

Department of Commerce
U.S. Census Bureau
OMB Information Collection Request
Management and Organizational Practices Survey-Hospitals
OMB Control Number 0607-<XXXX>

Part A – Justification

Question 1. Necessity of the Information Collection

The Census Bureau proposes conducting the Management and Organizational Practices Survey-Hospitals (MOPS-HP) in order to provide critical information on the health sector to our many stakeholders in support of our mission to serve as “the leading source of quality data about the nation’s people and economy.” The MOPS-HP will collect information on the use of structured management practices from Chief Nursing Officers (CNOs) at approximately 3,200 hospitals with the goal of producing four publicly-available indices that measure key characteristics of these structured management practices. The proposed MOPS-HP will be collected for reference years 2020 and 2019. Content, which can be seen in Attachment A, includes performance monitoring, goals, staff management, the use of standardized clinical protocols, and medical record documentation. Some questions are adapted from the Management and Organizational Practices Survey (MOPS) (OMB Approval Number 0607-0963), conducted in the manufacturing sector, allowing for inter-sectoral comparisons.

The MOPS-HP will provide a deeper understanding of the business processes which impact an increasingly important sector of the economy; total national health expenditures represented almost 18 percent of U.S. gross domestic product in 2017 (National Center for Health Statistics). The MOPS-HP will provide a nationally representative sample, enabling stakeholders to understand the role of structured management practices in financial and clinical outcomes in U.S. hospitals. In much the same way that the MOPS allowed for the measurement of the importance of these structured management practices for productivity and growth in the manufacturing sector,¹ the MOPS-HP will inform our understanding of hospitals. This understanding is of increasing importance with the COVID-19 pandemic, where the overwhelming number of hospitalizations at varying points has stretched staff and resources to capacity. Questions developed and tested for the MOPS-HP instrument are adapted from the 2015 MOPS and the 2009 World Management Survey’s (WMS) healthcare instrument.^{2,3} The Census Bureau conducted the MOPS in 2010 and 2015 with approximately 35,000 manufacturing plants to

¹ Bloom, N., E. Brynjolfsson, L. Foster, R. Jarmin, M. Patnaik, I. Saporta Eksten and J. Van Reenen. 2019. “What Drives Differences in Management Practices?” *American Economic Review*.

² 2015 MOPS’ [Questionnaire](#) and an [overview](#).

³ WMS’ [2009 instrument for healthcare and academic research papers](#).

measure management practices.^{4,5} These data show that management practices are strongly correlated with plant profitability and productivity.⁶ The WMS has collected data on 20 basic management practices for approximately 2,000 hospitals in nine countries, including 307 in the U.S.⁷ Interviewers ask open-ended questions and rate responses to indicate whether the management practices are more or less structured.^{8,9} Data from the WMS show large variations in these practices and their systematic relationship with clinical outcomes such as mortality rates from heart attacks.¹⁰ The justifications for the MOPS-HP's content seen in Attachment B reference adaptations of the questions asked in the 2015 MOPS and 2009 WMS.

The COVID-19 pandemic highlights the relevance of hospital management practices, especially as they relate to hospitals' ability to respond to shocks to their organization and the health care system. In light of this, the Census Bureau has modified the survey proposal to collect data for reference years 2020 and 2019. This change seeks to directly measure management practices and protocols before and during the pandemic to gain a better understanding of how hospitals have had to adjust and pivot operations during this public health emergency. The Census Bureau has also included two questions in the MOPS-HP content to help improve measurement of hospital preparedness. These questions, numbered 30 and 36 as seen in Attachment A, will provide information on two elements of responsiveness, hospitals' coordinated deployment of frontline clinical workers and hospitals' ability to quickly respond to needed changes in standardized clinical protocols. Attachment H summarizes the development process for these questions. In an effort to limit respondent burden while adding this content, adjustments were made to keep the total number of questions and estimated burden per response unchanged. Because the content changes were developed in response to the current pandemic, they were made after the pre-submission notice for the MOPS-HP was published in the *Federal Register*.

