

Frequently asked questions: The impact of the coronavirus (COVID-19) pandemic on the Current Population Survey/Housing Vacancy Survey (CPS/HVS)

The coronavirus pandemic affected data collection operations for the CPS/HVS during several quarters of 2020 and 2021. By the third quarter of 2021, the pandemic-related restrictions on CPS/HVS data collection had ended in almost all areas. Less than one-half of one percent of cases were affected by pandemic-related restrictions on data collection in the third quarter of 2021. However, the estimates of year-over-year change for the third quarter of 2021 compare back to the third quarter of 2020 when restrictions on in-person data collection were still in place in many areas. Data users should therefore understand and consider the changes in data collection operations when interpreting CPS/HVS estimates for the affected quarters and when comparing the affected quarters to other periods.

How did the data collection procedures change for the CPS/HVS in response to the coronavirus pandemic?

The Census Bureau suspended in-person data collection for the CPS/HVS on March 20th, 2020. The suspension of in-person interviews—termed *personal visits* by CPS/HVS—continued through the entirety of data collection for the second quarter during April, May, and June 2020. During this period, the Census Bureau continued to conduct the CPS/HVS by telephone, including efforts to collect telephone interviews for households and vacant units that would normally have been in-person interviews.

Beginning in July 2020, the Census Bureau began to reinstitute personal visits. The reintroduction of in-person data collection started in limited areas of the country in July 2020, in additional areas in August, and in all areas of the country by September and October 2020. For November and December 2020, in-person data collection was suspended for some areas based on local guidance, though to a lesser extent than the past two quarters. Also, beginning in December 2020, ‘drive-bys’ were allowed. Interviewers were allowed to drive by the sample unit, as another method to try to determine the vacancy status.

The data collection procedures for December 2020 continued to be in place through the current quarter. In-person data collection was suspended in a small number of areas based on local guidance, and interviewers continued to be allowed to drive by the sample unit to determine the vacancy status.

The table below shows the percentage of the CPS/HVS sample cases where personal visits were allowed during 2020 and the first three quarters of 2021.

Table 1: Percent of sample cases where personal visits were allowed.

	Region				
	All	Northeast	Midwest	South	West
Q3 2021 All Months	100%	100%	100%	100%	98%
September 2021	100%	100%	100%	100%	100%
August 2021	99%	100%	100%	100%	98%

July 2021	99%	100%	100%	100%	98%
Q2 2021 All Months	99%	100%	99%	100%	98%
June 2021	99%	100%	100%	100%	98%
May 2021	99%	100%	100%	100%	98%
April 2021	99%	100%	97%	100%	98%
Q1 2021 All Months	98%	100%	100%	100%	91%
March 2021	99%	100%	100%	100%	98%
February 2021	97%	100%	100%	100%	88%
January 2021	97%	100%	100%	100%	89%
Q4 2020 All Months	94%	100%	90%	100%	84%
December 2020	84%	100%	71%	100%	60%
November 2020	98%	100%	100%	100%	93%
October 2020	100%	100%	100%	100%	100%
Q3 2020 All Months	63%	95%	72%	45%	61%
September 2020	100%	100%	100%	100%	100%
August 2020	50%	100%	70%	20%	47%
July 2020	39%	87%	47%	15%	36%
Q2 2020 All Months	0%	0%	0%	0%	0%
June 2020	0%	0%	0%	0%	0%
May 2020	0%	0%	0%	0%	0%
April 2020	0%	0%	0%	0%	0%

The CPS/HVS sample design seeks to collect data on sampled housing units for a total of 8 months, meaning that interviewers attempt to complete an interview in each of those 8 months. Once selected, a housing unit is in the sample for 4 consecutive months, out for 8 months, and then in the sample for 4 months. Under normal procedures, the first and fifth interviews are conducted entirely via in-person interviews. In other months, a field representative can conduct a telephone interview instead of an in-person interview if certain conditions are met. The suspension of in-person interviews replaced these procedures, substituting telephone contact attempts for all sample housing units regardless of their month in sample. The removal of the in-person visit suspensions reversed this change, returning to the previous procedures for determining when a telephone interview attempt is allowed.

During the period when personal visits were suspended, the telephone contact attempts relied on phone numbers identified through multiple sources. For housing units with a completed interview in a previous month, interviewers attempted to contact the occupant or knowledgeable proxy interviewed during the previous month. Additionally, interviewers were encouraged to use the resources available to them to identify contact information for sample housing units and/or knowledgeable proxy respondents. These resources included internal resources such as purchased third-party telephone lookup databases, as well as public records databases such as tax assessor records. They also included telephone contacts with knowledgeable local sources such as landlords, leasing offices, neighbors, and postal workers who might be able to identify vacant units, provide contact information for the property owner, and/or complete a proxy interview.

What was the response rate for the third quarter of 2021?

