Misreporting Health Insurance Status: Medicaid Enrollees in the Medical Expenditure Panel Survey, 2003¹

Victoria Lynch and Dean Resnick U.S. Census Bureau, 4600 Silver Hill Road, Suitland, MD 20233

Key Words

Medicaid undercount, health insurance, misreport, measurement error, MEPS-HC.

Abstract

One of the most well-documented problems with using survey data to study the dynamics of health insurance in the United States is the undercount: the difference between estimates of Medicaid enrollment derived from surveys and counts from state administrative records. Research points to measurement error in the reporting of Medicaid enrollment as the main explanation for this undercount. In order to improve survey data on insurance, it is important to learn why respondents misreport and why rates of misreporting vary across surveys. In this study, we evaluate the extent and causes of false-negative reporting about Medicaid in the Medical Expenditure Panel Survey – Household Component (MEPS-HC).² We attempt to replicate methods from previous studies of different surveys so that the findings are more comparable and therefore more helpful in discussions about how specific survey features may affect the propensity to false-negatively report Medicaid. Results show that MEPS-HC respondents correctly classify an estimated 82.5% of the people known to have Medicaid during 2003 and incorrectly classify 9.2% as having some other type of coverage and 8.3% as having no insurance. This corroborates the findings that respondents have trouble accurately reporting Medicaid enrollment but most are classified as having some form of coverage (Call et al., 2009; U.S. Census Bureau, 2008). Results also corroborate findings that there is consistency across surveys in terms of the enrollee characteristics predictive of misreport. We conclude that poverty level and timing (of service, enrollment and reporting periods) are robust predictors of misreport. Closer analysis of predictive factors and how their interaction with misreporting varies across surveys may yield clues about how specific survey features may account for differences in reporting accuracy across surveys.

Background

Federal surveys produce different estimates of health insurance coverage in the United States (see Figure 1³) and this observation has been cited as a major criticism of the quality of the survey data available to inform policymaking (Blewett and Davern, 2006; Joint Economic Committee, 2004; Kenney, Holahan, and Nichols, 2006; O'Grady, 2006).

¹ This report is released to inform interested parties of ongoing research and to encourage discussion. Any views expressed are those of the authors and not necessarily those of the U.S. Census Bureau or any other institution.

² http://www.MEPS-HC.ahrq.gov

³ Figure from Office of Assistant Secretary for Planning and Evaluation, Health and Human Services (2005).



Source: Office of the Assistant Secretary for Planning and Evaluation, Health and Human Services (2005). "Understanding Estimates of the Uninsured: Putting the Differences in Context." http://aspe.hhs.gov/health/reports/05/uninsured-understanding-ib/#estimates

Survey data are important to policymaking because they are a practical and timely source of information to estimate both the rates of uninsurance and the effects of different policy options for expanding coverage and access to healthcare. For example, surveys collect the detailed income and other household information used to determine eligibility for different types of insurance, and critically, collect this information for people who have no insurance as well as for those who do have insurance. That is, administrative records provide information only on the population in the system, while surveys are often the only source of information on people not in the system, making surveys the only method to compare the two groups.

In considering the quality of estimates about health insurance, it is important to recognize that estimates differ for reasons other than problems with data quality. Federal surveys were developed for a variety of purposes other than measuring health insurance and several of the differences in their design mean they measure different concepts of coverage (Office of the Assistant Secretary for Planning and Evaluation, Health and Human Services, 2005; Call et al., 2007; O'Grady, 2006). In addition to straightforward differences such as methods of imputing/allocating responses and categorizing responses,⁴ there are more elusive differences related to definitions of coverage relative to timing of the interview. Table 1 shows examples of survey features that differ with respect to health insurance and may affect the accuracy of respondent reports, the fundamental component for producing accurate survey data. One example found to relate to reporting accuracy is reference period. Table 1 shows that the National Health Interview Survey (NHIS) measures coverage by asking respondents about coverage at the time of the interview while the Current Population Survey Annual Social and

⁴ For example, the final Medicaid/SCHIP variable in the Current Population Survey Annual Social and Economic Supplement (CPS ASEC) includes reports of other public coverage (besides Medicare and military-related coverage) while the MEPS-HC does not.

