Technical Appendix:
March 2012 CPS Auxiliary Data

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OVERVIEW OF THE 2012 CPS AUXILIARY DATA

The March Annual Social and Economic Supplement to the Current Population Survey (March CPS) is the data source most often used for estimating health insurance coverage in the U.S. population. There are, however, several important characteristics of health insurance that are not captured by the survey but which are particularly relevant to employer sponsored insurance (ESI) coverage. To address these limitations, the U.S. Department of Labor (DOL) Employee Benefits Security Administration (EBSA) has produced an auxiliary data file which contains recoded and imputed employment and health insurance variables, and an annual bulletin with summary tables based on the enhanced data.

As part of the process in creating the March 2012 Auxiliary Data, we have updated our data sources to reflect the newest available information. This document describes the current imputations and edits performed in order to provide estimates of employer sponsored insurance in detail for calendar year (CY) 2011.

The imputations performed can be broken down into two main categories: those dealing with access to coverage and those that describe the coverage in detail. Access to coverage includes whether an employer provides coverage as well as details about that employer such as size (number of employees) and sector. Coverage characteristics include funding and plan type and estimates of retiree and COBRA coverage. Starting with CY 2010, a variable for actuarial value, which represents the average value of an active employer sponsored health insurance plan, has also been imputed to active employees with health insurance in their own name.

In general, insurance and employment characteristics were imputed to employees as well as to other persons with employer sponsored insurance coverage in their own name. ESI dependents were given the characteristics of their primary policyholder (when that person could be found). Links for up to two policyholders were maintained for each dependent on the March CPS file so that characteristics of the secondary coverage could also be identified. One policyholder link was maintained for ESI policyholders who were also dependents.

As mentioned above, our starting data set was the March 2012 Annual Social and Economic Supplement (ASEC) to the CPS. The following enhancements were then made:

- Source of coverage, employer offers of coverage: While the March CPS asks whether insurance coverage is provided by an employer, it does not distinguish whether this coverage is from a current or former employer. The Medical Expenditure Panel Survey Household Component (MEPS-HC) provided data on whether ESI coverage was from a current or former employer and for workers whether health insurance was offered to them by their current employer. This data was the basis of our imputations and was taken from the survey years 2008 through 2010.

- Sector and size providing coverage: For persons with coverage from a former employer, it was necessary to impute both sector and size of the employer providing the coverage. This was done using the most recent three years of data (2009-2011) from the Medical

Expenditure Panel Survey Insurance Component (MEPS-IC), as provided by the Agency for Healthcare Research and Quality (AHRQ).

- Funding status, plan type and COBRA/retiree partition: Data from the MEPS-IC from 2009 through 2011, along with partitions and trends from the Kaiser/HRET Employer Health Benefits Surveys (2005 through 2011) were used to impute funding status and type of coverage for those with ESI as well to partition coverage from a former employer into retiree and COBRA.

- Federal estimates: Data, by type of plan, from the Office of Personnel Management (OPM) on employees (postal and non-postal), dependents and annuitants covered under the Federal Employees Health Benefits Program (FEHBP) was used to provide estimates at the Federal level.

- Actuarial values: Analysis done for DOL/EBSA using the National Compensation Survey (2005) was used with calculated plan values from the Kaiser/HRET Employer Health Benefits Surveys in order to impute preliminary actuarial values onto active policyholder records.

- Health spending: CPS variables on out of pocket spending and person-paid health insurance premiums had been introduced on the March 2011 CPS. After examination and comparison to other data sources, it was decided to include the former in the March 2012 Auxiliary Data and the current Health Insurance Coverage Bulletin.

These enhancements were implemented in the 11 steps that are detailed below:

Step 1: Imputing coverage from a current versus former employer

The March CPS captures whether insurance coverage is provided by an employer, but not whether the coverage is from the policyholder's current or former employer. To impute the employer status, MEPS-HC 2008-2010 data was averaged to calculate probabilities of having coverage through a former versus a current employer. The results were enhanced with data from the 2008 through 2010 MEPS-IC, which provided counts of actives, retirees, and persons with COBRA coverage from non-Federal employers. Data from the FEHBP was used to provide estimates at the Federal level.

