Supporting Statement A
Department of Commerce
United States Census Bureau
National Sample Survey of Registered Nurses
OMB Control No. 0607-1002

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) and Section 295k(a)-(b). These mandates ensure the development of information describing and analyzing the health care workforce and workforce related issues. Through means of collecting, compiling, and analyzing data on healthcare professionals. In order to provide necessary information for decision-making regarding future directions in health professions and nursing programs in response to societal and professional needs.

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

The NSSRN went through a substantial redesign in the 2018 cycle. Improvements were made based on changes in healthcare policy, best practices in survey methodology, and a section on Nurse Practitioners'(NPs) was added. Previously, NP data were collected in a separate survey called National Sample Survey of Nurse Practitioners (NSSNP). The updated survey, which incorporates questions from both previous surveys, retains the name The National Sample Survey of Registered Nurses (NSSRN). The intent behind combining these two surveys was 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 2022 NSSRN will be the second production fielding of the NSSRN since redesign and collaboration with the Census Bureau. There are a few differences between the 2018 NSSRN and the 2022 NSSRN for which we are requesting OMB approval. These differences will be discussed in further detail throughout Supporting Statements A & B, but have been summarized here for ease of reference:

- **Revised questionnaire content** – The 2022 NSSRN questionnaire has new content provided from sponsors at NCHWA and underwent two rounds of cognitive testing. This

testing request was submitted under the generic clearance package and was approved by OMB[1]. Based on the results, a final set of proposed new and modified content for the 2022 NSSRN was created. Please see **Appendix A** for the list of content changes from 2018 to 2022. Please see **Appendix B** for the final questionnaire.

- **Increased sample size** - With additional sponsor funding and continued cost savings from streamlining the survey operations process, we are requesting an increase in sample size. The 2022 NSSRN plan is to sample 125,000 RNs compared with 100,000 RNs in the 2018 NSSRN.

- **Unconditional incentive** - The NSSRN will experiment with unconditional monetary incentives for the 2022 cycle, with 90% of the sample receiving $5 with an initial web invitation letter. The intention of the monetary incentive is to test the efficacy of reducing nonresponse bias by encouraging response, that is, whether offering $5 increases response, thus reducing non-response bias, and reducing costs associated with follow-up mailings. The unconditional monetary incentive will be randomly assigned to 90% of the sample prior to data collection.

Since the NSSRN was last collected in 2018, there has been significant time spent on reviewing the 2018 questionnaire content. Modifications to questionnaire content were made based on recent healthcare policy changes, including a new section titled Nursing During the Coronavirus Pandemic. The new content for 2022 questionnaire went through cognitive testing.

The proposed data collection design for the 2022 NSSRN is planned as a probability sample (125,000 RNs) selected from a sampling frame compiled from files provided by the State Boards of Nursing, American Association of Nurse Practitioners (AANP), 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 2022 NSSRN survey will be including a $5 monetary incentive for 90% of the respondents in the first mailing. The 2022 NSSRN survey includes plans to experimentally test the efficacy of the monetary incentive; that is, whether offering $5 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 A Section 9.

The U.S. Census Bureau is required by law to protect respondent information. The Census

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1 Generic Clearance Information Collection Request: https://www.reginfo.gov/public/do/PRAViewIC?ref_nbr=201909-0607-002&icID=248532

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 2022 NSSRN will be conducted for HRSA NCHWA by the Census Bureau in Web Push mixed-mode format. 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 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 2022 NSSRN will utilize a Web-based survey with follow-up paper data collection as 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 2018. There have been modifications made to the questionnaire. In the process of redesigning and eliminating redundancies in questionnaire items, the 2022 NSSRN will also include new content "Nursing During the Coronavirus Pandemic" section (see **Appendix A** for a complete list of new, and modified survey items).

5. Impact on Small Businesses or Other Small Entities

Not applicable.

6. Consequences of Collecting the Information Less Frequently

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 March 14, 2022 (87 FR 14246; pp. 14246-14247). Comments were received and have been acknowledged. See **Appendix C**.

In summary, there were two public comments received. The first noted that the proposed changes to the National Survey of Registered Nurses should be approved to improve the survey experience for nurses. The comment also acknowledged support of the cash incentive plan, as well as additional questions to be fielded on the Covid-19 pandemic.

The second comment received was from the American Association of Nurse Practitioners (AANP). The AANP have been invaluable partners in their support of and collaboration on the NSSRN, and their feedback is greatly appreciated.

The AANP sent suggestive changes to numerous questions on the survey. The 2022 NSSRN questionnaire has undergone extensive rounds of cognitive testing on Registered Nurses (RNs) as well as Nurse Practitioners (NPs), and other Advanced Practice Registered Nurses (APRNs) in various types of work settings. All comments provided by AANP on the 2022 NSSRN questionnaire will be cognitively tested for the next iteration of the survey.

AANP provided comments to expand response categories for some questions. The response options for 2022 were based on previous iterations of the survey, findings from the 2018 NSSRN, feedback from nursing workforce experts, and feedback from cognitive testing. Each of the questions where expanded response categories were suggested, have a catch-all "Other" category for respondents to add their own response. As done in previous cycles, response categories can be added to the public use file if warranted by the data.

