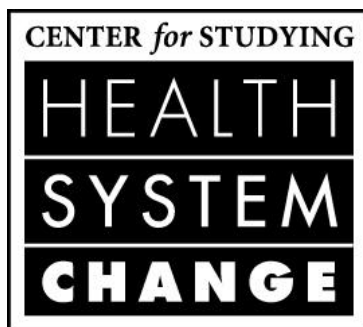**Community Tracking Study**

**Validation of the Community Tracking Study Household Survey
Premium Contribution and Premium Payment Questions**



*Richard Strouse*
*Mourad Touzani*
*John Hall*

# COMMUNITY TRACKING STUDY (CTS)

The Center for Studying Health System Change (HSC) documents changes in health care systems over time and tracks the effects of those changes on people. Through surveys and site visits, HSC seeks to describe and analyze how the interactions of providers, insurers, policy makers and others determine the accessibility, cost, and quality of locally delivered health care. The core of these efforts is HSC's Community Tracking Study (CTS), a set of periodic surveys and site visits that allows researchers to analyze information about local markets and the nation as a whole. Because health care delivery is primarily local, both the surveys and site visits are centered around communities in the U.S. In addition, because the focus of the CTS is on change as well as communities, the study is longitudinal.

## CTS HOUSEHOLD SURVEY

The CTS includes a periodic national survey of households. The survey samples are concentrated in 60 communities that were randomly selected to provide a representative profile of change across the U.S. Among these communities, 48 are "large" metropolitan areas (with populations greater than 200,000), from which 12 communities were randomly selected to be studied in depth. Those 12 communities have larger survey samples and also comprise the communities used for the site visits. The survey data can be used to draw conclusions for the nation and for individual communities.

Each round of the Household Survey contains information on approximately 25,000 – 33,000 families and 47,000 – 60,000 individuals and is nationally representative of the civilian, non-institutionalized population. The survey is conducted by telephone; to ensure proper representation, households without telephones are visited by survey staff providing mobile telephones so that those households can be included in the survey. The survey is conducted by Mathematica Policy Research, Inc. Household Survey topics include type of health insurance coverage, utilization of medical services (e.g., number of physician visits and number of emergency room visits), usual source of care, satisfaction with health care, health status and employer health insurance offerings.

The four household surveys have been conducted in 1996-97 (Round One), 1998-99 (Round Two), 2000-01 (Round Three), and 2003 (Round Four).

## ADDITIONAL INFORMATION

For more information on the CTS Household Survey and related HSC Technical Publications, please visit the HSC web site (www.hschange.org).

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Contract No.: B30569
MPR Reference No.: 8985-300

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# Validation of the Community Tracking Study Household Survey Premium Contribution and Premium Payment Questions

*Revised Final Report*

*November 2, 2004*

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# ACKNOWLEDGEMENTS

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# EXECUTIVE SUMMARY

The Round 4 Community Tracking Study (CTS) Household Survey includes questions on health insurance premium contributions made to employers for employer sponsored insurance (ESI) plans and premium payments to insurers for nongroup plans. These questions, which are based on the Medical Expenditure Panel Survey Household Component (MEPS-HC), represent the only source of information on the cost of health insurance plans to privately insured families and individuals in the CTS Household Survey. Since we could not identify any studies validating the accuracy of the self-reported responses, we validated them by re-contacting a representative sample of survey respondents to the Round 4 Household Survey, and asking them to obtain ESI contributions from pay stubs and nongroup payments from payment records. We sampled 1,499 families for the validation, of whom 799 completed interviews and 262 were ineligible for a response rate of 70.8 percent. Low-income families and those with nongroup insurance were oversampled to obtain a sufficient number of observations from those subgroups. Responding families had 918 health insurance policies, of which 850 were used in the analysis (682 ESI and 168 nongroup policies). Since we are analyzing the accuracy of premium contributions and payments for health insurance policies, rather than for individuals, we used the CTS family-level weight for national estimates, adjusted for oversampling of families reporting nongroup policies and income that was less than or equal to 200 percent of the federal poverty level.

Except for annual ESI premium contributions of less than $1,000, there was considerable inconsistency between the CTS household survey and the validation interview, regardless of whether differences were compared as point estimates or in $1,000 intervals. On average, premium contributions in the same enrollment period were larger on the household survey than on the validation interview, although the difference was not statistically significant due to the number of large over-reports and under-reports. After controlling for other personal and policy characteristics, large differences between the two survey measures were more likely for beneficiaries whose family income was equal to or less than 200 percent of the federal poverty level and less likely for black non-Hispanics (compared with white non-Hispanics) and for families with more than one private policy (compared with families with one policy). Families covered by multiple private policies are more likely to have single coverage, which also are more likely to be fully paid by the employer and therefore easier to recall. Whether or not the family informant was the policyholder was unrelated to large reporting errors.

Questions on cafeteria plans were included in the validation interview but not on the household survey; these plans represented 13 percent of ESI policies. Under cafeteria plans, employees are given a fixed amount (often called "flexible benefit credits") that can be spent on various benefits, such as health insurance premiums, dental insurance, life insurance, and child care. We did not provide instructions to household survey respondents on how to report premium contributions. For the validation interview, we assumed there was no cost to the employee (zero contribution) if the policy holder said that flexible benefit credits were used to cover the full cost of premiums. Otherwise, we asked how much of the policyholder's paycheck was taken out for health insurance premiums and assumed that amount was equivalent to a premium contribution. Since household survey respondents were not provided with guidance on

how to classify premium contributions, cafeteria plans were a potential source of response error. For three-fourths of these polices, respondents used flexible benefits to pay for part of their health insurance premiums and typically reported premium contributions on the household survey. However, respondents usually reported premium contributions on the household survey even when the beneficiary used flexible benefit credits to pay for all of his or her premiums. This error could be reduced with probes similar to those used on the validation interview. Overall, over- and under-reporting differences for cafeteria plans cancelled each other out.

The quality of household survey reports of nongroup premium payments was better than it was for ESI premium contributions. Differences in means between household and validation reports in the same enrollment period were not significant and averaged 7 percent higher for the validation interview when that survey was conducted in a different enrollment period. About three-fourths of responses categorized into $1,000 intervals were consistent. However, unlike ESI premium contributions, nongroup payments were not clustered at the low end of the distribution, and there was a greater degree of consistency between the household survey and validation interview for larger premiums. Nevertheless, there were some large differences between the two reports, which may have resulted from changes in insurance plans, although the validation interview attempted to control for this. There were too few nongroup policies for a separate analysis of the relationship of reporting differences to personal or plan characteristics.

There are several limitations in our analysis of reporting differences. First, 30 percent of the sampled families did not respond. It is possible that nonrespondents were less motivated to provide accurate information in the initial survey than those who agreed to participate in the validation interview.

Second, based on information provided by validation interview respondents on the month their premium contributions or premiums last changed, over one-third of the responses to the validation interview were for a different enrollment period than on the household survey. This problem occurred because the validation interviews were conducted late in the household survey field period. We attempted to control for this problem by separately analyzing reporting differences in policies reported for the same or different enrollment periods; however, the reports of enrollment changes themselves could be in error, confounding the analysis.

Third, comparisons with data for the MEPS-HC (2002) show that overall the 2003 CTS Household Survey reported a higher percentage of ESI premium contributions fully paid by employers, but that the two surveys differed substantially by employer size. For firms with fewer than 50 workers, the percentage of MEPS-HC employees indicating that their employers did not require an employee contribution was higher than for the CTS for single and family coverage. Conversely, for employees of firms with 50 or more workers, a substantially higher percentage of CTS than MEPS-HC employees said their employers did not require a premium contribution for single and family coverage. These findings are perplexing and suggest caution in interpreting CTS data on the percentage of ESI premiums fully paid by employers.

We recommend using nongroup premium payments in analyses but caution researchers about using ESI premium contributions for making national estimates. Providing nongroup premium payments is a simpler task, since the beneficiary pays the full cost and the information is easier to access from invoices or canceled checks. ESI premium contributions may be the responsibility of the employer or the employee, or they may be shared by both. Even when a family member takes the time to obtain pay stubs, it is often difficult to locate the correct amount and payment period, and cafeteria plan menus further complicate the task. Obtaining accurate information is also more difficult during telephone interviews, since interviewers cannot verify the information that was reported.

Current research plans do not call for using the ESI premium contribution variable to make national estimates, but rather to use it as an explanatory variable in statistical modeling of the demand for health insurance. The variable will be treated as endogenous and adjusted using an instrumental variable. This approach corrects for measurement error by replacing observed with predicted values, which typically have a tighter distribution than observed values. So while the data should not be used for point estimates, with the appropriate statistical adjustments, the data may be very useful for analytic model estimation.

# I. DESIGN

## A. INTRODUCTION

The Round 4 Community Tracking Study (CTS) Household Survey includes questions on health insurance premium contributions made to employers for employer sponsored insurance (ESI) plans and premium payments to insurers for nongroup plans. These questions represent the only source of information on the cost of health insurance plans to privately insured families and individuals. Self-reported premium payment and premium contribution questions have been included on the Medical Expenditure Panel Survey Household Component (MEPS-HC, sponsored by AHRQ, www.meps.ahrq.gov) and in many state surveys (see the Web site for the State Health Access Data Assistance Center SHADAC; http://www.shadac.umn.edu/). Since we could not identify any studies validating the accuracy of the self-reported responses, we validated them by re-contacting a representative sample of survey respondents to the Round 4 Household Survey, obtaining ESI contributions from pay stubs and nongroup payments from payment records. In the following sections, we describe the questions to be validated, the sample design for the validation, the validation instrument, data collection methods, analysis file, and weights.

## B. SURVEY DESIGN AND DATA COLLECTION METHODS

### 1. Household Survey Questions on Premium Contributions (ESI) and Premiums (Nongroup)

The questions used to obtain premium contributions from employer sponsored plans and premium payments for nongroup plans on the CTS Household Survey are based on the MEPS-HC and are shown below. (To provide additional context, Appendix A includes the Round 4 Household Survey questions used to identify policy-holders, family members covered, employers for employer sponsored plans, and plan name.)

1

EMPLOYER SPONSORED PLANS


>b31111<    ESI PLANS:

            For coverage through [EMPLOYER NAMED IN b2611], does anyone in
            the family pay all of the premium or cost, some of the premium or
            cost, or none of the premium or cost?

    PROBE:  Do not include the cost of any copayments, coinsurance, or
            deductibles anyone in the family may have had to pay.

            YES, PAY ALL OF PREMIUM/COST...................1
            YES, PAY SOME OF PREMIUM/COST..................2
            YES, BUT DON'T KNOW IF PAY ALL OR SOME OF
            PREMIUM OR COST................................3
            NO, PAY NONE OF THE COST.......................0 [goto b331]

            DON'T KNOW....................................d [goto b331]
            REFUSED.......................................r [goto b331]
    ===>


>b31121@at<:How much is (POLICYHOLDER's NAME) premium for health insurance
            through ............ (EMPLOYER NAMED IN b261/(his/her) employer)?

            PROBE: Your best estimate of the amount (POLICYHOLDER NAME) pays
            for coverage each pay period would be fine.

            NONE..........................................0

            $|___|___|___|___|
            $(10-9997)............................. [goto b3113]

            DON'T KNOW....................................d
            REFUSED.......................................r
            ===> [goto b331]


>b31121@p<  INTERVIEWER:  CODE TIME PERIOD.

