccinations in the Provider Record Check Study. An NCHS Series 2 Report on the statistical methodology of the NIS is currently under preparation. This report will provide details of how unvaccinated children were included in the estimates of vaccine coverage. NCHS Series 2 reports can be viewed at http://www.cdc.gov/nchs/products/pubs/pubd/series/sr02/ser2.htm. This modification to the NIS results in small changes in vaccination coverage for IAP areas and states, because the number of unvaccinated children in the sample is very small.

The design and implementation of the NIS sample involve four procedures. First, statistical models predict the number of sample telephone numbers needed in each IAP area to meet a target number of interviews (Buckley et al. 1998). Second, the sample for an IAP area is divided into random subsamples called replicates. By administering the sample release on a replicate-by-replicate basis, it is possible to spread the interviews for each IAP area evenly across the entire calendar quarter. Third, an automated procedure eliminates a portion of the nonworking and nonresidential telephone numbers from the sample before the interviewers dial them. Fourth, the sample telephone numbers are matched with a national database of directory-listed residential telephone numbers in order to obtain usable mailing addresses for as many sample households as possible. To promote participation in the NIS, an advance letter is sent to these addresses approximately two weeks prior to the RDD interview.

The NIS Provider Record Check Study

At the end of the NIS RDD interview, consent to contact the child's vaccination providers is requested from the parent/guardian. When verbal consent is obtained, those providers are mailed an immunization history questionnaire (IHQ). This mail survey portion of the NIS is the Provider Record Check (PRC) Study.

The IHQ is sent by mail to vaccination providers with instructions to mail or fax the questionnaire back upon completion. Two weeks later, a thank you/reminder postcard is sent to each provider. If no response has been received, another questionnaire packet is mailed five weeks after the initial mailing. Finally, seven weeks after the initial mailing, a telephone call is made to providers who have still not responded, to remind and encourage them to complete the form and either mail or fax the information back. In some instances, provider-reported vaccination histories are accepted over the phone. The data from the IHQs are entered, cleaned, edited, and merged with the household information from the RDD survey to produce a child-level record.

Summary of Data Collection

Table 1 presents selected operational results of NIS data collection for calendar year 2002. Children who were 19 to 35 months of age during 2002 data collection were born between January 1999 and June 2001. The original sample (in replicates that were released for use) consisted of 3,361,396 telephone numbers. Of those, 1,306,025 numbers were eliminated by the automated procedure as nonworking or nonresidential numbers. The remaining

2,055,371 telephone numbers were called to identify 1,056,429 households, as shown in Rows 3 and 6 of Table 1. Among the identified households, 1,020,404 (96.6%) were successfully screened for age-eligible children. Of these, 986,203 did not contain an age-eligible child, and 34,201 (3.4%) contained one or more age-eligible children. Among these households 30,974 (90.6%) completed the NIS household RDD interview.

Table 1: Selected Operational Results of NIS Data Collection for 2002

ROW	KEY INDICATOR	NUMBER	PERCENT
	RDD Phase		
1	Total Selected Telephone Numbers in Released Replicates	3,361,396	--
2	Phone Numbers Resolved before CATI	1,306,025	38.9% (Row 2/Row 1)
3	Total Phone Numbers Called	2,055,371	--
4	Advance Letters Mailed	1,285,751	62.6% (Row 4/Row 3)
5	Resolved Phone Numbers* – *Resolution Rate*	2,849,329	84.8% (Row 5/Row 1)
6	Households Identified	1,056,429	37.1% (Row 6/Row 5)
7	Households Successfully Screened for Presence of Age-Eligible Children – *Screening Completion Rate*	1,020,404	96.6% (Row 7/Row 6)
8	Households with no NIS Age-Eligible Children	986,203	96.6% (Row 8/Row 7)
9	Households with NIS Age-Eligible Children – *Eligibility Rate*	34,201	3.4% (Row 9/Row 7)
10	Households with NIS Age-Eligible Children with Completed RDD Interviews– *Interview Completion Rate*	30,974	90.6% (Row 10/Row 9)
11	CASRO Response Rate**	NA	74.2% (Row 5 x Row 7 x Row 10)
12	Age-Eligible Children with Completed RDD Interviews	31,693	--
	PRC Phase		
13	Children with Consent Obtained to Contact Vaccination Providers	27,489	86.7% (Row 13/Row 12)
14	Immunization History Questionnaires Mailed to Providers	34,444	--
15	Immunization History Questionnaires Returned from Providers	29,579	85.9% (Row 15/Row14)
16	Children with Adequate Provider Data	21,410	67.6% (Row 16/Row 12)

*Includes phone numbers resolved before CATI (Row 2).
**CASRO, Council of American Survey Research Organizations.

A standard approach for measuring response rates for RDD surveys, known as the CASRO household response rate, has been defined by the Council of American Survey Research Organizations (Frankel 1983). In 2002 the CASRO household response rate (Row 11) was 74.2%. The CASRO response rate equals the product of the resolution rate (84.8%, Row 5), the screening completion rate (96.6%, Row 7), and the interview completion rate among eligible households (90.6%, Row 10). The resolution rate is the percentage of the total phone numbers selected that are classifiable as nonworking, nonresidential, or residential. The screening completion rate is the percentage of known households that are successfully screened for the presence of age-eligible children. The interview completion rate is the percentage of households with one or more age-eligible children that complete the RDD interview.

Row 12 of Table 1 shows that 31,693 age-eligible children had completed RDD interviews. Rows 13 through 16 of Table 1 give results for the PRC phase. Specifically, Row 13 gives the rate of obtaining verbal consent from household respondents to contact their children's vaccination providers – 86.7% in 2002. The number of IHQs that were mailed to vaccination providers exceeds the number of completed child interviews, because some children have more than one vaccination provider. In 2002 the mean number of vaccination providers identified for a child was 1.34.

Of the IHQs mailed to providers, 85.9% were returned with information pertaining to the child's vaccination history. Among the children with completed household RDD interviews 21,410 (67.6%) had adequate vaccination histories. The other 32.4% of children lacked

adequate provider data for a variety of reasons, such as that the parent did not give consent to contact providers, or the providers did not have medical records for the child.

For each IAP area and each state Table I.1 shows the number of children with completed household interviews and the number of children with adequate provider data.

Informed Consent, Security, and Confidentiality of Information

The Screener Introduction, the Advance Letter, and the Oral Consent assure the respondent of the confidentiality of his/her responses and the voluntary nature of the survey. Informed consent is obtained from the respondent (generally the parent or guardian of the child) to participate in the household interview and also (at the end of the interview) to contact the child's vaccination providers.

Information in the NIS is collected and processed under high security. To ensure privacy of the respondents and confidentiality of sensitive information, NCHS has established standards for release of data from all NCHS surveys. All CDC staff and contractor staff involved with the NIS sign the NCHS confidentiality agreement and follow instructions to prevent disclosure.

All information in the NIS is collected under strict confidentiality and can be used only for research purposes [Section 308(d) of the Public Health Service Act, 42 U.S. Code 242m(d), and the Privacy Act of 1974 (5 U.S. Code 552a)]. Prior to the public release, the contents of

the PUF go through an extensive review by the NCHS Disclosure Review Board to protect confidentiality of the participants as well as the data.

3. Content of NIS Questionnaires

This section describes the questionnaires used in the 2002 NIS telephone interview of households and in the NIS PRC survey.

Content of the NIS Household Questionnaire

The Computer-Assisted Telephone Interview (CATI) questionnaire used in the RDD phase of NIS data collection (Appendix B) consists of two parts: a screener to identify households with children aged 19 to 35 months and an interview portion. The questionnaire is modeled on the Immunization Supplement to the National Health Interview Survey (NHIS) (NCHS 1999). The NIS CATI questionnaire has been translated into Spanish, and the AT&T Language Line is used for real-time translation into many other languages (Wall et al. 1995). Table 2 summarizes the content of each section of the 2002 NIS household interview.

In the screener the purpose of the survey is explained to the respondent, and the household is screened to determine whether it contains any children 19 to 35 months of age. If the household has an eligible child, the respondent is asked whether he/she is the most knowledgeable person (MKP) for the child's vaccination history. If the respondent indicates that another person in the household is more knowledgeable, the interviewer asks to speak to him or her at that time. If that person is unavailable to be interviewed, the interview

proceeds to Section MR, the name of the MKP is recorded, and a "callback" is scheduled for a later date.

Table 2: Content of the 2002 NIS Household Interview

Screener	Screening questions to determine eligibility, roster of eligible children, availability of shot records
Section MR	Most-knowledgeable-respondent callback questions
Section A	Vaccination history, asked if shot records are available
Section B	Vaccination history, asked if shot records are not available
Section C	Demographic and socioeconomic questions
Section D	Provider information and request for consent to contact the eligible child's vaccination providers

Also during the screener the person being interviewed is asked whether he/she has a written record (shot card) of the child's vaccination history, and whether it is easily accessible. If the shot card is available, the respondent is asked to provide information directly from it in Section A. If the child does not have a shot card or the shot card is not easily accessible, the interview proceeds with Section B, which asks the respondent to recall from memory information about the child's vaccinations.

Section C obtains information that includes the relationship of the respondent to the child, the race of the child, household income and educational attainment of the mother, and other information on the socioeconomic characteristics of the household and its eligible children. This section is asked of all respondents upon completion of Section A or Section B.

At the conclusion of the NIS household interview, consent is requested to contact the child's vaccination providers (Section D). If verbal consent is obtained, identifying information (name, address, and telephone number) on the vaccination provider(s) is requested, as well as the full names of the child and the respondent, so that NIS personnel can contact the providers and identify the child whose immunization information the NIS is requesting. When verbal consent and sufficient identifying information are obtained, the IHQ is mailed to the child's vaccination provider(s). No changes were made to the NIS CATI questionnaire in 2002.

Content of the Immunization History Questionnaire

The IHQs used in 2002 (Appendix C) are designed to be simple and brief, to minimize burden on the providers and to encourage participation in the survey. The IHQ used for the first two quarters of 2002 consists of one double-sided page (see the first IHQ in Appendix C). Page 1 includes space for a label that gives the child's name, date of birth and gender. Page 1 also includes a grid for recording dates of vaccinations. The columns of the grid correspond to recommended vaccines, and an additional column is available for recording other vaccines. Page 2 of the IHQ contains several questions about the facility and vaccination provider (for example, whether the facility is public or private).

An improved IHQ was used for the last two quarters of 2002 (see the second IHQ in Appendix C). The new IHQ consists of two double-sided pages. Page 1 includes space for the label that gives the child's name, date of birth and gender. The remainder of page 1 contains questions about the facility and vaccination provider. Page 2 gives instructions for

filling out the shot grid, which appears on page 3. The new shot grid is structured to make filling in the shot dates and shot types easier for most vaccination providers. Page 4 thanks the vaccination provider for providing the information and lists web sites and telephone numbers that can be used to obtain more information about the NIS and the National Immunization Program. The new IHQ was pretested before implementation in the NIS.

4. Data Preparation and Processing Procedures

The household data collection and provider data collection in the NIS incorporate extensive data preparation and processing procedures. During the household interview the CATI system makes many edits as the interviewer enters the data. After the completion of interviewing for a quarter, post-CATI editing and data cleaning produce a final interview data file. The editing of the provider data begins with a manual review of returned IHQs, data entry of the IHQs, and cleaning of the provider data file. After the provider data are merged with the household interview data, and responses from multiple providers for a child are consolidated into a child-level data record, the editing continues. At this point a check ensures that the IHQ was filled out for the correct child and that the child is actually 19 to 35 months of age (from all the date-of-birth information). Then editing of the provider-reported vaccination dates attempts to resolve specific types of discrepancies in the provider data. The end product is an analytic file containing household and provider data for use in estimating vaccination coverage.

Data Preparation

The editing and cleaning of NIS data involve several steps. First, the CATI system incorporates an automatic editing process. Further cleaning and editing take place in a post-CATI clean-up stage, involving an extensive review of data values, crosschecks, and the recoding of verbatim responses for race, ethnicity, and vaccinations. The next step involves the creation of numerous composite variables. Finally, provider data are cleaned in a separate step. After these steps have been completed, imputations are performed for item nonresponse on selected variables, and weights are calculated. The procedures and rules of the National Health Interview Survey served as the standard in all stages of data editing and cleaning.

Editing in the CATI System

The CATI software checks consistency across data elements and does not allow interviewers to enter invalid values. Catching potential errors early increases the efficiency of post-survey data cleaning and processing.

The CATI system makes a number of edits as an interviewer enters data. These edits correct data entry errors that can be reconciled while the respondent is on the telephone; they focus, in particular, on items critical to the conduct of the study, such as those that determine a child's eligibility (e.g., date of birth). To the extent possible without making the CATI system overly complicated, out-of-range and inconsistent responses produce a warning screen, allowing the interviewer to correct errors as they occur.

A CATI system cannot simultaneously incorporate every possible type of error check and maximize system performance. To reconcile this trade-off, post-CATI edits are used to resolve problems that do not require access to the respondent, as well as unanticipated logic problems that appear in the data.

Post-CATI Edits

The post-CATI editing process produces final, cleaned data files for each quarter. The steps in this process, implemented after all data collection activities for a quarter are completed, are described below.

Initial Post-CATI Edits and File Creation

After the completion of interviewing each quarter, the raw data are extracted from the CATI data system and used to create two files: the Sample File and the Interview File. The Sample File contains one record for each sample telephone number. It contains summary information for telephone numbers and households. The Interview File contains one record for each eligible sample child. It contains all vaccination data that the household reported for the child.

Following the creation of these files, a preliminary analysis of each file identifies out-of-range values and extraneous codes. The first check verifies the eligibility status of children, based on date of birth and date of interview. Once the required corrections are verified, the invalid values are replaced with either an appropriate data value or a missing-value code.

Frequency Review

After the pre-programmed edits are run, frequency distributions of all variables in each file are produced and reviewed. Each variable's range of values is examined for any invalid values or unusual distributions. If blank values exist for a variable, they are checked to see whether they are allowable and whether they occur in excessive numbers. Any problems are investigated and corrected as appropriate.

File Crosschecks

Crosscheck programs make sure that cases exist across files in a consistent manner. Specifically, checks ensure that each case in the Interview File is also present in the Sample File and that each case in the Sample File was released to the CATI center. Checks also ensure that no duplicate households exist in the Sample File and no duplicate children exist in the Interview File.

When all of these checks have been performed, the final quarterly Interview File is created. Programmers and statisticians then create composite variables for each child. Sampling weights (described in Section 6) are added to each record.

Editing of Provider Data

Six to eight weeks after the close of household data collection for a quarter, the collection of Immunization History Questionnaires from providers typically ends. The data from the hard-copy questionnaires are entered and independently re-entered to provide 100% verification. The Provider Data File is cleaned, in a similar fashion to the household data, for out-of-range values and consistency. A computer program back-codes all “other shot” verbatim responses

into the proper vaccine category (e.g., Engerix B counts as Hep B, and Tetramune counts as DTP and Hib). These translations come from a file that contains all such verbatim responses ever encountered in the NIS. Also, the Provider File is checked for duplicate records, and exact duplicates are removed from the file. If the IHQ contains a date of birth of the child, gender of the child or child name that differs from the household interview, the IHQ is examined to see whether it may have been filled out for the wrong child. IHQs that appear to have been filled out for the wrong child are removed from the provider database. When a child has data from more than one IHQ, decision rules are applied to produce the most complete picture of the child's immunization history.

Once these data have been cleaned, they are combined with the household interview data. Information from up to five providers can be added to a child's record.

Many variables in the household data are checked against or verified with the provider data. For example, a child's date of birth as recorded by the provider is checked against the date of birth as given by the household, to verify that the provider was reporting for that specific child. Shot dates are also compared, and any discrepancies are examined by hand. In most instances the provider data are used if dates do not agree between the provider(s) and the household.

Limitations of Data Editing Procedures

Although data editing procedures were used for the 2002 NIS, the data user should be aware that some inconsistent data might remain in the public-use file. The variables that indicate whether a child is up-to-date on each vaccine or series (on which the estimates of vaccination coverage are based) are derived from provider-reported data. Hence the household-reported vaccination dates (from interviews conducted with a shot card) are not edited for discrepancies beyond the built-in checks in the CATI system.

The NIS does not recontact households or providers to attempt to reconcile potential discrepancies in provider-reported vaccination dates or to resolve date-of-birth reporting errors. However, beginning with the 1999 NIS, the provider-reported data are manually reviewed and edited to correct specific reporting errors. The *National Immunization Survey: Guide to Quality Control Procedures* discusses the editing procedures in more detail. Overall, even with these minor limitations, the NIS is a rich source of data for assessment of up-to-date status and age-appropriate immunization.

Variable-Naming Conventions

To facilitate access to the contents of the PUF, the names of variables adhere to the SAS (Version 6.12) convention of having no more than 8 characters, and they follow a systematic pattern as much as possible. The code book for the PUF groups the variables into nine broad categories according to the source of the data (household or providers) and the content of the variable (see Appendix H).

The household report of vaccinations received by the child is used to create household up-to-date indicator variables. The names of these variables begin with FULL. For example, FULL_HEP indicates whether the child has received three or more hepatitis B vaccinations. Additional household up-to-date variables combine each vaccine with use of a shot card. The names of these variables begin with C_. For example, C_HEP has five values, corresponding to up-to-date on hepatitis B from a shot card, not up-to-date on hepatitis B from a shot card, up-to-date on hepatitis B not from a shot card, not up-to-date on hepatitis B not from a shot card, and vaccination status on hepatitis B indeterminate.

The provider data from the IHQs are used to create numerous child-level composite variables, as described below. The names of the variables giving the number of doses received for each vaccine begin with P_NUM. For example, P_NUMHEP gives the number of doses of hepatitis B vaccine according to the provider data. An up-to-date indicator variable also exists for each vaccine, and these variables begin with P_UTD. For example, P_UTDHEP indicates whether the child received 3 or more doses of hepatitis B vaccine. The provider data are also used to form variables for age in days and age in months at time of vaccination. For age in days and age in months, either 4 or 8 variables are created, depending on the vaccine. The variables for age in months end with n_AGE, where n is the dose number. For example, HEP1_AGE to HEP8_AGE give age in months for 8 possible doses of hepatitis B vaccine. Similarly, for age in days at vaccination, the variables start with D and end with the dose number. For example, DHEPB1 to DHEPB8 give age in days for 8 possible doses of hepatitis B vaccine.

Missing-Value Codes

The missing-value codes for household variables are 6 and 96 for DON'T KNOW and 7 and 97 for REFUSED. Some household variables may also contain blanks, if the question was not asked. The variables developed from the IHQ generally do not have specific missing-value codes. For example, if a provider failed to answer the question on types of care provided, the response category variables for that question would be blank.

Imputation for Item Nonresponse

The NIS uses imputation primarily to replace missing values on selected socioeconomic and demographic variables collected in the household survey. A sequential hot-deck method is used to assign imputed values (Cox 1980). Each imputation cell has at least four donors. The Notes section of the code book identifies variables that contain imputed values. These variables include maternal education, Hispanic origin, race, race/ethnicity, firstborn status of child, maternal marital status, maternal age group, whether the household experienced an interruption in telephone service, and whether the child ever had chicken pox disease.

The count of vaccinations for a specific vaccine is based on the number of unique vaccination *dates* reported by the child's provider(s). In filling out the IHQ a provider may not know the date of the first dose of hepatitis B, which is typically given at birth. The provider does, however, have the option of making a check mark in the "Administered at Birth" box on the IHQ for the first dose of hepatitis B. For children with fewer than three provider-reported hepatitis B vaccinations, a program checks to see whether the

"Administered at Birth" box was checked for the first dose of hepatitis B. If it was checked and the date of the birth dose of hepatitis B was not reported, the program assigns the date of the birth dose for this vaccine. If the household used a vaccination record to report vaccination dates, those dates are examined to see whether the date of the birth dose can be taken from that record. If it is not reported in the vaccination record, a value is imputed from the distribution of provider-reported dates for the birth dose of hepatitis B in the same NIS quarter. The birth dose is defined as being between the date of birth (i.e., 0 days) and the date of birth plus 6 days (i.e., in the first 7 days of life). This imputation procedure was first implemented for Q1/2000-Q4/2000. For Q1/2002-Q4/2002 a total of 191 children had the date of the birth dose of hepatitis B assigned using the above procedure (see HEP_FLAG). The date of the birth dose was taken from the vaccination record for 41 children. For the remaining 150 children the value was imputed from the distribution of provider-reported dates for the birth dose.

Table 3 shows the distribution of age in days at the birth dose for children in Q1/2002-Q4/2002 with a provider-reported birth dose. A similar table is included in the 2000 and 2001 Data User's Guides. For 1997, 1998 and 1999, Section 5 of the Data User's Guide provides information on the distribution of age in days for the birth dose of hepatitis B vaccine, and gives guidance on imputing age in days at birth dose date for children with a missing date, but for whom the provider checked a box on the IHQ indicating that a dose was administered at birth (see HEP_BRTH).

Table 3: Distribution of Age (in days) at the Birth Dose of Hepatitis B Vaccine, 2002	
Age in Days at Birth Dose	**Unweighted Percentage of Birth Doses**
0	48.1
1	29.7
2	13.7
3	3.3
4	2.4
5	1.4
6	1.4

Vaccine-Specific Recoding of Verbatim Responses

During the household interview, respondents are given the option to report vaccinations in addition to, or instead of, the categories specifically read to them. These verbatim responses are entered into the CATI system by the interviewer and stored in the Interview File. They are reviewed in the post-CATI editing process in order to reclassify the responses into the listed categories, where possible. NIP personnel manually review the verbatim responses and determine to which category or categories (for combination shots), if any, each should be recoded. Once the recoding has been completed, a quality control review ensures that the responses were correctly recoded and are consistent with one another.

Composite Variables

A number of composite variables (constructed from basic variables) are created and included in the NIS PUF. Composite variables assist users and data analysts by eliminating duplication of effort and making NIS data easier to use.

Since the initial years of NIS data collection, the household composite variables have included up-to-date status on individual vaccinations, race of child, household income, and up-to-date status on several vaccination series. Many of these composite household variables are included in the NIS PUF. Table 4 lists some of the key demographic variables and their categories.

Table 4: Key Demographic Composite Variables

AGEGRP – age category of child	19-23 months 24-29 months 30-35 months
RACEETHK – race/ethnicity of child (introduced in 2002; RACEKIDR used in 1995-2001)	Hispanic White Alone, nonHispanic Black Alone, nonHispanic All Other Races Alone and Multi-Racial, nonHispanic
SEX – gender of child	Male Female
EDUC1 – education of the mother	<12 years 12 years >12 years, not a college graduate College graduate
MARITAL – marital status of mother	Widowed, divorced, separated, or deceased Never married Currently married
M_AGEGRP	Under 20 years 20-29 years 30 years or older
FRSTBRN	No Yes
INCPOV1R – poverty status	At or above poverty level Below poverty level Not determined

In Q3/1999 the NIS race questions (see questions C3, C4, C9 and C10 in Appendix B) were expanded to include Alaska Native, Native Hawaiian and Pacific Islander, implementing the revised Office of Management and Budget (OMB) standards for the classification of race and ethnicity (http://www.whitehouse.gov/omb/inforeg/statpol.html). The composite race

variables in the 2002 PUF, however, contain only three categories: white alone, black alone, and all other races alone and multi-racial. The "all other races alone" category includes Asian, American Indian or Alaska Native, Native Hawaiian or Pacific Islander, and other races. If more than one race was selected during the administration of the questions on race of child, the child is classified as multi-racial. Because of small sample sizes and risk of disclosure within IAP areas, the 2002 PUF does not contain any variables with separate multiple-race categories. Rather, the multi-racial children are included in the "all other races alone" category. As a guide to data users, information on the weighted distribution of children by the old race/ethnicity (single race only) classification versus the new race/ethnicity (single or multiple race) classification is shown in Table 5. Estimates of vaccination coverage for 2002 by the new race/ethnicity classification can be found at http://www.cdc.gov/nip/coverage/NIS/02/toc-02.htm.

The 1995-2001 NIS PUFs used a race/ethnicity variable that placed each child into a single-race category (Hispanic, nonHispanic white, nonHispanic black, and nonHispanic all other races). IAP area comparisons of vaccination coverage by race/ethnicity for 2002 versus a prior year could be affected by the change in the race/ethnicity variable. To assess the impact of introducing the new race/ethnicity variable in 2002, 4:3:1:3 vaccination coverage for nonHispanic white and nonHispanic black children was compared for those IAP areas where the sample size in the race/ethnicity group was 30 or greater (see Appendix D). In assessing statistical significance, the variance of the difference took the correlation arising from the overlap of the samples into account (Kish 1965). Although some of the differences in vaccination coverage (ranging from –2.9% to 4.5%) are statistically significant, almost all of the significant differences are small – under two percentage points.

The provider data from the IHQs are used to create numerous child-level composite variables. The most important variables give the number of doses received for each type of vaccine. Up-to-date indicator variables are created for each individual vaccine and for several vaccine series. Another set of variables gives age in days at time of vaccination. For each dose of a vaccine, the age in days is constructed from the date of birth of the child and the date of the shot. Corresponding variables give exact age in months at time of vaccination.

The IHQs also contain information on provider characteristics. This information is used to create composite variables related to provider facility type (PROV_FAC), types of care offered by the provider (NCARER1 to NCARER5), participation in the Vaccines for Children program (VFC_PRO), and participation in state or community immunization registries (REGISTRY).

Table 5: Weighted Race/Ethnicity Distribution of Children Based on the Old Versus New Race Categories and 4:3:1:3 vaccination coverage, National Immunization Survey, 2002

Old (single race only) race/ethnicity classification	Weighted percent distribution of children aged 19-35 months in U.S. (% 4:3:1:3 UTD)	New (single or multiple) race/ethnicity classification	Weighted percent distribution of children aged 19-35 months in U.S. (% 4:3:1:3 UTD)
Hispanic	24.20 (72.81)	Hispanic	24.20 (72.81)
NonHispanic White	54.05 (77.59)	NonHispanic White Alone	52.80 (77.67)
NonHispanic Black	14.09 (67.66)	NonHispanic Black Alone	13.38 (68.02)
NonHispanic Asian	4.10 (79.63)	NonHispanic Asian Alone	3.54 (81.87)
NonHispanic American Indian	1.12 (57.60)	NonHispanic American Indian or Alaska Native (AIAN) Alone	0.92 (62.08)
		NonHispanic Native Hawaiian or Pacific Islander (NHOPI) Alone	0.30 (72.47)
NonHispanic Other Race	0.04 (42.09)	NonHispanic Other Race Alone	0.01 (37.41)
		NonHispanic Multiple Races	3.52 (69.26) 1. Black/White – 1.46 2. AIAN/White – 0.81 3. Asian and/or NHOPI/White – 0.83 4. Other Combination – 0.42
Unknown	2.40 (73.90)	Unknown	1.31 (66.81)

Note: The Hispanic origin, race and race/ethnicity variables in the PUF do not include a category for "unknown." Children with an unknown Hispanic origin and/or race are imputed using the mother's Hispanic origin and/or race or by a hot-deck method if the mother's information is not present.

Subsets of the NIS Data

The NIS PUF contains data for all children aged 19 to 35 months who have a completed household (RDD) interview. An interview is considered complete if the respondent answered either Section A or Section B of the questionnaire. **As explained in Section 6, each child with a completed household interview is assigned a weight (RDD_WT) for use in estimation.**

The NIS uses the provider-reported vaccination histories to form the estimates of vaccination coverage, because the provider data are considered much more accurate. Thus, the most important subset of the data consists of children with adequate provider data. For these children one or more providers returned the IHQ, and the vaccination information reported by those providers is sufficient to determine whether the child is up-to-date on the recommended vaccinations. **As discussed in Section 7, the PDAT variable identifies the children with adequate provider data (PDAT=1). These children have a separate weight (WT), which should be used to form estimates of vaccination coverage (see Section 6).**

Confidentiality and Disclosure Avoidance

To prevent identification of participants in the NIS and the resulting disclosure of information, certain items from the questionnaires are not included in the PUF. In addition, some of the released variables are top- or bottom-coded, or their categories are collapsed.

5. Quality Control and Quality Assurance Procedures

A major contributor to the quality of the NIS data is its sample management system, which manages 312 RDD samples annually (78 IAP areas times 4 quarters) and uses 20 performance measures to track their progress toward completion. Important aspects of the quality assurance program for the RDD component of the NIS include on-line interviewer monitoring; on-line look-ups in topic-oriented databases integrated with the CATI system, including names, addresses and telephone numbers of vaccination providers; and automated range-edits and consistency checks. These and other quality assurance procedures contribute to a reduction in the total cost of the data collection, by minimizing interviewer labor and overall burden to respondents. Khare et al. (2000), Khare et al. (2001), and the *National Immunization Survey: Guide to Quality Control Procedures* discuss the procedures in more detail.

The quality assurance procedures of the PRC component follow a proven methodology documented by Dillman (1978). The most critical quality assurance activities occur during post-processing of the returned questionnaires or vaccination records. All returned IHQs are examined to identify and correct any obvious errors prior to data entry and then key-entered with 100% verification. The National Immunization Program additionally has conducted a manual quality assurance review of 10% of forms returned by providers. Resulting error rates for the edit process are estimated to be less than 1%.

6. Sampling Weights

Each of the two stages of data collection results in a sampling weight for the children who have data at that stage. The RDD sampling weights (RDD_WT) permit analyses of data from children with completed household interviews (HY_WGT in 1995-2001). Each child with adequate provider data (the subset on which official estimates of vaccination coverage are based) has a "partial-nonresponse-adjusted sampling weight" (WT) (W0 in 1995-2001).

A sampling weight may be interpreted as the approximate number of children in the target population that the child in the sample represents. Thus, for example, the sum of the sampling weights of children who are up-to-date (on a particular vaccine or series of vaccines) yields an estimate of the total number of children in the target population who are up-to-date. Dividing this sum by the total of the sampling weights for all children gives an estimate of the corresponding vaccination coverage rate.

This section describes how these weights are developed and adjusted so as to achieve an accurate representation of the target population. The weights reflect each child's probability of being selected into the sample; and the adjustments take into account the number of telephone lines in the household, nonresponse to the household interview, noncoverage of households that do not have telephones, and nonresponse by providers.

Adjusted Base Sampling Weight

In each quarterly NIS sample, each child with a completed RDD interview receives a base sampling weight. This weight is equal to the total number of telephone numbers in the sampling frame for the IAP area divided by the total number of telephone numbers that were randomly sampled from that sampling frame during that quarter. Because households with multiple telephone lines have a greater chance of being sampled, each child's base sampling weight is adjusted by dividing it by the total number of residential telephone lines reported in the household (up to a maximum of 3).

Adjustment for Interview Nonresponse

Nonresponse occurs in population-based surveys when respondents refuse to participate or are not available at the time of the interview. Thus, the sum of the adjusted base sampling weights of children with completed RDD interviews will underestimate the size of the target population in the IAP area, because some sampled households containing age-eligible children do not complete the RDD interview. As a result, the adjusted base sampling weights must be further adjusted so that they more accurately reflect the number of children in the target population that each sampled child with a completed RDD interview represents.

Some sampled households with age-eligible children fail to complete the RDD interview because of unit nonresponse: some telephone numbers are never determined to be residential despite multiple call attempts, some households cannot be determined to have age-eligible children, and some households with age-eligible children do not complete the RDD

interview. To compensate for these three types of unit nonresponse, the sampling weights of children with a completed RDD interview are adjusted to account for the estimated number of age-eligible children in households whose telephone numbers are never determined to be residential, the estimated number of age-eligible children in households that fail to complete the screening interview, and the number of identified age-eligible children for whom the RDD interview is not completed. Each of these adjustments is carried out within IAP areas by forming weighting cells based on the residential directory-listed status of the sample telephone number and socioeconomic and demographic characteristics of the IAP area's telephone exchanges (e.g., 4 weighting cells formed from directory-listed versus non-directory-listed telephone number by telephone exchanges with 75% or higher white population versus telephone exchanges with less than 75% white population).

Because the quarterly interview-nonresponse-adjusted base sampling weights pertain to the entire target population and because annualized vaccination coverage estimates are obtained from data for four consecutive quarters, the adjusted base sampling weights are divided by 4 when the data from the four quarters are combined.

Adjustment for Households That Do Not Have Telephones

The NIS sampling frame includes only households that have telephones. Because the target population consists of all children 19 to 35 months of age living in households regardless of whether they have telephones, the interview-nonresponse-adjusted base sampling weights need to be adjusted to compensate for the noncoverage of children living in households without telephones. Although national telephone coverage for age-eligible children is

estimated to be 90%, telephone coverage is known to be as low as 76% in some IAP areas. Further, data from the NHIS, which samples both "telephone" and "nontelephone" households, indicate that children living in households without telephones have significantly lower vaccination coverage. Thus, the adjustment to the sampling weights to compensate for noncoverage of nontelephone households may be particularly important in IAP areas in which the percentage of households that have telephones is relatively low.

To compensate for potential noncoverage bias, the NIS employs strategies based on poststratification. An initial step, simple poststratification, separates the sample of completed interviews into cells defined by characteristics related to noncoverage. For each IAP area, each cell (after collapsing small cells) has a population total derived from natality data from the National Center for Health Statistics (NCHS 1993). The poststratification variables are race/ethnicity of the child's mother, the level of educational attainment of the child's mother, and the age of the child. Because the Vital Statistics data give the counts of all live births in the U.S., regardless of whether the household has telephone service, this adjustment corrects in part for underrepresentation of children who belong to households that are less likely to have telephones (typified by racial/ethnic minorities or mothers with low educational attainment). A further step subdivides each poststratification cell according to the vaccination status of the child and uses national data on immunization rates of nontelephone households (from the National Health Interview Survey) to construct corresponding population totals. The process of bringing the weighted distribution of completed interviews over the subdivided cells into agreement with the corresponding population totals yields the "modified-poststratification weights," which are used in estimating vaccination coverage. A

further description is given by Battaglia et al. (1995). This estimation procedure was used in the 1995–2001 NIS.

An alternative approach builds on findings (from other surveys) that households that have a telephone at the time of the survey but have experienced an interruption (of more than one week) in their telephone service during the previous year are often similar to households that do not have a telephone. In the NIS the resulting adjustment, in essence, projects from the non-interruption part of the sample to the non-interruption part of the population and from the interruption part of the sample to both the interruption and nontelephone parts of the population. The estimated population totals for each IAP area take into account the proportion of children in that IAP area that come from households with interruptions in telephone service. In this way the interruption-based adjustment responds better to variation among IAP areas than does modified poststratification. After this adjustment the weights are poststratified, using the same population control totals as in simple poststratification (mentioned above). **This new estimation procedure was introduced in the 2002 NIS.** Frankel et al. (2003) give the details of the new procedure.

The base sampling weights after adjustment for multiple residential telephones, unit nonresponse, and noncoverage of nontelephone households constitute the "RDD sampling weights" (RDD_WT).

Adjustment for Provider Nonresponse

Among the 31,693 children with a completed RDD interview, 21,410 (67.6%) had adequate provider data. **Starting with the 2002 PUF, the definition of children with adequate provider data was expanded to include unvaccinated children. These are children for whom the respondent reported during the household interview that the child had received no vaccinations, and that the child has no immunization providers; or the child was reported as having one or more immunization providers, but those providers reported administering no vaccinations in the Provider Record Check Study. An NCHS Series 2 Report on the statistical methodology of the NIS is currently under preparation. This report will provide details of how unvaccinated children were included in the estimates of vaccine coverage. NCHS Series 2 reports can be viewed at http://www.cdc.gov/nchs/products/pubs/pubd/series/sr02/ser2.htm.** Failure to obtain adequate provider data for the remaining 32.4% was attributable to:

- the parent or guardian not giving consent to contact the child's vaccination providers (15.5%),
- inadequate information to contact the provider, the provider did not respond, or the provider responded but did not report any immunization information for the child (15.6%), and
- children with two or more identified providers but not all of the providers responded and the responding providers did not report sufficient information to determine the child's vaccination status (1.3%).

The 10,283 (32.4%) children for whom an RDD interview was completed but adequate provider data were not obtained are "partial nonresponders" because they have only a partial response to the NIS as a whole.

Empirical results suggest that children with adequate provider data have characteristics that are believed to be associated with a greater likelihood of being up-to-date, compared to partial nonresponders. Specifically, children with adequate provider response are more likely to live in households that have higher total family income, to have a white mother, and to live outside a central city of a Metropolitan Statistical Area. Also, a partial nonresponder is less likely to live in the state where the mother resided when the child was born and less likely to have a parent/guardian who could locate a shot card. Both of these factors indicate a potential lack of continuity of health care, and are associated with lower vaccination rates (Coronado et al. 2000). If no adjustment is made to the RDD sampling weights to account for these differences, estimated vaccination coverage rates may be biased.

To reduce potential bias in estimated vaccination coverage estimates attributable to partial nonresponse, a "weighting-class adjustment" is used in each IAP area (Brick and Kalton 1996). This adjustment involves two steps. In the first step, sampled children are classified according to the quintile of their estimated probabilities of having adequate provider data. In the statistical literature these probabilities are called response propensities (Rosenbaum and Rubin 1983, 1984; Rosenbaum 1987). Children who have similar response propensities will also be similar with respect to variables that are strongly associated with the probability of having adequate provider data. In this important respect, children in each class are comparable. Because of this comparability, any subsample of children in a class may

represent all of the children in the class. Therefore, the weighting-class adjustment uses the children with adequate provider data to represent all of the children in the class.

