



EPIC 2024

NORC PUBLIC AFFAIRS AND MEDIA RESEARCH ON BEHALF OF THE UNIVERSITY OF CHICAGO



PROJECT METHODS AND TRANSPARENCY REPORT

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STUDY INTRODUCTION

NORC conducted the EPIC 2024 study on behalf of the University of Chicago using NORC's AmeriSpeak® Panel and Dynata for the sample source. The former is a probability-based panel and the latter is a non-probability panel. This research was done to continue trends from prior AP-NORC/EPIC surveys, and extend the research to better understand the American public's experiences with, and attitudes toward, electric vehicles.

The survey was offered in English-only, and was administered in two modes for the AmeriSpeak respondents depending on the preference of the respondent provided during the panel recruitment: 1) self-administered by the respondent online via the Web; or 2) administered over the telephone by a live interviewer. For non-probability respondents, all completed interviews were self-administered by the respondent online. Final data was weighted using NORC's **TrueNorth** Calibration methodology.



AAPOR Transparency Initiative

This *AmeriSpeak Project Methods and Transparency Report* provides complete information on how the survey was executed, including any information disclosure to meet the requirement of the AAPOR Transparency Initiative. NORC at the University of Chicago is a Charter Member of the AAPOR Transparency Initiative, which fosters open science of survey research by acknowledging those organizations that pledge to practice transparency in their reporting of survey-based research findings. More on the Transparency Initiative can be found here: <https://aapor.org/standards-and-ethics/transparency-initiative/>

NORC Card

This *AmeriSpeak Project Methods and Transparency Report* combines into one document two previous deliverables: The NORC Card and The Project Report. AmeriSpeak designed the NORC Card to meet the requirements of the AAPOR Transparency Initiative. The Project Report addressed steps taken to build the AmeriSpeak Panel and conduct the study. Thus, the information in the NORC Card and the Project Report is now fully provided in this *AmeriSpeak Project Methods and Transparency Report*. We at NORC are proud of our rigorous scientific research methodology, and we are deeply committed to transparency in the work we do and the insights we deliver. If there is any information in your *AmeriSpeak Project Methods and Transparency Report* that needs further clarification, please reach out to us so we can provide you with the answers you need.

SURVEY OVERVIEW

Study Target Population: General Population Age 18+
Sample Units (Probability cases only): 9,998
Overall Completed Units: 6,265
 Probability Completed Units: 3,987
 Nonprobability Completed Units: 2,278
Expected Eligibility Rate: 100%
Observed Eligibility Rate: 100%
Survey Field Period: March 26, 2024 - April 10, 2024
Median Duration (minutes):
 Web Mode: 10
 Phone Mode: 21

Definitions of the above categories:

Study Target Population: The total set of individuals of interest to which the researcher intends to generalize their conclusions.

Sample Units: The number of panel members selected into the study sample.

Completed Units: The number of sample units that completed the interview based on the study-specific definition of what constitutes a complete interview. This number excludes any cases where an interviewer finished a survey, but the case was removed due to data quality concerns (the process for such removal is detailed later in this report).

Expected Eligibility Rate: The percentage of the sampling population who are expected to meet study eligibility criteria.

Observed Eligibility Rate: The percentage of the sample members who were eligible for the study among those who answered the screening questions.

Survey Field Length: The period from the earliest to the latest contact dates of cases sampled for the survey.

Duration: Length of time for completed interviews. Interview length is calculated differently depending upon whether the interview was conducted over the phone or via the web. For telephone mode, it is the time from when the respondent picks up the telephone until they hang up the telephone. For web interviews, it is the time from when they first connect to the web system to the time they log off the system or become inactive. In the case of multiple contacts, this number represents the sum of those contacts.

STUDY-SPECIFIC DETAILS

Sampling

A general population age 18+ sample was selected from NORC's probability based AmeriSpeak Panel and from Dynata's non-probability panel for this study. The overall study target population is general population age 18+.

The probability sample for this study is selected from the AmeriSpeak Panel using sampling strata based on age, race/Hispanic ethnicity, education, and gender (48 sampling strata in total). Sample selection takes into account the expected differential survey completion rates across the sampling strata. The size of the selected sample per stratum is determined such that the distribution of the complete surveys across the strata matches that of the target population as represented by census data. If a panel household has more than one active adult panel member, only one adult panel member is selected at random. When panelists are selected for an AmeriSpeak survey, the selection process, within each sampling strata, favors those who were not selected in the most recent previous AmeriSpeak survey. This selection process is designed to minimize the number of surveys any one panelist is exposed to and maximize the rotation of all panelists across AmeriSpeak surveys.

For more detailed information on the AmeriSpeak panel recruitment and management methodology, please see the Appendix (“Technical Overview of the AmeriSpeak® Panel NORC’S Probability-Based Household Panel”) attached to this AmeriSpeak Project Report.

For the non-probability sample, we defined quota buckets for demographic strata to reflect known population distributions and worked with the sample provider to slowly release sample over the field period to adequately fill each. The quota buckets and the number of interviews in each are given later in the field section of this report.

Field

A sub-sample of AmeriSpeak web-mode panelists were invited to the survey on Wednesday, March 27 in a soft-launch. Although the invites were sent out on Wednesday, March 27, the sample was loaded on Tuesday, March 26 and some respondents completed the survey before receiving the invite. The initial data from the soft-launch was reviewed by AmeriSpeak and PAMR to confirm that there were no processing or programming errors. Once reviewed, the remainder of sampled AmeriSpeak panelists were invited to the survey on Thursday, March 28. Data collection ended on Wednesday, April 10.

