

## TECHNICAL MEMO

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**RE:** Comparing Results from the March 2014 (CY 13) and March 2015 (CY14) Auxiliary Data

In the fall of 2014, Census released its Annual Social and Economic Supplement (ASEC) to the Current Population Survey (CPS). The ASEC, also known as the March 2014 CPS, incorporated a new series of health insurance questions that would serve as the baseline for the coming changes in insurance under the Affordable Care Act (ACA). In addition, the 2014 ASEC was released as a split file, with one portion asked the historical income questions and a second portion, released later, asked new questions for better reporting. Both segments contained the new health insurance questions. What this change meant was that the March 2014 ASEC was not compatible with prior years for estimates of health insurance coverage.

With the release of the March 2015 ASEC, there are now two years of CPS data for examining changes in insurance status over the time period when ACA took effect. Our goal was to make sure that the work done for the 2014 Auxiliary Data would be compatible with the 2015 Auxiliary Data so that we could look at these effects as part of the CPS Auxiliary data Project. This involved incorporating any changes to the survey that were not originally released as well as any changes / improvements in our methodology. The main change to the survey, that was not initially released but now exists for both March 2014 and March 2015 concerns a clarification to the source of insurance coverage from outside the household. The main improvement to our methodology is in the calculation of actuarial values for employer sponsored health plans.

Once these two areas were addressed, we were then able to look at a subset of the tables from the upcoming Health Bulletin, and examine how the estimates had changed from the prior year. It should be noted that the two-year tables are not directly compatible with last year's Health Bulletin or Auxiliary Data, but do instead point to actual changes on a consistent basis from CY 2013 to CY 2014. Details of all three areas (survey changes, methodological improvements, tables compared) are discussed below.

### Adjustments for Survey Changes:

Since many of the changes to the March 2014 were not released with the original dataset in September of 2014, they were not incorporated in the original Auxiliary Data for that year. The main data item that has been released, for both the March 2014 and March 2015 surveys, is OUTTYP, which seeks to clarify insurance coverage from outside the household, and results in a reclassification of insurance coverage for approximately 7 million persons (weighted) in the March 2014 data.

In the fall of 2015, Census released OUTTYP for both 2014 and 2015 ASEC, and it was incorporated in the 2015 Auxiliary Data. Adjusting the 2014 ASEC (and thus the March 2014 Auxiliary Data) to incorporate OUTTYP shifted insurance coverage for approximately 7 million people. Once OUTTYP was incorporated into the insurance definitions in the Auxiliary Data, and in order to be able to compare insurance over the 2 years, ARC adjusted certain variables on the 2014 Auxiliary Data file. These flags included both insurance coverage flags as well as employer sponsored insurance (ESI) specific flags such as sector and

size of employer offering coverage, plan type, funding, current versus prior coverage (COBRA or retiree), union, and whether Medicare is a secondary payer.

ARC identified 5 groups with shifting insurance coverage:

1. 492 records, representing 1.28 million persons, shifted from ESIPH to ESIPH and ESIDEP;
2. 85 records, representing 0.16 million persons, shifted from ESIDEP to OPHIDEP;
3. 96 records, representing 0.21 million persons, shifted from OPHIPH and OPHIDEP to OPHIPH and ESIDEP;
4. 2,202 records, representing 5.48 million persons, shifted from OPHIDEP to ESIDEP; and
5. 2 records, representing 0.004 million persons, shifted from OPHIDEP to other insurance.

Our first step was to change the insurance flags on the Auxiliary data file to reflect these shifts. In addition, the variables PHLINE and PH2LINE, which link to policy holder records, were not valid for these records as the ASEC does not contain a policyholder link for those with coverage from outside of the household. The first group kept their ESI policy holder coverage and added coverage as a dependent from outside the household. Due to their policy holder status, the main variables imputed already existed for these records and so no other changes were made. For the group that moved from ESI based coverage to other private as a dependent (group 2), the ESI based flags were zeroed out (NEWSECTOR, NEWSIZE, EEPRIOR, SIFLAG, HMOFLAG, RETFLAG, EEUNION). Group 5 needed no changes to be made beyond the insurance flags, as they did not have, nor did they gain, ESI.