All March CPS records were initially checked to see if current versus former employer status could be determined with certainty. That is, if a person did not work at all during a year but had ESI in their own name, then they were assigned coverage by a former employer. For all others, it was necessary to impute the source of the coverage. The 2008-2010 MEPS-HC was used to calculate probabilities of having coverage through a former employer by age, work status and presence of retiree income. These relative probabilities were adjusted in order to reproduce the target likelihood of coverage being from a former employer based on the MEPS-IC.

Valid codes for status were set as:

0 = no ESI
1 = coverage through a former employer
2 = coverage through a current employer.

For CY 2011, this process resulted in 74.5 million ESI policyholders with coverage through their current employer and 13.8 million with coverage through a former employer.

As a result of the imputation, persons with ESI in their own names were assigned as follows:

Persons with ESI in Own Name
by Employment Status
(numbers in millions)

Employment Status	Number with ESI
Total	88.3
Worked in past year	**77.3**
Coverage from current employer	74.5
Coverage from former employer	2.8
Did not work in past year	**11.0**

Step 2: Imputing whether current employer offers ESI

While the March CPS captures whether individuals are covered by ESI, it does not ask if an employee is offered insurance by his or her current employer. The imputation of coverage through a current versus former employer (described in the previous step) resulted in a subset of persons who, by definition, had an employer that offered coverage.[1] For all other workers, however, it was necessary to impute whether or not their employer offered health insurance[2] and, if so, whether or not they were eligible for it.

Data from the 2008 through 2010 MEPS-HC was tabulated to calculate three year averages of offers and eligibility. These tabulations were converted to the probability of working for an offering employer and being eligible for coverage based on sector (private, Federal, and state/local), firm size (<50, 50-99, 100-499, and 500+) and hours worked (< 35 vs. 35 or more per week).

Valid codes for offer status at the person level were set to:

1 = Enrolled, coverage through current employer
2 = Employer offered, eligible, not enrolled
3 = Employer offered, not eligible, not enrolled
4 = Not offered

Once this was completed, a final recode was performed such that Federal and state sector employees could not have the offer status "not offered" but were instead recoded to "offered, not eligible."

As a result of the imputation, persons who worked were partitioned in the following manner:

Coverage of Persons Who Worked
by Employer Offer Status
(numbers in millions)

Offer Status	Workers
Total	**154.6**
Employer offers coverage	**124.0**
Employee has coverage from employer	74.5
Employee offered (eligible), not enrolled	30.2
Employee not offered (not eligible), not enrolled	19.3
Employer does NOT offer coverage	**30.6**

[1] These were workers with coverage from their current employer.
[2] An employer is considered to offer coverage if it offers coverage to any employee, even if a specific employee is not offered the coverage due to eligibility issues.

Step 3: Imputing the sector that provides coverage

Given that the CPS provides information on current (March and past year) employment status, but not former employment, it was necessary to impute both sector and size of employers that provided coverage for those who had health insurance from a former employer. For those individuals who received pension or survivor's payments as reported in the March CPS, we used the sector of the employer that provided the payments to represent the sector providing insurance coverage. For those policyholders without such payments, the sector providing coverage was based on geography (state) and age of policyholder (under 55, 55-64 and 65+). We used data from the 2008 through 2010 MEPS-HC as well as the 2009 through 2011 MEPS-IC surveys and 2011 FEHBP data to determine target probabilities by these dimensions.

For dependents, the sector of the primary policyholder was used to determine where coverage was likely to have come from. For those few dependents without a link to a policyholder record, their own demographic characteristics (age, presence of survivor's income) were used to determine the sector providing coverage.

As a result of the imputations, persons were assigned to sectors in the following manner:

Coverage of all Persons with ESI
by ESI Status and Sector
(numbers in millions)

ESI Status	Sector	Number with ESI
ESI In Own Name	Total	**88.3**
	Private Sector	66.2
	Current Employer	58.9
	Former Employer	7.3
	Public Sector	22.2
	Current Employer	15.6
	Former Employer	6.5
ESI as Dependents	Total	**81.8**
	Private Sector	63.0
	Current Employer	59.3
	Former Employer	3.7
	Public Sector	18.8
	Current Employer	16.2
	Former Employer	2.6

Step 4: Imputing the size of employer that provides coverage

The March CPS provides information on current employer size. This means that for those individuals covered by a former employer, the size of the employer providing the health insurance had to be imputed. This imputation was done in a similar manner as the sector imputation.