The MOPS-HP will be a supplement to the Service Annual Survey (SAS) and will utilize a subset of its mail-out sample. Its sample will consist of hospital locations for enterprises classified under General Medical and Surgical Hospitals (NAICS 6221) and sampled in the SAS. The survey will be mailed separately from the SAS and collected electronically through the Census Bureau's Centurion online reporting system. Respondents will be sent an initial letter with instructions detailing how to log into the instrument and report their information. These letters, which can be seen in Attachments C, D, and E, will be addressed to the location's Chief

⁴ Throughout this document, any reference to the "MOPS" refers to the surveys conducted for the manufacturing sector, while the hospital survey will always be denoted as the "MOPS-HP."

⁵ Buffington, C., L. Foster, R. Jarmin, and S. Ohlmacher. 2017. "The Management and Organizational Practices Survey (MOPS): An Overview." *Journal of Economic and Social Measurement*, 42(1), 1-26.

⁶ Bloom, N., E. Brynjolfsson, L. Foster, R. Jarmin, M. Patnaik, I. Saporta Eksten and J. Van Reenen. 2019. "What Drives Differences in Management Practices?" *American Economic Review*.

⁷ Bloom, N., R. Lemos, R. Sadun and J. Van Reenen. 2019. "Healthy Business? Managerial Education and Management in Healthcare." *Review of Economics and Statistics*, forthcoming.

⁸ Bloom, N. and J. Van Reenen. 2007. "Measuring and Explaining Management Practices Across Firms and Countries." *The Quarterly Journal of Economics* 122(4): 1351-1408.

⁹ Bloom, N., R. Lemos, R. Sadun, D. Scur and J. Van Reenen. 2014. "The New Empirical Economics of Management." *Journal of the European Economic Association*.

¹⁰ Bloom, N., R. Lemos, R. Sadun and J. Van Reenen. 2019. "Healthy Business? Managerial Education and Management in Healthcare." *Review of Economics and Statistics*, forthcoming.

Nursing Officer (CNO). The letters that are attached to this package are drafts; however, we do not expect any substantial changes. Collection is scheduled to begin in April 2021 and end in October 2021. Due to the nature of the respondents, this schedule may be impacted by the effects of COVID-19. The Census Bureau is monitoring the ongoing situation and will adjust dates as necessary as the collection start date approaches as we do not want to add burden to an overly burdened sector of the economy.

The Census Bureau will conduct the MOPS-HP on a mandatory basis under authority of Title 13, United States Code, Sections 131, 182, 224, and 225. The cited authorities can be seen in Attachment I.

Question 2. Needs and Uses

The Census Bureau will produce a publicly-available press release to describe the survey and discuss the results. The Census Bureau will also write at least one research paper describing the MOPS-HP collection, processing, and data findings. Conditional on quality, the Census Bureau will construct and publish in a research paper indices of management practices, which can be used in tabulations and empirical analyses for potential use by the public, clinicians, hospitals, and researchers. These indices as well as microdata will be available to approved Federal Statistical Research Data Centers (FSRDC) users and will provide benefits to other Federal agencies and the public.

Examining factors that impact clinical and financial outcomes is essential to understanding the health care industry, which makes up a large portion of the U.S. economy. The MOPS-HP will provide unique national-level estimates on management and organizational practices in hospitals prior to and during the COVID-19 pandemic that could improve our understanding of the hospital industry:

- The Centers for Medicare and Medicaid Services' Hospital Compare data or the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey could be used in conjunction with the MOPS-HP to determine whether hospitals with more structured management practices have higher overall patient ratings and are more likely to be recommended.¹¹
- The National Hospital Care Survey from the National Center for Health Statistics could be used in combination with the MOPS-HP's index to evaluate how management practices relate to hospital utilization and patient care.
- Data from the Surveys on Patient Safety Culture-Hospital Survey from the Agency for Healthcare Research and Quality could be used to study whether hospitals with more structured management practices have fewer patient safety events.

