Health Reform Monitoring Survey – Overview and Methodology
Prepared by the Urban Institute
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Purpose and Funding

The Health Reform Monitoring Survey (HRMS) is a nationally representative, internet-based survey of nonelderly adults launched in 2013 to provide timely information on the Affordable Care Act (ACA) before data from federal surveys become available. The HRMS identifies trends in key outcomes related to changes under the ACA by providing data on health insurance coverage, access to and use of health care, health care affordability, and self-reported health status. The survey also contains topical questions on important ACA policy and implementation issues and has been used to collect data on a broad range of other health topics, including social determinants of health, patient interactions with health care providers, and the COVID-19 pandemic.

The Robert Wood Johnson Foundation provides core funding for the HRMS, and the Urban Institute and Ford Foundation provided additional core funding for early rounds of the survey. Since the survey was launched, other agencies and organizations have provided supplemental funding for targeted analyses, including the U.S. Department of Health and Human Services Office of the Assistant Secretary for Planning and Evaluation (ASPE), the Medicaid and CHIP Payment and Access Commission (MACPAC), AARP, and the National Institute for Health Care Reform. The HRMS child supplement (see below) was supported by The Atlantic Philanthropies, the David and Lucile Packard Foundation, and an anonymous donor and was conducted in partnership with the Center for Children and Families at Georgetown University.

Timing and Frequency

The first quarter 2013 HRMS combines data from the January-February and February-March 2013 pilot surveys, and the second quarter 2013 HRMS was fielded in June-July 2013. Subsequently, the timetable for HRMS fielding was shifted to the last month of each quarter (e.g., March, June, September, and December). The HRMS shifted to a semiannual fielding schedule (e.g., every March and September) in the first quarter of 2015 and then to an annual schedule in 2020. To assess the impact of the COVID-19 pandemic, the Urban Institute fielded two waves of a Coronavirus Tracking Survey with a subset of March/April 2020 HRMS participants, first in May 2020 and again in September 2020. The next round of the HRMS was fielded in April 2021.

Target Population and Sample Size

The HRMS is a national survey of US adults ages 18 to 64. The sample does not include adults living in group quarters or institutional settings, those who are homeless, or those who do not speak English or Spanish. Early rounds of the HRMS also included a child supplement in which nonelderly adults answered questions on behalf of a randomly selected child under 18 in the household. The information was collected for about 2,400 children and includes the topics covered for adults (i.e., insurance coverage, access to health care, affordability of health care, and health status), as well as additional topics related to children's health. The 2021 HRMS included a supplemental oversample of approximately 3,000 adults ages 65 and older. The HRMS does not support state-specific estimates. However, several funders have contracted with the panel vendor to obtain samples to support state-specific estimates based on the HRMS instrument.

In the first quarter of 2013, the HRMS provides an analysis sample of about 3,000 adults ages 18-64. In subsequent quarters, the HRMS sample was expanded to approximately 7,500 nonelderly adults and further expanded to approximately 9,500 nonelderly adults beginning in the first quarter of 2017. The sample size was reduced to approximately 9,000 nonelderly adults in the first quarter of 2020.

Sampling and Weighting

For each round of the HRMS, a stratified random sample of adults ages 18 to 64 is drawn from the KnowledgePanel, the nation's largest probability-based online research panel, which is currently managed by Ipsos.[1] The KnowledgePanel has been used to support timely policy research in academia, research organizations, and government agencies.[2] Approximately 55,000 individuals participate in the panel, some with and some without household internet access. Web-enabled devices (such as tablet computers) and Internet access are provided for free to households without access to ensure inclusion in the panel. Recruitment for the panel is based on an address-based sampling frame drawn from the US Postal Service's Delivery Sequence File, which covers approximately 97 percent of US households.[3] Panel recruitment is based on a stratified sampling methodology designed to provide representative information on the US population; self-selected volunteers are not eligible to participate in the panel. KnowledgePanel members are generally assigned no more than one survey per week and stay in the panel for an average of two years, though some leave earlier and some stay longer.

Beginning with the second quarter of 2013, the HRMS includes oversamples of adults with family incomes at or below 138 percent of the federal poverty level (FPL) and adults from selected state groups based on the potential for gains in insurance coverage in the state under the ACA (as estimated by the Urban Institute's microsimulation model) and states of specific interest to the HRMS funders. As of the third quarter of 2015, the HRMS no longer includes oversamples of adults from these state groups. In the March/April 2020 HRMS, the sampling strategy was redesigned to include oversamples of adults with household incomes below 150 percent of FPL and between 150 to 250 percent of FPL by race and ethnicity (non-Hispanic white; nonwhite or Hispanic), as well as an oversample of adults ages 18 to 29. Although fresh samples are drawn each quarter, the same individuals may be selected for different rounds of the survey. Because each panel member has a unique identifier, it is possible to control for the overlap in samples across quarters.

