



Highlights from SHADAC's Census Bureau Small Area Health Insurance Estimates Conference Call

On October 14, 2008, the State Health Access Data Assistance Center (SHADAC) hosted a conference call featuring Rick Denby, Brett O'Hara and Lucie Dalzell of the U.S. Census Bureau. The call included a discussion of the recently released model-based Small Area Health Insurance Estimates (SAHIE). This release provides county-level estimates of uninsurance by several demographic characteristics and is based on the Current Population Survey's Annual Social and Economic Supplement (CPS).

Thirty state health policy and data analysts representing 20 states, 3 federal agencies, and 1 research group participated in the conference call.

Background on the SAHIE Program

- The Census Bureau's SAHIE program produces estimates of health insurance coverage for states and all counties and county equivalents.
- In July 2005, SAHIE released the first nation-wide set of county-level estimates on the number of people without health insurance coverage for calendar year 2000 for all ages and those under 18 years old.
- On October 9, 2008, SAHIE released estimates of health insurance coverage for calendar year 2005 by age, sex, race, Hispanic origin, and income categories at the state-level and by age, sex, and poverty categories at the county level.
- The 2008 release of calendar year 2005 health insurance estimates is the first county-level release for estimates within the demographic groups of sex, age and poverty.
- The model for the 2008 release is very different from the model used in the 2005 release.
- Comparisons between the 2005 and 2008 release are discouraged.
- Production of the 2008 estimates was funded primarily by the Centers for Disease Control and Prevention, National Breast and Cervical Cancer Early Detection Program (NBCCEDP). The CDC have a congressional mandate to provide screening services for breast and cervical cancer to low-income, uninsured, and underserved women. The new demographic variables included in this data release reflect this mandate. (Note: estimates for men were also included in this release).

Description of the Estimates Released

- This release includes county-level uninsurance estimates for: ages 0-64, 18-64 and 40-64; sex; ≤ 200 percent of poverty and ≤ 250 percent of poverty; ages 0-18 and ≤ 200 percent of poverty.

- State-level uninsurance estimates include these same demographics in addition to race: all races, White alone (not Hispanic), Black alone (not Hispanic), and Hispanic (any race).
- Measures of uncertainty of the estimates are included in the release.
- Interactive table generation is available from this page:
<http://www.census.gov/hhes/www/sahie/data/2005/tables.html>

Description of the Modeling Approach

- The dependent variable in the model is the 3-year state-level average of the CPS estimate of uninsurance (2004-2006 calendar years). The independent variables in the model include an income-to-poverty ratio, county business pattern data, Medicaid/SCHIP enrollment, food stamp enrollment and IRS tax records data.
- A detailed description of the model methodology is at
<http://www.census.gov/hhes/www/sahie/methods/2005/index.html>

Plans for Future Releases

- The Census Bureau plans to release 2006 estimates, reflecting 2005-2007 CPS data, sometime in the first half of 2009, probably by the end of April. Future releases are not yet determined.

Summary of Conference Call Questions and Answers

- **Q:** The California Health Interview Survey (CHIS) has large enough sample to produce direct county-level estimates. Does the Census Bureau compare their SAHIE results to states that have direct estimates? Does the Bureau recommend relying on these direct estimates or the modeled estimates?
A: California's direct estimates were compared to SAHIE's model-based estimates and found to be very consistent for all but two counties. California is the only state that has direct estimates for most counties (a few counties were aggregated), although several other states have direct estimates for their larger counties. In these cases a comparison could be done, but it should consider not just the coverage estimate but also the methodological issues that may account for differences in the estimates (e.g., how the insurance questions are asked, context of the survey, mode of administration). SAHIE may have additional breakdowns that are not available from state surveys. For instance, the tables with California's direct estimates did not have a breakdown for low-income people for all counties.
- **Q:** Does the Bureau recommend relying on states' direct survey estimates or the modeled estimates?
A: Direct estimates are typically best when they are available.
- **Q:** On the SAHIE site's interactive tables (<http://www.census.gov/hhes/www/sahie/data/2005/tables.html>), the percent insured and percent margin of error are not included on the tables. Why is this? Can we calculate these?

A: The main reason they are not included is the space limitations of our online table generation tool. You can calculate the percent insured, but you won't have the margin of error. This is on the list of wants/needs for future releases but has not yet been modeled.