Economic Supplement (CPS ASEC) asks about coverage during the calendar year that ended three months prior to the interview. There is evidence suggesting that CPS ASEC reporting about insurance for Medicaid enrollees would be on par with NHIS if CPS ASEC respondents did not have to recall status from the previous calendar year (Lynch, 2008). However the CPS ASEC is an employment survey and requires insurance data for the same calendar year time frame covered by its data about income and other employment variables (Hoffman and Holahan, 2005).

Table 1. Examples of Survey Features that may Affect Reporting about Health Insurance						
Feature	CPS ASEC	NHIS	MEPS-HC			
Reference Period	The previous calendar	Interview date	Interview date (except round			
	year (which typically		5) and round (typically the			
	ended three months		last two to seven months)			
	before interview)					
Respondent	Household informant	Adults encouraged to	Family informant			
		self-report/most				
		knowledgeable person				
Questions about	No	Yes	Yes			
Health Care						
Status as Uninsured	Inferred	"No coverage" option	Inferred			
		on flashcard				
Respondent asked to	Yes	Yes	No, but interviewer notes that			
Confirm Status of			"uninsured" recorded and			
"Uninsured"			asks about duration			
Respondent asked for	No	Medicare and private (if	All insurance cards, contact			
Insurance		reported with private but	information for insurance and			
Documentation		not listed in one of the	medical providers.			
		family's plans)	-			
Question level	Family	Person	Family			

Research into survey data on health insurance tends to focus on measurement error in reporting about Medicaid enrollment. One of the reasons for this focus has been the assumption that estimates of uninsurance are inflated because surveys misclassify Medicaid enrollees as having no insurance (Hoffman and Holahan, 2005). Recent findings from a study involving several surveys counter this assumption by showing that the rate of misclassification of Medicaid enrollees as uninsured is too low to inflate the point-in-time estimates of uninsurance substantially (Call et al., 2009). This is an important finding that should give policymakers more confidence in the capacity of those surveys to correctly exclude Medicaid enrollees from their estimates of the uninsured. However, we do not know how generalizable the Call et al., (2009) findings are to other surveys.⁵ The rate of misreporting Medicaid enrollees as uninsured appears low in some surveys, but evidence from record check studies indicate that Medicaid enrollees report insurance status other than Medicaid enrollment (Blumberg and Cynamon 1999; Card, Hildreth, and Shore-Sheppard, 2001; Davern et al., 2008; Eberly, Pohl, and Davis, 2005; Klerman, Ringel, and Roth, 2005; U.S. Census Bureau, 2008). This is problematic because false-negative reporting is not random, with errors being predictable from both survey and administrative variables (Davern et al., 2009, U.S. Census Bureau, 2008).

⁵ The study authors note that the findings do not hold for the CPS ASEC, which is not a point-in-time survey like the others they studied.

Formulas for allocating funds to states may yield biased results if the data used in modeling are a non-representative subset of the people in the survey who were in Medicaid (Goidel et al., 2007). Similarly, research into the effects of current and potential public policies may be misleading if survey records show an insurance status other than the person's true status. For example, Davern et al., (2009) note that it is unclear how to adjust simulation models without knowing more about the joint distribution of response errors. In this study we extend the focus on measurement error in reporting Medicaid enrollment to include the MEPS-HC.

Objectives

Our first objective is to determine what insurance status MEPS-HC respondents report for individuals known to have Medicaid during the various reference periods. It is important to report this information about MEPS-HC because there is evidence that the scope of Medicaid misreporting varies by survey and Hill (2008) points out that there are issues with generalizing from the results of validation studies of other surveys.

Our second objective is to identify what factors are associated with reporting accuracy for periods of Medicaid enrollment in MEPS-HC 2003. There are numerous studies showing that enrollee characteristics can be used to predict reporting accuracy, but Call and others (2009) point out that information about the level of consistency among the predictive factors is just beginning to emerge. Being able to identify factors by whether they consistently or inconsistently relate to reporting accuracy across studies and surveys would give survey methodologists more clues about how specific survey features affect reporting accuracy. This could ultimately help to identify the features of surveys that can be most effectively modified to mitigate misreports about insurance status, within the context of the survey's broader purpose and cost constraints.

