

Department of Commerce
United States Census Bureau
National Sample Survey of Registered Nurses: Supporting Statement A
OMB Control No. 0607-####

A. Justification

1. Circumstances Making the Collection of Information Necessary

Sponsored by the U.S. Department of Health and Human Services' (HHS) Health Resources and Services Administration's (HRSA) National Center for Health Workforce Analysis (NCHWA), the National Sample Survey of Registered Nurses (NSSRN) is designed to obtain the necessary data to determine the characteristics and distribution of Registered Nurses (RNs) throughout the United States, as well as emerging patterns in their employment characteristics. These data will provide the means for the evaluation and assessment of the evolving demographics, educational qualifications, and career employment patterns of RNs.

The National Sample Survey of Registered Nurses (NSSRN) is collected to assist in fulfilling the goals of the congressional mandates of the Public Health Service Act 42 U.S.C. Section 294n(b)(2)(A). These mandates ensure the development of information describing and analyzing the health care workforce and workforce related issues and provide necessary information for decision-making regarding future directions in health professions and nursing programs in response to societal and professional needs. In addition, Public Health Service Act 42 U.S.C. Section 295k(a)-(b) states:

“The Secretary shall establish a program, including a uniform health professions data reporting system, to collect, compile, and analyze data on health professions personnel ... The Secretary is authorized to expand the program to include, whenever he determines it necessary, the collection, compilation, and analysis of data ... health care administration personnel, nurses, allied health personnel...in States designated by the Secretary to be included in the program.”

Such data have become particularly important for the need to better understand workforce issues given the recent dynamic change in the RN population and, the transformation of the healthcare system.

The NSSRN survey has gone through a substantial redesign for the 2018 cycle. The NSSRN was last collected in 2008. Given the time lapse since it was last collected, there was significant time spent on reviewing content on the 2008 questionnaire. Improvements were made based on healthcare policy changes, and best practices in survey methodology. In addition to adding and removing content related to the RN population, NCHWA decided to add a section on Nurse Practitioners' (NPs). Previously, NCHWA collected data on NPs on a separate survey called National Sample Survey of Nurse Practitioners (NSSNP), last collected in 2012. The intent behind combining these two surveys is to reduce redundancy in the collection of data, which results in lower costs, and the burden on respondents that accompanied the administration of two separate surveys.

The proposed data collection design for the 2018 NSSRN is planned as a probability sample (100,000 RNs) selected from a sampling frame compiled from files provided by the State Boards of Nursing and the National Council of the State Boards of Nursing (NCSBN). These files constitute a sampling frame of all RNs licensed in the 50 States and the District of Columbia. Sampling rates are set for each state based on considerations of statistical precision of the estimates and the costs involved in obtaining reliable national and state-level estimates. The survey will utilize a multimode data collection design, offering respondents the opportunity to participate via a web instrument and/or a paper questionnaire. Respondents will also have access to a staffed questionnaire assistance telephone line where they will be able to get login assistance, language support, and even complete the interview with a Census telephone interview agent.

To help reduce non-response bias, the 2018 NSSRN survey will be including a non-monetary incentive for half of the respondents in the first mailing and for a portion of non-respondents in mailing contact #5. The 2018 NSSRN project includes plans to experimentally test the efficacy of the non-monetary incentive; that is, whether offering an inscribed syringe pen and lanyard as a token of appreciation increases response among respondents who would otherwise refuse, thus reducing non-response bias and reducing costs associated with non-response follow-up efforts. This research is discussed in detail in Part B Section 2.

In addition to testing non-monetary incentives, the 2018 NSSRN will evaluate the use of different materials and various non-response follow-up mailing strategies testing for response improvements using different envelopes to deliver the survey materials. This research is discussed in detail in Supporting Statement B Section 2.

The U.S. Census Bureau is required by law to protect respondent information. The Census Bureau is not permitted to publicly release respondent information in a way that could identify them or their household. The U.S. Census Bureau is conducting the NSSRN on the behalf of the HHS under Title 13, United States Code, Section 8(b), which allows the Census Bureau to conduct surveys on behalf of other agencies. Public Health Service Act 42 U.S.C. Section 294n(b)(2)(A) and Section 295k(a)-(b) allows HHS to collect information for the purpose of understanding the nursing workforce in the United States. Federal law protects respondent privacy and keeps answers confidential (Title 13, United States Code, Section 9). Per the Federal Cybersecurity Enhancement Act of 2015, respondent data are protected from cybersecurity risks through screening of the systems that transmit those data.

