

Adapting Data Collection for Frontline Workers During the Pandemic

Melissa Kresin, U.S. Census Bureau (presenter)
Vicki Bookhultz, U.S. Census Bureau

Nicole Cummings, National Center for Health Statistics (presenter)
Sonja Williams, National Center for Health Statistics

Disclaimer

The findings and conclusions in this article are those of the authors and do not necessarily represent the official position of the U.S. Census Bureau, National Center for Health Statistics, or the Centers for Disease Control and Prevention.

Presentation Outline

- National Ambulatory Medical Care Survey (NAMCS) and National Hospital Ambulatory Medical Care Survey (NHAMCS) overview
- Impact of the pandemic on NAMCS and NHAMCS
- Field Representative safety protocols
- Data collection and survey instrument adaptations
- Future considerations

NAMCS and NHAMCS and the Data Collection Agent

- The Centers for Disease Control and Prevention's National Center for Health Statistics (NCHS) conducts NAMCS and NHAMCS
- NCHS is the main source of U.S. health statistics. Other NCHS surveys include:
 - National Hospital Care Survey (NHCS)
 - National Post-acute and Long-term Care Study (NPALS)
 - National Health and Nutrition Examination Survey (NHANES)
 - National Health Interview Survey (NHIS)
 - National Survey of Family Growth (NSFG)
- U.S. Census Bureau is the data collection agent

National Ambulatory Medical Care Survey

- **Background**

- The purpose of NAMCS is to serve as a source of information for health care policy and research
- NAMCS has been conducted since 1973 and annually since 1989
- Health Centers were added in 2006

- **Data coverage**

- Office-based physicians classified by AMA or AOA as primarily engaged in office-based patient care
- Visits to those physicians' offices or sampled Health Centers

- **Objective**

- Provide nationally representative data of ambulatory care provided at physicians' offices and Health Centers

National Hospital Ambulatory Medical Care Survey

- Background
 - The purpose of NHAMCS is to serve as a source of information for health care policy and research
 - NHAMCS has been conducted annually since 1992
- Data coverage
 - Emergency departments of non-institutional general and short-stay hospitals located in the 50 states and D.C.
- Objective
 - Provide nationally representative data of emergency care provided in hospitals within the Nation

NAMCS and NHAMCS Data Collection Phases

- **Screener Interview**
 - Usually conducted over the telephone
 - Determines if a physician/hospital is eligible to participate in the survey
- **Induction Interview**
 - Usually administered in person
 - Gathers characteristic data for the physician/hospital and the physician's practice/hospital's emergency departments
- **Abstraction**
 - Usually conducted in the physician's office/hospital's medical records department
 - Collects patient visit data for the designated reporting period

How were NAMCS and NHAMCS respondents uniquely impacted by the pandemic?

- Time constraints and safety concerns – respondents were on the front lines of the pandemic, administering care to individuals impacted by COVID-19
- Burden concerns – COVID-19 response increased burden on healthcare professionals
- Access constraints – many offices/hospitals were only open to staff and patients
- Space constraints – for those offices/hospitals that were open to visitors, there was often no available space for FRs to abstract

What did these constraints mean for NAMCS and NHAMCS data collection?

- Additional considerations for field representative (FR) and respondent safety and FR morale
- Necessary modifications to the survey instruments and data collection procedures to facilitate and encourage respondent participation
- Opportunity to implement changes and improvements

Implemented Safety Protocols for all Census Bureau Field Representatives

The Census Bureau implemented safety protocols to improve FR and respondent safety, including:

- Maximizing telephone contact attempts
- Mandating mask use by all FRs
- Social distancing
- Hand hygiene
- Additional general guidance

Implemented Safety Protocols for all Census Bureau Field Representatives – Continued

- March 19, 2020: All Census Bureau current surveys became telephone only (no in-person visits)
- July 1, 2020: On a weekly basis, counties were released to start in-person interviewing
- September 1, 2020: All counties began in-person visits again
- November 1, 2020: Regional Directors were given authority to determine counties where personal visits should not occur
- Regional Office's (ROs) were periodically closed throughout 2020 based on their geography and local guidance

Boosted NAMCS and NHAMCS Field Representative Morale

- 2020 data collection kickoff teleconference in May 2020
- FR thank you calls
- Monthly FR thank you notes
- Monetary awards
- Refusals due to COVID-19 were charged to the RO instead of the FR

Emailed NAMCS and NHAMCS Survey Materials to Respondents

- Prior to 2020, hard-copy survey materials were provided to FRs to share with respondents to encourage survey participation, including:
 - Background information on the survey
 - Examples of how the data are used and kept confidential
 - Sample survey questions and response options
- In 2020, the Census Bureau created an email template and three PDF attachments for FRs to email electronic survey materials to respondents