Data for Analysis

This study uses a file of MEPS-HC records linked⁶ on an individual level to administrative records from the Medicaid Statistical Information System (MSIS) and Medicaid Analytic Extract (MAX) databases. The Centers for Medicare and Medicaid Services (CMS) develops MSIS and MAX from records states use to administer their Medicaid and SCHIP programs. The MEPS-HC records in this study are from the 2003 Household Component (MEPS-HC), which is designed to provide comprehensive information about health care use, spending, insurance coverage, and sources of payment. It is a longitudinal survey covering the civilian non-institutionalized population of the United States. In 2003, it included 32,681 individual sample members. MEPS-HC collects data according to an overlapping panel design (see Figure 2) involving a preliminary contact with a household followed by a series of five rounds of interviews over a two-and-a-half year period.

⁶ All data manipulation and analysis was done in accordance with the Census Bureau's standards for maintaining data security and protecting individual privacy.

Figure 2. Overlapping Panel Design: Data Reference Periods in MEPS-HC 2003												
	2002			2003			2004					
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Panel 7												
Round 1												
Round 2												
Round 3												
Round 4												
Round 5												
Panel 8												
Round 1												
Round 2												
Round 3												
Round 4												
Round 5												

In addition to the features that may affect reporting accuracy listed in Table 1, there are a number of MEPS-HC-specific issues to consider when evaluating results from this study:

- MEPS-HC 2003 is a subsample of NHIS households interviewed in 2001 or 2002 about insurance and other health matters.
- Interviewers conduct a pre-interview in which they provide the family with a calendar for recording medical events to discuss during interviews.
- Interviewers ask the family respondent to get the insurance cards at the beginning of the interview.
- There is a series of questions and skips to determine if anyone in the family is covered by a particular type of insurance, and if yes, who has the coverage.
- Reports about Medicaid and SCHIP are collected in one question (see Figure 3) so we count as correct a report of SCHIP for a Medicaid enrollee.⁷

Figure 3. Snapshot of Interviewer Script for Medicaid/SCHIP, MEPS-HC 2003

{Some people are covered by programs called {**Medicaid**/{**STATE NAME FOR MEDICAID**}/or {**STATE CHIP NAME**}}. These are state programs for low-income families and individuals or children who do not have private health insurance. They sometimes cover persons with very large medical bills or those in nursing homes.}

{SHOW CARD HX-3.}

- After round 1, interviewers determine status by asking if the insurance status reported for the date of the previous interview is still in effect.
- Interviewers collect status about each month of the round (asking explicitly about each month if the respondent reports that the status ever differed from the status on the interview date).

⁷ As described below, this contrasts with similar studies we conducted with CPS ASEC and NHIS, where reports of SCHIP for known Medicaid enrollees were defined as incorrect. However, it is in keeping with the official CPS ASEC estimate of Medicaid, which does include SCHIP reports, as well as some reports of other public coverage (Peterson and Grady, 2005).

- A respondent must report at least one month of Medicaid/SCHIP coverage for an enrollee to be correctly counted in the MEPS-HC estimate.⁸
- Interviewers ask about characteristics of the plan (e.g., managed care) in the first interview, and subsequently if the respondent reports a change.
- If no insurance is reported, the interviewer asks about reasons and duration.
- The CAPI instrument provides an event driver for the interviewer to verify, modify and add new information throughout and after sections of the interviews. Interviewers tell respondents they can refer to summary of health care generated from previous interviews.
- At the end of each round, interviewers ask for authorization to get information from medical providers, insurance providers, and employers.

