Address-Based Sampling

RTI International pioneered the use of address-based sampling for surveys. We continually build on this award-winning innovation by enhancing our methodology to improve coverage, efficiency, and quality. Our in-person, mail, and multimode surveys support federal, state, and commercial clients.

Overview

Address-based sampling (ABS) has emerged as a cost-effective sampling frame that offers high coverage of the U.S. household population for in-person, mail, telephone, and multimode surveys. ABS frames rely on residential addresses in the U.S. Postal Service (USPS) Computerized Delivery Sequence File provided by third-party vendors. Understanding the coverage and quality of the USPS file is critical to its use as a sampling frame for surveys.

In 2000, RTI conducted the first published evaluation of mailing addresses for use with an in-person household survey in the United States. The evaluation found that a sampling frame of mailing addresses provided nearly complete coverage of the Dallas, Texas, metropolitan area at approximately one-tenth the cost of traditional area sampling. In 2011, the American Association for Public Opinion Research awarded RTI researchers the Warren Mitofsky Innovators Award for our groundbreaking ABS research.

For small- and moderate-sized surveys, the cost savings associated with ABS can make in-person interviewing a viable mode of data collection. For large-scale national surveys that have traditionally relied on expensive enumeration of housing units in area designs, ABS offers an efficient alternative for maximizing program dollars. Because ABS frames include virtually all mailing addresses in the United States, they also support mail and multimode designs, including telephone and web data collection efforts.

RTI has been at the forefront of ABS research, with methodological contributions in the following areas:

- Developed a methodology called "Check for Housing Units Missed" (CHUM) to provide complete household coverage in areas where the ABS frame is incomplete for in-person surveys
- Conducted the first published evaluation of the No-Stat file, a supplemental address list that can improve the coverage and efficiency of ABS designs
- Enhanced ABS frame with auxiliary data for efficient design targeting of subdomains in the population

Project and Research Highlights

- In 2012, RTI conducted the Survey of Crime Victimization, a multimode field study sponsored by the Bureau of Justice Statistics.
- Since 2009, RTI has conducted methodological studies evaluating the use of ABS for the National Survey on Drug Use and Health for the Substance Abuse and Mental Health Services Administration.

- In 2008, RTI redesigned the American National Election Survey to incorporate ABS methodology. Funded by the National Science Foundation, the survey was a collaboration between Stanford University and the University of Michigan.
- RTI employed ABS methodology in the 2006 Portraits of American Life Survey, conducted for Rice University and the University of Notre Dame with funding from the Lilly Endowment.
- RTI expanded ABS methodology for national use in the 2002 U.S. Valuation of the EuroQoL EQ-5D Health States, sponsored by the Agency for Healthcare Research and Quality within the Department of Health and Human Services.
- RTI conducted the Dallas Heart Disease Prevention Study in 2000 for the University of Texas Southwest Medical Center, with funding from the Reynolds Foundation.

Selected ABS-Related Projects

- Adult Targeted Surveillance Survey of the Community Transformation Grant Program—Centers for Disease Control and Prevention
- Evaluation of Public Education Campaign on Teen Tobacco and the National Consumer Surveys on Understanding the Risks and Benefits of FDA-Regulated Medical Products—Food and Drug Administration
- Aligning Forces for Quality: Assessment of Consumer Engagement—Robert Wood Johnson Foundation, conducted for the Center for Health Care and Policy Research within Pennsylvania State University

Selected Publications

McMichael, J. P., Shook-Sa, B. E., and Ridenhour, J. L. (2013, November). The CHUM: An Adaptation of the Half-Open Interval Procedure for Use with ABS Frames. Presented at Federal Committee on Statistical Methodology, Washington, DC.

Shook-Sa, B. E., D. Currivan, J. McMichael, and V. Iannacchione. (2013). Extending the coverage of address-based sampling frames: Beyond the USPS computerized delivery sequence file. *Public Opinion Quarterly* 77: 994–1005.

Iannacchione, V. G. (2011). The changing role of address-based sampling in survey research. *Public Opinion Quarterly* 75: 556–575.

McMichael, J., J. Ridenhour, and B. E. Shook-Sa. (2008). A Robust procedure to supplement the coverage of address-based sampling frames for household surveys. *Proceedings of the American Statistical Association, Section on Survey Research Methods* 4329–4335.

Iannacchione, V., J. Staab, and D. Redden. (2003). Evaluating the use of residential mailing addresses in a metropolitan household survey. *Public Opinion Quarterly* 67: 202–210.

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