

**SURVEY OF INCOME AND
PROGRAM PARTICIPATION**

**A COMPARATIVE ANALYSIS OF
HEALTH INSURANCE COVERAGE
ESTIMATES: DATA FROM CPS AND SIPP**

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1. Introduction

In 1980 the Census Bureau began asking questions about health insurance on the March Income Supplement to the Current Population Survey (CPS). Health insurance questions are asked each March, and refer to coverage at any time during the previous year. For sometime, the Census Bureau has published annual estimates of participants in specific health insurance programs such as Medicare, Medicaid, and employer-provided health insurance from the CPS. However, it wasn't until 1993 that the Census Bureau began publishing comprehensive estimates of health insurance coverage from the CPS. Even so, prior to their publication, the information has been widely available to private and government researchers through CPS microdata files and unpublished Census Bureau tabulations. The CPS has been a major source of information on the extent of health insurance coverage in the United States.

Underreporting of health insurance coverage in the CPS has been a persistent problem, as other surveys (such as the Survey of Income and Program Participation) have shown consistently higher annual coverage rates. Another issue involves the belief by some researchers and data users that CPS respondents tend to answer health insurance questions based on their current status rather than the previous year.

The main objectives of this paper are: 1) Analyze and compare recent trends in CPS and SIPP health insurance estimates. 2) Address the hypothesis that CPS respondents tend to answer health insurance questions based on their current status rather than the previous year. 3) Evaluate the findings. 5) Present recent developments in the CPS and SIPP.

Although the statistical testing for this paper shows some significant differences in estimates, analytically the differences are not considered significant. For the purpose of this paper only the analytical similarities or differences in estimates are discussed.

2. Overview of Survey Methodologies

Beginning in 1984 health insurance information has been collected in the SIPP. The SIPP is a longitudinal survey designed to collect primarily income and program participation data. Several of the core items included in the survey are health insurance questions. The CPS, on the other hand, is a cross-sectional survey primarily designed to collect labor force data about the civilian noninstitutional population.

There are major differences in the way health insurance questions are asked in the CPS and

SIPP. The CPS respondents are asked in March about their coverage during the previous calendar year. A “Yes” to any of the health insurance questions denotes at least some coverage of that type during the previous calendar year. In the SIPP, respondents are asked about health insurance coverage in each month of the 4-month reference period. Health insurance indicators are set based on self-reported coverage or reported coverage from others in the household. Either survey method may result in health insurance coverage reporting errors.

3. Comparisons Over Time

To observe trends, 3 recent time periods were chosen. The CPS estimates between 1991-93 are compared with SIPP 1st quarter estimates between 1992-94 and SIPP annual estimates from 1991-93. The SIPP 1st quarter was chosen because it corresponds close to the time frame in which CPS health insurance data are collected. The quarterly estimates are monthly averages. The SIPP annual estimates were generated from longitudinal data files. When noncoverage rates from the two surveys are examined over time, the relationship between the estimates is consistent (see table 1). In the CPS, over a 3-year period from 1991-93 noncoverage rates were 14-15 percent (see table A). For the 1st quarter of the SIPP, the noncoverage rate remained at 15 percent between 1992-94. In contrast, the trend for the SIPP shows annual noncoverage rates of 7-8 percent between 1991-93. As indicated by these estimates, the CPS noncoverage rates are similar to the SIPP quarterly rates and about twice as high as the SIPP annual noncoverage rates.

As expected, private health insurance coverage accounts for the difference between CPS and SIPP annual estimates. The CPS private health insurance coverage rates were much lower than the SIPP annual rates. For example, in 1993 the CPS shows a 70 percent coverage rate for private health insurance compared with 81 percent for SIPP; the 1st quarterly estimate for SIPP was 72 percent in 1994 (table 2). Government health insurance estimates were generally consistent over time and across surveys. In the CPS between 1991-93, Medicaid coverage rates were 11-12 percent. These estimates were fairly similar to Medicaid coverage rates for the SIPP 1st quarter (9-11 percent) and the SIPP annual rates (9-11 percent)(table 3). Medicare coverage rates were 13-14 percent (table 4) and military health care coverage rates ranged from 3-5 percent.