2. Purpose and Use of Information Collection

Data from the NSSRN are used to capture the evolving demographics, educational qualifications, and career employment patterns of the RN workforce. It is therefore critical that the U.S. Census Bureau conducts this survey on behalf of HRSA NCHWA to collect information to better understand workforce issues given the recent dynamic change in the RN population and the transformation of the healthcare system.

Information quality is an integral part of the pre-dissemination review of the information released by the Census Bureau (fully described in the Census Bureau's Information Quality

Guidelines). Information quality is also integral to the information collections conducted by the Census Bureau and is incorporated into the clearance process required by the Paperwork Reduction Act.

3. Use of Improved Information Technology and Burden Reduction

The 2018 NSSRN will be conducted for HRSA NCHWA by the Census Bureau in Web Push Plus Mail mixed-mode format. For half of respondents (50%), the initial opportunities to respond electronically via the Centurion Web instrument will be followed by a data collection strategy that will augment online data collection with a paper data collection mode. The other half of the sample will be placed in the mixed-mode group and will receive both a Centurion Web instrument invite as well as a paper questionnaire with the initial mailing. The Centurion Web instrument allows online reporting, improving the efficiency and accuracy of the data collection process, and minimizes burden and material costs. The paper data collection will rely on three complementary survey systems to efficiently administer this mode of data collection: (1) Amgraf One Form Plus, (2) Docuprint, and (3) integrated Computer-Assisted Data Entry (iCADE).

- **Online Reporting.** The 2018 NSSRN will utilize a Web-based survey with follow-up paper data collection as one of the primary collection modes. The Web-based survey collection mode allows for features that reduce respondent burden as well as report results more quickly and at considerably less cost. In general, respondents find it less taxing to provide sensitive information in self-administered surveys; however, because of the significant number of filter questions, paper-and-pencil versions of the survey appear quite lengthy. The Web-based survey allows for the programming of skip patterns which combines the comfort of self-administration with the ease of seeing and subsequently answering only questions relevant to a particular respondent.
- **Forms Design.** Questionnaires will be created using Amgraf One Form Plus. Completed hardcopy forms can be processed by iCADE to capture responses through optical mark recognition (OMR), optical character recognition (OCR), and keying from image (KFI). The data from the questionnaires will be captured by the iCADE technology/software, which automatically extracts all check box entries (OMR) and preselected answer fields (OCR), then captures, and displays an image of all other entries to an operator for KFI.
- **Image Preprocessing.** The iCADE software performs a registration process for each individual questionnaire page to match to the appropriate page template. This also allows for corrections due to any skewing during scanning.
- **Data Capture.** iCADE reads the form image files, checks for the presence of data, processes all check box fields through OMR, processes all preselected response fields through OCR, then presents an image of all other handwritten fields to an operator for KFI.

- **Verification.** Extracted KFI data are subject to 100% field validation according to project specifications. If a data value violates validation rules, the data point is flagged for review by verifiers who interactively review the images and the corresponding extracted data, and resolve validation errors.
- **Archiving.** Images will be scanned and archived to magnetic storage located on a secured server in case they are needed later. This eliminates the need to save paper copies of the completed questionnaires.

4. Efforts to Identify Duplication and Use of Similar Information

The NSSRN was last collected in 2008 and the National Sample Survey of Nurse Practitioners was last collected in 2012. The intent of the 2018 NSSRN is to combine these two surveys. Previously, there was significant duplication between the NSSRN and the NSSNP. A key objective in developing this 2018 NSSRN instrument was to consolidate the two into one survey, reducing redundancy in the collection of data and the burden on respondents that accompanied the administration of two separate surveys.

In the process of redesigning and eliminating redundancies in questionnaire items, the 2018 NSSRN will also include new content on the following topics (see Attachment A for a complete list of new, modified, and deleted survey items):

- Military and deployment status
- Orientation and preceptor programs
- National Practitioner Data Bank
- Telehealth

5. Impact on Small Businesses or Other Small Entities

Not applicable.

6. Consequences of Collecting the Information Less Frequently

The 2018 NSSRN has not been collected since 2008, therefore there is a substantial lapse in nursing workforce data. The NSSRN collects the necessary data to determine the characteristics and distribution of Registered Nurses (RNs) throughout the United States, as well as emerging patterns in their employment characteristics. These data will provide the means for the evaluation and assessment of the evolving demographics, educational qualifications, and career employment patterns of RNs. HRSA NCHWA would not be able to produce these timely national estimates without these data.

