

Supporting Statement B for Request for Clearance:  
NATIONAL AMBULATORY MEDICAL CARE SURVEY

OMB No. 0920-0234

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## **B. Collections of Information Employing Statistical Methods**

### **1. Respondent Universe and Sampling Methods**

As previously mentioned in section A1, the basic statistical design and data collection methods were updated in 2012 and will continue for the 2015-2017 NAMCS. The projected sample size for 2015-2017 allows the NAMCS to make state-based estimates for 16 states annually.

#### Respondent Universe

There are two major components of the targeted NAMCS universe. The first component consists of non-Federally employed physicians (excluding those in the specialties of anesthesiology, radiology, and pathology) practicing in the United States who were classified by the American Medical Association (AMA) and the American Osteopathic Association (AOA) as being in “office-based, patient care.” There are 574,304 physicians in the sampling frame for this first component of the 2015 NAMCS. The second component consists of physicians (MDs and DOs) and mid-level providers (i.e., nurse practitioners, physician assistants, and nurse mid-wives) practicing at community health centers (CHCs).

Unlike physicians in the office-based NAMCS, physicians and mid-level providers working at CHCs are not selected at the first stage because a complete sampling frame of these providers is unavailable. We include three different types of CHCs in the sample: (1) CHCs that receive grant funds from the Federal government through Section 330 of the Public Health Service Act; (2) look-alike CHCs who meet all the requirements to receive 330 grant funding, but do not actually receive a grant; and (3) Urban Indian Federally Qualified Health Centers. The list of federally funded CHCs (330 grant) and look-alike CHCs will be provided by the Health Resources and Services Administration (HRSA). Urban Indian Federally Qualified Health Centers will be provided by the Indian Health Service.

#### NAMCS Office-based Physicians

There are two distinct sampling elements to the office-based physician component of the current NAMCS: core and expansion. In each NAMCS survey year, there is a fresh core sample of 3,000 office-based physicians that NCHS commits to fund at a minimum. Additionally, each year, a substantial number of office-based physicians may be added to the core sample, if funds become available. The combination of the individual core and expansion NAMCS samples are referred to as the base NAMCS sample within this package. The core and expansion samples (base NAMCS sample) were designed to produce estimates for as many individual states as the survey funds could support. For 2015-2017, the proposed annualized sample size for office-based physicians is 8,080 (3,000 core + 5,080 expansion). Estimates can be made separately for the four Census regions, 16 individual states with the largest populations, and the U.S. as a whole.

The base sample is a stratified list sample of physicians with strata defined by (1) the four Census regions and by 16 targeted individual states with the largest populations and (2) 14

physician specialty groups used as sampling strata in years prior to 2012. Please see **Attachment J** for a breakdown of the number of physicians in the sampling frame and sample by the 14 physician specialty groups in the sampling frame for the 2015 NAMCS. From each of these sampling strata, systematic random sampling was used to select physicians from a list in which the physicians were sorted, in order of priority, by MD/DO status, practice type (primary care, surgical, medical), by MSA status (in MSA vs. not-in MSA where MSA is Metropolitan Statistical Areas defined by the Office of Management and Budget), subspecialty groups within the major 14 specialty groups, and by hospital employed status (is or is not hospital employed).

The total office-based physician sample for each year is divided into 52 representative groups which are randomly assigned to the 52 weeks of the year. Please see **Attachment K** for a breakdown of the sampling frame for the 2015 NAMCS and sample by Census region and state. The groups are formed by systematically assigning physicians to groups from a list in which the sample physicians are arrayed according to the order in which they were selected. During the assigned week for each sample physician, a systematic random sample of approximately 30 patient visits is selected from chronologic lists of the visits made to the physician during that week. This provides for continuous data collection throughout the year to account for seasonal variation in disease and patient visit patterns. Data collection within a physician's practice begins on Monday morning of the assigned reporting week and continues through the following Sunday (substitution of a reporting week is not permitted).