In the second step of the weighting-class adjustment, within each class, an adjustment factor redistributes the RDD sample weights of the partial nonresponders among the children who have adequate provider data. These revised RDD sampling weights of children with adequate provider data are "partial-nonresponse-adjusted RDD sampling weights" (WT). Because of the comparability of children within each weighting class, any estimate that uses data only from the children with adequate provider data, along with their partial-nonresponse-adjusted RDD sampling weights, will have less bias attributable to differences between children with adequate provider data and partial nonresponders. Smith et al. (2001b) describe the development of this approach in more detail. Appendix E summarizes the distribution of the sampling weights (RDD_WT and WT) in each IAP area.

7. Analytic and Reporting Guidelines

Data from the NIS PUF can be used to produce national, state and IAP area estimates of vaccination coverage rates using the WT weight. Information in the data file can be used to calculate standard errors of the vaccination coverage rates, using the WT weight, that reflect the complex sample design of the NIS. **The file includes IAP area and state identifiers (ITRUEIAP and STATE).** The sample is stratified by the 78 IAP areas, and the IAP area identifier and the coded household identifier (SEQNUMHH) are key variables for obtaining standard errors for IAP area, state and national estimates of vaccination coverage rates. Demographic and socioeconomic variables in the file can be used to obtain national

vaccination coverage rates for subgroups of the population. Data users should, however, be aware that estimates for such subgroups at the state or IAP area level will generally have large standard errors because of the small sample sizes. The NCHS standard for precision of subgroup estimates is that the ratio of the standard error to the estimate should be less than or equal to 30%, and each analytic cell should contain at least 30 respondents.

Key Variables

The variables in the NIS PUF fall into two major categories: 1) variables that apply to all children with completed household interviews (use RDD_WT), and 2) variables that apply only to children with adequate provider data (use PDAT=1 and the WT weight). Variables in the first group include the household report of vaccinations received by the child, and various demographic and socioeconomic characteristics of the child, the mother and the household. Because of reporting and recall errors, the household report of vaccinations is not used to produce vaccination coverage rates. As discussed below, the provider report of vaccinations received by the child is used to produce vaccination coverage rates.

Table 6 lists variables that are commonly used in analyses or for published estimates of vaccination coverage.

The SEQNUMC variable is the unique child identifier. SEQNUMHH is the unique household identifier variable. Key geographic variables include IAP area (ITRUEIAP), state (STATE), and Census Region (REGION). Key demographic variables include race/ethnicity category of the child (RACEETHK), age category of the child (AGEGRP), age category of the mother (M_AGEGRP), marital status category of the mother (MARITAL), and first-born status of the child (FRSTBRN). Key socioeconomic variables include education category of mother (EDUC1), poverty status (INCPOV1R), and the income-poverty ratio (INCPORAT).

Selecting children with PDAT equal to 1 identifies children with adequate provider data (DISPCODE = 1 to 6 or 8 to 11) or who are unvaccinated (as defined earlier). Children who do not have provider data (DISPCODE = MISSING) or who have provider data that are not adequate to determine the up-to-date vaccination status of the child (DISPCODE = 7) have PDAT equal to 2. (Appendix F gives the definition of the values of DISPCODE).

The NIS PUF contains many variables constructed from the provider data. One set of variables indicates the number of doses the child received for each of the vaccines. For example, P_NUMDTP indicates the number of doses of DTP. It counts all DTP-containing vaccines, including DTP, DTaP, DT, DTaP-Hib and DTP-Hib.

Both the individual vaccines and the vaccine series have up-to-date indicator variables. For example, PUTD4313 is an indicator variable for whether the child has 4+ DTP vaccinations, 3+ polio vaccinations, 1+ measles-containing vaccinations, and 3+ Hib vaccinations. Also, PUT43133 is an indicator variable for 4+ DTP, 3+ polio, 1+ MCV, 3+ Hib, and 3+ Hep B. Section 4 discusses the naming conventions for these variables.

Table 6: NIS Variables That Are Commonly Used in Analyses or for Published Estimates	
ID variables	
SEQNUMC – unique child ID variable	
SEQNUMHH – unique household ID variable	
Geographic variables	
ITRUEIAP – IAP area	
STATE – state FIPS code	
REGION – Census Region	Northeast Midwest South West
Child demographic variables	
AGEGRP – age category of child	19-23 months 24-29 months 30-35 months
RACEETHK – race/ethnicity of child (introduced in 2002; RACEKIDR used in 1995-2001)	Hispanic White Alone, nonHispanic Black Alone, nonHispanic All Other Races Alone and Multi-Racial, nonHispanic
SEX – gender of child	Male Female
FRSTBRN – first born status of the child	No Yes
Mother demographic variables	
EDUC1 – education of the mother	<12 years 12 years >12 years, not a college graduate College graduate
MARITAL – marital status of mother	Widowed, divorced, separated, or deceased Never married Currently married
M_AGEGRP – age group of mother	Under 20 years 20-29 years 30 years or older
Poverty variables	
INCPOV1R – poverty status	At or above poverty level Below poverty level Not determined
INCPORAT – income to poverty ratio	

Table 6: NIS Variables That Are Commonly Used in Analyses or for Published Estimates (continued)	
Presence of provider data variables	
PDAT – adequate provider data indicator	Yes No
Number of provider-reported doses of vaccine variables	
P_NUMDTP – total number of DT/DTP/DTaP doses	
P_NUMPOL – total number of Polio doses	
P_NUMMMR – total number of MCV doses	
P_NUMHIB – total number of Hib doses	
P_NUMHEP – total number of Hep B doses	
P_NUMVRC – total number of varicella doses	
P_NUMPCV – total number of pneumococcal doses	
Provider characteristic variables	
PROV_FAC – provider facility type	All public facilities All hospital facilities All private facilities All military/other facilities All WIC clinic providers Mixed types Unknown
VFC_PRO – participation of child's provider(s) in VFC program	All providers Some but not all providers No providers Unknown
REGISTRY – child's vaccination reported by provider(s) to state or community immunization registry	All providers Some but not all providers No providers Unknown
NCARER1 to NCARER6 – types of services offered by child's provider(s)	All providers Some but not all providers No providers/unknown

To accommodate the large and continually growing number of types of vaccinations covered by the NIS, vaccination-type indicator variables (see Table 7) are also created from information on the Immunization History Questionnaire. For example, the vaccination-type indicator variable for the first dose of DTP (XDTPTY1) indicates whether

that dose was a DTP, DTaP, DT, DTP-Hib, or DTaP-Hib vaccination. Additional codes cover the situation where the provider does not specify the type of DTP or type of DTP-Hib vaccine. There is a vaccination-type indicator variable for each pair of age in days and age in months at vaccination variables (e.g., XDTPTY1 is associated with DDTP1 and DTP1_AGE). More detail on the age-at-vaccination variables is given below.

DTP-containing vaccines have a vaccination type code of 01 to 07. Polio-containing vaccines have a vaccination type code of 20 to 22. Measles-containing vaccines have a vaccination type code of 30 to 33. Hib-containing vaccines have a vaccination type code of 05 to 07 or 40 to 43. **For the last two quarters of 2002 all single-antigen Hib shots have a vaccination type code of 42 (Hib – unknown type), because the IHQ used in the last two quarters of 2002 did not record the type of single-antigen Hib shots.** Hepatitis B-containing vaccines have a vaccination type code of 43 or 60. Varicella vaccine does not require vaccination-type indicator variables. Finally, pneumococcal-containing vaccines have a vaccination type code of 70 to 72. Vaccine type codes 10 to 19 and 50 to 59 have been reserved for later use.

These vaccination-type indicator variables greatly reduce the number of vaccination date and age-at-vaccination variables that must be carried in the NIS public-use file without any loss of information. They also allow data users more easily to determine the specific type of

Table 7: Vaccination-type indicator variables for use with vaccination-date arrays and age-at-vaccination arrays

Vaccination-Type Indicator Variable Description and Variable Names	Vaccination Type Code	Specific Type of Vaccination Recorded on Immunization History Questionnaire
DTP (DTP/DT-containing vaccine): **XDTPTY1 – XDTPTY8**	01	DT
	02	DTP
	03	DTP - unknown type
	04	DTaP
	05	DTP/Hib
	06	DTP/Hib - unknown type
	07	DTaP/Hib
POLIO (Polio-containing vaccine): **XPOLTY1 – XPOLTY8**	20	OPV
	21	IPV
	22	Polio - unknown type
MCV (Measles-containing vaccine): **XMMRTY1 – XMMRTY4**	30	MMR
	31	Measles only
	32	Measles/Mumps
	33	Measles/Rubella
HIB (Hib-containing vaccine): **XHIBTY1 – XHIBTY8**	40	Pedvax Hib
	41	Other Hib
	42	Hib - unknown type
	05	DTP/Hib
	06	DTP/Hib - unknown type
	07	DTaP/Hib
	43	Hep B - Hib
HEP B (Hep B-containing vaccine): **XHEPTY1 – XHEPTY8**	60	Hep B only
	43	Hep B - Hib
PCV (Pneumococcal-containing vaccine): **XPCVTY1 – XPCVTY8**	70	Conjugate
	71	Polysaccharide
	72	Pneumococcal – unknown type

vaccine given at each dose (e.g., the percentage of children with a DTaP vaccination for their first dose of DTP-containing vaccine). The vaccination-type indicator variables were implemented in 2000, and the 2002 PUF is the third NIS PUF to contain these new variables. They are located in Section 9 of the code book that accompanies the 2002 NIS PUF. As an example of their use, a weighted (using the WT weight for children with PDAT = 1) frequency distribution on XDTPTY1 would give estimates of the proportion of DTP-containing first doses that were DT, DTP, DTaP, DTP-Hib, DTaP-Hib, etc. For PUFs prior to 2000 it is possible to determine vaccination type from other variables in the data file. In the 1999 PUF, as an example, one must first determine the age in days of the first DTP-containing vaccination by examining DDTP1 for each child with PDAT = 1. Next, for these children the individual variables for age in days at DTP-containing shot #1 (DDTM1, DDTPM1, DDTAP1, DDTHM1, DDTAH1, etc.) must be examined to see which one has the same value as DDTP1. That variable identifies the specific type of DTP-containing vaccine given at the first dose.

The NIS PUF includes a variable for age in days at each vaccination (e.g., DDTP1 for the first dose of DTP-containing vaccine). These variables can be used to examine age at vaccination, vaccination spacing intervals, and age-appropriate immunization. Another set of variables gives age in months at time of vaccination (e.g., DTP1_AGE for the first dose of DTP-containing vaccine). They are located in Section 9 of the code book. These variables can be used to determine, for example, whether a child received at least four DTP vaccinations by the age of 19 months. Section 4 discusses the naming conventions for these variables.

The final key set of provider variables relates to characteristics of the provider: provider facility type (PROV_FAC), type of care offered by the provider (NCARER1 to NCARER6), participation in the Vaccines for Children (VFC) program (VFC_PRO), and an indicator of whether the child's vaccinations are reported to a community or state immunization registry (REGISTRY).

Use of the NIS Sampling Weights

The NIS PUF contains two child-level weights. The RDD_WT variable gives the household weight for each child. It should be used to form estimates from the children with completed household interviews. This weight reflects the stratified sample design and also adjusts for unit nonresponse, for poststratification to population control totals, and for the exclusion of nontelephone children from the NIS. **The weight variable that applies to children with adequate provider data is WT. This weight should be used to form estimates of vaccination coverage. Each child with adequate provider data (PDAT = 1) has a value of WT. Starting with the 2002 PUF, the definition of children with adequate provider data was expanded to include unvaccinated children (as discussed in Section 2).**

The NIS PUF does not contain any provider-level weights. The NIS does not sample providers directly; rather, they are included in the survey through the children they vaccinate. A user of the NIS PUF should not attempt provider-level analyses (e.g., estimate the percentage of providers in the U.S. that are private providers), because the NIS sample was not designed for that purpose.

Estimation and Analysis

Estimating Vaccination Coverage Rates

Vaccination coverage rates are ratio estimates, as described in the statistical literature on methods for complex sample surveys. Because of the adjustment to the sampling weights for partial nonresponse, statistical analyses require only data from children with adequate provider data (PDAT = 1), along with their partial-nonresponse-adjusted sampling weights (WT). To summarize the statistical methodology by which vaccination coverage rates and their standard errors are obtained from these data, let Y_{hij} be an indicator, for the *j*th child with adequate provider data in the *i*th sampled household in the *h*th stratum (IAP area) of the NIS sampling design, equal to 1 if the child is up-to-date according to the provider data and 0 otherwise. Also, let W_{hij} denote the value of WT for this child. Then, letting

$$\hat{Y}_h = \sum_{i=1}^{n_h} \sum_{j=1}^{m_{hi}} W_{hij} Y_{hij} \text{ and } \hat{T}_h = \sum_{i=1}^{n_h} \sum_{j=1}^{m_{hi}} W_{hij},$$

the national estimator of the vaccination coverage rate may be expressed as

$$\hat{q} = \frac{\sum_{h=1}^{L} \hat{Y}_h}{\sum_{h=1}^{L} \hat{T}_h}$$

where *L* denotes the number of strata (the 78 IAP areas), n_h denotes the number of sampled households containing children with adequate provider data in the *h*th IAP area, and m_{hi} denotes the number of age-eligible children with adequate provider data in the *i*th household in the *h*th IAP area.

Letting L denote the number of IAP areas in a state, the above formula can also be used to calculate vaccination coverage rates for states containing two or more IAP areas and for states containing only one IAP area.

Estimating Standard Errors of Vaccination Coverage Rates

The Taylor-series method can be used to estimate the sampling variance of vaccination coverage rates for the U.S., the states, and IAP areas. Letting $Z_{hij} = \frac{W_{hij}(Y_{hij} - \hat{q})}{\hat{T}_h}$,

$Z_{hi} = \sum_{j=1}^{m_{hi}} Z_{hij}$, and $\overline{Z}_h = \frac{\sum_{i=1}^{n_h} Z_{hi}}{n_h}$,

an estimator of the variance of the vaccination coverage rate, $\hat{q}$, is

$$\hat{V}(\hat{q}) = \sum_{h=1}^{L} \frac{n_h}{n_h - 1} \sum_{i=1}^{n_h} (Z_{hi} - \overline{Z}_h)^2 .$$

The calculation of standard errors for estimates of vaccination coverage rates in the NIS can be implemented in statistical software such as SUDAAN (Shah et al. 1997), SAS (SAS Institute Inc. 1999) and Stata (Stata Corporation 2001). Appendix G gives examples of the use of SUDAAN to estimate vaccination coverage rates and their standard errors for IAP areas and states. For PROC CROSSTAB, the DESIGN = WR (with-replacement sampling of Primary Sampling Units within stratum) option is used, because the sampling fractions for households within an IAP area are all quite small. In these applications the IAP area (ITRUEIAP) is used as the stratum variable, and the household identifier (SEQNUMHH) is used as the Primary Sampling Unit identifier in the NEST statement. The data file should

first be sorted on ITRUEIAP and then sorted on SEQNUMHH within ITRUEIAP before running SUDAAN. As indicated above, WT is used as the weight variable.

Combining Multiple Years of NIS Data

With the release of the 2002 NIS PUF, eight years of NIS data are now available. The precision of estimates of vaccination coverage for subdomains (e.g., by race/ethnicity of child) within IAP areas or states can be improved by combining two or more years of NIS data. Data users should, however, be aware that estimates from combined years of NIS data represent an average over two or more years. Although combining several years of NIS data will yield a larger sample size for IAP areas and states, the composition of the population in a geographic area may change over time, making interpretation of the results difficult. Furthermore, if vaccination administration schedules or vaccination coverage changes over time, the estimate of vaccination coverage for the combined time period applies to a hypothetical population that existed at the middle of the time period, making interpretation of the results more difficult. Given the use of independent random-digit-dialing samples in the NIS, it is also possible that a child could appear in more than one public-use file.

The weights (HY_WGT in 1995-2001 and RDD_WT in 2002, and W0 in 1995-2001 and WT in 2002) in each PUF should be divided by the number of years being combined. For example, if data for 2000 and 2001 are combined, the weights in each PUF should be divided by 2 to obtain revised weights. It is necessary to use revised weights in order to obtain correct weighted counts of children aged 19-35 months. The child and household ID numbers (SEQNUMC and SEQNUMHH) in the PUFs are unique only within a year, not

across years. It is important that you create revised, unique ID numbers when combining data from multiple years. The following SAS code can be used:

```
YRSEQC = 1 * (YEAR || SEQNUMC);
YRSEQHH = 1 * (YEAR || SEQNUMHH);
```

YEAR is the 4-digit year variable for the NIS data year (e.g., 2001).

The data file should first be sorted on YEAR, then sorted on ITRUEIAP within YEAR (the two stratum variables), and finally sorted on YRSEQHH (the PSU variable) within ITRUEIAP before running SUDAAN. The revised weight should be used as the weight variable. The SUDAAN NEST statement should be modified to:

```
NEST YEAR ITRUEIAP YRSEQHH / PSULEV = 3;
```

8. Summary Tables

Appendix I contains seven tables. As mentioned in Section 2, **Table I.1** lists the 78 IAP areas by state. For the U.S. and for each state and IAP area, it gives the estimated population total of children 19 to 35 months of age in 2002 and (from 2002 NIS data collection) the number of children with completed household interviews and the number of children with adequate provider data.

Tables I.2 through I.5 summarize pairs of variables: age group of child by maternal education (Table I.2), age group by family income (Table I.3), age group by race/ethnicity (Table I.4), and age group by gender (Table I.5). Each of these tables gives the unweighted and weighted counts of children who have completed household interviews and the unweighted and weighted counts of children with adequate provider data.

Table I.6 gives unweighted counts of children for shot card use by the presence of adequate provider data.

Table I.7 presents estimates of vaccination coverage and 95-percent confidence-interval half-widths obtained from SUDAAN. The data user should obtain the same estimates from the public-use file.

9. Citations for NIS Data

In publications please acknowledge CDC (NCHS and NIP) as the original data source. The reference for the 2002 NIS Public-Use File is:

U.S. Department of Health and Human Services (DHHS). National Center for Health Statistics. The 2002 National Immunization Survey, CD-ROM No. 8. Hyattsville, MD: Centers for Disease Control and Prevention, 2003.

Please place the acronym "NIS" in the titles, keywords, or abstracts of journal articles and other publications in order to facilitate the retrieval of such materials in bibliographic searches.

10. References

Battaglia, M.P., Malec, D.J., Spencer, B.D., Hoaglin, D.C., and Sedransk J. (1995). Adjusting for noncoverage of nontelephone households in the National Immunization Survey. *1995 Proceedings of the Section on Survey Research Methods*, Alexandria: VA: American Statistical Association, pp. 678-683.

Brick, J.M. and Kalton, G. (1996). Handling missing data in survey research. *Statistical Methods in Medical Research*, 5:215–238.

Buckley, P., Dennis, J.M., Saulsberry, C., Coronado, V.G., Ezzati-Rice, T., Maes, E., Rodén, A.-S., and Wright, R.A. (1998). Managing 78 simultaneous RDD samples. *1998 Proceedings of the Section on Survey Research Methods*, Alexandria, VA: American Statistical Association, pp. 957-961.

Centers for Disease Control and Prevention (1994). Reported vaccine-preventable diseases - United States, 1993, and the Childhood Immunization Initiative. *MMWR*, 43:57-60.

Centers for Disease Control and Prevention (2000). Prevention of pneumococcal disease among infants and young children using a pneumococcal conjugate vaccine. Recommendations of the Advisory Committee on Immunization Practices (ACIP). *MMWR*, 49(RR-9):1-35.

Centers for Disease Control and Prevention (2002a). Recommended childhood immunization schedule—United States, 2002. *MMWR*, 51(02): 31-33.

Centers for Disease Control and Prevention (2002b). Shortage of varicella and measles, mumps and rubella vaccines and interim recommendations from the Advisory Committee on Immunization Practices. *MMWR*, 51(09): 190-197.

Centers for Disease Control and Prevention (2003). National, state, and urban area vaccination levels among children aged 19-35 months—United States, 2002. *MMWR*, 52(31): 728-732.

Coronado, V.G., Maes, E.F., Rodewald, L.E., Chu, S., Battaglia, M.P., Hoaglin, D.C., Merced, N.L., Yusuf, H., Cordero, J.F., and Orenstein, W.A. (2000). Risk factors for underimmunization among 19-35 month-old children in the United States: National Immunization Survey, July 1996-June 1998. Unpublished manuscript, Centers for Disease Control and Prevention, Atlanta.

Cox, B.G. (1980). The weighted sequential hot-deck imputation procedure. *1980 Proceedings of the Section on Survey Research Methods*. Washington, DC: American Statistical Association, pp. 721-726.

Dillman, D. (1978). *Mail and Telephone Surveys: The Total Design Method.* New York: John Wiley & Sons.

Ezzati-Rice, T.M., Zell, E.R., Battaglia, M.P., Ching, P.L.Y.H., and Wright, R.A. (1995). The design of the National Immunization Survey. *1995 Proceedings of the Section on Survey Research Methods*, Alexandria, VA: American Statistical Association, pp. 668-672.

Frankel, L.R. (1983). The report of the CASRO task force on response rates. *Improving Data Quality in Sample Surveys*. Edited by Wiseman, F. Cambridge, MA: Marketing Science Institute, pp. 1-11.

Frankel, M.R., Srinath, K.P., Hoaglin, D.C., Battaglia, M.P., Smith, P.J., Wright, R.A., and Khare, M. (2003). Adjustments for non-telephone bias in random-digit-dialing surveys. *Statistics in Medicine*. 22:1611-1626.

Khare, M., Battaglia, M.P., Huggins, V.J., Stokley, S., Hoaglin, D.C., Wright, R.A., and Roden, A.S. (2000). Accuracy of vaccination dates reported by immunization providers in the National Immunization Survey. *2000 Proceedings of the Section on Survey Research Methods*. Alexandria, VA: American Statistical Association, pp. 665-670.

Khare, M., Battaglia, M.P., Stokley, S., Wright, R.A., and Huggins, V.J. (2001). Quality of immunization histories reported in the National Immunization Survey. *Proceedings of the International Conference on Quality in Official Statistics* (CD-ROM). Stockholm: Statistics Sweden.

Kish, L. (1965). *Survey Sampling*. New York: John Wiley & Sons.

Lepkowski, J.M. (1988). Telephone sampling methods in the United States. *Telephone Survey Methodology*. Edited by Groves, R.M., Biemer, P.P., Lyberg, L.E., Massey, J.T., Nicholls, W.L., and Waksberg, J. New York: John Wiley & Sons, pp. 73-98.

National Center for Health Statistics. (1993). Public Use Data Tape Documentation: 1991 Detail Natality. U.S. Department of Health and Human Services, Pubic Health Service, Centers for Disease Control and Prevention, National Center for Health Statistics, Hyattsville, MD.

National Center for Health Statistics (1999). *National Health Interview Survey: Research for the 1995-2004 Redesign*. Vital and Health Statistics, Series 2, No. 126. (DHHS publication no. (PHS) 99-1326). Hyattsville, MD: National Center for Health Statistics.

Rosenbaum, P.R. (1987). Model-based direct adjustment. *Journal of the American Statistical Association*, 82:387-394.

Rosenbaum, P.R. and Rubin, D.B. (1983). The central role of the propensity score in observational studies for causal effects. *Biometrika*, 70:41-55.

Rosenbaum, P.R. and Rubin, D.B. (1984). Reducing bias in observational studies using subclassification on the propensity score. *Journal of the American Statistical Association*, 79:516-534.

Rust, K.F., and Rao, J.N.K. (1996). Variance estimation for complex surveys using replication techniques. *Statistical Methods in Medical Research*, 5:283-310.

SAS Institute Inc. (1999). *SAS/STAT User's Guide, Version 8*. Cary, NC: SAS Institute Inc.

Shah, B.V., Barnwell, B.G., and Bieler, G.S. (1997). *SUDAAN User's Manual, Release 7.5*. Research Triangle Park, NC: Research Triangle Institute.

Smith, P.J., Battaglia, M.P., Huggins, V.J., Hoaglin, D.C., Rodén, A.-S., Khare, M., Ezzati-Rice, T.M., and Wright, R.A. (2001a). Overview of the sampling design and statistical methods used in the National Immunization Survey. *American Journal of Preventive Medicine,* Volume 20, Number 4S, pp. 17-24.

Smith, P.J., Rao, J.N.K., Battaglia, M.P., Ezzati-Rice, T.M., Daniels, D., and Khare, M. (2001b). *Compensating for Provider Nonresponse Using Response Propensities to Form Adjustment Cells: The National Immunization Survey.* Vital and Health Statistics, Series 2, No. 133 (DHHS publication no. (PHS) 2001-1333). Hyattsville, MD: National Center for Health Statistics.

Stata Corporation (2001). *Stata Reference Manual.* College Station, TX: Stata Press.

Wall, T.P., Kochanek, K.M., Fitti, J.E., and Zell, E.R. (1995). The use of real time translation services in RDD telephone surveys. Presented at the 1995 Conference of the American Association for Public Opinion Research, Fort Lauderdale, FL. This paper is posted at http://www.nisabt.org/ .

Zell, E.R., Ezzati-Rice, T.M., Battaglia, M.P., and Wright, R.A. (2000). National Immunization Survey: The methodology of a vaccination surveillance system. *Public Health Reports*, 115(1):65-77.

Appendix A

Glossary of Abbreviations and Terms

Glossary of Commonly-Used Abbreviations and Terms

3:3:1	The series of 3 or more DTP vaccinations, 3 or more polio immunizations, and 1 or more MCV vaccinations
4:3:1	The series of 4 or more DTP vaccinations, 3 or more polio immunizations, and 1 or more MCV vaccinations
4:3:1:3	The series of 4 or more DTP vaccinations, 3 or more polio immunizations, 1 or more MCV vaccinations, and 3 or more Hib vaccinations
4:3:1:3:3	The series of 4 or more DTP vaccinations, 3 or more polio immunizations, 1 or more MCV vaccinations, 3 or more Hib vaccinations, and 3 or more hepatitis B vaccinations
4:3:1:3:3:1	The series of 4 or more DTP vaccinations, 3 or more polio immunizations, 1 or more MCV vaccinations, 3 or more Hib vaccinations, 3 or more hepatitis B vaccinations, and 1 or more varicella vaccinations given at age 12 months or older
CATI	Computer-Assisted Telephone Interviewing
CDC	Centers for Disease Control and Prevention
DOB	Date of birth
DTaP	Diphtheria and tetanus toxoids and acellular pertussis vaccine
DTP	Diphtheria and tetanus toxoids and pertussis vaccine
DT	Diphtheria and tetanus toxoids vaccine
Hep B	Hepatitis B vaccine
Hib	*Haemophilus influenzae* type b vaccine
IHQ	Immunization history questionnaire
IPV	Inactivated poliovirus vaccine
MCV	Measles-containing vaccine
MMR	Measles, mumps, and rubella vaccine

NCHS	National Center for Health Statistics
NHIS	National Health Interview Survey
NIP	National Immunization Program
NSC	Non-shot-card
OPV	Oral poliovirus vaccine
PCV	Pneumococcal vaccine
RDD	Random-digit dialing
SC	Shot card
UTD	Up-to-date
VFC	Vaccinations for Children program
VRC	Varicella vaccine

Appendix B

NIS Household Questionnaire

NIS Hard Copy Questionnaire

SCREENER

October, 2002

Confidential Information

Information contained on this form which would permit identification of any individual or establishment has been collected with a guarantee that it will be held in strict confidence by Abt Associates and CDC, will be used only for purposes stated in this study, and will not be disclosed or released to anyone other than authorized staff of CDC without the consent of the individual or establishment in accordance with Section 308(d) of the Public Health Service Act (42 U.S.C. 242m).

CASE ID_____ DATE _____

INTERVIEWER ID_____

TELEPHONE NUMBER _____

DATA ENTRY: DATE_____ ENTERED BY _____ (INTERVIEWER ID)

		ALT KEYS	CHECK	DISP
#1.	SALTZ "Is this telephone number for business use only". IF THE ANSWER IS "YES", GO TO RECORD OF CALLS, AND ENTER COMMENTS DESCRIBING CALL. IF THE ANSWER IS "NO", SELECT RESPONSE AND YOU WILL GO BACK TO THE INTRODUCTION AND COMPLETE INTERVIEW.			409
#2.	IF AT ANY POINT DURING THE INTRO OR S1, THE RESPONDENT STATES THAT THERE ARE NO CHILDREN AND HANGS UP, USE F5 KEYS TO CODE AS HAVING NO CHILDREN, GO TO RECORD OF CALLS, AND ENTER COMMENTS DESCRIBING CALL.			429
#3.	SF9 "Just to make sure I have this correct, are there any children between the ages of 18 months and 36 months old living or staying in your household?" YES 1 CONTINUE AT BEGINNING OF QUESTION WHERE INTERRUPTION OCCURRED NO 2 GO TO ELIGIBILITY STATUS CHECKPOINT (S1=YES=1, S2=DK=6)			429

Intro_1 Hello, my name is _____. I'm calling on behalf of the Centers for Disease Control and Prevention. We're conducting a nationwide immunization study to find out how many children under 4 years of age, are receiving all of the recommended vaccinations for childhood diseases. Your telephone number has been selected at random to be included in the study. .

CONTINUE WITH INTERVIEW 1	[GO TO S1]
CONFIRM BUSINESS 2	[GO TO SALTZ]
EMERGENCY:- NO KIDS 3	[GO TO SF9]
ANSWERING MACHINE 4	
ANSWERING SERVICE 5	[GO TO SASERV]

S1. Am I speaking to someone who lives in this household who is over 17 years old?

I AM THAT PERSON 1	GO TO S_NUMB
THIS IS A BUSINESS 2	We are interviewing only in private residences. Thank you very much. [**TERMINATE INTERVIEW**]
NEW PERSON COMES TO PHONE 3	REPEAT INTRO_1 HERE, VERIFY PERSON'S AGE AND GO TO S_NUMB
REFUSED 7	GO TO REFUSAL CONVERSION
DOESN'T LIVE IN HOUSEHOLD 8	CALLBACK
NO PERSON AT HOME WHO IS AT LEAST 17 9	GO TO S2_B

S2_B Does anyone live in your household who is over 17 years old?

YES . . . . . 1 When would be a good time for me to call back and talk to that person? [SCHEDULE APPOINTMENT]

NO . . . . . 2 GO TO S_NUMB

S_NUMB How many children between the ages of 12 months and 3 years old are living or staying in your household? Please do not include children who have had their third birthdays.

IF ONE OR MORE,
ENTER # OF CHILDREN . . . . . _____ (01 TO 09)

NO CHILDREN . . . . . 00 GO TO S3_TERM

S3_LTR A letter describing this study may have been sent to your home recently. Do you remember seeing the letter?

YES 1
NO 2
DON'T KNOW 6
REFUSED 7

S3_INTRO This study is voluntary and is authorized by the U.S. Public Health Service Act. By law, the information you give will be kept in strict confidence and will be summarized for research purposes only. You may choose not to answer any question you don't want to answer or stop at any time.

S3_EVAL In order to evaluate my performance, my supervisor may record and listen as I ask the questions. I READ THESE STATEMENTS TO THE RESPONDENT.

YES 1

S3 So I'll know which vaccination questions to ask, please tell me the month, day, and year of birth of the (first) child in your household who is between 12 months and 3 years old.

[ASK S3.3, S3_CONF, S3.4, AND S3.5 FOR EACH RESPONSE IN S3.1KID OR S3.MKIDS; RECORD ON ELIGIBILITY GRID]

S3.3 ENTER BIRTH DATES (mm/dd/yyyy)
FROM S3.1KID OR S3.MKIDS IN ELIGIBILITY GRID ON PAGE 7.

If S3 is REFUSED, read YEARREF1

I understand you may be uncomfortable, however, all information is confidential under Federal Law. The only reason we need your child's birthdate is to know which immunization questions to ask (IF NECESSARY: If you would feel more comfortable, I can enter only a month and year of birth.

1.....R STILL REFUSES [GO TO YEARQUIT]
2.....RETURN TO QUESTIONNAIRE [GO TO S3]

If S3 is Don't Know, read YEARDK_1

The reason we need your child's birth date is to know which immunization questions to ask. Is there anyone available who would know the child's month, day, and year of birth?

1.....NEW PERSON COMES TO PHONE [GO TO INTRO1]
2.....NO [SET A CALLBACK]

YEARQUIT Since we need a birthdate in order to continue, these are all the questions I have at this time. I'd like to thank you on behalf of the Centers for Disease Control and Prevention for the time you spent answering these questions.

S3_CONF. That would make the [ordinal # of kid derived from S_NUMB] child [age of child in months and years] old; is that correct?

YES 1
NO 2

S3.4. Is the child born in [insert month and year of birth] male or female?

MALE 1
FEMALE 2
DON'T KNOW 6
REFUSED 7

S3.5. So I'll know how to refer to [him/her] during the interview, please tell me [his/her] first name or initials.

DON'T KNOW 6
REFUSED 7

S3_C. I have listed [NAMES FROM S3.5]. Do you have any other children between 12 months and 3 years old living or staying in this household?

YES	1	CONFIRM # AT S_NUMB, CHANGE AS NECESSARY AND REPEAT S3.3, S3_CONF, S3.4, S3.5 for missed children
NO	2	GO TO ELIG.CHECKPOINT

ELIGIBILITY GRID

LISTING TABLE OF CHILDREN BETWEEN THE AGES OF 19 MONTHS AND 35 MONTHS OLD

CHECK BELOW, WHERE APPLICABLE

COL. 1

	S3.3 Date of Birth	**S3_CONF Age Confirm**	**ASK ONLY IF CHILD IS ELIGIBLE (19-35 MONTHS)** **S3.4 Sex**	**S3.5 First Name/ Initials**	**Primary Eligible 19 to 35 months** ___/___/_____ to ___/___/_____
Child 1	___/___/___ _	**Y N**	M F		
Child 2	___/___/___ _	Y N	M F		
Child 3	___/___/___ _	Y N	M F		
Child 4	___/___/___ _	Y N	M F		
Child 5	___/___/___ _	Y N	M F		
Child 6	___/___/___ _	Y N	M F		
Child 7	___/___/___ _	Y N	M F		

Child 8	___/___/___ _	Y N	M F			GO TO S4
Child 9	___/___/___ _	Y N	M F			
9						

ELIGIBILITY STATUS CHECKPOINT

☐ 1. Checks in Column 1))))))))))))))))))Q

GO TO
S3_TERM ☐ 3. NO Checks in Column 1

S_NUMB_QT. Those are all the questions I have. This survey is collecting information on the health of children between 19 months and 3 years old only. I'd like to thank you on behalf of the Centers of Disease Control and Prevention for the time you spent answering these questions.
[TERMINATE INTERVIEW]

S3_TERM Those are all the questions I have. (I'd like to thank you on behalf of the Centers for Disease Control and Prevention for the time and effort you spent answering these questions.) [**TERMINATE INTERVIEW**]

S3_D_1+1 Most of the remaining questions will be about [FIRST NAME(S)/INITIALS OF ELIGIBLE CHILD(REN) FROM S3.5].

S4. Since this survey asks about immunizations children may have received, I need to speak to the person living in your household who knows the most about the immunizations or shots that [FIRST NAMES/INITIALS OF ELIGIBLE CHILD(REN) FROM S3.5] (has/have) received. Are you this person?

YES	1	GO TO S6_INTRO
NO	2	

S5. May I speak with this person now?

YES	1	GO TO S5_BOX
NO, NOT AT HOME	2	GO TO MR1

S5_BOX READ WHEN NEW PERSON COMES TO THE PHONE
OR
FOR Most Knowledgeable Respondent CALLBACK INTRODUCTION

> Hi. I'm calling for the Centers for Disease Control and Prevention. We're calling about an important national study of immunization. I'd like you to know that this study is voluntary and is authorized by the U.S. Public Health Service Act. The information you give will be kept in strict confidence and will be summarized for research purposes only. It's all right to skip any questions you don't want to answer.

S6_INTRO The following questions ask about immunizations or shots for [FIRST NAMES OF ALL ELIGIBLE CHILDREN, FROM S3.5]. Because the Centers for Disease Control and Prevention needs accurate information on immunizations children receive, we would like you to refer to shot records.