            WEEK..........................................1
            EVERY OTHER WEEK..............................2
            TWICE A MONTH.................................3
            MONTH.........................................4
            QUARTER.......................................5
            SEMI-ANNUAL...................................6
            ANNUAL........................................7
            ===> [goto b331]


2

```
NON-EMPLOYER AND NON-UNION PLANS:

>b311<      How much is the insurance premium for this policy?

            NONE.........................................0

            $|___|___|___|___|
            $(10-9997)..............................[goto b321]

            DON'T KNOW...................................d
            REFUSED......................................r
            ===> [goto ngi1]


>b321<      INTERVIEWER:  CODE TIME PERIOD.

            WEEK.........................................1
            EVERY OTHER WEEK.............................2
            TWICE A MONTH................................3
            MONTH........................................4
            QUARTER......................................5
            SEMI-ANNUAL..................................6
            ANNUAL.......................................7
            ===>
```

## 2.   Sample Design

The Round 4 CTS Household Survey began in February 2003 and was completed in February 2004.  The validation sample was selected October 7, 2003 from family interviews that had been completed at that time; these interviews represented 85 percent of the total number completed.  We did not wait until the survey was completed to select the validation sample to reduce the number of policies for which the premium had changed since the CTS household survey interview.  The validation sample was selected from 9,680 families that reported premiums for one or more employer sponsored or nongroup private health insurance plans and where the policyholder was identified and was a member of the household (some policies were held by non-household members).  Policies for college students were excluded.

To validate the household survey responses, we selected a representative sample of families that responded to the Round 4 Household Survey.  We oversampled low-income and nongroup families to obtain a sufficient number of observations from these sub-groups.

3

1. Low-income families were defined as those less than or equal to 200 percent of the federal poverty level

2. Nongroup families were defined as those with one or more nongroup policies (Families could report up to three private insurance plans which could include both ESI and nongroup policies)

Families were selected by a sequential sampling procedure developed by J.R. Chromy and available in SAS Surveyselect. This procedure offers the advantage of systematic sampling but eliminates the risk of systematic list-order bias by making independent selections within each of the zones associated with systematic sampling, while controlling the selection opportunities for units crossing zone boundaries (Chromy 1979).[1] Altogether, we sampled 1,499 out of 9,680 eligible families for the validation. (The design called for 1,500 families to be sampled, but one in the higher-income nongroup stratum was never released.) The number selected and eligible are shown below, by strata:

1. =200 percent poverty ESI:  sampled 400/1,540

2. >200 percent poverty ESI: sampled 800/7,229

3. <=200 percent poverty nongroup: sampled 100/257

4. >200 percent poverty nongroup: sampled 200/654

## 3. Validation Instrument

The validation survey instrument was designed to obtain premium contributions for ESI plans or premium payments for nongroup plans from pay stubs (ESI plans) or other records (nongroup plans). We attempted to conduct the validation interview with the policyholder named on the household interview but accepted the original family informant (if a different person) if

---

[1] See J.R. Chromy, "Sequential Sample Selection Methods." *Proceedings of the Survey Research Methods Section of the American Statistical Association,* 1979, pp. 401-406.

the policyholder were unavailable.  The instrument (see Appendix B) referenced the plan name and employer cited on the household survey and excluded policies where:

1. The policyholder no longer had health insurance through the same employer (most likely, due to a job change)
2. The family no longer obtained insurance from the same plan
3. A change occurred in the number of persons covered by the policy that resulted in an increase or decrease in premiums
4. Or the health insurance premium contribution was included with union dues

For ESI plans, the interviewer asked the respondent to obtain a pay stub that included the amount deducted for health insurance or coded that the policyholder did not pay any of the cost. The Round 4 CTS Household Survey did not include questions to obtain premium contributions for employees covered by "cafeteria plans," but anecdotal evidence suggested increasing use of these plans by large employers.  Under cafeteria plans, employees are given a fixed amount (often called "flexible benefit credits") that can be spent on various benefits, such as health insurance premiums, dental insurance, life insurance, and child care.  Consequently, we included separate questions on the validation interview to identify employers who had cafeteria plans and the amount deducted to cover the cost of health insurance premiums (see questions caf1 – caf5). If the policyholder said that flexible benefit credits were used to cover the full cost of health insurance premiums, we assumed there was no cost to the employee.  Otherwise, we asked the respondent how much was taken out of the policyholder's paycheck for health insurance premiums. Since household survey respondents were not provided with guidance on how to classify premium contributions, cafeteria plans were a potential source of response error.

Based on a review of a representative sample of pay stubs from another study, probes were developed to aid the respondent in identifying premium deductions on his or her pay stub. Respondents were told that premium deductions could be found under deductions, withholding,

adjustments, pre-tax or after–tax, or taxes, and that they might be referred to as "health plan," "medical coverage," under plan name, HMO, medical insurance copay, and so on.  Respondents were then asked for the amount taken out of the paycheck for health insurance premiums for this plan and for the corresponding pay period.  Since premiums may be deducted only once or twice a month, the respondent was asked to verify whether premiums were taken out of every paycheck and, if not, how often they were taken out.  Questions on the amount and pay period for non-cafeteria plans were similar to those for cafeteria plans.

Since validation interviews were conducted after the household interview, we had to determine whether premium contributions were reported for the same enrollment period. Therefore, respondents were asked when their premium contributions had last changed.  If they had changed since the household survey was conducted, we asked the respondent for the new premium contribution and whether the one recorded on the household survey was correct. Although we could not independently validate the household report in these cases, we could determine whether the change was in the expected direction and whether the amount of the change was reasonable.

The questions asked for nongroup plans were similar to non-cafeteria ESI plans, except that we asked respondents to obtain the most recent bill for their health insurance plan payment, rather than their last pay stub.

## 4.  Data Collection

The validation interviews were conducted from December 9, 2003 to February 10, 2004 by experienced CTS Household Survey interviewers. Therefore, the validation interviews were conducted from two to 12 months after the household interviews.  Of the 1,499 sampled families, a total of 799 validation interviews were completed and another 262 were ineligible due to

changes in insurer, employer, or family coverage since the household interview. The response rate for the validation [(799+262)/1,499] was 70.8 percent (see Table I.1). Most of the ineligible families had changes in employer (41.1 percent of ineligible cases) or insurer (40.8 percent). Other exclusions included changes in the number of persons covered (9.6 percent), union plan with premium contribution included in dues (4.4 percent), and ineligibility code assigned by interviewing supervisor (mostly non-telephone households) (4.1 percent; see Table I.2).

Up to three private health insurance plans could be reported in a family interview, and respondents were asked to validate each plan they reported. A total of 687 families reported one plan, 105 reported two, and 7 reported three, for a total of 918 policies (Table I.3).

## 5. Analysis File

A family-level file was created that included validation interview and household survey data—source variables used to construct premiums for private health insurance plans, whether the household survey family informant was the policyholder, informant demographic characteristics, family income, and poverty status. Several edits were made to premium payments and premium contributions. To standardize comparisons, we computed annualized premiums (nongroup) and premium contributions (ESI). There were 12 responses to the time period for premium or premium contribution on the validation interview that were coded as "other (specify)." These responses were manually reviewed and annualized values computed, where possible.

We reviewed household survey outliers and identified three premium contributions that appeared to have been reported as dollars and cents rather than rounded to dollars. These observations were divided by 100 and retained (original annual values were $153,764, $69,420, and $132,730). We also recoded to "missing" five household survey premiums or premium

TABLE I.1

DISPOSITION OF THE VALIDATION SAMPLE

| Sample Disposition | Number | Percent |
|---|---|---|
| Completed Interview | 799 | 53.3 |
| Ineligible for Validation−Change in Insurer, Employer, or Coverage Since Household Interview, or Union Plan | 262 | 17.5 |
| Refused | 126 | 8.4 |
| Moved Since Household Interview and Could Not Locate | 150 | 10.0 |
| Effort Ended Without a Complete or a Refusal | 162 | 10.8 |
| Total | 1,499 | 100.0 |
| Response Rate [a] | | 70.8 |

[a]The response rate is defined as the ratio of completed and ineligible interviews, divided by the total sample. This ratio assumes that eligibility for non-interviews is the same as for interviews.

TABLE I.2

REASONS FOR INELIGIBILITY ON THE VALIDATION INTERVIEW

|  | Number | Percent |
|---|---|---|
| Health insurance premium contribution included with union dues | 12 | 4.4 |
| No longer has health insurance through employer reported on household survey | 111 | 41.1 |
| No longer has health insurance, though employer sponsored health plan reported on household survey | 65 | 24.1 |
| Change in number of persons covered by policy resulted in increase or decrease in premium contribution to employer sponsored plan | 24 | 8.9 |
| No longer covered by nongroup plan cited on the household survey | 45 | 16.7 |
| Change in number of persons covered by policy resulted in increase or decrease in premium contribution to non−group plan | 2 | 0.7 |
| Code assigned by interviewing supervisor[b] | 11 | 4.1 |
| **Total** | **270[a]** | **100.0** |

[a] Total is greater than 262 because some families had more than one ineligible policy.

[b] These include 10 cases without telephone numbers and one with Medicaid that should not have been sampled.

TABLE I.3

NUMBER OF FAMILY INSURANCE UNITS AND HEALTH INSURANCE POLICIES
IN THE VALIDATION

| Number of Policies within FIU | Number of FIUs | Number of Policies |
|---|---|---|
| One Policy | 687 | 687 |
| Two Policies | 105 | 210 |
| Three Policies | 7 | 21 |
| **Total** | **799** | **918** |

contributions that were greater than $12,000 but had monthly, quarterly, semi-annual, or annual time periods.  It was not possible to determine whether or not these cases were coding errors.  The edited versions of the household survey premium payments and premium contributions variables were used in the analysis.  We did not exclude any validation responses as outliers, however; 22 responses were missing or had incomplete information.  We constructed a policy-level file for the 918 policies in the validation sample; the variables selected for the analysis are shown in Appendix C.

Of the 918 polices, 727 were for ESI and 191 for nongroup plans (see Table I.4).  We excluded 29 ESI policies because of changes in employer, insurer, or number of persons covered since the household interview, 2 because the household value was an outlier, and 14 because the validation response was incomplete.  (The 29 ESI policies with changes precluding validation were held by families with two or more policies, in which at least one was eligible for the validation.)  For nongroup coverage, we excluded 12 policies because of changes in insurer or number of persons covered, 3 because the household value was an outlier, and 8 because the validation response was incomplete.  Therefore, the validation sample included 850 policies: 682 ESI and 168 nongroup.

## 6. Sample Weights

Since we are comparing premium contributions and premium payments for health insurance policies, rather than for individuals, we used the CTS family-level weight for national estimates, adjusted for oversampling of families reporting nongroup policies and income that was less than or equal to 200 percent of the federal poverty level (FPL).  The first step in constructing the weight was to adjust the CTS family-level national weight to reflect differences in the probability of selection for the four strata created for the validation (<=200 percent FPL ESI, >200 percent FPL ESI, <=200 percent FPL nongroup, and >200 percent FPL nongroup).  Within each of the

TABLE I.4

STATUS OF POLICIES INCLUDED IN VALIDATION INTERVIEWS

|  | Sample Size | Percent |
|---|---|---|
| Employer Sponsored Health Insurance |  |  |
| Changed insurer, employer, or coverage [a] | 29 | 4.0 |
| Household value was excluded as outlier | 2 | 0.3 |
| Validation missing | 14 | 1.9 |
| Premium contribution reported on both household survey and validation | 682 | 93.8 |
| **Subtotal** | **727** | **100.0** |
| Nongroup Coverage |  |  |
| Changed insurer or coverage[a] | 12 | 6.3 |
| Household value was excluded as outlier | 3 | 1.6 |
| Validation missing | 8 | 4.2 |
| Premium reported on both the household survey and the validation | 168 | 88.0 |
| **Subtotal** | **191** | **100.0** |
| **Total** | **918** |  |

[a]These policies are from families that had two or more policies reported on the household survey, where at least one policy was validated and one was ineligible.

four strata, we multiplied the inverse of the probability of selection by the family weights for each family in the stratum.

The second step was to compute a non-response adjustment factor. Each sampled family was classified as eligible, ineligible, or undetermined eligibility (all nonresponses). Within each stratum, we summed the probability–adjusted weights for (1) all families, and (2) families where eligibility was determined. The non-response adjustment factor was then calculated within the stratum as (1) divided by (2), which was multiplied by the probability-adjusted family weight to get the final non-response-adjusted weight for completed family interviews. These weights are designed to represent civilian non-institutionalized families in the United States that have private health insurance and would have reported a premium on a survey designed like the CTS Round 4 Household Survey.

