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Enhancing the Value of the American Community Survey for ACA Evaluation: Developing More Timely Estimates of Health Insurance Coverage

Background: The American Community Survey

The American Community Survey (ACS) is an ongoing general household survey conducted by the U.S. Census Bureau. The ACS became fully operational in 2005, replacing the long form of the decennial census, and is based on completed interviews with almost two million housing units each year. The ACS provides annual estimates of economic, social, demographic, and housing information.

A health insurance coverage question was added to the ACS in 2008. Since then the ACS has increasingly been used as a source of state-level health insurance estimates, because the survey yields relatively precise state-level estimates of health insurance coverage for the overall population, for key population subgroups, and for sub-state areas in each state.

Increasing the Value of the ACS as a Tool for Policy Monitoring: Subannual Estimates

The ACS is a valuable tool for monitoring state-level health insurance coverage before and after implementation of key provisions of the Affordable Care Act (ACA), particularly among states that adopt the ACA's Medicaid expansion. However, the value of the ACS as a tool for tracking the progress of reform could be enhanced. Subannual estimates, whether monthly, quarterly, or semi-annual, would increase the value of the ACS to policy, research, and government audiences by providing a closer link between the timing of state decisions and insurance outcomes. This temporal connection is important for understanding the relationships between state policy choices under the ACA and health insurance coverage.

This brief explores the pathways by which subannual ACS estimates could be developed, the feasibility of these pathways, the challenges associated with the development of subannual estimates, and potential next steps to generate subannual estimates. While the focus of this brief is on developing subannual state-level estimate of health insurance coverage in particular, the strategies discussed could apply to other measures (e.g., employment, family income, and housing arrangements).

Pathways to Subannual ACS Estimates

There are two possible pathways for releasing subannual ACS estimates:

1. *Subannual state-level estimates could be released before the annual ACS estimates.*

The ACS is fielded continuously throughout the year, so a quarterly or other subannual release schedule with a shorter time lag is feasible. These "contemporaneous subannual estimates" would be



the first state-level health insurance estimates from an existing federal survey to be available subannually.¹ This type of release schedule would provide rapid feedback on trends to support policy and program refinements under the ACA at the state level.

2. *Subannual state-level estimates could be released at or around the same time as the annual ACS estimates.*

Such a schedule would provide retrospective information on state-level subannual changes—information that would be valuable despite being less timely for feedback on policy decisions than contemporaneous estimates. “Retrospective subannual estimates” would allow for stronger monitoring of the effects of policies and programs that are sensitive to subannual periods. The ACA is one such policy, since implementation is occurring at different times across the states and lagged impacts are expected.

How Feasible Are These Pathways?²

Among annual federal surveys, the ACS is unique in collecting continuous data throughout the year without the ability to easily produce subannual estimates under its current sample design, data processing regimen, and schedule. However, if the Census Bureau were to modify its procedures and accelerate its post-survey data processing time frame, it could be possible to introduce procedures to construct contemporaneous subannual estimates. Moreover, there appears to be the potential for generating retrospective subannual estimates in conjunction with the production of the annual ACS estimates in the context of the current ACS data processing protocol.

Developing Subannual ACS Estimates: Challenges

Since the ACS was not designed to provide subannual estimates, efforts to develop such estimates must address several challenges.

1. The ACS data collection protocol is such that data for the sample associated with any one month is collected over the course of a three month period by mail (month 1), by telephone (month 2), and in-person (month 3), and data are processed based on the month of data collection rather than the month in which the sample was initially released. As a result, the data collected in a given month does not represent the survey sample released that month (Figure 1). The development of weights for subannual estimates will require addressing the timing of survey fielding and data collection.
2. The ACS relies on three data collection modes—mail, telephone, and in-person interviews—so there is a potential for response bias by survey mode. If there is differential reporting by mode and shifts in the frequency of response mode over the course of the year, subannual comparisons could be

¹ Among the national surveys, the National Health Interview Survey (NHIS) currently produces the most timely subannual estimates of health insurance coverage, but the quarterly NHIS data do not currently support state-level estimates due to the survey’s relatively small state sample sizes.