The first step had all those with sector equal to either state or Federal government assigned the largest CPS size category (1,000+). Next, all other persons were assigned a size based on state, age (under 55, 55 to 64, or 65+) and sector. As with sector, data from the MEPS-IC was the primary source. If a policyholder was not found, person characteristics of the dependent were used instead. Dimensions were essentially the same as those used for the policyholder imputation, except that the age category for dependents included younger groupings.

As a result of the imputations, persons were assigned to size categories as summarized below:

Coverage of all Persons with ESI
by ESI Status and Employer Size
(numbers in millions)

ESI Status	Size	Number with ESI
ESI In Own Name	Total	**88.3**
	Employer Size < 100	20.3
	Current Employer	19.8
	Former Employer	0.5
	Employer Size 100+	68.0
	Current Employer	54.7
	Former Employer	13.3
ESI as Dependents	Total	**81.8**
	Employer Size < 100	18.1
	Current Employer	17.9
	Former Employer	0.2
	Employer Size 100+	63.6
	Current Employer	57.6
	Former Employer	6.0

Step 5: Imputing whether coverage was fully-insured or self-insured

The March CPS contains no information about the health insurance plans held by survey respondents. One of the characteristics of health insurance plans is funding status: whether an employer sponsored insurance plan is fully-insured (the employer contracts with another organization to assume financial responsibility for the enrollees' medical claims and administrative costs) or self-insured (the employer assumes some or all of these costs directly), All the information on plan funding for individuals with ESI has been imputed for the Bulletin as part of the Auxiliary Data.

Data on funding status, as well as plan type, for persons in non-Federal plans was obtained from tabulations of the 2009 through 2011 MEPS-IC files provided by AHRQ. Data was presented at the state (or geographic region) level for each year, and while there were some variations over the period, the relative values of each state versus the country as a whole were consistent. In addition to the MEPS-IC information, we also looked at the Kaiser/HRET surveys, through 2011, to determine appropriate penetration levels of self-insurance by size of employer.

The 2011 MEPS-IC levels of self-insurance were used by sector (private vs. state/local) along with the three year state averages to determine state specific targets for persons with ESI. All persons enrolled in Federal plans were assumed to be in fully-insured plans.

As a result of the imputation, persons were assigned funding status as follows:

Funding Status:
Self- vs. Fully-Insured
(numbers in millions)

Funding Status	Number with ESI
Total	**170.1**
Self-Insured	92.5
Fully-Insured	77.6

Step 6: Imputing type of plan

As noted in the prior step, the March CPS does not contain information on the details of the health plan an individual is enrolled in. As with plan funding, all details on the type of plan held by a person were imputed for those covered by ESI. Prevalence of coverage by plan type (HMO, PPO, POS, or high deductible plan (HDED)) was based on data from the 2011 MEPS-IC and the 2011 Kaiser/HRET survey. This data was presented by funding status (self-insured vs. fully-insured) and geography.[3] Imputations were done by these dimensions as well as by size of employer.

For Federal plans, the allocation was based on actual FEHBP data from 2011 as obtained from the Office of Personnel Management. The data was given for employees (postal vs. other), annuitants (retirees) and dependents by plan type (HMO vs. PPO).

As a result of the imputation, persons were assigned plan types as follows:

Persons with ESI
by Funding Status and Type of Plan
(numbers in millions)

Funding Status	Total	HMO	PPO	POS	HDED
Total	**170.1**	**30.8**	**97.9**	**14.5**	**26.8**
In Self-Insured Plans	92.5	10.2	63.3	3.8	15.2
In Fully-Insured Plans	77.6	20.6	34.6	10.7	11.6

[3] Three years of non-published MEPS-IC data provided by AHRQ were averaged to obtain target percentages by plan type for each state. When smaller sample sizes were an issue on the MEPS-IC, three years of data by geographic region, rather than state, were used.

Step 7: Imputing the partition of COBRA versus retiree coverage

The March CPS does not distinguish between ESI coverage provided by a current or former employer, and it lacks information on whether coverage by a former employer is retiree coverage or COBRA. As this information has become increasingly important to DOL, the partition into retiree vs. COBRA has been imputed for the Bulletin as part of the Auxiliary Data.

Our 2011 "target" counts of persons with either COBRA or retiree coverage was obtained from AHRQ, based on the 2011 MEPS-IC, and from OPM data for the Federal Employees Health Benefits Program (FEHBP). Partitioning persons assigned with coverage from a former employee into retiree or COBRA coverage was based on person characteristics, using the CPS data itself as well as data from the MEPS-HC.