4. Evaluating the Hypothesis

It is believed by some researchers and data users that CPS respondents tend to answer health insurance questions based on their current status, even though the questions refer to coverage at any time during the previous year. In order to evaluate this hypothesis, questions about the current status of health insurance coverage were included in the March 1995 CPS. Results from these questions show an overall coverage rate of about 73 percent, which is significantly lower than the 85 percent rate for the previous year. This seems to indicate that 12 percent of those who were covered by health insurance at some point in 1994 lost their coverage by mid-March 1995. However, it is important to point out that the current status estimates do not include those individuals who are typically assigned government health insurance. In developing previous

calendar-year estimates, some individuals are categorically assigned government health insurance. Categorically assigned coverages are government health insurance programs automatically assigned to individuals who meet certain eligibility criteria. For example, persons age 65 and over who receive Social Security income are assigned Medicare coverage, even if they indicate they are not covered by Medicare. Also, persons who receive AFDC and some who receive SSI are assigned Medicaid coverage. Another example is that dependents of persons on active duty in the military are assigned military coverage. For comparison purposes, a different set of CPS annual health insurance estimates was prepared for 1994; that set of estimates excluded all categorically assigned coverages. Results from that different set of estimates show an overall coverage rate of about 82 percent in 1994. This estimate was also much higher than the current status estimate of 73 percent. In comparison, the SIPP shows an 86 percent coverage rate for the 1st quarter of 1994 and a 92 percent annual coverage rate in 1993 (table 5).

To evaluate results from both the CPS and SIPP, the following calculations were performed:

$$(1) \quad \begin{array}{l} \text{SIPP}_Q \quad 86\% \\ \text{-----} = \text{----} = 93\% \\ \text{SIPP}_A \quad 92\% \end{array}$$

$$(2) \quad \begin{array}{l} \text{CPS}_c \quad X \\ \text{-----} = \text{----} = 93\%, X = 76\% \\ \text{CPS}_A \quad 82\% \end{array}$$

$$(3) \quad \begin{array}{l} \text{CPS}_c \quad 73\% \\ \text{-----} = \text{----} = 89\% \\ \text{CPS}_A \quad 82\% \end{array}$$

These basic calculations are designed to show the relationship between SIPP quarterly and annual estimates and to compare that relationship with the relationship between the CPS current and annual estimates. Equation 1 shows the ratio of the SIPP 1st quarter coverage rate in 1994 (86%) to the annual coverage rate in 1993 (92%). Using the ratio derived from equation 1 (93%), equation 2 gives the expected CPS current coverage rate in 1995 (X). It shows a CPS annual coverage rate of 82% in 1994 (excluding categorical coverages) and a derived expected current coverage rate of 76% for 1995. As indicated by these calculations, the 73 percent shown for those reporting current coverage was slightly lower than the expected coverage rate of 76 percent. That is, in relation to SIPP respondents, CPS respondents were more likely to underreport current health insurance coverage. Perhaps it is because the current status questions were asked after questions referencing the previous year were asked. Or, maybe this underreporting occurs because no detailed questions

were asked about current status coverage, yet, they were asked in reference to previous year questions.

These results appear to indicate that the hypothesis is not true. It appears that CPS respondents do not report annual health insurance coverage information based on their current status rather than the previous year. This large difference cannot be explained through the use of a single summary health insurance question. Rather, it appears that CPS respondents underreport coverage, whether the question refers to current coverage or previous year coverage. Results also show that the extent of undercoverage is greater for current coverage than coverage last year. However, other factors may account for the difference between the expected (76%) and reported (73%) current CPS coverage rates. One possible reason is that respondents were confused when the reference period changed from the previous year to current status (last week). Another possibility is that there were no detailed current status questions, as there were for previous year coverage. The use of a single summary question may reduce coverage rates (see table 6).

5. Conclusion

Results appear to show that the hypothesis is not true; that CPS respondents do not report annual health insurance coverage information based on their current status rather than the previous year. However, these findings are considered inconclusive until there is more consistency in the way current and previous year questions are designed and asked. The application of similar data processing procedures for government health insurance programs is also needed.