THIS PAGE

SHOULD

BE BLANK

[ASK S6_X. THROUGH S7.B_X. FOR EACH RESPONSE IN S3.1KID OR S3.MKIDS; RECORD ON GRID BELOW]

	S3.5 First Name	**S6_X Do you have <u>any</u> shot records for [NAME OF FIRST CHILD]?**	**S7_A Some children receive many shots, and the names and dates of those shots can be difficult to remember. It would be helpful if you could bring [NAMES OF ALL CHILDREN WITH SHOT RECORDS]'s shot record(s) to the phone. (IF NECESSARY: I'll be happy to wait while you go get it/them)?**	**S7.B_X Am I correct that you have the shot records for [NAMES OF ALL CHILDREN WITH SHOT RECORDS]?**
CHILD 1		YES NO DK REF _____W_____/ Repeat S6_X for next child or Go To S8	YES 9 Go To S7.B CAN'T/WON'T BRING SR TO PHONE 9 Go to S8	YES NO 9 Go To S8.A. Go To S8.B.
CHILD 2		YES NO DK REF _____W_____/ Repeat S6_X for next child or Go To S8	YES 9 Go To S7.B CAN'T/WON'T BRING SR TO PHONE 9 Go to S8	YES NO 9 Go To S8.A. Go To S8.B.
CHILD 3		YES NO DK REF _____W_____/ Repeat S6_X for next child or Go To S8	YES 9 Go To S7.B CAN'T/WON'T BRING SR TO PHONE 9 Go to S8	YES NO 9 Go To S8.A. Go To S8.B.
CHILD 4		YES NO DK REF _____W_____/ Repeat S6_X for next child or Go To S8	YES 9 Go To S7.B CAN'T/WON'T BRING SR TO PHONE 9 Go to S8	YES NO 9 Go To S8.A. Go To S8.B.
CHILD 5		YES NO DK REF _____W_____/ Repeat S6_X for next child or Go To S8	YES 9 Go To S7.B CAN'T/WON'T BRING SR TO PHONE 9 Go to S8	YES NO 9 Go To S8.A. Go To S8.B.

DK = DON'T KNOW REF = REFUSAL

S8. EXISTENCE OF SHOT RECORDS CHECKPOINT

A L L S 6 _ X A N S W E R S A R E "Y E S".....1	GO TO S8.A.
A L L S 6 _ X A N S W E R S A R E "NO".....2	GO TO B_INTRO AND ASK FOR EACH CHILD IN HOUSEHOLD
A L L OTHERS..... 3	GO TO S8.B.

S8.A. CHECKPOINT FOR HOUSEHOLDS WHERE ALL CHILDREN HAVE SHOT RECORDS

ALL S7.A. AND S7.B_X ANSWERS ARE "YES".....1	GO TO SECTION A SHOT RECORD (*NO CALLBACK NEEDED*)
A L L OTHERS..... 3	ASK SECTION A FOR CHILDREN WITH SHOT RECORDS AND SECTION B FOR CHILDREN WITHOUT SHOT RECORDS OR WHEN SHOT RECORD IS NOT HANDY (*NO CALLBACK NEEDED*)

S8.B. CHECKPOINT FOR HOUSEHOLDS WHERE SOME CHILDREN HAVE SHOT RECORDS AND SOME CHILDREN DO NOT HAVE SHOT RECORDS

ALL S7.A AND S7.B_X ANSWERS ARE "YES" 1	ASK SECTION A FOR CHILDREN WITH SHOT RECORDS AND SECTION B FOR CHILDREN WITHOUT SHOT RECORDS (*NO CALLBACK NEEDED*)
ALL S7.A AND S7.B_X ANSWERS ARE "NO" 2	GO TO B_INTRO AND ASK FOR EACH CHILD IN HOUSEHOLD (*NO CALLBACK NEEDED*)
ALL OTHERS 3	ASK SECTION A FOR CHILDREN WITH SHOT RECORDS AND SECTION B FOR CHILDREN WITHOUT SHOT RECORDS (*NO CALLBACK NEEDED*)

CASE ID _____

TELEPHONE NUMBER _____

INTERVIEW DATE _____

INTERVIEWER ID _____

DATA ENTRY: DATE_____ BY _____(INTERVIEWER ID)

NIS Hard Copy Questionnaire

PART 2

October, 2002

SECTION MR - *Most Knowledgeable Respondent Callback*

SECTION A - *Available Shot Records*

SECTION B - *NO Shot Records*

SECTION C - *Demographics*

SECTION D - *Provider*

Confidential Information

Information contained on this form which would permit identification of any individual or establishment has been collected with a guarantee that it will be held in strict confidence by Abt Associates and CDC, will be used only for purposes stated in this study, and will not be disclosed or released to anyone other than authorized staff of CDC without the consent of the individual or establishment in accordance with Section 308(d) of the Public Health Service Act (42 U.S.C. 242m).

CATI Version 9.9k

SECTION MR

Most Knowledgeable Respondent Callback Questions

MR1. Before we hang up, please tell me the first name of the person who knows the most about (this child's/these children's) immunizations.

FIRST NAME _____

REFUSED 7

MR2. When would be a good time to call back to speak with [FILL VAR: this person/NAME FROM MR1]?

MR2 DATE_____

MR2_2 TIME_____

MR3. Would I call the same telephone number where I reached you?

YES . . . . . 1 GO TO MR_TERM

NO 2

MR4. What number should I call?

AREA CODE: _____

NUMBER: _____

MR_TERM.

Those are all the questions I have. I'd like to thank you on behalf of the Centers for Disease Control and Prevention for the time and effort you spent answering these questions.

[**TERMINATE INTERVIEW**]

. . . . . .

`

SECTION A

Available Shot Records

NOTE: SECTION A IS ASKED ONLY FOR CHILDREN WITH SHOT RECORDS AVAILABLE (FROM S6 AND S7)

NOTE: EACH SECTION (A, C AND D) IS ASKED IN ITS ENTIRETY FOR EACH CHILD WITH SHOT RECORDS.
EACH SECTION (B, C AND D) IS ASKED IN ITS ENTIRETY FOR EACH CHILD WITHOUT SHOT RECORDS.

SHOT RECORD FOR DTP/DT SHOT

AINTRO. Thank you for getting the shot records. The remainder of the survey will take about 15 minutes.

AN1. Looking at the shot record, please tell me how many times **[FILL VAR: NAME OF FIRST/SECOND... /SIXTH CHILD, FROM S3.5]** has received a D-T-P, D-T-A-P, or D-T shot, sometimes called a D-P-T shot, diphtheria-tetanus-pertussis shot, baby shot, or three-in-one shot.

IF R MENTIONS A SHOT NOT LISTED ABOVE, RECORD IN "OTHER SHOTS"-QUESTION A6

Shots . . . . . ☐	RECORD DATES BELOW
de NONE 0	GO TO AN2
de DON'T KNOW 6	GO TO AN2
de REFUSED 7	GO TO AN2

AD1. What is the date (on the record) for the [FILL VAR: (First/Second/...Eighth)] D-T-P, D-T-A-P, or D-T shot?

1st Shot AD11	___ / ___ / ____ MO DAY YEAR	de DON'T KNOW 9996 GO TO AN2 de REFUSED . . . 9997 GO TO AN2
2nd Shot AD12	___ / ___ / ____ MO DAY YEAR	de DON'T KNOW 9996 GO TO AN2 de REFUSED . . . 9997 GO TO AN2
3rd Shot AD13	___ / ___ / ____ MO DAY YEAR	de DON'T KNOW 9996 GO TO AN2 de REFUSED . . . 9997 GO TO AN2
4th Shot AD14	___ / ___ / ____ MO DAY YEAR	de DON'T KNOW 9996 GO TO AN2 de REFUSED . . . 9997 GO TO AN2
5th Shot AD15	___ / ___ / ____ MO DAY YEAR	de DON'T KNOW 9996 GO TO AN2 de REFUSED . . . 9997 GO TO AN2
6th Shot AD16	___ / ___ / ____ MO DAY YEAR	de DON'T KNOW 9996 GO TO AN2 de REFUSED . . . 9997 GO TO AN2
7th Shot AD17	___ / ___ / ____ MO DAY YEAR	de DON'T KNOW 9996 GO TO AN2 de REFUSED . . . 9997 GO TO AN2
8th Shot AD18	___ / ___ / ____ MO DAY YEAR	de DON'T KNOW 9996 GO TO AN2 de REFUSED . . . 9997 GO TO AN2

GO TO AN_2

SHOT RECORD FOR POLIO (DROPS OR SHOTS)

AN2. Looking at the shot record, please tell me how many times **[FILL VAR: NAME OF FIRST/SECOND... /SIXTH CHILD, FROM S3.5]** has received a polio vaccine -- pink drops, sometimes called O-P-V -- or a polio shot, sometimes called I-P-V.

IF R MENTIONS A SHOT NOT LISTED ABOVE, RECORD IN "OTHER SHOTS"-QUESTION A6

Shots . . . . . ☐ RECORD DATES BELOW

de NONE . . . . . 0 GO TO AN3
de DON'T KNOW . . . . . 6 GO TO AN3
de REFUSED . . . . . 7 GO TO AN3

AD2. What is the date (on the record) for the [FILL VAR: (First/Second/...Eighth)] polio vaccine?

1st Shot AD21	___ / ___ / ____ MO DAY YEAR	de DON'T KNOW 9996 GO TO AN3 de REFUSED . . . . 9997 GO TO AN3
2nd Shot AD22	___ / ___ / ____ MO DAY YEAR	de DON'T KNOW 9996 GO TO AN3 de REFUSED . . . . 9997 GO TO AN3
3rd Shot AD23	___ / ___ / ____ MO DAY YEAR	de DON'T KNOW 9996 GO TO AN3 de REFUSED . . . . 9997 GO TO AN3
4th Shot AD24	___ / ___ / ____ MO DAY YEAR	de DON'T KNOW 9996 GO TO AN3 de REFUSED . . . . 9997 GO TO AN3
5th Shot AD25	___ / ___ / ____ MO DAY YEAR	de DON'T KNOW 9996 GO TO AN3 de REFUSED . . . . 9997 GO TO AN3
6th Shot AD26	___ / ___ / ____ MO DAY YEAR	de DON'T KNOW 9996 GO TO AN3 de REFUSED . . . . 9997 GO TO AN3
7th Shot AD27	___ / ___ / ____ MO DAY YEAR	de DON'T KNOW 9996 GO TO AN3 de REFUSED . . . . 9997 GO TO AN3
8th Shot AD28	___ / ___ / ____ MO DAY YEAR	de DON'T KNOW 9996 GO TO AN3 de REFUSED . . . . 9997 GO TO AN3

GO TO AN_3

SHOT RECORD FOR MEASLES/MMR (SHOTS)

AN3. Looking at the shot record, please tell me how many times **[FILL VAR: NAME OF FIRST/SECOND... /SIXTH CHILD, FROM S3.5]** has received a measles shot or an M-M-R shot, that is, a measles, mumps, and rubella shot.

IF R MENTIONS A SHOT NOT LISTED ABOVE, RECORD IN "OTHER SHOTS"- QUESTION A6

Shots . . . . . ☐ RECORD DATES BELOW

de NONE . . . . . 0 GO TO AN4
de DON'T KNOW . . . . . 6 GO TO AN4
de REFUSED . . . . . 7 GO TO AN4

AD3. What is the date (on the record) for the [FILL VAR: (First/Second/...Fourth)] (measles or M-M-R) shot?

Was that shot measles only or M-M-R only?

1st Shot AD31

___ / ___ / ____
MO DAY YEAR

de DON'T KNOW . . . . . 9996 GO TO AN4
de REFUSED . . . . . 9997 GO TO AN4

AM31 de MEASLES ONLY 1
AM32 de MMR ONLY 2
AM33 de DON'T KNOW 6
AM34 de REFUSED 7

2nd Shot AD32

___ / ___ / ____
MO DAY YEAR

de DON'T KNOW . . . . . 9996 GO TO AN4
de REFUSED . . . . . 9997 GO TO AN4

AM35 de MEASLES ONLY 1
AM36 de MMR ONLY 2
AM37 de DON'T KNOW 6
AM38 de REFUSED 7

3rd Shot AD33

___ / ___ / ____
MO DAY YEAR

de DON'T KNOW . . . . . 9996 GO TO AN4
de REFUSED . . . . . 9997 GO TO AN4

AM39 de MEASLES ONLY 1
AM40 de MMR ONLY 2
AM41 de DON'T KNOW 6
AM42 de REFUSED 7

4th Shot AD34	___ / ___ / ____ (MO DAY YEAR) de DON'T KNOW . . . . . 9996 GO TO AN4 de REFUSED . . . . . 9997 GO TO AN4 AM43 de MEASLES ONLY . . . . . 1 AM44 de MMR ONLY . . . . . 2 AM45 de DON'T KNOW . . . . . 6 AM46 de REFUSED . . . . . 7 GO TO AN_4

SHOT RECORD FOR HIB (SHOT)

AN4. Looking at the shot record please tell me how many times **[FILL VAR: NAME OF FIRST/SECOND... /SIXTH CHILD, FROM S3.5]** has received an H-I-B shot. (This is for Meningitis and is called HA-MA-FI-LUS IN-FLU-EN-ZI , H-I-B vaccine, or H flu vaccine.)

IF R MENTIONS A SHOT NOT LISTED ABOVE, RECORD IN "OTHER SHOTS"- QUESTION A6

Shots . . . . . ☐ RECORD DATES BELOW

de NONE . . . . . 0 GO TO AN5
de DON'T KNOW . . . . . 6 GO TO AN5
de REFUSED . . . . . 7 GO TO AN5

AD4. What is the date (on the record) for the [FILL VAR: (First/Second/...Eighth)] (H-I-B) shot?

1st Shot AD41	___ / ___ / ____ (MO DAY YEAR)	de DON'T KNOW 9996 GO TO AN5 de REFUSED . . . . 9997 GO TO AN5
2nd Shot AD42	___ / ___ / ____ (MO DAY YEAR)	de DON'T KNOW 9996 GO TO AN5 de REFUSED . . . . 9997 GO TO AN5
3rd Shot AD43	___ / ___ / ____ (MO DAY YEAR)	de DON'T KNOW 9996 GO TO AN5 de REFUSED . . . . 9997 GO TO AN5
4th Shot AD44	___ / ___ / ____ (MO DAY YEAR)	de DON'T KNOW 9996 GO TO AN5 de REFUSED . . . . 9997 GO TO AN5
5th Shot AD45	___ / ___ / ____ (MO DAY YEAR)	de DON'T KNOW 9996 GO TO AN5 de REFUSED . . . . 9997 GO TO AN5
6th Shot AD46	___ / ___ / ____ (MO DAY YEAR)	de DON'T KNOW 9996 GO TO AN5 de REFUSED . . . . 9997 GO TO AN5
7th Shot AD47	___ / ___ / ____ (MO DAY YEAR)	de DON'T KNOW 9996 GO TO AN5 de REFUSED . . . . 9997 GO TO AN5

8th Shot AD48	___ / ___ / ____ MO DAY YEAR GO TO AN_5	de DON'T KNOW 9996 GO TO AN5 de REFUSED . . . . 9997 GO TO AN5

SHOT RECORD FOR HEPATITIS B

AN5. (Looking at the shot record) Please tell me how many times **[FILL VAR: NAME OF FIRST/SECOND... /SIXTH CHILD, FROM S3.5]** has received a hepatitis B shot.

IF R MENTIONS A SHOT NOT LISTED ABOVE, RECORD IN "OTHER SHOTS"- QUESTION A6

Shots . . . . . ☐ RECORD DATES BELOW

de NONE . . . . . 0 GO TO AN6
de DON'T KNOW . . . . . 6 GO TO AN6
de REFUSED . . . . . 7 GO TO AN6

AD5. What is the date (on the record) for the [FILL VAR: (First/Second/...Eighth)] (hepatitis B) shot?

1st Shot AD51	___ / ___ / ____ MO DAY YEAR	de DON'T KNOW . . . . . 9996 GO TO AN6 de REFUSED . . . . . 9997 GO TO AN6
2nd Shot AD52	___ / ___ / ____ MO DAY YEAR	de DON'T KNOW . . . . . 9996 GO TO AN6 de REFUSED . . . . . 9997 GO TO AN6
3rd Shot AD53	/ / MO DAY YEAR	de DON'T KNOW . . . . . 9996 GO TO AN6 de REFUSED . . . . . 9997 GO TO AN6
4th Shot AD54	___ / ___ / ____ MO DAY YEAR	de DON'T KNOW . . . . . 9996 GO TO AN6 de REFUSED . . . . . 9997 GO TO AN6
5th Shot AD55	___ / ___ / __ MO DAY YEAR	de DON'T KNOW . . . . . 9996 GO TO AN6 de REFUSED . . . . . 9997 GO TO AN6
6th Shot AD56	___ / ___ / ___ MO DAY YEAR	de DON'T KNOW . . . . . 9996 GO TO AN6 de REFUSED . . . . . 9997 GO TO AN6
7th Shot AD57	___ / ___ / __ MO DAY YEAR	de DON'T KNOW . . . . . 9996 GO TO AN6 de REFUSED . . . . . 9997 GO TO AN6
8th Shot AD58	___ / ___ / ___ MO DAY YEAR	de DON'T KNOW . . . . . 9996 GO TO AN6 de REFUSED . . . . . 9997 GO TO AN6

GO TO AN_6

SHOT RECORD FOR CHICKEN POX

AN6. (Looking at the shot record) Please tell me how many times **[FILL VAR: NAME OF FIRST/SECOND... /SIXTH CHILD, FROM S3.5]** has received a chicken pox or varicella shot.

IF R MENTIONS A SHOT NOT LISTED ABOVE, RECORD IN "OTHER SHOTS"-QUESTION A6

Shots . . . . . ☐ RECORD DATES BELOW

de NONE . . . . . 0 GO TO AN7
de DON'T KNOW . . . . . 6 GO TO AN7
de REFUSED . . . . . 7 GO TO AN7

AD6. What is the date (on the record) for the [FILL VAR: (First/Second/...Fourth)] (chicken pox) shot?

1st Shot AD61	___ / ___ / __ MO DAY YEAR	de DON'T KNOW . . . . . 9996 GO TO AN7 de REFUSED . . . . . 9997 GO TO AN7
2nd Shot AD62	___ / ___ / 19__ MO DAY YEAR	de DON'T KNOW . . . . . 9996 GO TO AN7 de REFUSED . . . . . 9997 GO TO AN7
3rd Shot AD63	___ / ___ / 19__ MO DAY YEAR	de DON'T KNOW . . . . . 9996 GO TO AN7 de REFUSED . . . . . 9997 GO TO AN7
4th Shot AD64	___ / ___ / 19__ MO DAY YEAR	de DON'T KNOW . . . . . 9996 GO TO AN7 de REFUSED . . . . . 9997 GO TO AN7

GO TO AN_7

SHOT RECORD FOR ROTAVIRUS (SHOT)

AN7. (Looking at the shot record) Please tell me how many times **[FILL VAR: NAME OF FIRST/SECOND... /SIXTH CHILD, FROM S3.5]** has received a rotavirus shot.

IF R MENTIONS A SHOT NOT LISTED ABOVE, RECORD IN "OTHER SHOTS"- QUESTION A6

Shots . . . . . ☐ RECORD DATES BELOW

de NONE . . . . . 0 GO TO AN8
de DON'T KNOW . . . . . 6 GO TO AN8
de REFUSED . . . . . 7 GO TO AN8

AD7. What is the date (on the record) for the [FILL VAR: (First/Second/...Fourth)] (rotavirus) shot?

1st Shot AD71	___ / ___ / __ MO DAY YEAR	de DON'T KNOW . . . . . 9996 GO TO AN8 de REFUSED . . . . . 9997 GO TO AN8
2nd Shot AD72	___ / ___ / ____ MO DAY YEAR	de DON'T KNOW . . . . . 9996 GO TO AN8 de REFUSED . . . . . 9997 GO TO AN8
3rd Shot AD73	___ / ___ / _ MO DAY YEAR	de DON'T KNOW . . . . . 9996 GO TO AN8 de REFUSED . . . . . 9997 GO TO AN8
4th Shot AD74	___ / ___ / ____ MO DAY YEAR	de DON'T KNOW . . . . . 9996 GO TO AN8 de REFUSED . . . . . 9997 GO TO AN8

GO TO AN8.

SHOT RECORD FOR PNEUMOCOCCAL

AN8. (Looking at the shot record) Please tell me how many times **[FILL VAR: NAME OF FIRST/SECOND... /SIXTH CHILD, FROM S3.5]** has received a pneumococcal shot, also called the NU-MO-COC-AL conjugate vaccine, or Prevnar.

IF R MENTIONS A SHOT NOT LISTED ABOVE, RECORD IN "OTHER SHOTS"-QUESTION A6

Shots . . . . . ☐ RECORD DATES BELOW

de NONE . . . . . 0 GO TO A5_C
de DON'T KNOW . . . . . 6 GO TO A5_C
de REFUSED . . . . . 7 GO TO A5_C

AD8. What is the date (on the record) for the [FILL VAR: (First/Second/...Fourth)] (chicken pox) shot?

1st Shot AD81	___ / ___ / __ MO DAY YEAR	de DON'T KNOW . . . . . 9996 GO TO A5_C de REFUSED . . . . . 9997 GO TO A5_C
2nd Shot AD82	___ / ___ / 19__ MO DAY YEAR	de DON'T KNOW . . . . . 9996 GO TO A5_C de REFUSED . . . . . 9997 GO TO A5_C
3rd Shot AD83	___ / ___ / 19__ MO DAY YEAR	de DON'T KNOW . . . . . 9996 GO TO A5_C de REFUSED . . . . . 9997 GO TO A5_C
4th Shot AD84	___ / ___ / 19__ MO DAY YEAR	de DON'T KNOW . . . . . 9996 GO TO A5_C de REFUSED . . . . . 9997 GO TO A5_C
5th Shot AD85	___ / ___ / 19__ MO DAY YEAR	de DON'T KNOW . . . . . 9996 GO TO A5_C de REFUSED . . . . . 9997 GO TO A5_C
6th Shot AD86	___ / ___ / 19__ MO DAY YEAR	de DON'T KNOW . . . . . 9996 GO TO A5_C de REFUSED . . . . . 9997 GO TO A5_C
7th Shot AD87	___ / ___ / 19__ MO DAY YEAR	de DON'T KNOW . . . . . 9996 GO TO A5_C de REFUSED . . . . . 9997 GO TO A5_C
8th Shot AD88	___ / ___ / 19__ MO DAY YEAR	de DON'T KNOW . . . . . 9996 GO TO A5_C de REFUSED . . . . . 9997 GO TO A5_C

GO TO A5_C

A5_C. I've been asking about shots received by [FILL VAR: NAME OF FIRST/SECOND... /NINTH CHILD, FROM S3.5.] Now I would like to ask, has [FILL VAR: NAME OF FIRST/SECOND... /NINTH CHILD, FROM S3.5] ever been ill with chicken pox or varicella?

YES	1	GO TO A5_E
NO	2	
DON'T KNOW	6	GO TO A6
REFUSED	7	AOR NEXT CHILD

A5_E. How old was ([FILL VAR: NAME OF FIRST/SECOND.../NINTH CHILD, FROM S3.5]), in months, when (he/she) had chicken pox?

AGE CHILD HAD CHICKEN POX	__|__ MONTHS	GO TO A6 OR NEXT CHILD
REFUSED	97	A

IF UNABLE TO GIVE EXACT MONTHS

A5_F. Was ([FILL VAR: NAME OF FIRST/SECOND.../NINTH CHILD, FROM S3.5])...

...one to six months old?	01
...seven to twelve months old?	02
...13 to 18 months old?	03
...19 to 24 months old?	04
...25 to 30 months old?	05
...31 to 35 months old?	06
DON'T KNOW	96
REFUSAL	97

A6. Has **[FILL VAR: NAME OF FIRST/SECOND... /NINTH CHILD, FROM S3.5]** received any other immunizations that are listed on the shot records that I have not asked you about?

de YES	1	
de NO	2	GO TO A7
de DON'T KNOW	6	GO TO A7
de REFUSED	7	GO TO A7

A6.A. How many other shots are listed there (that I have not asked you about)?

NUMBER	☐	RECORD NAMES AND DATES BELOW
de REFUSED	7	GO TO A7

A6.B. What is the name of the **FIRST** other shot listed on the record?

de FOUR-IN-ONE 02
de BCG (TUBERCULOSIS) 03
de TYPHOID 04
de YELLOW FEVER 05
de MALARIA 06
de DTaP 07
de DTP/HiB 08
de DTP/HepB 09

de OTHER (SPECIFY) 95

_____

de DON'T KNOW . . . . . 96 GO TO A7 OR SECOND SHOT
de REFUSED . . . . . 97 GO TO A7 OR SECOND SHOT

A6.C. What is the date (on the record) for this shot?

_____ /_____ / _____ de DON'T KNOW . . . . . 9996 GO TO A7 OR SECOND SHOT
MO DAY YEAR de REFUSED . . . . . 9997 GO TO A7 OR SECOND SHOT

GO TO A7 OR SECOND SHOT (NEXT FRAME)

A6.B.2 What is the name of the **SECOND** other shot listed on the record?

de FOUR-IN-ONE 02
de BCG (TUBERCULOSIS) 03
de TYPHOID 04
de YELLOW FEVER 05
de MALARIA 06
de DTaP 07
de DTP/HiB 08
de DTP/HepB 09

de OTHER (SPECIFY) 95

_____

de DON'T KNOW . . . . . 96 GO TO A7 OR THIRD SHOT
de REFUSED . . . . . 97 GO TO A7 OR THIRD SHOT

A6.C.2 What is the date (on the record) for this shot?

_____ /_____ / _____ de DON'T KNOW . . . . . 9996 GO TO A7 OR THIRD SHOT
MO DAY YEAR de REFUSED . . . . . 9997 GO TO A7 OR THIRD SHOT

GO TO A7 OR THIRD SHOT (NEXT FRAME)

A6.B.3 What is the name of the **THIRD** other shot listed on the record?

de FOUR-IN-ONE	02	
de BCG (TUBERCULOSIS)	03	
de TYPHOID	04	
de YELLOW FEVER	05	
de MALARIA	06	
de DTaP	07	
de DTP/HiB	08	
de DTP/HepB	09	
de OTHER (SPECIFY) _____	95	
de DON'T KNOW	96	GO TO A7 OR FOURTH SHOT
de REFUSED	97	GO TO A7 OR FOURTH SHOT

A6.C.3 What is the date (on the record) for this shot?

_____ /_____ / _____
MO DAY YEAR

de DON'T KNOW	9996	GO TO A7 OR FOURTH SHOT
de REFUSED	9997	GO TO A7 OR FOURTH SHOT

GO TO A7 OR FOURTH SHOT (NEXT FRAME)

A6.B.4 What is the name of the **FOURTH** other shot listed on the record?

de FOUR-IN-ONE	02	
de BCG (TUBERCULOSIS)	03	
de TYPHOID	04	
de YELLOW FEVER	05	
de MALARIA	06	
de DTaP	07	
de DTP/HiB	08	
de DTP/HepB	09	
de OTHER (SPECIFY) _____	95	
de DON'T KNOW	96	GO TO A7 OR FIFTH SHOT
de REFUSED	97	GO TO A7 OR FIFTH SHOT

A6.C.4 What is the date (on the record) for this shot?

_____ /_____ / _____
MO DAY YEAR

de DON'T KNOW	9996	GO TO A7 OR FIFTH SHOT
de REFUSED	9997	GO TO A7 OR FIFTH SHOT

GO TO A7 OR FIFTH SHOT (NEXT FRAME)

A6.B.5 What is the name of the **FIFTH** other shot listed on the record?

de FOUR-IN-ONE 02
de BCG (TUBERCULOSIS) 03
de TYPHOID 04
de YELLOW FEVER 05
de MALARIA 06
de DTaP 07
de DTP/HiB 08
de DTP/HepB 09

de OTHER (SPECIFY) 95

_____

de DON'T KNOW . . . . . 96 GO TO A7
de REFUSED . . . . . 97 GO TO A7

A6.C.5 What is the date (on the record) for this shot?

_____ /_____ / _____
MO DAY YEAR

de DON'T KNOW . . . . . 9996 GO TO A7
de REFUSED . . . . . 9997 GO TO A7

GO TO A7

A7. Are all the immunizations that [FILL VAR: NAME OF FIRST/SECOND... /NINTH CHILD, FROM S3.5] ever received included on this shot record?

YES	1	GO TO A16
NO	2	
DON'T KNOW	6	
REFUSED	7	

A8. Has [FILL VAR: NAME OF FIRST/SECOND... /NINTH CHILD, FROM S3.5] ever received an additional D-T-P, D-T-A-P, or D-T shot (sometimes called D-P-T shot, diphtheria-tetanus-pertussis shot, baby shot, or three-in-one shot)?

YES	1	
NO	2	
DON'T KNOW	6	GO TO A9
REFUSED	7	

A8.A. How many additional D-T-P shots has [FILL VAR: NAME OF FIRST/SECOND... /NINTH CHILD, FROM S3.5] received?

NUMBER OF SHOTS	☐
ALL SHOTS	50
DON'T KNOW	96
REFUSED	97

A9. Has [FILL VAR: NAME OF FIRST/SECOND... /NINTH CHILD, FROM S3.5] ever received an additional polio vaccine by mouth, pink drops, sometimes called O-P-V, or by a polio shot, sometimes called I-P-V?

YES	1	
NO	2	
DON'T KNOW	6	GO TO A10
REFUSED	7	

A9.A. How many additional polio vaccines has [FILL VAR: NAME OF FIRST/SECOND... /NINTH CHILD, FROM S3.5] received?

NUMBER OF VACCINES	☐
ALL SHOTS	50
DON'T KNOW	96
REFUSED	97

A10. Has [FILL VAR: NAME OF FIRST/SECOND... /NINTH CHILD, FROM S3.5] ever received an additional measles or M-M-R, that is, measles - mumps - rubella shot?

YES	1	
NO	2	
DON'T KNOW	6	GO TO A11
REFUSED	7	A

A10.A. How many additional measles or M-M-R shots has [FILL VAR: NAME OF FIRST/SECOND... /NINTH CHILD, FROM S3.5] received?

NUMBER OF SHOTS	☐
ALL SHOTS	50
DON'T KNOW	96
REFUSED	97

A11. Has [FILL VAR: NAME OF FIRST/SECOND... /NINTH CHILD, FROM S3.5] ever received an additional H-I-B shot? This shot is for meningitis and is called Haemophilus Influenzae {HA-MA-FI-LUS IN-FLU-EN-ZI}, H-I-B vaccine or H flu vaccine.

YES	1	
NO	2	
DON'T KNOW	6	GO TO A12
REFUSED	7	

A11.A. How many additional H-I-B shots has [FILL VAR: NAME OF FIRST/SECOND... /NINTH CHILD, FROM S3.5] received?

NUMBER OF SHOTS	☐
ALL SHOTS	50
DON'T KNOW	96
REFUSED	97

A12. Has [FILL VAR: NAME OF FIRST/SECOND... /NINTH CHILD, FROM S3.5] ever received an additional hepatitis B shot?

YES	1	
NO	2	
DON'T KNOW	6	GO TO A12B
REFUSED	7	A

A12.A. How many additional hepatitis B shots has [FILL VAR: NAME OF FIRST/SECOND... /NINTH CHILD, FROM S3.5] received?

NUMBER OF SHOTS	☐
ALL SHOTS	50
DON'T KNOW	96
REFUSED	97

A12.B. Has [FILL VAR: NAME OF FIRST/SECOND... /NINTH CHILD, FROM S3.5] ever received an additional chicken pox or varicella shot?

YES	1	
NO	2	
DON'T KNOW	6	GO TO A12_R
REFUSED	7	

A12.C. How many additional chicken pox shots has [FILL VAR: NAME OF FIRST/SECOND... /NINTH CHILD, FROM S3.5] received?

NUMBER OF SHOTS	☐
ALL SHOTS	50
DON'T KNOW	96
REFUSED	97

A12_R. Has [FILL VAR: NAME OF FIRST/SECOND... /NINTH CHILD, FROM S3.5] ever received an additional rotavirus shot?

YES	1	
NO	2	
DON'T KNOW	6	GO TO A12_P
REFUSED	7	

A12_S. How many additional rotavirus shots did [FILL VAR: NAME OF FIRST/SECOND... /NINTH CHILD, FROM S3.5] ever receive?

NUMBER OF SHOTS	☐
ALL SHOTS	50
DON'T KNOW	96
REFUSED	97

A12_P. Has [FILL VAR: NAME OF FIRST/SECOND... /NINTH CHILD, FROM S3.5] ever received an additional pneumococcal shot?

YES	1	
NO	2	
DON'T KNOW	6	GO TO A13
REFUSED	7	

A12_Q. How many additional pneumococcal shots did [FILL VAR: NAME OF FIRST/SECOND... /NINTH CHILD, FROM S3.5] ever receive?

NUMBER OF SHOTS	☐
ALL SHOTS	50
DON'T KNOW	96
REFUSED	97

A13. Has **[FILL VAR: NAME OF FIRST/SECOND... /NINTH CHILD, FROM S3.5]** received any other additional immunizations that are not listed on the shot records that I have not asked you about?

de YES 1
de NO . . . . . 2 GO TO A16
de DON'T KNOW . . . . . 6 GO TO A16
de REFUSED . . . . . 7 GO TO A16

A13.A. How many other additional shots are there (that I have not asked you about)?

Number . . . . . ☐ RECORD NAMES BELOW

de REFUSED . . . . . 7 GO TO A16

A13.B. What is the name of the **FIRST** additional other shot (not listed on the records)?

de FOUR-IN-ONE 02
de BCG (TUBERCULOSIS) 03
de TYPHOID 04
de YELLOW FEVER 05
de MALARIA 06
de DTaP 07
de DTP/HiB 08
de DTP/HepB 09

de OTHER (SPECIFY) 95

_____

de DON'T KNOW . . . . . 96 GO TO A16 OR SECOND SHOT
de REFUSED . . . . . 97 GO TO A16 OR SECOND SHOT

GO TO A16 OR SECOND SHOT (NEXT FRAME)

A13.B.2 What is the name of the **SECOND** additional other shot (not listed on the records)?

de	FOUR-IN-ONE	02	
de	BCG (TUBERCULOSIS)	03	
de	TYPHOID	04	
de	YELLOW FEVER	05	
de	MALARIA	06	
de	DTaP	07	
de	DTP/HiB	08	
de	DTP/HepB	09	
de	OTHER (SPECIFY)	95	
de	DON'T KNOW	96	GO TO A16 OR THIRD SHOT
de	REFUSED	97	GO TO A16 OR THIRD SHOT

GO TO A16 OR THIRD SHOT (NEXT FRAME)

A13.B.3 What is the name of the **THIRD** additional other shot (not listed on the records)?

de	FOUR-IN-ONE	02	
de	BCG (TUBERCULOSIS)	03	
de	TYPHOID	04	
de	YELLOW FEVER	05	
de	MALARIA	06	
de	DTaP	07	
de	DTP/HiB	08	
de	DTP/HepB	09	
de	OTHER (SPECIFY)	95	
de	DON'T KNOW	96	GO TO A16 OR FOURTH SHOT
de	REFUSED	97	GO TO A16 OR FOURTH SHOT

GO TO A16 OR FOURTH SHOT (NEXT FRAME)

A13.B.4 What is the name of the **FOURTH** additional other shot (not listed on the records)?

de	FOUR-IN-ONE	02	
de	BCG (TUBERCULOSIS)	03	
de	TYPHOID	04	
de	YELLOW FEVER	05	
de	MALARIA	06	
de	DTaP	07	
de	DTP/HiB	08	
de	DTP/HepB	09	
de	OTHER (SPECIFY) _____	95	
de	DON'T KNOW	96	GO TO A14 OR FIFTH SHOT
de	REFUSED	97	GO TO A14 OR FIFTH SHOT

GO TO A16 OR FIFTH SHOT (NEXT FRAME)

A13.B.5 What is the name of the **FIFTH** additional other shot (not listed on the records)?

de	FOUR-IN-ONE	02	
de	BCG (TUBERCULOSIS)	03	
de	TYPHOID	04	
de	YELLOW FEVER	05	
de	MALARIA	06	
de	DTaP	07	
de	DTP/HiB	08	
de	DTP/HepB	09	
de	OTHER (SPECIFY) _____	95	
de	DON'T KNOW	96	GO TO A16
de	REFUSED	97	GO TO A16

GO TO A16

A16. REPEAT A6 - A13 FOR EACH CHILD WITH AVAILABLE SHOT RECORDS ON ANOTHER HARDCOPY QUESTIONNAIRE.

A17. INTERVIEWER CHECKPOINT.

CALLBACK INTERVIEW (SR OR MR COMPLETE)	**INITIAL INTERVIEW**
de IF CHILDREN WITH NO AVAILABLE SHOT RECORDS, GO TO B1.	de IF CHILDREN WITH NO AVAILABLE SHOT RECORDS, GO TO B1.
de ALL OTHERS, Those are all the questions I have. (I'd like to thank you on behalf of the Centers for Disease Control and Prevention for the time and effort you spent answering these questions.) [**TERMINATE INTERVIEW**]	de ALL OTHERS, GO TO C1

SECTION B

NO Shot Records

NOTE: SEE S6 - S8.B TO DETERMINE WHICH CHILDREN ARE ASKED SECTION B

BINTRO. The remainder of the survey will take about 10 minutes.

B1. Has [FILL VAR: NAME OF FIRST/SECOND... /NINTH CHILD, FROM S3.5] ever received an immunization, that is a shot or drops?

YES	1	
NO	2	
DON'T KNOW	6	GO TO B6.D
REFUSED	7	

B2. Has [FILL VAR: NAME OF FIRST/SECOND... /NINTH CHILD, FROM S3.5] ever received a D-T-P, D-T-A-P or D-T shot (sometimes called a D-P-T shot, diphtheria-tetanus-pertussis shot, baby shot, or three-in-one shot)?

YES	1	
NO	2	
DON'T KNOW	6	GO TO B3
REFUSED	7	

B2.A. How many D-T-P, D-T-A-P or D-T shots did [FILL VAR: NAME OF FIRST/SECOND... /NINTH CHILD, FROM S3.5] ever receive?