Groups 3 and 4, however, involved adding employer sponsored coverage as a dependent when no prior ESI coverage existed. Since these people were not previously coded as having ESI, imputations for most of the added ESI variables were necessary. These imputations were based on the characteristics of the dependent, as there was no policyholder record to link to. These variables were imputed as follows:

- Size (NEWSIZE) and sector (NEWSECTOR) of the employer who provided health insurance were the first variables to be imputed, and used the same method as for the original full file. Each person record was checked for the presence of survivor's income and if it was present, NEWSECTOR was assigned consistent with the income source. This subset was also assigned prior employer coverage (EEPRIOR) with certainty. For all other person records, the same probability matrix originally used based on attributes of policyholders covering dependents outside of the household was used including age, size and sector providing coverage.
- The second step was to assign whether coverage was from a current or prior employer (EEPRIOR), and if prior, whether the coverage was COBRA or retiree (RETFLAG). Excluding those few records, mentioned above, that were already assigned prior coverage with certainty, we used a methodology consistent with the original Auxiliary Data file<sup>1</sup>: the oldest dependent in the household was identified and assigned, then all other dependents assigned the same as the oldest. Probabilities for current versus prior coverage were based on an age, sex, size and sector of employer coverage. For those with prior coverage imputed, retiree vs. COBRA was assigned based on age and sector of employer insurance.

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<sup>1</sup> See steps 2 and 7 in "Technical Appendix: March 2014 Auxiliary Data", Cathi Callahan and Rodelle Williams, Actuarial Research Corporation, 2015.

- The next step assigned attributes of the ESI plan with respect to funding (SIFLAG) and plan type (HMOFLAG). Those receiving coverage from the Federal sector were assumed to be fully insured. All others were imputed based on a probability matrix using size and sector of employer coverage. Plan type was then assigned using probabilities based on employer size, funding, and sector. For those covered with ESI by the Federal government, only HMO and PPO were assigned.
- Finally, we imputed whether or not the dependent coverage was union based (EEUNION). Those records with coverage through self-employment in the private sector were not part of the imputation process, consistent with our universe for imputations on the Auxiliary Data. All others records were imputed based on age, employer size, sector and status (active, COBRA or retiree).

In all cases, for those with both Medicare and ESI coverage, the MSP flag was edited to indicate whether Medicare or ESI was the primary source of coverage based on age (<65 or 65+) and size of employer.

#### Adjustments for Improvements in our Methodology:

Starting with the CY 2010 Auxiliary Data, a variable for actuarial value (AV), which represents the average proportion of covered charges paid as benefits by insurance, has been imputed for active employees with health insurance in their own name. Health plan details from the relevant calendar year's Kaiser/HRET Employer Health Benefits Survey, along with prior actuarial value analysis done for EBSA using the National Compensation Survey (2005) and historical data from prior HRET surveys, were used to calculate actuarial values and impute these values onto active policyholder records. The imputations were based on plan type, funding, and employer size.

While the 2015 (CY 2014) Auxiliary Data also include a set of actuarial values in the Auxiliary dataset that are based on an ARC automation of the Minimum Value Calculator (MVC) from the Center for Consumer Information and Oversight, these MVC-AVs were not calculated for the 2014 and they do not appear in the Health Bulletin. The ARC calculated actuarial values are benchmarked to current projections for employer sponsored insurance, as reflected in the most recent National Health Accounts<sup>2</sup>. Our latest ESI benchmark, which calculates covered expenses for the under 65 populations, was used to calculate the AVs for CY 2014, as well as to recalculate those for CY 2013.

Actuarial value comparisons, as shown in the two-year table comparisons, are not compatible with those released in the Summer 2015 Health Bulletin (March 2014 with data for CY 2013), due to both refinements in estimates of health spending and in our AV calculation methodology.

