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**Modernizing a Major Federal Government Survey:  
A Review of the Redesign of the Current Population Survey  
Health Insurance Questions**

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## **ABSTRACT**

Measurement error can be very difficult to assess and reduce. While there have been great strides in the field of survey methods research in recent years, many ongoing federal surveys were initiated decades ago, before testing methods were fully developed. However, the longer a survey is in use, the more established the time series becomes, and any change to a questionnaire risks a break in that time series. This paper documents how a major federal survey – the health insurance module of the Current Population Survey (CPS) – was redesigned over the course of 15 years (1999-2014) through a systematic series of small, iterative tests, both qualitative and quantitative, and implemented in production beginning in the spring of 2014. This overview summarizes those tests and results, and illustrates how particular questionnaire design features were identified as problematic, and how improvements were developed and evaluated. The paper also addresses measurement challenges that emerged during the testing: passage of federal legislation on health reform (aka: the Affordable Care Act). While the particular topic is health insurance, the general approach (a coordinated series of small tests), along with the specific tests and methods employed, are not uniquely applicable to health insurance. Furthermore, the particular questionnaire design features of the CPS health module that were found to be most problematic are used in many other major surveys on a range of topic areas.

**Keywords:** health reform, questionnaire design, experiment

## 1. INTRODUCTION

Measurement error – the difference between the “true value” of a concept being measured and the survey estimate that represents that concept – can be very difficult to assess and reduce. While there have been great strides in the field of survey methods research in recent years, many ongoing federal surveys were initiated decades ago before testing methods were fully developed. As such, the degree and nature of measurement error associated with these surveys is often unknown. However, the longer a survey is in use, the more established the time series becomes, and any change to a questionnaire risks a break in that time series. Thus, a comprehensive survey redesign is generally approached with caution for a number of reasons. First, demonstrating that any changes actually do reduce measurement error (and do not inadvertently introduce other problems) can be elusive. Second, even if a statistic is imperfect (e.g., a point estimate contains bias), if the cause of the imperfection does not interact with time, then the trend line of that point estimate can still be valid and informative. Third, the loss of the time trend to the data user community due to a break in series is sometimes untenable. Finally, research to bridge the break in series is costly and sometimes data do not exist for the task. On balance, continuing with the status quo can be the best course of action in many cases.

This paper documents a middle-ground approach in which a major federal survey – the health insurance module of the Current Population Survey (CPS) – was redesigned over the course of 15 years (1999-2014) through a series of small, iterative tests, both qualitative and quantitative, and implemented in production beginning in the spring of 2014. The CPS is the most widely cited and used source of estimates on health coverage in the United States (Blewett and Davern, 2006) due in part to its trend line on coverage going back to the 1980s. It has also been the subject of criticism because its estimate of the uninsured tracks higher than that of other

major surveys (Davern et. al., 2007). For example, the estimate of those uninsured throughout calendar year 2012 was 15.4 percent in the CPS and 11.1 percent in the National Health Interview Survey (NHIS). The NHIS also produces an estimate of those uninsured at a single point-in-time, and in 2012, it was 14.7 percent, which happens to be close to the CPS 2012 calendar year estimate of 15.4 percent (SHADAC, 2013). Indeed, other studies have also found that the CPS calendar year estimate was very similar to point-in-time estimates from other surveys (Rosenbach and Lewis, 1998), leading to widespread speculation over what the CPS estimate really represented – calendar year or point-in-time coverage or something in-between.

Due to the divergent estimates across surveys, and the persistent criticism of the CPS, in 1999 the Census Bureau began a comprehensive research program to examine and reduce measurement error associated with health insurance estimates from the CPS, focusing on the role of the questionnaire. Numerous small-scale studies – both qualitative and quantitative – were fielded and analyzed, and results were fed into subsequent small-scale tests in an iterative fashion. The research approach was to identify features of the questionnaire that were candidates for contributing to measurement error, explore and modify those features, and test against the status quo to assess empirical evidence for improvements due to the changes. After a decade of this testing, a fundamentally redesigned questionnaire was crafted. A formal pretest of the redesign was conducted in 2009 and the basic approach was found to be sound (Pascale, 2009b). Minor refinements were made and a large-scale split-ballot experiment was conducted in March 2010 with promising results (Boudreaux et al, 2013). By chance, the very day the 2010 test was launched (March 23, 2010), the Patient Protection and Affordable Care Act (ACA) was passed. In response to that, the draft redesign was then adapted with questions specific to health reform and tested in 2011-2012 with residents of Massachusetts, given its passage of ACA-like state-

level legislation in 2006. That testing proved successful (Pascale et al, 2013), and the adaptations were integrated into the redesigned questionnaire for a follow-up large-scale field test in 2013. Results were favorable to the redesign (Pascale, Boudreaux and King, 2014), and it was implemented in March 2014 CPS ASEC data collection. See Appendix A for a display of the verbatim questions in the new versus old CPS in a typical household. See also Appendix B for complete specifications of question wording and skip patterns of the new CPS.

This paper documents the 15-year history of the CPS ASEC health insurance module redesign. The tests and results are summarized and used to illustrate how particular questionnaire design features were identified as problematic, and how improvements were developed and evaluated. While the particular topic is health insurance, the general approach (a coordinated series of small, iterative tests), along with the specific tests and methods employed, are not uniquely applicable to health insurance. Furthermore, the particular questionnaire design features of the CPS health module that were found to be most problematic are used in many other major surveys on a range of topic areas. The paper concludes with a discussion of the broader implications of this research for other topic areas and for survey redesign efforts in general.

## **2. METHODOLOGICAL VARIATIONS IN DATA SOURCES**

For many major social indicators – e.g., poverty, disability, and labor force participation – there are multiple data sources, each with their own purpose and constraints in terms of data collection. That is, the purpose and budget of the survey determine key design features such as content, sample size, mode, timing and frequency of data collection. Variation in these design features can lead to variation in the estimates, leaving researchers to weigh out the strengths and weaknesses of the measures, as well as other factors for analysis such as sample size and

auxiliary variables on the dataset. As a result, often the data source that researchers come to rely on for a particular analysis is not purpose-built for the specific concept under study.

In the case of health insurance, several major federal surveys came to include questions on health coverage gradually, as the health care system in the United States changed and as data needs developed. The National Health Interview Survey (NHIS), sponsored by the National Center for Health Statistics, has been fielded since 1957 for monitoring the health of the U.S. population. In 1959, questions on private coverage were added (note Medicaid and Medicare did not exist yet), and in the early 1970s questions on public sources of coverage were added (Blumberg, 2014). In 1983, the Census Bureau launched the Survey of Income and Program Participation (SIPP), whose main purpose is to measure the dynamics of economic and social well-being over time. As such, the focus is on measuring household income and benefits from a comprehensive range of sources (e.g., wages, investments, public programs, etc.), as well as health insurance. The CPS is the federal government's official data source for monthly unemployment estimates and annual estimates of household income and family poverty. In 1987, the CPS ASEC began including health insurance questions to collect data on Medicaid, employer-sponsored insurance (ESI) and other non-cash benefits in order to inform measures of economic well-being. A decade later, the Agency for Healthcare Research and Quality launched the National Medical Care and Expenditure Survey (NMCES), which was replaced by the Medical Expenditure Panel Survey (MEPS) in 1996. The MEPS collects data on the usage, cost and financing of health services, as well as health insurance. Finally, the American Community Survey (ACS), designed to replace the decennial census long form, began in 2005 and health insurance questions were added in 2008.

While the breadth of data sources on health insurance has its advantages, one downside is that the methods and the estimates they produce vary across surveys and it is not clear which estimates are most accurate. Research going back to the 1980s suggests that much of the variation in estimates across these surveys is rooted in subtle differences in the questionnaires. This notion prompted the line of inquiry investigating the association between questionnaire design features and measurement error. The over-arching finding was that within the questionnaire, three fundamental design features are particularly important in terms of their potential for driving the estimates. One is the “reference period” – that is, the time period specified in the survey question. Some surveys ask about current coverage status, while others ask about coverage over a certain time span. The reference period is then intertwined with the definition of the uninsured. For example, the CPS is administered in March (though a small number of interviews take place in late February and early April) and asks respondents if they had coverage “at any time” during the previous calendar year. The uninsured are then defined as those uninsured throughout the entire calendar year. The NHIS and the ACS, on the other hand, both ask about current coverage and define the uninsured as those without coverage at a particular point in time (i.e., the day of the interview). The MEPS and the SIPP, both longitudinal surveys that follow respondents for a number of years, use a reference period somewhere in between. The MEPS reference period ranges from two to seven months and, until very recently, the SIPP used a four-month reference period (it is now moving to an annual reference period using an event history calendar design). Both surveys ask about monthly coverage during that time span and the uninsured can then be defined in several different ways – uninsured in any given month, throughout the calendar year, throughout an entire 3-year panel, or any number of months in between.



Another difference across surveys is the specificity with which household members are asked about. For most plan types, the CPS, NHIS and MEPS ask questions at a general household level (e.g., “...was anyone in this household covered by [plan type X]?”). If the answer to this general question is yes, follow-up questions are asked to determine which household members have the coverage. This is referred to as a “household-level” approach. The SIPP and ACS, on the other hand, employ a “person-level” approach and ask about each household member by name (e.g., “Does [name] have [plan type X]?”). The SIPP, furthermore, attempts self-response for all household members age 15 and older, while in the ACS, CPS, MEPS and NHIS a single household respondent is asked questions on behalf of all household members.

A third major design feature that varies is the overall structure of the question series. The CPS, MEPS and ACS ask a series of yes/no questions, each on a specific type of health coverage (e.g., employer-sponsored plans, Medicaid). The SIPP, before its redesign, was fairly similar, asking specifically about Medicare and Medicaid, but rather than asking individual questions about employer-sponsored and directly purchased coverage, it asked one general question on private coverage and then follow-up questions to determine the type of private coverage. The NHIS takes a different approach and asks a global question about any coverage and, if yes, a single follow-up question is asked to determine the particular type of coverage.

### **3. PRIOR RESEARCH ON VARIATION IN HEALTH COVERAGE ESTIMATES**

#### **3.1 Reference Period**

For at least two decades, researchers have been trying to understand the source of variation in health coverage estimates. For example, Swartz’s seminal article in 1986 examined the sampling framework, weighting procedures, adjustments for non-response and attrition, and questionnaire

design across four different surveys (CPS, SIPP, NHIS and the NMCES). Swartz concluded that the largest contributor to variation in the estimates was differences in the questionnaire, particularly differences in the reference period (Swartz, 1986). Research comparing the calendar year and current reference periods corroborated the Swartz findings (Rosenbach and Lewis, 1998; Pascale, 1999), and prompted qualitative research to understand more about measurement error associated with the reference period. Results showed that some respondents do not focus on the reference period stated in the question (“At any time in [calendar year]”), but rather, they report on their current status or spell of coverage (Pascale, 2008). A study on receipt of welfare benefits produced similar findings (Lynch, 2006). In addition, a recent quantitative study matching CPS survey data to Medicaid administrative records showed that the more recent the coverage, the more accurate the survey report (Davern et al., 2009; Klerman et al., 2009; Pascale et al., 2009). An earlier study on receipt of food stamps showed a similar reporting pattern (Resnick et al., 2004). In sum, it appears that some respondents simply do not hear or do not focus on the calendar year reference period stated in the question, and instead report on their current situation, and respondents tend to under-report coverage from the more distant past.

A subtle but potentially important point about the reference period has to do with “lag time.” This is the length of time between the interview date and the time period of coverage asked about in the survey question. In surveys with a current reference period, obviously, there is no lag time; the questions are asking about coverage status on the day of the interview and there is no retrospective reporting. However, in the CPS there is roughly a three-month lag time, since respondents are asked in March about their coverage during the previous calendar year. They are not specifically asked about their current status or their coverage over the past three months. Given the research findings that some respondents focus on their current situation, regardless of

what is specified in the question, this could compound the problems with recalling and reporting past coverage. In the MEPS and SIPP, respondents are asked about coverage “at any time [since a particular date],” thus the time frame specified spans a number of months up to and including the day of the interview.

These issues are particularly problematic for the CPS. Respondents are never anchored in their current day-of-interview status but are given the task of thinking back over 15 months (from January of the previous year until March of the current year), focusing on the first 12 of those months while “subtracting out” the most recent three months. Furthermore, they are asked about coverage “at any time” during those 12 months which, technically speaking, includes coverage for as little as one day. Thus the relatively long duration of the reference period, the 3-month lag time, and the fact that respondents are not asked about their current situation may all be working against the CPS. However, these design features are more historical artifact than deliberate choice regarding health coverage. The CPS is primarily a labor force survey conducted monthly, and the data are used to produce official statistics on unemployment. Once a year the CPS includes the Annual Social and Economic Supplement (ASEC), which includes questions on income received during the previous calendar year. The purpose of the supplement is to broadly describe economic status, and data from the ASEC are used to produce official estimates of income and poverty in the U.S. In 1980 questions on non-cash benefits, including Medicaid, Medicare and other types of health insurance, were added to the ASEC to expand this economic portrait. In order to match the unit of measurement used for the income questions, the health insurance questions also employed the calendar year reference period. Over the next two decades, the research community came to rely on the CPS for health insurance estimates due to certain advantages, such as its large sample size (which allows for reporting of state level

estimates), high response rate, and rich auxiliary data on income in particular. However, perhaps the main asset of the CPS has been its reliable data collection and release schedule (dictated in part by the mandated deadlines for official estimates on income and poverty), which made it possible to produce annual trend data. Thus in spite of any measurement error built into the annual measure of coverage, the same error would be expected to manifest across years, making CPS trend data meaningful independent of imperfections in the point estimates.