All tabulations from the HRMS are based on weighted estimates. The HRMS weights reflect the probability of selection from the KnowledgePanel and post-stratification to the characteristics of nonelderly adults in the United States based on benchmarks from the American Community Survey and Current Population Survey.[4] Because the KnowledgePanel collects in-depth information on panel members, the post-stratification weights can be based on a rich set of measures. The measures used in the development of post-stratification weights include gender by age, race/ethnicity, educational attainment, presence of children under 18 in the household, state ACA Medicaid expansion status (as of January 2014) by region, state ACA Medicaid expansion status by residence in a metropolitan area, family income as a percentage of the federal poverty level, primary language (English or Spanish), and household Internet access by age.[5] Given the many potential sources of bias in survey data in general, and in data from Internet-based surveys in particular, the survey weights for the HRMS likely reduce, but do not eliminate, potential biases.

The April 2021 HRMS has a design effect of 1.46 for nonelderly adults, and a sampling margin of error for a 50 percent statistic with 95 percent confidence of +/- 1.2 for the nonelderly adult sample.

Response Rates

Approximately 11 percent of people invited to join the KnowledgePanel express a willingness to participate. To qualify for inclusion in the panel, they must complete initial surveys providing a detailed demographic profile of their households, and this profile information can be used for sampling and weighting in future surveys. The completion rate for the household profile is approximately 60 percent. These participants become active members of the panel and form the pool from which people are sampled for specific surveys. The study completion rate among panel members sampled for the HRMS is also approximately 60 percent, which is similar to other health studies relying on KnowledgePanel.[6] The American Association for Public Opinion Research (AAPOR) cumulative response rate is 4 to 5 percent, and is calculated as the product of the rate at which households were recruited to join the panel, the rate at which the recruited households completed a demographic profile of their household, and the survey completion rate for the HRMS. While the cumulative response rate is much lower than response rates for major federal surveys such as the American Community Survey and National Health Interview Survey, it is comparable to those of private telephone-based surveys such as those conducted by Pew Research and Gallup.[7]

While low, the HRMS response rate does not necessarily imply inaccurate estimates, as a survey with a low response rate can still be representative of the sample population, though the risk of nonresponse bias is higher.[8] Other factors beyond response rates are also important, such as levels of bias, levels of missing data, and similarity to other research findings.[9] Prior research on KnowledgePanel recruitment have found little evidence of nonresponse bias on demographic and socioeconomic variables,[10] and studies comparing KnowledgePanel to traditional telephone surveys have shown that KnowledgePanel produces comparable estimates for a range of demographic, socioeconomic, health status, health behavior, and other characteristics.[11] In addition, early HRMS estimates yielded comparable estimates of health insurance coverage and health care access to federal government survey data, especially for the key outcome of interest in the HRMS—health insurance coverage.[12] Nonetheless, the HRMS carries with it more risks and potential errors than federal government surveys. A number of potential sources of bias, including nonresponse bias, likely are only partly mitigated through the survey weighting.

Imputation of Missing Data

As part of developing the poststratification survey weights, we impute values for missing data on family size and family income as a percentage of FPL using a multiple imputation regression approach. For other variables, missing values are not imputed, and item non-response is generally less than 3 percent. When reporting on estimates from the HRMS, analyses include a category for missing data.

Survey Administration

The survey is self-administered online in both English and Spanish and currently takes respondents a median of 15 minutes to complete. Ipsos contacts panel members through email and invites them to participate in the HRMS. Participants are directed to follow a link to the online, self-administered survey. Nonresponding sample members are sent two reminder emails. To encourage participation, Ipsos has an incentive system that allows panel members to accrue points based on the number of surveys they complete. Members can be entered into sweepstakes or raffles or redeem points for cash or other prizes.

Survey Content

Core questions focus on health insurance coverage, health care access and affordability, and self-reported health status. Beginning in the second quarter of 2013, each round also contains topical questions focusing on timely ACA policy and implementation issues, as well as other topics such as social determinants of health, patient interactions with health care providers, and the COVID-19 pandemic. Where possible, HRMS questions are based on questions used in federal government surveys —including the American Community Survey, the Behavioral Risk Factor Surveillance System, the Annual Social and Economic Supplement to the Current Population Survey, and the National Health Interview Survey—and the data collected are benchmarked against those federal data.

The HRMS supplements ongoing federal government surveys by providing early feedback on the ACA and other health policy topics. While the HRMS carries with it more risks and potential errors than federal surveys, its timely findings provide policymakers with early insights into emerging issues and challenges, allowing them to fine-tune their policy choices in real time. A core component of the HRMS research program is assessing the reliability of the early feedback against both qualitative sources and stronger quantitative sources as those data become available.

Survey Instruments and Public Use Files

For each round in which the survey is conducted, we make the survey instruments for the HRMS publicly available roughly at the same time that we release new research products that use data from that survey round. In addition, with the support of the Robert Wood Johnson Foundation (RWJF), the Urban Institute is partnering with the Inter-university Consortium for Political and Social Research (ICPSR) at the University of Michigan to make HRMS data available for public use through RWJF's Health and Medical Archive on the ICPSR website. We provide documentation to assist users of the data. The data are de-identified, and some variables in each dataset have been excluded or modified to protect the confidentiality of survey respondents.

[1] KnowledgePanel was owned by GfK Research through mid-2018, at which time it was purchased by Ipsos.