# II. ANALYSIS

In the following sections, we discuss the classification of responses by enrollment period, the sources of discrepancies in classifying policies requiring no employee contributions, the distribution of premium contributions and the differences between the two reports, the impact of cafeteria plans on reporting differences, the relationship of demographic and policy attributes on reporting differences, and the distribution of differences for categorical estimates of premium contributions. The discussion of classification problems is based on unweighted data; comparisons of reporting differences between the two sources are weighted. In the last section, we discuss limitations in the analysis.

## A. CLASSIFICATION BY ENROLLMENT PERIOD

After reporting premium contributions for ESI policies or premium payments for nongroup policies, validation interview respondents were asked when the amount paid for the policy last changed. If the change occurred after the CTS household interview, we assumed that the two measures of premium contributions or payment occurred in different enrollment periods. In that case, the CATI program displayed the household interview premium contribution or payment on the screen, and the interviewer asked the respondent whether the prior value was correct. Although the validation and household survey interviews were for different enrollment periods, the validation response usually should be equal to or greater than the household report (since premium contributions or payments rarely decline), assuming the respondent confirmed that the household report was accurate. However, the questions on changes in enrollment period were not asked if the respondent indicated at the beginning of the validation interview that the policyholder did not pay any part of the premium.

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Of the 682 ESI policies included in the validation, 438 (64.2 percent) included positive premium contributions on both interviews, of which slightly more than half (227) were in the same enrollment period, and 211 were in different enrollment periods (see Table II.1). Of the remaining policies, 163 (23.9 percent) had no premium contribution on either the household or the validation interview, 38 (5.6 percent) had no premium contribution on the household survey and a positive premium contribution on the validation interview, and 43 (6.3 percent) had positive premium contributions on the household survey and no premium contribution on the validation interview. Since few employers shift from partial or full employee contributions to no employee contribution, we included policies in which no premium contribution was reported on the validation with policies reported for the same enrollment period.

Among the 227 ESI policies for which the validation interview was in a different enrollment period, validation interview respondents said that 171 (75.3 percent) of the household interview reports were correct, 41 (18 percent) were incorrect, and were uncertain about 15 (6.6 percent).

Of the 168 nongroup policies in the validation, 73 (43.4 percent) were reported to be in the same enrollment period as the household interview, and 95 (56.5 percent) were in different enrollment periods. Of the 95 in different enrollment periods, respondents said that 80 (84.2 percent) of the household interview reports of premiums were correct, 14 (8.3 percent) were incorrect, and 1 (1.1 percent) was uncertain.

## B.  SOURCES OF DISCREPANCIES IN CLASSIFYING EMPLOYEE CONTRIBU-TIONS TO ESI POLICIES

We examined sources of reporting differences for the 81 ESI policies in which household and validation interview respondents differed on whether or not a premium contribution was required (Table II.2).  Cafeteria plans contributed to respondent uncertainty regarding employer

TABLE II.1

STATUS OF POLICIES BY WHETHER HOUSEHOLD SURVEY AND VALIDATION CONDUCTED
IN THE SAME ENROLLMENT PERIOD
(UNWEIGHTED)

| Employer Sponsored Health Insurance | Total Policies | Same Enrollment Period [a] | Different Enrollment Periods | | | Total Policies in Different Enrollment Periods |
|---|---|---|---|---|---|---|
| | | | Validation Respondent Said that the Household Report Was Correct | Validation Respondent Said that the Household Report Was Not Correct | Validation Respondent Could Not Determine if Household Report Is Correct | |
| No Premium Contribution On Both Household Survey and Validation | 163 | 162 | 1[b] | | | 1 |
| No Premium Contribution (Household Survey); Positive Premium Contribution (Validation) | 38 | 23 | 3 | 5 | 7 | 15 |
| Positive Premium Contribution (Household Survey); No Premium Contribution (Validation)[a] | 43 | 43 | | | | 0 |
| Positive Premium Contribution On the Household Survey and Validation | 438 | 227 | 167 | 36 | 8 | 211 |
| **Total ESI** | **682** | **455** | **171** | **41** | **15** | **227** |

| Nongroup Health Insurance | | | | | | |
|---|---|---|---|---|---|---|
| Positive Premium on Both the Household Survey and the Validation | 168 | 73 | 80 | 14 | 1 | 95 |

[a]If the validation respondent confirmed that he or she did not change the employer or employer sponsored plan reported in the household survey, did not change the number of family members covered, and said that he or she did not pay any of the cost of the premium, the respondent was skipped over the questions asking for the month and year of the last open enrollment. We included these cases with premium contributions for which the same enrollment period was confirmed.

[b]According to the CATI logic this case should not have been asked the question on enrollment period; however, since it was confirmed to be in a different enrollment period we left it in that category.

TABLE II.2

SUMMARY OF  HOUSEHOLD AND VALIDATION INTERVIEW DIFFERENCES
IN CLASSIFYING POLICIES REQUIRING NO EMPLOYEE CONTRIBUTION
(UNWEIGHTED)

| | Single Policy FIU | Two or Three Policy FIU | Total |
|---|---|---|---|
| **No Premium Contribution (Household Survey); Premium Contribution (Validation)** | | | |
| Same Enrollment Period [a] | | | |
| Union plan—health insurance taken out of Paycheck | 2 | 0 | 2 |
| Cafeteria plan covers partial cost of Premiums | 3 | 3 | 6 |
| Other plan—household survey respondent was the policy holder | 7 | 4 | 11 |
| Other plan—household survey respondent was not the policyholder | 3 | 1 | 4 |
| | | | |
| Different Enrollment Period | | | |
| Union plan—health insurance taken out of Paycheck | 1 | 0 | 1 |
| Other plan—household survey respondent was the policyholder | 10 | 1 | 11 |
| Other plan—household survey respondent was not the policyholder | 3 | 0 | 3 |
| **Total** | **29** | **9** | **38** |
| | | | |
| **Premium Contribution (Household Survey); No Premium Contribution (Validation)** | | | |
| Same Enrollment Period [a] | | | |
| Cafeteria plan  covers full cost  of premiums | 9 | 3 | 12 |
| Household survey respondent was the Policyholder | 18 | 3 | 21 |
| Household survey respondent was not the Policyholder | 7 | 3 | 10 |
| **Total** | **34** | **9** | **43** |

[a] If the  validation respondent confirmed that he or she did not change the employer or employer sponsored plan reported in the household survey, did not change the number of family members covered, and said that he or she did not pay any of the cost of the premium, the respondent was skipped over the questions asking for the month and year of the last open enrollment.  We included these cases with premium contributions for which the same enrollment period was confirmed.

contribution. Of the 38 ESI policies for which premium contributions were reported on the validation interview but not on the household interview, six were cafeteria plans in which the plan covers part, but not all, of the cost of premiums. Of the 43 ESI policies for which premium contributions were reported on the household survey but not on the validation interview, 12 were cafeteria plans in which the flexible benefit covered the full cost of the health insurance premium.

We examined other sources of error, including union plans where health insurance was taken out of the paycheck, whether or not the household survey respondent was the policyholder, and the number of private policies within the family; but none of these factors appeared to contribute to classification error for the sample of 81 plans we reviewed. The percentage of union plans, multi-policy families, and informant as policyholder among policies with classification errors was approximately the same as for the entire validation sample.

## C. DISTRIBUTIONS OF PREMIUM CONTRIBUTIONS REPORTED ON THE HOUSEHOLD SURVEY AND VALIDATION INTERVIEW

The distributions of ESI premium contributions and nongroup payments reported on the household and validation interviews by enrollment period are shown in Table II.3. For ESI reports in the same enrollment period, the household survey mean ($1,075) is 31.6 percent larger than the validation mean ($816), although the differences are not statistically significant at $\alpha=.10$. The median, 75th and 90th percentiles all are larger for the household compared with the validation interview.

For ESI policies reported in different enrollment periods, the validation mean ($2,389) is 22.8 percent greater than the household survey mean ($1,844). The validation values also are greater than those for the household survey for each cited percentile in the quantile distributions. This pattern was expected because premium contributions usually increase each enrollment period.

TABLE II.3

ANNUAL ESI PREMIUM CONTRIBUTIONS AND NONGROUP PREMIUM PAYMENTS REPORTED ON THE
HOUSEHOLD SURVEY AND THE VALIDATION INTERVIEW
(WEIGHTED)

|  | ESI Premium Contributions | | Nongroup Premium Payments | |
|---|---|---|---|---|
|  | Same Enrollment Period[a] | Different Enrollment Periods | Same Enrollment Period [a] | Different Enrollment Periods |
| Sample Size | 455 | 227 | 73 | 95 |
| **Household Interview** | | | | |
| Mean | $1,075 | $1,844 | $2,739 | $3,382 |
| Quantiles | | | | |
| Maximum | 11,400 | 7,332 | 10,800 | 12,000 |
| 90 percentile | 3,120 | 3,600 | 4,968 | 7,380 |
| 75 percentile | 1,416 | 2,400 | 3,864 | 4,788 |
| Median | 312 | 1,378 | 2,640 | 2,400 |
| 25 percentile | 0 | 910 | 1,260 | 1,000 |
| 10 percentile | 0 | 480 | 420 | 744 |
| Minimum | 0 | 0 | 108 | 120 |
| **Validation Interview** | | | | |
| Mean | $816 | $2,389 | $2,627 | $3,640 |
| Quantiles | | | | |
| Maximum | 10,452 | 14,300 | 14,400 | 18,000 |
| 90 percentile | 2,080 | 4,800 | 5,220 | 8,184 |
| 75 percentile | 1,200 | 3,120 | 3,852 | 5,424 |
| Median | 0 | 1,764 | 2,040 | 2,772 |
| 25 percentile | 0 | 1,040 | 1,260 | 1,000 |
| 10 percentile | 0 | 650 | 420 | 588 |
| Minimum | 0 | 0 | 120 | 120 |
| Difference in Means (Household−Validation) | $258 | $-545  *** | 112 | -257** |
| Difference in Means as Percentage of Validation Mean | 31.6 | -22.8 | 4.2 | -7.0 |

[a] If the validation respondent confirmed that he or she did not change the employer or employer sponsored plan reported in the household survey, did not change the number of family members covered,  and said that he or she did not pay any of the cost of the premium, the respondent was skipped over the questions asking for the month and year of the last open enrollment.  We included these cases with premium contributions for which the same enrollment period was confirmed.

   *Difference in means significant at p<.10.
  **Difference in means significant at p<.05.
***Difference in means significant at p <.01.

For the smaller nongroup premium sample, differences between the two survey means were small and not statistically significant for reports in the same enrollment period; the household survey annual premium mean was $2,739 and the validation mean was $2,627. However, the household survey median ($2,640) was greater than the validation median ($2,040). Where the validation was conducted in a different enrollment period, the validation annual mean ($3,640) was 7 percent larger than the household survey mean ($3,382). Median values for both surveys were smaller (household $2,400 and validation $2,772), indicating that a small number of large premium increases drove up the means on both surveys.

## D. DISTRIBUTIONS OF DIFFERENCES BETWEEN THE HOUSEHOLD SURVEY AND VALIDATION INTERVIEW

To compare individual responses between the household survey and validation interview, we constructed the difference between the two measures as the household survey annual premium contribution (payment for nongroup policies) minus the validation annual premium contribution (payment for nongroup policies). Assuming that the validation interview is the more accurate source of information, a positive value indicates that the household survey over-reported ESI premium contributions or nongroup premium payments and a negative value indicates that the household survey under-reported them. The distributions for the weighted differences are shown for policies in the same enrollment period in Table II.4 and for those in different enrollment periods in Table II.5.

For those in the same enrollment period, the mean difference is $250 for ESI and nongroup policies combined, $258 for ESI policies, and $112 for nongroup policies. For the ESI comparisons, household survey respondents were more likely to under- than over-report, but the average over-report was much greater than the average under-report. There were 119 over-reports averaging $1,861; 191 with no difference; and 145 under-reports averaging –$750.