NUMBER OF SHOTS	☐
ALL SHOTS	50
DON'T KNOW	96
REFUSED	97

B3. Has [FILL VAR: NAME OF FIRST/SECOND... /SIXTH CHILD, FROM S3.5] ever received a polio vaccine by mouth, pink drops, sometimes called O-P-V, or by a polio shot, sometimes called I-P-V?

YES	1	
NO	2	
DON'T KNOW	6	GO TO B4
REFUSED	7	

B3.A. How many polio vaccines did [FILL VAR: NAME OF FIRST/SECOND... /NINTH CHILD, FROM S3.5] ever receive?

NUMBER OF VACCINES	☐	
ALL SHOTS	50	
DON'T KNOW	96	
REFUSED	97	

B4. Has [FILL VAR: NAME OF FIRST/SECOND... /NINTH CHILD, FROM S3.5] ever received a measles or M-M-R (Measles-Mumps-Rubella) shot?

YES	1	
NO	2	
DON'T KNOW	6	GO TO B5
REFUSED	7	

B4.A. How many measles or M-M-R shots did [FILL VAR: NAME OF FIRST/SECOND... /NINTH CHILD, FROM S3.5] ever receive?

NUMBER OF SHOTS	☐	IF 1, GO TO B4.B IF 2 OR MORE, GO TO B5
ALL SHOTS	50	
DON'T KNOW	96	
REFUSED	97	

B4.B. Was that shot measles only or M-M-R only?

MEASLES ONLY	1
M-M-R ONLY	2
DON'T KNOW	6
REFUSED	7

B5. Has [FILL VAR: NAME OF FIRST/SECOND... /NINTH CHILD, FROM S3.5] ever received an H-I-B shot? This shot is for meningitis and is called Haemophilus Influenzae {HA-MA-FI-LUS IN-FLU-EN-ZI}, H-I-B vaccine, or H flu vaccine?

YES	1	
NO	2	
DON'T KNOW	6	GO TO B6
REFUSED	7	

B5.A. How many H-I-B shots did [FILL VAR: NAME OF FIRST/SECOND... /NINTH CHILD, FROM S3.5] ever receive?

NUMBER OF SHOTS	☐	
ALL SHOTS	50	
DON'T KNOW	96	
REFUSED	97	

B6. Has [FILL VAR: NAME OF FIRST/SECOND... /NINTH CHILD, FROM S3.5] ever received a hepatitis B shot?

YES	1	
NO	2	
DON'T KNOW	6	GO TO B6.B.
REFUSED	7	

B6.A. How many hepatitis B shots did [FILL VAR: NAME OF FIRST/SECOND... /NINTH CHILD, FROM S3.5] ever receive?

NUMBER OF SHOTS	☐	
ALL SHOTS	50	
DON'T KNOW	96	
REFUSED	97	

B6.B. Has [FILL VAR: NAME OF FIRST/SECOND... /NINTH CHILD, FROM S3.5] ever received a chicken pox or varicella shot?

YES	1	
NO	2	
DON'T KNOW	6	GO TO B6_R
REFUSED	7	

B6.C. How many chicken pox shots did [FILL VAR: NAME OF FIRST/SECOND... /NINTH CHILD, FROM S3.5] ever receive?

NUMBER OF SHOTS	☐	
ALL SHOTS	50	
DON'T KNOW	96	
REFUSED	97	

B6_R. Has [FILL VAR: NAME OF FIRST/SECOND... /NINTH CHILD, FROM S3.5] ever received a rotavirus shot?

YES	1	
NO	2	
DON'T KNOW	6	GO TO B6_P
REFUSED	7	

B6_V. How many rotavirus shots did [FILL VAR: NAME OF FIRST/SECOND... /NINTH CHILD, FROM S3.5] ever receive?

NUMBER OF SHOTS	☐	
ALL SHOTS	50	
DON'T KNOW	96	
REFUSED	97	

B6_P. Has [FILL VAR: NAME OF FIRST/SECOND... /NINTH CHILD, FROM S3.5] ever received a pneumococcal shot, also called NU-MO-COC-AL conjugate vaccine, or Prevnar?

YES	1	
NO	2	
DON'T KNOW	6	GO TO B7
REFUSED	7	

B6_Q. How many pneumococcal shots did [FILL VAR: NAME OF FIRST/SECOND... /NINTH CHILD, FROM S3.5] ever receive?

NUMBER OF SHOTS	☐	
ALL SHOTS	50	
DON'T KNOW	96	
REFUSED	97	

B6.D I've been asking about shots received by [FILL VAR: NAME OF FIRST/SECOND... /NINTH CHILD, FROM S3.5]. Now I would like to ask, has [FILL VAR: NAME OF FIRST/SECOND... /NINTH CHILD, FROM S3.5] ever been ill with chicken pox or varicella?

YES	1	GO TO B6.E
NO	2	
DON'T KNOW	6	
REFUSED	7	

IF B1 = 2 OR 6 OR 7, GO TO B10, OTHERWISE CONTINUE

B6.E How old was ([FILL VAR: NAME OF FIRST/SECOND.../NINTH CHILD, FROM S3.5]), in months, when (he/she) had chicken pox?

AGE CHILD HAD
CHICKEN POX . . . . . __|__ MONTHS
REFUSED 97

IF UNABLE TO GIVE EXACT MONTHS
B6.F Was ([FILL VAR: NAME OF FIRST/SECOND.../NINTH CHILD, FROM S3.5])...

...one to six months old?	01
...seven to twelve months old?	02
...13 to 18 months old?	03
...19 to 24 months old?	04
...25 to 30 months old?	05
...31 to 35 months old?	06
DON'T KNOW	96
REFUSAL	97

IF B1 = 2 OR 6 OR 7, GO TO B10, OTHERWISE CONTINUE

B7. Has **[FILL VAR: NAME OF FIRST/SECOND... /NINTH CHILD, FROM S3.5]** received any other immunizations that I have not asked you about?

de	YES	1	
de	NO	2	GO TO B10
de	DON'T KNOW	6	GO TO B10
de	REFUSED	7	GO TO B10

B7.A. How many other shots are there (that I have not asked you about)?

Number . . . . . ☐ RECORD NAMES IN B7.B

de	DON'T KNOW	6	GO TO B7.B
de	REFUSED	7	GO TO B10

B7.B.1 What is the name of the first other shot(s)?

de FOUR-IN-ONE 02
de BCG (TUBERCULOSIS), TB 03
de TYPHOID 04
de YELLOW FEVER 05
de MALARIA 05
de DTAP 07
de DTP/HiB 08
de DTP/HepB 09

de OTHER (SPECIFY) 00

de DON'T KNOW . . . . . 96 GO TO B10 OR NEXT SHOT
de REFUSED . . . . . 97 GO TO B10 OR NEXT SHOT

GO TO B10 OR NEXT SHOT

B7.B.2 What is the name of the second other shot(s)?

de FOUR-IN-ONE 02
de BCG (TUBERCULOSIS), TB 03
de TYPHOID 04
de YELLOW FEVER 05
de MALARIA 05
de DTAP 07
de DTP/HiB 08
de DTP/HepB 09

de OTHER (SPECIFY) 00

de DON'T KNOW . . . . . 96 GO TO B10 OR NEXT SHOT
de REFUSED . . . . . 97 GO TO B10 OR NEXT SHOT

GO TO B10 OR NEXT SHOT

B7.B.3 What is the name of the third other shot(s)?

de FOUR-IN-ONE 02
de BCG (TUBERCULOSIS), TB 03
de TYPHOID 04
de YELLOW FEVER 05
de MALARIA 05
de DTAP 07
de DTP/HiB 08
de DTP/HepB 09

de OTHER (SPECIFY) 00

de DON'T KNOW . . . . . 96 GO TO B10 OR NEXT SHOT
de REFUSED . . . . . 97 GO TO B10 OR NEXT SHOT

GO TO B10 OR NEXT SHOT

B7.B.4 What is the name of the fourth other shot(s)?

de FOUR-IN-ONE 02
de BCG (TUBERCULOSIS), TB 03
de TYPHOID 04
de YELLOW FEVER 05
de MALARIA 05
de DTAP 07
de DTP/HiB 08
de DTP/HepB 09

de OTHER (SPECIFY) 00

de DON'T KNOW . . . . . 96 GO TO B10 OR NEXT SHOT
de REFUSED . . . . . 97 GO TO B10 OR NEXT SHOT

GO TO B10 OR NEXT SHOT

B7.B.5 What is the name of the fifth other shot(s)?

de FOUR-IN-ONE 02
de BCG (TUBERCULOSIS), TB 03
de TYPHOID 04
de YELLOW FEVER 05
de MALARIA 05
de DTAP 07
de DTP/HiB 08
de DTP/HepB 09

de OTHER (SPECIFY) 00

de DON'T KNOW . . . . . 96 GO TO B10
de REFUSED . . . . . 97 GO TO B10

GO TO B10

B10. REPEAT B1-B9 FOR EACH CHILD WITH NO AVAILABLE SHOT RECORDS.

B11. INTERVIEWER CHECKPOINT.

CALLBACK INTERVIEW (MR COMPLETE)	**INITIAL INTERVIEW**
de Those are all the questions I have. (I'd like to thank you on behalf of the Centers for Disease Control and Prevention for the time and effort you spent answering these questions.) [**TERMINATE INTERVIEW**]	**de** GO TO C1

SECTION C

Demographics

C1. Including the adults and all the children, how many people live in this household?

NUMBER OF PEOPLE . . . . . ☐

C1.A. How many of these are adults 18 years of age or older?

NUMBER OF ADULTS . . . . . ☐

C1.B. And that means that [FILL VAR: ANSWER TO C1 - ANSWER TO C1A] of these people are under 18 years of age?

YES	1	
NO	2	
REFUSED	7	SKIP TO C1.C

[IF ANSWER TO C1.B IS GREATER THAN OR EQUAL TO S_NUMB + 1, THEN ASK C1.C; OTHERWISE, SKIP TO C2]

C1.C How many children less than 12 months old live in this household?

NUMBER OF CHILDREN < 12 MONTHS . . . . . ☐

DON'T KNOW	96
REFUSED	97

C2. Is [FILL VAR: NAME OF FIRST/SECOND.../NINTH CHILD, FROM S3.5] of Spanish, Hispanic, or Latino origin, that is Mexican, Mexican-American, Central American, South American, Chicano, or Puerto Rican, Cuban, or other Spanish-Caribbean? [CIRCLE ALL THAT APPLY]

C2_X01	NO, NOT SPANISH/HISPANIC	YES
C2_X02	YES, MEXICAN/MEXICANO	YES
C2_X03	YES, MEXICAN-AMERICAN	YES
C2_X04	YES, CENTRAL AMERICAN	YES
C2_X05	YES, SOUTH AMERICAN	YES
C2_X06	YES, CHICANO	YES
C2_X07	YES, PUERTO RICAN	YES
C2_X08	YES, CUBAN/CUBAN AMERICAN	YES
C2_X09	YES, SPANISH-CARIBBEAN	YES
C2_X10	YES, OTHER SPANISH/HISPANIC (SPECIFY)	YES

C2_OTHR1 _____

DON'T KNOW	96
REFUSED	97

C3. Now, I am going to read a list of categories. Please choose one or more of the following categories to describe [FILL VAR: NAME OF FIRST/SECOND.../NINTH CHILD, FROM S3.5]'s race. Is [FILL VAR: NAME OF FIRST/SECOND.../NINTH CHILD, FROM S3.5] White, Black or African American, Native American, Alaska Native, Asian, or Native Hawaiian or other Pacific Islander? [CIRCLE ALL THAT APPLY]

C3_X01	WHITE	YES
C3_X02	BLACK/ AFRICAN AMERICAN	YES
C3_X03	AMERICAN INDIAN	YES
C3_X04	ALASKA NATIVE	YES
C3_X05	ASIAN	YES
C3_X06	NATIVE HAWAIIAN	YES
C3_X07	PACIFIC ISLANDER	YES
C3_X08	OTHER (SPECIFY)	YES

C3_OTHR1 _____

DON'T KNOW 96
REFUSED 97

[IF MORE THAN ONE ANSWER AT C3, ASK C4]

C4. Which do you feel best describes [FILL VAR: NAME OF FIRST/SECOND.../NINTH CHILD, FROM S3.5]'s race?

WHITE 1
BLACK/ AFRICAN AMERICAN 2
AMERICAN INDIAN 3
ALASKA NATIVE 4
ASIAN 5
NATIVE HAWAIIAN 6
PACIFIC ISLANDER 7
OTHER (SPECIFY) 8

_____

DON'T KNOW 96
REFUSED 97

C5. What is your relationship to [FILL VAR: NAME OF FIRST/SECOND... /NINTH CHILD, FROM S3.5]?

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
FRIEND 08
DON'T KNOW 96
REFUSED 97

[RULES FOR ASKING C6 (EDUCATION), C7 (MARITAL STATUS), C8 - C10 (RACE-ETHNICITY) AND C11 (RESIDENCE AT CHILD'S BIRTH):

I. ONLY ONE CHILD IN HOUSEHOLD: ASK EACH QUESTION ONCE

II. TWO OR MORE CHILDREN IN HOUSEHOLD:
A. ASK FOR A CHILD ONLY IF THIS IS THE FIRST CHILD WHERE RESPONDENT IS MOTHER (C5 = 01)
B. ALWAYS ASK WHEN RESPONDENT IS NOT MOTHER (C5 … 01)]

C6. What is the highest grade or year of regular school (you have/[FILL VAR: NAME OF FIRST/SECOND.../NINTH CHILD, FROM S3.5]'s mother has) ever completed?

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17+
NEVER ATTENDED/ KINDERGARTEN (41)	ELEMENTARY (51)								HIGH SCHOOL (61)				COLLEGE (71)				GRADUATE (81)

DON'T KNOW 96
REFUSED 97

C7. (Are you/is [FILL VAR: NAME OF FIRST/SECOND.../NINTH CHILD, FROM S3.5]'s mother) now married, widowed, divorced, separated, or (have you/has she) never been married?

MARRIED 01
WIDOWED 02
DIVORCED 03
SEPARATED 04
NEVER MARRIED 05
DECEASED . . . . . 06 GO TO CFAMINC
DON'T KNOW 96
REFUSED 97

C8. (Are you/Is [FILL VAR: NAME OF FIRST/SECOND.../NINTH CHILD, FROM S3.5]'s mother) of Spanish, Hispanic, or Latino origin, that is, Mexican, Mexican-American, Central American, South American, Chicano, or Puerto Rican, Cuban, or other Spanish-Caribbean? [CIRCLE ALL THAT APPLY]

C8_X01	NO, NOT SPANISH/HISPANIC	YES
C8_X02	YES, MEXICAN/MEXICANO	YES
C8_X03	YES, MEXICAN-AMERICAN	YES
C8_X04	YES, CENTRAL AMERICAN	YES
C8_X05	YES, SOUTH AMERICAN	YES
C8_X06	YES, CHICANO	YES
C8_X07	YES, PUERTO RICAN	YES
C8_X08	YES, CUBAN/CUBAN AMERICAN	YES
C8_X09	YES, SPANISH-CARIBBEAN	YES
C8_X10	YES, OTHER SPANISH/HISPANIC (SPECIFY)	YES

C8_OTHR1 _____

DON'T KNOW	96
REFUSED	97

C9. Now I'm going to read a list of categories. Please choose one or more of the following categories to describe (your/ [FILL VAR: NAME OF FIRST/SECOND.../NINTH CHILD, FROM S3.5]'s mother's) race. (Are you/is [FILL VAR: NAME OF FIRST/SECOND.../NINTH CHILD, FROM S3.5]'s mother) White, Black or African American, Native American, Alaska Native, Asian, Native Hawaiian or other Pacific Islander? [CIRCLE ALL THAT APPLY]

C9_X01	WHITE	YES
C9_X02	BLACK/ AFRICAN AMERICAN	YES
C9_X03	AMERICAN INDIAN	YES
C9_X04	ALASKA NATIVE	YES
C9_X05	ASIAN	YES
C9_X06	NATIVE HAWAIIAN	YES
C9_X07	PACIFIC ISLANDER	YES
C9_X08	OTHER (SPECIFY)	YES

C9_OTHR1 _____

DON'T KNOW	96
REFUSED	97

[IF MORE THAN ONE ANSWER AT C9, ASK C10; OTHERWISE SKIP TO C10A.]

C10. Which do you feel best describes (your/[FILL VAR: NAME OF FIRST/SECOND.../NINTH CHILD, FROM S3.5]'s mother's) race?

WHITE	1
BLACK/AFRICAN AMERICAN	2
AMERICAN INDIAN	3
ALASKA NATIVE	4
ASIAN	5
NATIVE HAWAIIAN	6
PACIFIC ISLANDER	7
OTHER (SPECIFY)	8
DON'T KNOW	96
REFUSED	97

C10A. What is (your/[FILL VAR: NAME OF FIRST/SECOND.../NINTH CHILD, FROM S3.5]'s mother's) month, day, and year of birth?

____ / ____ / _____ (mm/dd/yyyy)

[IF MONTH=DK/REF OR YEAR=DK/REF, THEN SKIP TO C10B. OTHERWISE, SKIP TO C11.]

C10B. What is (your/[FILL VAR: NAME OF FIRST/SECOND.../NINTH CHILD, FROM S3.5]'s mother's) current age?

AGE . . . . . ☐☐

DON'T KNOW	96	
REFUSED	97	

C11. (Do you/Does [FILL VAR: NAME OF FIRST/SECOND.../NINTH CHILD, FROM S3.5]'s mother) live at the same address as (you/she) did when [FILL VAR: NAME OF FIRST/SECOND.../NINTH CHILD, FROM S3.5] was born?

YES	1	GO TO CFAMINC
NO	2	
DON'T KNOW	6	GO TO CFAMINC
REFUSED	7	GO TO CFAMINC

C11A. In what city, county, and state did (you/[FILL VAR: NAME OF FIRST/SECOND.../NINTH CHILD, FROM S3.5]'s mother) live when [FILL VAR: NAME OF FIRST/SECOND.../NINTH CHILD, FROM S3.5] was born?

CITY _____

COUNTY _____

STATE _____

OR

COUNTRY _____ GO TO CFAMINC

REFUSED 7

C11.B. What was (your/[FILL VAR: NAME OF FIRST/SECOND.../NINTH CHILD, FROM S3.5]'s mother's) zipcode at that time?

☐☐☐☐☐

DON'T KNOW 6
REFUSED 7

CFAMINC Please think about your total combined family income during 2001 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, rent, or any other money income received. Can you tell me that amount before taxes?

$☐☐☐,☐☐☐,☐☐☐ [GO TO C_19]

DON'T KNOW	6	GO TO C12 DON'TKNOW
REFUSED	7	GO TO C12 REFUSED

C12DON'TKNOW You may not be able to give us an exact figure for your total combined family income, but was your total family income during 2000 more or less than $20,000?

MORE THAN $20,000	1	GO TO C16
$20,000	2	GO TO C19
LESS THAN $20,000	3	GO TO C13
DON'T KNOW	6	GO TO C19
REFUSED	7	GO TO C19

C12REFUSED Income is important in analyzing the immunization information we collect. For example, this information helps us to learn whether persons in one group use these medical services more or less than those in another group. Now you may not be able to give us an exact figure for your total combined family income, but was your total family income during 2000 more or less than $20,000?

MORE THAN $20,000	1	GO TO C16
$20,000	2	GO TO C19
LESS THAN $20,000	3	GO TO C13
DON'T KNOW	6	GO TO C19
REFUSED	7	GO TO C19

C13. Was the total combined FAMILY income more or less than $10,000?

MORE THAN $10,000	1	GO TO C15
$10,000	2	GO TO C19
LESS THAN $10,000	3	GO TO C14.A
DON'T KNOW	6	GO TO C19
REFUSED	7	GO TO C19

C14.A Was it more than $7,500?

YES	1	
NO	2	
DON'T KNOW	6	GO TO C19
REFUSED	7	

C15. Was it more than $15,000?

YES	1	GO TO C15.A
NO	2	GO TO C15.B
DON'T KNOW	6	GO TO C19
REFUSED	7	

C15.A Was it more than $17,500?

YES	1	
NO	2	
DON'T KNOW	6	GO TO C19
REFUSED	7	

C15.B Was it more than $12,500?

YES	1	
NO	2	
DON'T KNOW	6	GO TO C19
REFUSED	7	

C16. Was the total combined FAMILY income more or less than $40,000?

MORE THAN $40,000	1	GO TO C16.A
$40,000	2	GO TO C19
LESS THAN $40,000	3	GO TO C17
DONT KNOW	6	GO TO C19
REFUSED	7	GO TO C19

C16.A Was the total combined FAMILY income more or less than $60,000?

MORE THAN $60,000	1	GO TO C18
$60,000	2	GO TO C19
LESS THAN $60,000	3	GO TO C16.B
DONT KNOW	6	GO TO C19
REFUSED	7	GO TO C19

C16.B Was the total combined FAMILY income more or less than $50,000?

MORE THAN $50,000	1	GO TO C19
$50,000	2	GO TO C19
LESS THAN $50,000	3	GO TO C16.C
DONT KNOW	6	GO TO C19
REFUSED	7	GO TO C19

C16.C Was the total combined FAMILY income more or less than $45,000?

MORE THAN $45,000	1	
LESS THAN $45,000	2	
DONT KNOW	6	GO TO C19
REFUSED	7	

C17. Was the total combined FAMILY income more or less than $30,000?

MORE THAN $30,000	1	GO TO C17.A
$30,000	2	GO TO C19
LESS THAN $30,000	3	GO TO C17.B
DONT KNOW	6	GO TO C19
REFUSED	7	GO TO C19

C17.A Was the total combined FAMILY income more or less than $35,000?

MORE THAN $35,000	1	
LESS THAN $35,000	2	
DONT KNOW	6	GO TO C19
REFUSED	7	

C17.B Was the total combined FAMILY income more or less than $25,000?

MORE THAN $25,000 1
LESS THAN $25,000 2
DONT KNOW . . . . . 6 GO TO C19

REFUSED. 7

C18. Was the total combined FAMILY income more or less than $75,000?

MORE THAN $75,000 1
$75,000 2
LESS THAN $75,000 3
DONT KNOW . . . . . 6 GO TO C19

REFUSED 7

CINC. Just to confirm that I entered the number correctly, the total combined family income was [FILL RESPONSE, CFAMINC]?

YES.....1	[GO TO C19]
NO.....2	[GO TO C12]
DON'T KNOW.....6	[GO TO C12DONTKNOW]
REFUSED.....7	[GO TO C12REFUSED]

C19. In what city, county and state do you live?

CITY_____

COUNTY _____

STATE _____

REFUSED 7

C19.A. What is your zip code?

☐☐☐☐☐

DON'T KNOW 6
REFUSED 7

C19.B Do you live within the city limits?

YES 1
NO 2

C20. The next few questions are about the telephone numbers in your household. Do you have any other home phone numbers in addition to [FILL VAR: AREA CODE/TELEPHONE NUMBER FROM SAMPLE TELEPHONE NUMBER]. Please do not include cellular phones in your answer.

YES	1	
NO	2	GO TO CNOSERV
REFUSED	7	GO TO CNOSERV

C21. 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	GO TO C22
BOTH HOME AND BUSINESS	3	
REFUSED	7	GO TO CNOSERV

C21.A. Is this second number used only for computer or fax communication?

YES	1	
NO	2	
DON'T KNOW	6	
REFUSED	7	GO TO CNOSERV

C22. Do you have a third home phone number in addition to the two you have already told me about? Please do not include cellular phones in your answer.

YES	1	
NO	2	GO TO CNOSERV
REFUSED	7	GO TO CNOSERV

C23. 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	GO TO CNOSERV
BOTH HOME AND BUSINESS	3	
REFUSED	7	GO TO CNOSERV

C23.A. Is this third number used only for computer or fax communication?

YES	1
NO	2
DON'T KNOW	6
REFUSED	7

CNOSERV

During the past 12 months, has your household been without telephone service for 1 week or more? Please do not include cellular phones in your answer.

YES	1	
NO	2	GO TO D5
DON'T KNOW	6	GO TO D5
REFUSED	7	GO TO D5

CHOWLONG1

For how long was your household without telephone service in the past 12 months?

IF ONE WEEK OR LESS, ENTER 0 FOR THE NUMBER.
ENTER NUMBER, PRESS RETURN.

NUMBER _____

CHOWLONG2

ENTER PERIOD _____

DAY(S)	1
WEEK(S)	2
MONTH(S)	3
DON'T KNOW	6
REFUSED	7

☐ ALL → GO TO D5

SECTION D

Provider Questions

D5 To get a complete picture of the vaccinations received by your (children/child), we would like to contact doctors or health clinics to obtain a copy of the vaccination records for your (children/child).

D6 How many locations have provided vaccinations for your child named [NAME OF (FIRST) ELIGIBLE CHILD] whose birth date is [DATE OF BIRTH OF (FIRST) ELIGIBLE CHILD]?

NUMBER: |___|___| IF "00" GO TO D6AA
IF R REFUSES GO TO D6_R

D6AA How many locations have provided health care for your child? Please include the hospital or birthing center where [HE/SHE] was born, and any other clinics or doctor's offices that have seen [HIM/HER].

NUMBER: |___| ENTER '0' IF CHILD HAS NEVER SEEN A DOCTOR OR OTHER HEALTH CARE PROVIDER

IF D6AA = 0 GO TO TOPICAL MODULES

IF D6AA >0 GO TO D6A.1

IF R REFUSES, GO TO D16

D6A.1 Starting with the most recent, please tell me the name, address and telephone number for each location. (Would you take a moment to find shot-cards, appointment cards, or other records you may have?)

YES, CONTINUE ON . . . . . 1 GO TO D6B.1.1.1

NO, CAN'T FIND, CONTINUE . . . . . 2 GO TO D6B.1.1.1

REFUSED . . . . . 7 GO TO D6_R

IF REFUSED

D6_R. (SUGGESTED SCRIPT) Vaccination information from doctors and clinics is often the most up-to-date and comprehensive. So, in order to obtain the most complete information possible about children's vaccinations, we need to collect the vaccination histories from both the parents or guardians of the children and the doctors and clinics that provide the immunizations.

All information about your child and your child's health care provider is held in strict confidence and used for study purposes only. Any names of children, as well as any names of doctors or clinics, will not be used in reporting the study results. We will never release any information that may identify you or your child.

RETURN TO QUESTION,
IF R STILL REFUSES -> GO TO D16

D6B.1.1.1 What is the last name of the doctor?

LAST_____

D6B.2.1.1 Do you know the doctor's first name?

FIRST_____

D6B.3.1.1 Please tell me the name of the office or the clinic.

OFFICE_____

D6B.4.1.1 What is the street address of the office or the clinic?

STREET_____

D6B.5.1.1 Is there a suite, floor, or room number?

SUITE #_____

D6B.6.1.1 What city is that in?

CITY_____

D6B.7.1.1 What state is that in?

STATE_____

D6B.8.1.1 What is the zip code?

ZIP CODE_____

D6B.9.1.1 What is their telephone number?

TELEPHONE_____

INTERVIEWER NOTE: IF MORE THAN ONE PROVIDER GO TO THE SUPPLEMENTAL PROVIDER SHEET - D6B.1.2.1

IF D6 > 1 → D8

IF D6=0 (NO VACCINATION PROVIDERS), D6AA >1 → D8M

D8 In order to help the doctor or clinic locate your child's vaccination records,

D8M Sometimes babies are given an immunization soon after birth or a young child may receive an immunization at a well-child visit. We would like to contact the places that have provided care for [CHILD] and request any vaccination information they may have. In order to help the doctor or clinic locate your child's vaccination records,

D8A.1 What is [NAME OF (FIRST) ELIGIBLE CHILD]'s full name - first, middle, and last name?

FIRST_____

IF REFUSED

D15B. (SUGGESTED SCRIPT) The only reason we need your child's full name is so that the doctor or clinic can locate the correct vaccination records for your child. Once vaccination data have been collected, all names are completely separated from the data, and we will not use your child's name again.

All information is held in strict confidence and is used for study purposes only. I assure you that any names of children, as well as any names of doctors or clinics, will not be used in any study results. We will not release any information that may identify you or your child.

RETURN TO QUESTION, IF R STILL REFUSES, GO TO D16

D8B.1 (What is the [NAME OF (FIRST) ELIGIBLE CHILD]'s full name - first, middle, and last name?)

MIDDLE_____

D8C.1 (What is the [NAME OF (FIRST) ELIGIBLE CHILD]'s full name - first, middle, and last name?)

LAST _____

IF REFUSED

D15B. (SUGGESTED SCRIPT) The only reason we need your child's full name is so that the doctor or clinic can locate the correct vaccination records for your child. Once vaccination data have been collected, all names are completely separated from the data, and we will not use your child's name again.

All information is held in strict confidence and is used for study purposes only. I assure you that any names of children, as well as any names of doctors or clinics, will not be used in any study results. We will not release any information that may identify you or your child.

RETURN TO QUESTION, IF R STILL REFUSES, GO TO D16

D9A. What is your full name - first, middle, and last?

FIRST_____

IF REFUSED
D15C. (SUGGESTED SCRIPT) The only reason we need your full name is so that the doctor or clinic can locate the correct vaccination records for your child. Once vaccination data have been collected, all names are completely separated from the data, and we will not use your child's name again.

All information is held in strict confidence and is used for study purposes only. I assure you that any names of children, as well as any names of doctors or clinics, will not be used in any study results. We will not release any information that may identify you or your child.
RETURN TO QUESTION, IF R STILL REFUSES, GO TO D16

D9B. (What is your full name - first, middle, and last?)

MIDDLE_____

D9C. (What is your full name - first, middle, and last?)

LAST _____

IF REFUSED
D15C. (SUGGESTED SCRIPT) The only reason we need your full name is so that the doctor or clinic can locate the correct vaccination records for your child. Once vaccination data have been collected, all names are completely separated from the data, and we will not use your child's name again.

All information is held in strict confidence and is used for study purposes only. I assure you that any names of children, as well as any names of doctors or clinics, will not be used in any study results. We will not release any information that may identify you or your child.
RETURN TO QUESTION, IF R STILL REFUSES, GO TO D16

INTERVIEWER NOTE: IF THERE ARE ANY ADDITIONAL ELIGIBLE CHILDREN, GO TO THE SUPPLEMENTAL CHILD SHEET, D6.2.

D9D. I need to verify that I am speaking with someone who can authorize the release of immunization records for [NAME OF ELIGIBLE CHILD(REN)]. Are you that person?

YES 1

NO . . . . . 2 GO TO D9D1

REFUSED . . . . . 7 GO TO D9D_R

IF REFUSED

D9D_R (SUGGESTED SCRIPT) Vaccination information from doctors and clinics is often the most up-to-date and comprehensive. So, in order to obtain the most complete information possible about children's vaccinations, we need to collect the vaccination histories from both the parents or guardians of the children and the doctors and clinics that provide the immunizations.

All information about your child and your child's health care provider is held in strict confidence and used for study purposes only. Any names of children, as well as any names of doctors or clinics, will not be used in reporting the study results. We will never release any information that may identify you or your child.

RETURN TO QUESTION, IF R STILL REFUSES -> GO TO TOP MODS

D6C. The vaccination records collected from the provider(s) will be kept in strict confidence.

D7. Do we have your permission to contact the provider(s) named in this interview, give the provider(s) basic information that identifies your child(ren), and request that information relevant to your child(ren)'s immunization history be sent to the Centers for Disease Control and Prevention or its contractors for study purposes only?

YES 1

NO . . . . . 2 [GO TO D7_R]

D7_R. We appreciate the information you have already provided, but without your consent, we cannot contact your health care provider. We are only requesting the dates and types of vaccinations your child has received and I can assure you that no further information will be provided to us. All information collected is kept confidential under federal law and the names of you and your child(ren) will be completely separated from the data released in study results. The doctor or health clinic will receive 2 forms, one that I have signed indicating your consent to collect immunization information, and one that looks similar to a shot record with only the names of vaccines listed and blank spaces for the dates to be filled in.

RETURN TO QUESTION, OR SKIP TO TOP MODS.

[If C19 IS Oklahoma, District of Columbia, or Michigan, ASK D7_G. Else SKIP TO DCG.]

D7G.

Sometimes to get a complete record of your child(ren)'s vaccinations it would be helpful to contact your local immunization registry. This registry has information on children's vaccinations. The information we collect will be about your child(ren)'s vaccinations only.

Do we have your permission to contact your local immunization registry, give them basic information that identifies your child(ren), and request that information relevant to your child(ren)'s immunization history be sent to the Centers for Disease Control and Prevention or its contractors for study purposes only?

YES	1	
NO	2	[GO TO D7G_R]

D7G_R. Vaccination information from doctors and clinics sometimes is not complete or available. So, in order to get the most complete information possible about children's vaccinations, we need to contact parents or guardians of the children, providers of children's immunizations, and local registries to collect vaccination information.

A parent or guardian often must give consent before the local registry will release a child's vaccination history, so it is important that I speak with someone who is authorized to give that consent. I can assure you that all information is kept in strict confidence and will be used to improve vaccination rates across the country
RETURN TO QUESTION, OR SKIP TO TOP MODS.

DCG. I would like to confirm that I have the correct information for you and the children in this household. [INTERVIEWER: CONFIRM ALL NAMES AND SPELLINGS WITH THE RESPONDENT. IF LAST NAMES ARE THE SAME, MAKE SURE THEY HAVE THE SAME SPELLING]

DCG1. I have your name as [FILL: CONSENT GIVER NAME FROM D9A-C - PAGE2]. Is this correct?

YES	1	
NO	2	[CORRECT NAME]

DCG2. The name I have for the first child is [FILL: FIRST CHILD'S NAME FROM D8A-C1 - PAGE2]. Is this correct?

YES 1

NO . . . . . 2 [CORRECT NAME]

DCONFDOB_1

The birth date I have for [FILL: FIRST CHILD'S NAME FROM D8A-C1 - PAGE2] is [FILL: FIRST CHILD'S BIRTH DATE FROM S3M.KIDS - SCREENER PAGE 5]. Is this correct?

YES . . . . . 1 [IF SNUMB=1, GO TO TOP MOD
IF SNUMB>1, GO TO DCG3]

NO . . . . . 2 [GO TO DNEWDOB_1]

DNEWDOB_1

What is the correct month, day and year of birth of [FILL: FIRST CHILD'S NAME FROM D8A-C1 - PAGE2]?

____ / ____ / _____ (mm/dd/yyyy) [IF SNUMB=1, GO TO TOP MOD
IF SNUMB>1, GO TO DCG3]

DCG3. The name I have for the next child is [FILL: SECOND/THIRD/.../SIXTH CHILD'S NAME FROM D8A-C1 - PAGE2]. Is this correct?

YES 1
NO . . . . . 2 [CORRECT NAME]

DCG3. The birth date I have for [FILL: SECOND/THIRD/.../SIXTH CHILD'S NAME FROM D8A-C1 - PAGE2] is [FILL: SECOND/THIRD/ .../SIXTH CHILD'S BIRTH DATE FROM S3M.KIDS - SCREENER PAGE 5]. Is this correct?

YES . . . . . 1 [GO TO TOP MOD]
NO . . . . . 2 [TO DNEWDOB_2]

DNEWDOB_2

What is the correct month, day and year of birth of [FILL: SECOND CHILD'S NAME FROM D8A-C1 - PAGE2]?

____ / ____ / _____ (mm/dd/yyyy)

[GO TO TOPICAL MODULES]

D16. Those are all the questions I have. You may be re-contacted in the future to participate in related studies. If you are contacted to participate in future surveys, you have the right to refuse. I'd like to thank you again on behalf of the Centers for Disease Control and Prevention for the time and effort you've spent answering these questions. If you would like more information about the National Immunization Study, please call Jim Murphy at the study's toll-free number, 1-800-247-1970. If you have questions about your rights as a study participant, you may call 1-800-223-8118, toll-free, and ask to speak to the Institutional Review Board Chairperson.

[GO TO TOPICAL MODULES]

ASK ONLY IF D9D = 2

D9D1. Please give me the full name of someone who can authorize the release of these immunization records.

D9D1F. What is the first name?

FIRST_____

D9D1M. What is the middle name?

MIDDLE_____

D9D1L. What is the last name?

LAST _____

D9DREL. What is this person's relationship to [FILL VAR: NAME OF FIRST/SECOND... /NINTH CHILD, FROM S3.5]?

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
FRIEND 08
DON'T KNOW 96
REFUSED 97

D9D1A May I speak with that person now?

YES . . . . . 1 GO TO D9D1NEW
NO 2

D9D2. When would be a good time to call this person?

D9D2_1 DATE_____

D9D2_2 TIME_____

[GO TO TOPICAL MODULES]

READ WHEN NEW PERSON COMES TO THE PHONE
OR
FOR Authorized Consent Respondent CALLBACK INTRODUCTION

D9D1NEW Hello, my name is _____. Am I speaking with [NAME LISTED IN D9D1, WHO CAN AUTHORIZE RELEASE OF SHOT RECORDS]?