¹¹ More structured management practices are associated with more rather than less frequent reviews of performance, communication with all levels of staff and not just senior staff, and promotions based on performance and ability and not just tenure. See Question 2.c. in the Supporting Statement B for more details on measuring whether management practices are more or less structured.

- Policymakers could use the data to understand how management and organizational practices are evolving in hospitals, which can help understand changes in the industry.¹² The Census Bureau plans to use the data collected from the MOPS-HP's questions on medical record documentation to construct an index measuring the management of multiple objectives – clinical and financial – that would inform policymakers concerned with both aspects of hospital performance. By examining any links between the survey's measures of management practices and clinical outcomes, the survey may help to inform policymakers and to encourage practices that are beneficial to patients and our population as a whole.
- Hospital administrators could utilize planned public indices to benchmark their own practices, and subsequently make decisions or set policies to improve their financial and clinical outcomes.
- The MOPS-HP data could be used in combination with the Census Bureau's collected data on hospital finances, including revenues and expenses, to improve our understanding on how management practices may impact financial performance.
- Existing literature shows that management practices are related to clinical outcomes, such as survival from heart attacks.^{13,14,15,16} The MOPS-HP data would support evaluation of whether more structured management practices in 2019 and 2020 are associated with COVID-19 outcomes including survival rates using non-Census data sources. Examples of more structured management practices include hospitals reviewing performance more frequently versus less frequently, adjusting clinical protocols after identifying the need to do so within one week rather than waiting six months, and coordinated movement of frontline clinical workers between hospital units to meet patient demand or understaffing rather than not moving these workers.^{17,18}
- Collecting 2019 pre-pandemic data along with data from 2020 will allow analysis of whether hospitals increased the structure of their 2019 management practices in 2020 in response to the ongoing pandemic.

¹² By collecting data for both 2020 and 2019, the MOPS-HP will help measure the evolution of management practices in hospitals before and during the pandemic.

¹³ Bloom, N., E. Brynjolfsson, L. Foster, R. Jarmin, M. Patnaik, I. Saporta Eksten and J. Van Reenen. 2019. "What Drives Differences in Management Practices?" *American Economic Review*.

¹⁴ Bloom, N., R. Lemos, R. Sadun and J. Van Reenen. 2019b. "Healthy Business? Managerial Education and Management in Healthcare." *Review of Economics and Statistics, forthcoming*.

¹⁵ Bradley, E. H., L. A. Curry, E. S. Spatz, J. Herrin, E. J. Cherlin, J. P. Curtis, J. W. Thompson, H. H. Ting, Y. Wang and H. M. Krumholz. 2012. "Hospital Strategies for Reducing Risk-standardized Mortality Rates in Acute Myocardial Infarction." *Annals of Internal Medicine* 156(9): 618-626.

¹⁶ Bradley, E. H., E. S. Holmboe and J. A. Mattera. 2001. "A Qualitative Study of Increasing β -Blocker Use after Myocardial Infarction." *JAMA* 285(20): 2604-2611.

¹⁷ Bloom, N. and J. Van Reenen. 2007. "Measuring and Explaining Management Practices Across Firms and Countries." *The Quarterly Journal of Economics* 122(4): 1351-1408.

¹⁸ WMS' [2009 instrument for healthcare and academic research papers](#)

- Literature also shows that management practices are related to financial outcomes.^{19,20} Concerns about hospital closures, especially in rural underserved locations were a concern prior to the pandemic and are ongoing. By combining the MOPS-HP data with Census Bureau business data, the financial performance of hospitals relative to their management practices prior to and during the pandemic can be examined.
- In a letter of support (Attachment G), the Bureau of Economic Analysis (BEA) expressed their interest in the MOPS-HP and noted that it will help aid their mission to promote “... a better understanding of the U.S. economy ...” The letter states that the MOPS-HP will “fill a critical gap in our current understanding of how management systems affect patient health outcomes and healthcare expenditures.”