TABLE II.4

DISTRIBUTIONS OF WEIGHTED DIFFERENCES BETWEEN  HOUSEHOLD SURVEY AND VALIDATION
REPORTS OF ANNUAL ESI PREMIUM CONTRIBUTIONS OR NONGROUP PREMIUM PAYMENTS
(WEIGHTED—SAME ENROLLMENT PERIOD) [a]

| | ESI and Nongroup Combined | ESI Only | Nongroup Only |
|---|---|---|---|
| **Difference in Annual ESI Premium Contribution or Nongroup Premium Payment** | | | |
| Sample Size (unweighted) | 528 | 455 | 73 |
| Mean Difference | $250 | $258 | $112 |
| Quantiles | | | |
| Maximum | 9,528 | 9,528 | 5,240 |
| 99th percentile | 6,680 | 6,680 | 1,356 |
| 95th percentile | 2,916 | 3,224 | 1,356 |
| 90th percentile | 976 | 864 | 1,356 |
| 75th percentile | 12 | 0 | 400 |
| Median | 0 | 0 | 4 |
| 25th percentile | -26 | -26 | -36 |
| 10th percentile | -520 | -520 | -696 |
| 5th percentile | -884 | -884 | -1,524 |
| 1st percentile | -3,600 | -3,840 | -2,400 |
| Minimum | -9,772 | -9,972 | -3,600 |
| **Higher  Annual ESI Premium Contribution or Nongroup Payment  on the Household Survey** | | | |
| Sample Size | 142 | 119 | 23 |
| Mean Difference | $1,715 | 1,861 | 621 |
| Median | 754 | 754 | 400 |
| **No Difference Between the Household Survey and the Validation** | | | |
| Sample Size | 204 | 191 | 13 |
| **Lower Annual ESI Premium Contribution or Nongroup Payment on the Household Survey** | | | |
| Sample Size | 182 | 145 | 37 |
| Mean Difference | -$742 | -$750 | -639 |
| Median | -390 | -390 | -360 |

[a]If the validation respondent confirmed that he or she did not change the employer or employer sponsored plan reported in the household survey, did not change the number of family members covered, and said that he or she did not pay any of the cost of the premium, the respondent was skipped over the questions asking for the month and year of the last open enrollment.  We included these cases with premium contributions for which the same enrollment period was confirmed.

TABLE II.5

DISTRIBUTIONS OF DIFFERENCES BETWEEN WEIGHTED HOUSEHOLD SURVEY AND VALIDATION
REPORTS OF ANNUAL ESI PREMIUM CONTRIBUTIONS OR NONGROUP PREMIUM PAYMENTS
(WEIGHTED–DIFFERENT ENROLLMENT PERIOD)

| | ESI Only | Nongroup Only |
|---|---|---|
| **Difference in Annual Premium Contribution or Premium Payment–All** | | |
| Sample Size | 227 | 95 |
| Mean Difference | -$545 | -$257 |
| Quantiles | | |
| Maximum | 5,532 | 6,576 |
| 99th percentile | 2,472 | 6,576 |
| 95th percentile | 528 | 2,412 |
| 90th percentile | 260 | 431 |
| 75th percentile | 60 | 12 |
| Median | -260 | -120 |
| 25th percentile | -1,080 | -468 |
| 10th percentile | -1,800 | -1,632 |
| 5th percentile | -2,256 | -2,160 |
| 1st percentile | -4800 | -6,000 |
| Minimum | -11,300 | -9,232 |
| **Difference in Annual Premium Contribution or Premium Payment– Validation Respondent Said that the Household Survey Report Was Accurate** | | |
| Sample Size | 171 | 80 |
| Mean Difference | -621 | 279 |
| Quantiles | | |
| Maximum | 2,472 | 4,486 |
| 99th percentile | 1,248 | 4,100 |
| 95th percentile | 260 | 1,860 |
| 90th percentile | 158 | 431 |
| 75th percentile | 0 | 0 |
| Median | -262 | -96 |
| 25th percentile | -1,152 | 984 |
| 10th percentile | -1,612 | -1,656 |
| 5th percentile | -2,050 | -2,040 |
| 1st percentile | -6,500 | -2,844 |
| Minimum | -11,300 | -6,000 |

TABLE II.5 *(continued)*

|  | ESI Only | Nongroup Only |
|---|---|---|
| **Household Survey Premium Contribution or Premium Payment Was Less than the Validation** |  |  |
| Sample Size | 124 | 55 |
| Mean Difference | -952 | -735 |
| Median | -616 | -400 |
| **No Difference Between the Household Survey and Validation Reports** | 16 | 8 |
| **Household Survey Premium Contribution Was Greater than the Validation** |  |  |
| Sample Size | 31 | 17 |
| Mean Difference | 339 | 996 |
| Median | 158 | 300 |

For the 73 nongroup policies reported for the same enrollment period, there are fewer large, negative or positive differences, compared with ESI policies. Above the 90th and below the 10th percentiles, ESI differences are much larger than nongroup differences. Also, the nongroup mean and median over–and–under reports are approximately the same, indicating that the estimate is not biased.

We also compared household survey and validation interview ESI premium contributions and nongroup premium payments in different enrollment periods to determine whether the differences were in the expected direction (Table II.5). The mean difference for ESI policies was –$545 and was –$257 for nongroup policies, indicating that, on average, premiums increased. The median differences also were in the expected direction: –$260 for ESI and –$120 for nongroup policies. Here, too, there were large positive and negative differences; however, we were able to exclude household survey ESI premium contributions and nongroup payments that the validation interview respondent said were inaccurate or was uncertain about their accuracy. Of the 227 ESI policies, the validation interview respondent said that 171 household survey responses were accurate; for the 95 nongroup policies, the respondent said that 80 household survey responses were accurate. Excluding the inaccurate and uncertain polices had little impact on mean differences (ESI = –$621 and nongroup = –$279) or median differences (ESI = –$262 and nongroup = –$96). The validation interview respondent reported a decline in premium contributions (higher value on the household survey) between enrollment periods, for about one-fifth of the ESI policies (31/171) and for a similar percentage of nongroup premium payments (17/80) for which he or she said that the household survey was accurate. The remainder either were unchanged or increased between enrollment periods. Limiting the comparison to policies that the validation respondent said were accurately reported on the household survey did not eliminate unusually large increases or decreases, suggesting that some validation interview

respondents might have changed policies or misreported, despite the reported use of paystubs or payment records.

## E. IMPACT OF CAFETERIA PLANS ON REPORTING DIFFERENCES

Of the 455 ESI policies in the same reporting period, 60 were classified as cafeteria plans during the validation interview. Of these, 45 respondents said that they used flexible benefits to pay for some, but not all, of their health insurance premiums and 15 to pay for all of their premiums. Respondents reported premium contributions on the household survey for 12 of the 15 for which they used flexible benefits to cover all their premiums (which was coded as "no employee contribution" on the validation interview). Only 6 of the 45 respondents who used flexible benefits to cover part of their health insurance premiums on the validation interview reported no employee contribution on the household survey. Overall, the mean reporting difference between the household and validation interviews for the 60 cafeteria plan policies was –$54, indicating that positive and negative reporting errors largely canceled each other out. The mean difference for policies under cafeteria plans is not significantly different from the mean difference for non-cafeteria plan policies ($295; see Table II.6).

## F. RELATIONSHIP OF DEMOGRAPHIC AND POLICY ATTRIBUTES TO REPORTING DIFFERENCES BETWEEN THE HOUSEHOLD SURVEY AND VALIDATION INTERVIEW

The accuracy with which ESI premium contributions or nongroup payments are reported may be related to the informant's personal characteristics and to the difficulty of the task. Since the validation interview was based on review of pay stubs (ESI policies) or payment records (nongroup policies), we looked at characteristics of the original household survey family interview respondent, who was not asked to access records. Personal characteristics included in models were: self-reported ethnicity (white non-Hispanic, black non-Hispanic, Asian non-

TABLE II.6

MEAN DIFFERENCES BETWEEN  HOUSEHOLD SURVEY AND VALIDATION REPORTS OF ANNUAL
PREMIUM CONTRIBUTIONS FOR CAFETERIA VERSUS OTHER ESI PLANS
(WEIGHTED)

|  | Mean Difference (Household Survey–Validation) |
| --- | --- |
| Did not report cafeteria plan on the validation interview (n=395) | $295 |
| Reported a cafeteria plan on the validation interview, using flexible benefits to pay for all or some of health insurance premiums (n=60) | -$54 |
| All ESI policies in some enrollment period–employee pays all, some, or none of cost (n=455) | $258 |

Hispanic, and Hispanic); age (less than 30, 30-54, greater than or equal to 55); gender; education (12 years or less, or more than 12); and income (defined as less than or equal to 200 percent of the federal poverty level, or greater than 200 percent of FPL). Policy attributes included whether the family had more than one policy and whether or not the original household survey respondent was the policyholder. Since differences in enrollment periods would confound efforts to explain reporting differences, we limited models to policies reported for the same enrollment period on both the CTS Household Survey and validation interview.

Because the distribution of reporting differences was nonlinear, we defined a dichotomous dependent variable based on the size of the reporting difference.[2] A large reporting difference was defined as being greater than or equal to the 90th percentile or less than or equal to the 10th percentile of the distribution, with the remainder defined as small reporting differences. For ESI and nongroup policies combined, this included differences greater than or equal to $976 or less than or equal to –$520. For ESI policies only, the 90th and 10th percentiles were $864 and –$520, respectively. We did not include models with nongroup policies only because there were too few observations. Models were estimated with and without education because this variable was correlated with the Federal Poverty Level (FPL). Since the sample was weighted and the CTS sample design complex, logistic regressions were run in SUDAAN to account for the design in the variance estimation. The reference group is female, white non-Hispanic, 30-54 years of age, policyholder was informant, one policy in family, family income is more than 200 percent of FPL, and more than 12 years of education (for models including education). The results are shown in Table II.7.

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[2] We tried to estimate linear models using the difference between the household survey and validation reports as the dependent variable (household survey – validation); however, the fit was poor and is not shown.

TABLE II.7

RELATIONSHIP OF DIFFERENCES IN REPORTING ANNUAL ESI PREMIUM CONTRIBUTIONS AND
NONGROUP PREMIUMS BETWEEN THE HOUSEHOLD SURVEY AND VALIDATION INTERVIEW
TO DEMOGRAPHIC AND POLICY ATTRIBUTES[a]
(WEIGHTED—SAME ENROLLMENT PERIOD)[b]

| Parameter | ESI and Nongroup Combined | | ESI Only | |
|---|---|---|---|---|
| | Odds Ratio (95 Percent Confidence Interval) | | Odds Ratio (95 Percent Confidence Interval) | |
| | Education Included in Model | Education Excluded from Model | Education Included in Model | Education Excluded from Model |
| Male | NS | NS | NS | NS |
| Black Non-Hispanic | .17 (.05-.53)*** | .18(.06-.56)*** | .17 (.05-.52)*** | .18( .06-.55)*** |
| Hispanic | NS | NS | NS | NS |
| Less than 30 Years of Age | NS | 2.41 (.81-7.19)* | NS | NS |
| 55 Years of Age or Older | NS | NS | NS | NS |
| Respondent Was Not Policyholder | NS | NS | NS | NS |
| Family Had More Than one Policy | .53 (.29-.97)** | .5 (.25-1.00)** | .36 (.17-.77)*** | .33(.15-.77)** |
| Less than or Equal to 200 Percent Poverty | 2.2 (.84-5.76)* | 2.39 (.98-5.81)* | NS | 2.22 (.96-5.14)* |
| Less Than or Equal to 12 Years of Education | NS | Excluded | NS | Excluded |

[a] Dependent variable dichotomizes weighted difference in annual premiums (household survey–validation) between those that are in the highest or lowest deciles (1) versus others (0). Reference group is female, white non-Hispanic, 30-54 years of age, policyholder, one policy in family, more than 200 percent of poverty, and more than 12 years of education.

[b] If the validation respondent confirmed that he or she did not change the employer or employer sponsored plan reported in the household survey, did not change the number of family members covered, and said that he or she did not pay any of the cost of the premium, the respondent was skipped over the questions asking for the month and year of the last open enrollment. We included these cases with premium contributions for which the same enrollment period was confirmed.

