Assessing the impact of survey attrition on longitudinal cohort analyses based on the National Health Interview Survey and Medical Expenditure Panel Survey

Steven B. Cohen, Ph.D, Agency for Healthcare Research and Quality

The household component of the Medical Expenditure Panel Survey (MEPS-HC) , sponsored by the Agency for Healthcare Research and Quality, was designed to provide annual estimates at the national level of the health care utilization, expenditures, sources of payment and health insurance coverage for the U.S. civilian non-institutionalized population. In addition to collecting data to yield annual and longitudinal estimates for a variety of measures related to health care use and expenditures, MEPS provides estimates of measures related to health status, demographic characteristics, employment and access to health care. The survey consists of an overlapping panel design in which any given sample panel is interviewed a total of 5 times in person over 30 months to yield annual use and expenditure data for two calendar years.

To enhance analytic capacity and facilitate efficiencies in sample selection, the MEPS is linked to the National Health Interview Survey (NHIS), which serves as its sampling frame. This survey integration permits an enhanced capacity for longitudinal analyses of trends in health care utilization, coverage, access and health status. Examples of enhanced longitudinal analyses based on the NHIS-MEPS linked files include studies of the long term uninsured and the conduct of episodes of illness studies over an extended time interval. In this study, attention is given to describing the estimation strategy used to conduct longitudinal cohort analyses based on these surveys with an emphasis on the methods employed to correct for survey nonresponse and attrition. The investigation includes an assessment of the impact of survey attrition on resultant longitudinal cohort analyses.

Key words: survey attrition, longitudinal analyses, MEPS, NHIS