YES 1

NO . . . . . 2 GO TO D9D2

D9D2ANEW I'm calling on behalf of the Centers for Disease Control and Prevention. We talked with [FILL: NAME FROM D9A] and collected immunization and provider information for [NAME OF ELIGIBLE CHILD(REN)]. We understand that you could authorize the release of immunization information for [NAME OF ELIGIBLE CHILD(REN)]. This study is voluntary and is authorized by the U.S. Public Health Service Act. It's alright to skip any questions you don't want to answer. The information you give will be kept in strict confidence and will be summarized for research purposes only.

D9DNEW I need to verify that I am speaking with someone who can authorize the release of immunization records for [NAME OF (FIRST) ELIGIBLE CHILD]. Are you that person?

YES 1

NO . . . . . 2 RETURN TO D9D1

REFUSED . . . . . 7 GO TO D9D_R

IF REFUSED

D9D_R. (SUGGESTED SCRIPT) Vaccination information from doctors and clinics is often the most up-to-date and comprehensive. So, in order to obtain the most complete information possible about children's vaccinations, we need to collect the vaccination histories from both the parents or guardians of the children and the doctors and clinics that provide the immunizations.

All information about your child and your child's health care provider is held in strict confidence and used for study purposes only. Any names of children, as well as any names of doctors or clinics, will not be used in reporting the study results. We will never release any information that may identify you or your child.

RETURN TO QUESTION, IF R STILL REFUSES -> GO TO TOP MODS

D6C. The vaccination records collected from the provider(s) will be kept in strict confidence.

D7. Do we have your permission to contact the provider(s) named in this interview, give the provider(s) basic information that identifies your child(ren), and request that information relevant to your child(ren)'s immunization history be sent to the Centers for Disease Control and Prevention or its contractors for study purposes only?

YES 1

NO . . . . . 2 GO TO TOP MOD

REFUSED . . . . . 7 GO TO TOP MOD

DCG. I would like to confirm that I have the correct information for you and the children in this household.
[INTERVIEWER: CONFIRM ALL NAMES AND SPELLINGS WITH THE RESPONDENT. IF LAST NAMES ARE THE SAME, MAKE SURE THEY HAVE THE SAME SPELLING]

DCG1. I have your name as [FILL: CONSENT GIVER NAME FROM D9A-C - PAGE2]. Is this correct?

YES 1
NO . . . . . 2 [CORRECT NAME]

DCG2. The name I have for the first child is [FILL: FIRST CHILD'S NAME FROM D8A-C1 - PAGE2]. Is this correct?

YES 1
NO . . . . . 2 [CORRECT NAME]

DCONFDOB_1
The birth date I have for [FILL: FIRST CHILD'S NAME FROM D8A-C1 - PAGE2] is [FILL: FIRST CHILD'S BIRTH DATE FROM S3M.KIDS - SCREENER PAGE 5]. Is this correct?

YES . . . . . 1 [IF SNUMB=1, GO TO TOP MOD
IF SNUMB>1, GO TO DCG3]
NO . . . . . 2 [GO TO DNEWDOB_1]

DNEWDOB_1
What is the correct month, day and year of birth of [FILL: FIRST CHILD'S NAME FROM D8A-C1 - PAGE2]?
____ / ____ / _____ (mm/dd/yyyy) [IF SNUMB=1, GO TO TOP MOD
IF SNUMB>1, GO TO DCG3]

DCG3. The name I have for the next child is [FILL: SECOND/THIRD/.../SIXTH CHILD'S NAME FROM D8A-C1 - PAGE2]. Is this correct?

YES 1
NO . . . . . 2 [CORRECT NAME]

DCONFDOB_2

The birth date I have for [FILL: SECOND/THIRD/.../SIXTH CHILD'S NAME FROM D8A-C1 - PAGE2] is [FILL: SECOND/THIRD/.../SIXTH CHILD'S BIRTH DATE FROM S3M.KIDS - SCREENER PAGE 5]. Is this correct?

YES	1	[GO TO TOP MOD]
NO	2	[TO DNEWDOB_2]

DNEWDOB_2

What is the correct month, day and year of birth of [FILL: SECOND CHILD'S NAME FROM D8A-C1 - PAGE2]?

____ / ____ / _____ (mm/dd/yyyy)

[GO TO TOPICAL MODULES]

D16. Those are all the questions I have. You may be re-contacted in the future to participate in related studies. If you are contacted to participate in future surveys, you have the right to refuse. I'd like to thank you again on behalf of the Centers for Disease Control and Prevention for the time and effort you've spent answering these questions. If you would like more information about the National Immunization Study, please call Jim Murphy at the study's toll-free number, 1-800-247-1970. If you have questions about your rights as a study participant, you may call 1-800-223-8118, toll-free, and ask to speak to the Institutional Review Board Chairperson. **[GO TO TOPICAL MODULES]**

SUPPLEMENTAL PROVIDER SHEET

CASE # |___|___|___|___|___|___|___|___|

ELIGIBLE CHILD'S NAME:_____ CHILD#:_____

ELIGIBLE CHILD'S BIRTH DATE: ____ / ____ / ____ PROVIDER#:_____

D6B.1.2.1 What is the last name of the next doctor?

LAST_____

D6B.2.2.1 Do you know the doctor's first name?

FIRST_____

D6B.3.2.1 Please tell me the name of the office or the clinic.

OFFICE_____

D6B.4.2.1 What is the street address of the office or the clinic?

STREET_____

D6B.5.2.1 Is there a suite, floor, or room number?

SUITE #_____

D6B.6.2.1 What city is that in?

CITY_____

D6B.7.2.1 What state is that in?

STATE_____

D6B.8.2.1 What is the zip code?

ZIP CODE_____

D6B.9.2.1 What is their telephone number?

TELEPHONE_____

INTERVIEWER NOTE: IF THERE ARE ANY ADDITIONAL PROVIDERS, OBTAIN ANOTHER SUPPLEMENTAL PROVIDER SHEET. WHEN YOU ARE FINISHED USING THE SUPPLEMENTAL PROVIDER SHEETS, RETURN TO THE QUESTIONNAIRE AT QUESTION **D6C.**

SUPPLEMENTAL CHILD SHEET
PAGE 1

CASE # |___|___|___|___|___|___|___|___|

NEXT ELIGIBLE CHILD'S NAME:_____CHILD#:_____

NEXT ELIGIBLE CHILD'S BIRTH DATE: ____ / ____ / ____

WHICH SHOT SECTION COMPLETED? (circle one): A / B

D6.2 How many locations have provided vaccinations for your child named [NAME OF NEXT ELIGIBLE CHILD] whose birth date is [DATE OF BIRTH OF NEXT ELIGIBLE CHILD]?

NUMBER: |___|___|

D6A.2 Starting with the most recent, please tell me the name, address and telephone number for each doctor or clinic. (Would you take a moment to find shot cards, appointment cards or other records you may have?)

YES, CONTINUE ON 1
NO, CAN'T FIND, CONTINUE 2
REFUSED . . . . . 7 GO TO D14B

D6B.1.1.2 What is the last name of the next doctor?

LAST_____

D6B.2.1.2 Do you know the doctor's first name?

FIRST_____

D6B.3.1.2 Please tell me the name of the office or the clinic.

OFFICE_____

D6B.4.1.2 What is the street address of the office or the clinic?

STREET_____

SUPPLEMENTAL CHILD SHEET
PAGE 2

D6B.5.1.2 Is there a suite, floor, or room number?

SUITE #_____

D6B.6.1.2 What city is that in?

CITY_____

D6B.7.1.2 What state is that in?

STATE_____

D6B.8.1.2 What is the zip code?

ZIP CODE_____

D6B.9.1.2 What is their telephone number?

TELEPHONE_____

INTERVIEWER NOTE: IF MORE THAN ONE PROVIDER GO TO AN ADDITIONAL SUPPLEMENTAL PROVIDER SHEET - D6B.1.2.1

D8A.2 In order to help the doctor or clinic locate your child's vaccination records, what is [NAME OF (NEXT) ELIGIBLE CHILD]'s full name - first, middle, and last name?

FIRST_____

D8B.2 MIDDLE_____

D8C.2 LAST _____

INTERVIEWER NOTE: IF THERE ARE ANY ADDITIONAL ELIGIBLE CHILDREN, OBTAIN ANOTHER SUPPLEMENTAL CHILD FORM.

Appendix C

NIS Provider Questionnaires

Old Immunization History Questionnaire

Q1/2002 – Q2/2002

NATIONAL IMMUNIZATION SURVEY PROVIDER STUDY: IMMUNIZATION HISTORY QUESTIONNAIRE

CDC 64.122 (rev, Sept. 2000) Q3/2001

Confidential Information. If received in error, please call 1-800-886-4993.

INSTRUCTIONS: *Please review your records and complete this questionnaire for the child identified below. Then mail it in the postage-paid envelope provided (Diane Simpson, MD, PhD, Centers for Disease Control and Prevention, P.O. Box 5517, Chicago, IL 60680-8817) or fax to: Diane Simpson, MD, PhD: (888) 529-1772.*

AS THESE MEDICAL DOCUMENTS ARE CONFIDENTIAL, IF SENDING A FAX, PLEASE TAKE EXTRA CARE TO DIAL THE CORRECT TOLL-FREE FAX NUMBER: **(888) 529-1772.**

1. Which of the following best describes your records of immunizations for this child? (Check only one box.)

1 ☐ a. Have immunization record for this child. **(Go to Question 2 below.)**

2 ☐ b. Have provided care to this child, but do not have his/her immunization record. **(Go to Question 2 below.)**

4 ☐ c. Have no record of providing care to this child. **(Return questionnaire to CDC as instructed above.)**

5 ☐ d. Other **(Explain)**: _____

For Office Use Only
Telephone
Fax
Mail

2. According to your records, what is this child's date of birth? ____---____---____ or

8 ☐ Don't know **MM DD YYYY**

Referring to all sources of immunization history, please specify below the month, day and year when each of the following immunizations was given, either by your office or by another provider (OP), as documented in your records. If you prefer, you may attach a copy of the complete immunization history record for this child and just complete Questions 2 through 12.
NOTE: Circle the "OP" above the date of immunization for any immunization given by another provider; then please complete Question 12 at the end of the questionnaire.

Dates of Immunization (month, day, year)										
Single Vaccines						Combination Vaccines				Other
Hib Only (check one box per date)	Hepatitis B Only (enter date or check box)	Polio (OPV or IPV) (check one box per date)	Pneumococcal	Varicella	Rotavirus	DT/DTP/DTaP (check one box per date)	DTP-Hib (Tetramune or Acthib/DTP) DTaP-Hib (TriHibit) (check one box per date)	Hep B-Hib (e.g., Comvax)	MMR/Measles (check one box per date)	Other Vaccines (Specify)
OP ___-___-___ ☐ PedvaxHIB ☐ Other	OP ___-___-___ ☐ Administered at birth	OP ___-___-___ ☐ OPV ☐ IPV	OP ___-___-___ ☐ Conjugate ☐ Polysaccharide	OP ___-___-___	OP ___-___-___	OP ___-___-___ ☐ DT ☐ DTP ☐ DTaP	OP ___-___-___ ☐ DTP/Hib ☐ DTaP/Hib	OP ___-___-___	OP ___-___-___ ☐ MMR ☐ Measles Only	OP ___-___-___
OP ___-___-___ ☐ PedvaxHIB ☐ Other	OP ___-___-___	OP ___-___-___ ☐ OPV ☐ IPV	OP ___-___-___ ☐ Conjugate ☐ Polysaccharide	OP ___-___-___	OP ___-___-___	OP ___-___-___ ☐ DT ☐ DTP ☐ DTaP	OP ___-___-___ ☐DTP/Hib ☐DTaP/Hib	OP ___-___-___	OP ___-___-___ ☐ MMR ☐ Measles Only	OP ___-___-___
OP ___-___-___ ☐ PedvaxHIB ☐ Other	OP ___-___-___	OP ___-___-___ ☐ OPV ☐ IPV	OP ___-___-___ ☐ Conjugate ☐ Polysaccharide	OP ___-___-___	OP ___-___-___	OP ___-___-___ ☐ DT ☐ DTP ☐ DTaP	OP ___-___-___ ☐DTP/Hib ☐DTaP/Hib	OP ___-___-___	OP ___-___-___ ☐ MMR ☐ Measles Only	OP ___-___-___
OP ___-___-___ ☐ PedvaxHIB ☐ Other	OP ___-___-___	OP ___-___-___ ☐ OPV ☐ IPV	OP ___-___-___ ☐ Conjugate ☐ Polysaccharide	OP ___-___-___	OP ___-___-___	OP ___-___-___ ☐ DT ☐ DTP ☐ DTaP	OP ___-___-___ ☐ DTP/Hib ☐ DTaP/Hib	OP ___-___-___	OP ___-___-___ ☐ MMR ☐ Measles Only	OP ___-___-___
OP ___-___-___ ☐ PedvaxHIB ☐ Other	OP ___-___-___	OP ___-___-___ ☐ OPV ☐ IPV	OP ___-___-___ ☐ Conjugate ☐ Polysaccharide	OP ___-___-___	OP ___-___-___	OP ___-___-___ ☐ DT ☐ DTP ☐ DTaP	OP ___-___-___ ☐ DTP/Hib ☐ DTaP/Hib	OP ___-___-___	OP ___-___-___ ☐ MMR ☐ Measles Only	OP ___-___-___

3. What was the date of this child's *first* visit, for any reason, to this place of practice?

_____ – _____ – _____ or 8 ☐ Don't Know
mm dd yyyy

4. What was the date of this child's most recent visit, for any reason,to this place of practice?

_____ – _____ – _____ or 8 ☐ Don't Know
mm dd yyyy

5. Which types of care does this facility routinely provide? (Check all that apply.)

☐ a. Comprehensive well-child care (examination, anticipatory guidance, screening)
☐ b. Acute illness care
☐ c. Follow-up visits
☐ d. After-hours telephone coverage
☐ e. WIC Program/services
☐ f. Other (Describe:) _____

6. Which of the following best describes this facility? (Check only one box, representing the most specific description.)

1 ☐ a. Federally-qualified health center, including community/migrant/rural/Indian health center
2 ☐ b. Hospital-based clinic, including university clinic or residency teaching practice
3 ☐ c. Private practice, including solo, group practice or HMO
4 ☐ d. Public health department-operated clinic
5 ☐ e. Military health care facility
6 ☐ f. Other (Describe:)_____

7. Is this facility a Vaccines for Children provider?

1 ☐ a. Yes
2 ☐ b. No
3 ☐ c. Unknown

8. Did you or your facility report any of this child's immunizations to your community or state immunization registry?

1 ☐ a. Yes
2 ☐ b. No
3 ☐ c. Not applicable (There is no registry in my community/state.)

9. Please indicate the clinical specialty of the person(s) at this facility who ordered all this child's vaccination(s). (Check all that apply.)

☐ a. Pediatrician
☐ b. Family Physician
☐ c. General Practitioner
☐ d. Nurse (Specify RN, LPN, etc.:) _____
☐ e. Pediatric Nurse Practitioner
☐ f. Family Nurse Practitioner
☐ g. Physician Assistant
☐ h. Other Practitioner (Specify:) _____

10. Name of person completing questionnaire: _____

Phone: (_____) _____

11. According to your records, did this child ever use another last name (excluding names prior to adoption)?

1 ☐ Yes [Specify name(s):] _____
2 ☐ No

INSTRUCTIONS: If you know of other providers that may have immunization records for this child, please continue with Item 12. Otherwise, return this questionnaire to CDC. As these medical documents are confidential, if sending a fax, please take extra care to dial the correct fax number: (888) 529-1772. Call 1-800-886-4993 with any questions. Thank you.

12. Please enter below the names, addresses and telephone numbers of other providers who may have an immunization record for this child, and the name and address for any provider of immunizations with OP circled in the shot grid.

(1) _____ (2) _____

_____ _____

_____ _____

_____ _____

New Immunization History Questionnaire

Q3/2002 – Q4/2002

National Immunization Survey
Immunization History Questionnaire

CENTERS FOR DISEASE CONTROL AND PREVENTION

Confidential Information. If received in error, please call 1-800-886-4993.

START HERE → **Please review your records and complete this questionnaire for the child identified on the label to the right, then return the questionnaire in the postage-paid envelope provided or FAX toll-free to (888) 529-1772. These medical records are confidential. If FAXing, please take extra care to dial the correct number.**

1. Which of the following best describes your immunization records for this child?

- ☐ You have all or partial immunization records for this child, go to question 2 below.
- ☐ This facility only gives immunizations at birth (hospital), go to question 2 below.
- ☐ Other - Explain

- ☐ You have provided care to this child, but do not have immunization records.
- ☐ You have no record of providing care to this child.

→ *Please complete item 9 and return form as instructed above*

2. According to your records, what is this child's date of birth?

Month | Day | Year

☐ Don't know

3. What was the date of this child's *first* visit, for any reason, to this place of practice?

Month | Day | Year

☐ Don't know

4. What was the date of this child's *most recent* visit, for any reason, to this place of practice?

Month | Day | Year

☐ Don't know

5. Which types of care does this facility routinely provide? Check all that apply.

- ☐ Comprehensive well-child care (examination, anticipatory guidance, screening)
- ☐ Acute illness care
- ☐ Follow-up visits
- ☐ After-hours telephone coverage
- ☐ WIC Program/services
- ☐ Other - Explain

6. Which of the following best describes this facility? Check only one box, representing the most specific description.

- ☐ Federally-qualified health center, including community/migrant/rural/Indian health center
- ☐ Hospital-based clinic, including university clinic, or residency teaching practice
- ☐ Private practice, including solo, group practice, or HMO
- ☐ Public health department-operated clinic
- ☐ Military health care facility
- ☐ WIC clinic
- ☐ Other - Explain

7. Is this facility a Vaccines for Children provider?

- ☐ Yes
- ☐ No
- ☐ Don't know

8. Did you or your facility report any of this child's immunizations to your community or state immunization registry?

- ☐ Yes
- ☐ No
- ☐ Not applicable (No registry in my community/state.)
- ☐ Don't know

9. Contact information for the person returning this form.

Name:

☐ Physician ☐ Nurse ☐ Office Manager/Receptionist

☐ Medical Records Administrator/Technician ☐ Other

Phone: ( ) X

FAX: ( ) X

10. Go to the next page →

Please review the instructions and examples below, then complete the "Shot Grid" on the next page.

Refer to your vaccination records for the child named on the labels on the front cover and next page of this form.

! **Be sure to mark the box for the correct combination vaccine for each dose as shown in the example below. If the combination included both DTaP and Hib, DTP and Hib, or HepB and Hib, be sure to enter the information in both vaccine categories. Note that the same vaccine (a combination DTaP-Hib vaccine) is entered under both DTP and Hib in the example below.**

Vaccine	*Date Given* Month	Day	Year	Given by **other** practice?	*Type of Vaccine* Mark one box for each vaccine dose				
DTP . . 1	11	20	2000	☐ Yes	☐ DTP	☐ DT	☐ DTaP	☒ DTaP-Hib	☐ DTP-Hib
2	1	18	2001	☒ Yes	☐ DTP	☐ DT	☒ DTaP	☐ DTaP-Hib	☐ DTP-Hib

					Mark one box for each vaccine dose			
Hib . . . 1	11	20	2000	☐ Yes	☐ Hib	☐ HepB-Hib	☒ DTaP-Hib	☐ DTP-Hib
2	1	18	2001	☒ Yes	☒ Hib	☐ HepB-Hib	☐ DTaP-Hib	☐ DTP-Hib

! **Be sure to mark the "Yes" box under "Given by other practice" for vaccines given by another practice (see example above).**

! **Be sure to mark the "Yes" box under "Given at birth?" if the first dose of HepB was given at birth. (see example below).**

					Given at birth?	Mark one box for each vaccine dose	
Hepatitis B 1	7	19	2000	☐ Yes	☒ Yes	☐ HepB Only	☒ HepB-Hib
2				☐ Yes		☐ HepB Only	☐ HepB-Hib

! **Use the "Other" space to enter any vaccines not listed on the next page or additional doses of listed vaccines that were given to this child (see example below).**

					Please enter a description of each vaccine dose
Other 1	11	20	2001	☐ Yes	BCG
2				☐ Yes	

! **After completing the "Shot Grid" on the next page, please return this form in the envelope provided.**

(Optional) You may also attach a copy of your immunization history records for this child to this form and send it back to the National Immunization Survey, Centers for Disease Control and Prevention, P.O. Box 5517, Chicago, IL 60680-8817.

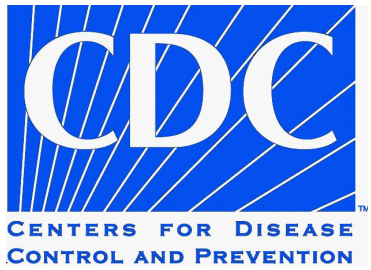
Or you may FAX the confidential information to (888) 529-1772. If FAXing this form, cut along fold to separate pages, then FAX pages 1 and 3. Do not FAX this page.

Vaccine		Date Given: Month	Day	Year	Given by other practice?	Type of Vaccine (Mark one box for each vaccine dose)				
DTP	1				☐ Yes	☐ DTP	☐ DT	☐ DTaP	☐ DTaP-Hib	☐ DTP-Hib
	2				☐ Yes	☐ DTP	☐ DT	☐ DTaP	☐ DTaP-Hib	☐ DTP-Hib
	3				☐ Yes	☐ DTP	☐ DT	☐ DTaP	☐ DTaP-Hib	☐ DTP-Hib
	4				☐ Yes	☐ DTP	☐ DT	☐ DTaP	☐ DTaP-Hib	☐ DTP-Hib
	5				☐ Yes	☐ DTP	☐ DT	☐ DTaP	☐ DTaP-Hib	☐ DTP-Hib
Hib	1				☐ Yes	☐ Hib	☐ HepB-Hib	☐ DTaP-Hib	☐ DTP-Hib	
	2				☐ Yes	☐ Hib	☐ HepB-Hib	☐ DTaP-Hib	☐ DTP-Hib	
	3				☐ Yes	☐ Hib	☐ HepB-Hib	☐ DTaP-Hib	☐ DTP-Hib	
	4				☐ Yes	☐ Hib	☐ HepB-Hib	☐ DTaP-Hib	☐ DTP-Hib	
	5				☐ Yes	☐ Hib	☐ HepB-Hib	☐ DTaP-Hib	☐ DTP-Hib	
Hepatitis B	1				☐ Yes	Given at birth? ☐ Yes	☐ HepB Only	☐ HepB-Hib		
	2				☐ Yes		☐ HepB Only	☐ HepB-Hib		
	3				☐ Yes		☐ HepB Only	☐ HepB-Hib		
	4				☐ Yes		☐ HepB Only	☐ HepB-Hib		
MMR	1				☐ Yes	☐ MMR	☐ Measles only			
	2				☐ Yes	☐ MMR	☐ Measles only			
Polio	1				☐ Yes	☐ OPV	☐ IPV			
	2				☐ Yes	☐ OPV	☐ IPV			
	3				☐ Yes	☐ OPV	☐ IPV			
	4				☐ Yes	☐ OPV	☐ IPV			
Varicella	1				☐ Yes					
	2				☐ Yes					
Pneumo-coccal	1				☐ Yes	☐ Conjugate	☐ Polysaccharide			
	2				☐ Yes	☐ Conjugate	☐ Polysaccharide			
	3				☐ Yes	☐ Conjugate	☐ Polysaccharide			
	4				☐ Yes	☐ Conjugate	☐ Polysaccharide			
Rotavirus	1				☐ Yes					
	2				☐ Yes					
	3				☐ Yes					
Hepatitis A	1				☐ Yes					
	2				☐ Yes					
Influenza	1				☐ Yes					
	2				☐ Yes					
Other	1				☐ Yes	Please enter a description of each vaccine dose				
	2				☐ Yes					
	3				☐ Yes					

Please remember to answer question 9 on page 1.

If you need more space to report vaccines, please attach additional sheets.

Thank You!



SAFER • HEALTHIER • PEOPLE

U.S. Department of Health and Human Services

Thank you for your help with this important study!

If you would like more information about the National Immunization Program, including information about vaccine recommendations, or data and statistics from previous years of the National Immunization Survey, please visit the National Immunization Program website at www.cdc.gov/nip/coverage.

If you would like more information about the National Immunization Survey, please visit the National Immunization Survey website at www.cdc.gov/nis. If you have any questions or comments about this study, please call (800) 886-4993 or email nis@cdc.gov.

Note: Do NOT send any confidential patient information, such as the patient's name or date of birth, in an email message.

Appendix D

IAP Area Estimates of 4:3:1:3 Vaccination Coverage for Selected Race/ethnicity Groups for Old Versus New Race Classification

Table D.1: Estimates of 4:3:1:3 Vaccination Coverage among NonHispanic White Children aged 19-35 months by the Old Versus New Race Classification for the 78 IAP Areas, National Immunization Survey, 2002.

IAP Area	Old Category NonHispanic white	New Category NonHispanic white alone	Difference (new – old estimate)	Statistical significance of difference at .05 level
Alabama				
Rest of State	79.76	80.19	0.43	*
Jefferson County	80.80	80.16	-0.64	*
Alaska	71.72	71.53	-0.19	n.s.
Arizona				
Rest of State	64.21	64.86	0.66	*
Maricopa County	82.68	83.25	0.58	*
Arkansas	68.96	68.90	-0.06	*
California				
Rest of State	72.55	72.33	-0.21	n.s.
Los Angeles	66.16	65.01	-1.15	*
Santa Clara	79.17	78.11	-1.05	*
San Diego County	68.30	67.27	-1.04	*
Colorado	69.97	70.86	0.89	*
Connecticut	87.37	87.89	0.51	*
Delaware	82.21	83.02	0.81	*
Dist of Columbia	80.83	79.80	-1.03	*
Florida				
Rest of State	75.20	74.75	-0.45	*
Duval County	77.58	77.19	-0.39	n.s.
Miami/Dade County	66.79	71.07	4.28	*
Georgia				
Rest of State	78.56	77.78	-0.78	*
Fulton/Dekalb Counties	91.68	92.15	0.47	*
Hawaii	80.75	78.40	-2.35	n.s.
Idaho	70.22	70.17	-0.04	n.s.
Illinois				
Rest of State	84.42	84.23	-0.19	*
City Chicago	78.21	79.28	1.07	*
Indiana				
Rest of State	77.11	79.08	1.96	*
Marion County	74.00	75.27	1.27	*
Iowa	79.81	79.17	-0.63	*
Kansas	68.35	69.01	0.66	*
Kentucky	75.59	76.60	1.01	*
Louisiana				
Rest of State	70.04	69.76	-0.28	*
Orleans Parish	59.04	58.99	-0.05	n.s.
Maine	80.61	80.24	-0.36	*
Maryland				
Rest of State	85.31	86.88	1.57	*
Baltimore City	71.81	74.11	2.30	*
Massachusetts				
Rest of State	87.00	86.84	-0.17	*
City of Boston	88.49	88.40	-0.10	*

Table D.1: Estimates of 4:3:1:3 Vaccination Coverage among NonHispanic White Children aged 19-35 months by the Old Versus New Race Classification for the 78 IAP Areas, National Immunization Survey, 2002.

IAP Area	Old Category NonHispanic white	New Category NonHispanic white alone	Difference (new – old estimate)	Statistical significance of difference at .05 level
Michigan				
Rest of State	82.95	83.59	0.64	*
Detroit	NA	NA	NA	NA
Minnesota	80.48	80.71	0.23	n.s.
Mississippi	74.25	74.10	-0.15	n.s.
Missouri	79.01	78.94	-0.07	n.s.
Montana	65.17	65.08	-0.09	n.s.
Nebraska	82.00	81.84	-0.16	n.s.
Nevada	72.04	71.44	-0.60	*
New Hampshire	83.46	83.45	-0.02	n.s.
New Jersey				
Rest of State	81.58	81.58	0.00	n.s.
City of Newark	NA	NA	NA	NA
New Mexico	60.49	61.00	0.51	*
New York				
Rest of State	77.99	77.31	-0.68	*
5 Counties	83.82	84.88	1.06	*
North Carolina	86.68	86.71	0.03	n.s.
North Dakota	79.22	80.27	1.05	*
Ohio				
Rest of State	75.31	75.27	-0.04	n.s.
Cuyahoga County	76.10	75.84	-0.25	*
Franklin County	82.08	81.76	-0.33	*
Oklahoma	70.46	67.61	-2.86	*
Oregon	72.59	71.81	-0.78	*
Pennsylvania				
Rest of State	75.09	77.69	2.61	*
Philadelphia	74.34	73.31	-1.02	*
Rhode Island	87.12	89.55	2.42	*
South Carolina	84.53	83.82	-0.71	*
South Dakota	83.31	83.06	-0.25	*
Tennessee				
Rest of State	78.26	78.13	-0.13	*
Shelby County	75.91	75.75	-0.17	n.s.
Davidson County	79.41	79.77	0.35	n.s.
Texas				
Rest of State	72.64	72.21	-0.43	n.s.
Dallas County	81.64	82.10	0.45	*
El Paso County	NA	NA	NA	NA
City Houston	62.65	63.65	1.00	n.s.
Bexar County	77.29	78.78	1.50	*
Utah	77.12	76.91	-0.20	*
Vermont	81.90	81.91	0.01	n.s.
Virginia	77.45	77.11	-0.34	*

Table D.1: Estimates of 4:3:1:3 Vaccination Coverage among NonHispanic White Children aged 19-35 months by the Old Versus New Race Classification for the 78 IAP Areas, National Immunization Survey, 2002.

IAP Area	Old Category NonHispanic white	New Category NonHispanic white alone	Difference (new – old estimate)	Statistical significance of difference at .05 level
Washington				
Rest of State	66.79	66.74	-0.05	n.s.
King County	73.58	73.52	-0.07	n.s.
West Virginia	76.70	76.14	-0.56	*
Wisconsin				
Rest of State	85.31	87.20	1.90	*
Milwaukee County	74.04	74.33	0.30	*
Wyoming	76.64	76.60	-0.04	*

NA Sample size is less than 30.
* Significant at individual .05 level.
n.s. Not significant.

Table D.2: Estimates of 4:3:1:3 Vaccination Coverage among NonHispanic Black Children aged 19-35 months by the Old Versus New Race Classification for the 78 IAP Areas, National Immunization Survey, 2002.

IAP Area	Old Category NonHispanic black	New Category NonHispanic black alone	Difference (new – old estimate)	Statistical significance of difference at .05 level
Alabama				
Rest of State	68.45	68.07	-0.37	*
Jefferson County	75.92	75.92	0.00	n.s.
Alaska	NA	NA	NA	NA
Arizona				
Rest of State	NA	NA	NA	NA
Maricopa County	NA	NA	NA	NA
Arkansas	67.39	67.39	0.00	n.s.
California				
Rest of State	NA	NA	NA	NA
Los Angeles	NA	NA	NA	NA
Santa Clara	NA	NA	NA	NA
San Diego County	NA	NA	NA	NA
Colorado	NA	NA	NA	NA
Connecticut	NA	NA	NA	NA
Delaware	76.53	81.05	4.52	*
Dist of Columbia	64.42	64.12	-0.30	*
Florida				
Rest of State	80.14	78.46	-1.67	*
Duval County	70.35	69.77	-0.58	*
Miami/Dade County	69.02	66.82	-2.20	*
Georgia				
Rest of State	81.91	81.91	0.00	n.s.
Fulton/Dekalb Counties	72.54	72.34	-0.20	n.s.
Hawaii	NA	NA	NA	NA
Idaho	NA	NA	NA	NA
Illinois				
Rest of State	NA	NA	NA	NA
City Chicago	62.08	62.08	0.00	n.s.
Indiana				
Rest of State	NA	NA	NA	NA
Marion County	72.25	73.25	1.01	n.s.
Iowa	NA	NA	NA	NA
Kansas	NA	NA	NA	NA
Kentucky	NA	NA	NA	NA
Louisiana				
Rest of State	59.88	59.28	-0.60	n.s.
Orleans Parish	59.86	60.00	0.14	*
Maine	NA	NA	NA	NA
Maryland				
Rest of State	69.55	67.74	-1.81	*
Baltimore City	69.30	69.43	0.14	n.s.
Massachusetts				
Rest of State	NA	NA	NA	NA
City of Boston	69.09	69.62	0.54	*

Table D.2: Estimates of 4:3:1:3 Vaccination Coverage among NonHispanic Black Children aged 19-35 months by the Old Versus New Race Classification for the 78 IAP Areas, National Immunization Survey, 2002.

IAP Area	Old Category NonHispanic black	New Category NonHispanic black alone	Difference (new – old estimate)	Statistical significance of difference at .05 level
Michigan				
Rest of State	NA	NA	NA	NA
Detroit	60.67	60.89	0.22	*
Minnesota	NA	NA	NA	NA
Mississippi	78.26	77.90	-0.37	*
Missouri	NA	NA	NA	NA
Montana	NA	NA	NA	NA
Nebraska	NA	NA	NA	NA
Nevada	NA	NA	NA	NA
New Hampshire	NA	NA	NA	NA
New Jersey				
Rest of State	62.37	62.63	0.25	n.s.
City of Newark	48.85	49.04	0.19	n.s.
New Mexico	NA	NA	NA	NA
New York				
Rest of State	NA	NA	NA	NA
5 Counties	67.98	70.02	2.04	*
North Carolina	69.43	68.78	-0.66	*
North Dakota	NA	NA	NA	NA
Ohio				
Rest of State	77.15	82.72	5.57	*
Cuyahoga County	66.61	66.88	0.27	n.s.
Franklin County	70.68	68.61	-2.07	n.s.
Oklahoma	NA	NA	NA	NA
Oregon	NA	NA	NA	NA
Pennsylvania				
Rest of State	NA	NA	NA	NA
Philadelphia	73.70	74.00	0.30	n.s.
Rhode Island	NA	NA	NA	NA
South Carolina	74.10	75.73	1.63	*
South Dakota	NA	NA	NA	NA
Tennessee				
Rest of State	NA	NA	NA	NA
Shelby County	71.12	70.82	-0.30	*
Davidson County	80.06	81.55	1.49	*
Texas				
Rest of State	NA	NA	NA	NA
Dallas County	67.80	67.80	0.00	n.s.
El Paso County	NA	NA	NA	NA
City Houston	52.71	53.53	0.81	n.s.
Bexar County	NA	NA	NA	NA
Utah	NA	NA	NA	NA
Vermont	NA	NA	NA	NA
Virginia	63.28	64.64	1.37	*

Table D.2: Estimates of 4:3:1:3 Vaccination Coverage among NonHispanic Black Children aged 19-35 months by the Old Versus New Race Classification for the 78 IAP Areas, National Immunization Survey, 2002.

IAP Area	Old Category NonHispanic black	New Category NonHispanic black alone	Difference (new – old estimate)	Statistical significance of difference at .05 level
Washington				
Rest of State	NA	NA	NA	NA
King County	NA	NA	NA	NA
West Virginia	NA	NA	NA	NA
Wisconsin				
Rest of State	NA	NA	NA	NA
Milwaukee County	55.94	54.86	-1.09	*
Wyoming	NA	NA	NA	NA

NA Sample size is less than 30.
* Significant at individual .05 level.
n.s. Not significant.