AANP also provided general comments about survey management including cost to respondents and the sampling frame. In the 60-day notice, it was referenced that there weren't additional costs to respondents. Comments from AANP suggest they may have misconstrued the meaning of this question as total cost to the public. The $0 survey cost is the amount that the respondent is responsible for after receiving the survey invitation. This cost is $0. While there are costs associated with postage and increased survey size, these costs are not passed on to the respondent.

The last comment from AANP addresses the cost to nursing organizations that aid in the creation of the NSSRN sampling frame. We recognize that without a current database of Registered Nurses, support from the individual state boards and various nursing associations are critical to the success of the NSSRN. We will continue to find the best solution for

establishing a current database of nurses, while minimizing the burden to state boards and associations.

Notification of receipt and response has been sent to AANP. Their support is critical for the future sustainability of this survey.

The action taken is to continue with the 2022 NSSRN data collection as outlined within this package.

9. Explanation of any Payment/Gift to Respondents

There will be a $5 monetary incentive experiment for the 2022 NSSRN in the first mailing to 90% of the sample, along with a control group that will not be eligible to receive an incentive. The cost of monetary incentive is balanced against the reduction in follow-up effort and the cost required to collect the data.

As people in medical fields become increasingly burdened with surveys, studies suggest incentives may be necessary to engage potential respondents and thus maximize response rate[2].

Survey methods research strongly support the use of unconditional incentives to reduce nonresponse bias in self-administered survey data collection[34]. The 2022 NSSRN project plan allows us to implement and monitor the effectiveness of the monetary incentive in the initial mailing. 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 Survey of Children's Health, 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.

10. Assurance of Confidentiality Provided to Respondents

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

The Census Bureau is required by law to protect your information. We are not permitted to publicly release your responses in a way that could identify your household. The Census Bureau is conducting this survey under the authority of Title 13, United States Code (U.S.C.), Section 8(b) (13 U.S.C. § 8(b)) and Section 501(a)(2) of the Social Security Act (42

2 Cunningham, C.T., Quan, H., Hemmelgarn, B. *et al.* Exploring physician specialist response rates to web-based surveys. *BMC Med Res Methodol* **15,** 32 (2015). https://doi.org/10.1186/s12874-015-0016-z

3 Alexander, G.L. et al. (2008). Effect of Incentives and Mailing Features on Online Health Program Enrollment. *American Journal of Preventive Medicine, 34*(5), 382-388.

4 Cosgrove, J.A. Using a Small Cash Incentive to Increase Survey Response. *Adm Policy Ment Health* **45,** 813–819 (2018). https://doi.org/10.1007/s10488-018-0866-x

U.S.C. § 701). Federal law protects your privacy and keeps your answers confidential under Title 13, U.S.C., Section 9 (13 U.S.C. § 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.

Access to records maintained in the system is restricted to Census Bureau employees and certain individuals authorized by Title 13, U.S. Code (designated as Special Sworn Status individuals). These individuals are subject to the same confidentiality requirements as regular Census Bureau employees identified above and as permitted under the Privacy Act of 1974 (5 U.S.C. Section 552a) and SORN COMMERCE/CENSUS-3, Demographic Survey Collection (Census Bureau Sampling Frame).

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. 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 81,250 annually. The total number of annual burden hours is 42,250. 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 higher here than those in the Federal Register Pre-submission notice. The figures here reflect revised estimates of (1) the expected response rate for the questionnaire and (2) the average time to complete the survey instruments[5].

Table 12A. Estimated Annualized Burden Hours

Type of Respondent	Questionnaire Name	Expected Number of Respondents[6]	Number of Responses per Respondent	Average Burden per Response (in hours)	Total Burden Hours

[5] [3] For the 2022 NSSRN 81,250 respondents are expected the 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 $39.78 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 $56.75 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).

[6] The expected number of respondents is an estimate of the expected number of completed questionnaires, discussed

NSSRN Production					
Registered Nurse	**NSSRN**	37,500	1	.5	18,750
Nurse Practitioner	**NSSRN**	25,000	1	.6	13,750
Total	**NSSRN**	62,500	1	.5	32,500

in section B.1.3. This is different from the number of respondents that are mailed a questionnaire.

Table 12B. Estimated Annualized Burden Costs

Type of Respondent	Total Burden Hours	Hourly Wage Rate	Total Respondent Costs
NSSRN Production			
Registered Nurse	18,750	$39.78	$745,875
Nurse Practitioner	13,750	$56.75	$780,313
Total	32,500	-	$1,526,188

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 $5,263,763. 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

This is a reinstatement with changes request of a previously approved collection. The burden impact increased between the 2018 and 2022 survey cycles because of an increase in overall sample size. The sample size was approximately 100,000 RNs in 2018. For the 2022 NSCH cycle, the production survey will be mailed to up to 125,000 RNs. The increased number of RNs are in response to additional funding and streamlined data collection procedures. With each cycle there continues to be a streamlining of NSSRN processes with the creation of a mailing strategy that has proven effective in increasing early response and reducing nonresponse follow-up and bias.

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

The following is a project time schedule for the 2022 NSSRN:

2022 NSSRN Data Collection Plan	
October	Mailing #1: Initial Invite with $5 Incentive Experiment (containing Web login information)
	Mailing #2: Pressure-sealed postcard reminder (containing Web login information)
November	Mailing #3: Web invite & paper questionnaire
	Mailing #4: Pressure-sealed postcard reminder (containing Web login information)
December	Mailing #5: Final Web Invite
January	Mailing #6: Survey Deadline Extended (if needed)
	Survey closeout – data collection ends

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.