#### NAMCS Community Health Centers (CHC)

The CHC component of the NAMCS uses a three stage design in which the first stage is a stratified list sample of CHC service delivery sites with strata defined by Census region and 16 individual states for which state specific estimates are targeted. From each sampling stratum, systematic random sampling is used to select service sites from a list in which the service sites are arrayed by CHC type and CHC. The total annual sample of CHC sites for each year is divided into 52 subsamples which, in turn, are randomly assigned to the 52 weeks of the year for reporting in the survey. At each sampled service delivery site, a systematic random sample of up to three providers (MDs, DOs, and/or mid-level providers) will be selected from those scheduled to work at the CHC site during the site's assigned sample week. The three providers will be selected with probability proportional to the numbers of visits the providers are expected to see during the reporting week. If fewer than three providers will see patients during the assigned week, then all providers seeing patients at that site in that week are included in the sample. As done with office-based physicians, a systematic random sample of approximately 30 patient visits to each sampled provider will be selected from chronologic lists of visits seen by the provider during the assigned week. Visits define the third stage of sampling. There is a proposed annual sample of 1,780 CHC service delivery sites for 2015-2017. Up to 3 providers will be selected from each site, but our calculations use 2.25 providers, which is the average observed in field work. This adds 4,005 providers to the NAMCS sample. Similar to the office-based NAMCS, the CHC sample will produce visit estimates for four regions, 16 individual states, and the whole US.

| <b>Annualized NAMCS Sample Counts for 2015-2017</b>         |               |
|---|---------------|
| State-based estimates                                       | 16 states     |
| <b>Office-based Physicians</b>                              |               |
| Core Office-based Physicians                                | } <b>Base</b> |
| Expansion sample (Office-based)                             |               |
| <b>Total Office-based Physicians</b>                        | <b>8,080</b>  |
| <b>Community Health Centers</b>                             |               |
| Core CHC service delivery sites                             | } <b>Base</b> |
| Expansion sample - CHC sites                                |               |
| Total CHC service delivery sites                            | 1,780         |
| <b>Total CHC Providers</b> = CHC sites * 2.25 CHC providers | <b>4,005</b>  |
| <b>Combined Sample Size</b>                                 | <b>12,085</b> |

## 2. Procedures for the Collection of Information

### A. Core NAMCS

#### Training

Primary training in data collection procedures is conducted at different times with three types of staff. First, Census Bureau Headquarters staff are responsible for training the Regional Office (RO) staff. Second, Regional Office staff have the primary responsibility for training the FRs and for supervising physician/provider data collection activities. FR training covers the following topics: inducting the physician/provider, confidentiality, HIPAA, instructing physicians'/providers' staff, supervising patient visit sampling, editing completed forms, retrieving missing data, and medical record abstraction. Finally, FRs induct the physicians/providers and train their staffs on visit sampling and completion of the PRFs if the physicians prefer to fill out the forms, themselves. In preparation for each survey year, Census staff provide initial training to FRs and RO staff on changes related to the forms, items, and procedures.

Census Bureau Headquarters staff are also responsible for writing the field manual. The field manual contains topics that cover the following: purposes of the survey; interviewing techniques; a description of Physician Induction (NAMCS-1) questionnaire, Community Health Center Induction Interview (NAMCS-201), Patient Record form (NAMCS-30), and related forms; and procedures that cover inducting office-based physicians/providers, conducting physician visits, determining the take every and random start numbers, instructing the physician's staff, supervising patient visit sampling, editing completed forms, and retrieving missing data.

Throughout the year, conference calls are held among Ambulatory and Hospital Care Statistics Branch (AHCSB) staff, Census Bureau Headquarters staff, Census Field Division staff, and

NAMCS supervisory staff from all of the Regional Offices to discuss issues relevant to the ongoing NAMCS data collection.

Newly hired FRs are trained in a centralized location, Jeffersonville, IN, on the specifics of the NAMCS survey and introduced to the automation procedures. As a follow-up, in annual training, all field representatives (including the newly hired FRs) from the 6 regional offices across the country have the opportunity to participate in a national NAMCS/NHAMCS conference highlighting issues related to (1) administering the computer-based induction instruments in the field, including efforts to increase respondent participation; (2) abstracting data in the automated PRF instrument; (3) how to manage NAMCS electronic cases, and (4) addressing FR questions and concerns. The national conference represents a unique opportunity for FRs to exchange ideas and methods on how to work on a survey that presents unique challenges not faced by other Census FRs.