The value of the CPS notwithstanding, there is mounting evidence that the calendar year reference period (perhaps compounded by the 3-month lag time) is problematic. The CPS is, nevertheless, charged with collecting data on the entire calendar year, and the ASEC has the constraint of being fielded in March of the subsequent year for purposes of income reporting. A possible solution was envisioned by an exploration of ways of asking about both current and past calendar year coverage within the same set of questions. The rationale was two-fold: (1) research suggests current status estimates are more accurate than calendar year estimates (at least those generated under current CPS methodology); and (2) it was also hoped that a revised set of retrospective questions could improve on the calendar year estimates given previous research on memory and recall (Blair and Ganesh, 1991; Loftus et al, 1990). Indeed it is possible that the new questions on current status could be leveraged to serve as an anchor which could help elicit reports of past year coverage more accurately than the standard methodology (Crespi and Swineheart, 1982; Pascale, 2009a).

Measurement issues aside for the moment, the choice of reference period also brings up the intertwined definition issues and raises the question: what kind of definition of the uninsured “should” be used? That is, what degree of “uninsured” makes most sense as an analytic category? In the CPS there is no measure of monthly coverage; the only information collected is

whether the respondent had coverage “at any time” during the previous calendar year. Thus, the insured are defined as those who had coverage anywhere from one day to 365 days, and the uninsured are defined as those without coverage throughout the entire year. That is, one day of coverage can separate the insured from the uninsured. This is a rather dubious distinction, since a person who was uninsured for, say, 11 out of 12 months, or who had spells of non-coverage, is likely to have a profile more like a person uninsured throughout the year than someone who was insured for the entire 12 months. A more useful measure might be a snapshot (e.g., an estimate of those uninsured at a given point in time) or some measure of duration of coverage and non-coverage. While this is at its core a substantive analytic issue, it needs to be considered in the context of the measurement approach since the unit of measurement ultimately dictates the range of possibilities for defining the uninsured.

### **3.2 Household- versus Person-Level Questions**

While reference period issues have tended to dominate the literature on health insurance measurement error, as a design feature, reference period alone does not explain all the variation observed in the estimate of the uninsured. For example, both the SIPP and the MEPS employed reference periods shorter than the calendar year, yet the difference in their uninsured-throughout-the-year estimates for 2002 was quite striking: 8.1 percent in the SIPP and 12.9 percent in the MEPS (Davern, 2009). Key differences between these surveys are the household-level approach (used for most plan types in the MEPS) versus person-level approach (used in the SIPP), and the fact that the SIPP is a self-response survey for those 15 and older while the MEPS asks one household member to answer questions about all other household members. Self-response by adults has somewhat obvious benefits over proxy reporting (Moore, 1988). And although the household-level design has benefits in terms of respondent burden, there is some evidence that a

failure to name each household member individually risks the respondent failing to report for some members, particularly in larger or complex households (Blumberg et al., 2004; Hess et al., 2001). On the other hand, administering the entire series for each household member individually risks respondent fatigue and associated underreporting (Blumberg et al., 2004; Pascale, 2000). Recent research also demonstrated that capitalizing on “shared coverage” (that is, household members who are covered by the same plan type) results in more accurate reporting, at least for Medicaid. Specifically, respondents are more likely to accurately report the Medicaid coverage of other household members when they (the respondents themselves) also have Medicaid (Pascale et al., 2009). So while there are pros and cons to both approaches it is not entirely clear how the overall estimates are affected across all plan types and across households of various sizes and complexity.

One early experiment integrated both the household/person level design and reference period features in order to isolate the effects of each. The study was a 15-minute telephone-administered split-ballot field test (n=3,228) conducted by Census Bureau interviewers with a Random Digit Dial (RDD) sample. The questionnaire covered typical questions on demographics, disability, and labor force, and included four different health insurance modules. All four modules used a common core mimicking the CPS series asking about eight different plan types. The reference period and household/person-level features were manipulated in a two-by-two experimental design in which respondents were randomly assigned to one of four treatments (1) household-level/calendar year (this is the status quo CPS ASEC); (2) household-level/current coverage; (3) person-level/calendar year and (4) person-level/current coverage.

Results for the uninsured estimate were telling. Within the person-level designs the gap in time period of coverage was observed in the expected direction; the uninsured rate was lower in

the calendar year design than in the current design by 3.4 percentage points ( $p < 0.05$ ). However, within the household-level designs, the uninsured rate was identical – at 12 percent – for both reference period designs (Table 1). This suggested the reference period wording – “at any time during [previous calendar year]” – had an effect when respondents were asked to think about only one person at a time, but not when they were asked to think about “anyone in this household.” Furthermore, within reference period designs, in the absence of measurement error, the same estimate across person- and household-level designs should, in theory, be identical but it was not. Within the current reference period versions, the difference between person- and household-level designs was non-significant, but within the calendar year designs, the uninsured rate in the household-level design was 5.1 percentage points higher than in the person-level designs ( $p < 0.01$ ). This suggested that respondents could report on all household members, whether or not they are provided with the individual names, equally well when they are only asked about current coverage, but when asked about coverage during the past calendar year they report more coverage when provided with individual household members’ names (Pascale, 2001). In short, there appeared to be some kind of cognitive over-taxing going on within the household/calendar year design that warranted further study.

### **3.3 Questionnaire Structure on Plan Type**

With regard to the general structure of the questionnaire – how to ask about status (covered or not) and how to identify coverage type – most surveys use some version of a “laundry list” which asks a series of yes/no questions, each on a detailed plan type. The list generally includes employer-sponsored insurance (ESI), directly purchased coverage, Medicare, Medicaid and CHIP, state-sponsored plans, military coverage and a catch-all “other” category. Some surveys also include a question on coverage from someone outside the household, the Indian Health

Service, and VA coverage. A number of reporting problems was identified with the laundry list approach in the literature (Beatty and Schechter, 1998; Loomis, 2000; Roman et al., 2002; Pascale, 2009c; Pascale, 2008; Willson, 2005). First, the list itself is often not mutually exclusive. For example, ESI and military coverage can overlap, and coverage from someone outside the household can overlap with ESI and/or directly purchased coverage. Second, respondents can have difficulty figuring out which category best fits their coverage. For example, self-employed individuals who get coverage through a trade association are sometimes torn between the ESI and directly purchased category. In addition, dependents on a spouse or parent's job-based plan are sometimes reluctant to report their coverage as ESI because the coverage is not through *their* job but that of the spouse or parent. Third, individual items on plan type were often too detailed and complex for respondents to grasp with confidence, or they failed to tap into the respondent's understanding of the coverage. This was particularly problematic when respondents were answering for other household members, about whom they had only limited knowledge of personal circumstances like health coverage (Pascale, 2009c). In many cases, respondents knew another household member was covered, and that it was a government-sponsored plan, but they were unclear on the distinction between Medicaid and Medicare (Loomis, 2000; Roman et al., 2002; Willson, 2005). All these factors led respondents to misreport one plan type as another, double-report the same plan twice, or fail to report the plan altogether. For example, studies found that respondents sometimes "pre-reported" their plan at the first question that seemed somewhat appropriate, even if that plan type was incorrect (Loomis, 2000; Pascale, 2008).

One of the most compelling examples of this type of misreporting is demonstrated in two related studies. Loomis (2000) conducted cognitive testing of the CPS series but used two



alternative versions – one in which Medicare was asked prior to Medicaid (the status quo) and one that reversed just the order of questions on those two plan types within the series. She found that respondents confused the two programs, and “sometimes the confusion was expressed at the Medicare question, sometimes at the Medicaid question, sometimes at both questions. [Some] respondents reported Medicaid twice, once at the Medicaid question then again at the Medicare question.” Quotes from respondents who were asked about Medicare prior to Medicaid include:

- *“It’s asking if anyone was covered by, I think Medicare, I don’t know if Medicare, that may be ‘yes’ because I’m thinking Medicare may be the card that [my granddaughter] gets every month. I don’t know if that’s considered Medicare or Medicaid. If it’s Medicare, yes, she gets a medical card every month.” Later, at the Medicaid question: “If Medicaid pertains to the card that [my granddaughter] gets, yes.”*
- *“That’s my medical card, right? I get those two confused, Medicare and Medicaid”*

Quotes from those who were asked the Medicaid question first include:

- *“Medical card, right? I’m confused with Medicaid and Medicare. But we have medical cards. But Medicaid and Medicare is, I don’t know which, I know one is like 65 and above and the other is below that, but I don’t know which is which.” Later at the Medicare question: “See, now I get mixed up between Medicare and Medicaid. Ok, Medicare is the same thing as the medical card, right? Is that what you said?”*
- *Answered ‘yes’ and paraphrased as “Does your family have medical insurance, what kind of medical insurance, like is your family covered by Medicaid medical insurance.” Later, at the Medicare question answered ‘yes’ again and paraphrased as: “They want to know are you, um, like are you on the Medicaid, and um, I’m on MedPlus. Like are you getting medical coverage...Are you getting medical assistance, is the assistance office paying for your medical. [Interviewer probed about Medicaid vs. Medicare] It’s the same thing. It’s like you are asking the same question twice.”*
- *Answered ‘yes’ to Medicaid question and paraphrased “The health plan that, my kids are under these health plans...medical assistance through social services.” Later at the Medicare question, she answered ‘yes’ and paraphrased as “Did Medicaid cover any of my kids in the last 12 months.”*

Loomis concluded “It also seems quite possible for Medicaid recipients to simply respond ‘yes’ to the first question that sounds familiar to them.”

Following on these findings, a split-ballot field test on sequencing effects of Medicare and Medicaid was conducted in 2003 in which the standard CPS series of questions was asked, but in half the sample the Medicare question preceded the Medicaid item and in the other half the sequence of these two plan types was reversed. Results suggested there was false-positive reporting of Medicare when that plan type was asked first. The test did not include a validation component so it is not possible to know with certainty what type of coverage respondents had. However, among low-income households (in which individuals are more likely to be covered by Medicaid), when Medicare was asked first, the Medicare estimate was 24.8 percent, and when Medicaid was asked first the Medicare estimate was 18.6 percent. The Medicaid estimate was unaffected by question sequencing. That is, in households where Medicaid enrollment was likely, it appears some respondents may have reported that Medicaid at both the Medicare question and then again at the Medicaid question when Medicare was asked first, but the coverage was not double-reported when Medicaid was asked first (Pascale, 2004). A later validation study of people known through Blue Cross/Blue Shield records to be enrolled in Medicaid found that “a fair number of Medicaid enrollees – when asked both the Medicaid and Medicare question – answered yes to both.” (Davern et al, 2008). Though this one example is suggestive of a certain pattern of misreporting, overall it is difficult to gauge the magnitude and direction of misreporting stemming from the laundry list approach. However, there is ample evidence from this and numerous other studies of the potential for underreporting, double reporting and misreporting of plan type (Pascale, 2009c).

#### **4. EXPERIMENTAL QUESTIONNAIRE DESIGN DEVELOPMENT**

The initial prototype of the redesigned questionnaire addressed the reference period, household-level design and the laundry list approach. Given the CPS's calendar year reference period, and the 3-month lag time, a review of relevant general survey methods literature on memory and recall was conducted. There is some evidence that respondents tend to report on their current state of affairs even when the question explicitly asks about the prior calendar year (Pascale, 2008), and there is also evidence that events further back in the calendar year are more likely to be underreported than more recent events (Pascale et al., 2009, Resnick et al., 2004). These findings support an intuitive notion that data quality would be highest when asking respondents about their current situation, versus any time in the past. With regard to retrospective reports, the memory literature suggested there was some advantage to providing multiple time frames to enhance the accuracy of reporting of past events (Crespi and Swinehart, 1982; Loftus et al., 1990; Martin et al., 2002; Blair and Ganesh, 1991). For example, Loftus et al. (1990) found that the accuracy of reports of past physical examinations improved when the question on the target reference period was preceded by a question with a shorter reference period.

Based on these findings, an approach toward asking about retrospective coverage was developed which involved two time anchors: the date of the interview, and January 1 of the previous calendar year. This both anchors the respondent in the present day and frames the 15-month time span of interest. Very generally, the series begins by asking about current coverage, and then asking whether that coverage started before January 1 of the previous year. If before, respondents are asked if the coverage was continuous since January 1. If so, it is inferred that the coverage was held all 15 months and no more questions are asked about time frame for that plan. If the coverage began after January 1, respondents are asked in what month the current coverage

started. These respondents, along with those whose coverage was not continuous, are asked specifically about months in the past for which they were not yet reported to have coverage. This is a key departure from the much more general line of questioning asking “At any time during [past year]...” In terms of respondent burden, while some respondents are prompted with these month-specific questions, for the vast majority of respondents whose coverage was consistent over the past 15 months the series boils down to three fairly simple questions: (1) Do you have coverage now? (2) Did it start before January 1 of last year? (3) Was it continuous since then?

With regard to the household- versus person-level issue, a hybrid approach was developed to exploit the advantages of each while minimizing their weaknesses. Each household member is asked about by name, but whenever a specific plan or plan type is reported, a follow-up question is asked to determine if anyone else in the household is also covered by that same plan or plan type. That information is stored and harnessed so that when subsequent household members are asked about, if they were already reported to have coverage, the question series is much abbreviated and only asks about any additional coverage. This allows the questions to reference each household member by name (rather than the more general “anyone in the household”) but it avoids redundant reporting of health plans in the vast majority of cases where multiple household members share the same type of coverage.