7. Special Circumstances Relating to the Guidelines of 5 CFR 1320.5

This data collection will be consistent with the general information collection guidelines of 5 CFR 1320.5. No special circumstances apply.

8. Comments in Response to the Federal Register Notice/Outside Consultation

The 60-day Federal Register Notice was published in the *Federal Register* on June 26, 2017 (82 FR 28817; pp. 28817-28818). No substantive comments were received.

9. Explanation of any Payment/Gift to Respondents

The non-monetary incentive experiment for the 2018 NSSRN includes both an inscribed syringe pen and lanyard treatment group along with a control group that will not be eligible to receive an incentive. The cost of non-monetary incentives is balanced against the reduction in follow-up effort and the cost required to collect the data.

In the 2018 NSSRN, half of the sampled respondents will receive a pen and lanyard while the other half will be part of the initial control group, and will not be incentive eligible for the first mailing. The incentive was chosen since both a pen and a lanyard are useful to the nursing workforce. The idea was tested in part of the cognitive interviews administered for the paper questionnaire. Survey methods research strongly support the use of unconditional incentives to reduce nonresponse bias in self-administered survey data collection. The 2018 NSSRN project plan allows us to implement and monitor the effectiveness of the non-monetary incentive in the initial mailing. The sample distribution is presented in Table 9A. Half of the respondents Based on the results of this experiment, future incentive use in the NSSRN or other surveys can be planned with directly applicable information.

Incentives are commonly used in other HHS-sponsored surveys including the National Health Interview Survey, the National Survey of Family Growth, the National Health and Nutrition Examination Survey, the National Survey on Drug Use and Health, and the Health Center Patient Survey. Research on non-monetary incentives within the health profession population found that the use of an unconditional non-monetary incentive increased the response rate within that population from 40% (no pen) to 56% (with pen) (White, Carney & Kolar, 2005)².

Table 9A. Treatment Group by Non-Monetary Incentive and Internet Likelihood

| Incentive Treatment Group | Initial Cases | Web First Only Treatment | Paper and Web Treatment |
|---------------------------|---------------|--------------------------|-------------------------|
|---------------------------|---------------|--------------------------|-------------------------|

The expected number of respondents is an estimate of the expected number of completed questionnaires, discussed in section B.1.3. This is different from the number of respondents that are mailed a questionnaire.

²White, E. Carney, P. & Kolar, A. (2005). Increasing Response to Mailed Questionnaires by Including a Pencil/Pen. *American Journal of Epidemiology*, 162(3):261 -266.

| | | | |
|-----------------|--------|--------|--------|
| Control | 50,000 | 25,000 | |
| | | | 25,000 |
| Pen and Lanyard | 50,000 | 25,000 | |
| | | | 25,000 |

Table 9A note: The web first only treatment are those respondents randomly assigned to only receive web invitations for the first four mailings. Paper and web treatment group are those respondents randomly assigned to receive a paper questionnaire with a web invitation on the first mailing.

10. Assurance of Confidentiality Provided to Respondents

The following confidentiality statement will be presented to respondents within the Centurion Web instrument and paper questionnaires:

The U.S. Census Bureau is required by law to protect your information. The Census Bureau is not permitted to publicly release your responses in a way that could identify you or your household. We are conducting this survey under the authority of Title 13, United States Code, Section 8(b). Federal law protects your privacy and keeps your answers confidential under 13 U.S.C. Section 9. Per the Federal Cybersecurity Enhancement Act of 2015, your data are protected from cybersecurity risks through screening of the systems that transmit your data.

11. Justification for Sensitive Questions

Sensitive questions are generally not included on the NSSRN. However, it is possible that respondents may find some questions related to their work history to be sensitive in nature. Respondents are made aware of the voluntary nature of this survey in the cover letter that accompanies the invitation to complete the questionnaire and on the material distributed with the paper questionnaire. Individuals are free to refrain from answering any question that they do not feel comfortable responding to. The U.S. Department of Health and Human Services requires that race and ethnicity be asked on all HHS data collection instruments and questions on both race and Hispanic origin appear on the NSSRN. There is, however, no requirement that respondents answer these questions.