*P-value <.10
**P-value <.05
***P-value <.01

There were three significant coefficients. Black non-Hispanics were less likely than white non-Hispanics to have large reporting differences; informants for families that had more than one health insurance policy were less likely to have large reporting than those with one policy; informants in families with income less than or equal to 200 percent of FPL were more likely to have large reporting errors than those with higher income. Families with two or three private policies were more likely to have single coverage, which was more likely to be fully paid by the employer and therefore easier to recall. Being in, or slightly above, the FPL is correlated with a low level of education and is often related to reporting error. We did not include variables in our model that may have explained why black non-Hispanics above 200 percent of the FPL reported more accurately than white non-Hispanics. It is possible that they have been more likely to work in industries, such as government, that provided employees with more information on premium contributions.

## G. COMPARISON OF HOUSEHOLD SURVEY AND VALIDATION INTERVIEW ESI PREMIUM CONTRIBUTIONS AND NONGROUP PAYMENTS CATEGORIZED IN INTERVALS

An alternative method with which to evaluate the consistency of self-reported ESI premium contributions and nongroup payments is to cross-tabulate household survey and validation interview reports categorized into intervals. Since there was evidence from the MEPS-HC that both CTS measures overestimated the percentage of ESI policies that did not require an employer contribution, we could combine values of no cost with small employee contributions. In Table II.8, we summarize the results of a cross-tabulation of the household survey and validation interview measures of ESI premium contributions categorized into $1,000 intervals, from less than or equal to $1,000 to more than $5,000. The diagonals in the cross-tabulations represent consistent responses between the two measures of premium contributions. For ESI premium contributions in the same enrollment period, values of less than or equal to $1,000 are

TABLE II.8

COMPARISON OF HOUSEHOLD SURVEY AND VALIDATION INTERVIEW ESI PREMIUM CONTRIBUTIONS
CATEGORIZED IN INTERVALS
(WEIGHTED PERCENTAGES)

| | Same Enrollment Period [a] | | | Different Enrollment Period | | | Total Sample | | |
|---|---|---|---|---|---|---|---|---|---|
| | Household Survey | Validation Survey | Consistent on Both Surveys [b] | Household Survey | Validation Survey | Consistent on Both Surveys [b] | Household Survey | Validation Survey | Consistent on Both Surveys [b] |
| $0-1,000 | 67.3 | 69.6 | 60.8 | 26.5 | 21.6 | 18.9 | 55.0. | 55.0 | 48.1 |
| $1,001-2,000 | 13.0 | 20.0 | 9.2 | 39.6 | 31.7 | 25.4 | 21.1 | 23.6 | 14.1 |
| $2001-3,000 | 9.6 | 5.0 | 3.0 | 15.0 | 20.4 | 11.0 | 11.3 | 9.7 | 5.4 |
| $3,001-4,000 | 4.2 | 1.9 | 0.7 | 10.9 | 8.4 | 1.0 | 6.2 | 3.9 | 0.8 |
| $4,001-5,000 | 0.8 | 1.0 | 0.0 | 3.5 | 10.7 | 1.5 | 1.6 | 4.0 | 0.5 |
| GT $5,000 | 5.1 | 2.4 | 0.8 | 4.3 | 7.2 | 3.0 | 4.9 | 3.9 | 1.5 |
| **Total** | **100** | **100** | **74.5** | **100.0** | **100.0** | **60.8** | **100** | **100** | **70.4** |

[a]If the validation respondent confirmed that he or she did not change the employer or employer sponsored plan reported in the household survey, did not change the number of family members covered, and said that he or she did not pay any of the cost of the premium, the respondent was skipped over the questions asking for the month and year of the last open enrollment. These cases are included with premium contributions for which the same enrollment period was confirmed.

[b]These are the percentage of respondents reporting premium contributions in the same interval on both the initial household and the validation surveys.

generally consistent; the household survey marginal percent is 67.3, the validation marginal percent is 69.6, and the percent reporting a premium of $1,000 or less in both surveys is 60.8 percent. For larger annual premium contributions, the household survey reports a higher proportion of values greater than or equal to $2,000 (19.7 percent), compared with the validation interview (10.3 percent); whereas the validation interview reports more responses in the $1,000 to $2,000 interval (20.0 percent), compared with the household survey (13.0 percent). The level of consistency between the two surveys is low for all intervals greater than $1,000.

For annual premium contributions reported in different enrollment periods, the distributions are in the expected direction: 46.7 percent of the validation interview responses were greater than $2,000, compared with 33.7 percent for the household interview. Somewhat surprisingly, the overall level of consistency is nearly as great for responses in different enrollment periods (60.8 percent) as for those in the same enrollment period (74.5 percent).

For nongroup premium payments, the overall level of consistency is comparable to ESI premium contributions—72.6 percent of the responses in the same enrollment period and 77.2 percent of those in different enrollment periods were in the same interval (Table II.9). However, unlike ESI premium contributions, nongroup payments were not clustered at the low end of the distribution, and there was a greater degree of consistency between the two measures for larger premiums. Also, marginal distributions for measures in different enrollment periods were actually somewhat more consistent than were those for the same enrollment period.

## H. LIMITATIONS

There are several limitations in our analysis of reporting differences. First, 30 percent of the sampled families did not respond. It is possible that nonrespondents were less motivated to provide accurate information in the initial survey than those who agreed to participate in the validation interview.

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TABLE II.9

COMPARISON OF HOUSEHOLD SURVEY AND VALIDATION INTERVIEW NONGROUP  PREMIUM
PAYMENTS CATEGORIZED IN INTERVALS
(WEIGHTED PERCENTAGES)

| | Same Enrollment Period | | | Different Enrollment Period | | | Total Sample | | |
|---|---|---|---|---|---|---|---|---|---|
| | Household Survey | Validation Survey | Consistent on Both Surveys | Household Survey | Validation Survey | Consistent on Both Surveys[a] | Household Survey | Validation Survey | Consistent on Both Surveys |
| $1-1,000 | 17.9 | 14.5 | 14.5 | 25.0 | 25.2 | 23.4 | 21.5 | 19.9 | 19.0 |
| $1,001-2,000 | 19.2 | 33.0 | 16.2 | 14.1 | 13.1 | 10.3 | 16.6 | 23.0 | 13.2 |
| $2001-3,000 | 31.3 | 18.3 | 15.6 | 16.4 | 15.4 | 13.1 | 23.8 | 16.8 | 14.3 |
| $3,001-4,000 | 17.3 | 20.0 | 15.8 | 11.6 | 9.4 | 5.6 | 14.4 | 14.6 | 10.7 |
| $4,001-5,000 | 5.1 | 3.7 | 3.0 | 8.2 | 8.9 | 2.8 | 6.7 | 6.4 | 2.9 |
| GT $5,000 | 9.2 | 10.5 | 7.5 | 24.6 | 28.0 | 22.0 | 17.0 | 19.3 | 14.8 |
| **Total** | **100** | **100** | **72.6** | **100.0** | **100.0** | **77.2** | **100** | **100** | **72.0** |

[a]These are the percentage of respondents reporting premium contributions in the same interval on both the initial household and the validation surveys.

Second, based on information provided by validation interview respondents on the month their premium contributions or premiums last changed, more than one-third of the responses to the validation interview were for a different enrollment period than on the household survey. This problem occurred because the validation interviews were conducted late in the household survey field period. We attempted to control for this problem by separately analyzing reporting differences in policies reported for the same or different enrollment periods; however, the reports of enrollment changes themselves could be in error, confounding the analysis.

Third, comparison with the most recent published data for the MEPS-HC (2002),[3] which was used to develop the CTS premium contribution questions, suggests that both the CTS Household Survey and the validation interview may have overestimated the percentage of employer sponsored plans that did not require employee contribution (34 percent of Household Survey and 35 percent of validation interview policies). In Table II.10, we compare the percentage of private sector employees enrolled in an employer sponsored health plan that did not require an employee contribution between the full 2003 CTS Household Survey sample of covered workers (using person level national weights) and the 2002 MEPS-HC.[4] Since the MEPS-HC is being compared with the pre-validation CTS Household Survey, neither survey had questions that explicitly dealt with cafeteria plans.

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[3] See http://www.meps.ahrq.gov/mepsdata/IC/2002/Tables_I/TIC4A.HTM, …/TID4a.htm.

[4] We considered but did not compare the CTS or MEPS-HC results with the 2003 Kaiser Family Foundation and the Health Research and Educational Trust Employer Health Survey for two reasons. First, the unit of observation is different. In particularly, the survey asks questions about the employer's health insurance plans with the largest enrollment in each of four categories. Second, the sample is less reliable for very small employers.

TABLE II.10

PERCENTAGE OF EMPLOYEES ENROLLED IN A PRIVATE SECTOR EMPLOYER
SPONSORED HEALTH PLAN THAT REQUIRED NO EMPLOYEE CONTRIBUTION
BY TYPE OF COVERAGE AND SURVEY

| Private Sector Employers | Single Coverage | Family Coverage | Employee Plus One Coverage |
|---|---|---|---|
| MEPS (2002)[a] | | | |
| Less than 50 employees | 56.3 | 41.4 | 29.6 |
| 50 or more employees | 17.5 | 9.7 | 8.2 |
| **Total** | **26.6** | **14.8** | **11.7** |
| CTS (2003)[b] | | | |
| 2-49 employees | 44.0 | 31.5 | NA |
| 50 or more employees | 27.9 | 20.7 | NA |
| **Total** | **32.0** | **23.0** | **NA** |

[a]Estimates for the 2002 MEPS-HC were from the MEPS web site:

       http://www.meps.ahrq.gov/MEPSDATA/ic/2002/Tables_I/TIC4a.htm;
       http://www.meps.ahrq.gov/MEPSDATA/ic/2002/Tables_I/TID4a.htm;
       http://www.meps.ahrq.gov/MEPSDATA/ic/2002/Tables_I/TIE4a.htm

[b]Estimates provided from the 2003 Round 4 CTS Household Survey. The sample includes employed adults who are policyholders of employer sponsored health insurance plans; person level national weights were used in computing weighted estimates.

For workers with single coverage, the percentage not requiring an employee contribution in the 2003 CTS (32.0 percent) is somewhat higher than the 2002 MEPS-HC (26.6 percent) for private sector employers. However, the CTS family coverage estimate (23.0 percent) is substantially greater than the MEPS-HC family (14.8 percent) or Employee Plus One (11.7 percent) coverage. For the CTS, we did not differentiate between family and employee plus one coverage. The MEPS-HC and CTS survey estimates differed by number of employees in the firm. For employees of firms with fewer than 50 workers, the percentage of MEPS-HC employees that did not require an employee contribution was higher than for the CTS for single coverage (56.3 versus 44.0 percent) and for family coverage (41.4 versus 31.5 percent). For employee plus one coverage, the MEPS-HC estimate was 29.6 percent. The pattern was reversed for employees of firms with 50 or more workers. For the CTS, 27.9 percent of single coverage employees said their employers did not require a premium contribution, compared with only 17.5 percent for the MEPS-HC. For CTS private sector employees with family coverage in these firms, 20.7 percent reported no premium contribution, compared with 9.7 percent (family coverage) and 8.2 percent (employee plus one coverage) on the MEPS-HC. These results are perplexing, and suggest caution in interpreting the percentage of ESI premiums fully paid by employers. Although both surveys used similar question wording, the MEPS-HC was conducted in-person, permitting verification pay stubs or other documentation. We did not assess whether differences in weighting procedures may have affected these estimates.

## I.    SUMMARY AND RECOMMENDATIONS

Except for annual premium contributions of less than $1,000, there was considerable inconsistency between the CTS household survey and the validation interview, regardless of whether differences were compared as point estimates or in $1,000 intervals. A substantial fraction of the validation interviews were conducted in a different enrollment period from the

initial household survey, which reduced the available sample for some analyses. On average, premium contributions in the same enrollment period were larger on the household survey than on the validation interview, although the difference was not statistically significant, due to the number of large over-reports and under-reports. After controlling for other personal and policy characteristics, large differences between the two survey measures were more likely for beneficiaries whose family income was equal to or below 200 percent of FPL and less likely for black non-Hispanics (compared with white non-Hispanics) and for families with more than one private policy (compared with families with one policy). Families covered by multiple private policies are more likely to have single coverage, which is more likely to be fully paid by the employer and thus easier to recall. Whether or not the family informant was the policyholder was unrelated to large reporting errors.