Finally, regarding the general questionnaire structure, the CPS employs a laundry list approach starting with questions on three sources of private coverage (employer-sponsored, directly-purchased, and coverage from someone outside the household) followed by four questions on government-related plans (Medicare, Medicaid, CHIP, and military plans), and ending with a catch-all question about “any other plan.” The redesign addresses the problems with the laundry list approach noted above by starting with a relatively simple question about

whether the respondent has coverage or not, and following up with questions that go from general to specific to identify plan type. The objective was to make each individual question easier for respondents to understand and answer, and to tap into the level of knowledge they did have. For respondents who report some kind of coverage, a follow-up question first determines the general source of coverage -- through a job, the government or state, or some other way -- and tailored questions from each response category obtain the necessary detail. For job-based plans, subsequent questions identify policyholders and dependents, and determine if the coverage is related to military service in any way. For government plans a follow-up question asks about the type of government plan, presenting both Medicare and Medicaid in the same list of response categories, so that respondents can assess which plan type is closest to their understanding of the coverage they have. For respondents who choose "other" as their general source of coverage, follow-up questions ask about plans obtained in the next-most-common ways (other than employment and government) -- through direct purchase and, to accommodate dependents on someone else's private plan -- through a parent or spouse. A follow-up question asks whether the parent or spouse gets the coverage through an employer or direct-purchase.

The final redesign incorporated all three of these modified design features: the integrated point-in-time/calendar year reference period, the hybrid person-household design, and the general-to-specific series of questions on plan type. As a final preparation step in the development of the redesign, informal testing of this experimental draft was conducted with family, friends and colleagues in order to correct any fatal flaws before conducting cognitive testing with paid respondents. Minor modifications were made, resulting in a final question series used as a baseline in the first round of cognitive testing. The cognitive testing was carried out in the spring of 2008 with 36 household respondents. No major flaws were identified but

minor refinements were made and retested during subsequent rounds (Pascale, 2009a). Two somewhat substantial issues were identified and modifications were made but could not be evaluated within the cognitive testing phase. These revisions were thus explicitly explored during the pretest, which was conducted in March 2009, with 54 household respondents. There was no evidence of problems with the refinements made based on results of this pretest. The general flow also worked well from the interviewers' perspective, and the respondent debriefing showed that respondents felt the questions accurately captured the health coverage situation for their household (Pascale, 2009b). However, one design issue was identified with regard to months of coverage. Technically speaking the aim of the CPS ASEC is to capture coverage during the previous calendar year, and one major goal of the redesign was to address the distinction between current and past-year coverage. Thus initial redesign questions captured only past calendar year and day-of-interview coverage. However, pretest results suggested it was, perhaps ironically, less burdensome to collect data across the entire 15-month time span with wording such as "And was [NAME] also covered from January, 2008 up until now?" than it was to ask about current coverage and then only the previous calendar year.

## **5. 2010 and 2013 FIELD TESTS**

### **5.1 2010 Survey of Health Insurance and Program Participation (SHIPP)**

The 2010 split-ballot field test, called the Survey of Health Insurance and Program Participation or SHIPP, was carried out in the spring of 2010 by the Census Bureau's telephone interviewing staff in Hagerstown, Md., using a CATI instrument and took an average of 17 minutes per household to complete. A display of the basic structure and flow of the question series, for both the old and new CPS, is shown in Figure 1. The sample was drawn from two

sources – an RDD frame and Medicare enrollment files. Medicaid records were sought but unavailable, so Medicare records were used given the scarcity of validation studies in health measurement research. Individuals under 65 and those recently enrolled were over-sampled under the assumption that these groups were more vulnerable to misreporting – and hence more could be learned from them – than those 65 and over and/or enrolled for longer periods of time. Data were collected on 8,507 individuals, split about 60/40 across the RDD/Medicare samples. Response rates (based on the AAPOR RR4 definition) were 47.6 percent and 61.4 percent for the RDD and Medicare samples, respectively.

Results showed that there were no statistically significant differences in calendar year estimates of the uninsured, or estimates of coverage by plan type, between the old and new CPS (Boudreaux et al, 2013). However, the direction of differences favored the new CPS, and coverage and sample bias could have been major contributors to the lack of statistical significance in the differences. For cost reasons, the SHIPP survey was entirely landline-telephone-based and did not include a cell-phone-only or face-to-face component, introducing an overall bias to both questionnaire panels. In the latter half of 2010 almost 30 percent of households in the U.S. were cell-phone-only, and individuals living in those households were more likely to be young adults (in particular, those aged 25-29), living in or near poverty, living with unrelated adult roommates, Hispanic, male and uninsured (Blumberg and Luke, 2011). This makes it difficult to draw conclusions from the unweighted SHIPP data with regard to any absolute estimates, but relative comparisons should be valid since assignment to treatment was randomized. However, these relative comparisons could be compromised if the methods operate differently among subgroups that were particularly lacking in the overall sample. For example, one of the goals of the redesign was to encourage more accurate reporting of past coverage –

particularly relatively short spells of coverage – by prompting respondents with the specific months for which no coverage had yet been reported. If respondents with short, intermittent spells of coverage were under-represented in the SHIPP sample overall, then this potential advantage of the redesign would be statistically imperceptible.

The SHIPP data were also evaluated for face validity of person/month/plan-level data. Statistical analysis was limited by the small sample size, coverage bias, and the low prevalence of change in coverage status during the 15-17 month reference period. However, the patterns exhibited were informative. Among the non-elderly sample who were administered the new CPS (n=2,882), the vast majority (80.3 percent) were insured throughout the entire reference period, 11.2 percent were uninsured throughout, and another 2.5 percent had coverage in January 2009 but lost it and never regained it by the end of the reference period. The remaining 6.1 percent (n=176) began a spell of insurance during the reference period, and five of these individuals began two spells of coverage during that time. Figure 2 plots the start month of these 181 spells. On average, just over 11 spells began in any given month and the range was one spell (starting in October 2009) up to 39 spells (starting in January 2010) (Pascale, original analysis). The uptick in January 2010 may reflect actual behavior due to open enrollment, New Year's resolutions and/or other events tied to the start of the calendar year. This uptick notwithstanding, there does not appear to be evidence of seam bias or other obvious systematic biases in terms of reported start date of spells across the 15-month reference period.

The Medicare portion of the SHIPP survey data was matched back to the Medicare records from which that sample was drawn originally, and indicators of Medicare enrollment from the two data sources were compared. Results were favorable to the redesign in terms of both under-reporting and over-reporting, but for the latter results were particularly robust. The false positive



(over-reporting) error rate in the old CPS was 6.93% and in the new CPS the error rate was 1.95% — a 4.98 percentage point difference ( $p=0.0095$ ) (Resnick, 2013).

It was hoped that the new CPS would garner higher reports of past coverage than the old CPS. However, the new CPS did not lose ground compared to the status quo design, and coverage bias could explain the lack of differences in the estimates. Furthermore, the person/month/plan-level data had face validity, and the Medicare match-back study favored the redesign. All these factors warranted a follow-up test.

## **5.2 CPS ASEC 2013 Content Test**

In March 2013 the Census Bureau carried out the CPS ASEC 2013 Content Test to evaluate the CPS redesign in a production environment with a larger sample ( $n=29,629$ ) more representative of the CPS. The study was a quasi-split ballot test of the old and new CPS questionnaire. The old CPS was administered to a control panel (a subset of the CPS production sample interviewed by phone) and the new CPS was administered in parallel, also by phone, to a test panel comprised of households that had already completed the final rotation of the CPS (this is known as “retired” sample). Weights, multivariate modeling, and a separate analysis of a subset of retired sample from the production side were all used to assess the effects of the nature of differences across samples. Results showed that the odds of having coverage in the past calendar year were higher under the new CPS than the old, and that within the new CPS, calendar year estimates of coverage were higher than and distinct from point-in-time estimates. There were few statistically significant differences in coverage across demographic subgroups. See Pascale, Boudreaux and King (Health Services Research, in print) for a thorough description of the weighting, methodology and results. These results demonstrated that the redesign did

represent an improvement in the estimates, and there was no evidence that subgroups were unevenly affected by the design difference.

Further methodological analysis of the same dataset was conducted in an attempt to assess the impact of the individual features of the questionnaire that were changed. This was not a straightforward process, however, because all three questionnaire design features were modified at the same time in order to evaluate the final questionnaire as a whole. Two characteristics in particular, however, were tied to some of the modified questionnaire features: household size and “social distance” – the relationship between the household respondent and the person for whom he/she was reporting (aka self/proxy). The hybrid person-household level design in the new CPS, which provides names of individual household members (versus the more general “anyone in the household” in the old CPS), could reduce the chances that certain individuals are forgotten, especially in larger households. The new CPS structure of questions on coverage type (general-to-specific) allows respondents to provide basic information on whether other household members are covered or not (even if their knowledge of coverage type is limited), while the old CPS laundry list asks very detailed questions on coverage type but no general yes/no question on coverage. The more social distance, the less knowledge respondents may have on the details of coverage type for other household members. This could lead to more under-reporting for more socially distant individuals in the old CPS than the new. While the reference period changes could not be completely disentangled from the other two questionnaire features, comparing estimates from single-person households at least removes the effect of the household/person level design for this subset. In both the old and the new CPS, the questions refer to only the household respondent (“you”) and no names are used (see Figure 3, upper panel). Thus, any

observed differences in single-person households could be attributed to either the reference period change, the change to the laundry list approach, or some combination.

In Table 2, two distinct variables are examined. The first is a measure of household size, where households were categorized as small (single-person), medium (two to four people) or large (five or more people). The second is a measure of social distance, which categorizes individuals as having either a self- or proxy-report of their health coverage. Within proxy reports, individuals were classified based on their relationship to the “reference person,” who is usually the household respondent or their spouse. The proxies were divided into two groups: the child of the reference person, or someone other than the child of the reference person. Chi-squared tests of association were used to test the statistical significance of bivariate comparisons of coverage across test and control panels. A logistic regression model was used to test within-treatment comparisons between small, medium and large households, and between self and proxy reports. For all comparisons, a significance threshold of 0.05 was used.

Regarding household size, Table 2 shows that among single-person and large households, there was no difference between the old and new CPS insured estimate. However, in medium households, the new CPS insured rate was 2.39 percentage points higher than in the old CPS design ( $p=0.0043$ ). Within the new CPS there was no difference in the estimates between small and medium households, but within the old CPS the insured estimate in small households was 2.66 percentage points higher than in medium households ( $p=0.0205$ ). In both the old and new CPS, reporting of coverage was much lower in large than in small households, by almost eight percentage points. Reporting of coverage was also lower in large households compared to medium households in both treatments ( $p=0.0001$  in the new CPS;  $p=0.0056$  in the old CPS).

Turning to self/proxy results, Table 2 shows there was no treatment difference in the insured estimate for self-responses, but for proxy responses overall the new CPS insured rate was 2 percentage points higher than the old CPS ( $p=0.0408$ ). Among proxies, there was no treatment difference in reporting of coverage for the child of the reference person, but proxy reporting of coverage for any other household member was 3.64 percentage points higher in the new versus old CPS ( $p=0.0026$ ). Within the new CPS, there was no difference between self and proxy reporting, whether the proxy was the child of the reference person or someone else in the household. But, within the old CPS the estimate for self-reports was 2.52 percentage points higher than for proxy reports overall ( $p=0.0002$ ). Furthermore, among proxies, the old CPS reporting was 4.85 percentage points higher for child of the reference person than others in the household ( $p=0.0001$ ). These results suggest that the new CPS closed the social distance gap that existed in the old CPS.

In sum, in lieu of a true gold standard, if we assume higher reporting is more accurate reporting, the old and new CPS both do equally well in single-person households, and when the respondent has only to report for him/herself and/or his/her child. Given the large gap in reporting between small and large households, one could also say both treatments do equally poorly once the household gets to be five or more people in size. However, it is unknown whether coverage levels are simply lower in larger households, or whether both treatments are missing reports of coverage for some individuals in large households.

Where the new CPS demonstrates significant, measurable improvements is in medium-sized households and with proxy reports for individuals who are the most socially distant from the respondent. To estimate how many additional people were reported as insured under the new CPS solely due to its different impact on these two subgroups, a rough calculation is offered

using the 2013 content test data. For reasons described elsewhere (Pascale, Boudreaux and King, in press), the 2013 test sample was weighted to a total somewhat lower than the U.S. population – about 243 million – and it is on that base population that these calculations are offered. Individuals in medium-sized households constituted 70 percent of the sample, those in the proxy/other category constituted 30 percent of the sample, and 25 percent of the total sample (n=60,868,731) was in both groups. The new-old CPS difference in the insured estimate was 2.39 percentage points for individuals in medium households, and 3.64 percentage points for proxy/other individuals. To be conservative, if we allocate all of the 25 percent overlapping sample to medium households (where the new-old CPS difference is lower), the calculation would be:

Medium-sized households in the old CPS

- 169,925,637 individuals \* 2.39 ppt new-old CPS difference → 4,061,223

Proxy/Other individuals in the old CPS

- 74,590,668 individuals – 60,868,731 (the 25% overlapping sample) = 13,721,937
- 13,721,937 individuals \* 3.64 ppt new-old CPS difference → 499,479

Based on these rough calculations, a total of about four and a half million individuals reported as uninsured in the old CPS would have been reported as insured in the new CPS. Taking this a step further, if we add this four and a half million to the total reported as insured under the old CPS, the new hypothetical insured total comes up to 218,873,234, or 89.90 percent of the total old CPS population. This compares to the insured rate of 88.02 percent under the old CPS and represents a 1.9 percentage point difference. This difference is in line with findings from the 2013 content test, which showed a difference of 1.4 percentage points in the uninsured rate between the old and new CPS. It is also in line with a comparison of the 2013 and 2014

production estimates, which employed the old and new CPS, respectively. While there were many caveats to that comparison, a 1.6 percentage point difference was approximated to be attributable to the change in questionnaire design (Pascale, Boudreaux and King, in press).