In general, policyholders were allocated first, with their dependents allocated according to policyholder characteristics. Dependents without policyholders (usually those with coverage from outside the household) were partitioned into retiree or COBRA coverage based on their own characteristics. In our allocation, the following March CPS characteristics were used: age, presence of pension income, sector providing coverage, and amount paid by employer towards coverage.

Age groups used were as follows: under 55, 55 to 64 and 65+. Presence of pension income was based on the March CPS variable "source of retiree income" (or survivor's income, if a dependent), with this income assumed to be pension related if the source was either company or union pension, Federal government retirement, state or local government retirement, or U.S. railroad retirement. The amount paid by an employer towards coverage is captured by the March CPS and includes the following categories: unknown,[4] all, some, or none.

Some persons were assigned to either COBRA or retiree with "certainty" (that is, person level characteristics alone determined the type of coverage held), while others were assigned based on the likelihood of coverage being either COBRA or retiree along with the desired total counts of each type of coverage.

The allocation rules and guidelines for assigning individuals to "retiree" or "COBRA" coverage are listed below, based on whether there was certainty or probability involved.

If there was pension income present, status was decided with certainty as follows:

- If person had pension (or survivor's) income and coverage was from public sector, then coverage was deemed retiree.

- If person had pension (or survivor's) income and coverage was from private sector and employer payment was anything (including unknown) except "none," then coverage was deemed retiree.

[4] This includes "not in universe" for those policyholders found through either the "other coverage" questions or the verification questions.

- If person was under 65, and had pension (or survivor's) income, coverage from private sector, and employer payment was "none," then coverage was deemed "COBRA."

- If person was aged 65 or over, though, coverage was deemed retiree.

If no pension (or survivor's) income was present, then the partition between retiree and COBRA was determined as follows:

- The count of persons allocated to retiree or COBRA coverage based on presence of pension income was subtracted from the target counts of retiree and COBRA persons by sector and age.

- Data from the MEPS-HC and MEPS-IC were used to develop probabilities of retiree vs. COBRA coverage for this remaining group by age, employer payment and sector (for private, state and local coverage); while FEHBP data was used to determine the probability of retiree coverage for Federal covered persons.

- Persons age 66 and older who had Medicare were assigned to retiree coverage, while persons aged 65 were permitted to be assigned COBRA as part of the transition to Medicare.

As a result of the COBRA and retiree assignments, persons with coverage from a former employer (policyholders and dependents combined) were partitioned as follows:

Coverage of Persons with ESI from a Former Employer

by Age, Sector and Retiree vs. COBRA

(numbers in millions)

Age	Sector	Total ESI
Under Age 55	Total	**6.4**
	Private Sector	4.3
	Retiree Coverage	0.9
	COBRA Coverage	3.4
	Public Sector	2.1
	Retiree Coverage	1.6
	COBRA Coverage	0.5
Aged 55-64	Total	**4.2**
	Private Sector	2.0
	Retiree Coverage	1.5
	COBRA Coverage	0.5
	Public Sector	2.3
	Retiree Coverage	2.2
	COBRA Coverage	0.1
Aged 65+	Total	**9.4**
	Private Sector	4.7
	Retiree Coverage	4.6
	COBRA Coverage	0.1
	Public Sector	4.7
	Retiree Coverage	4.7
	COBRA Coverage	0.0

As with the March 2011 CPS, the March 2012 CPS showed increases in the CPS non-working ESI population. In addition, this year's updated MEPS-IC target shows a smaller percentage of ESI policy holders covered by a former employer. This combination resulted in a substantially decreased working ESI population covered by a former employer due to the fact that non-workers are assigned to "former employer" with certainty, and we can only change the target percentage of workers assigned to this category.

Step 8: Editing and imputing employer size for current workers

The March CPS contains an interval variable for size of employer for longest job held during the year. While this variable refers to firm size rather than the establishment or location the employee works at, tabulations suggested that not all respondents answer appropriately. While it was not possible to infer whether responses by workers in the private sector included all employer locations when determining their employer size, it was assumed that persons working for a state or the Federal government should fall into the largest employer size category. Responses were edited accordingly.

Starting with the March 2011 CPS, Census revised the employer size categories so that there were partitions at 10, 50 and 100 whereas there had previously been partitions at 10, 25 and 100. Although we have modified our analysis to use these new size categories, it also became necessary to include an additional partition at size 20 in order to determine Medicare secondary payer splits. Data from the three most current MEPS-HC files was used in order to determine the likely location of this partition for full time and part time workers.