Appendix E

Summary Statistics for Sampling Weights by IAP Area

Table A: Distribution of sampling weights for children with completed household interviews, National Immunization Survey, 2002, (RDD_WT)

IAP	Area	N	SUM	MIN	MAX	MEAN	CV
	TOTAL U.S.	31693	5845539.05	3.303	7598.14	184.443	124.930
1	CT	410	62800.30	40.537	503.96	153.171	40.598
2	MA-REST OF STATE	416	103501.44	6.832	859.58	248.802	44.797
3	MA-CITY OF BOSTON	435	12220.85	7.844	181.78	28.094	54.133
4	ME	347	20831.29	15.041	207.79	60.033	39.432
5	NH	365	21212.99	15.380	299.45	58.118	57.279
6	RI	387	17843.36	11.921	202.99	46.107	47.495
7	VT	356	9693.04	9.101	79.03	27.228	35.616
8	NJ-REST OF STATE	489	163525.75	3.303	1128.59	334.408	53.706
9	NJ-CITY OF NEWARK	381	7417.70	5.668	151.93	19.469	55.610
10	NY-REST OF STATE	378	193504.54	75.603	1929.44	511.917	52.416
11	NY-NYC 5 COUNTIES	459	173220.90	7.855	1805.06	377.388	56.922
12	DISTRICT OF COLUMBIA	442	10041.34	5.071	128.71	22.718	68.508
13	DE	443	14998.18	10.233	114.42	33.856	44.080
14	MD-REST OF STATE	435	98749.90	4.663	1598.26	227.011	68.908
15	MD-CITY OF BALTIMORE	373	16542.12	9.404	143.49	44.349	52.027
16	PA-REST OF STATE	373	177759.73	7.567	1665.32	476.568	44.610
17	PA-PHILADELPHIA COUNTY	400	31386.86	21.050	185.83	78.467	34.552
18	VA	419	147868.86	112.723	1475.32	352.909	46.574
19	WV	385	28708.85	24.473	299.91	74.568	54.168
20	AL-REST OF STATE	374	78317.72	10.703	845.57	209.406	54.392
21	AL-JEFFERSON COUNTY	357	13915.83	12.453	207.84	38.980	65.083
22	FL-REST OF STATE	459	241042.62	19.798	2060.65	525.147	57.359
23	FL-DUVAL COUNTY	417	18642.26	8.239	179.15	44.706	59.706
24	FL-DADE COUNTY	429	49354.97	34.010	573.71	115.047	54.879
25	GA-REST OF STATE	443	154987.49	48.280	1608.90	349.859	66.241
26	GA-FULTON/DEKALB COUNTIES	441	36259.89	22.659	350.43	82.222	53.825
27	KY	364	79339.05	55.228	827.63	217.964	59.951
28	MS	359	62264.22	48.070	761.39	173.438	68.217
29	NC	384	173447.42	114.173	2189.33	451.686	57.663
30	SC	359	83094.71	42.019	990.63	231.462	61.749
31	TN-REST OF STATE	362	77465.75	7.832	745.35	213.994	59.582
32	TN-SHELBY COUNTY	456	20575.18	8.467	201.06	45.121	64.998
33	TN-DAVIDSON COUNTY	379	12432.05	7.614	204.09	32.802	68.442
34	IL-REST OF STATE	405	193440.20	137.479	2293.18	477.630	57.244
35	IL-CITY OF CHICAGO	462	73068.28	29.467	925.76	158.156	64.995
36	IN-REST OF STATE	408	105116.05	10.235	1083.78	257.637	62.741
37	IN-MARION COUNTY	425	20891.85	13.189	182.81	49.157	56.296
38	MI-REST OF STATE	444	172430.68	13.359	1806.83	388.357	64.835
39	MI-CITY OF DETROIT	407	22961.41	13.793	148.88	56.416	44.320
40	MN	360	100041.20	25.594	1404.98	277.892	47.077
41	OH-REST OF STATE	457	168986.22	29.001	1369.63	369.773	50.422
42	OH-CUYAHOGA COUNTY	419	26656.32	18.354	255.78	63.619	56.960
43	OH-FRANKLIN COUNTY	384	24517.51	18.188	244.47	63.848	46.225
44	WI-REST OF STATE	384	78915.56	27.665	798.09	205.509	43.186
45	WI-MILWAUKEE COUNTY	381	22461.98	16.100	262.88	58.955	56.194
46	AR	371	53746.64	37.537	493.21	144.870	64.601
47	LA-REST OF STATE	476	82391.36	9.363	770.15	173.091	62.037
48	LA-ORLEANS PARISH	441	10451.44	4.238	164.79	23.699	74.618
49	NM	384	39439.24	26.737	391.53	102.706	53.421

Table A: Distribution of sampling weights for children with completed household interviews, National Immunization Survey, 2002, (RDD_WT)

IAP	Area	N	SUM	MIN	MAX	MEAN	CV
50	OK	388	71629.27	50.067	720.04	184.612	64.8406
51	TX-REST OF STATE	469	335270.91	19.346	7598.14	714.863	85.2242
52	TX-DALLAS COUNTY	449	59924.99	45.769	523.73	133.463	42.1075
53	TX-EL PASO COUNTY	404	20149.51	13.883	179.49	49.875	56.1318
54	TX-CITY OF HOUSTON	443	63515.26	42.467	777.19	143.375	58.3388
55	TX-BEXAR COUNTY	416	34146.64	21.801	317.28	82.083	63.6743
56	IA	391	54270.57	47.853	568.51	138.799	47.6998
57	KS	406	58240.69	32.022	644.89	143.450	58.1602
58	MO	409	107840.80	81.287	923.78	263.669	50.8844
59	NE	395	33945.52	28.764	318.81	85.938	39.9536
60	CO	376	90165.42	88.817	746.37	239.802	37.8132
61	MT	374	15470.31	11.014	143.83	41.364	50.4954
62	ND	369	9720.74	8.917	79.41	26.343	39.5698
63	SD	383	15083.05	11.111	194.33	39.381	68.3733
64	UT	384	62754.47	9.795	482.40	163.423	41.2300
65	WY	369	8783.31	7.429	80.27	23.803	47.4163
66	AZ-REST OF STATE	394	43198.89	29.485	375.78	109.642	51.3338
67	AZ-MARICOPA COUNTY	463	75807.46	41.005	755.34	163.731	56.5799
68	CA-REST OF STATE	441	437867.48	80.420	3673.56	992.897	41.3368
69	CA-LOS ANGELES COUNTY	459	231312.39	137.211	2275.09	503.949	51.0495
70	CA-SANTA CLARA COUNTY	428	40246.21	25.566	317.54	94.033	41.3154
71	CA-SAN DIEGO COUNTY	402	64758.02	39.304	596.21	161.090	45.7419
72	HI	469	25351.71	14.976	242.54	54.055	41.7999
73	NV	414	47816.38	27.134	298.55	115.498	34.4723
74	AK	377	14048.18	12.847	109.28	37.263	37.3967
75	ID	370	28804.01	27.117	264.91	77.849	41.8475
76	OR	390	67140.87	51.376	422.47	172.156	30.8292
77	WA-REST OF STATE	391	86511.03	36.532	632.88	221.256	40.1943
78	WA-KING COUNTY	386	33281.89	25.881	259.42	86.223	30.9101

Table B: Distribution of sampling weights for children with adequate provider data, National Immunization Survey, 2002, (WT)

IAP	Area	N	SUM	MIN	MAX	MEAN	CV
	TOTAL U.S.	21410	5845539.05	3.677	6493.99	273.028	131.350
1	CT	289	62800.30	58.448	706.42	217.302	47.137
2	MA-REST OF STATE	303	103501.44	11.349	1238.47	341.589	43.152
3	MA-CITY OF BOSTON	290	12220.85	12.411	222.66	42.141	56.977
4	ME	258	20831.29	19.228	248.61	80.741	41.020
5	NH	278	21212.99	17.365	317.08	76.306	54.264
6	RI	269	17843.36	15.408	263.51	66.332	51.775
7	VT	284	9693.04	9.864	95.77	34.130	40.350
8	NJ-REST OF STATE	322	163525.75	3.677	1848.83	507.844	59.608
9	NJ-CITY OF NEWARK	232	7417.70	9.592	275.61	31.973	70.156
10	NY-REST OF STATE	263	193504.54	191.870	3993.10	735.759	61.720
11	NY-NYC 5 COUNTIES	235	173220.90	213.382	4169.25	737.110	63.742
12	DISTRICT OF COLUMBIA	259	10041.34	7.626	198.91	38.770	79.727
13	DE	297	14998.18	12.943	210.37	50.499	50.043
14	MD-REST OF STATE	282	98749.90	4.943	1568.27	350.177	76.319
15	MD-CITY OF BALTIMORE	247	16542.12	13.444	258.15	66.972	61.886
16	PA-REST OF STATE	252	177759.73	11.502	3482.27	705.396	50.772
17	PA-PHILADELPHIA COUNTY	234	31386.86	46.514	409.14	134.132	40.690
18	VA	272	147868.86	163.929	1967.71	543.636	46.244
19	WV	256	28708.85	32.187	596.91	112.144	57.426
20	AL-REST OF STATE	267	78317.72	15.500	1378.64	293.325	59.137
21	AL-JEFFERSON COUNTY	258	13915.83	16.062	256.46	53.937	67.044
22	FL-REST OF STATE	283	241042.62	44.722	3315.50	851.741	61.054
23	FL-DUVAL COUNTY	287	18642.26	10.343	374.96	64.956	69.140
24	FL-DADE COUNTY	278	49354.97	47.632	896.00	177.536	59.812
25	GA-REST OF STATE	305	154987.49	60.966	2189.02	508.156	66.423
26	GA-FULTON/DEKALB COUNTIES	289	36259.89	27.715	467.56	125.467	55.172
27	KY	272	79339.05	72.182	1135.19	291.688	62.240
28	MS	254	62264.22	53.660	1456.57	245.135	72.219
29	NC	259	173447.42	123.491	2915.26	669.681	66.757
30	SC	261	83094.71	62.271	1288.48	318.371	59.216
31	TN-REST OF STATE	274	77465.75	13.684	942.76	282.722	60.644
32	TN-SHELBY COUNTY	289	20575.18	15.211	349.33	71.194	68.168
33	TN-DAVIDSON COUNTY	263	12432.05	8.891	250.68	47.270	77.624
34	IL-REST OF STATE	282	193440.20	205.248	2868.57	685.958	54.965
35	IL-CITY OF CHICAGO	280	73068.28	45.973	2130.63	260.958	87.430
36	IN-REST OF STATE	291	105116.05	12.908	1833.54	361.224	63.097
37	IN-MARION COUNTY	296	20891.85	17.749	371.70	70.581	63.993
38	MI-REST OF STATE	302	172430.68	17.625	2613.63	570.963	65.106
39	MI-CITY OF DETROIT	237	22961.41	27.614	299.65	96.884	45.904
40	MN	282	100041.20	33.333	2029.10	354.756	57.035
41	OH-REST OF STATE	331	168986.22	36.362	1764.99	510.532	52.796
42	OH-CUYAHOGA COUNTY	266	26656.32	20.732	630.93	100.212	78.902
43	OH-FRANKLIN COUNTY	262	24517.51	17.966	388.73	93.578	60.355
44	WI-REST OF STATE	287	78915.56	38.593	1070.45	274.967	45.153
45	WI-MILWAUKEE COUNTY	265	22461.98	23.754	479.13	84.762	74.729
46	AR	286	53746.64	69.891	790.21	187.925	69.124
47	LA-REST OF STATE	309	82391.36	13.200	1362.77	266.639	63.879
48	LA-ORLEANS PARISH	242	10451.44	10.693	370.16	43.188	94.586
49	NM	259	39439.24	30.358	685.32	152.275	59.888

Table B: Distribution of sampling weights for children with adequate provider data, National Immunization Survey, 2002, (WT)

IAP	Area	N	SUM	MIN	MAX	MEAN	CV
50	OK	268	71629.27	78.198	1308.58	267.27	72.8118
51	TX-REST OF STATE	278	335270.91	27.144	6493.99	1206.01	80.6981
52	TX-DALLAS COUNTY	289	59924.99	62.524	558.02	207.35	41.1386
53	TX-EL PASO COUNTY	278	20149.51	21.774	282.25	72.48	64.8450
54	TX-CITY OF HOUSTON	227	63515.26	90.947	1403.19	279.80	67.4946
55	TX-BEXAR COUNTY	273	34146.64	34.627	539.58	125.08	62.4596
56	IA	283	54270.57	60.200	903.24	191.77	52.6310
57	KS	291	58240.69	47.329	1109.47	200.14	61.5388
58	MO	271	107840.80	114.134	1533.64	397.94	56.4612
59	NE	282	33945.52	33.755	472.70	120.37	48.0604
60	CO	255	90165.42	152.017	1059.67	353.59	42.6054
61	MT	276	15470.31	12.680	255.36	56.05	56.7649
62	ND	278	9720.74	10.983	126.92	34.97	47.5120
63	SD	282	15083.05	15.114	245.42	53.49	64.3960
64	UT	274	62754.47	64.754	718.05	229.03	46.6324
65	WY	268	8783.31	8.813	117.25	32.77	51.5610
66	AZ-REST OF STATE	268	43198.89	40.193	573.80	161.19	52.7149
67	AZ-MARICOPA COUNTY	290	75807.46	61.605	1059.79	261.41	61.4824
68	CA-REST OF STATE	282	437867.48	114.768	5210.68	1552.72	40.5225
69	CA-LOS ANGELES COUNTY	276	231312.39	266.811	3731.97	838.09	59.9514
70	CA-SANTA CLARA COUNTY	285	40246.21	48.335	443.31	141.21	38.3950
71	CA-SAN DIEGO COUNTY	258	64758.02	54.697	747.53	251.00	47.2336
72	HI	292	25351.71	29.594	354.50	86.82	46.5340
73	NV	258	47816.38	53.900	591.32	185.33	41.9008
74	AK	262	14048.18	17.945	155.52	53.62	40.1819
75	ID	297	28804.01	33.395	326.69	96.98	43.5431
76	OR	283	67140.87	72.490	628.55	237.25	33.8096
77	WA-REST OF STATE	269	86511.03	72.574	1087.21	321.60	42.1851
78	WA-KING COUNTY	279	33281.89	43.049	330.56	119.29	34.6527

Appendix F

Disposition of Children with respect to Provider Record Check, National Immunization Survey, 2002

DISPCODE: Disposition of Children with Respect to Provider Record Check, National Immunization Survey, 2002

Number Of Children	*Disposition Code Number and Definition*
8,421	1 = All identified providers responded, no problems indicated in cross check between household and provider shot dates.
10,628	2 = All identified providers responded, no NIS shot card to cross check.
541	3 = All identified providers responded, poor immunization history matching results.
39	4 = All identified providers responded, poor immunization history matching results, additional mismatch indicators present.
1,183	5 = Some but not all identified providers responded, but provider information indicates 4:3:1:3:3 up-to-date.
62	6 = Some but not all identified providers responded, but provider information matches NIS shot card immunization history.
425	7 = Some but not all identified providers responded, completeness of provider immunization history is unknown.
44	8 = Some but not all identified providers responded, but provider information indicates 4:3:1:3:3 up-to-date when post-RDD-interview immunizations are included.
75	9 = Some but not all identified providers responded, but provider information indicates at least as many doses for each vaccine as the RDD respondent (or at least 1 dose for MCV).

199 10 = Some but not all identified providers responded, but the household reported an inexact number of vaccinations ("All","Don't Know", "Refused" or missing) for one or more vaccines and any exact responses meet previous criteria (for DISPCODE 9).

125 11 = Some but not all identified providers responded, but definite number of shots was reported by household not from a shot card for one or more vaccines and any other vaccines meet previous criteria (for DISPCODE 9 or 10).

21,742 TOTAL

Notes: The criteria for all dispositions (except 7) were applied in order. A case where some but not all providers responded is assigned disposition 7 if it does not qualify for dispositions 5, 6, 8, 9, 10 or 11.

When checking the criteria for dispositions 10 and 11, the provider history must contain at least three distinct vaccination dates (visits) for the provider immunization count to be accepted for vaccines for which an inexact response was reported, from recall, in the household survey.

Appendix G

Examples of the Use of SUDAAN To Estimate Vaccination Coverage Rates and Their Standard Errors

```
**********;
title1 'SUD_IAP.SAS';
*************************************************************************
THIS PROGRAM WILL PRODUCE IAP AREA  ESTIMATES AND STANDARD ERRORS
FOR PUTD4313 USING SAS CALLABLE SUDAAN.

SUDAAN NOTES:
    1. ALL VARIABLES USED MUST BE NUMERIC.
    2. VARIABLES IN THE SUBGROUP STATEMENT MUST HAVE VALUES 1,2,..K
       WHERE K IS THE NUMBER OF LEVELS FOR EACH VARIABLE.
    3. DATA MUST BE SORTED ACCORDING TO THE SAMPLE DESIGN VARIABLES
      (STRATUM AND PRIMARY SAMPLING UNIT), SPECIFIED IN THE
      NEST STATEMENT.
*************************************************************************;
options ps=78 ls=90 obs= max;

libname dd      'c:\nispuf02'; *--- SPECIFY PATH TO SAS DATASET ---*;
libname library 'c:\nispuf02'; *--- IF DATASET WAS CREATED WITH FORMATS STORED ---*;
                               *--- PERMANENTLY SPECIFY PATH TO LIBRARY       ---*;
                               *--- OTHERWISE COMMENT THIS STATEMENT OUT      ---*;

%let in_file=dd.nispuf02; *--- NAME OF SAS DATASET ---*;
%let wt=wt;               *--- WEIGHT TO USE ---*;

Proc format;
         /*
            THE FOLLOWING FORMAT WILL BE USED FOR PUTD4313.
            ORIGINAL VALUES OF PUTD4313 ARE 1,0.
            MUST BE CONVERTED TO 1,2 IN SUDAAN.
         */
 value put4313f
    1='4:3:1:3 Up-to-date'
    2='Not 4:3:1:3 Up-to-date';

 value itrueiaf
   0 ='U.S Total'
   01='Connecticut'
   02='MA-Rest of State'
   03='MA-City of Boston'
   04='Maine'
   05='New Hampshire'
   06='Rhode Island'
   07='Vermont'
   08='NJ-Rest of State'
   09='NJ-City of Newark'
   10='NY-Rest of State '
   11='NY-5 Counties    '
   12='Dist of Columbia '
   13='Delaware         '
   14='MD-Rest of State '
   15='MD-Baltimore City'
   16='PA-Rest of State '
   17='PA-Philadelphia  '
   18='Virginia         '
   19='West Virginia    '
   20='AL-Rest of State '
```

21='AL-Jefferson Cnty'
22='FL-Rest of State '
23='FL-Duval County '
24='FL-Dade County '
25='GA-Rest of State'
26='GA-Fulton/Dekalb '
27='Kentucky '
28='Mississippi '
29='North Carolina '
30='South Carolina '
31='TN-Rest of State '
32='TN-Shelby County '
33='TN-Davidson Cnty '
34='IL-Rest of State '
35='IL-City Chicago '
36='IN-Rest of State '
37='IN-Marion County '
38='MI-Rest of State '
39='MI-Detroit '
40='Minnesota '
41='OH-Rest of State '
42='OH-Cuyahoga Cnty '
43='OH-Franklin Cnty '
44='WI-Rest of State '
45='WI-Milwaukee Cnty'
46='Arkansas '
47='LA-Rest of State '
48='LA-Orleans Parish'
49='New Mexico '
50='Oklahoma '
51='TX-Rest of State '
52='TX-Dallas County '
53='TX-El Paso Cnty '
54='TX-City Houston '
55='TX-Bexar County '
56='Iowa '
57='Kansas '
58='Missouri '
59='Nebraska '
60='Colorado '
61='Montana '
62='North Dakota '
63='South Dakota '
64='Utah '
65='Wyoming '
66='AZ-Rest of State '
67='AZ-Maricopa Cnty '
68='CA-Rest of State '
69='CA-Los Angeles '
70='CA-Santa Clara '
71='CA-San Diego Cnty'
72='Hawaii '
73='Nevada '
74='Alaska '
75='Idaho '
76='Oregon '

```
   77='WA-Rest of State '
   78='WA-King County   ';

data sud_file;
 set &in_file(keep= seqnumhh seqnumc putd4313 itrueiap  &wt);

 if putd4313=0 then putd4313=2; *--- CONVERT PUTD4313=0 TO PUTD4313=2 ---*;

 nseqnumh=1*seqnumhh; *--- CONVERT HOUSEHOLD ID SEQNUMHH FROM CHARACTER TO NUMERIC ---*;

*=== SORT BY NEST VARIABLES: ITRUEIAP (STRATUM) NSEQNUMH (PRIMARY SAMPLING UNIT) ===*;
proc sort;
 by itrueiap nseqnumh;

proc crosstab data=sud_file filetype=sas design=wr;
weight &wt;
nest itrueiap nseqnumh;
subgroup  itrueiap putd4313 ;
levels      78      2      ;
tables    itrueiap * putd4313 ;
print nsum wsum  rowper serow/style=nchs ;
rtitle "4:3:1:3  ESTIMATES BY IAP";
rformat itrueiap itrueiaf.;
rformat putd4313 put4313f.;
output rowper serow/filename=sud_est filetype=sas;

proc print data=sud_est(where=(putd4313=1)) noobs label;
format itrueiap itrueiaf.;
var itrueiap rowper serow ;
label
    rowper='Percent 4:3:1:3 Up -to-date'
    serow='Standard Error'
 ;
title "4:3:1:3  ESTIMATES BY IAP";
```

```
**********************;
title1 'SUDSTATE.SAS';
*************************************************************************
THIS PROGRAM WILL PRODUCE STATE  ESTIMATES AND STANDARD ERRORS
FOR PUTD4313 USING SAS CALLABLE SUDAAN.

NOTE : THE STATE VARIABLE IS BASED ON FIPSTATE CODES ,THERE ARE
      NO STATES WITH FIPS CODES 3,7,14,43,52.

SUDAAN NOTES:
    1. ALL VARIABLES USED MUST BE NUMERIC.
    2. VARIABLES IN THE SUBGROUP STATEMENT MUST HAVE VALUES 1,2,..K
       WHERE K IS THE NUMBER OF LEVELS FOR EACH VARIABLE.
    3. DATA MUST BE SORTED ACCORDING TO THE SAMPLE DESIGN VARIABLES
       (STRATUM AND PRIMARY SAMPLING UNIT), SPECIFIED IN THE
       NEST STATEMENT.
*************************************************************************;
options ps=78 ls=90 obs= max;

libname dd      'c:\nispuf02'; *--- SPECIFY PATH TO SAS DATASET ---*;
libname library 'c:\nispuf02'; *--- IF DATASET WAS CREATED WITH FORMATS STORED ---*;
                *--- PERMANENTLY SPECIFY PATH TO LIBRARY        ---*;
                *--- OTHERWISE COMMENT THIS STATEMENT OUT       ---*;

%let in_file=dd.nispuf02; *--- NAME OF SAS DATASET ---*;
%let wt=wt;               *--- WEIGHT TO USE ---*;

PROC FORMAT;
 /*
  THE FOLLOWING FORMAT WILL BE USED FOR PUTD4313.
  ORIGINAL VALUES OF PUTD4313 ARE 1,0.
  MUST BE CONVERTED TO 1,2 IN SUDAAN.
 */
 value put4313f
    1='4:3:1:3 Up-to-date'
    2='Not 4:3:1:3 Up-to-date'
 ;
 value statef
    0 ='U.S. Total       '
    1 ='Alabama          '
    2 ='Alaska           '
    4 ='Arizona          '
    5 ='Arkansas         '
    6 ='California       '
    8 ='Colorado         '
    9 ='Connecticut      '
   10 ='Delaware         '
   11 ='Dist. of Columbia'
   12 ='Florida          '
   13 ='Georgia          '
   15 ='Hawaii           '
   16 ='Idaho            '
   17 ='Illinois         '
   18 ='Indiana          '
   19 ='Iowa             '
   20 ='Kansas           '
```

```
   21 ='Kentucky         '
   22 ='Louisiana        '
   23 ='Maine           '
   24 ='Mary land        '
   25 ='Massachusetts    '
   26 ='Michigan         '
   27 ='Minnesota        '
   28 ='Mississippi      '
   29 ='Missouri         '
   30 ='Montana          '
   31 ='Nebraska         '
   32 ='Nevada           '
   33 ='New Hamp shire    '
   34 ='New Jersey       '
   35 ='New Mexico       '
   36 ='New York         '
   37 ='North Carolina   '
   38 ='North Dakota     '
   39 ='Ohio            '
   40 ='Oklahoma         '
   41 ='Oregon           '
   42 ='Pennsylvania     '
   44 ='Rhode Island     '
   45 ='South Carolina   '
   46 ='South Dakota     '
   47 ='Tennessee        '
   48 ='Texas            '
   49 ='Utah             '
   50 ='Vermont          '
   51 ='Virginia         '
   53 ='Washington       '
   54 ='West Virginia    '
   55 ='Wisconsin        '
   56 ='Wyoming          '
;

data sud_file;
 set &in_file(keep= seqnumhh seqnumc putd4313  itrueiap state &wt);

 if putd4313=0 then putd4313=2; *** CONVERT PUTD4313=0 TO PUTD4313=2 ***;

 nseqnumh=1*seqnumhh;   *** CONVERT HOUSEHOLD ID SEQNUMH FROM CHARACTER TO NUMERIC ***;

*=== SORT BY NEST VARIABLES: ITRUEIAP (STRATUM) NSEQNUMH (PRIMARY SAMPLING UNIT) ===*;
proc sort;
 by itrueiap nseqnumh;

proc crosstab data=sud_file filetype=sas design=wr;
weight &wt;
nest itrueiap nseqnumh;
subgroup  state putd4313 ;
levels      56    2      ;
tables state * putd4313 ;
print nsum wsum  rowper serow/style=nchs ;
rtitle "4:3:1:3  ESTIMATES BY STATE";
rformat state statef.;
```

```
rformat putd4313 put4313f.;
output rowper serow  / filename=sud_est filetype=sas;

*** EXCLUDE 3,7,14,43,52 THERE ARE NO STATES WITH THESE FIPS CODES *** ;
proc print data=sud_est(where=(putd4313=1
                        & state notin (3,7,14,43,52))) label noobs;
var state rowper serow ;
label
    rowper='Percent 4:3:1:3 Up-to-date'
    serow='Standard Error'
 ;
title "4:3:1:3  ESTIMATES BY STATE";
```

Appendix H

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VARIABLE NAME	BEGIN POSITION	END POSITION	SECTION NUMBER	VARIABLE LABEL
AGEGRP	0059	0059	3	AGE CATEGORY OF CHILD (RECODE)
ALL4SHOT	0037	0037	2	4:3:1:3 UP-TO-DATE (HH REPORT)
C_431	0038	0038	2	HOUSEHOLD REPORT OF 4:3:1 UP-TO-DATE BY SHOT CARD USE
C_4313	0039	0039	2	HOUSEHOLD REPORT OF 4:3:1:3 UP-TO-DATE BY SHOT CARD USE
C_DTP	0040	0040	2	HOUSEHOLD REPORT OF 4+ DTP UP-TO-DATE BY SHOT CARD USE
C_HEP	0041	0041	2	HOUSEHOLD REPORT OF 3+ HEPATITIS B UP-TO-DATE BY SHOT CARD USE
C_HIB	0042	0042	2	HOUSEHOLD REPORT OF 3+ HIB UP-TO-DATE BY SHOT CARD USE
C_MMR	0043	0043	2	HOUSEHOLD REPORT OF 1+ MEASLES-CONTAINING VACCINE UP-TO-DATE BY SHOT CARD USE
C_POL	0044	0044	2	HOUSEHOLD REPORT OF 3+ POLIO UP-TO-DATE BY SHOT CARD USE
C_VRC	0045	0045	2	HOUSEHOLD REPORT OF 1+ VARICELLA UP-TO-DATE BY SHOT CARD USE
C1R	0060	0061	3	NUMBER OF PEOPLE LIVING IN THE HOUSEHOLD (RECODE)
C5R	0062	0063	3	RELATIONSHIP OF RESPONDENT TO CHILD (RECODE)
CEN_REG	0064	0064	3	CENSUS REGION BASED ON STATE
CHILDNM	0065	0065	3	NUMBER OF CHILDREN LESS THAN 18 YEARS IN HH (RECODE)
D6R	0090	0090	5	NUMBER OF VACCINATION PROVIDERS IDENTIFIED BY RESPONDENT (RECODE)
D7	0091	0091	5	CONSENT TO OBTAIN CHILD'S IMMUNIZATION RECORDS FROM VACCINATION PROVIDERS IDENTIFIED IN QUESTION D6 IN THE INTERVIEW
DDTP1	0156	0159	9	AGE IN DAYS OF PROVIDER-REPORTED DTP SHOT (ALL TYPES INCLUDING DT) #1
DDTP2	0160	0163	9	AGE IN DAYS OF PROVIDER-REPORTED DTP SHOT (ALL TYPES INCLUDING DT) #2
DDTP3	0164	0167	9	AGE IN DAYS OF PROVIDER-REPORTED DTP SHOT (ALL TYPES INCLUDING DT) #3
DDTP4	0168	0171	9	AGE IN DAYS OF PROVIDER-REPORTED DTP SHOT (ALL TYPES INCLUDING DT) #4
DDTP5	0172	0175	9	AGE IN DAYS OF PROVIDER-REPORTED DTP SHOT (ALL TYPES INCLUDING DT) #5
DDTP6	0176	0179	9	AGE IN DAYS OF PROVIDER-REPORTED DTP SHOT (ALL TYPES INCLUDING DT) #6
DDTP7	0180	0183	9	AGE IN DAYS OF PROVIDER-REPORTED DTP SHOT (ALL TYPES INCLUDING DT) #7
DDTP8	0184	0187	9	AGE IN DAYS OF PROVIDER-REPORTED DTP SHOT (ALL TYPES INCLUDING DT) #8
DHEPB1	0380	0383	9	AGE IN DAYS OF PROVIDER-REPORTED HEPATITIS B (ALL TYPES) SHOT #1
DHEPB2	0384	0387	9	AGE IN DAYS OF PROVIDER-REPORTED HEPATITIS B (ALL TYPES) SHOT #2

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VARIABLE NAME	BEGIN POSITION	END POSITION	SECTION NUMBER	VARIABLE LABEL
DHEPB3	0388	0391	9	AGE IN DAYS OF PROVIDER-REPORTED HEPATITIS B (ALL TYPES) SHOT #3
DHEPB4	0392	0395	9	AGE IN DAYS OF PROVIDER-REPORTED HEPATITIS B (ALL TYPES) SHOT #4
DHEPB5	0396	0399	9	AGE IN DAYS OF PROVIDER-REPORTED HEPATITIS B (ALL TYPES) SHOT #5
DHEPB6	0400	0403	9	AGE IN DAYS OF PROVIDER-REPORTED HEPATITIS B (ALL TYPES) SHOT #6
DHEPB7	0404	0407	9	AGE IN DAYS OF PROVIDER-REPORTED HEPATITIS B (ALL TYPES) SHOT #7
DHEPB8	0408	0411	9	AGE IN DAYS OF PROVIDER-REPORTED HEPATITIS B (ALL TYPES) SHOT #8
DHIB1	0316	0319	9	AGE IN DAYS OF PROVIDER-REPORTED HIB SHOT (ALL TYPES) #1
DHIB2	0320	0323	9	AGE IN DAYS OF PROVIDER-REPORTED HIB SHOT (ALL TYPES) #2
DHIB3	0324	0327	9	AGE IN DAYS OF PROVIDER-REPORTED HIB SHOT (ALL TYPES) #3
DHIB4	0328	0331	9	AGE IN DAYS OF PROVIDER-REPORTED HIB SHOT (ALL TYPES) #4
DHIB5	0332	0335	9	AGE IN DAYS OF PROVIDER-REPORTED HIB SHOT (ALL TYPES) #5
DHIB6	0336	0339	9	AGE IN DAYS OF PROVIDER-REPORTED HIB SHOT (ALL TYPES) #6
DHIB7	0340	0343	9	AGE IN DAYS OF PROVIDER-REPORTED HIB SHOT (ALL TYPES) #7
DHIB8	0344	0347	9	AGE IN DAYS OF PROVIDER-REPORTED HIB SHOT (ALL TYPES) #8
DISPCODE	0092	0093	6	NIS PROVIDER RECORD-CHECK DISPOSITION CODE
DMMR1	0284	0287	9	AGE IN DAYS OF PROVIDER-REPORTED MEASLES-CONTAINING VACCINE SHOT #1
DMMR2	0288	0291	9	AGE IN DAYS OF PROVIDER-REPORTED MEASLES-CONTAINING VACCINE SHOT #2
DMMR3	0292	0295	9	AGE IN DAYS OF PROVIDER-REPORTED MEASLES-CONTAINING VACCINE SHOT #3
DMMR4	0296	0299	9	AGE IN DAYS OF PROVIDER-REPORTED MEASLES-CONTAINING VACCINE SHOT #4
DMP1	0444	0447	9	AGE IN DAYS OF PROVIDER-REPORTED MUMPS SHOT #1
DMP2	0448	0451	9	AGE IN DAYS OF PROVIDER-REPORTED MUMPS SHOT #2
DMP3	0452	0455	9	AGE IN DAYS OF PROVIDER-REPORTED MUMPS SHOT #3
DMP4	0456	0459	9	AGE IN DAYS OF PROVIDER-REPORTED MUMPS SHOT #4
DMPRB1	0468	0471	9	AGE IN DAYS OF PROVIDER-REPORTED MUMPS/RUBELLA SHOT #1
DMPRB2	0472	0475	9	AGE IN DAYS OF PROVIDER-REPORTED MUMPS/RUBELLA SHOT #2
DMPRB3	0476	0479	9	AGE IN DAYS OF PROVIDER-REPORTED MUMPS/RUBELLA SHOT #3
DMPRB4	0480	0483	9	AGE IN DAYS OF PROVIDER-REPORTED MUMPS/RUBELLA SHOT #4

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VARIABLE NAME	BEGIN POSITION	END POSITION	SECTION NUMBER	VARIABLE LABEL
DPCV1	0612	0615	9	AGE IN DAYS OF PROVIDER-REPORTED PNEUMOCOCCAL SHOT #1
DPCV2	0616	0619	9	AGE IN DAYS OF PROVIDER-REPORTED PNEUMOCOCCAL SHOT #2
DPCV3	0620	0623	9	AGE IN DAYS OF PROVIDER-REPORTED PNEUMOCOCCAL SHOT #3
DPCV4	0624	0627	9	AGE IN DAYS OF PROVIDER-REPORTED PNEUMOCOCCAL SHOT #4
DPCV5	0628	0631	9	AGE IN DAYS OF PROVIDER-REPORTED PNEUMOCOCCAL SHOT #5
DPCV6	0632	0635	9	AGE IN DAYS OF PROVIDER-REPORTED PNEUMOCOCCAL SHOT #6
DPCV7	0636	0639	9	AGE IN DAYS OF PROVIDER-REPORTED PNEUMOCOCCAL SHOT #7
DPCV8	0640	0643	9	AGE IN DAYS OF PROVIDER-REPORTED PNEUMOCOCCAL SHOT #8
DPOLIO1	0220	0223	9	AGE IN DAYS OF PROVIDER-REPORTED POLIO SHOT (ALL TYPES) #1
DPOLIO2	0224	0227	9	AGE IN DAYS OF PROVIDER-REPORTED POLIO SHOT (ALL TYPES) #2
DPOLIO3	0228	0231	9	AGE IN DAYS OF PROVIDER-REPORTED POLIO SHOT (ALL TYPES) #3
DPOLIO4	0232	0235	9	AGE IN DAYS OF PROVIDER-REPORTED POLIO SHOT (ALL TYPES) #4
DPOLIO5	0236	0239	9	AGE IN DAYS OF PROVIDER-REPORTED POLIO SHOT (ALL TYPES) #5
DPOLIO6	0240	0243	9	AGE IN DAYS OF PROVIDER-REPORTED POLIO SHOT (ALL TYPES) #6
DPOLIO7	0244	0247	9	AGE IN DAYS OF PROVIDER-REPORTED POLIO SHOT (ALL TYPES) #7
DPOLIO8	0248	0251	9	AGE IN DAYS OF PROVIDER-REPORTED POLIO SHOT (ALL TYPES) #8
DRB1	0492	0495	9	AGE IN DAYS OF PROVIDER-REPORTED RUBELLA SHOT #1
DRB2	0496	0499	9	AGE IN DAYS OF PROVIDER-REPORTED RUBELLA SHOT #2
DRB3	0500	0503	9	AGE IN DAYS OF PROVIDER-REPORTED RUBELLA SHOT #3
DRB4	0504	0507	9	AGE IN DAYS OF PROVIDER-REPORTED RUBELLA SHOT #4
DRB5	0508	0511	9	AGE IN DAYS OF PROVIDER-REPORTED RUBELLA SHOT #5
DRB6	0512	0515	9	AGE IN DAYS OF PROVIDER-REPORTED RUBELLA SHOT #6
DRB7	0516	0519	9	AGE IN DAYS OF PROVIDER-REPORTED RUBELLA SHOT #7
DRB8	0520	0523	9	AGE IN DAYS OF PROVIDER-REPORTED RUBELLA SHOT #8
DROT1	0540	0543	9	AGE IN DAYS OF PROVIDER-REPORTED ROTAVIRUS SHOT #1
DROT2	0544	0547	9	AGE IN DAYS OF PROVIDER-REPORTED ROTAVIRUS SHOT #2
DROT3	0548	0551	9	AGE IN DAYS OF PROVIDER-REPORTED ROTAVIRUS SHOT #3
DROT4	0552	0555	9	AGE IN DAYS OF PROVIDER-REPORTED ROTAVIRUS SHOT #4

