

Current Population Survey: Developing and evaluating a pandemic-related question on unmet medical care needs July 2024

Mary Dorinda Allard¹ and Anne E. Polivka¹

¹Bureau of Labor Statistics, 2 Massachusetts Avenue, NE, Washington, DC 20212

Abstract

In May 2020, the Bureau of Labor Statistics temporarily added several pandemic-related questions to its monthly survey of households, the Current Population Survey. While the questions largely related to the impact of the pandemic on the labor force, one question, which was contributed by the National Center for Health Statistics, focused on unmet medical needs due to lack of access to health care. This paper will describe the development and testing process for this unmet-care question, which was fielded from May 2020 to October 2020. It also will compare estimates from the question to those from a similar question in the Census Bureau's Household Pulse Survey. Finally, it will explore possible reasons for the sharp differences in the estimates of unmet care from these two surveys.

Introduction

Employment dropped sharply and the unemployment rate increased considerably at the onset of the COVID-19 pandemic, leading the Bureau of Labor Statistics (BLS) to develop a short set of supplementary questions for the Current Population Survey (CPS) about the effect of the pandemic on the labor market.¹ The CPS is a monthly survey of approximately 60,000 households that is best known as the source of the national unemployment rate. Because statistics from the survey are typically published each month about 2 weeks after the data are collected, the CPS was an excellent candidate for collecting pandemic-related information quickly in a rapidly changing environment. In addition to providing extensive information about employment and unemployment, CPS data can be broken out by a variety of demographic characteristics, such as age, sex, race, ethnicity, and educational attainment. Any additional questions could also leverage the rich demographic and labor market data already collected in the CPS.²

In March 2020, BLS began developing four questions about the effect of the pandemic on the labor market for the CPS.³ Because of the nation's urgent need for timely data about the pandemic, William W. Beach, the BLS Commissioner of Labor Statistics at the time, invited the Center for Disease Control and Prevention's National Center for Health Statistics (NCHS) to also add a question to the CPS. When extending the offer, the Commissioner made it clear that the question would need to be simple and could not jeopardize participation in the survey or taint the CPS data. He also stated that BLS would need to know exactly what question NCHS wanted to add by the end of March.

The NCHS welcomed the opportunity to add a question to the CPS and quickly decided to focus this question on unmet medical needs due to lack of access to health care. Their justification for this focus was that access to health care is a fundamental determinant of health, and its equitable distribution across the population is a critical issue of health services research and policymaking. Unmet needs are generally the result of cost-related barriers, accessibility problems (such as lack of transportation or lack of availability of medical care in the area), and acceptability (such as personal preferences). The pandemic had the potential to greatly exacerbate these causes of inequitable distribution of care, especially accessibility problems (for example, doctor's offices limiting in-person appointments, urgent care clinics focusing on COVID-19 care and excluding other health concerns, or public transportation systems cutting back on

service). A question about whether people's access to care had been reduced because of COVID-19 would provide data on the prevalence of people with recent unmet needs, whether that prevalence had changed over time, and whether historic demographic inequities in access to care was widening.

This paper will focus on the unmet-care question that was included in the monthly CPS from May to October 2020 and will describe question development and testing. It also will compare estimates from the question to the results from a different survey, the Census Bureau's Household Pulse Survey.⁴ Finally, it will discuss possible reasons for the sharp differences between CPS and Household Pulse estimates.

I. Developing and fielding the unmet-care question

Developing question wording. Within a week of receiving the Commissioner's invitation, NCHS provided draft question wording to BLS. The NCHS wording was for a self-response question—that is, it was designed to be answered by individuals about their own situation. While the CPS accepts self-response, it also accepts proxy responses—that is, individuals may answer questions about other people in their households. Therefore, the BLS team made some adjustments to the question to allow for proxy response. This involved creating a follow-up question to identify people in the household who had unmet care.

The question evaluation phase typically involves multiple steps, including stakeholder outreach, cognitive testing, and an Office of Management and Budget (OMB) clearance process that solicits comments from the public. This would have significantly delayed the fielding of the questions, so OMB allowed BLS to add questions to the CPS through an emergency clearance process that did not require extensive outreach or cognitive testing prior to fielding.

In the absence of cognitive interviews and stakeholder outreach, the BLS team submitted the unmet-care question—along with the pandemic-related labor market questions—to several survey methodologists who had not been involved in the question development. CPS staff at the Census Bureau also reviewed the unmet-care question, as did staff at OMB. BLS discussed all feedback with NCHS, and suggestions from these independent expert reviews resulted in several refinements to the wording.

The final question wording was as follows:

At any time in the last 4 weeks, did you or anyone in your household need medical care for something other than Coronavirus, but not get it because of the Coronavirus pandemic? Please include all adults and children in the household.