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<sup>2</sup> The latest historical accounts are found here: <https://www.cms.gov/research-statistics-data-and-systems/statistics-trends-and-reports/nationalhealthexpenddata/nationalhealthaccounts/historical.html> and the latest projections are found here: <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsProjected.html>

### Comparing Coverage in CY 2014 to CY 2013:

Tables chosen included most of those found in the Health Bulletin, with the exception of those where data is shown at the state level, or the information doesn't easily lend itself to a two-year comparison.

The list of tables chosen is as follows:

- Table 1B: Health Insurance Coverage from All Sources, by Age: CY 2013 vs. CY 2014
- Table 1D: Health Insurance Coverage from Primary Source, by Age: CY 2013 vs. CY 2014
- Table 2: Insurance Coverage of Workers from Primary Source, by Employer Offers of Health Insurance and Employer Size: CY 2013 vs. CY 2014
- Table 2A: Insurance Coverage of Full Time Workers from Primary Source, by Employer Offers of Health Insurance and Employer Size: CY 2013 vs. CY 2014
- Table 2B: Insurance Coverage of Part Time Workers from Primary Source, by Employer Offers of Health Insurance and Employer Size: CY 2013 vs. CY 2014
- Table 4: All Persons with Employer Sponsored Insurance, by Policyholder Status, Sector and Size of Employer Providing Coverage: CY 2013 vs. CY 2014
- Table 6: Persons with Employer Sponsored Insurance, by Sector Providing Coverage, Funding and Union Membership: CY 2013 vs. CY 2014
- Table 7: Average Actuarial Values for Active ESI Policyholders, by Sector of Employer Providing Coverage, Funding and Plan Type: CY 2013 vs. CY 2014
- Table 8A: Mean Out of Pocket Spending, by Age and Primary Insurance: CY 2013 vs. CY 2014
- Table 8B: Mean Out of Pocket Spending by Persons with Spending, by Age and Primary Insurance: CY 2013 vs. CY 2014
- Table 9A: Point in Time versus Ever Insured in Prior Year, by Age: CY 2013, CY 2014 vs. Date of Questionnaire

Insurance coverage changes are, for the most part, as expected, with highlights as follows:

- Table Set 1:
  - Insurance coverage increased 4.3%, from 271.4 million in CY 2013 to 283.2 million in CY 2014, with the greatest rates of increase among those 18 to 25 (7.1%) and 26 to 64 (5.6%).
  - The greatest areas of increase were individual coverage, including the exchanges, and Medicaid (part of the "other public" category).
  - The number of uninsured persons dropped from 42.0 million to 33.0 million.
- Table Set 2:
  - Among workers, coverage from current employment remained fairly constant, with only a slight increase, however the share of employees whose employer did not offer coverage increased slightly (from 20% to 21%).
  - Coverage from individual private insurance, including exchanges, saw an increase from 8.6 million persons to 12.4 million persons.
  - The number of uninsured dropped from 25.4 million (16%) to 19.9 million (12.4%).

- Table Set 4:
  - Among persons with coverage through a current or former employer, current and retiree coverage remained fairly constant, while COBRA coverage saw a drop from 4.2 million persons to 3.5 million, most likely due to more affordable options available either through the exchange or Medicaid expansions.
- Table Set 6:
  - Coverage through a union had a slight but not unexpected decline.
- Table Set 7:
  - The distribution of plans by type, for active policy holders, remained relatively constant from CY 2013 to CY 2014. Self-insured plans saw a slight increase in richness, while fully-insured plans saw a slight decline. When averaged over all active policy holders, the average actuarial value held fairly constant at just over 85%.
- Table Set 8:
  - Mean out of pocket spending showed a slight decline from CY 2013 to CY 2014, most noticeably among those aged 25 to 54, and in particular for those with other private (individual) insurance.
- Table Set 9:
  - Approximately 98% of persons insured during either CY 2013 or CY 2014 were still insured at the time of the survey (March of the following year). Of those who were uninsured during all of the prior year, 89% were uninsured in March of 2014, and 87% uninsured in March of 2015. While the counts of uninsured have dropped, the patterns of coverage are still similar for those in a particular category.