### **5.3 Questionnaire Administration Time in the Old versus New CPS**

Timers were built into the both the 2010 and 2013 tests. In 2010, the old CPS health insurance module took two minutes and 25 seconds to administer while the new CPS took on average three minutes 56 seconds – about a minute and a half longer. The median measure showed a gap of about one minute between the old and new CPS. The 2013 results were almost identical, indicating that the new CPS took 1.5 minutes longer than the old CPS health insurance module (Bee and Cantu, 2013). While the added duration in the new CPS is concerning, there are some important mitigating factors. For example, the average SHIPP interviewer had 8.39 years of field interviewing experience at the Census Bureau, and 5.41 years of experience on surveys that include questions about health insurance (the old CPS being among the most common of these). For the new CPS, interviewers had only the benefit of a two-day training and a 10-day field period. Thus as interviewers become more familiar with the new CPS – which is a tremendous departure from the old design – the learning curve benefits should develop and reduce administration time. Other important considerations are the benefits of the redesign discussed below.

## **6. DISCUSSION**

When this research began in 1999, the objective was to identify key questionnaire design features that were associated with measurement error, develop improvements and test their effectiveness. The 2013 test results indicated that the new CPS did reduce measurement error in estimates, across demographic subgroups, resulting in a lower estimate of the uninsured (again

under the assumption that higher reporting is more accurate). Further analysis of the 2013 test, focusing on household size and self/proxy reporting, shed some light on the reasons for the observed improved reporting. While long-standing speculation suggested that recall error induced by the reference period was the main contributor to reporting error, results indicate that much more than recall error was at play. If recall were the only factor, then we would expect improved reporting under the new CPS even in single-person households, but we see no differences there.

What seems to be driving lower reporting in the old CPS is not primarily recall error but a confluence of factors related to household size and composition, and cognitive difficulty of the reporting task. Consider that when asked in the old CPS, “At any time in [last calendar year] did anyone in the household have [Plan Type X]?”, respondents who fail to report coverage are not saying “no” – that an individual household member does not have that coverage type – they are just not saying “yes.” Furthermore, they are failing to say “yes” to two different kinds of questions. First, in cases where the coverage type specified in the household-level question is obscure to them (e.g., Tricare and other military plans, Medicaid and its state-specific program names) they may not say “yes” simply because they don’t recognize the coverage type. Second, if they do answer “yes” to the household-level question, they then have to actively report individual household members who have that coverage type. In these cases, the more socially distant household members may not come to mind as readily. For example, a respondent reporting ESI coverage may be focused mostly on their own family members who are dependents on their particular plan, and less focused on other, more socially distant household members (e.g., a cousin, boarder), who may have their own ESI plans. Indeed, social distance has been found to affect data quality in other contexts as well. For example, Grieco and

Armstrong (2015) reported that social distance between the respondent and others in the household was likely a factor in item-nonresponse to questions on year of naturalization.

Social distance, however, is only part of the reporting problem. Results indicate that when the reporting task becomes particularly challenging – calling to mind several other household members at once, some of whom are more socially distant, and thinking back over 15 months, sometimes about obscure coverage types – the old CPS design is less equipped than the new design to prompt reporting. These results harken back to the 1999 study on reference period and household versus person-level design. That study suggested that respondents had difficulty when asked about both the past calendar year *and* all household members at once. They had less difficulty when either one person at a time was asked about (by name) for the calendar year, or when only the current time period was asked about for “anyone in the household” (with no names). All three revised questionnaire features in the new CPS play a role in simplifying the reporting task and collectively reducing the cognitive burden on the respondent. The series asks about only one person at a time, and it starts with a simple yes/no question on current coverage status – not specific coverage type. Furthermore, the series starts with questions about not just any household member but the respondent him/herself. This allows the respondent to focus on what are likely the more difficult aspects of the questions – coverage type and months of coverage – under (arguably) the simplest circumstances first, without being burdened with *also* thinking about those same aspects for other people over a 15 month time period. Decomposing complex questions into simpler questions has been demonstrated to result in higher data quality in other contexts as well (Redline, 2013; Fowler, 2004).

Apart from addressing measurement error, the new CPS renders all the same data as the old CPS but with much more detailed information. The original strategy of asking about current



coverage, framing the 15-month time period and, in some cases, prompting respondents with month-level questions on coverage, was all in the service of improving reports of retrospective coverage. However, as a side benefit, the questionnaire renders person/month/plan-level data, from the beginning of the previous calendar year all the way through and including the interview day. Thus, the redesign enhances the value of the dataset by enabling a more thorough analysis of the dynamics of coverage over a continuous 15-month reference period. For example, analysts can examine the number and duration of spells, and also the specific months of coverage, which allows for studies on topics such as seasonality and the effects of major external events, such as a recession. The data also enable analysis of churning within plan type (e.g., people who are on and off Medicaid), transitions from one plan type to another, and the direction of those transitions (e.g., from Medicaid to ESI, or vice versa). And while the traditional CPS does allow for reporting of multiple plan types, since it only asks about coverage “at any time” during the past year it is impossible to know how many months individuals were covered, and whether they were covered by multiple plan types at the same time or whether they transitioned from one plan type to another. Having the data to study source of coverage and transitions will likely become more valuable in the coming years. As the uninsured rate drops, the research community focus may shift from measuring the uninsured to exploring how individuals obtain their coverage, and the dynamics of coverage – when and why they shift from one source to another.

Like all studies that aim to measure the uninsured, definitive conclusions regarding measurement error are saddled by lack of a truth source. The U.S. health care system, both pre- and post-reform, is a patchwork of private and public sources of coverage. As such, there is no centralized database on individuals with and without health coverage, and no definitive number of the uninsured against which to compare a survey estimate. However, some limited

conclusions can be drawn about the data quality of the new CPS. First, studies on the old CPS indicated the calendar year estimate of the uninsured was in-line with estimates of those uninsured at a point-in-time. By definition, one of these estimates is wrong, because individuals are more likely to be covered “at any time” during an entire 365-day period than on any given day. Thus within the new CPS, the finding that the estimate of calendar year coverage is higher than and distinct from the estimate of current coverage represents an improved metric, at least in the relative sense. Second, the new CPS appears to be less prone to measurement error in relation to household size and social distance. Third, to the extent that relevance is a measure of data quality, the improved precision and detail in terms of person/month/plan-type level variables, and the additional ACA-specific measures in the new CPS, represents a marked improvement over the old CPS.

Next steps in this line of research include continued study of public coverage reporting. The new CPS was designed to address the chronic and persistent under-reporting of public coverage, but appears not to have made any gains in that area. Analysis of the 2013 test results suggests this could be a result of multiple factors all revolving around the theme of over-reporting (Pascale, Boudreaux and King, in press). Results from the 2010 test showed there was more double reporting of both public and private coverage in the old than in the new CPS (Boudreaux et al, 2013), and that Medicare over-reporting was higher in the old than in the new CPS (Resnick, 2013). Furthermore, although the Medicaid under-count is well documented, there is some evidence of Medicaid over-reporting (Klerman, Davern et al, 2009; Davern et al, 2008). The latter study showed that roughly 20 percent of the self-reported Medicaid estimate was comprised of enrollees in private coverage who also reported Medicaid. Finally, the dearth of evidence on over-reporting is not indicative of a lack of over-reporting; rather, it is much more

difficult to measure due to state-level variation and the absence of a truly comprehensive dataset of enrollees.

Another key area for more research is validation. For surveys to derive an estimate of the uninsured, most (including the old CPS) ask about coverage through specific sources – ESI, Medicaid and so on – and anyone not reported to have coverage through one of those sources is classified as uninsured. Other surveys (including the new CPS) begin the series with a simple yes/no question on covered/not covered and then follow up with questions on the source of coverage. Under either approach, for anyone not reported as covered, most surveys include follow up questions on coverage types often under-reported (such as Medicaid), and most verify that those thus far reported without coverage are, in fact, uninsured. In spite of these efforts, to varying degrees, the accuracy of the uninsured estimate is intertwined with the accuracy of reporting on plan type. Medicaid has received substantial study and attention with regard to reporting accuracy, in part due to the existence and accessibility of fairly high-quality records. Yet even within the Medicaid reporting literature it is not entirely clear how misreporting of Medicaid affects estimates of other plan types, and the ultimate measure of the uninsured, at the national level. The accuracy of reporting of plan types other than Medicaid has received less rigorous study, perhaps because they are more difficult due in part to less accessible, more disparate sources of validation data. Furthermore, only two studies to date (Davern et al., 2008 and Nelson et al, 2000) have examined reporting accuracy of multiple sources of coverage – both public and private – within the same questionnaire.

To address this gap the Census Bureau collaborated with the State Health Access Data Assistance Center, the US Department of Health and Human Services, the Medica Research Institute, and the Robert Wood Johnson Foundation to conduct a study in Spring 2015 titled

“Comparing Health Insurance Measurement Error” (CHIME). The study compares data from enrollment records across multiple markets (including Medicaid, ESI and non-group coverage purchased within and outside the marketplace) to survey reports from health insurance modules from the CPS ASEC redesign and the ACS. Analysis includes an assessment of both “absolute” reporting accuracy (the extent to which the survey data matches the record data) and “relative” reporting accuracy (comparing absolute reporting accuracy across questionnaire treatments). Final results are expected in early 2016.

## **7. IMPLICATIONS**

These results have broad implications for both questionnaire redesign strategies and for topic areas beyond health insurance. Many redesign efforts involve a long-term plan whereby each phase of the research and the schedule is set years in advance. This often means the timeline is insufficient to fully digest results of one study in order for the findings to be fed in to the design of the next study. More important, it can often mean that results from an early study raise questions that warrant a subsequent test of a certain nature and scope, but a different type of test was pre-defined in the research plan. Some degree of planning and scheduling is obviously necessary for staffing and budgeting purposes. However, if considerable flexibility is built in to the research plan, the value of each test can be enhanced with sufficient time for analysis, and each test can be adjusted to address the emerging research questions.

Results also provide guidance for questionnaire design, as the specific features found to be problematic are not unique to health insurance questions. The over-arching finding is that if a reporting task is particularly demanding, it often pays to decompose complex questions into their simpler parts. Knowing what constitutes “particularly demanding” for all respondents is certainly

not possible. However, results suggest how to design questions so that reporting under the more challenging conditions does not suffer relative to the simpler conditions. Numerous surveys ask retrospective questions using wording like “At any time during [time period X] did [you/anyone] receive [subject Y]?” These surveys may benefit by decomposing the task and asking first about the present (i.e.: “Do you receive [subject Y]?”), which allows respondents to focus on subject Y without the compound tasks of thinking about duration and any change over time within the same question. In terms of subject matter, many topic areas lend themselves to being asked at a general level (e.g.: retirement plans) or a specific level (e.g. 401(k), 403(b), IRA, Roth IRA). Results suggest asking about the general level first and then drilling down to the specifics, particularly when a single respondent is answering questions about all household members. Finally, to reduce the risk of under-reporting by providing individual names, while also reducing burden, results suggest that a hybrid person-household level approach can be effective. This could be especially relevant when asking about a topic area that may be shared across household members, such as jointly owned assets, or household-level receipt of public benefits.

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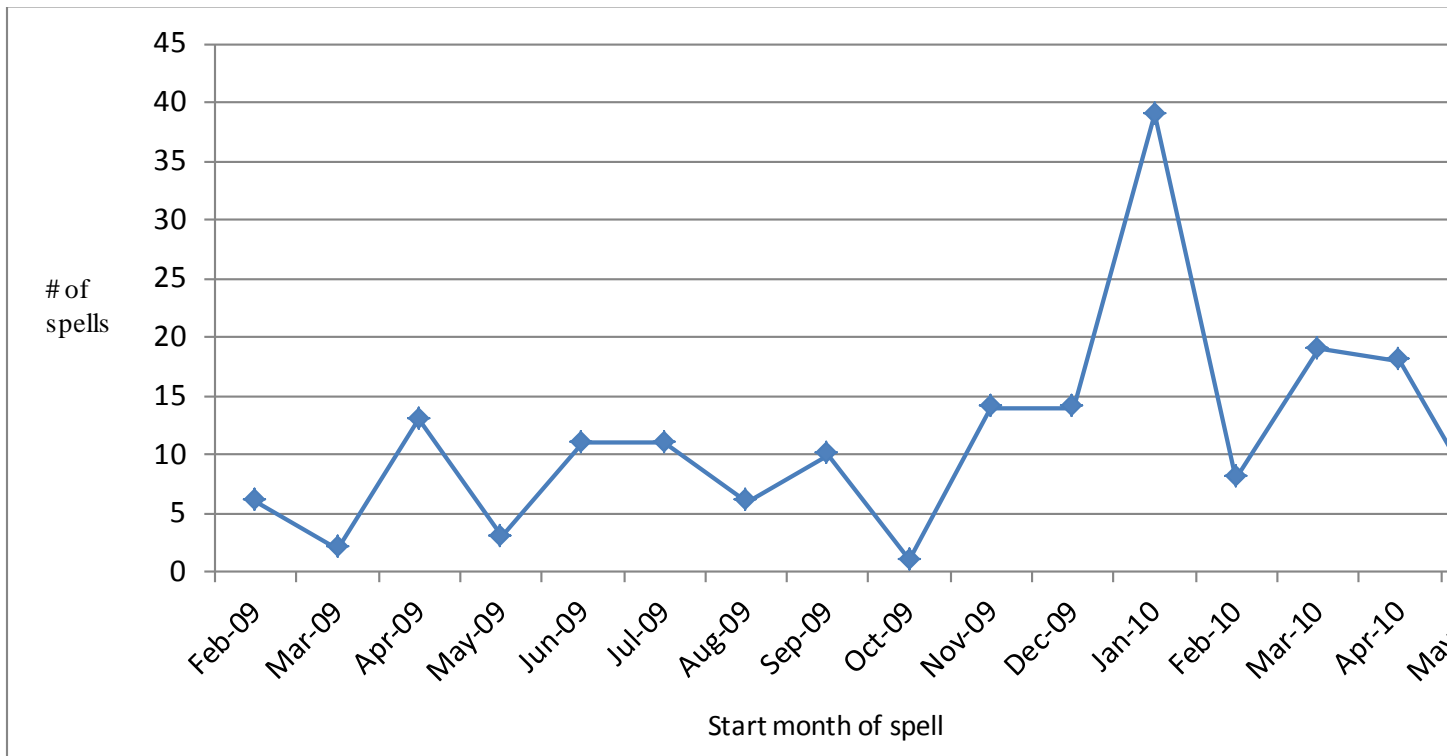