Unlike most other questions in the CPS, which are limited to people age 16 and over, the unmet-care question was designed to collect information about all members of the household, including children. The collection instrument instructed interviewers to enter "no" if everyone in the household voluntarily cancelled or delayed medical care for themselves or another household member. If the answer to the question was "yes," a follow-up question would ask:

Who was that?

Interviewers would then record all the people in the household who had not received needed medical care. Since the CPS collects a roster of household members, it would be a simple matter for interviewers to identify household members on the already-collected roster.

After the question wording was finalized, BLS, NCHS, and the Census Bureau worked together to develop training materials that were provided to interviewers prior to the first data collection. The question about unmet medical care, along with the 4 questions about the effect of the pandemic on the labor market, was added to the monthly CPS starting in May 2020.

Cognitive testing. Although BLS did not cognitively test the question prior to fielding because of the need to collect data quickly, BLS conducted cognitive testing and other evaluations after the questions were fielded to ensure that there were no obvious issues with the questions.⁵

BLS survey methodologists conducted 9 cognitive interviews by telephone. A survey methodologist trained in cognitive interviewing administered an abbreviated version of the CPS, along with the new questions. The interviewer then debriefed participants to gain insight into their response process to identify possible sources of error or ways to improve the questions. In almost all cases, one survey methodologist conducted the interview and another took notes.

In addition, BLS survey methodologists reviewed findings from an online assessment of questions from another survey, the Census Bureau's Household Pulse Survey. Two rounds of this online Web Probe Assessment were conducted with independent samples. Both rounds included questions similar to the CPS unmet-care question.

After reviewing information from both the cognitive testing and the online assessments, BLS survey methodologists found the unmet-care question to be somewhat problematic. Specifically, the wording of the question was complicated, making the objective not entirely clear. Therefore, the survey methodologists encouraged NCHS to prioritize their measurement objectives given the limited space that could be allocated to the question, as well as suggesting possible wording changes.

Discontinuation of the unmet-care question and publication of microdata. At the request of NCHS, the unmet-care question was discontinued after October 2020 data collection. Public-use variables for the question are included in monthly extract files on the Census Bureau website for May 2020 to October 2020.⁶ These variables can be linked to the CPS public-use microdata files, enabling researchers to conduct their own analyses.

II. Comparing results with the Household Pulse Survey

A very basic examination of the results revealed that the CPS estimates were very different from those from other surveys conducted around the same time that included similar questions. To illustrate this, we compared top-level estimates from the CPS to estimates from the Household Pulse Survey.⁷

Table A. Percent of people who needed but did not receive medical care at any time during the previous 4 weeks due to the Coronavirus pandemic, May-June 2020				
	May		June	
	CPS	Household Pulse	CPS	Household Pulse
Total	6.2	32.8	4.3	32.7
Men	5.5	29.7	3.9	29.8
Women	6.8	35.8	4.6	35.5

Note: CPS estimates are for people age 16 and over, and Household Pulse estimates are for those age 18 and over. Household Pulse estimates are from surveys fielded May 14-19 and June 18-23.

According to the CPS, 6.2 percent of people needed but did not receive medical care during the previous 4 weeks due to the pandemic in May 2020 much lower than the estimate of 32.8 percent from the Household Pulse Survey. (See Table A.)⁸ This sharp disparity was also evident in the estimates for men and women, though both surveys show that women were more likely than men to not received needed medical care. The estimates for June showed similar disparities.

It is rare for estimates from two different surveys to match, but the differences between the CPS and the Household Pulse are unexpectedly large. The rich research into questionnaire design has uncovered many

factors that impact how people answer survey questions. Listed below are some of the many reasons why the estimates from the CPS and the Household Pulse may be so different.

Universe. The CPS universe for the unmet-care question was the civilian noninstitutional population, including children. The universe for the Household Pulse question was people age 18 and over living in households. The CPS includes a small number of people residing in group quarters (such as independent living facilities). The Household Pulse, unlike the CPS, includes members of the Armed Forces who reside in households within the US.

Coverage. The Household Pulse Survey recruited only households for which an email address or cell phone number could be identified. The CPS, by contrast, includes both households with and without telephones (either landline or cell) or email addresses and typically conducts in-person and telephone interviews. At the first interview, respondents are asked to supply a telephone number. While no in-person interviews were conducted in May and June 2020, many respondents received phone calls from interviewers they had spoken with in previous months or for whom interviewers could obtain a phone number.

Timing of survey. Both surveys asked about medical care not received in the previous 4 weeks, but they asked at slightly different times. For example, the CPS was fielded in the week containing the 19th of the month (May 17-23 and June 14-20),⁹ while the Household Pulse was fielded May 14-19 and June 18-23.