12. Estimates of Annualized Hour and Cost Burden

Estimates of annualized hour burden and annualized cost to respondents are listed in Tables 12A and 12B, respectively. The total number of estimated respondents is 65,000 annually. The total number of annual burden hours is 28,600. The estimated total annual respondent cost is \$1,195,220. Please note that the estimated number of respondents and the estimated total annual burden hours are lower here than those in the Federal Register Pre-submission

¹ The expected number of respondents is an estimate of the expected number of completed questionnaires, discussed in section B.1.3. This is different from the number of respondents that are mailed a questionnaire.

notice. The figures here reflect revised estimates of (1) the expected response rates for the questionnaire and (2) the average time to complete the survey instruments³.

Table 12A. Estimated Annualized Burden Hours

| Type of Respondent | Questionnaire Name | Expected Number of Respondents ¹ | Number of Responses per Respondent | Average Burden per Response (in hours) | Total Burden Hours |
|-------------------------|--------------------|---|------------------------------------|--|--------------------|
| NSSRN Production | | | | | |
| Registered Nurse | NSSRN | 39,000 | 1 | .4 | 15,600 |
| Nurse Practitioner | NSSRN | 26,000 | 1 | .5 | 13,000 |
| Total | NSSRN | 65,000 | 1 | .4 | 28,600 |

Table 12B. Estimated Annualized Burden Costs

| Type of Respondent | Total Burden Hours | Hourly Wage Rate | Total Respondent Costs |
|-------------------------|--------------------|------------------|------------------------|
| NSSRN Production | | | |
| Registered Nurse | 15,600 | \$34.70 | \$541,320 |
| Nurse Practitioner | 13,000 | \$50.30 | \$653,900 |
| Total | 28,600 | - | \$1,195,220 |

³ For the 2018 NSSRN 65,000 respondents are expected to complete the questionnaire. The average burden per response was determined by timing the administration of the instruments. Estimates of the total annual respondent cost for the collection of information use the appropriate wage rate categories. For RNs, the wage rate is \$34.70 per hour. This is based on the average hourly earnings for employees as reported by the Bureau of Labor Statistics (<https://www.bls.gov/oes/current/oes291141.htm>). For NPs, the wage rate is \$50.30 per hour. This is based on the average hourly earnings for employees as reported by the Bureau of Labor Statistics (<https://www.bls.gov/oes/current/oes291171.htm>).

13. Estimates of Other Total Annual Cost Burden to Respondents

There are no direct costs to respondents other than their time to participate in the study.

14. Annualized Cost to the Federal Government

Costs for this survey are estimated at \$4,700,000. This includes all direct and indirect costs of the design, data collection, analysis, and reporting phases of the survey, as well as delivery of the data sets to HRSA NCHWA.

15. Explanation for Program Changes or Adjustments

Not applicable.

16. Plans for Tabulation, Publication, and Project Time Schedule

The following is a project time schedule for the 2018 NSSRN:

| 2018 NSSRN Project Time Schedule and Deliverables | |
|---|---|
| 3/15/2018 | Initial mailout of all treatment groups |
| 3/21/2018 | Pressure-sealed reminder |
| 4/12/2018 | First Follow up Mailing (high web) |
| 4/26/2018 | First Follow up Mailing, Second Paper Questionnaire (high paper) |
| 4/18/2018 | Second Pressure Sealed Reminder (high web) |
| 5/2/2018 | Second Pressure Sealed Reminder (high paper) |
| 5/17/2018 | Second Follow up Mailing, First Questionnaire Package (high web) |
| 6/7/2018 | Second Follow up Mailing, Third Questionnaire Package (high paper) |
| 5/23/2018 | Third Pressure Sealed Reminder (high web) |
| 6/13/2018 | Final Letter, Third Pressure Sealed Reminder (high paper) |
| 6/21/2018 | Third Follow up Mailing, First Questionnaire Package (high web) |
| 6/27/2018 | Final Letter, Fourth Pressure Sealed Reminder (high web) |
| July 2018 | Survey closeout – data collection ends |
| December 2018 | Delivery of documented public use file (PUF), user’s manual, and methodology report |

The NSSRN will generate datasets, statistics, and reports. Below are the planned deliverables that the Census Bureau will provide NCHWA:

Datasets, Statistics, and Reports.

- A fully documented public use data set. This file will contain all of the data collected and any other variables (derived, flag, admin, etc.) requested by HRSA NCHWA.
- A codebook with weighted and unweighted frequencies of all variables
- A user’s manual and methodology report

17. Reason(s) Display of OMB Expiration Date is Inappropriate

Not applicable. No exception requested.

18. Exceptions to Certification for Paperwork Reduction Act Submissions

Not applicable. No exception requested.