Step 9: Imputing Medicare Secondary Payer (MSP)

When assigning primary coverage to individuals with more than one source of coverage during the year, the Bulletin ranks employer sponsored insurance (ESI) generally above all other sources. However, when a person has both Medicare and ESI, this is not always the case. Under Medicare rules, non-workers (retirees) with ESI always have Medicare as the primary payer. For workers, the primary payer for an individual with both sources of coverage depends on the size of the employer and whether the individual qualifies for Medicare due to age or disability. Since the March CPS does not ask individuals with multiple sources of coverage which of these two types of insurance is the primary payer, this variable had to be imputed for persons with ESI and Medicare.

In accordance with Medicare rules: For active employees (and their dependents) a determination of primary payer depends on age and employer size. For workers or their spouses who are age 65 or over, ESI is the primary payer if the employer size is 20 or more (and Medicare is the Secondary Payer (MSP)), while for those younger than 65, ESI is the primary payer if the employer size is 100 or more (and Medicare is the Secondary Payer (MSP)). For those workers with employer size of fewer than 20 or 100 respectively, Medicare is the primary payer.

As noted in the prior step, the March CPS does not have an employer size split at 20, but rather a category for size 10 to 49; and, thus, we have used partitions based on the MEPS-HC to determine probabilities for persons in this size group to be randomly assigned to employer size under 20 or size 20 or greater.[5] For dependents with coverage from both Medicare and ESI, the dependent's age is used, but the size category is obtained from the policyholder providing coverage. A variable has been included in the Auxiliary Data file for all persons with both ESI and Medicare in order to indicate primary payer.

As a result of the MSP imputation, we have the following coverage distribution:

Medicare Secondary Payer Coverage
By Age
(numbers in millions)

Age	MSP Status	Total ESI
Age under 65	**Total**	**1.5**
	Medicare Primary	1.0
	Medicare Secondary	0.6
Ages 65 and over	**Total**	**12.2**
	Medicare Primary	9.8
	Medicare Secondary	2.4

[5] We have made this assumption only for the determination of MSP coverage.

Step 10: Imputing preliminary actuarial values (AVs)

While the March CPS has begun collecting limited data on the cost of health insurance and annual medical expenditures, it does not collect the information required to determine the "actuarial value" of an individual's health insurance plan. "Actuarial value," or AV, represents the fraction of covered medical expenses paid for by a health insurance plan, calculated as an average over a standard population. Two variables which represent the average value of an active employer sponsored health insurance plan have been imputed to active employees with health insurance in their own name and are included in the Auxiliary Data.

The starting point for the imputation of actuarial value was the 2005 National Compensation Survey (NCS). Actuarial Research Corporation calculated actuarial values for the private sector plans based on the plan specifications (cost sharing and covered services) provided in this survey, and presented the distributional results by plan type, funding and employer size.

In order for these actuarial values to be relevant for plans in CY 2011, plan level detail from the 2006 through 2011 Kaiser/HRET Employer Health Benefits Surveys was used to calculate actuarial values for 2006 and 2011 as well as to explore changes in plan details and coverage parameters over time. Three main differences between the NCS data and the Kaiser/HRET data were: (a) the Kaiser/HRET surveys highlighted the transition over time away from fee-for-service (FFS) plans and their replacement by high deductible (HDED) plans, (b) the NCS analysis combined PPO and POS categories while there were separate categories in the Kaiser/HRET data and (c) the Kaiser/HRET survey contained plans for both the public and private sectors, while the NCS data was for the private sector only.

Average actuarial values, as well as prevalence by type of plan and source of funding, have shifted over the time period from 2005 to 2011, but the shape of the AV distributions (as calculated from the NCS data) were preserved within cell. What this means is that for each combination of sector (private vs. public), plan type and funding method, the shape of the NCS actuarial value distribution was maintained while the average values reflected our best estimates for 2011. These averages were imputed onto the Auxiliary Data as the "cell based actuarial value" and, while useful at the aggregate level, are not helpful for distributional analysis. The second "plan-specific actuarial value" variable was imputed from the Kaiser/HRET NCS-adjusted plan records using a plan to person record-by-record match prioritized by size. It is this variable that reflects the NCS distribution within plan type.