The overall response rate for the third quarter 2021 was 76 percent. This is approximately 2 percentage points lower than the response rate for the previous quarter (78 percent in the second quarter 2021), but it is notably higher than the response rate for the same quarter of the previous year (71 percent in the third quarter of 2020). The overall response rate for the third quarter 2021 reflects three monthly data collection efforts in July, August, and September 2021. The monthly response rates were 77 percent in July, 77 percent in August, and 75 percent in September 2021.

During the second quarter of 2021, the monthly response rates were 79 percent in April, 78 percent in May, and 76 percent in June 2021.

During the first quarter of 2021, the monthly response rates were 78 percent in January, 78 percent in February, and 77 percent in March 2021.

During the fourth quarter 2020, the monthly response rates were 81 percent in October, 80 percent in November, and 77 percent in December.

During the third quarter 2020, the monthly response rates were 66 percent in July, 69 percent in August, and 79 percent in September. These monthly rates reflect the incremental reintroduction of personal visits during July, August, and September 2020.

During the second quarter of 2020, the monthly response rates were 70 percent in April, 67 percent in May, and 65 percent in June. These rates reflect no in-person visits for data collection.

During the first quarter of 2020, the monthly response rates were 82 percent in January, 83 percent in February, and 73 percent in March. These rates reflect the use of normal data collection procedures during January and February 2020 and the suspension of in-person interviews midweek during the data collection operations for March 2020. CPS/HVS data collection operations for each month begin at the start of the week containing the 19th and close out early the following week. The suspension of in-person interviews on March 20th, 2020 occurred on the Friday during the week of data collection. Interviewers were able to make at least one in-person visit attempt to most sample units before in-person visits were suspended.

How does the CPS/HVS weighting and methodology account for non-response?

The CPS/HVS methodology assumes that the in-person visits and other data collection steps will allow interviewers to make a determination for every unit in the sample of whether the unit is an occupied unit with a completed CPS interview or a Type A (eligible but no data collected/refusal), Type B (eligible but unoccupied/vacant), or Type C (ineligible/not a residential unit) non-interview. In months when normal data collection procedures are in place, this process relies on in-person visits to allow the interviewer to observe the visible attributes of the unit and attempt to contact

neighbors or other individuals who may have knowledge of the vacancy status of the unit in order to identify all potential HVS-eligible units. Following the suspension of in-person interviewing, the number of HVS eligible interviews (Type Bs) declined in April, May, and June 2020 relative to their historical averages, and the number of Type A units increased. Type A units continued to be elevated in July and August, relative to their historical averages, and Type B units continued to be depressed. But Type A units returned closer to their historical average in September, October, November, and December and continuing through the third quarter 2021. These changes may be due to the data collection changes resulting in more units with unresolved interview statuses or to a true decrease in the number of vacant units. The data collected do not distinguish between these possibilities.

The CPS/HVS weighting and estimation procedures are designed under the assumption that the data collection procedures will accurately determine the interview status (Type A, B, or C) of the units in the housing sample. The weights adjust for changes over time in the incidence of Type A noninterviews relative to completed interviews for occupied units. However, the weighting methodology does not include a non-response component to adjust for changes in the response rate of vacant units. Instead, the methodology assumes that all HVS-eligible vacant units will be identified by the in-person data collection attempts. If the suspension of in-person interviews reduced the ability of interviewers to complete data collection for HVS-eligible vacant units, the impact would be a lower estimate of the vacancy rate.

In addition to the implications for the overall level of the vacancy rate estimates, data users should also consider the potential for the changes in data collection procedures to disproportionately affect data collection among some groups more than others, along with the consequences of differential non-response for the CPS/HVS estimates. Because the CPS/HVS weights for vacant units do not include a non-response component to adjust for differences in the response rates of different subgroups, the CPS/HVS estimates would reflect any differences in the relative response rates of specific subgroups. For example, if the changes in data collection procedures increased the difficulty of data collection for vacant rental units more than vacant homeowner units, the CPS/HVS estimates would reflect the impact on data collection by showing a relatively larger reduction in the rental vacancy rate than in the homeowner vacancy rate.

Were there any changes to the methodology for processing the data or producing estimates?

No, there were no changes to the procedures used to process the data and produce estimates. The CPS/HVS methodology is described in Technical Paper #77, "[Design and Methodology: Current Population Survey—America’s Source for Labor Force Data](#)," published in October 2019.

Census is conducting ongoing research to understand the extent to which the changes in data collection procedures were accompanied by changes in nonresponse and sample composition, along with the implications of such changes for the CPS/HVS estimates. As part of this effort, we recently released a working paper that presents the results of nonresponse analyses and that examines the sensitivity of CPS/HVS estimates to the use of an alternative nonresponse weighting

adjustment (Spader et.al. 2021), <https://www.census.gov/library/working-papers/2021/demo/SEHSD-WP2021-04.html>

Could the changes in data collection procedures affect the CPS/HVS estimates of vacancy?