Questions on cafeteria plans were included in the validation interview but not on the household survey; these plans represented 13 percent of ESI policies. For three-fourths of these policies, respondents used flexible benefits to pay for part of their health insurance premiums, and typically reported premium contributions on the household survey, which did not include separate questions for cafeteria plans. However, respondents usually reported premium contributions on the household survey even when the beneficiary used flexible benefit credits to pay for all of his or her premiums. This error could be reduced with probes similar to those used on the validation interview. Overall, over and under-reporting differences for cafeteria plans canceled each other out.

The quality of household survey reports of nongroup premium payments was better than for ESI premium contributions. Differences in means between household and validation reports in the same enrollment period were not significant, and averaged only 7 percent higher for the validation interview when that survey was conducted in a different enrollment period. About

three-fourths of responses categorized into $1,000 intervals were consistent. Nevertheless, there were some large differences between the two reports, which may have resulted from changes in insurance plans, although the validation interview attempted to control for this. There were too few nongroup policies for a separate analysis of the relationship of reporting differences to personal or plan characteristics.

We recommend using nongroup premium payments in analyses of how much employees pay or the distribution of employees by out-of-pocket premium contribution but caution researchers about using ESI premium contributions for making national estimates. Providing nongroup premium payments is a simpler task, since the beneficiary pays the full cost and the information is easier to access from invoices or canceled checks. ESI premium contributions may be the responsibility of the employer or the employee, or they may be shared by both. Even when a family member takes the time to obtain pay stubs, it is often difficult to locate the correct amount and payment period, and cafeteria plan menus further complicate the task. Obtaining accurate information is also more difficult during telephone interviews, since interviewers cannot verify the information that was reported.

Current research plans do not call for using the ESI premium contribution variable to make national estimates, but rather to use it as an explanatory variable in statistical modeling of the demand for health insurance. The variable will be treated as endogenous and adjusted using an instrumental variable. This approach corrects for measurement error by replacing observed with predicted values, which typically have a tighter distribution than observed values. So while the data should not be used for point estimates, with the appropriate statistical adjustments, the data may be very useful for analytic model estimation.

**APPENDIX A**

**ROUND 4 CTS HOUSEHOLD SURVEY PRIVATE HEALTH INSURANCE PLAN QUESTIONS**

>b231<      Health insurance plans are usually obtained in one person's name even if other
            family members are covered.  That person is called the policyholder. [NHIS]

   In whose name is this plan?[1]

      **INTERVIEWER:**  CODE NON-SPECIFIED POLICY HOLDER IN "OTHER."

                  [fill NAME] .......................................................................1
                  [fill NAME] .......................................................................2
                  [fill NAME] .......................................................................3
                  [fill NAME] .......................................................................4
                  [fill NAME] .......................................................................5
                  [fill NAME] .......................................................................6
                  [fill NAME] .......................................................................7
                  [fill NAME] .......................................................................8
                  OTHER [SPECIFY] ...........................................................9

                  DON'T KNOW.................................................................d
                  REFUSED......................................................................r
                  ===>


>b2311<     Is [POLICY HOLDER] a postal worker?

                  YES ....................................................................1  [goto b2p1]
                  NO 0

                  DON'T KNOW.................................................................d
                  REFUSED......................................................................r

                  ===> [goto b2312]


>b2312<     Is [POLICY HOLDER] a federal government employee?


                  YES ....................................................................1
                  NO 0

                  DON'T KNOW.................................................................d
                  REFUSED......................................................................r
                  ===>

---

[1]The program lists and allows all persons in the household 18 and over, plus the
householder and spouse regardless of age, to be named as policyholder.

>b2p1@an<   What is the name of [POLICY HOLDER]'s health insurance company or health plan?

    PROBE:  IF R HAS DIFFICULTY RECALLING NAME, ASK:  Do you have and insurance card or something else with the [first] plan name on it?

>b2p1@nam< INTERVIEWER: ENTER THE VERBATIM NAME OF THE HEALTH PLAN

>TEST<      IF b2311=1 or b2312=1 goto fed1@num1, ELSE goto [STATENAME]1@NUM1


FEDERAL

>fed1@num1<  What is the name of [POLICY HOLDER]'s health insurance plan?

    INTERVIEWER :  CODE PLAN; READ PLAN NAMES IF NECESSARY

    PROBE:  IF R HAS DIFFICULTY RECALLING NAME, ASK:  Do you have and insurance card or something else with the [first] plan name on it?

    PROGRAMMER NOTE:   DISPLAY PLAN NAMES OFFERED POSTAL OR NON-POSTAL WORKERS IN THIS SITE, OR STATE IF PLAN IS OFFERED STATEWIDE.  IF R. CAN'T SELECT A PLAN, THEN RECORD TEXT RESPONSE AS AN OTHER SPECIFY. IF RESPONSE TO B2312 IS D/R, THEN DISPLAY NON-POSTAL PLANS.

      OTHER .............................................................99

      _____

      DON'T KNOW..................................................d
      REFUSED..................................................... r

      ===> [goto test b221]

NON-FEDERAL:

>[STATENAME]1@NUM1<USE LIST BELOW TO CODE INSURER.  PROBE: READ LIST IF NECESSARY.

IF RESPONSE IS A STAND ALONE PPO OR TPA, SINGLE PRODUCT HEALTH PLAN, OR UNSPECIFIED PLAN NAME, SKIP TO B2316; IF REFUSED, SKIP TO TESTB24; ELSE IF R. NAMED A MULTI-PRODUCT PLAN GO TO B2315. NOTE THAT THE DATABASE WILL IDENTIFY WHETHER AN INSURER OFFERS MULTIPLE PLANS IN THE R'S SITE.

HIGHLIGHT BLUE CROSS/BLUE SHIELD PLANS SINCE SOME MARKETS MAY HAVE MORE THAN ONE LICENSED PLAN.

>STATENAME]p1<Is [POLICY HOLDER']s  health plan from [NAME OF MULTI-PRODUCT INSURER FROM B2314IN] one of the following products? INTERVIEWER: READ LIST OF PRODUCTS OFFERED BY THIS INSURER

DISPLAY  LIST OF INSURANCE PRODUCTS OFFERED BY INSURER IN THIS SITE OR STATEWIDE.

>b221<        **INTERVIEWER:**  CODE WHETHER DOCUMENT USED.  [NO ERASE]

INSURANCE CARD...........................................................1

CLAIMS FORM ................................................................2

INSURANCE POLICY ...................................................3

NO DOCUMENT USED .....................................................0

>**test b24<**     **[if b2 gt <1>, goto b241; else goto test b25].  It is unnecessary to ask b241 if the family has only one plan because coverage was obtained in b1a, b1b, or b1c.**

>b241<        Who is covered by [fill PLAN NAME]?

        [READ ASTERISKED NAMES IF NECESSARY.]

        CODE ALL THAT APPLY

                [fill NAME] ..................................................................1
                [fill NAME] ..................................................................2
                [fill NAME] ..................................................................3
                [fill NAME] ..................................................................4
                [fill NAME] ..................................................................5
                [fill NAME] ..................................................................6
                [fill NAME] ..................................................................7
                [fill NAME] ..................................................................8

                NONE/NO ONE/NO OTHER RESPONSES ......................n
                NEED TO DELETE A RESPONSE ...................................x

                DON'T KNOW..................................................................d
                REFUSED...................................................................... r
                ===>


**>test b25<    [if b1b ge <1> or b1c ge <1> goto b251; else store <1> in b251 and goto b261].  This question does not need to be asked if the only private plans are employer-based.**


>b251<        Was this plan originally obtained through a current or past employer or union?
                YES ......................................................................1  [goto b2611]
                NO 0

                DON'T KNOW..................................................................d
                REFUSED.......................................................................... r
                ===> [goto b271]


>b2611<       In  order to get the best information possible about people's health insurance coverage, we need the name and address of the employer or union that provides this coverage.


        **PROBE IF RESPONDENT ASKS  FOR ADDITIONAL INFORMATION ON WHY WE WANT EMPLOYER/UNION ADDRESS**: We are trying to understand differences in insurance plans offered by employers and unions. Although we may try to contact your employer or union to learn more about your plan, we will not identify you by name.  We are trying to understand differences in insurance plans and how the benefits offered by a particular insurance company vary by employer/union.

**INTERVIEWER: OBTAIN AS MUCH INFORMATION AS RESPONDENT CAN PROVIDE. IF R. PROVIDES ADDRESS, ALSO ASK FOR PHONE NUMBER**

>b6p1@nam<EMPLOYER NAME
>b6p1@ad<1<sup>ST</sup> STREET ADDRESS
>b6p1@ad2<2<sup>ND</sup> STREET ADDRESS
>b6p1@cit<CITY
>b6p1@st<STATE
>b6p1@zip<ZIP CODE
>b6p1@ac<AREA CODE
>b6p1@ex<EXCHANGE
>b6p1@num<TELEPHONE NUMBER

DON'T KNOW ..................................................................................d
REFUSED     r


TEST          IF FEDERAL EMPLOYEE, GO TO b26a

>b26121<      INTERVIEWER; CODE WHETHER EMPLOYER OR UNION. IF UNSURE, ASK,
     Is [insert NAME] a union or employer?

     UNION     1
     EMPLOYER  2

     DON'T KNOW ..............................................................................d
     REFUSED    r

                ===>

>b26a<        Is information on this plan available in a booklet provided by POLICY HOLDER'S
              employer or insurer?

                YES ...................................................................................1
                NO 0

                DON'T KNOW.................................................................d
                REFUSED...................................................................... r
                     ===>


>b26b<        Is information on this plan available on a company Intranet or website that
              POLICYHOLDER can access from a computer?

                YES ...................................................................................1
                NO 0

                DON'T KNOW.................................................................d
                REFUSED...................................................................... r
                     ===> [goto b291]

>b271<     Was this plan obtained through a state or federal government program that helps pay insurance coverage?

          YES ................................................................................1  [goto b281]
          NO 0...........................................................................[goto b291]

          DON'T KNOW.................................................................d  [goto b281]
          REFUSED.................................................................... r
          ===> [goto b291]


>b281<     Do you recall the name of the program?

     **PROBE:** Some    programs    that    help    provide    health    insurance    include
               [fill STATE PROGRAMS].

          [fill STATE PROGRAMS] ...................................................1
          OTHER [SPECIFY] ............................................................9

          _____

          DON'T KNOW.....................................................................d
          REFUSED.......................................................................... r
          ===>

>b291<     Did READ ASTERISKED NAMES enroll in [NAME OF PLAN] in the past 12 months, that is after [fill DATE]?

     IF MORE THAN ONE PERSON, ASK:  Who enrolled in [fill PLAN] in the past 12 months?

     **INTERVIEWER:**          DO  NOT  INCLUDE  BABIES  UNDER  ONE  YEAR  IF  THEY WERE COVERED BY PLAN SINCE BIRTH.

     IF RESPONDENT SAYS HE/SHE STAYED WITH THE SAME PLAN DURING OPEN ENROLLMENT, CODE NO.

     CODE ALL THAT APPLY

          [fill NAME] .......................................................................1  [goto b301]
          [fill NAME] .......................................................................2  [goto b301]

          NO ONE...........................................................................n
          NEED TO DELETE A RESPONSE ...................................x

          DON'T KNOW.................................................................d
          REFUSED.................................................................... r
          ===> [goto test b311]

>b301<    How many months ago did [fill NAME] enroll in [fill PLAN NAME]?