### Initial Contact

Depending on the setting, initial contact is made at varying times prior to the beginning of the NAMCS-assigned reporting week for the sampled physician/CHC service delivery site. Six weeks prior to the CHCs assigned data collection week, notification is sent to each CHC executive/medical director that his/her particular site has been randomly selected to participate in NAMCS. CHC physicians/providers also receive an introductory letter, patterned after the letter sent to office-based physicians 5 weeks before their assigned reporting period. Finally, office-based physicians who have been selected to participate in the survey receive an introductory letter approximately 4 weeks before their 1-week reporting periods are to begin. All three types of letters are similar, signed by the Director of NCHS, and explain the basics of the survey. Specifically, the letters (1) highlight the voluntary nature of participation, (2) describe the planned contact with a representative from the Bureau of the Census who will act as NCHS's data collection agent, and (3) provide additional instructions and support. See **Attachment L** for copies of all three types of letters. The first letter in the attachment is intended for office-based physicians, the second is given to CHC executives/medical directors, and the final letter is for CHC providers. The letter sent to sampled NAMCS participants contains endorsing letters from specialty medical colleges and/or associations corresponding to the physician's particular specialty (**Attachment M**). In addition, we include a motivational insert (**Attachment N**) with the introductory letter. This short brochure contains reasons for participation, and questions and answers on confidentiality issues, including the HIPAA Privacy Rule.

During the initial interview with the CHC director, a Census FR completes a computer-assisted interviewing instrument, a NAMCS-201. This NAMCS-201 represents the Community Health Center Induction Interview (**Attachments C4 and C5**). Items in the automated NAMCS-201 instrument allow for the collection of general CHC contact information, along with the type of center and sources of revenue. The major purpose of the computer-based NAMCS-201 is to list all eligible providers at the sampled location, including those who will not be subjected to sampling because they are not scheduled to see patients during the CHC site's sample week. This list of providers will include only those who work at the sampled service delivery site. School-based locations of the CHC are not eligible, as institutional and occupational settings are not within the scope of NAMCS. When the list of providers has been supplied, the FR will

select three providers to be sampled. This selection will be proportional to their expected visit volume in the sample week. The FR will then obtain the telephone numbers of the selected providers so they can be contacted and inducted.

### Physician/Provider Induction

The introductory letter (**Attachment L**) to the office-based physician is followed by a telephone call from a Census Bureau FR to schedule an appointment so that the physician can be inducted into NAMCS by personal interview (**Attachments C1, C2, C3**). Each CHC physician/provider is also inducted with a letter followed by appointment scheduling and personal interview (**Attachments C1, C2, and C3**). During the induction visit, the interviewer provides the physician/CHC provider and staff with verbal and written instructions on the completion of electronic patient records (if they choose to fill out the forms themselves). At this time the interviewer also instructs the physician/CHC provider and staff on the sampling procedures, which vary according to how many visits the physician/CHC provider expects to see during the sample week. Sampling only a fraction of the visits is intended to reduce the burden to busy physicians/CHC providers. Detailed definitions and instructions for selected PRF items are provided as help screens in the electronic instrument.

### Data Collection

A computer-assisted NAMCS-1 interviewing instrument is completed for each sampled physician and CHC provider during the induction visit (**Attachments C1, C2, and C3**). As mentioned above, the questions in the first-half of the NAMCS-1 are used to guide the FRs through the induction process and verify the physician/provider's eligibility. The second half of the questions are dedicated to obtaining information concerning selected practice characteristics. For 2015, we modified selected existing questions for clarification and to keep up-to-date with current medical practice and terminology (**Attachments C2 and C3**); and added items to the Physician Induction Interview (NAMCS-1) on 1) cultural competence and 2) alcohol screening and brief intervention (SBI) (**Attachments C2 and C3**).

The bulk of data collection occurs with the completion of Patient Record forms (PRFs) (**Attachments D1, D2**). Based on a "start with" and "take every" number (generated by the automated NAMCS-1), the physician/CHC provider records each patient visiting them in sequence during the reporting week and completes PRFs for the designated sample visits. This record of patient visits may be completed whichever way works best for the physician. Visit sampling rates, based on the "start with" and "take every" number, are assigned to physicians/CHC providers according to the number of visits they expect to see during their reporting week, so that about 30 of the visits made to the physician/CHC provider during his/her reporting week will be selected for PRF completion. A random start is provided for each physician/CHC provider after which every  $n^{\text{th}}$  patient is sampled throughout the 1-week reporting period.