In general, there are several reasons why CPS respondents tend to underreport health insurance coverage relative to SIPP respondents: 1) The CPS uses a much longer reference period than SIPP, calendar-year versus each month of a 4-month reference period. 2) The CPS is largely a labor force survey, with minimum interviewer training on health insurance concepts; whereas, the SIPP is an income and program participation survey. 3) The CPS uses household screener questions (for example, "Was anyone in this household covered by Medicare?"), which usually means that one person answers questions for the entire household, while, the SIPP asks questions of each person and maximizes self-responses. This probably results in higher coverage rates.

6. Recent Developments

To improve the collection of current status health insurance information, changes are planned for the March 1997 CPS. Those changes will involve asking detailed type of health insurance questions, similar to those used to collect previous year coverage information. The changes will also provide for the assignment of categorical coverages, again, similar to that provided for previous year health insurance information. These changes along with those implemented in March 1995 represent a significant improvement in the collection of health insurance information in the CPS.

As for the SIPP, in April of this year computer-assisted interviewing was introduced. Prior

to this change, a paper questionnaire was used to collect health insurance information. Utilizing this data collection method in both the CPS (computer-assisted interviewing was introduced in March 1994) and SIPP should help to eliminate some of the inconsistencies between surveys. Given these recent developments, there is a need to revisit these issues.

Table 1. Percent Not Covered by Health Insurance				
	1994	1993	1992	1991
CPS _A	-	15.3	14.7	14.1
Std.err.		0.3	0.3	0.3
SIPP _Q	14.5	14.6	14.8	-
Std.err.	0.3	0.3	0.3	
SIPP _A	-	7.7	7.6	7.0
Std.err.		0.4	0.4	0.5

Table 2. Percent Covered by Private Health Insurance				
	1994	1993	1992	1991
CPS _A	-	70.2	71.1	72.1
Std.err.		0.4	0.4	0.4
SIPP _Q	71.9	72.4	72.7	-
Std.err.	0.4	0.4	0.4	
SIPP _A	-	81.2	81.7	83.4
Std.err.		0.6	0.6	0.7

Table 3. Percent Covered by Medicaid				
	1994	1993	1992	1991
CPS _A	-	12.2	11.2	10.7
Std.err.		0.3	0.2	0.2
SIPP _Q	11.3	10.2	9.4	-
Std.err.	0.3	0.3	0.3	
SIPP _A	-	12.9	12.3	11.5
Std.err.		0.5	0.5	0.6

Table 4. Percent Covered by Medicare				
	1994	1993	1992	1991
CPS _A	-	12.7	13.2	13.1
Std.err.		0.3	0.3	0.3
SIPP _Q	13.0	12.9	12.7	-
Std.err.	0.3	0.3	0.3	
SIPP _A	-	13.6	13.5	13.4
Std.err.		0.5	0.5	0.6

Table 5. Percent Covered by Health Insurance		
	Percent	Std. err.
CPS _A 1994	81.5	0.3
CPS _C 1995	72.6	0.3
SIPP _Q 1994	85.5	0.3
SIPP _A 1993	92.3	0.4

Table 6. CPS March 1995 Health Insurance Questions

Previous Year Questions	Current Status Questions
<p>1) At any time in 1994, (were you/was anyone in this household) covered by a health plan provided through (their/your) current or former employer or union? (EXCLUDE MILITARY HEALTH INSURANCE)</p> <p>2) At any time during 1994, (were you/was anyone in this household) covered by a plan that (you/they) PURCHASED DIRECTLY, that is, not related to current or past employer?</p> <p>3) At any time in 1994, (were you/was anyone in this household) covered by Medicare, the health insurance for persons 65 years and over or persons with disabilities?</p> <p>4) At any time in 1994, (were you/was anyone in this household) covered by Medicaid/(fill state name), the government assistance program that pays for health care?</p> <p>5) At any time in 1994, (were you/was anyone in this household) covered by CHAMPUS-VA, VA or military health care, or by any other health insurance?</p>	<p>1) These next questions are about CURRENT health insurance coverage, that is, health coverage last week. (Were you/Was anyone in this household) covered by ANY type of health insurance plan last week?</p> <p>What types of plans (were/was) (name/you) covered by last week?</p> <ul style="list-style-type: none"> ■ Medicare ■ Medicaid ■ Employer/union provided ■ Etc.