Record Check Analysis

We identify respondent accuracy about Medicaid enrollment by checking what respondents reported about Medicaid/SCHIP for periods when MSIS showed the person was enrolled for comprehensive Medicaid coverage.⁹ We then evaluate reporting on a weighted basis to account for sampling differences. Our unit of analysis depends on the reporting period of interest: for analyzing the MEPS-HC estimate of coverage, it is *ever in the year*; for the most stringent analysis of reporting accuracy, it is *month with coverage in 2003*; and for evaluating reporting accuracy as if MEPS-HC were a cross-sectional survey (i.e., first exposure to questions/no reminders of previous reporting), it is the *first round*.

Multivariate Analysis

We use logistic regressions to identify enrollee characteristics predictive of false-negative reporting about monthly Medicaid enrollment in MEPS-HC. Although MEPS-HC derives its insurance estimates from all reports about the calendar year, our unit of analysis is the personmonth because it allows us to analyze time-related factors and use a more straightforward definition of false-negative report. For example, to study error about reporting for the year it would be unclear which of the multiple interview dates to use to specify the variable for timing of service. It is also unclear how to define false-negative reporting since a respondent could misreport some or all months in a round/year and still have the enrollment correctly counted as being in 2003. We note in the Limitations section that the short time frame of a month poses some issues with the timing of processing new and outdated enrollment records, especially for one-time services such as emergency room visits.

We use the SAS survey logistic procedure¹⁰ and sampling weights to account for stratification and clustering in the complex sample design. Standard errors are corrected for clustering at the individual level to account for the person-month unit of analysis (i.e., individuals may have multiple months of data).

Researchers have found a range of error rates in reported insurance status across surveys and methods used to evaluate them (Hill, 2008; Lynch, 2008), and it is not clear how much of the range owes to the surveys themselves or to the methods used to study them. For example, many studies include enrollees with limited benefits (e.g., just family planning) but in this study we

⁸ The official MEPS-HC estimate for health insurance measures an "ever in the year" concept of coverage.

⁹ This excludes MSIS records for months with partial benefits such as coverage limited to family planning.

¹⁰ <u>http://support.sas.com/onlinedoc/913/docMainpage.jsp</u>

only analyze full-benefit enrollees. Similarly, many studies subset to the non-elderly but we include the elderly. In our first analysis we aim to minimize such differences by replicating methods from a previous study and then analyzing the consistency of the results. We also include the set of independent variables for logistic analysis (Figure 4) and run the regression on data from enrollees in the same universe.

Figure 4. Independent Variables: Same Specification, Different Surveys (MEPS-HC 2003, CPS ASEC 2000, NHIS 2001)

Age, race, sex, poverty level, Medicaid supplements Medicare, TANF, SSI, private coverage, relationship to survey reference person, number of days covered, service in previous year, recency of service, and state.

Differences that remain are survey features of special interest to people studying the Medicaid undercount: coverage specification, survey reference period, and universe requirements. For example, Figure 5 shows that MEPS-HC respondents provide data about Medicaid enrollment in each month of the round while NHIS respondents provide data about enrollment at the time of the interview. Figure 5 also reflects the fact that MEPS-HC asks about Medicaid and SCHIP in the same question while CPS ASEC and NHIS ask about them separately. As a result, one limitation of this analysis is that we count reports of SCHIP for Medicaid enrollees as correct for MEPS-HC but counted such reports as incorrect in the previous studies with CPS ASEC and NHIS. Since research shows that people confuse SCHIP with Medicaid this may be an important limitation to bear in mind when reviewing our results (Loomis, 2000).

Figure 5. The Model Pr (false-negative report) = f (independent variables)					
	Type of Report	Reference Period			
Survey	Analyzed	Analyzed	Requirement for Inclusion		
MEPS-	Madiavid or SCUID	Interview month and	Full benefit enrollee in specified		
HC Medicald of SCHIP		months in round	month		
NULIC	Medicaid	Time of interview	Full benefit enrollee in month of		
INTIS		Time of interview	interview		
CPS	Madiasid	Duraniana aslandan man	Full benefit enrollee in month of		
ASEC		Frevious calendar year	interview		

In our second logistic analysis we include variables that were not studied in the similar CPS ASEC and NHIS studies, but were found to be predictive about misreporting in other studies. Judging from the literature's recent emphasis on the cross-study consistency of factors associated with misreporting Medicaid (Call et al., 2009, Eberly, Pohl, and Davis, 2005), we believe that researchers glean useful hypotheses despite methodological differences between the studies. However, we urge caution in comparing these results with MEPS-HC to studies outside the Medicaid Undercount Project because differences include the universes studied, other variables in the models, and linking methods, among others.