A PRF is completed for each sampled patient visit. The NAMCS PRF collects data on patient characteristics, such as age, sex, race, and ethnicity, and visit characteristics, such as date of visit, expected source of payment, reason for visit in patient's own words, physician diagnoses, and

medications provided or prescribed. There are two options for completing abstractions: FR abstraction or Physician/CHC provider abstraction. Since 2012, we have emphasized FR abstraction, and only in cases where the provider might refuse should the provider or office staff perform abstraction. Physicians who choose to complete PRFs will have the option to either enter the patient record data on a Census-issued laptop or use their own computer to access a secure data-entry web portal called Centurion. It is estimated that FRs will abstract data at least 80 percent of the time. Field data has shown that FRs conduct nearly all of the patient record abstractions.

### Monitoring Data Collection and Quality Control

Census Bureau Headquarters staff, Demographic Surveys Division, Housing Surveys Branch, is responsible for overseeing the data collection for NAMCS (office-based physicians and CHCs). Census Bureau Headquarters staff, Field Division, is responsible for the supervision of staff in the Bureau's Regional Offices, who in turn supervise the field representatives (FRs).

When the physician/provider insists on doing his/her own abstracting, the FR calls the physician's office or CHC site 3 times during the sampled week. Calls are intended to answer any questions the office may have and to make sure sampling is being carried out as instructed. Specifically, the first phone call at the beginning of the week is to remind the office to start sampling; mid-week contact is to handle any problems the office may be having; and the final contact, on the last day of the physician's reporting week, is to answer questions and arrange for a meeting to deliver or retrieve the laptop. An essential part of this effort is quality control, which focuses on the completeness of the patient sampling frame, adherence to the sampling procedures, and assurance that a PRF is completed for every sample visit. Computerization of the Patient Record form allows for automated edits to be built into the instrument, so that keying errors are automatically detected as the data entry person (FR or physician/CHC provider) is entering the data.

Once a case is completed, the survey data are encrypted and sent to a secure Census Bureau database through a secure internet connection. The data are then sent to our keying and coding contractor who will do medical coding on the verbatim text fields. Drug coding is conducted in-house at NCHS. Keying and data entry activities are performed under contract with SRA International. All medical and drug coding, as well as all data entry operations, are subject to quality control procedures—specifically, a 10-percent quality control sample of survey records are independently keyed and coded. Computer edits for code ranges and inconsistencies are also performed.

As in any survey, results are subject to both sampling and non-sampling errors. Non-sampling errors include reporting and processing errors, as well as biases due to nonresponse and incomplete response. To eliminate ambiguities and encourage uniform reporting, attention has been given to the phrasing of items, terms, and definitions. New questions are carefully reviewed before being added to NAMCS. After questions are fielded, periodic focus groups are created to elicit comments and to correct potential sources of confusion. The Office of Minority Health provided two CLAS questions that will be added to the 2015 NAMCS. These two items are standardized questions that originated from existing surveys to assess CLAS and awareness of

the National CLAS Standards. The new alcohol screening and brief intervention (SBI) questions were supplied by subject matter experts at the CDC's National Center on Birth Defects and Developmental Disabilities (NCBDDD). Throughout the year, we frequently consult with subject matter experts and question sponsors and these discussions greatly influence the potential modifications and additions to the 2015-2017 NAMCS. For example, CDC injury epidemiologists advised on cause of injury and ASPE advised on physician workforce.

Missing values for a few items on the survey are imputed by randomly assigning a value from a PRF with similar characteristics. These imputations are based on physician identity, physician specialty, geographic region, and the 3-digit ICD-9-CM code for primary diagnosis. In 2012 (the latest data available), imputations were performed for the following variables: birth year (0.1 percent), sex (1.4 percent), ethnicity (37.7 percent), race (33.5 percent), patient seen before in practice (1.7 percent), number of visits patient made to that physician/provider in the last 12 months (11.7 percent of visits by established patients), and time spent with physician (37.4 percent).