[2] The KnowledgePanel was used to support innovative research studies by more than 400 researchers through the Time-Sharing Experiments for the Social Sciences (TESS), which is supported by nine different divisions of the National Science Foundation and housed at Northwestern University's Institute for Policy Research. TESS was awarded the 2007 Warren J. Mitofsky Innovators Award by the American Association for Public Opinion Research. See also https://www.ipsos.com/en-us/solutions/public-affairs/knowledgepanel.

[3] KnowledgePanel panelists were originally selected using random digit dialing (RDD), but since 2009 address-based sampling (ABS) has been used to select panelists.

[4] Prior to 2015, benchmarks for primary language were based on the Pew Hispanic Center Survey instead of the American Community Survey (ACS). In January 2017, all rounds of the HRMS from the first quarter of 2013 through the third quarter of 2016 were reweighted because of a change in the Current Population Survey question on Internet access that was being used to create benchmarks for construction of the post-stratification weights. Under the new weighting procedure, the data are weighted to be representative of the nonelderly adult

population in terms of Internet access by age group based on benchmarks derived from a more stable set of questions on household Internet access from the ACS. Other measures used in the weighting process are unchanged. The transition to the updated weights had a small effect on national estimates. For instance, in the quarter 3 2016 round of the survey, the estimated uninsurance rate was 0.23 percentage points lower under the new weights than under the original weights. The effect of reweighting on estimated changes in key outcomes over time is limited because the new weighting procedure was applied to all previous rounds of the data.

[5] Study samples from the KnowledgePanel are selected using a probability-proportional-to-size procedure. The pool of active members is assigned weights based on benchmarks from the Current Population Survey that are used as measures of size. Benchmarks used for these weights include gender, age, race/ethnicity, educational attainment, region, household income, homeownership status, and residence in a metropolitan area.

[6] See, for example, Gollust, SE, Dempsey, AF, Lantz, PM, Ubel, PA, and Fowler, EF. "Controversy Undermines Support for State Mandates on the Human Papillomavirus Vaccine," Health Affairs 2010; 29(11): 2041–46; and Murtagh, L, Gallagher, TH, Andrew, P, and Mello, MM. "Disclosure-and-Resolution Programs That Include Generous Compensation Offers May Prompt a Complex Patient Response," Health Affairs 2012; 31(12): 2681–89.

[7] For context, the response rates for federal government surveys are generally quite high (for example, 95.8 percent for the American Community Survey in 2015 and 70.1 percent for the National Health Interview Survey in 2015), while response rates for telephone surveys used for polling, like those conducted by Pew Research and Gallup, are much lower at about 9 percent. For information on response rates in the national surveys see "American Community Survey—Response Rates," U.S. Census Bureau, and "2015 National Health Insurance Survey (NHIS) Public Use Data Release — NHIS Survey Description," National Center for Health Statistics. For information on the Pew Research response rate, see, "Assessing the Representativeness of Public Opinion Surveys," Pew Research Center for the People and the Press. Information on the response rate for the Gallup Daily Tracking Poll was obtained through personal communication with Gallup.

[8] Groves, RM. Nonresponse Rates and Nonresponse Bias in Household Surveys. Public Opinion Quarterly. 2006; 70(5): 646–75; Jonathon, R, Halbesleben, B, Whitman, M. Evaluating Survey Quality in Health Services Research: A Decision Framework for Assessing Nonresponse Bias. Health Services Research. 2013; 48(3):913–30; Brick, JM. The Future of Survey Sampling. Public Opinion Quarterly. 2011; 75(5): 872–88.

[9] American Association of Public Opinion Research. Response Rates - An Overview.

[10] Heeren, T, Edwards, EM, Dennis, JM, Rodkin, S, Hingson, RW, Rosenbloom, D. A Comparison of Results from an Alcohol Survey of a Prerecruited Internet Panel and the National Epidemiologic Survey on Alcohol and Related Conditions. Alcoholism Clinical & Experimental Research. 2008; 32(2): 222–29; Garret, J, Dennis, JM, DiSogra, CA. Non-response Bias: Recent Findings from Address-Based Panel Recruitment. Paper presented at the annual conference of the American Association for Public Opinion Research, Chicago, May 2010.

[11] See Chang, L, Krosnick, J. National Surveys via RDD Telephone Interviewing versus the Internet. Public Opinion Quarterly. 2009; 73(4): 641–78; Yeager, DS, Krosnick, JA, Chang, L, Javitz, HS, Levendusky, MS, Simpser, A, et al. Comparing the Accuracy of RDD Telephone Surveys and Internet Surveys Conducted with Probability and Non-Probability Samples. Public Opinion Quarterly. 2011; 75(4):709–47.

[12] Long, SK, Kenney, GM, Zuckerman, S, Goin, DE, Wissoker, D, Blavin, F, Blumberg, LJ, Clemans-Cope, L, Holahan, J, and Hempstead, K. “The Health Reform Monitoring Survey: Addressing Data Gaps to Provide Timely Insights into the Affordable Care Act,” Health Affairs 2014; 33(1): 161–7.