Results

Figure 7 shows that MEPS-HC respondents correctly classify most of the Medicaid population (i.e., the weighted sample of MEPS-HC cases found with full coverage in MSIS during the reference period). This finding holds regardless of the enrollment period their reports cover. Respondents correctly classify an estimated 82.5% of people ever enrolled in 2003. They

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correctly classify an estimated 81.8% of months with enrollment in 2003. They also correctly classify 81.5% of the people¹¹ enrolled in the first round (i.e., before respondents are reminded what was reported in a previous interview).



Figure 8 shows that MEPS-HC respondents misclassify 8.3 percent of the Medicaid population as having had no coverage. Respondents misclassify 9.2% of the Medicaid population as having some other type of coverage. This suggests that about half of the total misreporting of Medicaid enrollment is false negative reporting of coverage, and the other half is attributable to errors in the type of coverage.



¹¹ We use weights to help account for sampling differences, but this is a hypothetical population because the subset of sample enrollees who were interviewed in the first round are not meant to represent the universe of enrollees in 2003 (and since the survey is not given to everyone, *interview round* has no meaning on a population level).

Table 2 and Table 3 show that the direction of relationships with reporting accuracy is fairly consistent across surveys analyzed with similar methods. The tables list the name and direction of relationship for variables found to have a statistically significant relationship with false-negative reporting in at least one of the surveys. The probability of false-negative reporting was modeled using the same set of independent variables in MEPS-HC, NHIS and the subset of CPS ASEC enrollees who were covered during the interview month as well as during the calendar year reference period. We use effect coding so class variables are interpreted in terms of the average person. The full sets of regression results from MEPS-HC are in the Appendix tables at the end of this paper, and results from NHIS and CPS ASEC are in Lynch (2008).

Table 2. Variables that Consistently Predict Accuracy of Reporting Medicaid Enrollment: MEPS-HC (2003), CPS ASEC (2000¹²), NHIS (2001)

Predictor of Incorrect Report	Poverty ratio greater than 199%		
Predictor of Correct Report	Poverty ratio less than 50%		
	Days with Coverage in Calendar Year before Interview ¹⁵		
	Payment for Service in prior year		
	Payment for Service in past 60 Days		

Table 3. Type of Relationships for Variables that are Not Always Statistically Significantly Related	d
to False-Negative Reporting Medicaid: MEPS-HC (2003), CPS ASEC (2000 ¹⁴), NHIS (2001)	

	MEPS-HC	CPS ASEC	NHIS		
Age: 0-5 (relative to average)	NS	-	-		
Age: 65+ (relative to average)	NS	+	+		
Hispanic or Non-White	+	+	NS		
Relationship to Reference Person: Othe	er NS	+	NS		
(relative to average)					
Medicaid Supplements Medicare	NS	-	-		
Medicaid with Private Insurance	+	NS	+		
Medicaid Due to TANF coverage	NS	-	-		
MSIS Shows SSI in Survey Month	NS	-	-		
NS' = Nonsignificant $+' = Positive relationship$ $-' = Negative relationship$			10nship		

Discussion

We believe that these findings from MEPS-HC should be considered in the context of findings about misreporting Medicaid enrollment in other surveys. Focusing on differences in the patterns of misreporting across surveys will ultimately help us to understand how specific survey features influence respondents' propensity to misreport. Below we outline how we believe our findings add to the literature on this topic.

¹² Analysis of CPS ASEC enrollees with coverage at the interview date, usually March 2001.

¹³ Except for MEPS-HC months asked about in round 5. In the MEPS-HC analysis, this variable refers to 2002, and months in round 5 were asked about in 2004.

¹⁴ Analysis of CPS ASEC enrollees with coverage at the interview date, usually March 2001.