As mentioned in section A, quality control will be implemented through the proposed re-abstraction study. This study will be used to identify any particular data fields on the PRF with low agreement between abstraction/re-abstraction. If any are identified, we will explore possible reasons for the low agreement with Census. Results may be used to design supplemental training to improve abstraction quality, or may lead to proposed modification of instructions or data collection forms. Also, while re-abstraction will not be used to evaluate individual FRs, it will be used to track the level of abstraction/re-abstraction agreement in Census regional offices, and may identify a need for supplemental training.

### Estimation Procedures

National visit estimates and state estimates will be produced based on two fundamental sources of data: (1) private non-Federal office-based physicians, and (2) providers at CHCs designated as 330 grant-supported Federally funded qualified health centers, Federally qualified look-alikes, and Urban Indian Federally Qualified Health Centers. The estimation procedure has four basic components: (1) inflation by reciprocals of the selection probabilities, (2) adjustments for nonresponse, (3) calibration ratio adjustment, and (4) weight smoothing. Starting in 2003, the non-response adjustment factor utilized information provided by refusal physicians about the number of patient visits they see during a typical week in their practice and the number of weeks they work during the year. In addition, starting in 2004, the estimation process was modified to (1) take into account season of reporting weeks, and (2) produce unbiased quarterly estimates.

Since 2012, we have made state-based estimates for the most populated states, based on available funding. Expansion sample funding has continued each year to allow for 34 state-based estimates in 2012; 22 states in 2013; and 18 states in 2014. Based on current funding information, 16 states are projected for the 2015-2017 NAMCS. NAMCS data can also be used to make national estimates of office-based physicians and associated medical practices. These estimates are unbiased and based on a complex sampling design with multistage estimation. Physician weights are used to estimate national numbers and characteristics of office-based physicians (e.g., sex, age, and specialty) and their practices (e.g., numbers of physicians in the practice,

single-specialty compared with multispecialty practices, and types and numbers of patient encounters in last full week of practice). The NAMCS physician sampling weight can also be modified to produce a national medical practice estimator (e.g., practice size, breadth of specialization, and selected diagnostic and therapeutic services available onsite). Data from the NAMCS samples are weighted by the inverse of selection probabilities with non-response adjustments done at least within Census region and, when feasible within physician specialty groups and/or MSA status. Weights for data from samples designed to produce state estimates incorporate non-response adjustment done within state. Calibration adjustment factors are used to adjust estimated physician total counts to known physician total counts appropriate for each sample.

Details of the prior years' historical statistical design are provided in the 2010 NAMCS public use Micro-Data File Documentation

[ftp://ftp.cdc.gov/pub/Health\\_Statistics/NCHS/Dataset\\_Documentation/NAMCS/doc2010](ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Dataset_Documentation/NAMCS/doc2010) .

A description of the NAMCS sample design introduced in 2012 will be released in a later micro-data file.

The 2012 NAMCS office-based sample ended with an unweighted response rate of 45.4 percent for PRFs, and a weighted response rate of 46.4 percent. For the NAMCS-1 form, the unweighted and weighted response rates were 57.8% and 59.9%, respectively. Efforts to raise the response rate of future surveys are currently ongoing. With each introductory letter (**Attachment L**), we include a motivational brochure (**Attachment N**) that addresses physicians' concerns about participation. The insert covers confidentiality issues, including requirements pertaining to the Health Insurance Portability and Accountability Act (HIPAA) Privacy Rule. We enclose the introductory letter and brochure in a windowed, multi-colored envelope in order to increase visibility and exposure to office gatekeepers who, in many cases, sort and prioritize the mail for a physician.

We provide our Field Representatives (FRs) with the most current data so they can encourage participation in the surveys as well as promotional material that gives physicians examples of how the survey is used and how important it is for research. At centralized FR training conferences, FRs have an opportunity to learn from each other on how to convert physicians that initially refuse to participate. No matter how well we train and equip our FRs, the atmosphere of the physician's office makes it very difficult to obtain response rates higher than 70 percent. Because the physician and office staff are already very busy with patients and their associated paperwork, some may view such a survey as additional, volunteer work that they do not have the time or desire to complete. In addition, because of the many Medicaid and Medicare regulations from the government, numerous physicians may view this survey as a further intrusion into their private practice. Our efforts are many times overshadowed by private industry, which may pay the physician and office staff for their time.

Each year we publish weighted response rates by a variety of physician characteristics available from the sampling frame and the physicians themselves. Additional information concerning the 2015-2017 nonresponse is described in Section 3 of Part B.