The resulting average actuarial values are shown in the table below:

Average Actuarial Values for Persons with Active ESI in Own Name
by Sector and Type of Plan

Sector	Total	HMO	PPO	POS	HDED
Private Sector Plans	0.8534	0.8917	0.8587	0.8815	0.7875
Public Sector Plans	0.8826	0.9293	0.8792	0.8580	0.8027

Step 11: Examining CPS variables on health spending

Starting with the March 2011 CPS, Census now includes information on health insurance premiums as well as out of pocket spending for both over the counter purchases (POTC-VAL) and medical care and equipment (PMED-VAL).

Tabulations of the person's share of health insurance premiums, by age and insurance status, yielded what appeared to be inconsistencies in the presence of dollars for persons without private health insurance. Upon further reading of the CPS question, it was determined that the wording was sufficiently vague as not to guarantee the values truly represented premium dollars as we would define them. Limiting our focus to persons with either ESI or individual (other private) insurance (OPHI) still resulted in inconsistencies with estimates from other data sources such as the MEPS-IC and the AHIP survey of individual insurance coverage. Issues included single/family premium ratios and missing values for covered persons. The decision was made to not include the person's share of health insurance premiums on the March 2012 Auxiliary Data set or in the 2013 summer Health Bulletin.

Levels of out of pocket spending were, however, compatible with estimates from the MEPS-HC by age and insurance status. In addition, we examined the distribution of spending for those with spending and found these distributions to be robust at both the high and low ends, and we have included the CPS estimates of out of pocket spending on the March 2012 Auxiliary Data set and tables. The out of pocket variable included in the Auxiliary Data is the sum of the two CPS variables (over the counter purchases and medical care). No edits or imputations beyond this summation were performed on the CPS values.

Mean Out of Pocket Spending
by hierarchical insurance

Insurance	Counts (millions)	Mean OOP
Total Population	308.8	$ 730
Insured	260.2	$ 777
ESI		
Policyholder	79.9	$ 940
Dependent	79.5	$ 635
Medicare	44.0	$ 1,248
OPHI		
Policyholder	7.5	$ 1,156
Dependent	9.5	$ 626
Other Public	39.9	$ 181
Uninsured	48.6	$ 478

REVISIONS TO THE MARCH CPS AND OUR METHODOLOGY:

Last year, health insurance reporting on the March 2011 CPS was substantially revised by Census. Those revisions included a new imputation routine for health insurance coverage, Medicaid being assigned to foster children, the allowing of hot-decking of household dependents rather than only the nuclear family and the correction of a coding error. The Census Bureau re-released prior years to be consistent with the 2011 revisions. For a full description of these changes, please see the working paper by Michel Boudreaux and Joanna Turner on the Census website.[6]

In mid-2012, weights for the March 2011 CPS file were revised and released to be consistent with the 2010 Census. Previous years (and the previous Auxiliary Data file weights) had been based on the 2000 Census. These revisions by Census to the March CPS make estimates from the current two models (March 2011 and March 2012) incompatible with those from prior years. Therefore, these earlier versions should not be used to make historical comparisons with earlier data provided by EBSA.

Each year's dataset and tables are based on the most current March CPS, and revisions are introduced in order to make sure that all imputations are based on the most recently available data. Earlier incarnations of the March CPS based model remain as the basis for the current Auxiliary Data, with the March 2011 Auxiliary Data as the main starting point for this year's analysis. Revisions to the March 2011 Auxiliary Data had included moving away from use of the Survey of Income and Program Participation (SIPP) as a data source for imputing union coverage and adding a variable for the actuarial value of health insurance plans for active policyholders. The March 2011 Auxiliary Data was the first to make use of the actuarial value variable, and several revisions to the calculation resulted in values for the current version that are not directly comparable to those from last year. The revisions included updated plan data (moving to the 2011 KFF/HRET Survey), updated private insurance benchmark of underlying expenses (based on updated CMS projections) and revisions to the program used to calculate the actuarial values. In addition, this year's data has removed estimates of union coverage in anticipation of revisions to be made in both source data and methodology. Finally, this year's data includes a summary of the CPS variables on out of pocket expenditures for all persons.

[6] "Modifications to the Imputation Routine for Health Insurance in the CPS ASEC: Description and Evaluation," September 2011, Revised: December 2011, *http://www.census.gov/hhes/www/hlthins/data/revhlth/SHADAC.pdf.*