Expanded NAMCS and NHAMCS Remote Abstraction Methods

- In 2018, NCHS approved the first “remote abstraction” method
- In 2020, respondents proposed alternative remote abstraction methods
- Proposed methods were reviewed by NCHS’s Confidentiality Officer
- New approved methods include:
 - Telephone abstraction
 - Mailing paper or electronic patient records to the RO
 - Electronically sending patient records to the RO

Extended 2019 NHAMCS Data Collection Period

- 2019 NAMCS data collection closed out as expected in April 2020
- 2019 NHAMCS data collection closeout was moved from March to September 2020
 - FRs converted 3 hospitals who have historically refused to participate
 - One hospital wanted to participate via remote abstraction and needed to wait until FRs were allowed in the RO
 - Two hospitals wanted to participate via remote abstraction with a new, proposed method that required NCHS approval

Delayed the Start of 2020 NAMCS Data Collection

- 2020 NHAMCS data collection started as expected on May 26, 2020
- 2020 NAMCS data collection started May 19, 2020, six weeks after the intended start date, allowing:
 - Project staff to analyze the affect of the pandemic on the sampled physician offices
 - Respondents time to prepare for the virus to impact their area

Created Hotspot Areas for 2020 NAMCS and NHAMCS Cases

- 2020 data collection started with only non-hotspot areas
- NCHS provided Census with a list of counties where COVID-19 case count:
 - Was greater or equal to 5,000, or
 - More than 1,000 cases per 100,000 population
- Census provided that information to the ROs who used that information to assign cases to FRs accordingly
- For 2020 Q1 data collection:
 - 21% of NAMCS cases were in a hotspot area
 - 20% of NHAMCS cases were in a hotspot area

Dropped Abstractions in 2020 NAMCS and Prioritized COVID-19 Induction Data

- Dropped abstraction for NAMCS physician visit data for Q2-Q4
 - Response rates were low
 - Emphasis was placed on increasing induction response rate, where new COVID-19 questions are located
 - Incentives for respondents and FRs were explored, with the increased cost savings

Summary of NAMCS 2020 Preliminary Q1 & Q2 Response Rates

NAMCS		2020/01	2020/02
Induction Response Rate		40.13%	49.89%
Abstraction Response Rate		23.77%	NA

***Note:** Above are preliminary rates from the field, and not those calculated by NCHS to be used as final.

Added COVID-19 Questions in 2020 NAMCS and 2021 NHAMCS

- NCHS added COVID-19 related questions to assess the effects of the pandemic on physician offices and hospitals
- The addition of these questions included:
 - Consultation across NCHS
 - Submission of emergency OMB packages to gain approval for the approved questions
 - Navigating the work necessary to have them included in the survey instruments

Added COVID-19 Questions in 2020 NAMCS and 2021 NHAMCS – Continued

- The questions covered a myriad of COVID-19 pandemic related topics. Some included:
 - For both NAMCS and NHAMCS:
 - Personal Protective Equipment (PPE) shortages
 - Testing capabilities
 - Employees testing positive
 - Having to turn away positive/presumptive positive patients
 - For NAMCS only:
 - Designation as a testing referral site
 - Telehealth/telemedicine usage

Future Considerations

- Exploring respondent and FR incentives
- Exploring the release of COVID-19 preliminary data
- Continuing no abstraction for NAMCS physician visit data
- Improving electronic survey materials based on FR feedback

Thank You!

Melissa Kresin (presenter)
Assistant Survey Director
National Ambulatory Medical Care Surveys
Associate Directorate for Demographic Programs
U.S. Census Bureau
Office 301.763.9825
Melissa.Kresin@census.gov

Victoria Bookhultz
Team Lead
Health Surveys Branch
Field Division
U.S. Census Bureau
Office 301-763-1164
Victoria.Bookhultz@census.gov

Nicole Cummings (presenter)
Health Statistician
Ambulatory and Hospital Care Statistics Branch
Division of Health Care Statistics
National Center for Health Statistics
Centers for Disease Control and Prevention
Office 301.458.4705
ncummings2@cdc.gov

Sonja Williams
Acting Team Lead
Ambulatory and Hospital Care Statistics Branch
Division of Health Care Statistics
National Center for Health Statistics
Centers for Disease Control and Prevention
Office 301.458.4774
swilliams14@cdc.gov

Thank You!

