

CPS and ACS Health Insurance Estimates: Consistent Trends from 2009-2012

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For the first time, the U.S. Census Bureau's annual report *Health Insurance Coverage in the United States: 2013* includes statistics from two surveys: the Current Population Survey Annual Social and Economic Supplement (CPS) and the American Community Survey (ACS). In addition to comprehensive statistics on health insurance coverage by detailed characteristics using data from the CPS, the report presents historical trends and year-to-year changes using data from the ACS because the redesigned health insurance section in the CPS resulted in a break in the health insurance coverage time series. This technical brief demonstrates that changes in health insurance coverage, as measured by either survey, present consistent results. Thus, the ACS can provide this important measure of change in place of the CPS estimates between 2012 and 2013.

The Census Bureau recently implemented a redesign of the health insurance questions in the CPS. Since 1981, the CPS has asked questions about health insurance types. Over the years, researchers have noted that the CPS uninsured estimates for being too high compared with estimates from other federal surveys. For more than a decade, Census Bureau research examined empirical evidence for these claims, and determined that the evidence supported a change in the question series. The Census Bureau designed, tested, and analyzed a new set of questions that improved the estimate of the uninsured population, and in 2014, implemented this redesigned health insurance section. Similar to the earlier version of questions, the CPS asks about the previous calendar year; thus, the estimates of health insurance coverage collected in 2014 in the redesigned survey refer to the 2013 calendar year. The new method of collecting health insurance information is expected to produce estimates that are more in line with other national surveys, such as the ACS and the National Health Interview Survey.

In addition to the CPS, the Census Bureau also collects health insurance information in the ACS. While the CPS measures health insurance coverage during the past calendar year for all individuals, the ACS measures current coverage averaged over the year across individuals to

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² The views expressed are those of the authors and not necessarily those of the U.S. Census Bureau.

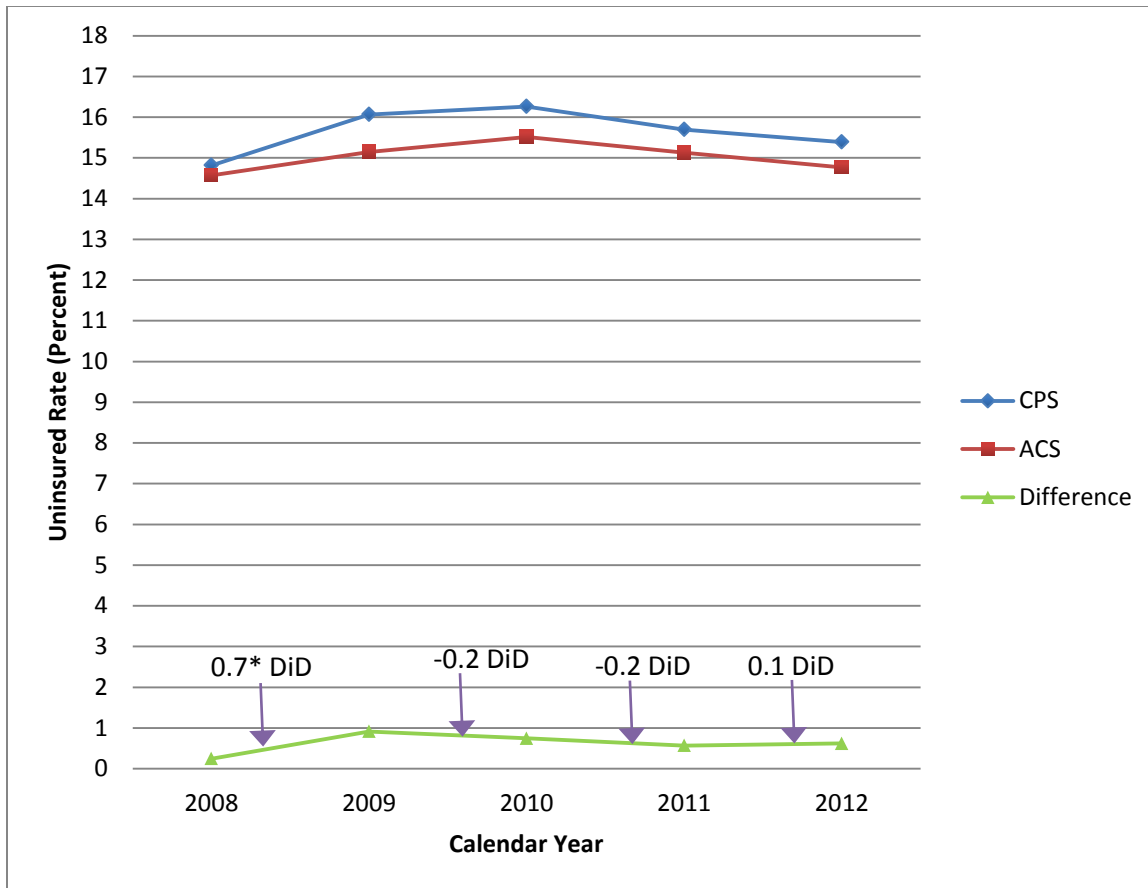
produce an annual estimate. Due to these differences in methodologies, the levels of the uninsured rate do differ across these surveys; however, despite these differences, the CPS and ACS produce uninsured rates that track very closely over time.