- **Q:** Do counties with high student populations affect the estimates?

A: The Census Bureau has not looked into this issue specifically for the SAHIE estimates. The CPS does not include institutional group quarters (including dormitories), so they should not affect the estimates although off-campus residents would be included. This has been examined on the Small Area Income and Poverty Estimates (SAIPE) and they are robust to the impact of low-income college students.

- **Q:** You mentioned that states were consulted regarding the decision on what poverty level to use for their state. Can you tell me which agencies in each state were consulted?

A: Because this study was sponsored by the CDC's NBCCEDP, the state agency that is involved with this program was consulted. Most states chose to use the $\leq 200\%$ or $\leq 250\%$ FPL level. Three states wanted a different level, but were asked to choose one of these levels.

- **Q:** Is there a way for states that have adequate direct county-level estimates to collaborate with SAHIE and use these data, rather than the CPS, for modeling?

A: The Census Bureau is interested in maintaining consistency and using a federal data source that can apply to all states for modeling purposes. Several states and the Census Bureau were in favor of compiling a set of direct estimates from state-level surveys to compare to the SAHIE estimates. SHADAC conducted a similar comparison for the 2005 SAHIE release (see <http://www.census.gov/hhes/www/sahie/review/index.html>). Several states continue to conduct household surveys and have more recent data available. If there is interest, SHADAC will coordinate the effort to compare these estimates to the new SAHIE model for the next SAHIE release in 2009.

- **Q:** Are these new estimates comparable to the last SAHIE release? Will they be comparable going forward?

A: The latest release should be not compared to the estimates released in 2005 (which reflected 2000 data). The estimation model changed significantly to accommodate the program needs of the CDC. Next year's release will be a much more close comparison to this year's release because the general parameters will remain consistent. However, the Census Bureau generally discourages year-to-year comparisons because the model itself will change from year to year.

- **Q:** What is the sample size for Wisconsin?

A: After the call, SHADAC determined that there were 3,510 Wisconsin individuals under age 65 in the 2006 CPS data (although 3 years of CPS data are used in the model). Census staff confirmed that all state estimates from SAHIE model are consistent with direct CPS state estimates.

NOTE: *This discussion may have inadvertently emphasized sample size. Sample size is not necessarily a good measure of reliability or precision for model-based estimates because these models borrow strength from other data inputs (such as the Medicaid, IRS and food stamp data). Also note that the model is run on three years of CPS data.*

- **Q:** What is the reference period for uninsurance?
A: Uninsurance refers to being uninsured for all of the past calendar year in the CPS. However, perhaps due to respondent recall and other issues, CPS estimates often resemble point-in-time uninsurance estimates.

- **Q:** Our state has some affluent counties that we think should have low uninsurance estimates, but in at least one case the SAHIE results show high rates of uninsurance. Can you explain why this would be the case?
A: There may be a number of factors at play. On the data side, there may be a high margin of error, a low sample, or perhaps a chance that not many affluent households were surveyed. There may also be some contextual issues; for example, are there areas in the county that are not affluent, or is there a high population of (uninsured) domestic servants supporting the affluent population?

- **Q:** How confident should we be when looking at low estimates of uninsurance?
A: The accuracy of the estimates is reduced when estimates are closer to 0% or 100%. Therefore, all else being equal there is less accuracy for a 5% uninsurance estimate than there is for a 20% estimate.

- **Q:** Is there documentation to describe the changes in this year's model compared to the 2005 SAHIE release?
A: A complete explanation is available at:
<http://www.census.gov/hhes/www/sahie/methods/index.html>

- **Q:** Because this latest release is for 2005, how can we be comfortable that the estimates apply in today's environment? Is there a way to model trend estimates?
A: The Census Bureau has not considered modeling trend estimates of this type. However, these estimates do not lag the CPS data release schedule by much. The underlying data for this release incorporate three years of data for calendar years 2004, 2005 and 2006, so they are only one year out of date (2007 CPS data were release in August of 2008). The next SAHIE release (anticipated by end of April 2009) will include CPS years 2005-2007, and therefore will be up to date. Analysts can also look at more recent state CPS direct estimates to look at the trend (<http://www.census.gov/hhes/www/hlthins/historic/index.html>). For most counties it is not possible to look at annual trends, although some larger counties are identified in CPS and someone could use the microdata to produce estimates (although they will likely have large confidential intervals).