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**Figure 1: Old versus New CPS Questionnaire Structure for SHIPP 2010 Field Test**

Old CPS	New CPS
<p>1. In 2009 was anyone in hh covered by job plan?</p> <ul style="list-style-type: none"> <li>• Yes =&gt; Who? =&gt; 2</li> <li>• No =&gt; 6</li> </ul> <p>2. Who in hh were policyholders? =&gt; 3</p> <p>3. Who else in hh was covered? =&gt; 4</p> <p>4. Did plan cover anyone outside hh? =&gt; 5</p> <p>5. Did emp/union pay all/part/none of premium =&gt; 6</p> <p>6. In 2009 was anyone in hh covered by direct plan?</p> <ul style="list-style-type: none"> <li>• Yes =&gt; 7</li> <li>• No =&gt; 10</li> </ul> <p>7. Who in hh were policyholders? =&gt; 8</p> <p>8. Who else in hh was covered? =&gt; 9</p> <p>9. Did plan cover anyone outside hh? =&gt; 10</p> <p>10. In 2009 was anyone in hh covered by outside hh?</p> <ul style="list-style-type: none"> <li>• Yes =&gt; Who? =&gt; 11</li> <li>• No =&gt; 11</li> </ul> <p>11. In 2009 was anyone in hh covered by Medicare?</p> <ul style="list-style-type: none"> <li>• Yes =&gt; Who? =&gt; 12</li> <li>• No =&gt; 12</li> </ul> <p>12. In 2009 was anyone in hh covered by Medicaid?</p> <ul style="list-style-type: none"> <li>• Yes =&gt; Who? =&gt; 13</li> <li>• No =&gt; 14</li> </ul> <p>13. How many months in 2009 was NAME covered? =&gt; 14</p> <p>14. In 2009 was anyone in hh covered by SCHIP?</p> <ul style="list-style-type: none"> <li>• Yes =&gt; Who? =&gt; 15</li> <li>• No =&gt; 15</li> </ul> <p>15. In 2009 was anyone in hh covered by military?</p> <ul style="list-style-type: none"> <li>• Yes =&gt; Who? =&gt; Plan type =&gt; 16</li> <li>• No =&gt; 16</li> </ul> <p>16. In 2009 was anyone in hh covered by state/oth plan?</p> <ul style="list-style-type: none"> <li>• Yes =&gt; Who? =&gt; Plan type =&gt; 17</li> <li>• No =&gt;</li> </ul> <p>17. I have recorded NAME(s) not covered; correct?</p> <ul style="list-style-type: none"> <li>• Yes =&gt; END</li> <li>• No =&gt; Who was covered? =&gt; Plan type =&gt; END</li> </ul>	<p>CK1: If disabled or age = 65+ =&gt; 1; else =&gt; 2</p> <p>1. Are you covered by Medicare?</p> <ul style="list-style-type: none"> <li>• Yes =&gt; 10</li> <li>• No =&gt; 2</li> </ul> <p>2. Are you covered by any type of health plan?</p> <ul style="list-style-type: none"> <li>• Yes =&gt; 3</li> <li>• No =&gt; Qs on under-reported plans; if none =&gt; verification of uninsured then =&gt; 15</li> </ul> <p>3. Is it provided thru a job, the govt, or other way?</p> <ul style="list-style-type: none"> <li>• Job =&gt; 6</li> <li>• Government =&gt; 4</li> <li>• Other way =&gt; 7</li> </ul> <p>4. Is that plan related to a JOB with the government?</p> <ul style="list-style-type: none"> <li>• Yes =&gt; 6</li> <li>• No =&gt; 5</li> </ul> <p>5. Is that Medicare, Medicaid/CHIP, military, other? =&gt; 10</p> <p>6. Is the plan related to military service in any way? [if yes, type of plan] =&gt; 9</p> <p>7. How is it provided – parent/spouse, direct, other?</p> <ul style="list-style-type: none"> <li>• Parent/spouse/direct =&gt; thru job or direct? =&gt; 9</li> <li>• Other =&gt; 8</li> </ul> <p>8. Is it thru former emp, union, biz assn, school, other?</p> <ul style="list-style-type: none"> <li>• Former employer/union/biz assn =&gt; 9</li> <li>• School/other =&gt; 10</li> </ul> <p>9. Who is the policyholder? [hh roster; outside hh] =&gt; 10</p> <p>10. Did coverage start before or after January 1, 2009?</p> <ul style="list-style-type: none"> <li>• Before =&gt; 11</li> <li>• After =&gt; Qs on start month/year =&gt; 11</li> </ul> <p>11. Has coverage been continuous since then? [if no =&gt; Qs on months of spells] =&gt; 12</p> <p>12. Is anyone else in hh covered on same plan? [if yes, who?] =&gt; 13</p> <p>13. Were they covered same months, more, or fewer?</p> <ul style="list-style-type: none"> <li>• Yes =&gt; 14</li> <li>• No =&gt; What months were they covered? =&gt; 14</li> </ul> <p>14. Do you NOW have any OTHER coverage?</p> <ul style="list-style-type: none"> <li>• Yes =&gt; loop thru series again, starting with 3</li> <li>• No =&gt; 15</li> </ul> <p>15. And in 2009? DID you have any (other) coverage?</p> <ul style="list-style-type: none"> <li>• Yes =&gt; loop thru series again, starting with 3</li> <li>• No =&gt; CK2</li> </ul> <p>CK2:</p> <ul style="list-style-type: none"> <li>• If next on roster was reported in 12 =&gt; 14; else =&gt; CK1</li> <li>• If no more on roster =&gt; END</li> </ul>

**Figure 2: SHIPP 2010 Start Month of Insured Spells (n=181 spells)**



Source: 2010 Survey of Health Insurance and Program Participation.

**Figure 3: Simplified Question Flow by Household Size in Old versus New CPS**

	<b>Old CPS</b>	<b>New CPS</b>
<b>Single-person households</b>	<ol style="list-style-type: none"> <li>1. At any time in 2009 were you covered by [plan type x]?</li> <li>2. At any time in 2009 were you covered by [plan type y]?</li> <li>3. [repeat for all eight plan types]</li> </ol>	<ol style="list-style-type: none"> <li>1. Do you NOW have any coverage? Yes → [Qs to identify plan type] → Q2 No → next section</li> <li>2. Did your coverage from [plan type x] start before or after January 1, 2009? Before → Q3 After → Q4</li> <li>3. And has it been continuous since January 2009? Yes → CK No → Q4</li> <li>4. In what month did that coverage start? → Qs on gaps in coverage prior to start month → CK CK: If single-person household → next section; else → Q5</li> </ol>
<b>Multi-person households</b>	<ol style="list-style-type: none"> <li>1. At any time during 2009 was anyone in this household covered by [plan type x]? Yes → go to Q1a No → go to Q2 1a. Who was covered? → Q2</li> <li>2. At any time during 2009 was anyone in this household covered by [plan type y]? Yes → go to Q2a No → go to Q3 2a. Who was covered? → Q3</li> </ol> <p>[repeat for all eight plan types]</p>	<p>[Same routine as in single-person households, with the addition of Q5-Q8]:</p> <ol style="list-style-type: none"> <li>5. Is anyone else in this household also covered by [plan type x]? Yes → Q6 No → next section</li> <li>6. Who is covered? → Q7</li> <li>7. Were they also covered in [months first person had the coverage]? Yes → apply same months to this person as first person No → Q8</li> <li>8. What months between January 2009 and now was this person covered by [plan type x]?</li> </ol>

**Table 1: Unweighted Estimates of Uninsured, 1999 Questionnaire Design Experimental Research Survey**

		Person vs Household level design		
		Person	Household	Difference
Reference Period	Current	10.3% (n=84)	12.0% (n=104)	1.7%
	Calendar Year	6.9% (n=53)	12.0% (n=93)	5.1% **
	Difference	3.4% *	0.0%	

\* p < 0.05; \*\* p < 0.01.  
Source: 1999 Questionnaire Design Experimental Research Survey (QDERS). See Pascale, 1999 for details.

**Table 2: Weighted Old versus New CPS Insured Estimates, 2013 CSP ASEC Content Test**

		New CPS Insured		Old CPS Insured		New-Old % insured (p)
		N=243,474,924	% (SE)	N=243,474,924	% (SE)	
Household Size	Small	23,878,488	90.74 (1.0152)	27,571,316	91.24 (0.9246)	-0.50 (0.7136)
	Medium	155,833,875	90.96 (0.5383)	150,507,500	88.57 (0.5784)	<b>2.39</b> <b>(0.0043)</b>
	Large	37,932,138	82.76 (1.7761)	36,233,716	83.62 (1.8462)	-0.87 (0.7532)
Self/Proxy	Self	86,334,860	89.98 (0.5656)	88,093,242	89.52 (0.5553)	0.45 (0.5676)
	Proxy	131,309,641	89.01 (0.6735)	126,219,290	87.00 (0.6535)	<b>2.00</b> <b>(0.0408)</b>
	Child	66,524,680	89.72 (0.9987)	63,078,540	89.50 (0.8721)	0.22 (0.8743)
	Other	64,784,961	88.29 (0.7498)	63,140,750	84.65 (0.8696)	<b>3.64</b> <b>(0.0026)</b>

SE are clustered on household. Unweighted n=29,629 (Test n=16,401; Control n=13,228). Weighted totals do not sum to population estimates due to the sample design of the 2013 content test and drop-out rates within the ASEC portion of the questionnaire. See Pascale, Boudreaux and King (2015) for more details.  
Source: 2013 CPS-ASEC Content Test.

## Appendix A: Verbatim Wording of Old versus New CPS Questions for Identical Household Scenario

Old CPS	
1.	These next questions are about health insurance coverage during the calendar year 2013. The questions apply to ALL persons of ALL ages. At any time in 2013, was anyone in this household covered by a health insurance plan provided through their current or former employer or union? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
2.	Who in this household were policyholders? <input checked="" type="checkbox"/> Parent A
3.	In addition to Parent A, who else in this household was covered by Parent A's plan? <input checked="" type="checkbox"/> Parent B <input checked="" type="checkbox"/> Child A <input checked="" type="checkbox"/> Child B
4.	Did Parent A's plan cover anyone living outside this household? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5.	Did Person A's former or current employer or union pay for all, part, or none of the health insurance premium?
6.	At any time in 2013, was anyone in this household covered by a health insurance plan that they PURCHASED DIRECTLY FROM AN INSURANCE COMPANY, that is, not related to current or past employment? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
7.	At any time in 2013, was anyone in this household covered by the health insurance plan of someone who does not live in this household? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
8.	At any time in 2013, was anyone in this household covered by Medicare? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
9.	At any time in 2013, was anyone in this household covered by Medicaid/Healthy Montana Kids? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
10.	In Montana, Healthy Montana Kids helps families get health insurance for CHILDREN. Just to be sure, were any of the children in this household covered by that program? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
11.	At any time in, 2013 was anyone in this household covered by TRICARE, CHAMPUS, CHAMPVA, VA, military health care, or Indian Health Service? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
12.	Other than the plans I have already talked about, during 2013, was anyone in this household covered by a health insurance plan such as the Montana Comprehensive Health Association (MCHA) or any other type of plan? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

**New CPS**

1. These next questions are about health coverage between January 1, 2013 and now. Do you NOW have any type of health plan or health coverage?
  - Yes
  - No
2. For the coverage YOU have NOW, do you get it through a job, the government or state, or some other way?
  - Job (current or former)
  - Government or State
  - Some other way
3. Is that plan related to military service in any way?
  - Yes
  - No
4. Whose name is the policy in? (Who is the policyholder)?
  - Parent A (respondent)
5. Does your employer or union pay for all, part, or none of the health insurance premium?
6. Did your coverage from a plan through your job start before January 1, 2013?
  - Before January 1, 2013
  - On or after January 1, 2013
7. And has it been continuous since January, 2013?
  - Yes
  - No
8. Between January 1, 2013 and now, was anyone in the household other than you ALSO covered by a plan through your job?
  - Yes
  - No
9. Who? (Who else in this household is or was covered by a plan through your job)?
  - Parent B
  - Child A
  - Child B
10. Were Parent B, Child A and Child B all also covered from January 1, 2013 until now?
  - All also covered from January 2013 until now
  - At least one person not covered from January 2013 until now
11. Does that plan cover anyone living outside this household?
  - Yes
  - No
12. Other than a plan through your job, were you covered by any other health plan or health coverage AT ANY TIME between January 2013 and now?
  - Yes
  - No
13. Next I'm going to ask you about Parent B's health coverage. Other than a plan through your job, was Parent B covered by any other health plan or health coverage AT ANY TIME between January 2013 and now?
  - Yes
  - No
14. Next I'm going to ask you about Child A's health coverage. Other than a plan through your job, was Child A covered by any other health plan or health coverage AT ANY TIME between January 2013 and now?
  - Yes
  - No
15. Next I'm going to ask you about Child B's health coverage. Other than a plan through your job, was Child B covered by any other health plan or health coverage AT ANY TIME between January 2013 and now?
  - Yes
  - No

## **APPENDIX B: Current Population Survey (CPS) Annual Social and Economic (ASEC) Supplement Redesigned Health Insurance Module Flow Document**

### **OVERVIEW**

The purpose of the module is to capture health coverage status (covered or not), type of plan, and months of coverage. The interview is administered in the spring each year (most are conducted in March, though some are carried out in February and April). Questions are asked about any health coverage from January 1 of the previous calendar year up until the date of interview, rendering data at the plan type-month-level for each person. This enables an analysis of coverage through multiple concurrent plans, multiple transitions from one plan type to another, and transitions on-and-off the same plan type across the 14-16 month reference period. The redesign also includes new questions related to provisions of the Affordable Care Act (ACA) implemented in 2014, including questions on coverage through health insurance marketplace and premium subsidies.