We confirm that it is appropriate to use the ACS or the CPS to examine changes in the uninsured rate between 2009 and 2012. This is appropriate even if the levels of the uninsured rate vary between the two surveys as long as the historical changes in the uninsured rate are consistent between them. Figure 1 illustrates the annual ACS and CPS uninsured rates, as well as the difference in the uninsured rate between the ACS and CPS for each year for the last five years (2008 to 2012). Subtracting the ACS uninsured rate from the CPS estimate for a given year, these differences are: 0.2 percent in 2008, 0.9 percent in 2009, 0.7 percent in 2010, and 0.6 percent in both 2011 and 2012³.

To formally examine the change in the difference in the uninsured rate between the ACS and CPS over each calendar year, we use the Difference-in-Differences (DiD) method. This method estimates the DiD as the slope between any two points on the “difference” line in Figure 1 and tests whether the slope is statistically significantly different from zero. Using the DiD method, we find that there was no statistical change in the difference between the estimates between calendar years from 2009-2012: the slopes on the line segments between 2009-2010, 2010-2011, and 2011-2012, are not significantly different from zero. The DiD estimate for 2008-2009 deviates from this trend; the slope is 0.7 percentage points and statistically significant.

³ The estimates 0.9, 0.6, and 0.7 are not statistically different from one another.

Figure 1. Uninsured Rates from the CPS and the ACS

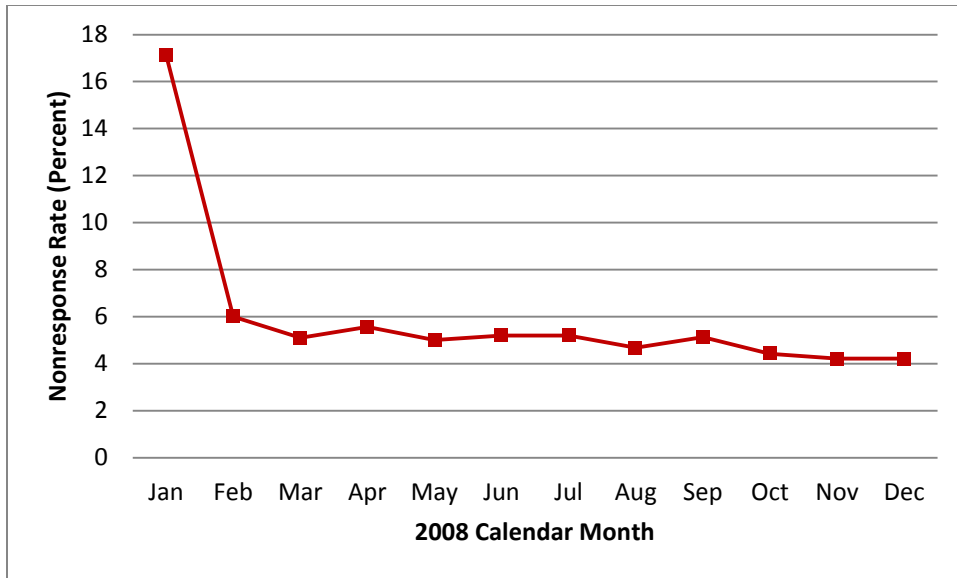


Source: 2008 to 2012 1-year ACS, 2009 to 2013 CPS

* Indicates that the DiD is significant at the 90 percent level.

We believe that the significant DiD estimate for 2008-2009 slope between CPS and ACS reflects survey-related differences specific to those years and should not raise concern for the compatibility of more recent data. The ACS began asking respondents about health insurance coverage in 2008; its first year of data collection. This anomaly is most likely attributable to nonresponse. ACS respondents who were sampled at the end of 2007 but returned their mail forms during the beginning months of 2008 (“late returns”) were included as part of the 2008 ACS sample. However, these questionnaires did not include the new questions on health insurance, resulting in an approximately three-fold non-response rate for the health insurance questions in January 2008 (Figure 2). The Census Bureau fills in missing data in the ACS through an imputation procedure. Due to the high item non-response rate at the beginning of the year, this imputation procedure resulted in a higher estimate of the uninsured in the 2008 ACS. Estimates from 2009 to the present are more reliable because this imputation issue that arose from adding new questions to the ACS is no longer applicable.

Figure 2. Non-Response Rates from 2008 ACS for All Health Insurance Questions



Source: 2008 1-year ACS

With the exception of the 2008-2009 ACS, the CPS and ACS demonstrate consistent trends, including the magnitude and direction of year-to-year changes in the uninsured rate. For example, the ACS indicates that the uninsured rate went down significantly by 0.4 percentage points (the 2011-2012 ACS difference), and the CPS shows a comparable decrease (the CPS calendar year estimate for 2011-2012 declined 0.3 percentage points; the DiD was not significant). While the level of the uninsured rate in the CPS is different from the level of the uninsured rate in the ACS, the two surveys consistently measure changes in the uninsured rate over time. Therefore, both the ACS and CPS provide scientifically sound estimates of year-to-year changes in the uninsured rate.