NAMCS Physician Office COVID-19 Questions



1. During the past THREE months, how often did your office experience shortages of any of the following personal protective equipment due to the onset of the coronavirus disease (COVID-19) pandemic?

N95 respirators or other approved facemasks

- Never
- Some of the time
- Most of the time
- All of the time
- Don't know

1. During the past THREE months, how often did your office experience shortages of any of the following personal protective equipment due to the onset of the coronavirus disease (COVID-19) pandemic?

Eye protection, isolation gowns, or gloves

- Never
- Some of the time
- Most of the time
- All of the time
- Don't know

2. During the past THREE months, did your office have the ability to test patients for coronavirus disease (COVID-19) infection?

- Yes
- No [SKIP TO #2b]
- Not applicable – did not need to do any COVID-19 testing [SKIP TO #3]
- Don't know [SKIP TO #2b]

2A. [IF ANSWERED 'YES' TO #2] During the past THREE months, how often did your office experience shortages of coronavirus disease (COVID-19) tests for any patients who needed testing?

- Never
- Some of the time
- Most of the time
- All of the time
- Don't know

2B. During the past THREE months, how often did your office have a location where patients could be referred to for coronavirus disease (COVID-19) testing?

- Never
- Some of the time
- Most of the time
- All of the time
- Don't know

3. During the past THREE months, did your office need to turn away or refer elsewhere any patients with confirmed or presumptive positive coronavirus disease (COVID-19) infection?

- No, COVID-19 patients were not turned away or referred elsewhere
- Yes, some COVID-19 patients were turned away or referred elsewhere
- Yes, most COVID-19 patients were turned away or referred elsewhere
- Yes, all COVID-19 patients were turned away or referred elsewhere
- Not applicable – the office did not have any COVID-19 patients
- Don't know

NAMCS Physician Office COVID-19 Questions – Continued



4. During the past THREE months, did any of the following clinical care providers in your office test positive for coronavirus disease (COVID-19) infection?

- Physicians
 - Yes
 - No
 - Not applicable – did not have such provider type onsite
 - Don't know
- Physician assistants
 - Yes
 - No
 - Not applicable – did not have such provider type onsite
 - Don't know
- Nurse practitioners
 - Yes
 - No
 - Not applicable – did not have such provider type onsite
 - Don't know
- Certified nurse-midwives
 - Yes
 - No
 - Not applicable – did not have such provider type onsite
 - Don't know
- Registered nurses/licensed practical nurses
 - Yes
 - No
 - Not applicable – did not have such provider type onsite
 - Don't know
- Other clinical care providers
 - Yes (please specify: _____)
 - No
 - Not applicable – did not have such provider type onsite
 - Don't know

5. During January and February 2020, was your office using telemedicine or telehealth technologies (for example, audio with video, web videoconference) to assess, diagnose, monitor, or treat patients?

- Yes
- No
- Don't know

5A. [IF ANSWERED 'YES' to #5]: After February 2020, did your office's use of telemedicine or telehealth technologies to conduct patient visits increase?

- Yes
- No
- Don't know

5B. [IF ANSWERED 'YES' to #5a]: After February 2020, how much has your office's use of telemedicine or telehealth technologies to conduct patient visits increased?

- Less than 25%
- 25% to 49%
- 50% to 74%
- 75% or more
- Don't know

5C. [IF ANSWERED 'NO' to #5]: After February 2020, has your office started using telemedicine or telehealth technologies?

- Yes
- No
- Don't know

5D. [IF ANSWERED 'YES' to #5c]: Since your office started using these technologies, how many of your patient visits have been conducted using telemedicine or telehealth technologies?

- Less than 25%
- 25% to 49%
- 50% to 74%
- 75% or more
- Don't know

NAMCS Health Center COVID-19 Questions



1. During the past THREE months, how often did your center experience shortages of any of the following personal protective equipment due to the onset of the coronavirus disease (COVID-19) pandemic?

N95 respirators or other approved facemasks

- Never
- Some of the time
- Most of the time
- All of the time
- Don't know

1. During the past THREE months, how often did your center experience shortages of any of the following personal protective equipment due to the onset of the coronavirus disease (COVID-19) pandemic?

Eye protection, isolation gowns, or gloves

- Never
- Some of the time
- Most of the time
- All of the time
- Don't know

2. During the past THREE months, did your center have the ability to test patients for coronavirus disease (COVID-19) infection?

- Yes
- No [SKIP TO #2b]
- Not applicable – did not need to do any COVID-19 testing [SKIP TO #3]
- Don't know [SKIP TO #2b]

2A. [IF ANSWERED 'YES' TO #2] During the past THREE months, how often did your center experience shortages of coronavirus disease (COVID-19) tests for any patients who needed testing?