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VARIABLE NAME	BEGIN POSITION	END POSITION	SECTION NUMBER	VARIABLE LABEL
DROT5	0556	0559	9	AGE IN DAYS OF PROVIDER-REPORTED ROTAVIRUS SHOT #5
DROT6	0560	0563	9	AGE IN DAYS OF PROVIDER-REPORTED ROTAVIRUS SHOT #6
DROT7	0564	0567	9	AGE IN DAYS OF PROVIDER-REPORTED ROTAVIRUS SHOT #7
DROT8	0568	0571	9	AGE IN DAYS OF PROVIDER-REPORTED ROTAVIRUS SHOT #8
DTP_SOUR	0046	0046	2	SHOT CARD USED FOR DTP REPORTING
DTP1_AGE	0188	0189	9	AGE IN MONTHS PROVIDER-REPORTED DTP (ALL TYPES)SHOT#1
DTP2_AGE	0190	0191	9	AGE IN MONTHS PROVIDER-REPORTED DTP (ALL TYPES)SHOT#2
DTP3_AGE	0192	0193	9	AGE IN MONTHS PROVIDER-REPORTED DTP (ALL TYPES)SHOT#3
DTP4_AGE	0194	0195	9	AGE IN MONTHS PROVIDER-REPORTED DTP (ALL TYPES)SHOT#4
DTP5_AGE	0196	0197	9	AGE IN MONTHS PROVIDER-REPORTED DTP (ALL TYPES)SHOT#5
DTP6_AGE	0198	0199	9	AGE IN MONTHS PROVIDER-REPORTED DTP (ALL TYPES)SHOT#6
DTP7_AGE	0200	0201	9	AGE IN MONTHS PROVIDER-REPORTED DTP (ALL TYPES)SHOT#7
DTP8_AGE	0202	0203	9	AGE IN MONTHS PROVIDER-REPORTED DTP (ALL TYPES)SHOT#8
DVRC1	0588	0591	9	AGE IN DAYS OF PROVIDER-REPORTED VARICELLA SHOT #1
DVRC2	0592	0595	9	AGE IN DAYS OF PROVIDER-REPORTED VARICELLA SHOT #2
DVRC3	0596	0599	9	AGE IN DAYS OF PROVIDER-REPORTED VARICELLA SHOT #3
DVRC4	0600	0603	9	AGE IN DAYS OF PROVIDER-REPORTED VARICELLA SHOT #4
EDUC1	0066	0066	3	EDUCATION OF MOTHER CATEGORIES
ENTRY2	0067	0067	3	CHILD LIVES IN STATE WITH HEPATITIS B STATE ENTRY LAW FOR DAY CARE/HEAD START (2001-2002 SCHOOL YEAR)
FRSTBRN	0068	0068	3	FIRST BORN STATUS OF CHILD
FUL2_MMR	0047	0047	2	HOUSEHOLD REPORT OF 1+ MMR AT ANY AGE
FULL_CPO	0048	0048	2	HOUSEHOLD REPORT OF 1+ VARICELLA AT ANY AGE
FULL_DTP	0049	0049	2	HOUSEHOLD REPORT OF 4+ DTP
FULL_HEP	0050	0050	2	HOUSEHOLD REPORT OF 3+ HEPATITIS B
FULL_HIB	0051	0051	2	HOUSEHOLD REPORT OF 3+ HIB
FULL_PCV	0052	0052	2	HOUSEHOLD REPORT OF 4+ PNEUMOCOCCAL
FULL_POL	0053	0053	2	HOUSEHOLD REPORT OF 3+ POLIO
FULL_RV	0054	0054	2	HOUSEHOLD REPORT OF 3+ ROTAVIRUS
HEP_BRTH	0104	0104	8	HEPATITIS B GIVEN AT BIRTH FLAG

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VARIABLE NAME	BEGIN POSITION	END POSITION	SECTION NUMBER	VARIABLE LABEL
HEP_FLAG	0105	0105	8	HEPATITIS B BIRTH SHOT DATE IMPUTATION FLAG
HEP1_AGE	0412	0413	9	AGE IN MONTHS OF PROVIDER-REPORTED HEPATITIS B (ALL TYPES) SHOT #1
HEP2_AGE	0414	0415	9	AGE IN MONTHS OF PROVIDER-REPORTED HEPATITIS B (ALL TYPES) SHOT #2
HEP3_AGE	0416	0417	9	AGE IN MONTHS OF PROVIDER-REPORTED HEPATITIS B (ALL TYPES) SHOT #3
HEP4_AGE	0418	0419	9	AGE IN MONTHS OF PROVIDER-REPORTED HEPATITIS B (ALL TYPES) SHOT #4
HEP5_AGE	0420	0421	9	AGE IN MONTHS OF PROVIDER-REPORTED HEPATITIS B (ALL TYPES) SHOT #5
HEP6_AGE	0422	0423	9	AGE IN MONTHS OF PROVIDER-REPORTED HEPATITIS B (ALL TYPES) SHOT #6
HEP7_AGE	0424	0425	9	AGE IN MONTHS OF PROVIDER-REPORTED HEPATITIS B (ALL TYPES) SHOT #7
HEP8_AGE	0426	0427	9	AGE IN MONTHS OF PROVIDER-REPORTED HEPATITIS B (ALL TYPES) SHOT #8
HIB1_AGE	0348	0349	9	AGE IN MONTHS OF PROVIDER-REPORTED HIB (ALL TYPES) SHOT #1
HIB2_AGE	0350	0351	9	AGE IN MONTHS OF PROVIDER-REPORTED HIB (ALL TYPES) SHOT #2
HIB3_AGE	0352	0353	9	AGE IN MONTHS OF PROVIDER-REPORTED HIB (ALL TYPES) SHOT #3
HIB4_AGE	0354	0355	9	AGE IN MONTHS OF PROVIDER-REPORTED HIB (ALL TYPES) SHOT #4
HIB5_AGE	0356	0357	9	AGE IN MONTHS OF PROVIDER-REPORTED HIB (ALL TYPES) SHOT #5
HIB6_AGE	0358	0359	9	AGE IN MONTHS OF PROVIDER-REPORTED HIB (ALL TYPES) SHOT #6
HIB7_AGE	0360	0361	9	AGE IN MONTHS OF PROVIDER-REPORTED HIB (ALL TYPES) SHOT #7
HIB8_AGE	0362	0363	9	AGE IN MONTHS OF PROVIDER-REPORTED HIB (ALL TYPES) SHOT #8
HUTD4313	0055	0055	2	HOUSEHOLD REPORT OF 4:3:1:3 UTD (UP-TO-DATE)
I_HADCPX	0056	0056	2	DID CHILD EVER HAVE CHICKEN POX?
I_HISP_K	0076	0076	3	HISPANIC ORIGIN OF CHILD
IAGECPXR	0057	0057	2	AGE IN MONTHS WHEN CHILD HAD CHICKEN POX (RECODE)
INCPORAT	0069	0072	3	INCOME TO POVERTY RATIO
INCPOV1R	0073	0073	3	POVERTY STATUS(RECODE)
INCQ298R	0074	0075	3	FAMILY INCOME CATEGORIES (RECODE)
INOPHONR	0085	0085	3	LENGTH OF INTERRUPTION IN TELEPHONE SERVICE IN DAYS(RECODE)
INTRP	0084	0084	3	INTERRUPTION IN PHONE SERVICE OF 7 DAYS OR MORE
ITRUEIAP	0086	0087	4	IAP AREA OF CURRENT RESIDENCE
LANGUAGE	0077	0077	3	LANGUAGE THE INTERVIEW WAS CONDUCTED IN
M_AGEGRP	0080	0080	3	AGE OF MOTHER CATEGORIES
MARITAL	0078	0078	3	MARITAL STATUS OF MOTHER CATEGORIES

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VARIABLE NAME	BEGIN POSITION	END POSITION	SECTION NUMBER	VARIABLE LABEL
MMR1_AGE	0300	0301	9	AGE IN MONTHS OF PROVIDER-REPORTED MEASLES-CONTAINING VACCINE SHOT #1
MMR2_AGE	0302	0303	9	AGE IN MONTHS OF PROVIDER-REPORTED MEASLES-CONTAINING VACCINE SHOT #2
MMR3_AGE	0304	0305	9	AGE IN MONTHS OF PROVIDER-REPORTED MEASLES-CONTAINING VACCINE SHOT #3
MMR4_AGE	0306	0307	9	AGE IN MONTHS OF PROVIDER-REPORTED MEASLES-CONTAINING VACCINE SHOT #4
MOBIL	0079	0079	3	GEOGRAPHIC MOBILITY STATUS: STATE OF RESIDENCE OF CHILD AT BIRTH VERSUS CURRENT STATE OF RESIDENCE
MP1_AGE	0460	0461	9	AGE IN MONTHS OF PROVIDER-REPORTED MUMPS SHOT #1
MP2_AGE	0462	0463	9	AGE IN MONTHS OF PROVIDER-REPORTED MUMPS SHOT #2
MP3_AGE	0464	0465	9	AGE IN MONTHS OF PROVIDER-REPORTED MUMPS SHOT #3
MP4_AGE	0466	0467	9	AGE IN MONTHS OF PROVIDER-REPORTED MUMPS SHOT #4
MPR1_AGE	0484	0485	9	AGE IN MONTHS OF PROVIDER-REPORTED MUMPS/RUBELLA SHOT #1
MPR2_AGE	0486	0487	9	AGE IN MONTHS OF PROVIDER-REPORTED MUMPS/RUBELLA SHOT #2
MPR3_AGE	0488	0489	9	AGE IN MONTHS OF PROVIDER-REPORTED MUMPS/RUBELLA SHOT #3
MPR4_AGE	0490	0491	9	AGE IN MONTHS OF PROVIDER-REPORTED MUMPS/RUBELLA SHOT #4
N_PRVR	0094	0094	6	NUMBER OF PROVIDERS RESPONDING WITH VACCINATION DATA FOR CHILD (RECODE)
NCARER1	0095	0095	7	CHILD'S PROVIDERS OFFER COMPREHENSIVE CHILD CARE
NCARER2	0096	0096	7	CHILD'S PROVIDERS OFFER ACUTE ILLNESS CARE
NCARER3	0097	0097	7	CHILD'S PROVIDERS OFFER FOLLOW UP VISITS
NCARER4	0098	0098	7	CHILD'S PROVIDERS OFFER AFTER-HOURS TELEPHONE COVERAGE
NCARER5	0099	0099	7	CHILD'S PROVIDERS OFFER WIC PROGRAM/SERVICES
NCARER6	0100	0100	7	CHILD'S PROVIDERS OFFER OTHER SERVICES
P_NUHEPX	0121	0121	8	NUMBER OF HEPATITIS B-ONLY SHOTS, AS DETERMINED FROM PROVIDER INFORMATION. DOES NOT INCLUDE SHOTS REPORTED BY THE PROVIDER(S) AS OCCURRING AFTER THE RDD INTERVIEW DATE.
P_NUHIBN	0122	0122	8	NUMBER OF HIB (UNMARKED) SHOTS, AS DETERMINED FROM PROVIDER INFORMATION. DOES NOT INCLUDE SHOTS REPORTED BY THE PROVIDER(S) AS OCCURRING AFTER THE RDD INTERVIEW DATE.
P_NUHIBO	0123	0123	8	NUMBER OF HIB (OTHER) SHOTS, AS DETERMINED FROM PROVIDER INFORMATION. DOES NOT INCLUDE SHOTS REPORTED BY THE PROVIDER(S) AS OCCURRING AFTER THE RDD INTERVIEW DATE.
P_NUHIBP	0124	0124	8	NUMBER OF PEDVAX HIB SHOTS, AS DETERMINED FROM PROVIDER INFORMATION. DOES NOT INCLUDE SHOTS REPORTED BY THE PROVIDER(S) AS OCCURRING AFTER THE RDD INTERVIEW DATE.

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VARIABLE NAME	BEGIN POSITION	END POSITION	SECTION NUMBER	VARIABLE LABEL
P_NUHIBX	0125	0125	8	NUMBER OF HIB-ONLY SHOTS, AS DETERMINED FROM PROVIDER INFORMATION. DOES NOT INCLUDE SHOTS REPORTED BY THE PROVIDER(S) AS OCCURRING AFTER THE RDD INTERVIEW DATE.
P_NUHPHB	0126	0126	8	NUMBER OF HEPATITIS B/HIB (COMVAX) SHOTS, AS DETERMINED FROM PROVIDER INFORMATION. DOES NOT INCLUDE SHOTS REPORTED BY THE PROVIDER(S) AS OCCURRING AFTER THE RDD INTERVIEW DATE.
P_NUMDAH	0127	0127	8	NUMBER OF DTAP/HIB (MARKED) SHOTS, AS DETERMINED FROM PROVIDER INFORMATION. DOES NOT INCLUDE SHOTS REPORTED BY THE PROVIDER(S) AS OCCURRING AFTER THE RDD INTERVIEW DATE.
P_NUMDHB	0128	0128	8	NUMBER OF DTP/HIB COMBINATION SHOTS (ALL TYPES), AS DETERMINED FROM PROVIDER INFORMATION. DOES NOT INCLUDE SHOTS REPORTED BY THE PROVIDER(S) AS OCCURRING AFTER THE RDD INTERVIEW DATE.
P_NUMDHM	0129	0129	8	NUMBER OF DTP/HIB (MARKED) SHOTS, AS DETERMINED FROM PROVIDER INFORMATION. DOES NOT INCLUDE SHOTS REPORTED BY THE PROVIDER(S) AS OCCURRING AFTER THE RDD INTERVIEW DATE.
P_NUMDHN	0130	0130	8	NUMBER OF DTP/HIB (UNMARKED) SHOTS, AS DETERMINED FROM PROVIDER INFORMATION. DOES NOT INCLUDE SHOTS REPORTED BY THE PROVIDER(S) AS OCCURRING AFTER THE RDD INTERVIEW DATE.
P_NUMDTA	0131	0131	8	NUMBER OF DTAP (MARKED) SHOTS, AS DETERMINED FROM PROVIDER INFORMATION. DOES NOT INCLUDE SHOTS REPORTED BY THE PROVIDER(S) AS OCCURRING AFTER THE RDD INTERVIEW DATE.
P_NUMDTM	0132	0132	8	NUMBER OF DT (MARKED) SHOTS, AS DETERMINED FROM PROVIDER INFORMATION. DOES NOT INCLUDE SHOTS REPORTED BY THE PROVIDER(S) AS OCCURRING AFTER THE RDD INTERVIEW DATE.
P_NUMDTP	0133	0133	8	NUMBER OF DTP SHOTS (ALL TYPES INCLUDING DT), AS DETERMINED FROM PROVIDER INFORMATION. DOES NOT INCLUDE SHOTS REPORTED BY THE PROVIDER(S) AS OCCURRING AFTER THE RDD INTERVIEW DATE.
P_NUMHEP	0134	0134	8	NUMBER OF HEPATITIS B (ALL TYPES) SHOTS, AS DETERMINED FROM PROVIDER INFORMATION. DOES NOT INCLUDE SHOTS REPORTED BY THE PROVIDER(S) AS OCCURRING AFTER THE RDD INTERVIEW DATE.
P_NUMHIB	0135	0135	8	NUMBER OF HIB (ALL TYPES) SHOTS, AS DETERMINED FROM PROVIDER INFORMATION. DOES NOT INCLUDE SHOTS REPORTED BY THE PROVIDER(S) AS OCCURRING AFTER THE RDD INTERVIEW DATE.
P_NUMIPV	0136	0136	8	NUMBER OF IPV (MARKED) SHOTS, AS DETERMINED FROM PROVIDER INFORMATION. DOES NOT INCLUDE SHOTS REPORTED BY THE PROVIDER(S) AS OCCURRING AFTER THE RDD INTERVIEW DATE.

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VARIABLE NAME	BEGIN POSITION	END POSITION	SECTION NUMBER	VARIABLE LABEL
P_NUMMMR	0137	0137	8	NUMBER OF MCV (MEASLES-CONTAINING VACCINE) SHOTS, AS DETERMINED FROM PROVIDER INFORMATION. DOES NOT INCLUDE SHOTS REPORTED BY THE PROVIDER(S) AS OCCURRING AFTER THE RDD INTERVIEW DATE.
P_NUMMMX	0138	0138	8	NUMBER OF TRUE MMR (NOT INCLUDING MEASLES-ONLY SHOTS), AS DETERMINED FROM PROVIDER INFORMATION. DOES NOT INCLUDE SHOTS REPORTED BY THE PROVIDER(S) AS OCCURRING AFTER THE RDD INTERVIEW DATE.
P_NUMMP	0142	0142	8	NUMBER OF MUMPS SHOTS, AS DETERMINED FROM PROVIDER INFORMATION. DOES NOT INCLUDE SHOTS REPORTED BY THE PROVIDER(S) AS OCCURRING AFTER THE RDD INTERVIEW DATE.
P_NUMMPR	0143	0143	8	NUMBER OF MUMPS/RUBELLA SHOTS, AS DETERMINED FROM PROVIDER INFORMATION. DOES NOT INCLUDE SHOTS REPORTED BY THE PROVIDER(S) AS OCCURRING AFTER THE RDD INTERVIEW DATE.
P_NUMMS	0139	0139	8	NUMBER OF MEASLES-ONLY SHOTS, AS DETERMINED FROM PROVIDER INFORMATION. DOES NOT INCLUDE SHOTS REPORTED BY THE PROVIDER(S) AS OCCURRING AFTER THE RDD INTERVIEW DATE.
P_NUMMSM	0140	0140	8	NUMBER OF MEASLES/MUMPS SHOTS, AS DETERMINED FROM PROVIDER INFORMATION. DOES NOT INCLUDE SHOTS REPORTED BY THE PROVIDER(S) AS OCCURRING AFTER THE RDD INTERVIEW DATE.
P_NUMMSR	0141	0141	8	NUMBER OF MEASLES/RUBELLA, AS DETERMINED FROM PROVIDER INFORMATION. DOES NOT INCLUDE SHOTS REPORTED BY THE PROVIDER(S) AS OCCURRING AFTER THE RDD INTERVIEW DATE.
P_NUMOLN	0144	0144	8	NUMBER OF POLIO (UNMARKED) SHOTS, AS DETERMINED FROM PROVIDER INFORMATION. DOES NOT INCLUDE SHOTS REPORTED BY THE PROVIDER(S) AS OCCURRING AFTER THE RDD INTERVIEW DATE.
P_NUMOPV	0145	0145	8	NUMBER OF OPV (MARKED) SHOTS, AS DETERMINED FROM PROVIDER INFORMATION. DOES NOT INCLUDE SHOTS REPORTED BY THE PROVIDER(S) AS OCCURRING AFTER THE RDD INTERVIEW DATE.
P_NUMPCC	0146	0146	8	NUMBER OF CONJUGATE (MARKED) SHOTS, AS DETERMINED FROM PROVIDER INFORMATION. DOES NOT INCLUDE SHOTS REPORTED BY THE PROVIDER(S) AS OCCURRING AFTER THE RDD INTERVIEW DATE.
P_NUMPCN	0147	0147	8	NUMBER OF PNEUMOCOCCAL (UNMARKED) SHOTS, AS DETERMINED FROM PROVIDER INFORMATION. DOES NOT INCLUDE SHOTS REPORTED BY THE PROVIDER(S) AS OCCURRING AFTER THE RDD INTERVIEW DATE.
P_NUMPCP	0148	0148	8	NUMBER OF POLYSACCHARIDE (MARKED) SHOTS, AS DETERMINED FROM PROVIDER INFORMATION. DOES NOT INCLUDE SHOTS REPORTED BY THE PROVIDER(S) AS OCCURRING AFTER THE RDD INTERVIEW DATE.

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VARIABLE NAME	BEGIN POSITION	END POSITION	SECTION NUMBER	VARIABLE LABEL
P_NUMPCV	0149	0149	8	NUMBER OF PNEUMOCOCCAL(ALL TYPES) SHOTS, AS DETERMINED FROM PROVIDER INFORMATION. DOES NOT INCLUDE SHOTS REPORTED BY THE PROVIDER(S) AS OCCURRING AFTER THE RDD INTERVIEW DATE.
P_NUMPOL	0150	0150	8	NUMBER OF POLIO (ALL TYPES) SHOTS, AS DETERMINED FROM PROVIDER INFORMATION. DOES NOT INCLUDE SHOTS REPORTED BY THE PROVIDER(S) AS OCCURRING AFTER THE RDD INTERVIEW DATE.
P_NUMRB	0151	0151	8	NUMBER OF RUBELLA SHOTS, AS DETERMINED FROM PROVIDER INFORMATION. DOES NOT INCLUDE SHOTS REPORTED BY THE PROVIDER(S) AS OCCURRING AFTER THE RDD INTERVIEW DATE.
P_NUMROT	0152	0152	8	NUMBER OF ROTAVIRUS SHOTS, AS DETERMINED FROM PROVIDER INFORMATION. DOES NOT INCLUDE SHOTS REPORTED BY THE PROVIDER(S) AS OCCURRING AFTER THE RDD INTERVIEW DATE.
P_NUMTPM	0153	0153	8	NUMBER OF DTP (MARKED) SHOTS, AS DETERMINED FROM PROVIDER INFORMATION. DOES NOT INCLUDE SHOTS REPORTED BY THE PROVIDER(S) AS OCCURRING AFTER THE RDD INTERVIEW DATE.
P_NUMTPN	0154	0154	8	NUMBER OF DTP (UNMARKED) SHOTS, AS DETERMINED FROM PROVIDER INFORMATION. DOES NOT INCLUDE SHOTS REPORTED BY THE PROVIDER(S) AS OCCURRING AFTER THE RDD INTERVIEW DATE.
P_NUMVRC	0155	0155	8	NUMBER OF VARICELLA (CHICKEN POX) SHOTS, AS DETERMINED FROM PROVIDER INFORMATION. DOES NOT INCLUDE SHOTS REPORTED BY THE PROVIDER(S) AS OCCURRING AFTER THE RDD INTERVIEW DATE.
P_U12VRC	0111	0111	8	UTD (UP-TO-DATE) FLAG FOR PROVIDER 1+ VARICELLA AT 12+ MONTHS
P_UTD331	0110	0110	8	UTD (UP-TO-DATE) FLAG FOR PROVIDER 3:3:1
P_UTD431	0106	0106	8	UTD (UP-TO-DATE) FLAG FOR PROVIDER 4:3:1
P_UTDHEP	0112	0112	8	UTD (UP-TO-DATE) FLAG FOR PROVIDER 3+ HEPATITIS B
P_UTDHIB	0113	0113	8	UTD (UP-TO-DATE) FLAG FOR PROVIDER 3+ HIB
P_UTDMCV	0114	0114	8	UTD (UP-TO-DATE) FLAG FOR PROVIDER 1+ MCV
P_UTDMMX	0115	0115	8	UTD (UP-TO-DATE) FLAG FOR PROVIDER 1+ MMR (NOT INCLUDING ANY MEASLES-ONLY SHOTS)
P_UTDPC3	0116	0116	8	UTD FLAG FOR PROVIDER 3+ PNEUMOCOCCAL
P_UTDPCV	0117	0117	8	UTD (UP-TO-DATE) FLAG FOR PROVIDER 4+ PNEUMOCOCCAL
P_UTDPOL	0118	0118	8	UTD (UP-TO-DATE) FLAG FOR PROVIDER 3+ POLIO
P_UTDTP3	0119	0119	8	UTD (UP-TO-DATE) FLAG FOR PROVIDER 3+ DTP
P_UTDTP4	0120	0120	8	UTD (UP-TO-DATE) FLAG FOR PROVIDER 4+ DTP
PCV1_AGE	0644	0645	9	AGE IN MONTHS OF PROVIDER-REPORTED PNEUMOCOCCAL (ALL TYPES) SHOT # 1
PCV2_AGE	0646	0647	9	AGE IN MONTHS OF PROVIDER-REPORTED PNEUMOCOCCAL (ALL TYPES) SHOT # 2

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VARIABLE NAME	BEGIN POSITION	END POSITION	SECTION NUMBER	VARIABLE LABEL
PCV3_AGE	0648	0649	9	AGE IN MONTHS OF PROVIDER-REPORTED PNEUMOCOCCAL (ALL TYPES) SHOT # 3
PCV4_AGE	0650	0651	9	AGE IN MONTHS OF PROVIDER-REPORTED PNEUMOCOCCAL (ALL TYPES) SHOT # 4
PCV5_AGE	0652	0653	9	AGE IN MONTHS OF PROVIDER-REPORTED PNEUMOCOCCAL (ALL TYPES) SHOT # 5
PCV6_AGE	0654	0655	9	AGE IN MONTHS OF PROVIDER-REPORTED PNEUMOCOCCAL (ALL TYPES) SHOT # 6
PCV7_AGE	0656	0657	9	AGE IN MONTHS OF PROVIDER-REPORTED PNEUMOCOCCAL (ALL TYPES) SHOT # 7
PCV8_AGE	0658	0659	9	AGE IN MONTHS OF PROVIDER-REPORTED PNEUMOCOCCAL (ALL TYPES) SHOT # 8
PDAT	0036	0036	1	CHILD HAS ADEQUATE PROVIDER DATA
POL1_AGE	0252	0253	9	AGE IN MONTHS OF PROVIDER-REPORTED POLIO (ALL TYPES) SHOT # 1
POL2_AGE	0254	0255	9	AGE IN MONTHS OF PROVIDER-REPORTED POLIO (ALL TYPES) SHOT # 2
POL3_AGE	0256	0257	9	AGE IN MONTHS OF PROVIDER-REPORTED POLIO (ALL TYPES) SHOT # 3
POL4_AGE	0258	0259	9	AGE IN MONTHS OF PROVIDER-REPORTED POLIO (ALL TYPES) SHOT # 4
POL5_AGE	0260	0261	9	AGE IN MONTHS OF PROVIDER-REPORTED POLIO (ALL TYPES) SHOT # 5
POL6_AGE	0262	0263	9	AGE IN MONTHS OF PROVIDER-REPORTED POLIO (ALL TYPES) SHOT # 6
POL7_AGE	0264	0265	9	AGE IN MONTHS OF PROVIDER-REPORTED POLIO (ALL TYPES) SHOT # 7
POL8_AGE	0266	0267	9	AGE IN MONTHS OF PROVIDER-REPORTED POLIO (ALL TYPES) SHOT # 8
PROV_FAC	0101	0101	7	PROVIDER FACILITY TYPE
PU431331	0109	0109	8	UTD FLAG FOR PROVIDER 4:3:1:3:3:1 (INCLUDES 1+ VARICELLA AT AGE 12+ MONTHS)
PUT43133	0108	0108	8	UTD (UP-TO-DATE) FLAG FOR PROVIDER 4:3:1:3:3
PUTD4313	0107	0107	8	UTD (UP-TO-DATE) FLAG FOR PROVIDER 4:3:1:3
RACE_K	0081	0081	3	RACE OF CHILD (RECODE)
RACEETHK	0082	0082	3	RACE/ETHNICITY OF CHILD (RECODE)
RB1_AGE	0524	0525	9	AGE IN MONTHS OF PROVIDER-REPORTED RUBELLA SHOT #1
RB2_AGE	0526	0527	9	AGE IN MONTHS OF PROVIDER-REPORTED RUBELLA SHOT #2
RB3_AGE	0528	0529	9	AGE IN MONTHS OF PROVIDER-REPORTED RUBELLA SHOT #3
RB4_AGE	0530	0531	9	AGE IN MONTHS OF PROVIDER-REPORTED RUBELLA SHOT #4
RB5_AGE	0532	0533	9	AGE IN MONTHS OF PROVIDER-REPORTED RUBELLA SHOT #5
RB6_AGE	0534	0535	9	AGE IN MONTHS OF PROVIDER-REPORTED RUBELLA SHOT #6

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VARIABLE NAME	BEGIN POSITION	END POSITION	SECTION NUMBER	VARIABLE LABEL
RB7_AGE	0536	0537	9	AGE IN MONTHS OF PROVIDER-REPORTED RUBELLA SHOT #7
RB8_AGE	0538	0539	9	AGE IN MONTHS OF PROVIDER-REPORTED RUBELLA SHOT #8
RDD_WT	0012	0021	1	WEIGHT FOR CHILDREN WITH COMPLETED HOUSEHOLD INTERVIEWS
REGISTRY	0102	0102	7	CHILD'S PROVIDERS REPORTED CHILD'S VACCINATIONS TO IMMUNIZATION REGISTRY
ROT1_AGE	0572	0573	9	AGE IN MONTHS OF PROVIDER-REPORTED ROTAVIRUS SHOT #1
ROT2_AGE	0574	0575	9	AGE IN MONTHS OF PROVIDER-REPORTED ROTAVIRUS SHOT #2
ROT3_AGE	0576	0577	9	AGE IN MONTHS OF PROVIDER-REPORTED ROTAVIRUS SHOT #3
ROT4_AGE	0578	0579	9	AGE IN MONTHS OF PROVIDER-REPORTED ROTAVIRUS SHOT #4
ROT5_AGE	0580	0581	9	AGE IN MONTHS OF PROVIDER-REPORTED ROTAVIRUS SHOT #5
ROT6_AGE	0582	0583	9	AGE IN MONTHS OF PROVIDER-REPORTED ROTAVIRUS SHOT #6
ROT7_AGE	0584	0585	9	AGE IN MONTHS OF PROVIDER-REPORTED ROTAVIRUS SHOT #7
ROT8_AGE	0586	0587	9	AGE IN MONTHS OF PROVIDER-REPORTED ROTAVIRUS SHOT #8
SEQNUMC	0001	0006	1	UNIQUE CHILD IDENTIFIER
SEQNUMHH	0007	0011	1	UNIQUE HOUSEHOLD IDENTIFIER
SEX	0083	0083	3	GENDER OF CHILD
SHOTCARD	0058	0058	2	SHOT CARD USE FLAG
STATE	0088	0089	4	STATE OF RESIDENCE (STATE FIPS CODE)
VFC_PRO	0103	0103	7	PARTICIPATION OF CHILD'S PROVIDERS IN VACCINES FOR CHILDREN PROGRAM
VRC1_AGE	0604	0605	9	AGE IN MONTHS OF PROVIDER-REPORTED VARICELLA SHOT #1
VRC2_AGE	0606	0607	9	AGE IN MONTHS OF PROVIDER-REPORTED VARICELLA SHOT #2
VRC3_AGE	0608	0609	9	AGE IN MONTHS OF PROVIDER-REPORTED VARICELLA SHOT #3
VRC4_AGE	0610	0611	9	AGE IN MONTHS OF PROVIDER-REPORTED VARICELLA SHOT #4
WT	0022	0031	1	WEIGHT FOR CHILDREN WITH ADEQUATE PROVIDER DATA
XDTPTY1	0204	0205	9	DTP-CONTAINING VACCINATION #1 TYPE CODE
XDTPTY2	0206	0207	9	DTP-CONTAINING VACCINATION #2 TYPE CODE
XDTPTY3	0208	0209	9	DTP-CONTAINING VACCINATION #3 TYPE CODE
XDTPTY4	0210	0211	9	DTP-CONTAINING VACCINATION #4 TYPE CODE
XDTPTY5	0212	0213	9	DTP-CONTAINING VACCINATION #5 TYPE CODE
XDTPTY6	0214	0215	9	DTP-CONTAINING VACCINATION #6 TYPE CODE
XDTPTY7	0216	0217	9	DTP-CONTAINING VACCINATION #7 TYPE CODE

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VARIABLE NAME	BEGIN POSITION	END POSITION	SECTION NUMBER	VARIABLE LABEL
XDTPTY8	0218	0219	9	DTP-CONTAINING VACCINATION #8 TYPE CODE
XHEPTY1	0428	0429	9	HEPATITIS B-CONTAINING VACCINATION #1 TYPE CODE
XHEPTY2	0430	0431	9	HEPATITIS B-CONTAINING VACCINATION #2 TYPE CODE
XHEPTY3	0432	0433	9	HEPATITIS B-CONTAINING VACCINATION #3 TYPE CODE
XHEPTY4	0434	0435	9	HEPATITIS B-CONTAINING VACCINATION #4 TYPE CODE
XHEPTY5	0436	0437	9	HEPATITIS B-CONTAINING VACCINATION #5 TYPE CODE
XHEPTY6	0438	0439	9	HEPATITIS B-CONTAINING VACCINATION #6 TYPE CODE
XHEPTY7	0440	0441	9	HEPATITIS B-CONTAINING VACCINATION #7 TYPE CODE
XHEPTY8	0442	0443	9	HEPATITIS B-CONTAINING VACCINATION #8 TYPE CODE
XHIBTY1	0364	0365	9	HIB-CONTAINING VACCINATION #1 TYPE CODE
XHIBTY2	0366	0367	9	HIB-CONTAINING VACCINATION #2 TYPE CODE
XHIBTY3	0368	0369	9	HIB-CONTAINING VACCINATION #3 TYPE CODE
XHIBTY4	0370	0371	9	HIB-CONTAINING VACCINATION #4 TYPE CODE
XHIBTY5	0372	0373	9	HIB-CONTAINING VACCINATION #5 TYPE CODE
XHIBTY6	0374	0375	9	HIB-CONTAINING VACCINATION #6 TYPE CODE
XHIBTY7	0376	0377	9	HIB-CONTAINING VACCINATION #7 TYPE CODE
XHIBTY8	0378	0379	9	HIB-CONTAINING VACCINATION #8 TYPE CODE
XMMRTY1	0308	0309	9	MCV-CONTAINING VACCINATION #1 TYPE CODE
XMMRTY2	0310	0311	9	MCV-CONTAINING VACCINATION #2 TYPE CODE
XMMRTY3	0312	0313	9	MCV-CONTAINING VACCINATION #3 TYPE CODE
XMMRTY4	0314	0315	9	MCV-CONTAINING VACCINATION #4 TYPE CODE
XPCVTY1	0660	0661	9	PNEUMOCOCCAL-CONTAINING VACCINATION #1 TYPE CODE
XPCVTY2	0662	0663	9	PNEUMOCOCCAL-CONTAINING VACCINATION #2 TYPE CODE
XPCVTY3	0664	0665	9	PNEUMOCOCCAL-CONTAINING VACCINATION #3 TYPE CODE
XPCVTY4	0666	0667	9	PNEUMOCOCCAL-CONTAINING VACCINATION #4 TYPE CODE
XPCVTY5	0668	0669	9	PNEUMOCOCCAL-CONTAINING VACCINATION #5 TYPE CODE
XPCVTY6	0670	0671	9	PNEUMOCOCCAL-CONTAINING VACCINATION #6 TYPE CODE
XPCVTY7	0672	0673	9	PNEUMOCOCCAL-CONTAINING VACCINATION #7 TYPE CODE
XPCVTY8	0674	0675	9	PNEUMOCOCCAL-CONTAINING VACCINATION #8 TYPE CODE
XPOLTY1	0268	0269	9	POLIO-CONTAINING VACCINATION #1 TYPE CODE
XPOLTY2	0270	0271	9	POLIO-CONTAINING VACCINATION #2 TYPE CODE
XPOLTY3	0272	0273	9	POLIO-CONTAINING VACCINATION #3 TYPE CODE
XPOLTY4	0274	0275	9	POLIO-CONTAINING VACCINATION #4 TYPE CODE
XPOLTY5	0276	0277	9	POLIO-CONTAINING VACCINATION #5 TYPE CODE
XPOLTY6	0278	0279	9	POLIO-CONTAINING VACCINATION #6 TYPE CODE
XPOLTY7	0280	0281	9	POLIO-CONTAINING VACCINATION #7 TYPE CODE
XPOLTY8	0282	0283	9	POLIO-CONTAINING VACCINATION #8 TYPE CODE
YEAR	0032	0035	1	YEAR OF INTERVIEW

Appendix I

Summary Tables

Table I.1: Estimated population totals and sample sizes of children 19-35 months of age by state and IAP area, National Immunization Survey, 2002

State/IAP Area	Estimated Population Total of Children	Number of Children with Completed HH Interviews	Number of Children with Adequate Provider Data
U.S. National	5,845,539	31,693	21,410
Alabama	92,234	731	525
Rest of State	78,318	374	267
Jefferson County	13,916	357	258
Alaska	14,048	377	262
Arizona	119,006	857	558
Rest of State	43,199	394	268
Maricopa County	75,807	463	290
Arkansas	53,747	371	286
California	774,184	1,730	1,101
Rest of State	437,867	441	282
Los Angeles County	231,312	459	276
Santa Clara County	40,246	428	285
San Diego County	64,758	402	258
Colorado	90,165	376	255
Connecticut	62,800	410	289
Delaware	14,998	443	297
District of Columbia	10,041	442	259
Florida	309,040	1,305	848
Rest of State	241,043	459	283
Duval County	18,642	417	287
Dade County	49,355	429	278
Georgia	191,247	884	594
Rest of State	154,987	443	305
Fulton/DeKalb Cos.	36,260	441	289
Hawaii	25,352	469	292
Idaho	28,804	370	297
Illinois	266,508	867	562
Rest of State	193,440	405	282
City of Chicago	73,068	462	280
Indiana	126,008	833	587
Rest of State	105,116	408	291
Marion County	20,892	425	296
Iowa	54,271	391	283
Kansas	58,241	406	291
Kentucky	79,339	364	272

Table I.1: Estimated population total and sample sizes of children 19-35 months of age by state and IAP area, National Immunization Survey, 2002 (continued)

State/IAP Area	Estimated Population Total of Children	Number of Children with Completed HH Interviews	Number of Children with Adequate Provider Data
Louisiana	92,843	917	551
Rest of State	82,391	476	309
Orleans Parish	10,451	441	242
Maine	20,831	347	258
Maryland	115,292	808	529
Rest of State	98,750	435	282
Baltimore City	16,542	373	247
Massachusetts	115,722	851	593
Rest of State	103,501	416	303
City of Boston	12,221	435	290
Michigan	195,392	851	539
Rest of State	172,431	444	302
City of Detroit	22,961	407	237
Minnesota	100,041	360	282
Mississippi	62,264	359	254
Missouri	107,841	409	271
Montana	15,470	374	276
Nebraska	33,946	395	282
Nevada	47,816	414	258
New Hampshire	21,213	365	278
New Jersey	170,943	870	554
Rest of State	163,526	489	322
City of Newark	7,418	381	232
New Mexico	39,439	384	259
New York	366,725	837	498
Rest of State	193,505	378	263
NYC - 5 Counties	173,221	459	235
North Carolina	173,447	384	259
North Dakota	9,721	369	278
Ohio	220,160	1,260	859
Rest of State	168,986	457	331
Cuyahoga County	26,656	419	266
Franklin County	24,518	384	262
Oklahoma	71,629	388	268
Oregon	67,141	390	283

Table I.1: Estimated population total and sample sizes of children 19-35 months of age by state and IAP area, National Immunization Survey, 2002 (continued)