List of Main Findings

- 1) MEPS-HC respondents report Medicaid enrollment correctly more than 80 percent of the time, but results corroborate findings that false-negative reporting is a common problem in surveys.
- 2) Respondents report most enrollees as having at least some form of coverage, and judging from calculations made in other studies, the extent to which estimates of uninsurance are inflated can vary substantially with questionnaire content and survey design.
- 3) Regression results corroborate findings that factors associated with reporting accuracy are fairly consistent across surveys.
- 4) Regression results corroborate findings showing that events outside the reference period relate to reporting accuracy about enrollment during the reference period.
- 5) Reporting accuracy improves from the first MEPS-HC interview in subsequent interviews.
- 6) Reporting is less accurate when there was a change in Medicaid status during the round.

Finding 1

Results showing good reporting in MEPS-HC may relate to the fact that SCHIP reports are categorized as Medicaid. Research has shown that respondents confuse program names, especially SCHIP with Medicaid (Pascale, 2008, Loomis, 2000). We recommend closer study of cases in which the respondent indicates Medicaid/SCHIP in some fashion other than an explicit affirmation to the question asking about it by its official name ("Medicaid" or the state-specific name). It may be helpful to examine cases when the respondent implicitly indicated Medicaid/SCHIP by showing an ID card or by calling it something other than one of its official names. It may also be helpful to analyze cases where the respondent explicitly reports Medicaid/SCHIP but in the wrong part of the interview. We are especially interested in learning more about how interviewers record those cases and whether they indicate to the respondent how they should report it in the next round.

Finding 2

Results showing that respondents classify most enrollees as having Medicaid and a large majority as having at least some coverage corroborates findings from federal and state-specific surveys (Davern et al., 2008; Call et al., 2008).

For enrollment periods misreported as uninsured we recommend analyzing what respondents reported when the interviewed asked for reasons and duration of uninsurance. Some studies find that significant numbers of respondents who initially report no form of insurance do report coverage when asked to confirm lack of insurance, which MEPS-HC does not explicitly do (Rajan, Zuckerman, and Brennan, 2000; Nelson and Mills, 2001).

For enrollment periods misreported as some form of employer-sponsored coverage we recommend analyzing the MEPS-HC data on dates of employment and medical providers as well

as the MSIS/MAX data on dates of medical services. It may be that many of these cases are examples of people who remain enrolled (perhaps because of their state's continuous eligibility requirement) but no longer use Medicaid because they have private coverage through a new job.

Finding 3

Regression results add to the growing body of literature showing that particular enrollee characteristics consistently predict response accuracy in different surveys and studies. We believe our efforts to minimize differences in study methods (results shown in Tables 2 and 3) mean the observed relationships between reporting accuracy and family income and timing variables are robust (duration of coverage and history and recency of service). It is notable that results from MEPS-HC corroborate findings of consistency because time-related factors are among the consistent predictors. In particular, we suspect that the MEPS-HC longitudinal design (multiple times and multiples ways of asking about coverage with respect to time) implies that the respondents in MEPS-HC think about timing of enrollment differently than they would in a cross-sectional survey that asks about different time periods and in just one interview. As referenced above, we believe the MEPS-HC data on employment and medical providers offers important potential for better understanding the relationship between income and reporting.

Finding 4

Finding relationships between reporting accuracy and circumstances outside the reference period corroborates results from quantitative and qualitative studies (Lynch, 2008; U.S. Census Bureau, 2008). For example, Table 2 shows evidence that events before the reference period affect reporting accuracy because it shows that the variables for duration of coverage and the history of Medicaid service (in the previous calendar year) positively relate to reporting accuracy in NHIS and MEPS-HC. Figure 9 shows evidence that events after the reference period affect reporting accuracy because it shows that the probability of misreporting about an enrolled month in MEPS-HC is higher if the enrollee no longer has coverage in the month of the interview. This corroborates findings from the CPS ASEC showing that the probability of misreporting enrollment in the previous calendar year is much higher if the enrollee is no longer covered in the month of the interview (U.S. Census Bureau, 2008; Lynch, 2008). We think it is notable that we see evidence for this in MEPS-HC since we would expect that the events calendar and repeated rounds of interviewing should make it relatively easier for the respondent to distinguish the reference period boundaries, and particularly the reference period boundaries of the round. For example, aside from the first round, respondents are asked about Medicaid coverage in the period since the previous interview.