- Never
- Some of the time
- Most of the time
- All of the time
- Don't know

2B. During the past THREE months, how often did your center have a location where patients could be referred to for coronavirus disease (COVID-19) testing?

- Never
- Some of the time
- Most of the time
- All of the time
- Don't know

3. During the past THREE months, did your center need to turn away or refer elsewhere any patients with confirmed or presumptive positive coronavirus disease (COVID-19) infection?

- No, COVID-19 patients were not turned away or referred elsewhere
- Yes, some COVID-19 patients were turned away or referred elsewhere
- Yes, most COVID-19 patients were turned away or referred elsewhere
- Yes, all COVID-19 patients were turned away or referred elsewhere
- Not applicable – the office did not have any COVID-19 patients
- Don't know

NAMCS Health Center COVID-19 Questions – Continued



4. During the past THREE months, did any of the following clinical care providers in your center test positive for coronavirus disease (COVID-19) infection?

- Physicians
 - Yes
 - No
 - Not applicable – did not have such provider type onsite
 - Don't know
- Physician assistants
 - Yes
 - No
 - Not applicable – did not have such provider type onsite
 - Don't know
- Nurse practitioners
 - Yes
 - No
 - Not applicable – did not have such provider type onsite
 - Don't know
- Certified nurse-midwives
 - Yes
 - No
 - Not applicable – did not have such provider type onsite
 - Don't know
- Registered nurses/licensed practical nurses
 - Yes
 - No
 - Not applicable – did not have such provider type onsite
 - Don't know
- Other clinical care providers
 - Yes (please specify: _____)
 - No
 - Not applicable – did not have such provider type onsite
 - Don't know

5. During January and February 2020, was your center using telemedicine or telehealth technologies (for example, audio with video, web videoconference) to assess, diagnose, monitor, or treat patients?

- Yes
- No
- Don't know

5A. [IF ANSWERED 'YES' to #5]: After February 2020, did your center's use of telemedicine or telehealth technologies to conduct patient visits increase?

- Yes
- No
- Don't know

5B. [IF ANSWERED 'YES' to #5a]: After February 2020, how much has your center's use of telemedicine or telehealth technologies to conduct patient visits increased?

- Less than 25%
- 25% to 49%
- 50% to 74%
- 75% or more
- Don't know

5C. [IF ANSWERED 'NO' to #5]: After February 2020, has your center started using telemedicine or telehealth technologies?

- Yes
- No
- Don't know

5D. [IF ANSWERED 'YES' to #5c]: Since your center started using these technologies, how many of your patient visits have been conducted using telemedicine or telehealth technologies?

- Less than 25%
- 25% to 49%
- 50% to 74%
- 75% or more
- Don't know

NHAMCS COVID-19 Questions



1. During the past four weeks, did your emergency department experience shortages of coronavirus disease (COVID-19) tests for any patients with presumptive positive COVID-19 infection?

- Never
- Some of the time
- Most of the time
- All of the time
- Not applicable – did not need to do any COVID-19 testing
- Don't know

2. During the past four weeks, did your hospital create areas outside the emergency department entrance to screen patients for coronavirus disease (COVID-19) infection?

- Yes
- No
- Don't Know

3. During the past four weeks, did your emergency department need to turn away or refer elsewhere any patients with confirmed or presumptive positive coronavirus disease (COVID-19) infection?

- No COVID-19 patients were turned away or referred elsewhere
- Some COVID-19 patients were turned away or referred elsewhere
- Most COVID-19 patients were turned away or referred elsewhere
- All COVID-19 patients were turned away or referred elsewhere
- Not applicable – the emergency department did not have any COVID-19 patients.
- Don't know

4. During the past four weeks, did any of the following clinical care providers in your emergency department test positive for coronavirus disease (COVID-19) infection?

- Physicians
 - Yes
 - No
 - Not applicable – did not have such provider type onsite
 - Don't know
- Physician assistants
 - Yes
 - No
 - Not applicable – did not have such provider type onsite
 - Don't know
- Nurse practitioners
 - Yes
 - No
 - Not applicable – did not have such provider type onsite
 - Don't know
- Certified nurse-midwives
 - Yes
 - No
 - Not applicable – did not have such provider type onsite
 - Don't know
- Registered nurses/licensed practical nurses
 - Yes
 - No
 - Not applicable – did not have such provider type onsite
 - Don't know
- Other clinical care providers
 - Yes (please specify: _____)
 - No
 - Not applicable – did not have such provider type onsite
 - Don't know