Mode. In May and June, all CPS interviews were collected over the telephone by an interviewer, while the Household Pulse was collected electronically from the respondent through a website or mobile device without an interviewer. Previous research has shown that the mode of data collection can impact responses.

Information collected from each household. The CPS question collected information about everyone in the household, including children. The Household Pulse question collected information about one adult for whom the Census Bureau had contact information in the household. Unmet health care needs may differ between the member of the household answering the Household Pulse and other members of the person's household.

Self versus proxy response. The CPS asks respondents to report about themselves and other people living in their household—that is, the survey includes both self (responses supplied by people about themselves) and proxy responses (responses about other people in the household). The Household Pulse includes only self responses. Responses that people give for themselves can differ from answers given on behalf of others.

Question wording. It is widely recognized that even small differences in question wording can lead to differences in response. While questions in the CPS and the Household Pulse were similar, there were two significant differences.

First, the Household Pulse had two questions about slightly different topics—one about the respondent's delayed care and one immediately following about their unmet care. The CPS only had a question about unmet care. Second, because the CPS question was about everyone in the household, there was a follow-up question about who did not receive care.

The CPS questions were as follows:

At any time in the last 4 weeks, did you or anyone in your household need medical care for something other than Coronavirus, but not get it because of the Coronavirus pandemic? Please include all adults and children in the household.

Who was that?

The two Household Pulse questions were:

At any time in the last 4 weeks, did you DELAY getting medical care because of the coronavirus pandemic?

At any time in the last 4 weeks, did you need medical care for something other than coronavirus, but DID NOT GET IT because of the coronavirus pandemic?

Data from the Census Bureau's Web Probe Assessment of the Household Pulse questions showed that large percentages of respondents listed out-of-scope medical care activities when answering the unmet-care question, such as dental care, vision care, and regular check-ups. There were also indications that the delayed-care question might have influenced responses to the unmet-care question. (The estimate of the number of people who delayed care was 40.7 percent for May 14-19 and 41.5 percent for June 18-23.) From the Web Probe data on those two questions, it appeared that some people either had multiple medical situations with different outcomes or had overlapping interpretations of what the two questions were meant to capture. Thus, the unmet-care question in the Household Pulse likely overestimated the number of people who were unable to receive necessary medical care.

In addition to reviewing the Census Bureau's Web Probe Assessment, BLS survey methodologists conducted a small number of cognitive interviews to evaluate the CPS questions, including the unmet-care question. While they found that the CPS question mostly worked as intended, they noted that the wording was quite complex. In order to answer accurately, respondents had to consider several different points: whether they or their household members had failed to receive care, whether they had needed that care, whether that care was voluntarily delayed, and whether the care was dental or vision. Thus, BLS survey methodologists suggested focusing on the highest priority measurement objectives and simplifying the question wording accordingly.

Interviewer-administered versus self-administered. The CPS is collected by trained interviewers. The data collection instrument sometimes contains special instructions for interviewers that are not read to the respondent. The CPS unmet-care question included an interviewer instruction in the instrument:

Enter NO if all persons in the household voluntarily cancelled or delayed medical care for themselves or another household member.

This instruction doubtless helped limit the number of "yes" responses for voluntarily cancelled or delayed care.

In addition, CPS interviewers received specific question-related training that had been developed by BLS in consultation with the Census Bureau and NCHS. The training included some detailed instructions on how to record answers:

Enter No if all persons in the household voluntarily cancelled or delayed medical care for themselves or another household member. Cancellations or delays are voluntary only if the person decided that the care was not needed or could be easily postponed.

Cancellations or delays of medical care should not be considered voluntary if the person believed the care was needed, but they chose not to get it due to fear, loss of health insurance, lack of transportation, unavailability of providers, or problems getting an appointment. If any of these reasons were due to the coronavirus pandemic, enter Yes.

Do not include dental or vision care.

The Household Pulse Survey was entirely self-administered, and there were no special instructions about these questions or training for respondents.

Salience. It is well known that a survey's main subject can influence results. For example, a test of identical questions about disability yielded different results in the National Comorbidity Survey, a health survey, than they did in the CPS, which is focused on the labor force.¹⁰ In the CPS, the unmet-care question was virtually the only health-related question in the survey, and it followed many questions about employment and unemployment. By contrast, the Household Pulse delayed-care and unmet-care questions followed several questions about health and health insurance. Thus, respondents may have found the topic more salient in the Household Pulse than in the CPS.