#### **The Household Respondent**

A single household respondent answers questions for all household members. The series begins by asking whether the household respondent (i.e.: Person 1) has coverage now and, if so, the type of coverage. We then ask whether that coverage started before January 1 of the previous calendar year and, if after January, we ask for the start month. In either case, we ask whether the coverage was continuous from the reported start date, and if so we infer that the coverage lasted from that start date through to the date of the interview. If the coverage was not continuous we determine the start month of the current spell of coverage. We then ask what other months between January 1 of the previous calendar year and the start date of the current spell the respondent also had coverage from that same plan or plan type. This is one way we capture churning on and off the same plan type. Once we determine plan type and months of coverage for the first person, we determine whether any other household members are also covered by that same plan and, if so, what months they were covered.

The instrument then checks for any gaps in coverage during the 14-16 month reference period. If there were gaps, we ask if there was any coverage during the specific months for which no coverage was yet reported. If there was coverage, we collect the same details as for the first reported plan (plan type, months of coverage, other household members on the same plan, and months they were covered). We then ask if the person has or had any additional coverage, from January 1 of the previous year until the interview date. Note this question is meant to capture coverage held in the past but no longer held, as well as current coverage. If additional coverage is reported, we go through the same routine described above to capture details (plan type, months of coverage, other household members on the same plan, and months they were covered).

#### **Other Household Members**

The questionnaire is designed to limit respondent burden regarding questions about any subsequent household members on the roster by tracking and harnessing any information about their coverage that has already been reported. Once the entire series is administered for Person 1 we move on to Person 2, with a brief introduction (“Next I’m going to ask you about Person 2.”). At this point the instrument checks to see if Person 2 was mentioned as being covered by any of the same plan(s) that were already reported to cover Person 1. If so the instrument checks for any gaps in Person 2’s coverage (throughout the 14-16 month reference period), and collects details (plan type, months of coverage, etc.) on any of those plans. We then ask if Person 2 has or had coverage during the 14-16 month reference period in addition to the coverage already captured during the course of Person 1’s interview. If so details on plan type etc. are captured. This same question is asked if Person 2 was covered by a plan already mentioned in Person 1’s interview but did NOT have any gaps in coverage. If Person 2 was not mentioned during Person 1’s interview as being covered, the series begins “from scratch” for Person 2 – from the first basic question on whether they have any type of coverage, if so what plan type, what months of coverage, and so on.

The series then repeats in this fashion for Person 3, and the instrument checks for any coverage already reported for Person 3 during the course of interviewing for *both* Person 1 and Person 2. The series continues through the entire household roster (regardless of age) in this same way until each person has been asked about explicitly.



## **Leaders vs. Followers**

To facilitate a description of the flow of the instrument we introduce the terms “leader” and “follower.” This status is only meaningful for the purpose of directing a given respondent through the instrument correctly; it has nothing to do with policyholder or dependent relationships. A leader is the first person for whom a given plan was reported, and a follower is any person who is reported to also be covered by that plan. Leaders and followers are defined simply based on the somewhat arbitrary order in which household members were listed on the roster, and which household members share the same plan type.

For example, if a husband (the respondent) is listed on the household roster as Person 1 and his wife is listed as Person 2, and they are both covered by the wife’s plan through her job, the coverage will first be discussed during questions about the husband’s sources of coverage since he is listed on the roster first. When job-based coverage is reported for him, a question will be asked to identify the policyholder, at which point his status as a dependent and his wife’s status as the policyholder will be determined. But the husband will be defined as the leader since it was during his interview that the plan was first reported. Other household members (the wife herself, and any other dependents) will then be defined as followers on the wife’s job-based plan.

One other important aspect of this process is that a person can be both a leader and a follower on different plans. In the previous example, the wife was initially defined as a follower on her own job-based plan. As such, her portion of the interview would begin with the wrap-up question about whether she has or had any plans in addition to the job-based plan. Let’s assume that her job-based plan only started a few months before the interview, and that prior to that coverage she had a directly-purchased plan which covered her and her child, but not her husband. During her portion of the interview, this directly-purchased plan would be identified and the wife would be considered the leader on the plan since it was during her portion of the interview that the plan was first reported. When it is reported that her child was also covered, the child would be identified as a follower.

## **Instrument Structure and Sections**

The questionnaire has five main sections – A through E. Section A determines whether a health insurance plan exists for a given household member, and if so, the “Current Loop” is administered. The Current Loop consists of three sections. Section B identifies the specific plan type (Medicaid, military, etc.), Section C identifies the months the leader was covered, and Section D determines whether any other household members were also covered and, if so, the months they were covered. There is also a “Past Loop” series. This is very similar to the Current Loop, and contains Sections A thru D, except that the questions are asked in the past tense, and Section C (on months of coverage) is simpler. Section E contains questions on employer-sponsored insurance (ESI) take-up.

After health coverage status has been asked about for all household members, the instrument loops through the household roster and any member who was reported to be currently employed (in the last week) but was not reported to be a current policyholder on an employer-sponsored insurance plan enters Section E. The section contains four questions. Two questions determine whether the person’s employer offers coverage and whether the employee is eligible. If eligible the third question determines why the employee opted out of the coverage; if not eligible the fourth question determines the reasons for ineligibility.

## **Loops**

The instrument is designed to capture up to seven plans per person – concurrent and/or consecutive across the entire reference period from January 1 of the previous calendar year up through the interview date. The same data are captured for each plan – that is, plan type, months of coverage, whether any other household members are covered, and the months they were covered. For purposes of this document, the full text of the items are only shown once, but each item has a loop-specific suffix. The naming convention for these loop-specific items is “L” for “leader” and “F” for follower, “C” for current plan and “P” for past plan, and 1, 2 or 3 to represent the first, second or third plan reported for that person. For example, the set of items for which full text is displayed below is the leader’s first current plan, hence items in Sections B through D all have the suffix “LC1.” Each loop is triggered by answering “yes” to certain questions as shown in Table 1.

**Table 1: Health Coverage “Loops” and their Trigger Questions**

PLAN	TRIGGER QUESTIONS	PLAN DETAILS (suffix of variables in Sections B-D)
Leader’s First Current Plan	MCARE1=yes ANYCOV=yes MEDI=yes OTHGOVT=yes VET=yes VERIFY=no	LC1
Leader’s First Past Plan	AddGap1_L=yes	LP1
Leader’s Second Past Plan	AddOth1_L=yes	LP2
Leader’s Third Past Plan	AddOth2_L=yes	LP3
Follower’s First Past Plan	AddGap1_F=yes	FP1
Follower’s Second Past Plan	AddOth1_F=yes	FP2
Follower’s Third Past Plan	AddOth2_F=yes	FP3

**“Don’t Know” and “Refused” Answers**

Every item allows a “don’t know” and “refused”(DK and REF) response but they are not displayed on the screen. In this document, for simplicity, these response options are grouped in the with other substantive response categories if they all follow the same skip pattern. But in the instrument itself, only the substantive response categories are displayed on the screen.

**Fills in Questionnaire**

There are several instances where most of the question wording is static but some words or names vary depending on circumstances, such as what plan type is being asked about. These are called “fills” and below are specifications.

**General**

CY: current year

CY-1: current year minus one (i.e.: previous calendar year)

CM: current month

**Plan Type**

There are several instances where a question needs to display the particular plan type reported by the respondent earlier in the interview. Following are specifications for the PLANTYPE fill:

- if plan is military-related:
  - if MILTYPE =1 thru 5 fill: [plan type selected in MILTYPE]
  - else if MILTYPE=6, DK or REF fill: “a military plan”
- else if plan is job-related and
  - NAME was selected in POLHOLDER fill: “a plan through your job”
  - A name was selected in POLHOLDER but it was someone within the hh other than NAME fill: “a plan through [policyholder]’s job”
  - POLHOLDER=17 fill: “a plan through the job of someone outside the household”
  - POLHOLDER=DK or REF fill: “a plan through someone’s job”
- else if plan is union-related and
  - NAME was selected in POLHOLDER fill: “a plan through your union”
  - A name was selected in POLHOLDER but it was someone within the hh other than NAME fill: “a plan through [policyholder]’s union”
  - POLHOLDER=17 fill: “a plan through the union of someone outside the household”
  - POLHOLDER=DK or REF fill: “a plan through someone’s union”
- else if plan is related to a business association and
  - NAME was selected in POLHOLDER fill: “a plan through your business association”

- A name was selected in POLHOLDER but it was someone within the hh other than NAME fill: “a plan through [policyholder]’s business association”
- POLHOLDER=17 fill: “a plan through the business association of someone outside the household”
- POLHOLDER=DK or REF fill: “a plan through someone’s business association”
- else if plan is directly-purchased and
  - EXCHTYPE=1-4 then:
    - if NAME was selected in POLHOLDER fill: “your [text of response category 1-3]”
    - if a name was selected in POLHOLDER but it was someone within the hh other than NAME fill: “[policyholder]’s [text of response category 1-3]”
    - if POLHOLDER=17 (outside hh), DK, REF fill: “[text of response category 1-3]”
  - else if PORTAL=1 then:
    - if NAME was selected in POLHOLDER fill: “your [STPORTAL] plan”
    - if a name was selected in POLHOLDER but it was someone within the hh other than NAME fill: “[policyholder]’s [STPORTAL] plan”
    - if POLHOLDER=17 (outside hh), DK, REF fill: “an [STPORTAL] plan”
  - else:
    - if NAME was selected in POLHOLDER fill: “a plan you buy”
    - if a name was selected in POLHOLDER but it was someone within the hh other than NAME fill: “a plan [policyholder] buys”
    - if POLHOLDER=17 (outside hh) fill: “a plan bought by someone outside the household”
    - if POLHOLDER=DK or REF fill: “a plan that someone buys”
- else if plan is school-based fill: “your plan through school”
- else if plan is Indian Health Service fill: “the Indian Health Service”
- else if plan is Medicare fill: “Medicare”
- Else if plan is Medicaid, CHIP, other government plan, or other/unspecified plan then:
  - if GOVPLAN=1 thru 16 fill “[text of response category 1-16]”
  - else if GOVPLAN=17 or 18 fill “[open-text write-in from MISCSPEC]”
  - else if GOVPLAN=D or R fill “your/NAME’s plan”

### **State-Specific Government Assistance Health Program Name**

Several items include fills for state-specific program names for Medicaid, CHIP and other state-sponsored government programs. States vary in the number of names they use for these programs, and the names could change from year to year. Each year the Census Bureau works with researchers at the State Health Access Data Assistance Center to update the list of program names to determine what specific program names should be used as fill content. As a default there is a maximum of nine state-specific program names across the three programs (Medicaid, CHIP and other government programs). Furthermore, these programs often have overlapping names (for example, in some states the same program name is used for Medicaid and CHIP) and the Census Bureau aggregates coverage through any of these three types of programs into one category of public coverage. Throughout these specifications, therefore, no substantive distinction will be made between the three programs, and the term “Medicaid” will be used as a proxy for coverage through Medicaid, CHIP as well as other government programs. The fill names and content are:

- STMCAID1=1<sup>st</sup> state-specific name for Medicaid, CHIP or other government program
- STMCAID2=2<sup>nd</sup> state-specific name for Medicaid, CHIP or other government program
- Etc.
- STMCAID9=9<sup>th</sup> state-specific name for Medicaid, CHIP or other government program

### **State-Specific Marketplace and SHOP Program Names**

There will also be state-specific names of marketplace and SHOP programs. As with state-specific names for government programs, we have set a default of up to three state-specific names for marketplace programs, along with the portal itself. Likewise for SHOP, the instrument allows for one SHOP state portal and up to three state-specific SHOP program names. The fill names are:

- STPORTAL=state-specific portal name
- STEXCH1=1<sup>st</sup> state-specific name for marketplace coverage
- STEXCH2=2<sup>nd</sup> state-specific name for marketplace coverage
- STEXCH3=2<sup>nd</sup> state-specific name for marketplace coverage

- STSHOPPORTAL=state-specific SHOP portal name
- STSHOP1=1<sup>st</sup> state-specific name for SHOP coverage
- STSHOP2=2<sup>nd</sup> state-specific name for SHOP coverage
- STSHOP3=2<sup>nd</sup> state-specific name for SHOP coverage

## CPS ASEC QUESTIONNAIRE

### Section A: Coverage Status (Leader)

#### **HINTRO**

These next questions are about health coverage between January 1, [CY-1] and now.