**INTERVIEWER**:         IF MORE THAN 11 MONTHS, BACK UP TO PREVIOUS
                         QUESTION AND DELETE PERSON.

|___|___| MONTHS
(0-11)

DON'T KNOW..................................................................d
REFUSED................................................................... r
===> [REPEAT b301 FOR EACH PERSON ENROLLED IN PAST 12 MONTHS]

**>test b311<    [if b251 ne <1> goto b311; else, if b251 <eq> 1 and policy holder is listed in b231, go to b3111; else, go to b331] NOTE THAT A POLICY HOLDER ONLY HAS TO BE LISTED IN B231; THE INFORMANT DOES NOT HAVE TO BE THE POLICY HOLDER.**

>b31111<    ESI PLANS:

For coverage through [EMPLOYER NAMED IN b2611], does anyone in the family pay all of the premium or cost, some of the premium or cost, or none of the premium or cost?

PROBE:  Do not include the cost of any copayments, coinsurance, or deductibles anyone in the family may have had to pay.

YES, PAY ALL OF PREMIUM/COST .................................1
YES, PAY SOME OF PREMIUM/COST.............................2
YES, BUT DON'T KNOW IF PAY ALL OR SOME OF
PREMIUM OR COST...........................................................3
NO, PAY NONE OF THE COST .....................................0  [goto b331]

DON'T KNOW..................................................................d  [goto b331]
REFUSED................................................................... r  [goto b331]
===>

>b31121@at<

How much is (POLICYHOLDER's NAME) premium for health insurance through (EMPLOYER NAMED IN b261/(his/her) employer)?

PROBE: Your best estimate of the amount (POLICYHOLDER NAME) pays for coverage each pay period would be fine.

NONE ............................................................................0

$|___|___|___|___|
$(10-9997) ...............................................................[goto b3113]

DON'T KNOW..................................................................d
REFUSED................................................................... r
===> [goto b331]

A.9

>b31121@p< INTERVIEWER: CODE TIME PERIOD.

        WEEK ........................................................................... 1
        EVERY OTHER WEEK ................................................... 2
        TWICE A MONTH ......................................................... 3
        MONTH ....................................................................... 4
        QUARTER ................................................................... 5
        SEMI-ANNUAL ............................................................ 6
        ANNUAL .................................................................... 7
        ===> [goto b331]


>b311<      NON-EMPLOYER AND NON-UNION PLANS:

How much is the insurance premium for this policy?

        NONE ........................................................................ 0

        $|___|___|___|___|
        $(10-9997) ...................................................... [goto b321]

        DON'T KNOW ............................................................. d
        REFUSED .................................................................. r
        ===> [goto ngi1]


>b321<      INTERVIEWER: CODE TIME PERIOD.

        WEEK ........................................................................... 1
        EVERY OTHER WEEK ................................................... 2
        TWICE A MONTH ......................................................... 3
        MONTH ....................................................................... 4
        QUARTER ................................................................... 5
        SEMI-ANNUAL ............................................................ 6
        ANNUAL .................................................................... 7
        ===>

**APPENDIX B**

**COMMUNITY TRACKING STUDY**
**PREMIUM VALIDATION SURVEY**

**INTRODUCTIONS**


>intro1<      Hello, this is NAME with the Community Tracking Study, the health care survey in which your household participated in (INTERVIEW MONTH YEAR).   May I please speak with  (POLICYHOLDER)?

PROGRAMMER:  IF MORE THAN ONE POLICYHOLDER IN FIU, LIST POLICYHOLDER WHO WAS ALSO INFORMANT.  IF NO POLICYHOLDER ALSO AN INFORMANT, LIST POLICYHOLDER FOR PLAN 1.

IF NOT AVAILABLE, AND INFORMANT NOT SAME AS POLICYHOLDER: Then may I please speak with (INFORMANT)?

LIST ADULTS IN FAMILY
INTERVIEWER: RECORD WHO YOU ARE SPEAKING WITH

[fill NAME] .................................................................. 1
[fill NAME] .................................................................. 2
[fill NAME] .................................................................. 3
[fill NAME] .................................................................. 4
[fill NAME] .................................................................. 5
[fill NAME] .................................................................. 6
[fill NAME] .................................................................. 7
[fill NAME] .................................................................. 8
===>

>intro2<      We are trying to understand more about how much people are paying for their health insurance.  I am hoping you will be able to help us by answering a couple of additional questions about (your/POLICYHOLDER's) health insurance premium.  It will only take a couple of minutes, and of course all of your answers are completely confidential.

CONTINUE ................................................................  1

NOT A GOOD TIME ...................................................... c  [goto CALLBACK]
REFUSED .................................................................. r
===>

>TEST1<      IF FAMILY HAS MORE THAN ONE PRIVATE HEALTH INSURANCE POLICY -- GOTO POLICY, USE PLAN 1 INFORMATION
IF ONLY ONE POLICY GOTO TEST2

>POLICY<      I'd [first/next] like to ask you about (VERBATIM PLAN NAME), the plan for which (you were/POLICYHOLDER was) the policyholder when we interviewed your family in [INTMONTH].

[IF EMPLOYER SPONSORED] PROBE:  The plan through [b2611 EMPLOYER NAME].

**EXCLUDING UNION-PROVIDED HEALTH COVERAGE**

>TEST2< [SEE b26121 OF THE R4 SURVEY] IF SELECTED PLAN IS EMPLOYER, GO
TO CHANGE1; IF SELECTED IS PROVIDED THROUGH – A UNION-OR
DK/RGOTO union1
IF INDIVIDUALLY PURCHASED GOTO ichange2

>union1< First of all, is (your/POLICYHOLDER's) health insurance provided through an
employer or is it provided directly by a union?

      EMPLOYER ................................................................1
      UNION ......................................................................2 [goto union2]

      DON'T KNOW ...........................................................d
      REFUSED ................................................................. r
      ===> [goto change1]

>union2< Is the amount (you pay/POLICYHOLDER pays) for health insurance taken out of
the paycheck or is it included with the union dues?

      PAYROLL DEDUCTION...............................................1
      UNION DUES..............................................................2 [goto ineligible]
      OTHER [specify] ........................................................ .0

      DON'T KNOW ...........................................................d
      REFUSED ................................................................. r
      ===>

**EMPLOYER-SPONSORED INSURANCE – EXCLUDING MAJOR CHANGES**

>change1<    (Do you/Does POLICYHOLDER) still have health insurance coverage through (b2611 EMPLOYER NAME)?

INTERVIEWER:  IF R DOESN'T KNOW,  DETERMINE IF SOMEONE ELSE IS MORE KNOWLEDGEABLE ABOUT HEALTH INSURANCE COVERAGE.

YES.........................................................................1  [goto change2]
NO .........................................................................0

REFUSED ................................................................ r
===> [goto ineligible]

>change2<    And, is (VERBATIM PLAN NAME), still (your/POLICYHOLDER's)  health insurance plan?

INTERVIEWER:  IF R DOESN'T KNOW,  DETERMINE IF SOMEONE ELSE IS MORE KNOWLEDGEABLE ABOUT HEALTH INSURANCE COVERAGE.

YES.........................................................................1  [goto change3a]
NO .........................................................................0

REFUSED ................................................................ r
===> [goto ineligible]

>change3a<    Have any family members been added to this health insurance policy since we last interviewed your family in (INTERVIEW MONTH)?

PROBE:  (Your/POLICYHOLDER's) (VERBATIM PLAN NAME) plan.

YES.........................................................................1
NO .........................................................................0

DON'T KNOW ..........................................................d
REFUSED ................................................................ r
===>

>change3b<    Have any family members been dropped from this health insurance policy since we last interviewed your family in (INTERVIEW MONTH)?

PROBE:  (Your/POLICYHOLDER's) (VERBATIM PLAN NAME) plan.

YES.........................................................................1
NO .........................................................................0

DON'T KNOW ..........................................................d
REFUSED ................................................................ r
===>

>test3<

IF CHANGE3A=0 AND CHANGE3B=0 THEN GOTO PAYSTUB.
OTHERWISE, GOTO CHANGE3C.

>change3c<     Did the [addition][and][deletion] of persons covered by this policy
[increase][or][decrease] your premium?

PROGRAMMER:   USE "addition" AND "increase" IF CHANGE3A=1, d, r.   USE "deletion" AND
"decrease" IF CHANGE3B=1, d, r.   USE "and" AND "or" IF BOTH ARE TRUE.

PROBE:   (your/POLICYHOLDER's) (VERBATIM PLAN NAME) plan.

YES...........................................................................1   [goto ineligible]
NO ............................................................................0

DON'T KNOW ............................................................d
REFUSED ................................................................. r
===>

## EMPLOYER-SPONSORED INSURANCE

>paystub<     Health insurance premiums represent a large part of health care costs. However,
it is difficult for most of us to report this cost accurately without checking pay
stubs. Could you get a recent pay stub that has the amount deducted for health
insurance [for this plan]?   I can hold on while you go and get it.

PROBE IF PAYSTUBS AT WORK OR ONLINE:   I can call you back when you
have (your/POLICYHOLDER's) paystubs to look at.

PROBE IF R. SAYS NOTHING IS DEDUCTED FOR HEALTH INSURANCE:
O.K. I still have a few questions about your health plan.

IF SPEAKING TO POLICYHOLDER:   Would it be more convenient for me to call
you at home or at work?

IF YES, SCHEDULE CALL BACK, RECORD NEW NUMBER IN NOTES

HAS PAYSTUBS/CONTINUE .....................................1
NOTHING DEDUCTED FOR HEALTH
INSURANCE ...........................................................2

CALLBACK ................................................................c   [goto cback]
REFUSAL ................................................................. r   [goto refusal]
===>

**CAFETERIA PLANS**

>caf1<        Some employers provide a cafeteria plan to employees.  With a cafeteria plan, employees are given a fixed amount of money that they can  choose to spend on various benefits, such as health insurance premiums, dental insurance, life insurance, child care, and so on.

(Do you/Does POLICYHOLDER) have a cafeteria plan that can be used to cover the cost of health insurance premiums?

YES...........................................................................1  [goto testzero]
NO .............................................................................0

DON'T KNOW .............................................................d
REFUSED .................................................................. r
===> [gototestesi1]

>testzero<     [if paystub eq <2> then go to end; else go to caf2a]]
>caf2a<

The amount your employer gives you to spend on benefits is often called flexible benefit credits. (Do you/Does POLICY HOLDER) use flexible benefit credits to cover the full cost of  health insurance premiums?

YES...........................................................................1  [goto end]
NO .............................................................................0

DON'T KNOW .............................................................d
REFUSED .................................................................. r
===> [goto caf2b]

>caf2b<     Please look at your pay stub. How much is taken out of (your/POLICYHOLDER's) paycheck for health insurance premiums for this plan?

    PROBE:  These premium deductions  often can be found on a paystub under deductions, withholding, adjustments, pre-tax or before tax, or taxes. They might be referred to as health plan, medical coverage, the specific name of your plan, HMO, medical insurance co-pay, or something with the number 125.

$|___|___|___|___|

DON'T KNOW .............................................................d
REFUSED .................................................................. r

===>

>caf3<        How often (are you/is POLICY HOLDER) paid?

                    EVERY WEEK ............................................................1
                    EVERY OTHER WEEK ...............................................2
                    TWICE A MONTH ......................................................3
                    ONCE A MONTH .......................................................4
                    OTHER (specify) ......................................................0

                    DON'T KNOW ...........................................................d
                    REFUSED ................................................................ r
                    ===>

>caf4<        Sometimes health insurance premiums are deducted only once or twice a month.
              Are health insurance premiums for this plan taken out of each pay check?

                    YES...........................................................................1
                    NO ..........................................................................0  [goto caf5]

                    DON'T KNOW ...........................................................d
                    REFUSED ................................................................ r
                    ===> [goto end]

>caf5<        How often are these health insurance premiums taken out of each pay check ?

                    EVERY WEEK ............................................................1
                    EVERY OTHER WEEK ...............................................2
                    TWICE A MONTH ......................................................3
                    ONCE A MONTH .......................................................4
                    OTHER (specify) ......................................................0

                    DON'T KNOW ...........................................................d
                    REFUSED ................................................................ r
                    ===> [goto end]

## STANDARD (NON-CAFETERIA) EMPLOYER-SPONSORED PLANS

>testesi1<    [if paystub eq <2> then go to end]

>esi1<    For coverage through (b2611 EMPLOYER NAME), does (POLICYHOLDER)  pay
          all of the premium or cost, some of the premium or cost, or none of the premium
          or cost?