Finding 5

Our determination that reporting in MEPS-HC improves from first round to later rounds (See regression results in Appendix) suggests that MEPS-HC does well apart from features related to its longitudinal design at the same time that there is something about those features that helps respondents to more accurately report enrollment. The Figure 7 findings about the first round show that respondents do well before they have had the potential to learn from previous MEPS-HC rounds,¹⁵ and before they are reminded about what was reported in a previous round. We evaluated reporting in the first round as an attempt to disentangle effects of the longitudinal

¹⁵ With repeated exposure the respondent has more opportunities to understand what is being asked and to determine what the correct answer is, such as by asking a more informed member of the household.

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design from effects owing to other features of MEPS-HC. However this approximation to hypothetical MEPS-HC without longitudinal features falls short in a number of ways, including:

- The last month of the first round is usually the first month of the second round so respondents have the opportunity to correct responses about that month in the second round.
- MEPS-HC is subsampled from NHIS so usually someone in the household was asked about Medicaid in NHIS, in the year or two before MEPS-HC.
- There is a "pre-interview" when respondents are exposed to concepts of coverage and other concepts important to correct reporting about Medicaid/SCHIP.
- The longitudinal design may imply that the MEPS-HC sample is more compliant than it would have been if the final sample included people who dropped out after round 1. However, the MEPS-HC sample weights are designed to correct for this.

Figure 9 suggests a weak trend of better reporting over repeated rounds. The statistically significant betas indicate that reporting accuracy is a bit worse than average in the first and second rounds and bit better in the last round. This finding may support the cognitive interview results, described by Pascale (2007), which show that some respondent "pre-report". Over the rounds of interviews, respondents may learn that there is a more appropriate place to report Medicaid later in the MEPS-HC instrument. Whatever the specific underlying reasons, we consider this apparent round effect to be an important finding that may imply there are ways to help respondents accurately report Medicaid. However, there may be some issues with seasonality of data collection or other survey or administrative processing. There may also be some confounding of round with the opportunity to report twice about a month: specifically, the round variable represents the last round in which the month was asked about, and this means that there are some months in rounds 1-4 that are asked about more than once while there are no such cases in round 5.

Finding 6

Reporting is less accurate when there was a change in Medicaid status during the round. This fits with Pascale's (2007) cognitive interviewing that respondents may report the customary status.

Conclusion

We believe these findings add to the growing understanding of why respondents false-negatively report enrollment but we consider this study to be a preliminary analysis of MEPS-HC. In particular, we believe there is insight to be drawn from taking advantage of how the MEPS-HC longitudinal design with varying lengths of reference period offers many ways to evaluate misreporting as it relates to time. In addition, we believe it is important to analyze several variables found to be important in other quantitative and qualitative analyses (e.g., employment status, family composition).

Limitations

Limitations from errors include sampling and non-sampling error in the MEPS-HC and administrative records. Although the administrative data are edited and validated, there are

known errors in them as well as in the integrated files created from linking and aligning them with surveys that measure health insurance. Of most concern are the adjustments we make to compensate for not being able to find all matches, and what this might mean in terms of the matched sample being more compliant or unrepresentative of the true sample of enrollees. The short time frame of a month poses some issues with the timing of record processing and particularly because the timing depends on the particular process (new enrollee, one-time service, retrospective coverage, etc.). However, as we detail in Census reports (U.S. Census Bureau, 2008), we believe our methods mitigate these problems well enough to add to the literature on misreporting (and especially because enrollees tend to stay enrolled).

Klerman (2005) and Hill (2008) find that respondents whose reports can be validated are more compliant than others, and compliance may be more of an issue in MEPS-HC since it is a longitudinal survey asking participants to comply with the burden of multiple interviews.

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