The changes in data collection procedures could affect the CPS/HVS estimates of vacancy for the quarters when in-person visits were restricted. The methodology for producing the CPS/HVS estimates of vacancy rates assumes that all HVS-eligible vacant units will be identified through the in-person data collection procedures. To the extent that the changes in data collection procedures resulted in some vacant units being classified as Type A nonresponses rather than HVS-eligible vacant units, the CPS/HVS estimates will underestimate the true vacancy rate. Because the data collection changes occurred in response to the onset of the COVID-19 pandemic, it is difficult to separate the effects of the data collection changes from the effects of COVID-19. Data users should therefore exercise caution when comparing the estimates across quarters, interpreting the differences between quarters to reflect both the effects of the COVID-19 pandemic and the effects of changes in data collection procedures.

Could the changes in data collection procedures affect the CPS/HVS estimates of the homeownership rate?

The changes in data collection procedures could affect the CPS/HVS estimates of the homeownership rate for the quarters when in-person visits were restricted. In particular, data users should consider the potential for the suspension of in-person interviews to disproportionately affect the response rates of renters versus homeowners. For example, if response rates declined further among rental units than homeowner units following the suspension of in-person interviews, the effects on the CPS/HVS estimates would be a lower estimate of the number of rental households, a higher estimate of the number of homeowner households, and a higher estimate of the homeownership rate. Data users should therefore exercise caution when comparing the estimates across quarters, interpreting the differences between quarters to reflect both the effects of the COVID-19 pandemic and the effects of changes in data collection procedures.

Could the changes in data collection procedures affect the CPS/HVS estimates of the housing inventory composition?

The changes in data collection procedures could affect the CPS/HVS estimates of the components of the housing inventory for the quarters when in-person visits were restricted. The CPS/HVS weights are controlled to the total number of housing units in the United States, so the estimated number of all housing units in the housing inventory is not affected by the data collection changes. However, the potential impacts of the data collection changes on the estimates of vacancy and tenure described in the previous sections could affect the estimated components of the housing inventory. Specifically, any change in the estimated vacancy rate will affect both the estimated

number of vacant units and the estimated number of occupied units, because the sum of vacant and occupied units must equal the total number of housing units in the United States. Data users should therefore consider the CPS/HVS weighting methodology when interpreting the estimates of the components of the housing inventory.

Could the changes in data collection procedures affect estimates of quarter-to-quarter and year-to-year change in the CPS/HVS estimates?

The changes in data collection procedures could affect the estimates of quarter-to-quarter and year-to-year change. The previous sections describe how the changes in data collection procedures could affect the estimates of vacancy rates, the homeownership rate, and the housing inventory for a specific quarter. Because the changes in data collection procedures continued to evolve across data collection months, the impacts of these changes on CPS/HVS estimates may also differ across quarters. Data users should therefore consider the data collection procedures present in each quarter being compared—and any differences between quarters—when interpreting estimates of quarter-to-quarter or year-to-year change. For example, Table 1 shows that 63 percent were eligible for personal visits during the third quarter of 2020, but that 100 percent of sample housing units were eligible for personal visits during the third quarter of 2021. Estimates of the change in the homeownership rate from the third quarter of 2020 to the third quarter of 2021 may therefore reflect the differences in data collection procedures between quarters in addition to the actual change in homeownership.

What about the estimates for the 75 largest MSAs?

In the third quarter 2021, all 75 areas were eligible for in-person data collection.

In the second quarter 2021, all 75 areas were eligible for in-person data collection.

In the first quarter 2021, all 75 areas were eligible for in-person data collection except for parts of Albuquerque, NM, Fresno, CA, and Sacramento-Roseville-Arden-Arcade, CA.

In the fourth quarter 2020, all 75 areas were eligible for in-person data collection, except for parts of Albuquerque, NM, Chicago-Naperville, Joliet, IL-IN-WI, Detroit-Warren-Livonia, MI, Fresno, CA, Grand Rapids-Wyoming, MI, Los Angeles-Long Beach-Santa Ana, CA, Milwaukee, Waukesha, West Allis, WI, Minneapolis-St. Paul-Bloomington, MN-WI, Omaha-Council Bluffs, NE-IA, Sacramento-Roseville-Arden-Arcade, CA, San Diego-Carlsbad-San Marcos, CA, San Francisco-Oakland-Fremont, CA, San Jose-Sunnyvale-Santa Clara, CA, and Seattle-Bellevue-Everett, WA.

Will in-person data collection be allowed in all areas in the fourth quarter 2021?

The extent of in-person data collection in the fourth quarter of 2021 has not yet been determined, but the situation has been improving in recent months as 99 percent of the country was open for in-

person interviewing in the third quarter 2021. In fact, there were no COVID-19 restrictions whatsoever in September 2021. However, at the time of this release, we do not know if any areas will be closed for in-person interviewing in October. We do not know if the pandemic will require more data collection changes for the safety of our field representatives and respondents. Any changes in data collection procedures in October to December 2021 will be described in the release of the Fourth Quarter 2021 CPS/HVS estimates—which is scheduled for February 2, 2022.