          PROBE:  Do not include the cost of any copayments, coinsurance, or deductibles
          anyone in the family may have had to pay.

               YES, PAY ALL OF PREMIUM/COST ...........................1
               YES, PAY SOME OF PREMIUM/COST ......................2
               YES, BUT DON'T KNOW IF PAY ALL OR SOME OF
               PREMIUM OR COST ...................................................3
               NO, PAY NONE OF THE COST.............. …………..0 [goto testwhy]

               DON'T KNOW ...........................................................d
               REFUSED ................................................................. r
          ===> [goto esi2]

>testwhy<  IF PAY NONE OF THE COST FROM  R4 SURVEY [I.E., PREMIUM
           CONTRIBUTION =0] THEN GOTO END, ELSE GOTO WHY

>why<      (Have you/Has POLICYHOLDER) ever paid any of the premium or cost for
           coverage through [EMPLOYER NAMED IN b2611]?

               YES..........................................................................1
               NO ...........................................................................0  [goto end]

               DON'T KNOW ...........................................................d
               REFUSED ................................................................. r
          ===> [goto why2]

>why2<     When (did you/did POLICYHOLDER) stop paying for the premium or cost of
           coverage for this plan?

               BEFORE JANUARY 2003…………………………….0
               JANUARY ..................................................................1
               FEBRUARY................................................................2
               MARCH......................................................................3
               APRIL.........................................................................4
               MAY ..........................................................................5
               JUNE..........................................................................6
               JULY  ........................................................................7
               AUGUST ...................................................................8
               SEPTEMBER .............................................................9
               OCTOBER .................................................................10
               NOVEMBER................................................................11
               DECEMBER...............................................................12

               DON'T KNOW ...........................................................d
               REFUSED ................................................................. r
          ===> [goto end]

>esi2<        How much is taken out of (your/POLICYHOLDER's) paycheck for health
              insurance premiums for this plan?

              PROBES:  These premium deductions can often be found on a paystub under
              deductions, withholding, adjustments, pre-tax or before tax, or taxes.  They might
              be referred to as health plan, medical coverage, the specific name of your plan,
              HMO, medical insurance co-pay, or something with the number 125.


                  $|___|___|___|___|
                  $(0-9997)

                  DON'T KNOW ..............................................................d
                  REFUSED ................................................................. r
                  ===>

>esi3<        How often (are you/is POLICY HOLDER) paid?

                  EVERY WEEK ............................................................1
                  EVERY OTHER WEEK................................................2
                  TWICE A MONTH .....................................................3
                  ONCE A MONTH .....................................................4
                  OTHER (specify) .......................................................0

                  DON'T KNOW ..........................................................d
                  REFUSED ................................................................. r
                  ===>

>esi4<        Sometimes health insurance premiums are deducted only once or twice a month.
              Are health insurance premiums for this plan taken out of each pay check?

                  YES........................................................................1
                  NO ........................................................................0  [goto esi5]

                  DON'T KNOW ..........................................................d
                  REFUSED ................................................................. r
                  ===> [goto change5m]

>esi5<        How  often are these health insurance premiums taken out of each pay check?

                  EVERY WEEK ............................................................1
                  EVERY OTHER WEEK................................................2
                  TWICE A MONTH .....................................................3
                  ONCE A MONTH .....................................................4
                  OTHER (specify) .......................................................0

                  DON'T KNOW ..........................................................d
                  REFUSED ................................................................. r
                  ===>

>change5m< The amount people pay for health insurance coverage often changes each year. Do you happen to know the last time the amount (you pay/POLICYHOLDER pays) for this health insurance policy changed?

RECORD MONTH HERE AND YEAR ON NEXT SCREEN:

HAS NOT CHANGED ..........................................0 [goto end]

JANUARY ...................................................................1
FEBRUARY................................................................2
MARCH.....................................................................3
APRIL........................................................................4
MAY ..........................................................................5
JUNE.........................................................................6
JULY .........................................................................7
AUGUST ...................................................................8
SEPTEMBER .............................................................9
OCTOBER ...............................................................10
NOVEMBER.............................................................11
DECEMBER.............................................................12

DON'T KNOW ...........................................................d
REFUSED................................................................ r
===>

>change5y< RECORD YEAR:

BEFORE 2003 ...........................................................1
2003..........................................................................2

DON'T KNOW ...........................................................d
REFUSED................................................................ r
===>

>TEST4< IF CHANGE5Y=1 OR (CHANGE5Y=2 AND CHANGE5M<=INTMONTH) THEN GOTO END.

IF CHANGE SINCE INTERVIEW (CHANGE5Y=2 AND CHANGE5M>INTMONTH) THEN GOTO OLDPREM

[PRELOAD PREMIUM FROM ORIGINAL INTERVIEW]

>oldprem< When we interviewed your family in [INTDATE], the premium recorded at that time for this plan was [PREMIUM]. Does that amount sound correct to you?

YES, SOUNDS ABOUT RIGHT...................................1
NO ............................................................................0

DON'T KNOW ...........................................................d
REFUSED................................................................ r
===> [goto end]

B.11

**INDIVIDUALLY PURCHASED (NON-GROUP) PLANS**

Moved to be parallel to ESI plans.

>ichange2<    (Are you/Is POLICYHOLDER) still covered by (VERBATIM PLAN NAME), a
health insurance plan that (you/he/she) bought on (your/his/her) own?

INTERVIEWER:  IF R DOESN'T KNOW,  DETERMINE IF SOMEONE ELSE IS
MORE KNOWLEDGEABLE ABOUT HEALTH INSURANCE COVERAGE.

YES..........................................................................1  [goto ichange3a]
NO ...........................................................................0
NEVER COVERED .....................................................n

REFUSED ................................................................. r
===> [goto ineligible]

>ichange3a<   Have any family members been added to this health insurance policy since we
last interviewed your family in (INTERVIEW MONTH)?

PROBE:  (Your/POLICYHOLDER's) (VERBATIM PLAN NAME) plan.

YES..........................................................................1
NO ...........................................................................0
DON'T KNOW ...........................................................d
REFUSED ................................................................. r
===>

>ichange3b<   Have any family members been dropped from this health insurance policy or
taken off of it since we last interviewed your family in (INTERVIEW MONTH)?

PROBE:  (Your/POLICYHOLDER's) (VERBATIM PLAN NAME) plan.

YES..........................................................................1
NO ...........................................................................0

DON'T KNOW ...........................................................d
REFUSED ................................................................. r
===>

>test5<

IF ICHANGE3A=0 AND ICHANGE3B=0 THEN GOTO INDIV1.
OTHERWISE, GOTO ICHANGE3C.

>ichange3c<   Did the [addition][and][deletion] of persons covered by this policy
[increase][or][decrease] your premium?

B.12

USE "addition" AND "increase" IF CHANGE3A=1, d, r. USE "deletion" AND "decrease" IF CHANGE3B=1, d, r. USE "and" AND "or" IF BOTH ARE TRUE.
PROBE: (Your/POLICYHOLDER's) (VERBATIM PLAN NAME) plan.

```
YES.............................................................................1  [goto ineligible]
NO ..............................................................................0
DON'T KNOW ............................................................d
REFUSED ................................................................. r
===>
```

>indiv1<      I would like to ask you some questions about how much you pay for the health insurance plan (you/POLICYHOLDER) bought on (your/his/her) own. These questions will be easy to answer if you have your most recent bill from (VERBATIM PLAN NAME). I can hold on while you go and get it.

              PROBE IF NO BILL AVAILABLE: Do you have a cancelled check or a notation in your checkbook that you could reference instead?

              PROBE: I can call you back when you have your bill to look at. Would it be more convenient for me to call you at home or at the office? SCHEDULE CALL BACK, RECORD NEW NUMBER IN NOTES

```
HAS BILL, CONTINUE ..................................................1
CALLBACK ................................................................. c  [goto cback]
REFUSAL ....................................................... r  [goto refusal]
===>
```

>indiv2<      How often (do you/does POLICYHOLDER) pay the insurance premium for this policy?

              INTERVIEWER: CODE TIME PERIOD.

```
ONCE A MONTH ..........................................................1
EVERY TWO MONTHS ...............................................2
FOUR TIMES A YEAR .................................................3
TWICE A YEAR ...........................................................4
ONCE A YEAR.............................................................5
OTHER [specify] .........................................................0

DON'T KNOW ............................................................d
REFUSED .................................................................. r
===>
```

>indiv3<      How much (do you/does POLICYHOLDER) pay each time?

```
$|___|___|___|___|
$(10-9997)

DON'T KNOW ............................................................d
REFUSED .................................................................. r
===>
```

>iChange5m< The amount people pay for health insurance coverage often changes each year. Do you happen to know the last time the amount (you pay/POLICYHOLDER pays) for this health insurance policy changed?

RECORD MONTH HERE AND YEAR ON NEXT SCREEN:

HAS NOT CHANGED ..........................................0 [goto end]

JANUARY ....................................................................1
FEBRUARY.................................................................2
MARCH.......................................................................3
APRIL..........................................................................4
MAY ...........................................................................5
JUNE...........................................................................6
JULY ..........................................................................7
AUGUST .....................................................................8
SEPTEMBER ..............................................................9
OCTOBER ................................................................10
NOVEMBER..............................................................11
DECEMBER..............................................................12

DON'T KNOW ............................................................d
REFUSED .................................................................. r
===>

>iChange5y<  RECORD YEAR:

BEFORE 2003 ...........................................................1
2003..........................................................................2

DON'T KNOW ............................................................d
REFUSED .................................................................. r
===>

>TEST6<      IF iCHANGE5Y=1 OR (iCHANGE5Y=2 AND iCHANGE5M<=INTMONTH) THEN GOTO END.
IF CHANGE SINCE INTERVIEW (iCHANGE5Y=2 AND iCHANGE5M>INTMONTH) THEN GOTO iOLDPREM

[PRELOAD PREMIUM FROM ORIGINAL INTERVIEW]

>iOLDPREM< When we interviewed your family in [INTDATE], the premium recorded at that time for this plan was [PREMIUM].  Does that amount sound correct to you?

YES, SOUNDS ABOUT RIGHT.................................. 1
NO ..............................................................................0

DON'T KNOW ............................................................d
REFUSED .................................................................. r

B.14

>END<    IF THERE WAS MORE THAN ONE PRIVATE PLAN PER FAMILY, GO BACK TO ">POLICY<" UNTIL HAVE ASKED ABOUT ALL PLANS.

OTHERWISE:  Those are all the questions I have.  Thank you very much for helping us.

**APPENDIX C**

**VARIABLES INCLUDED IN THE VALIDATION**

# VARIABLES INCLUDED IN THE VALIDATION

- HHESIPMU—household ESI annual premium contribution (unedited)

- HHESIPME—household ESI annual premium contribution(edited)

- VESIPM—validation ESI annual premium contribution

- HHINDPMU—household non-group annual premium (unedited)

- HHINDPME—household non-group annual premium (edited)

- VINDPM—validation non-group annual premium

- PCHANGE—whether there was a change in insurer, employer, or family coverage since the household survey (In multi-policy families, it was possible to have both validated and ineligible policies.)

- RESPPH—whether the family informant was the policy holder

- POLNUM—number of private health insurance policies in the family

- UNION1—whether ESI plan is provided through employer or union

- UNION2—whether the premium contribution is take out of the pay check or union dues

- PAYSTUB—whether used pay stub

- CAF1—whether has cafeteria plan

- CAF2A—whether flexible benefit credits covers the full cost of health insurance premiums

- ESI1—whether pays all, some, or none of ESI premium

- OLDPREM (for ESI policies in new enrollment period)—whether household survey amount is correct

- IOLDPREM—(for non-group policies in new enrollment period)—whether household survey amount is correct

- RACEETH—composite variable including family informant's race and whether or not Hispanic

- SEX—family informant's gender

- FAMINC—family income

- PINDEX—poverty index

- SITE—CTS site

- AGE1—family informant's age

- HIGRAD—family informant's highest grade completed