Information quality is an integral part of the pre-dissemination review of the information disseminated 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.

Question 3. Use of Information Technology

The MOPS-HP will be collected electronically through the Census Bureau’s Centurion online reporting system. Respondents will be sent an initial letter with instructions detailing how to log into the collection instrument and report their information. This letter can be viewed in Attachment C. This process follows the same model that the SAS uses to collect its data and was confirmed as the optimal method when the MOPS-HP’s content was tested with potential respondents.

Respondents will utilize a portal to register for their account and create their own User ID and Password. They can then add the MOPS-HP to their account using the ‘Authentication Code’ provided in the initial and follow-up mailings, and share access with others. This same account can be used to manage all Census Bureau surveys.

Once inside the portal, respondents can perform a number of self-service options and communicate more easily with Census Bureau staff. They can also view their survey and company information and begin reporting. Menu options allow respondents to request extensions, share survey access, check their filing status, view survey FAQs, communicate securely with survey representatives, and view the survey toll-free contact number if further assistance is needed.

¹⁹ Bloom, N., E. Brynjolfsson, L. Foster, R. Jarmin, M. Patnaik, I. Saporta Eksten and J. Van Reenen. 2019a. “What Drives Differences in Management Practices?” *American Economic Review*.

²⁰ Bloom, N., R. Lemos, R. Sadun and J. Van Reenen. 2019b. “Healthy Business? Managerial Education and Management in Healthcare.” *Review of Economics and Statistics*, forthcoming.

After respondents select “Report Now”, they will be in the Centurion system and can begin completing their form(s). Respondents have the option of printing out a worksheet, which they can use as a guide for completing the electronic instrument.

The Centurion system is designed to be secure and user friendly. Respondent burden will be reduced as a result of the fully electronic collection strategy. This system will allow respondents to complete and file in one session or to save and return over multiple sessions. The instrument will also remove questions and response options for respondents when they are irrelevant based on the respondent’s selections to previous questions. This will prevent the respondent from reading and attempting to answer questions that are not applicable to them. The nightly loading of the electronic responses allows for timelier identification of completed questionnaires and fewer follow-ups to respondents.

Question 4. Efforts to Identify Duplication

The Census Bureau makes a concerted effort on a continuing basis to investigate possible duplications both within the agency and outside the agency to eliminate duplication when possible. The MOPS-HP will be the only source of management and organizational practices data for hospitals. There is no other source for this data collection.

Data products from other organizations and agencies, including the Centers for Medicare and Medicaid Services (CMS) and the National Center for Health Statistics (NCHS), have been examined to ensure no duplication. Surveys such as the Hospital Consumer Assessment of Healthcare Providers and Systems Survey (HCAHPS) at CMS and the National Hospital Ambulatory Medical Care Survey (NHAMCS) at NCHS provide data on patient experiences and assessments, but do not collect data from clinical managers at the hospital about their practices.

The Surveys on Patient Safety Culture (SOPS) for hospitals managed by the Agency for Healthcare Research and Quality (AHRQ) at the United States Department of Health and Human Services is a survey that hospitals may elect to self-administer at their facilities. Staff respond to questions covering aspects of management and organizational practices but with a focus on patient safety. The MOPS-HP is more comprehensive in its questioning about overall management and organizational practices that are relevant to the hospital’s clinical and financial performance. In addition, the samples for the SOPS is voluntary and has a smaller sample with 630 hospitals self-administering the survey in 2018. In contrast, the MOPS-HP plans to survey approximately 3,200 hospitals. Finally, the MOPS-HP will have firm-level revenue data for participating hospitals through the SAS. This link between these two data points is unique to the MOPS-HP.