² These findings are based on a scan of relevant literature, internet searches, information requests from appropriate listservs, an industry scan of federal statistical surveys, and interviews with key informants at the Census Bureau, elsewhere in the federal statistical system, and in the private sector. For further information on sources, see: Santos, R., Long, S.K., Resnick, D., Wissoker, D., Kenney, G., & Call, K.T. 2013. “[Developing Subannual Estimates of Health Insurance Coverage from the American Community Survey: Challenges and Promising Next Steps](http://www.shadac.org/publications/ACSsubannual).” Prepared for The Assistant Secretary for Planning and Evaluation, United States Department of Health and Human Services. Available at: <http://www.shadac.org/publications/ACSsubannual>

biased, with the potential for bias increasing as the reference period for estimates gets smaller. The development of subannual estimates will require that analysts take into consideration the potential for bias due to variation in response mode.

3. The ACS currently uses weighting procedures that adjust to housing and population totals for July 1 of the relevant year. The weighting process for subannual estimates would not, however, be able to rely on only one reference period for population control totals. Instead, the subannual weighting process would have to incorporate changes in the housing stock and population at multiple points over the course of the year.
4. State-level subannual estimates from the ACS would be based on smaller sample sizes than the annual estimates and would therefore be less statistically precise. As a result, the subannual estimates could exhibit instability. However, it is important to note that the sample sizes for state-level subannual estimates from the ACS would still be substantially larger than those available for annual state-level estimates from most national surveys.

Figure 1. Example of Month of Data Collection Relative to Sample Release Month for the ACS

Month of Survey Sample	Month of Data Collection			
	January 2012	February 2012	March 2012	April 2012
November 2011 (In-Person)				
December 2011 (Phone)	December 2011 (In-Person)			
January 2012 (Mail)	January 2012 (Phone)	January 2012 (In-Person)		
	February 2012 (Mail)	February 2012 (Phone)	February 2012 (In-Person)	
		March 2012 (Mail)	March 2012 (Phone)	
			April 2012 (Mail)	

Potential Next Steps for Developing Subannual Estimates

The main barrier to the development of subannual ACS estimates stems from the annualized orientation of the survey's current weighting methods, as a result of which separate sets of weights would have to be developed in order to general monthly, quarterly, or semi-annual estimates.

It appears that retrospective subannual estimates could, at present, be requested through the Census Bureau's Special Tabulations Program, through which the Census Bureau would develop the subannual weights needed to support such estimates. The subannual weights and related estimates generated under such a Special Tabulations Request could provide the basis for a number of new analyses, including stronger modeling efforts to address state differences in the impacts of the ACA, along with detailed analyses of

The U.S. Census Bureau Special Tabulations Program

Census Bureau staff can prepare special tabulations on a cost basis, depending on the availability of staff resources and time. Submitting a Special Tabulations Request takes advantage of the expertise of the Census Bureau in ACS data processing and weighting protocols. Once special tabulations are constructed, researchers can, with Census Bureau approval, use the tabulations in analyses using ACS microdata within a Research Data Center (www.cdc.gov/rdc).

trends over time at the state and substate levels:

- Aggregate state-level subannual estimates of health insurance coverage would enable analysts to track changes over time under the ACA, including trends in coverage overall and for key population groups by state.
- Subannual state-level data for individuals would support even richer analyses, allowing analysts to consider variation in ACA impacts within and across states, along with the factors driving that variation. Individual data would be particularly useful for examining the effects of specific components of the ACA, such as the expansion of Medicaid coverage, because the data could be used to conduct pre-post analyses.

Conclusion

The ACS represents a valuable resource for tracking health insurance coverage in the nation and across states. The development of state-level subannual estimates of health insurance coverage from the ACS—whether contemporaneous or retrospective—would address a clear gap in data for monitoring the impacts of the ACA. Such estimates could play a significant role in expanding the ability of researchers to evaluate the impacts of the ACA, including efforts to disentangle the effects of different state policy choices (Kenney et al., 2012). Not only would subannual estimates facilitate efforts to monitor the impacts of the ACA over time, across policy relevant subpopulations, and across states, but they could also increase the use of the ACS for a broad array of purposes beyond monitoring health insurance coverage, thereby enhancing support for the ACS as a policy resource.

References

Kenney, G., Long, S.K., Haber, S., et al. 2012. “Design of an Evaluation of the Affordable Care Act (ACA) Medicaid Expansion: Evaluation Design Options Memorandum.” Report to ASPE/DHHS. RTI, The Urban Institute, and SHADAC.

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About SHADAC

The University of Minnesota’s State Health Access Data Assistance Center (SHADAC) is funded by the Robert Wood Johnson Foundation to collect and analyze data to inform state health policy decisions relating to health insurance coverage and access to care. For information on how SHADAC can assist your state with small area estimation or other data issues relevant to state health policy, please contact us at shadac@umn.edu or call 612-624-4802.

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