Survey response rates. Although responses to the CPS were lower after the onset of the pandemic, they were much higher than those for the Household Pulse. CPS survey response rates were 67.4 percent in May and 64.9 percent in June. By contrast, the Household Pulse had response rates of 1.2 percent in May and 2.3 percent in June. Both BLS and Census conducted nonresponse bias analyses. The BLS analysis of the CPS found that there was some bias but that the impact on the overall unemployment rate was low.¹¹ The Census evaluation of the Household Pulse showed evidence of potential nonresponse bias, as well as evidence that the weighting adjustments helped mitigate that bias in the final estimates.¹² An independent analysis also found evidence of bias in the Household Pulse Survey.¹³

Item response rates. Both surveys had item nonresponse on this question. Because item nonresponse is unlikely to be random, CPS imputed missing values using a hot-deck allocation method based on general demographic characteristics.¹⁴ CPS estimates reported above include these imputed values. By contrast, the Household Pulse Survey calculations do not include the missing responses.

Summary

In May 2020, BLS added four questions to the CPS to measure the effect of the pandemic on the labor market. Along with these four questions, BLS added a question on unmet health care needs for NCHS, a question that was fielded in the CPS from May to October 2020. Estimates from this question differed considerably from similar questions in other surveys fielded at approximately the same time, such as the Census Bureau's Household Pulse Survey. Similar questions from different surveys rarely match, but the disparity is not usually as large as between the CPS and the Household Pulse. Even though the questions appear to be quite similar, there are many methodological and contextual differences that could have contributed to the disparity.

¹ For more information about the CPS, see <https://www.bls.gov/opub/hom/cps/>.

² BLS has developed supplemental questions for the CPS on previous occasions. For a description of the questions added to the CPS after Hurricane Katrina, see Lawrence S. Cahoon, Diane E. Herz, Richard C. Ning, Anne E. Polivka, Maria E. Reed, Edwin L. Robison, and Gregory D. Weyland, "The Current Population Survey Response to Hurricane Katrina," *Monthly Labor Review*, August 2006, pp. 40-51, www.bls.gov/opub/mlr/2006/08/art4full.pdf.

³ These supplemental labor market questions were added to the CPS in May 2020, and the first estimates from these questions were published in June 2020. For more information about these questions, see <https://www.bls.gov/cps/covid-may2020-sept2022-highlights.htm>.

⁴ In April 2020, the Census Bureau began fielding the Household Pulse Survey, which was designed to measure how individuals and households were responding to the pandemic. The Household Pulse Survey is collected in 2-week time periods, during which approximately 1 million people are invited to participate via email or SMS (a text messaging service). For more information about the Household Pulse Survey, see <https://www.census.gov/data/experimental-data-products/household-pulse-survey.html>.

⁵ Cognitive testing involves administering a sample questionnaire to recruited participants and then asking a series of debriefing questions. Such testing can help uncover any flaws in questions and ensure that they measure the intended concepts. Question wording is often adjusted as a result of cognitive testing. For OMB standards and guidelines for cognitive interviews, see https://www.whitehouse.gov/wp-content/uploads/2021/04/final_addendum_to_stat_policy_dir_2.pdf.

⁶ These extract files are available on the Census website at <https://www.census.gov/data/datasets/2020/demo/cps/cps-covid.html>.

⁷ For more information about the Household Pulse Survey's unmet medical care question, see <https://www.cdc.gov/nchs/covid19/pulse/reduced-access-to-care.htm>.

⁸ Estimates from the Household Pulse as calculated by NCHS are available at https://data.cdc.gov/NCHS/Indicators-of-Reduced-Access-to-Care-Due-to-the-Co/xb3p-q62w/data_preview.

⁹ A very small amount of data is collected in the 3 to 4 days following the week of the 19th of the month.

¹⁰ See Terence M. McMenamin and Steven F. Hipple, "The development of questions on disability for the Current Population Survey," *Monthly Labor Review*, April 2014, available at <https://www.bls.gov/opub/mlr/2014/article/the-development-of-questions-on-disability-for-the-current-population-survey.htm>.

¹¹ See Justin J. McIllece, "Covid-19 and the Current Population Survey: response rates and estimation bias," October 2020, available at <https://www.bls.gov/osmr/research-papers/2020/pdf/st200030.pdf>.

¹² See Sandra Peterson, Norilsa Toribio, James Farber, and David Hornick, "Nonresponse bias report for the 2020 Household Pulse Survey," March 2021, available at https://www2.census.gov/programs-surveys/demo/technical-documentation/hhp/2020_HPS_NR_Bias_Report-final.pdf.

¹³ See Valerie C. Bradley, Shiro Kuriwaki, Michael Isakov, Dino Sejdinovic, Xiao-Li men, and Seth Flaxman, "Unrepresentative big surveys significantly overestimated US vaccine uptake," *Nature*, 600: 695-700, December 2021, available at <https://www.nature.com/articles/s41586-021-04198-4>.

¹⁴ For a descriptions of the allocation processes used in the CPS, see pages 132-134 of *CPS Design and Methodology: Technical Paper 77*, October 2019, available at <https://www2.census.gov/programs-surveys/cps/methodology/CPS-Tech-Paper-77.pdf>.