The Census Bureau collects data on management practices in the manufacturing sector in the MOPS, but the industries covered in that survey do not overlap with hospitals. Additionally, the MOPS-HP covers topics specific to hospitals that are not relevant on the MOPS such as the use of standardized clinical protocols or medical record documentation.

Question 5. Minimizing Burden

Small businesses or other small entities are not asked to report information.

Respondent burden is reduced as a result of the fully electronic collection strategy. The Respondent Portal will give the respondent the ability to easily communicate with survey representatives as well as perform other actions such as requesting an extension to the due date. The Centurion instrument will allow respondents to complete and file in one session or to save and return over multiple sessions. The instrument will also remove questions and response options for respondents when they are irrelevant based on the respondent's selections to previous questions. This will prevent the respondent from reading and attempting to answer questions that are not applicable to them.

The MOPS-HP surveys at the establishment level while the SAS is administered at the company level; therefore, these respondents will not overlap. In addition, the intended respondent for the MOPS-HP, the CNO, is likely not the same person responding to the SAS questionnaire since the majority of the SAS questions concern financial items.

Finding ways to reduce burden was a priority during cognitive testing of the content. Potential respondents provided feedback on various aspects of the collection, including ease of providing the information being asked. The content was tested to be administered with both CNOs and Chief Financial Officers (CFO) at each location sampled. Based on feedback, it was determined that CNOs would be the most appropriate respondent to the MOPS-HP. Additionally, individual questions were improved to remove any ambiguity and to require less time from the respondent. Definitions of frequently used terms were also edited and/or added to the survey worksheet and electronic collection instrument to make the questions clearer. **In addition to reducing burden due to content, a delay in survey timing from the initially scheduled dates will reduce burden on hospitals and CNOs. This allows recent surges of cases to be avoided, allowing respondents more capacity for the survey.**

Question 6. Consequences of Less Frequent Collection

The MOPS-HP is a one-time collection with future data collection to be evaluated upon success and availability of funding. If the MOPS-HP is not conducted, the lack of data on hospital management practices will negatively impact obtaining a full understanding of hospitals and the health care industry. Hospital management practices have been shown to be related to both financial and clinical outcomes. This gap in data would prevent the Census Bureau from delivering products that would help other Federal Agencies, policymakers, and the public.

Question 7. Special Circumstances

The MOPS-HP will not have any special circumstances.

Question 8. Consultations Outside the Agency

The MOPS-HP content was developed by the Census Bureau in collaboration with external researchers who have past experience in surveying hospitals on management practices. The content was also thoroughly examined through two rounds of cognitive testing with potential respondents conducted by the Census Bureau. Participants in the testing provided feedback on various aspects of the collection, including the structure of specific questions, the ordering of the questions, the best way to reach the intended respondents, and ease of providing the information being asked.

The Census Bureau initially published a 60-day notice for comment in the *Federal Register* on January 27, 2020 (Vol 85, pg. 4623-4624). That notice proposed collecting data for survey years 2019 and 2014. The Census Bureau received one comment in opposition to collecting these data annually. This survey is not planned as an annual collection; it is a one-time collection. The commenter also wanted to know whether we had coordinated this survey with the "...us dept of health [sic]..." to avoid unnecessary duplication. These data do not currently exist and are not collected elsewhere. Additionally, the Census Bureau received a letter of support for the MOPS-HP from the Bureau of Economic Analysis (Attachment G). We thank them for their support.

A second 60-day notice for comment proposing to instead collect data for reference years 2020 and 2019 was published in the *Federal Register* on November 19, 2020 (vol 85, pg. 73,673-73,674). We received no noteworthy comments in response to that notice.

Question 9. Paying Respondents

The Census Bureau will not pay respondents or provide gifts in return for complying with the MOPS-HP.