- Continue → CK-MCARE1

#### **CK-MCARE1**

Is NAME either 65+ or disabled?

- Yes → MCARE1
- No → ANYCOV

#### **MCARE1**

Medicare is the health insurance for people 65 years and older, or people under 65 with disabilities. [Are you/Is NAME] NOW covered by Medicare?

- ♦ Code Medicare Parts A, B and C and Medicare Advantage as “YES”.
  1. Yes → BEFORAFT\_LC1
  2. No/DK/REF → ANYCOV

#### **ANYCOV**

[Do you/Does NAME] NOW have any type of health plan or health coverage?

1. Yes → SRCEGEN\_LC1
2. No/DK/REF → MEDI

#### **MEDI**

[Are you/Is NAME] NOW covered by Medicaid, Medical Assistance, CHIP, or [if MCARE1 not yet asked: or Medicare]?

1. Yes → GOVTYPE\_LC1
2. No/DK/REF → OTHGOVT

#### **OTHGOVT**

[Are you/Is NAME] NOW covered by a state or government assistance program that helps pay for healthcare, such as [STMCAID1-9, STPORTAL, STEXCH1-3]?

- ♦ STOP READING IF RESPONDENTS SAYS “YES.”
  1. Yes → GOVPLAN\_LC1
  2. No/DK/REF → If served in Armed Forces but not now on active duty → VET; else → VERIFY

#### **VET**

[Are you/Is NAME] NOW covered by Veteran’s Administration (VA) care?

1. Yes → BEFORAFT\_LC1
2. No/DK/REF → VERIFY

#### **VERIFY**

I have recorded that [you are/NAME is] not currently covered by any kind of health plan or health coverage. Is that correct?

1. Yes, is NOT covered → ADDOTH1\_L
2. No, is covered → SRCEGEN\_LC1
3. DK/REF → ADDOTH1\_L

## **Section B: Plan Type (Leader, Current Loop)**

### **SRCEGEN\_LC1**

#### **ASK OR VERIFY**

For the coverage YOU/NAME has/have NOW, [do you/does NAME] get it through a job, the government or state, or some other way?

◆ **JOB:** Military (TRICARE, VA, etc.), Former job/Retiree, Union, Spouse/parent's job, Job with the government, COBRA

◆ **GOVERNMENT OR STATE:** Medical Assistance, Medicaid Medicare (Parts A+B; Part C), Medicare Advantage, State-provided health coverage, Indian Health Service

◆ **OTHER:** Privately purchased, Parent or spouse, School, Exchange plan/Marketplace, Group or association, Medicare Supplements

◆ **IF R CHOOSES MORE THAN ONE:** Ok let's talk about one plan at a time. Which would you like to tell me about first?

1. Job (current or former) → MILPLAN\_LC1
2. Government or State → JOBCOV\_LC1
3. Some other way/DK/REF → SRCEDEPDIR\_LC1

### **SRCEDEPDIR\_LC1**

#### ◆ **ASK OR VERIFY**

[Do you/Does NAME] get that coverage through a parent or spouse, [do you/does he/she] buy it [yourself/himself/herself], or [do you/does he/she] get it some other way?

**PARENT/SPOUSE:** Parent, Spouse

**BUY IT DIRECTLY:** Buy it, Parent/spouse buys it, Medicare Supplement

**SOME OTHER WAY:** Former employer, Group or association, Indian Health Service, School

1. Parent or spouse → POLHOLDER\_LC1
2. Buy it → POLHOLDER\_LC1
3. Some other way/DK/REF → SRCEOTH\_LC1

### **SRCEOTH\_LC1**

#### ◆ **ASK OR VERIFY**

[Do you/Does NAME] get it through a former employer, a union, a group or association, the Indian Health Service, a school, or some other way?

1. Former employer → POLHOLDER\_LC1
2. Union → POLHOLDER\_LC1
3. Group or association → POLHOLDER\_LC1
4. Indian Health Service → BEFORAFT\_LC1
5. School → POLHOLDER\_LC1
6. Some other way/DK/REF → GOVPLAN\_LC1

### **JOBCOV\_LC1**

Is that coverage related to a JOB with the government or state?

◆ Include coverage through FORMER employers and unions, and COBRA plans.

1. Yes → MILPLAN\_LC1
2. No/DK/REF → GOVTYPE\_LC1

**Soft edit:** If "yes" and no one in the household was reported to have a job in the government sector, nor is anyone in the household a retiree, then ask soft edit: "Can I just check -- I recorded that this coverage is related to a JOB. Is that correct?"

◆ If this is correct, continue to MILPLAN\_LC1

◆ If this is not correct, go back to JOBCOV\_LC1 and correct

### **MILPLAN\_LC1**

#### ◆ ASK OR VERIFY

Is that plan related to military service in any way?

1. Yes → MILTYPE\_LC1
2. No/DK/REF → POLHOLDER\_LC1

### **GOVTYPE\_LC1**

#### ◆ ASK OR VERIFY

Is that coverage Medicaid, CHIP, Medicare, a plan through the military, or some other program?

◆ Code Medicare Parts A, B and C and Medicare Advantage as “YES”.

**IF R CHOOSES MORE THAN ONE:** Ok let’s talk about one plan at a time. Which would you like to tell me about first?

1. Medicaid or Medical Assistance → BEFORAFT\_LC1
2. CHIP → BEFORAFT\_LC1
3. Medicare → soft edit then → BEFORAFT\_LC1
4. Military → MILTYPE\_LC1
5. Other/DK/REF → GOVPLAN\_LC1

**Soft edit:** if Medicare is selected and NAME is under 65 and not disabled ask: “There are two programs that sound a lot alike. MediCARE is for people 65 years and older, or people under 65 with disabilities. MediCAID is a government-assistance plan for those with low-incomes or a disability. Just to be sure, which program are you/is NAME covered by?”

◆ If Medicare is correct, suppress and continue.

◆ If Medicare is not correct, go back to GOVTYPE\_LC1 and correct.

### **MILTYPE\_LC1**

#### ◆ ASK OR VERIFY

Is the plan through TRICARE, TRICARE for Life, CHAMPVA, VA care, military health care, or something else?

1. TRICARE
2. TRICARE for Life
3. CHAMPVA
4. Veterans Administration (VA) care
5. Military health care
6. Other/DK/REF

[all] → POLHOLDER\_LC1

### **POLHOLDER\_LC1**

#### ◆ ASK OR VERIFY

Whose name is the policy in? (Who is the policyholder)?

1. *household member 1*
2. *household member 2*
- .....
16. *household member 16*
17. Someone living outside the household
18. DK/REF

[all] → CK-SRCEPTSP\_LC1

### **CK-SRCEPTSP\_LC1**

- If SRCEPDIR\_LC1 = “parent or spouse” then → SRCEPTSP\_LC1
- Else if SRCEPDIR\_LC1=2 = “buy it” then → PORTAL\_LC1
- Else → CK-HIPAIID\_LC1

### **SRCEPTSP\_LC1**

#### **◆ ASK OR VERIFY**

Do they get that coverage through their job, do they buy it themselves, or do they get it some other way?

1. Job (current or former) → HIPAID\_LC1
2. Buy it → PORTAL\_LC1
3. Some other way/DK/REF → GOVPLAN\_LC1

### **GOVPLAN\_LC1**

#### **◆ ASK OR VERIFY**

What do you call the program?

**IF R ANSWERS WITH INSURANCE COMPANY NAME:** OK, so that would be the plan name. What do you call the program? Some examples of programs in [STATE] are [STMCAID1-9,STEXCH1-3 and other plans thru STPORTAL].

1. Medicaid
2. Medical Assistance
3. Indian Health Service
4. STMCAID1
5. STMCAID2
- .....
12. STMCAID9
13. Plan through [STPORTAL]
14. STEXCH1
15. STEXCH2
16. STEXCH3
17. Other government plan
18. Other (please specify)/DK/REF
19. DK/REF

Skip Instructions

- if 3 (IHS) → BEFORAFT\_LC1
- else if 17, 18 (non-specific other government plan or other/specify) then → MISCSPEC\_LC1
- else if 13-16 (marketplace plan) then → POLHOLDER2\_LC1
- all others (Medicaid, CHIP, state-specific government plan, DK, REF) → PORTAL\_LC1

### **MISCSPEC\_LC1**

[open text; 65 characters] → PORTAL\_LC1

### **PORTAL\_LC1**

#### **◆ ASK OR VERIFY**

Is that coverage through [STPORTAL], [such as STEXCH1-3]?

1. Yes → EXCHTYPE\_LC1
2. No/DK/REF → PREMYN\_LC1

### **EXCHTYPE\_LC1**

#### **◆ ASK OR VERIFY**

What do you call it – [STPORTAL, STEXCH1-3]?

1. STPORTAL
2. STEXCH1
3. STEXCH2
4. STEXCH3
5. DK/REF

[all] → CK-POLHOLDER2\_LC1



### CK-HIPAIID\_LC1

Is coverage related to employment?

- Yes → HIPAIID\_LC1
- No → BEFOREAFT\_LC1

### HIPAIID\_LC1

Does (name's/policyholder name's) employer or union pay for all, part, or none of the health insurance premium?

◆ Report here employer's contribution to employee's health insurance premiums, not the employee's medical bills.

1. All
2. Part
3. None, DK/REF

[all] if MILTYPE=empty and policyholder works for small business → SHOP\_LC1; else → BEFOREAFT\_LC1

### SHOP\_LC1

Small businesses can offer health coverage to their employees through [STSHOPPORTAL]. Is the coverage at all related to [STSHOPPORTAL], [which may also be known as STSHOP1-3]?

1. Yes
2. No, DK/REF

[all] → BEFOREAFT\_LC1

### CK-POLHOLDER2\_LC1

Was POLHOLDER\_LC1 already asked?

- Yes → PREMYN\_LC1
- No → POLHOLDER2\_LC1

### POLHOLDER2\_LC1

◆ ASK OR VERIFY

Whose name is the policy in? [NOTE: Spanish version: Whose name is the health insurance policy in?]

1. *household member 1*  
.....  
16. *household member 16*
17. Someone living outside the household
18. DK/REF

[all] → PREMYN\_LC1

### PREMYN\_LC1

Is there a monthly premium for this plan?

◆ **READ IF NECESSARY:** A monthly premium is a fixed amount of money people pay each month to have health coverage. It does not include copays or other expenses such as prescription costs.

1. Yes → PREMSUBS\_LC1
2. No/DK/REF → BEFOREAFT\_LC1

### PREMSUBS\_LC1

Is the cost of the premium subsidized based on [if single-person hh and NAME is policyholder fill: your/else fill: family] income?

◆ **READ IF NECESSARY:** A monthly premium is a fixed amount of money people pay each month to have health coverage. It does not include copays or other expenses such as prescription costs.

◆ **READ IF NECESSARY:** Subsidized health coverage is insurance with a reduced premium. Low and middle income families are eligible to receive tax credits that allow them to pay lower premiums for insurance bought through healthcare exchanges or marketplaces.

1. Yes
2. No/DK/REF

[all] → BEFOREAFT\_LC1

## **Section C: Months of Coverage (Leader, Current Loop)**

### **BEFORAFT\_LC1**

Did [your/NAME's] coverage from [PLANTYPE] start before January 1, [CY-1]?

◆ **READ IF NECESSARY:** Your best estimate is fine.

If PLANTYPE is job-related fill:

◆ **READ IF NECESSARY:** If [POLICYHOLDER NAME] switched employers or plans through their employer, consider it the same plan.

If PLANTYPE is directly-purchased fill:

◆ **READ IF NECESSARY:** If [POLICYHOLDER NAME] switched plans that he/she buys, consider it the same plan.

1. Before January 1, [CY-1] → CNTCOV\_LC1
2. On or after January 1, [CY-1] → MNTHBEG1\_LC1
3. DK/REF → ANYTHIS\_LC1

### **MNTHBEG1\_LC1**

In what month did that coverage start?

◆ **READ IF NECESSARY:** Your best estimate is fine.

If PLANTYPE is job-related fill:

◆ **READ IF NECESSARY:** If [POLICYHOLDER NAME] switched employers or plans through their employer, consider it the same plan.

If PLANTYPE is directly-purchased fill:

◆ **READ IF NECESSARY:** If [POLICYHOLDER NAME] switched plans that he/she buys, consider it the same plan.

◆ This question refers to [PLANTYPE].

1. January
2. February
- .....
12. December
13. DK/REF

If MNTHBEG1\_LC1=current month or earlier → YEARBEG1\_LC1

If MNTHBEG1\_LC1= later than current month → CNTCOV\_LC1

If MNTHBEG1\_LC1= (D/R) → ANYTHIS\_LC1

### **YEARBEG1\_LC1**

◆ **ASK OR VERIFY**

And what year was that?

If PLANTYPE is job-related fill:

◆ **READ IF NECESSARY:** If [POLICYHOLDER NAME] switched employers or plans through their employer, consider it the same plan.

If PLANTYPE is directly-purchased fill:

◆ **READ IF NECESSARY:** If [POLICYHOLDER NAME] switched plans that he/she buys, consider it the same plan.

◆ This question refers to [PLANTYPE].

1. CY-1 → CNTCOV\_LC1
2. CY → CNTCOV\_LC1
3. DK/REF → ANYTHIS\_LC1

### CNTCOV\_LC1

And has it been continuous since [January, CY-1/month and year from MNTH/YRBEG1]?