### Sampling Errors

The standard error is primarily a measure of the sampling variability that occurs by chance because only a sample rather than an entire universe is surveyed. Estimates of the sampling variability were calculated using Taylor series approximations in SUDAAN, which take into account the complex sample design of NAMCS. A description of the software and its approach has been published<sup>1</sup>.

### 3. Methods to Maximize Response Rates and Deal with Nonresponse

NAMCS uses multiple methods for maximizing physician response. The medical community, including the American Medical Association and the American Osteopathic Association, is informed and consulted about the study. Twenty major medical societies have endorsed NAMCS and have provided letters of support for use in enlisting sampled physicians during the 2015 – 2017 survey years (**Attachment M**). These letters are typically updated every year, as our contacts change annually. Survey procedures and forms are designed to minimize the time required of physicians to participate. Physicians selected in the non-CHC NAMCS sample are excluded from possible selection again for the following two years. Another way that we try to deal with nonresponse is to expose FRs to a video that highlights scenarios on getting past difficult "gate keepers" in the physician's office and persuading reluctant physicians. In addition, the FRs are given detailed training in survey procedures with special modules on gaining physician cooperation. FR "nurturing" sessions are conducted periodically, as survey funds permit. Another way nonresponse can also be addressed is in FR training sessions. As mentioned earlier in B.2, newly hired FRs are trained in the regional offices (ROs) on the specifics of the NAMCS survey and automation procedures. In centralized trainings, all field representatives (including the newly hired FRs) from the regional offices across the country have the opportunity to participate in a national NAMCS/NHAMCS conference highlighting issues related to (1) administering the computer-based induction instruments in the field, including efforts to increase respondent participation; (2) abstracting data in the automated PRF instrument; (3) how to manage NAMCS electronic cases, and (4) addressing FR questions and concerns. We have trained about 700 field representatives at each of the annual centralized training conferences: Atlanta, GA in 2012, Dallas, TX in 2013, and Dallas, TX in 2014. The national conference represents a unique opportunity for FRs to exchange ideas and methods on how to work on a survey that presents unique challenges not faced by other Census FRs.

As mentioned in a previous section, NCHS has designed a mailing insert to help persuade the physician, gatekeeper, or CHC provider to participate. The insert (**Attachment N**) includes motivational statements from the Secretary of Health and Human Services and the Director of CDC/ATSDR. It also has answers to questions that physicians may have on why they should participate, describes how the Privacy Rule permits data collection for NAMCS, and provides a link ([http://www.cdc.gov/nchs/ahcd/namcs\\_participant.htm](http://www.cdc.gov/nchs/ahcd/namcs_participant.htm)) to our participant Web site. This Web site makes available further material that physicians can use to verify, under the requirements of the Privacy Rule that they are indeed allowed to disclose to NCHS/CDC the

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<sup>1</sup> Research Triangle Institute. SUDAAN User's Manual, Release 9.0.1. Research Triangle Park, NC: Research Triangle Institute, 2005

information requested as part of this survey. This includes the authority under which NCHS is collecting this information and that the information being collected is the minimum necessary.

The FRs provide the sampled physician with materials that show the importance of NAMCS, including the most recent survey report (for a sample of the most recent NAMCS data brief, (see <http://www.cdc.gov/nchs/data/databriefs/db145.htm>.)

Survey procedures were also developed to verify the status of the out-of-scope physicians to ensure they were not just refusal cases that were erroneously labeled as out-of-scope. A 20 percent sample of all out-of-scope cases from each FR is re-interviewed over the telephone to confirm that the physician is not within the scope of the survey. If one case is found to be in error, then all out-of-scope cases from that FR are reinterviewed.

This survey requires a commitment from the physicians and their staffs, along with CHC directors and sampled providers. Any of these groups may refuse to participate for many different reasons. Through years of experience with NAMCS, techniques for converting refusals have been developed that are quite effective, each flexible and responsive to individual concerns. Primarily using supervisory personnel, interviewers have successfully converted approximately 15 percent of initial refusals to successful participants. Conversion is successful by emphasizing the following ideas: professional responsibility to enhance knowledge of the utilization of ambulatory care in the United States, and the fact that no confidential information is collected on any patient resulting in only descriptive statistical reports.