Question 10. Assurance of Confidentiality

Data collected in this survey are maintained in strictest confidence under the authority of an Act of Congress, Title 13, United States Code, Section 9. An assurance of confidentiality and the fact that response is required is conveyed to the respondent via the Centurion welcome screen (Attachment F) and the initial letter (Attachment C) that they receive to provide them with important information regarding the MOPS-HP. The letters that are attached to this package are drafts; however, we do not expect any substantial changes.

Question 11. Justification for Sensitive Questions

The MOPS-HP does not ask any sensitive questions. It only requests information about the hospitals' management and organizational practices, tenure of the respondents, and the number of licensed beds at the location.

Question 12. Estimate of Hour Burden

The number of respondents will be approximately 3,200. The MOPS-HP is a one-time collection. The estimated burden per response is 45 minutes, bringing the total respondent burden to 2,400 hours. The questionnaire contains 39 questions, 36 of which are checkboxes and do not require a numerical value. Most of these questions are not anticipated to take longer than one minute to answer. As the survey is intended for Chief Nursing Officers, it is expected that respondents will know most of the answers to the questions without extensive research. Cognitive testing of the survey content concluded that the time to complete the survey was between 30 minutes to an hour. Based on feedback obtained through testing, survey questions were improved to reduce the amount of time required from the respondent. The burden estimate of 45 minutes per respondent is equal to what was estimated for the 2015 MOPS conducted in the manufacturing sector, which contains similar content and a similar number of questions.

Respondents	Responses per Respondent	Total Responses	Burden per respondent	Total Burden
3,200	1	3,200	45 min.	2,400

The total cost to the respondents in terms of their time to respond is approximately \$192,011 or about \$60.00 per respondent. This was calculated using the Bureau of Labor Statistics' Occupational Outlook Handbook, which lists the median annual wages for top executives in the healthcare and social assistance industries as \$166,410 in May 2019.²¹ Using this figure, an hourly wage of approximately \$80.00 was estimated assuming 40 hours of work per week for 52 weeks in the year.

Question 13. Estimate of Cost Burden

We do not expect respondents to incur any costs other than that of their time to respond. The information requested is of the type and scope that the respondent should be able to recall it easily. No special hardware, software, or system is necessary to provide answers to this information collection. Therefore, respondents are not expected to incur any capital and start-up costs or system maintenance costs in responding.

Question 14. Cost to Federal Government

²¹ Bureau of Labor Statistics' [Occupational Outlook Handbook – Top Executives](#).

The total cost of this information collection to the Federal Government is \$134,288, to be incurred by the Census Bureau. The cost for activities in fiscal year 2020 will be \$73,122. The remaining \$61,166 will be incurred mostly in fiscal year 2021, with a minimal share being incurred in fiscal year 2022. The activities covered in the cost to the federal government include coordination of survey operations, creation of processing and collection requirements, and mail costs. This is a joint statistical project with Harvard Business School, who will cover the remaining cost of \$1,208,579.

Question 15. Reason for Change in Burden

The increase in burden is attributable to the information collection being submitted as new.

Question 16. Project Schedule

The schedule for the entire MOPS-HP project is as follows:

Initial mail out	April 2021
Respondent follow-ups	May 2021 – August 2021
Data collection instrument closeout	October 2021
Data analysis and tabulation	October 2021 – May 2022
Publication of press release	June 2022

This schedule may be impacted by the effects of COVID-19. The Census Bureau is cognizant and respectful of the survey’s timing and related burden for CNOs when their time and resources are needed elsewhere. The ongoing situation is being monitored and dates will be adjusted as necessary as the collection start date approaches as we do not want to add burden to an overly burdened sector of the economy.

Question 17. Request to Not Display Expiration Date

The assigned expiration date will be displayed on the information collection instrument.

Question 18. Exceptions to the Certification

There are no exceptions to the certification.

Question 19. SIC Codes Affected

The MOPS-HP will affect NAICS code 6221, General Medical and Surgical Hospitals.