If PLANTYPE is job-related fill:

◆ **READ IF NECESSARY:** If [POLICYHOLDER NAME] switched employers or plans through their employer, consider it the same plan.

If PLANTYPE is directly-purchased fill:

◆ **READ IF NECESSARY:** If [POLICYHOLDER NAME] switched plans that he/she buys, consider it the same plan.

◆ **READ IF NECESSARY:** If the gap in coverage was less than three weeks, consider the coverage “continuous.”

◆ This question refers to [PLANTYPE].

1. Yes → CK-OTHEMEMB\_LC1
2. No/DK → MNTHBEG2\_LC1
3. REF → ANYTHIS\_LC1

### MNTHBEG2\_LC1

In what month did this most recent period of coverage start?

◆ **READ IF NECESSARY:** Your best estimate is fine.

If PLANTYPE is job-related fill:

◆ **READ IF NECESSARY:** If [POLICYHOLDER NAME] switched employers or plans through their employer, consider it the same plan.

If PLANTYPE is directly-purchased fill:

◆ **READ IF NECESSARY:** If [POLICYHOLDER NAME] switched plans that he/she buys, consider it the same plan.

◆ This question refers to [PLANTYPE].

1. January
2. February
- .....
12. December
13. DK/REF

If MNTHBEG2\_LC1=current month or earlier → YEARBEG2\_LC1

If MNTHBEG2\_LC1= later than current month → SPELLADD\_LC1

Else If MNTHBEG2\_LC1= (D/R) → if covered all months of CY => ANYLAST\_LC1; else → ANYTHIS\_LC1

### YEARBEG2\_LC1

◆ ASK OR VERIFY

And what year was that?

If PLANTYPE is job-related fill:

◆ **READ IF NECESSARY:** If [POLICYHOLDER NAME] switched employers or plans through their employer, consider it the same plan.

If PLANTYPE is directly-purchased fill:

◆ **READ IF NECESSARY:** If [POLICYHOLDER NAME] switched plans that he/she buys, consider it the same plan.

◆ This question refers to [PLANTYPE].

1. [CY-1] → SPELLADD\_LC1
2. [CY] → SPELLADD\_LC1
3. DK/REF → if covered all months of CY → ANYLAST\_LC1; else → ANYTHIS\_LC1

### SPELLADD\_LC1

I recorded that [you were/NAME was] covered by [PLANTYPE] in [read months covered]. Were there any OTHER months between January [CY-1] and now that [you were/NAME was] also covered by [PLANTYPE]?

1. Yes → if covered all months of CY → ANYLAST\_LC1; else → ANYTHIS\_LC1
2. No/DK/REF → CK-OTHEMEMB\_LC1

**ANYTHIS\_LC1**

Which months [were you/was NAME] covered by [PLANTYPE] THIS year – in [CY]?

◆ Choose all months that apply

- 1. January
- 2. February

.....

- 12. December
- 13. DK/REF

[all] → ANYLAST\_LC1

**ANYLAST\_LC1**

Which months [were you/was NAME] covered by [PLANTYPE] LAST year – in [CY-1]?

◆ Choose all months that apply

- 1. January
- 2. February

.....

- 12. December
- 13. DK/REF

[all] → CK-OTHEMEMB\_LC1

**CK-OTHEMEMB\_LC1**

Does this household have 2 or more members?

- Yes → OTHMEMB\_LC1
- No → CK-OTHOOUT\_LC1

**Section D: Other Household Members Covered by Leader’s Plan, and Months Covered (Current Loop)**

**OTHEMEMB\_LC1**

Between January 1, [CY-1] and now, was anyone in the household other than [you/NAME] ALSO covered by [PLANTYPE]?

- 1. Yes → COVWHO\_LC1
- 2. No/DK/REF → CK-OTHOOUT\_LC1

**Hard edit:** If NAME is a dependent on a job or direct-purchase plan and OTHMEMB\_LC1 ne “yes” (that is, the respondent fails to report that the policyholder is also on the plan) store a “Yes”

**COVWHO\_LC1**

Who? (Who else in this household is or was covered by [PLANTYPE])?

◆ **PROBE:** Anyone else?

◆ Choose all persons covered

- 0. No one
- 1. *household member 1*
- 2. *household member 2*

.....

- 16. *household member 16*
- 96. all household members
- 97. DK/REF

- Any household member → CK-SAMEMNTHS\_LC1
- DK/REF => CK-OTHOOUT\_LC1

**Hard edit:** If NAME is a dependent on a job or direct-purchase plan and the policyholder is not selected, store policyholder’s name in COVWHO\_LC1

**CK-SAMEMNTHS\_LC1**

- If leader was covered all months → SAMEMNTHS\_LC1
- If leader was NOT covered all months → MNTHS\_LC1

### **SAMEMNTHS\_LC1**

[If 2+ names selected in COVWHO fill: Were NAMEs all/else if only one name selected fill: Was NAME] also covered from January 1, CY-1 until now?

◆ This question refers to [PLANTYPE].

- (Yes) [if 2+ names selected in COVWHO fill: All] also covered from January, CY-1 until now → CK-OTHOUT\_LC1
- (No) [if 2+ names selected in COVWHO fill: At least one person] not covered from January, CY-1 until now/DK/REF → MNTHS\_LC1

### **MNTHS\_LC1**

[First person] Which months between January [CY-1] and now was [NAME from COVWHO\_LC1] covered?

[Second+ person] How about NAME? (Which months between January [CY-1] and now was [NAME] covered?)

◆ Choose all months that apply

◆ This question refers to [PLANTYPE].

1. January CY-1
2. February CY-1
- .....
12. December CY-1
13. January CY
14. February CY
15. March CY
16. April CY
17. DK/REF
20. All months
21. No months

[all] → Loop through all persons reported in COVWHO\_LC1; then =>CK-OTHOUT\_LC1

### **CK-OTHOUT\_LC1**

- If PLANTYPE is job-related or directly-purchased or school-based → OTHOUT\_LC1
- Else → CK-ADDGAP1\_L

### **OTHOUT\_LC1**

Does that plan cover anyone living outside this household?

1. Yes → OTHWHO\_LC1
2. No/DK/REF → CK-ADDGAP1\_L

### **OTHWHO\_LC1**

How old are they – under 19, 19-25 or older than 25? [MARK ALL THAT APPLY]?

1. Under 19
2. 19-25 years old
3. Older than 25
4. DK/REF

[all] → CK-ADDGAP1\_L

## **Additional Plans for Leader**

### **CK-ADDGAP1\_L**

Are there any gaps in coverage for NAME?

- Yes (gaps in coverage) → ADDGAP1\_L
- No (no gaps in coverage) → ADDOTH1\_L

### **ADDGAP1\_L**

So far, I have recorded that [you were/NAME was] NOT covered in [months not covered]. [Were you/Was NAME] covered by any type of health plan or health coverage in [that/those] month(s)?

1. Yes → SRCEGEN\_LP1
2. No/DK/REF → ADDOTH1\_L

## **Past Loop**

The Past Loop is designed to capture plan type, months of coverage, other household members covered by the same plan, and the months they were covered. As such, the Past Loop consists of all items in Sections B through D above, but with the following exceptions. First, all items in the Past Loop are worded in the past tense. Second, for Section C of the past loop, there is only a single item asking about months of coverage. This is because for current coverage the questionnaire anchors the respondent in their day-of coverage and then establishes the start month of the spell. For coverage that is not held on the day of the interview it is not possible to employ this same technique so we simply ask what months throughout the 16-month reference period the coverage was held, as follows:

### **WMNTHS\_LP1**

Which months between January [CY-1] and now [were you/was NAME] covered by [PLANTYPE]?

♦ Choose all months that apply

1. January CY-1
2. February CY-1
- .....
12. December CY-1
13. January CY
14. February CY
15. March CY
16. April CY
17. DK/REF
20. All months
21. No months

[all] → CK-OTHEMEMB\_LP1

Once months of coverage are established for the leader, the respondent skips to Section D to determine whether other household members were also covered by the same plan.

### ***SRCEGEN\_LP1 thru OTHWHO\_LP1***

- *Copy all items in Sections B through D in the Current Loop (with the exception above for Section C) and replace “\_LC1” with “\_LP1.”*
- *All answer choices at end of Section D => ADDOTH1\_L*

### **ADDOTH1\_L**

[Other than [PLANTYPEs],] [W/were you/W/was NAME] covered by any [other] health plan or health coverage AT ANY TIME between January CY-1 and now?

♦ **READ IF NECESSARY:** Do not include plans that cover only one type of care, such as dental or vision plans.

1. Yes → SRCEGEN\_LP2
2. No/DK/REF → ADDOTH2\_L

***SRCEGEN\_LP2 thru OTHWHO\_LP2***

- *Copy all items in Past Loop and replace “\_LP1” with “\_LP2.”*
- *All answer choices at end of Section D => ADDOTH2\_L*

**ADDOTH2\_L**

[Other than [PLANTYPEs],] [W/were you/W/was NAME] covered by any [other] health plan or health coverage AT ANY TIME between January CY-1 and now?

- ◆ **READ IF NECESSARY:** Do not include plans that cover only one type of care, such as dental or vision plans.
- 1. Yes → SRCEGEN\_LP3
- 2. No/DK/REF → CK-NEXTMEMB

***SRCEGEN\_LP3 thru OTHWHO\_LP3***

- *copy all items in Past Loop and replace “\_LP1” with “\_LP3.”*
- *All answer choices at end of Section D => CK-NEXTMEMB*

**CK-NEXTMEMB**

Have all household members been asked about explicitly?

- Yes → CK-OFFER
- No → FINTRO

**Additional Plans for Follower**

**FHINTRO**

**Next I'm going to ask you about NAME's health coverage.**

- ◆ Press 1 to Continue

**CK-ADDGAP1\_F**

Are there any gaps in coverage for NAME?

- Yes (gaps in coverage) → ADDGAP1\_F
- No (no gaps in coverage) → ADDOTH1\_F

**ADDGAP1\_F**

So far, I have recorded that [you were/NAME was] NOT covered in [months not covered]. [Were you/Was NAME] covered by any type of health plan or health coverage in [that/those] month(s)?

1. Yes → SRCEGEN\_FP1
2. No/DK/REF → ADDOTH1\_F

***SRCEGEN\_FP1 thru OTHWHO\_FP1***

- *copy all items in Past Loop and replace “\_LP1” with “\_FP1.”*
- *All answer choices at end of Section D => ADDOTH1\_F*

**ADDOTH1\_F**

[Other than [PLANTYPEs],] [W/were you/W/was NAME] covered by any [other] health plan or health coverage AT ANY TIME between January CY-1 and now?

- ◆ **READ IF NECESSARY:** Do not include plans that cover only one type of care, such as dental or vision plans.
- 1. Yes → SRCEGEN\_FP2
- 2. No/DK/REF → CK-OFFER

***SRCEGEN\_FP2 thru OTHWHO\_FP2***

- *copy all items in Past Loop and replace “\_LP1” with “\_FP2.”*
- *All answer choices at end of Section D => ADDOTH2\_F*

## **ADDOTH2\_F**

[Other than [PLANTYPES],] [W/were you/W/was NAME] covered by any [other] health plan or health coverage AT ANY TIME between January CY-1 and now?

- ◆ **READ IF NECESSARY:** Do not include plans that cover only one type of care, such as dental or vision plans.
- 1. Yes → SRCEGEN\_FP3
- 2. No/DK/REF → CK-OFFER

## **SRCEGEN\_FP3 thru OTHWHO\_FP3**

- copy all items in Past Loop and replace “\_LPI” with “\_FP3.”
- All answer choices at end of Section D => CK-OFFER

## **Section E: Employer-Sponsored Insurance (ESI) Take-Up**

### **CK-OFFER**

Is NAME working at a paid non-self-employment job AND not a policyholder on an ESI plan and NAME not selected in POLHOLDER\* for interview month)?

- Yes → OFFER
- No → CK-END

### **OFFER**

[First time read fill: Now I'd like to ask some questions about health coverage offered through jobs. [If multi-person household fill: First I'd like to ask you about [yourself/NAME] [Second time read fill: Now I'd like to ask you about NAME.] Earlier I recorded that [you/NAME] [is/are] employed but [do/does] not have health coverage through [your/NAME's] employer. Does [EMPNAME of NAME] offer health insurance to any of its employees?

- Yes → COULD
- No/DK/REF/ NAME actually is covered by EMPNAME → CK- END

### **COULD**

Could [YOU/NAME] be in this plan if [YOU/HE/SHE] wanted to?

- Yes → WNTAKE
- No → WNELIG
- DK/REF → CK- END

### **WNTAKE**

Why [AREN'T/ISN'T] [YOU/HE/SHE] in this plan?

(choose all that apply, or DK or R)

- Covered by another plan
- Traded health insurance for higher pay
- Too expensive
- Don't need health insurance
- Have a pre-existing condition
- Haven't yet worked for this employer long enough to be covered
- Contract or temporary employees not allowed in plan
- Other/specify
- DK/REF

[all] → CK-END



**WNEIG**

Why not? (Why can't you/Name be in this plan if you/he/she wanted to?)

(choose all that apply, or DK or R)

- Don't work enough hours per week or weeks per year
- Contract or temporary employees not allowed in plan
- Haven't worked for this employer long enough to be covered
- Have a pre-existing condition
- Too expensive
- Other/specify
- DK/REF

[all] → CK-END

**CK-END**

Is there another person on the household roster?

- Yes → CK-OFFER (moving to next person record)
- No → End health insurance module