If all else fails to bring the response rates up to the expected levels, then NCHS requests the option to investigate the specific causes of nonresponse, so as to devise additional corrective measures, funding permitting.

A prior approved study of nonresponse cases in NAMCS found that break off was most likely to occur at the stage of the telephone screener (43 percent) and that often the refusal is from the office staff rather than the physician. This is consistent with information that shows that a majority of nonresponding physicians do not remember being contacted about NAMCS. Each year in our annual statistical report, we describe weighted characteristics of NAMCS physician respondents and nonrespondents on numerous variables including age, gender, geographic region, metropolitan statistical area (MSA) status, type of doctor, specialty, specialty type, type of practice, and annual visit volume. In 2008, responding versus non-responding physician distributions were similar for age and sex of the physician, and different for the following characteristics: region, metropolitan status, type of doctor, physician specialty, specialty type, practice type, and annual visit volume. Examining the weighted response rates, higher cooperation was gained among traditional physicians in nonmetropolitan statistical areas (rural), and selected physicians practicing in community health centers. The response rate was the lowest for physicians with a specialty of obstetrics and gynecology. The effect of any differential response is minimized in the visit estimates in most cases as NAMCS uses a nonresponse adjustment factor that takes annual visit volume, specialty, geographic region, MSA, and CHC status into account.

Researchers at the Center for Adaptive Design from our contracting agency at the U.S. Census Bureau have begun to analyze NAMCS contact history instrument (CHI) data, which has yielded valuable information, including descriptive statistics for contact attempts by type of interview. The contact rate indicates the rate at which FRs are making contact with someone – either the primary point of contact or someone else. These analyses can inform modifications to survey operations.

Since January 2007, we have provided physicians and nurses the opportunity to learn more about NAMCS through web-based educational modules presented on the CDC Public Health Training Network. The module presents key NAMCS concepts, interspersed with quiz questions after each concept to reinforce learning. The goal of the web-based material is for physicians and nurses to increase their understanding of NAMCS methodology, and to improve their ability to read critically those articles in peer-related literature that use national estimates of office-based practice parameters. Providing this NAMCS education module to physicians and nurses will not only give participants a chance to receive valuable continuing education credits, but also expand the level of NAMCS exposure to potential survey participants. We plan on continuing to offer this module throughout the 2015-2017 survey period.

#### **4. Tests of Procedures or Methods to be Undertaken**

No tests of procedures or methods are anticipated to be undertaken during the 2015-2017 study period.

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

The statistician responsible for the survey sample design is:

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Supporting Statement  
List of Attachments

NAMCS = National Ambulatory Medical Care Survey  
CHC = Community Health Center

- A. Applicable Laws and Regulations
- B. Federal Register/Vol. 79, No. 118/Thursday, June 19, 2014/Notices and  
Federal Register Public Comments
- C1. 2014 NAMCS-1
- C2. 2015 NAMCS-1 Proposed Changes table for Office-based Physicians and CHC  
Physician/Mid-level Providers
- C3. 2015 NAMCS-1 List of all proposed questions for Traditional Office-based Physicians and  
CHC Providers
- C4. 2015 NAMCS-201 CHC Service Delivery Site Induction Interview, Proposed Changes
- C5. 2015 NAMCS-201 CHC Service Delivery Site Induction Interview, List of all questions
- D1. 2014 Patient Record form (NAMCS-30)
- D2. 2015 Patient Record form (NAMCS-30), sample card
- D3. 2015 Patient Record form (NAMCS-30), Proposed Changes table
- E. 2014 NAMCS Re-abstraction Study screenshots
- F. Consultants for 2015-2017 NAMCS
- G. IRB Continuation of Protocol Approval Letter
- H. 2015 NAMCS Patient Record form (PRF): Pulling and Re-filing Medical Records
- I. 2015 NAMCS Re-abstraction Study: Pulling and Re-filing Medical Records
- J. Number of physicians in the sampling frame and sample for the 2015 NAMCS by physician  
specialty group and Census region
- K. Number of physicians in the sampling frame and sample for the 2015 NAMCS by Census  
region and state
- L. NAMCS Advanced Letters
- M. NAMCS Endorsing Organizational Letters
- N. NAMCS Brochure