

Supporting Statement for Request for Clearance:
NATIONAL HEALTH INTERVIEW SURVEY

OMB No. 0920-0214

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B. Collection of Information Employing Statistical Methods

1. Respondent Universe and Sampling Methods

The NHIS is a cross-sectional household interview survey. The sampling plan follows a multistage probability design which permits the continuous sampling of households. Every ten years, the NHIS sampling plan is revised following the decennial census of the population. The latest sampling plan started with the 2006 NHIS and is based on the 2000 decennial census.

The usual annual NHIS sample will contain 428 primary sampling units (PSUs), usually a county, a small group of counties, or a metropolitan statistical area, drawn from 1,838 PSUs that cover the 50 States and the District of Columbia. Within PSUs, second-stage sampling units called segments contain an expected 4, 8, 12 or 16 housing units. A major feature of the sample design is to increase the reliability of estimates on the minority domains of black, Hispanic and Asian persons. To permit such over sampling, the household sample was selected from minority density substrata within each PSU. Each substratum except those for building permits are defined by the concentrations of minority households at the block level. Depending on total expected sample size within each PSU, the blocks are stratified into 1 to 8 density strata. Sixteen robust definitions for black, Hispanic, Asian concentrations are used to reduce classification degradation over time and to allow efficient sampling structures for future data analysis. Segments are sampled at higher rates within those substrata having higher concentrations of minorities compared to those substrata with low concentrations of minorities. Within an individual segment not selected from the building permit frame, households with a black, Hispanic or Asian person are sampled at rates 25 to 67 percent higher than the other households with the rate varying by substratum.

The oversampling of the black, Hispanic and Asian households is accomplished by having two sampling designations for households within a segment, a traditional interview designation and a screening designation. In a typical data collection year about 22,000 households will be designated to be screened through the collection of the NHIS core household roster to determine whether the household includes a black, Hispanic or Asian person (See the Coverage (COV) and Household Composition (HHC) sections of Attachment 2a). The households designated for such screening will be retained in the NHIS sample only if the household contains those minorities. Approximately 15,000 of designated screener households are not selected for full survey participation.

Those households selected for traditional interview will be surveyed regardless of household composition. This strategy represents a cost-effective sampling approach for producing reliable estimates

for the black, Hispanic and Asian populations. The sample assigned to each week is representative of the target population and the weekly samples are additive.

In a typical data collection year the final NHIS sample will contain almost 40,000 households and 100,000 persons. Of these households about 20% will have been selected by the screening process. The updated sample design will not impact any survey protocols.

2. Procedures for the Collection of Information

The U.S. Bureau of the Census is responsible for drawing the final sample and for performing the necessary field procedures related to the survey. Specifications for the field operations are provided by the Division of Health Interview Statistics (DHIS) staff at NCHS.

DHIS staff provides specifications for the sample design, specific content of the questionnaire, detailed instructions for the administration of the interview and procedures to measure quality control in the information collection for the reinterview phase. The Census Bureau, in addition to drawing the sample, performs supervisor and interviewer training and conducts the field operations. These operations include first contacting all households via an advance letter, followed by a personal visit. Making contact via telephone is also sometimes used to follow up on respondents who were unable to complete the interview during a personal visit. (see B.3 for more detail). DHIS staff monitors the field activities through observation and communication with Census during all phases of data collection.

All data are weighted to national estimates using the following four components: 1) The reciprocal of the probability of selection; 2) a household nonresponse adjustment within segment; 3) a first-stage ratio adjustment; and 4) a second stage ratio (or post stratification) adjustment to the U.S. population by age, sex, and race-ethnicity.

Standard errors are calculated using a Taylor linearization approach as applied in SUDAAN variance software.

A small sample of respondents is reinterviewed by the Census Bureau to insure that interviewers are not submitting falsified interviews. NHIS reinterviews are usually conducted by a Census field supervisor over the telephone. The reinterview is very brief and verifies that the original interview was completed. Typically the NHIS reinterview is conducted within two to three weeks after the main survey. It is conducted with the same respondent who originally participated in the NHIS. After a brief introduction, the

reinterviewer determines if the original interview was done, and asks a few standard questions about the interview, such as its length. The questionnaire is administered by telephone using a Computer Assisted Personal Interview. A copy of the CAPI Reference Questionnaire (CRQ) for the reinterview is shown as Attachment 2b.

Additional technical details concerning sample design and survey execution can be found in the National Center for Health Statistics (2006) Survey Description Document available at <http://www.cdc.gov/nchs/nhis.htm>

3. Methods to Maximize Response Rates and Deal with Nonresponse

It is expected that the household response rate for the 2007 data collection will be approximately 87 percent. This rate is calculated by dividing the number of completed household interviews by the number of assigned, in-scope households. Of those not responding, about half are expected to be refusals to participate, and about half are expected to be households where no one was ever found at home after repeated tries. The sample child component is completed in about 90 percent of participating households for an overall response rate of 78 percent. The sample adult component is completed in about 80 percent of participating households for an overall response rate of 69 percent.

In order to maximize response rates a letter is sent to all sample households prior to the interviewer's arrival (Attachment 5a). The letter contains a reference to the authorizing legislation of the survey, a statement of confidentiality and an explanation of how the data will be used as well as the voluntary nature of the survey. The letter explains the purpose and need for the survey and tells the respondent that there is some chance that they may be contacted more than once. If at the time of the initial contact the interviewer is told that the letter was not received, another letter is provided prior to the interview and time is allowed for the person to read it before proceeding. The letter legitimizes and justifies the survey, increasing the probability that the respondent will cooperate.

If the time of contact is inconvenient for an interview, interviewers offer to schedule an appointment for a more convenient time. If the respondent refuses to cooperate with one interviewer, the field work supervisor often reassigns the case to a more experienced interviewer with experience and skill at converting reluctant respondents. Although face-to-face interviewers are preferred, interviewers are allowed to substitute telephone interviews if attempts to get a face-to-face interview are not successful.

At the end of the interview, respondents are given a letter thanking them for their participation (Attachment 5b). In addition to being an appropriate gesture, the thank you letter is intended and expected to create and maintain good will that may improve response to future contacts with the respondent as part of follow-up or linked surveys.

4. Tests of Procedures or Methods to be Undertaken

The NHIS Basic Module is the result of testing and evaluation in 1996 during redesign, and of ongoing testing and evaluation studies conducted from 1997 through 2006.

Tests of the Basic Module

The developmental work related to the NCHS Questionnaire Design Research Laboratory (QDRL) testing is described in detail in the OMB clearance submission entitled "NCHS Laboratory-Based Questionnaire Research" (OMB No. 0920-0222).

Tests of the 2007 Topical Modules

Many of the questions related to complementary and alternative medicine were QDRL tested in 2001 for fielding in the 2002 NHIS. Since there were many changes and new questions, the supplement for 2007 went through two rounds of QDRL testing in 2006.

Many of the questions related to hearing problems were fielded in 2001. Additionally, the QDRL provided a technical review of the questions.

5. Individuals Consulted on Statistical Aspects and Individuals Collecting and/or Analyzing Data

The following person was consulted in the statistical aspects of the design and collection of the 2007 NHIS:

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