State/IAP Area	Estimated Population Total of Children	Number of Children with Completed HH Interviews	Number of Children with Adequate Provider Data
Pennsylvania	209,147	773	486
Rest of State	177,760	373	252
Philadelphia County	31,387	400	234
Rhode Island	17,843	387	269
South Carolina	83,095	359	261
South Dakota	15,083	383	282
Tennessee	110,473	1,197	826
Rest of State	77,466	362	274
Shelby County	20,575	456	289
Davidson County	12,432	379	263
Texas	513,007	2,181	1,345
Rest of State	335,271	469	278
Dallas County	59,925	449	289
El Paso County	20,150	404	278
City of Houston	63,515	443	227
Bexar County	34,147	416	273
Utah	62,754	384	274
Vermont	9,693	356	284
Virginia	147,869	419	272
Washington	119,793	777	548
Rest of State	86,511	391	269
King County	33,282	386	279
West Virginia	28,709	385	256
Wisconsin	101,378	765	552
Rest of State	78,916	384	287
Milwaukee County	22,462	381	265
Wyoming	8,783	369	268

Table I.2: Estimated population totals and sample sizes for age group by maternal education, National Immunization Survey, 2002

		Children with Completed Household Interviews		Children with Adequate Provider Data	
Age Group In Months	**Maternal Education**	**Unweighted Sample Size**	**Weighted Sample Size**	**Unweighted Sample Size**	**Weighted Sample Size**
19 - 23	LESS THAN 12 YEARS	1,288	322,452.8	823	329,485.4
19 - 23	12 YEARS	2,706	584,080.1	1,852	597,408.8
19 - 23	GREATER 12 YEARS, NOT COLLEGE GRADUATE	1,764	267,034.5	1,202	274,735.9
19 - 23	COLLEGE GRADUATE	3,741	557,563.7	2,588	545,541.0
24 - 29	LESS THAN 12 YEARS	1,442	340,644.6	942	343,770.7
24 - 29	12 YEARS	3,240	741,949.9	2,175	741,323.6
24 - 29	GREATER 12 YEARS, NOT COLLEGE GRADUATE	2,109	323,493.0	1,391	315,068.9
24 - 29	COLLEGE GRADUATE	4,539	684,099.5	3,133	675,044.1
30 - 35	LESS THAN 12 YEARS	1,336	346,018.9	859	343,472.1
30 - 35	12 YEARS	3,172	745,864.5	2,078	725,547.8
30 - 35	GREATER 12 YEARS, NOT COLLEGE GRADUATE	2,048	303,150.7	1,394	319,177.8
30 - 35	COLLEGE GRADUATE	4,308	629,186.7	2,973	634,963.1

Table I.3: Estimated population totals and sample sizes for age group by family income, National Immunization Survey, 2002

Age Group in Months	Family Income	Children with Completed Household Interviews		Children with Adequate Provider Data	
		Unweighted Sample Size	Weighted Sample Size	Unweighted Sample Size	Weighted Sample Size
19 - 23	MISSING	136	26,057.4	1	346.0
19 - 23	0 - $ 7,500	460	87,714.9	306	86,342.1
19 - 23	$ 7,501 - $10,000	430	91,055.9	293	90,097.9
19 - 23	$10,001 - $12,500	180	45,321.1	129	46,315.9
19 - 23	$12,501 - $15,000	294	68,232.3	211	72,134.3
19 - 23	$15,001 - $17,500	176	34,008.9	118	37,975.3
19 - 23	$17,501 - $20,000	445	95,349.6	310	100,871.4
19 - 23	$20,001 - $25,000	480	93,896.1	314	94,387.9
19 - 23	$25,001 - $30,000	593	112,863.1	410	114,767.6
19 - 23	$30,001 - $35,000	410	76,939.7	303	88,890.0
19 - 23	$45,001 - $40,000	556	97,882.8	385	96,974.7
19 - 23	$40,001 - $45,000	350	54,055.3	266	57,973.7
19 - 23	$45,001 - $50,000	561	100,491.6	408	98,091.3
19 - 23	$50,001 +	3,359	546,787.1	2,419	546,912.8
19 - 23	DON'T KNOW	703	142,995.6	415	165,622.9
19 - 23	REFUSED	366	57,479.8	177	49,467.0
24 - 29	MISSING	143	23,150.1	2	65.8
24 - 29	0 - $ 7,500	551	121,932.3	376	123,037.4
24 - 29	$ 7,501 - $10,000	467	104,370.3	319	106,401.2
24 - 29	$10,001 - $12,500	210	42,559.4	137	42,248.7
24 - 29	$12,501 - $15,000	366	76,951.5	260	78,649.9
24 - 29	$15,001 - $17,500	189	38,262.8	120	33,540.7
24 - 29	$17,501 - $20,000	511	106,318.4	351	114,206.0
24 - 29	$20,001 - $25,000	639	126,484.2	442	119,826.6
24 - 29	$25,001 - $30,000	738	138,751.7	493	136,371.6
24 - 29	$30,001 - $35,000	526	109,718.9	366	113,743.6
24 - 29	$45,001 - $40,000	613	105,685.2	428	104,368.3
24 - 29	$40,001 - $45,000	394	68,178.2	286	72,380.7
24 - 29	$45,001 - $50,000	621	116,506.6	429	106,331.7
24 - 29	$50,001 +	4,050	666,286.7	2,896	670,098.7
24 - 29	DON'T KNOW	815	157,499.7	518	182,313.4
24 - 29	REFUSED	497	87,531.1	218	71,623.0
30 - 35	MISSING	166	34,769.6	1	33.5
30 - 35	0 - $ 7,500	517	113,119.0	324	100,173.5
30 - 35	$ 7,501 - $10,000	433	100,031.8	285	102,241.6
30 - 35	$10,001 - $12,500	213	46,930.4	152	51,318.9
30 - 35	$12,501 - $15,000	325	67,853.1	226	65,652.1
30 - 35	$15,001 - $17,500	192	43,513.7	140	49,821.7
30 - 35	$17,501 - $20,000	517	102,103.1	328	89,797.2
30 - 35	$20,001 - $25,000	565	129,099.3	393	131,585.8
30 - 35	$25,001 - $30,000	691	138,333.4	453	144,693.8
30 - 35	$30,001 - $35,000	551	101,097.6	383	100,188.5
30 - 35	$45,001 - $40,000	622	109,259.6	427	113,054.3
30 - 35	$40,001 - $45,000	410	74,044.7	295	74,092.1
30 - 35	$45,001 - $50,000	611	100,893.9	422	98,205.4

Table I.3: Estimated population totals and sample sizes for age group by family income, National Immunization Survey, 2002 (continued)

Age Group in Months	Family Income	Children with Completed Household Interviews		Children with Adequate Provider Data	
		Unweighted Sample Size	Weighted Sample Size	Unweighted Sample Size	Weighted Sample Size
30 - 35	$50,001 +	3,889	624,406.9	2,854	658,320.3
30 - 35	DON'T KNOW	709	162,942.6	416	178,014.8
30 - 35	REFUSED	453	75,822.2	205	65,967.3

Table I.4: Estimated population totals and sample sizes for age group by race/ethnicity, National Immunization Survey, 2002

		Children with Completed Household Interviews		Children with Adequate Provider Data	
Age Group In Months	**Race/Ethnicity Of Child**	**Unweighted Sample Size**	**Weighted Sample Size**	**Unweighted Sample Size**	**Weighted Sample Size**
19 - 23	HISPANIC	1,975	437,172.6	1,299	451,728.6
19 - 23	NONHISPANIC WHITE ALONE	5,209	915,683.9	3,696	909,285.9
19 - 23	NONHISPANIC BLACK ALONE	1,467	234,294.9	885	238,473.0
19 - 23	NONHISPANIC ALL OTHER RACES ALONE AND MULTI-RACIAL	848	143,979.8	585	147,683.6
24 - 29	HISPANIC	2,349	508,574.2	1,474	489,598.2
24 - 29	NONHISPANIC WHITE ALONE	6,242	1,124,318.9	4,485	1,133,751.6
24 - 29	NONHISPANIC BLACK ALONE	1,715	272,033.4	1,011	275,088.2
24 - 29	NONHISPANIC ALL OTHER RACES ALONE AND MULTI-RACIAL	1,024	185,260.5	671	176,769.2
30 - 35	HISPANIC	2,170	478,105.0	1,407	482,669.9
30 - 35	NONHISPANIC WHITE ALONE	6,096	1,090,151.1	4,340	1,098,982.3
30 - 35	NONHISPANIC BLACK ALONE	1,648	289,745.9	928	280,996.4
30 - 35	NONHISPANIC ALL OTHER RACES ALONE AND MULTI-RACIAL	950	166,218.8	629	160,512.3

Table I.5: Estimated population totals and sample sizes for age group by gender, National Immunization Survey, 2002

		Children with Completed Household Interviews		Children with Adequate Provider Data	
Age Group In Months	**Gender**	**Unweighted Sample Size**	**Weighted Sample Size**	**Unweighted Sample Size**	**Weighted Sample Size**
19 - 23	MALE	4,883	892,693.0	3,349	891,534.2
19 - 23	FEMALE	4,616	838,438.1	3,116	855,636.9
24 - 29	MALE	5,807	1,089,459.4	3,866	1,056,664.6
24 - 29	FEMALE	5,523	1,000,727.7	3,775	1,018,542.7
30 - 35	MALE	5,609	1,028,488.4	3,809	1,062,441.7
30 - 35	FEMALE	5,255	995,732.5	3,495	960,719.0

Table I.6: Sample sizes for shot card use by presence of adequate provider data, National Immunization Survey, 2002.

Shot Card Use	Presence of Adequate Provider Data	Unweighted Sample Size	Percent
SHOT CARD	ADEQUATE PROVIDER DATA	9,607	30.3
SHOT CARD	NO ADEQUATE PROVIDER DATA	3,814	12.0
NO SHOT CARD	ADEQUATE PROVIDER DATA	11,803	37.2
NO SHOT CARD	NO ADEQUATE PROVIDER DATA	6,469	20.4
TOTAL		31,693	100

Table I.7: Estimates of Vaccination Coverage and 95-Percent Confidence-Interval Half-Widths, National Immunization Survey, 2002

State/IAP Area	3+ DTP	4+ DTP	3+ POLIO	1+ MMR	3+ HIB	3+ HEP B	1+ VRC	3+ PCV	3:3:1	4:3:1	4:3:1:3	4:3:1:3:3	4:3:1:3:3:1
US National	94.9±0.6	81.6±0.9	90.2±0.7	91.6±0.7	93.1±0.6	89.9±0.7	80.6±0.9	40.8±1.1	85.8±0.8	78.5±1.0	77.5±1.0	74.8±1.0	65.5±1.1
Alabama	96.8±2.4	86.5±4.3	89.0±4.0	91.6±3.6	96.1±2.1	91.7±3.2	89.3±3.8	32.2±5.7	84.1±4.8	80.8±5.1	79.5±5.1	76.8±5.3	73.3±5.5
AL-Jefferson County	96.5±3.0	85.8±5.0	88.2±4.5	91.1±4.3	94.3±3.7	89.2±4.4	91.1±3.7	37.1±7.0	84.6±5.0	81.7±5.4	81.7±5.4	77.8±5.9	74.1±6.2
AL-Rest of State	96.8±2.8	86.7±5.0	89.2±4.6	91.7±4.2	96.4±2.4	92.1±3.7	89.0±4.5	31.4±6.7	84.0±5.5	80.6±5.9	79.2±6.0	76.6±6.1	73.1±6.4
Alaska	95.7±2.9	82.3±5.3	86.6±4.9	88.7±4.5	94.8±3.1	88.8±4.7	63.6±6.5	29.8±5.8	83.3±5.2	78.3±5.6	78.3±5.6	75.3±5.9	56.2±6.7
Arizona	92.8±3.0	74.8±4.4	86.5±3.7	88.9±3.1	91.6±3.0	89.2±3.3	78.6±3.9	28.1±4.2	80.5±4.1	70.0±4.7	69.5±4.7	67.9±4.7	59.0±4.9
AZ-Maricopa County	92.6±4.3	78.4±5.9	87.1±5.2	91.3±4.0	91.7±4.3	89.6±4.5	80.7±5.2	26.5±5.6	81.7±5.7	73.7±6.3	73.1±6.3	71.8±6.4	62.2±6.7
AZ-Rest of State	93.3±3.3	68.5±6.6	85.2±4.7	84.8±4.8	91.5±3.6	88.5±4.1	74.7±5.8	31.0±6.2	78.5±5.5	63.5±6.8	63.3±6.8	61.2±6.7	53.5±6.8
Arkansas	95.7±2.1	76.4±5.8	92.9±2.8	92.8±3.3	95.3±2.2	91.6±3.0	88.7±4.1	24.9±6.2	88.4±3.9	74.6±5.9	74.4±5.9	71.0±6.1	68.3±6.4
California	93.5±2.6	81.4±3.5	90.3±2.6	90.4±2.9	90.1±2.9	88.2±3.0	85.1±3.2	41.9±4.2	84.5±3.3	77.5±3.7	75.8±3.8	73.2±3.8	67.1±4.0
CA-Los Angeles Co.	93.1±4.2	83.7±5.3	88.3±4.8	91.1±4.0	89.7±4.7	90.4±3.9	88.1±4.3	34.4±6.4	85.4±5.1	79.6±5.6	77.1±5.8	76.0±5.9	72.3±6.1
CA-San Diego County	93.4±3.7	83.0±5.3	87.2±4.7	90.1±4.2	91.8±4.0	86.7±4.9	87.8±4.6	47.0±6.9	84.8±5.0	79.0±5.7	77.7±5.8	74.1±6.1	70.7±6.3
CA-Santa Clara Co.	96.3±2.3	88.6±3.9	93.6±3.0	93.0±3.2	94.6±2.8	92.9±3.1	90.3±3.6	54.6±6.4	89.5±3.8	85.0±4.4	83.7±4.5	81.1±4.8	75.2±5.3
CA-Rest of State	93.5±4.0	79.3±5.4	91.6±3.8	89.8±4.6	89.6±4.5	86.8±4.8	82.7±5.2	44.0±6.4	83.5±5.2	75.6±5.7	74.0±5.8	70.9±5.9	63.1±6.2
Colorado	91.1±4.2	66.2±6.5	90.1±3.9	90.7±4.0	92.1±3.5	92.4±3.3	79.8±5.5	36.8±6.4	84.9±4.9	64.7±6.6	64.3±6.6	62.7±6.6	56.1±6.8
Connecticut	95.7±2.9	87.1±4.7	93.8±3.7	95.3±2.7	97.1±2.7	91.4±3.8	86.5±4.6	46.4±6.5	90.4±4.1	86.1±4.8	85.7±4.9	81.9±5.2	72.8±5.9
Delaware	96.8±2.4	88.4±4.2	91.6±3.6	95.2±2.7	91.5±4.4	92.4±4.1	86.0±4.2	46.9±6.6	89.9±3.9	84.8±4.6	81.1±5.3	78.7±5.5	69.7±5.9
Dist. of Columbia	94.2±3.5	77.9±7.2	92.6±3.3	91.2±4.9	90.4±4.6	91.0±3.9	91.1±4.8	36.2±7.4	84.1±5.9	73.8±7.4	72.2±7.4	69.7±7.5	68.3±7.5
Florida	95.3±2.5	80.6±4.3	90.2±3.3	91.1±3.2	92.8±2.9	89.9±3.5	80.8±4.4	36.0±5.3	87.1±3.7	78.0±4.4	77.2±4.4	74.5±4.7	66.4±5.1
FL-Miami-Dade Co.	95.6±2.9	80.4±6.0	87.9±4.7	90.7±4.0	92.1±3.6	91.5±3.7	78.3±5.6	28.4±5.9	85.1±5.0	75.4±6.3	73.3±6.4	70.9±6.5	60.2±7.0
FL-Duval County	94.3±4.6	81.7±6.5	90.7±5.1	92.1±5.3	94.8±4.5	93.0±4.7	86.0±5.6	40.1±7.0	86.4±6.0	78.0±6.9	77.3±6.9	76.1±7.0	70.3±7.1
FL-Rest of State	95.3±3.1	80.6±5.3	90.7±4.1	91.1±4.0	92.8±3.6	89.3±4.5	80.9±5.6	37.2±6.7	87.6±4.5	78.6±5.5	78.0±5.5	75.1±5.8	67.3±6.4
Georgia	96.8±1.7	86.2±3.7	92.9±2.4	93.0±3.0	93.9±2.5	92.4±2.6	89.2±3.4	42.6±5.5	88.6±3.4	83.4±3.9	82.0±4.1	80.4±4.2	76.5±4.5
GA-Fulton/DeKalb	94.7±2.9	83.0±5.3	89.3±4.2	94.4±3.0	94.5±3.0	91.2±3.9	91.1±3.5	45.8±6.6	87.0±4.4	79.4±5.6	79.1±5.6	77.5±5.7	74.6±5.9
GA-Rest of State	97.3±2.0	87.0±4.4	93.7±2.8	92.7±3.6	93.8±2.9	92.7±3.1	88.7±4.1	41.9±6.6	88.9±4.0	84.4±4.7	82.6±4.9	81.0±5.0	76.9±5.4
Hawaii	94.4±3.8	83.0±5.3	91.3±4.2	96.4±2.5	93.5±3.4	90.7±4.3	81.6±5.2	62.7±6.4	89.4±4.4	81.3±5.4	80.9±5.4	78.7±5.5	69.1±6.1
Idaho	94.8±3.0	78.5±5.5	88.5±4.4	86.9±4.6	93.6±3.2	89.5±4.0	65.9±6.0	29.2±5.7	82.3±5.0	73.9±5.7	73.3±5.8	69.4±5.9	52.6±6.3
Illinois	96.9±1.6	84.4±4.0	91.8±2.7	94.4±2.2	95.8±1.8	92.5±2.7	69.9±5.1	38.4±5.1	87.4±3.3	80.4±4.2	79.6±4.3	78.6±4.3	58.1±5.3
IL-City of Chicago	95.0±3.5	76.8±7.3	85.2±6.8	90.8±4.5	94.4±3.7	86.0±6.8	77.7±6.7	37.2±7.5	79.9±7.0	72.3±7.4	71.5±7.4	69.1±7.5	58.3±7.9
IL-Rest of State	97.6±1.8	87.3±4.7	94.3±2.6	95.8±2.4	96.4±2.1	94.9±2.5	67.0±6.5	38.9±6.4	90.3±3.6	83.5±5.1	82.6±5.1	82.1±5.2	58.1±6.6
Indiana	95.2±2.3	81.7±4.3	90.5±3.3	91.1±3.2	91.7±3.5	93.2±2.7	70.0±5.3	40.7±5.9	85.7±3.8	79.2±4.5	77.9±4.6	76.0±5.0	59.4±5.8
IN-Marion County	94.5±3.2	78.9±6.2	87.5±5.6	90.7±4.8	93.8±3.5	91.7±3.8	75.4±6.3	46.1±6.7	83.9±5.8	75.6±6.5	75.3±6.5	74.0±6.5	62.2±7.0
IN-Rest of State	95.4±2.7	82.3±5.0	91.1±3.8	91.1±3.7	91.2±4.1	93.6±3.2	68.9±6.3	39.6±6.9	86.0±4.5	79.9±5.2	78.4±5.4	76.4±5.8	58.9±6.8
Iowa	96.5±2.5	83.3±5.1	91.4±3.6	92.3±3.5	92.7±4.0	90.6±4.2	66.5±6.2	43.3±6.6	87.5±4.2	80.7±5.4	79.7±5.4	78.7±5.5	58.2±6.5
Kansas	93.5±4.3	76.2±6.5	89.9±4.8	93.9±2.8	92.1±4.4	86.9±5.5	76.2±5.5	39.7±6.6	87.7±5.0	74.0±6.6	72.9±6.6	66.8±6.9	55.1±6.9
Kentucky	93.5±4.1	76.3±6.2	89.3±4.9	88.0±5.0	93.1±4.4	90.5±4.7	78.3±6.0	47.7±7.0	83.4±5.5	74.4±6.3	74.4±6.3	72.3±6.4	63.6±6.8
Louisiana	95.7±2.3	74.2±5.4	87.5±3.9	87.4±3.9	92.8±3.2	90.7±3.4	83.4±4.0	26.7±5.1	80.9±4.7	69.8±5.5	69.3±5.5	66.8±5.6	61.9±5.8
LA-Orleans Parish	92.1±3.8	70.1±7.7	83.5±6.0	88.0±4.7	89.7±4.9	84.9±6.2	77.7±6.8	27.4±6.8	76.6±6.7	65.0±8.0	63.4±8.1	60.5±8.3	53.3±8.6

Table I.7: Estimates of Vaccination Coverage and 95-Percent Confidence-Interval Half-Widths, National Immunization Survey, 2002 (continued)

State/IAP Area	3+ DTP	4+ DTP	3+ POLIO	1+ MMR	3+ HIB	3+ HEP B	1+ VRC	1+ PCV	3:3:1	4:3:1	4:3:1:3	4:3:1:3:3	4:3:1:3:3:1
LA-Rest of State	96.1±2.6	74.7±6.0	88.0±4.4	87.3±4.3	93.2±3.6	91.4±3.8	84.1±4.4	26.7±5.7	81.5±5.2	70.4±6.2	70.0±6.2	67.6±6.3	63.0±6.4
Maine	97.0±2.3	87.3±4.5	94.6±3.1	92.3±3.5	93.8±3.1	93.7±2.9	73.0±6.0	39.0±6.4	89.5±4.1	83.7±4.9	82.8±4.9	80.7±5.1	62.1±6.5
Maryland	98.0±1.3	84.6±5.0	92.5±3.7	95.4±3.2	96.4±2.0	93.0±2.8	87.7±4.8	42.5±6.3	89.3±4.5	81.8±5.5	80.8±5.6	78.7±5.6	70.7±6.4
MD-Baltimore City	94.4±3.2	77.4±6.2	93.8±3.0	95.6±3.6	92.7±4.3	89.5±4.9	94.6±3.7	34.6±7.1	89.2±4.7	76.2±6.3	74.6±6.3	70.8±6.7	69.1±6.8
MD-Rest of State	98.7±1.4	85.8±5.8	92.2±4.3	95.4±3.7	97.0±2.2	93.6±3.2	86.5±5.6	43.8±7.3	89.3±5.2	82.7±6.4	81.9±6.4	80.1±6.5	71.0±7.3
Massachusetts	97.0±2.3	92.3±3.0	94.8±2.7	95.5±2.5	97.7±2.2	93.7±3.0	87.0±3.9	62.0±5.5	92.2±3.0	89.5±3.4	89.2±3.4	86.2±3.8	78.0±4.6
MA-City of Boston	93.8±3.3	86.0±5.0	91.7±4.4	90.5±4.4	93.1±3.5	89.3±4.9	85.9±5.0	63.8±6.4	86.4±5.0	82.5±5.3	79.9±5.6	76.6±6.3	70.7±6.5
MA-Rest of State	97.4±2.6	93.1±3.3	95.1±3.0	96.1±2.8	98.3±2.4	94.2±3.3	87.1±4.3	61.8±6.1	92.9±3.3	90.3±3.7	90.3±3.7	87.4±4.1	78.8±5.0
Michigan	97.9±1.0	87.4±3.7	92.9±2.4	93.3±2.9	96.6±1.9	93.1±2.4	83.0±5.0	34.0±5.7	89.2±3.4	84.3±4.1	83.8±4.2	81.6±4.4	71.7±5.6
MI-City of Detroit	88.0±4.8	68.9±6.7	80.5±5.9	90.6±3.9	87.0±4.8	83.3±5.5	81.0±5.4	16.1±5.1	77.5±6.1	66.7±6.8	65.9±6.8	64.5±6.8	59.5±6.9
MI-Rest of State	99.2±0.8	89.9±4.1	94.6±2.6	93.7±3.3	97.9±2.1	94.4±2.6	83.2±5.6	36.3±6.4	90.7±3.7	86.6±4.6	86.1±4.6	83.9±4.9	73.3±6.3
Minnesota	98.7±1.2	85.1±5.2	94.8±2.7	92.2±3.9	89.8±5.4	87.9±4.6	73.6±6.2	48.2±6.8	89.3±4.4	82.2±5.6	78.9±6.5	76.8±6.5	61.5±6.9
Mississippi	95.3±3.2	79.9±6.0	91.0±4.2	91.1±4.0	90.3±4.5	88.3±5.0	77.5±5.9	24.5±6.7	88.1±4.6	77.8±6.2	77.8±6.2	75.7±6.5	63.9±7.3
Missouri	94.7±3.8	81.2±6.0	86.5±5.2	94.8±3.2	94.2±3.6	87.7±5.1	77.1±5.8	49.1±6.8	83.6±5.8	77.7±6.3	77.3±6.4	73.0±6.5	60.1±7.0
Montana	88.2±5.0	72.9±6.6	83.6±5.7	85.3±4.8	86.5±5.3	82.0±5.7	59.2±6.9	39.6±6.6	77.9±6.1	71.5±6.6	70.9±6.7	66.6±6.8	49.4±7.2
Nebraska	95.9±2.7	82.4±5.3	92.1±3.9	93.2±3.7	92.2±4.1	91.2±4.2	74.8±5.8	44.8±6.6	87.5±4.7	80.6±5.4	79.2±5.5	78.2±5.6	64.3±6.3
Nevada	90.4±4.6	79.0±5.9	88.5±4.8	89.4±4.6	89.8±4.6	90.1±4.6	74.7±6.1	13.1±4.4	85.8±5.1	78.4±5.9	77.8±6.0	76.4±6.1	65.3±6.5
New Hampshire	99.0±1.0	93.5±2.8	96.7±2.2	93.9±3.6	97.9±1.7	93.7±3.1	73.9±6.2	47.8±6.6	90.5±4.1	88.1±4.4	87.3±4.5	83.5±5.0	66.2±6.5
New Jersey	95.7±2.8	84.9±4.6	90.6±3.7	92.8±3.3	95.5±2.4	90.5±3.7	80.2±5.4	55.6±6.2	86.8±4.4	81.9±4.9	80.4±5.0	76.1±5.4	65.5±6.0
NJ-City of Newark	92.3±7.3	64.6±8.2	84.5±7.8	89.1±4.9	89.9±7.5	87.2±7.5	77.1±6.5	30.5±7.0	78.3±8.0	61.5±8.2	59.9±8.2	57.5±8.1	50.4±7.9
NJ-Rest of State	95.8±3.0	85.8±4.8	90.8±3.8	93.0±3.5	95.7±2.5	90.6±3.9	80.3±5.6	56.7±6.5	87.2±4.5	82.9±5.1	81.3±5.2	77.0±5.7	66.2±6.3
New Mexico	92.9±3.7	70.2±6.5	85.9±5.2	92.5±3.6	91.3±3.7	85.9±5.2	80.5±5.9	28.0±6.3	82.0±5.8	68.1±6.6	67.4±6.6	64.6±6.7	59.1±7.0
New York	96.2±1.8	85.4±3.8	91.0±2.9	94.4±2.4	96.2±2.1	92.3±2.7	81.0±4.1	48.0±5.2	86.7±3.5	81.8±4.0	81.3±4.0	77.5±4.3	67.3±4.8
NY-NYC 5 Counties	97.5±1.8	86.3±5.3	89.4±4.6	96.9±2.2	94.8±3.8	95.3±2.8	85.0±5.4	42.0±7.4	86.9±4.9	81.8±5.8	81.0±5.9	78.1±6.2	71.0±6.7
NY-Rest of State	95.0±2.9	84.6±5.3	92.5±3.7	92.2±4.0	97.5±2.2	89.6±4.3	77.4±6.2	53.3±7.2	86.6±4.9	81.8±5.5	81.6±5.5	77.0±6.0	64.0±6.8
North Carolina	95.7±3.3	88.2±4.8	93.9±3.3	94.9±3.1	97.4±2.3	91.4±4.1	81.8±5.9	42.9±7.2	89.9±4.4	86.9±4.9	86.5±4.9	82.4±5.5	69.7±6.8
North Dakota	93.0±5.5	81.4±6.6	90.7±5.6	90.7±5.7	94.9±5.3	93.5±5.5	67.4±6.7	29.5±6.0	86.4±5.9	78.8±6.7	78.8±6.7	77.7±6.7	56.3±6.9
Ohio	94.0±2.7	81.7±4.2	87.1±3.7	91.3±3.1	91.8±3.3	88.0±3.7	75.4±4.4	42.6±4.8	83.5±3.9	77.9±4.4	77.1±4.4	75.0±4.5	63.5±4.9
OH-Cuyahoga County	94.7±3.5	78.3±7.5	91.5±4.8	93.5±4.4	93.1±4.4	89.5±5.0	82.3±6.0	54.0±8.0	85.3±5.8	74.6±7.7	74.2±7.8	72.1±7.8	65.0±8.0
OH-Franklin County	97.4±2.4	87.4±4.9	92.1±3.5	94.3±3.2	95.1±3.1	91.1±4.1	79.2±6.4	45.0±7.1	88.7±4.2	84.5±5.2	83.7±5.2	81.0±5.6	69.4±6.8
OH-Rest of State	93.4±3.4	81.4±5.2	85.7±4.8	90.5±4.0	91.1±4.2	87.3±4.7	73.7±5.6	40.4±6.0	82.5±5.0	77.5±5.5	76.6±5.5	74.6±5.7	62.4±6.1
Oklahoma	90.3±4.9	71.3±7.0	86.6±5.4	86.4±5.3	86.1±6.0	86.5±5.4	81.0±5.8	31.1±6.5	82.6±5.8	69.6±7.1	66.7±7.4	65.3±7.4	60.3±7.4
Oregon	93.3±3.2	78.7±5.3	86.3±4.5	86.6±4.4	92.0±3.5	85.5±4.6	73.7±5.6	37.3±5.9	81.3±5.0	74.8±5.6	74.5±5.6	70.0±5.9	60.3±6.1
Pennsylvania	92.8±4.0	83.0±4.8	89.9±4.3	92.2±4.0	93.7±3.9	92.1±4.1	84.7±4.9	54.4±6.1	85.2±4.7	78.7±5.2	77.1±5.3	74.7±5.5	67.6±5.8
PA-Philadelphia	94.9±3.0	77.9±5.8	91.3±3.9	93.7±3.4	92.7±3.5	91.3±3.9	88.4±4.3	50.0±6.9	87.8±4.6	75.0±6.0	73.5±6.0	72.0±6.1	68.2±6.3
PA-Rest of State	92.5±4.7	84.0±5.5	89.7±5.0	92.0±4.6	93.9±4.6	92.3±4.8	84.1±5.7	55.2±7.1	84.8±5.5	79.3±6.0	77.7±6.2	75.2±6.4	67.5±6.7
Rhode Island	99.7±0.5	92.9±3.7	94.2±3.6	96.0±2.7	93.9±4.3	97.0±2.0	88.9±4.9	66.8±6.5	92.4±3.8	90.1±4.1	85.8±5.5	84.5±5.6	80.7±5.9
South Carolina	96.8±3.3	82.2±6.1	92.8±4.5	92.6±4.7	95.2±4.0	93.8±3.8	86.0±5.4	42.8±6.7	88.3±5.6	80.5±6.4	80.2±6.4	78.8±6.5	73.8±6.7
South Dakota	94.4±4.0	84.3±6.0	90.1±5.2	95.5±3.4	93.4±4.0	90.6±4.5	71.2±6.5	15.7±5.1	88.2±5.4	82.0±6.3	81.2±6.3	79.9±6.4	62.0±7.0

Table I.7: Estimates of Vaccination Coverage and 95-Percent Confidence-Interval Half-Widths, National Immunization Survey, 2002 (continued)

State/IAP Area	3+ DTP	4+ DTP	3+ POLIO	1+ MMR	3+ HIB	3+ HEP B	1+ VRC	3+ PCV	3:3:1	4:3:1	4:3:1:3	4:3:1:3:3	4:3:1:3:3:1
Tennessee	95.5±2.0	83.0±3.8	93.2±2.3	92.5±2.4	94.6±2.1	93.0±2.4	81.1±4.1	41.8±4.9	88.8±2.8	80.5±3.9	79.7±4.0	78.2±4.1	67.3±4.8
TN-Davidson County	96.5±2.2	83.2±5.6	92.8±3.4	90.4±5.0	96.0±3.0	94.4±3.0	77.8±6.7	46.2±7.7	86.3±5.4	81.3±5.8	79.8±6.1	79.3±6.2	66.7±7.3
TN-Shelby County	94.8±3.7	76.1±6.6	88.1±5.2	86.2±6.0	89.9±4.7	92.3±3.9	79.3±5.9	39.5±6.7	80.9±6.4	73.4±6.7	72.6±6.7	72.5±6.7	60.6±7.2
TN-Rest of State	95.5±2.7	84.8±5.0	94.7±2.9	94.6±2.9	95.7±2.7	92.9±3.3	82.1±5.5	41.7±6.7	91.3±3.5	82.3±5.2	81.5±5.3	79.6±5.4	69.2±6.5
Texas	93.1±2.9	74.6±5.0	87.2±3.7	87.7±3.9	91.4±3.0	86.2±3.8	82.9±4.1	33.9±4.7	81.0±4.5	71.3±5.0	70.9±5.0	67.9±5.1	65.0±5.1
TX-Bexar County	94.4±2.9	80.6±5.4	89.6±3.8	91.3±4.1	94.0±3.0	92.2±3.2	89.9±4.1	40.3±6.9	84.7±4.9	76.4±5.8	75.9±5.8	73.9±5.9	71.8±6.1
TX-City of Houston	90.2±5.3	66.9±8.1	82.3±6.6	84.7±6.1	86.4±6.7	82.6±6.3	75.0±7.5	32.1±7 .4	75.4±7.4	64.2±8.0	63.9±8.1	61.4±8.0	55.6±8.0
TX-Dallas County	92.9±3.2	80.2±4.9	86.9±4.1	89.4±3.9	89.1±3.9	84.1±4.6	83.8±4.7	36.1±6.0	83.9±4.5	77.3±5.1	75.9±5.2	71.5±5.5	68.0±5.8
TX-El Paso County	97.7±1.8	82.0±5.7	92.0±3.5	92.1±3.6	95.1±3.5	84.7±6.2	85.1±5.1	26.5±6.1	88.3±4.1	78.6±5.9	77.1±6.0	67.4±7.1	60.6±7.3
TX-Rest of State	93.3±4.3	74.0±7.3	87.6±5.4	87.3±5.7	92.3±4.3	86.7±5.5	83.5±5.9	33.6±6.9	80.7±6.6	70.6±7.4	70.4±7.4	67.8±7.5	65.8±7.5
Utah	96.3±2.1	82.6±5.3	88.2±4.3	94.0±3.2	93.1±3.6	92.1±3.4	78.1±5.5	29.7±5.8	87.4±4.4	79.9±5.6	79.1±5.6	75.7±5.9	61.4±6.5
Vermont	99.0±1.4	91.0±3.5	94.5±2.8	94.7±2.6	97.5±1.9	89.8±3.7	66.5±6.0	41.3±6.2	91.7±3.3	87.7±3.9	87.0±4.0	80.9±4.7	57.7±6.3
Virginia	93.7±3.8	81.3±5.5	88.4±4.8	90.3±4.2	90.9±4.4	83.2±5.4	83.0±5.4	54.4±6.6	83.4±5.3	77.7±5.8	76.6±5.9	72.0±6.2	64.8±6.5
Washington	93.2±2.6	77.4±4.6	87.1±3.5	89.6±3.1	89.4±3.6	84.9±4.0	65.1±5.1	25.2±4.1	84.2±3.7	74.7±4.7	73.1±4.9	69.2±5.0	51.9±5.1
WA-King County	96.1±2.4	80.1±5.1	92.6±3.3	92.4±3.3	92.0±3.9	88.8±4.3	71.2±5.8	32.5±5.7	89.0±3.9	78.3±5.3	76.9±5.4	73.1±5.6	56.3±6.3
WA-Rest of State	92.1±3.5	76.4±6.1	84.9±4.7	88.5±4.1	88.4±4.7	83.4±5.2	62.8±6.7	22.3±5.2	82.4±4.9	73.3±6.2	71.7±6.4	67.7±6.5	50.2±6.6
West Virginia	96.1±2.5	82.9±5.9	93.8±3.1	93.6±3.0	94.4±4.5	89.9±4.9	81.8±4.8	35.4±6.9	89.0±4.0	79.0±6.1	78.5±6.2	76.9±6.3	65.8±6.8
Wisconsin	96.2±1.9	86.2±4.0	92.1±3.2	92.9±2.9	94.5±2.2	93.3±2.2	79.8±4.0	44.3±5.2	88.7±3.5	83.4±4.2	81.8±4.3	80.3±4.3	67.5±5.0
WI-Milwaukee Co.	94.4±4.0	79.7±6.9	87.8±5.1	90.1±4.4	88.2±5.8	88.5±4.4	80.4±6.0	47.8±7.7	83.4±5.7	73.6±7.3	69.8±7.6	67.8±7.7	59.9±7.7
WI-Rest of State	96.8±2.1	88.1±4.8	93.3±3.9	93.6±3.5	96.3±2.2	94.6±2.6	79.7±4.8	43.3±6.4	90.2±4.2	86.2±4.9	85.2±5.0	83.9±5.1	69.6±6.0
Wyoming	92.2±4.2	78.4±6.0	85.7±5.4	89.7±4.4	92.8±4.1	88.8±4.8	65.2±6.5	27.7±5.8	82.7±5.6	76.5±6.1	76.5±6.1	73.3±6.4	54.1±6.8