A sub-sample from Dynata were invited to the survey on Wednesday, March 27 in the soft-launch. The remainder of the Dynata sample was fielded Thursday, March 28 to Tuesday, April 9.

In total, NORC collected 6,265 final interviews, 6,175 by web mode and 90 by phone mode. 3,987 final interviews were collected through Dynata. This does not include interviews that may have been removed for data quality purposes (see below).

Minimum quotas were set for the nonprobability sample, broken out in the following ways:

Nested Quota Cells and Number of Completes for Nonprobability Sample by Race/Ethnicity, Age, Education, and Gender (Unweighted)

Ethnicity	Age	Education	Gender	# of Completes
Non Hispanic All Other	18-34 yrs	Some college or less	Male	190
			Female	161
		Bachelors or Above	Male	96
			Female	119
	35-49 yrs	Some college or less	Male	134
			Female	109
		Bachelors or Above	Male	120
			Female	134
	50-64 yrs	Some college or less	Male	157
			Female	158
		Bachelors or Above	Male	105
			Female	111
	65+ yrs	Some college or less	Male	151
			Female	197
		Bachelors or Above	Male	110
			Female	103

Ethnicity	Age	Education	Gender	# of Completes
Non Hispanic Black	18-34 yrs	Some college or less	Male	53
			Female	46
		Bachelors or Above	Male	12
			Female	18
	35-49 yrs	Some college or less	Male	32
			Female	31
		Bachelors or Above	Male	12
			Female	21
	50-64 yrs	Some college or less	Male	29
			Female	33
		Bachelors or Above	Male	10
			Female	13
	65+ yrs	Some college or less	Male	22
			Female	29
		Bachelors or Above	Male	6
			Female	10
Hispanic	18-34 yrs	Some college or less	Male	154
			Female	164
		Bachelors or Above	Male	52
			Female	86
	35-49 yrs	Some college or less	Male	74
			Female	70
		Bachelors or Above	Male	64
			Female	61
	50-64 yrs	Some college or less	Male	116
			Female	114
		Bachelors or Above	Male	86
			Female	91
	65+ yrs	Some college or less	Male	81
			Female	102
		Bachelors or Above	Male	71
			Female	69
Total				3987

Panel & Survey Sample Performance

This section **only** applies to the AmeriSpeak part of the sample. It is not possible to measure sample performance rates for nonprobability sample, since we do not know how many were invited to the survey or any information about how the panel was built. It is also not relevant, since there is no advantage of a high response rate when the panel nor the sample is not based on probability.

To meet requirements in the AAPOR Transparency Initiative, we offer performance outcome measures of both the AmeriSpeak Panel and the AmeriSpeak sample selected from the AmeriSpeak Panel. The AmeriSpeak Panel is a household panel, so recruitment and retention rates are household rates. The survey sample is an individual-level sample pulled from the AmeriSpeak panel, so those are individual-level rates.

Panel Outcome Measures	
Weighted Household Panel Recruitment Rate (WPRcr)	Weighted Household Panel Retention Rate (WPRet)
22.3%	78.9%

Weighted Household Recruitment Rate (WPRcr): The weighted AAPOR RR3¹ at the household level for AmeriSpeak panel recruitment. A recruited household is a household where at least one adult successfully completed the recruitment survey and joined the panel.

Weighted Household Retention Rate (WPRet): The weighted percent of recruited households that remain on the panel and are available for sampling for this survey. Unavailable panelists are those who have temporarily or permanently asked to be removed from the panel or from receiving surveys.

Survey Sample Outcome Measures	
Survey Completion Rate (SurC)	Weighted Cumulative Response Rate (WCR)
22.8%	4.0%

Survey Completion Rate (SurC): The percent of sample members who completed the survey interview. 9,998 panelists were invited to the survey, and 2,278 completed the survey. As noted earlier, survey completes exclude any cases removed due to data quality concerns.

Weighted Cumulative Response Rate (WCR): The overall survey response rate that accounts for survey response in all phases, including panel recruitment, panel retention, and survey completion. This overall rate is weighted to account for the sample design and differential inclusion probabilities of sample members in all sampling stages. ($WCR = SurC \times WPRet \times WPRcr$)

Gaining Cooperation of AmeriSpeak Panelists for the Study

If invited, AmeriSpeak panelists can take the survey online through the password-protected AmeriSpeak Mobile App, the password-protected AmeriSpeak Web portal, or by following a link in the e-mail invitation sent to them.

¹AAPOR RR3 and other response rate calculations can be found here: <https://www-archive.aapor.org/Education-Resources/For-Researchers/Poll-Survey-FAQ/Response-Rates-An-Overview.aspx>.

To encourage study cooperation, NORC sent the initial invitation and email reminders to the soft launch sampled web-mode panelists on the following dates:

- Wednesday, March 27
- Saturday, March 30
- Thursday, April 4

NORC sent the initial invitations on Thursday, March 28 to the remaining sampled panelists. To encourage study participation, NORC sent email reminders to sampled web-mode panelists on the following schedule:

- Email reminders were sent three (3) days after initial invite email, and then every five (5) days thereafter.

To administer the phone survey, NORC dialed sampled panelists who prefer to take surveys on the phone from Friday, March 29 to Wednesday, April 10. Although most panelists who have stated a preference to take the survey on the phone do take them in that mode, they also have the option of taking the survey online via the web portal or the AmeriSpeak App or can ask the interviewer to e-mail them an invite instead. These rare phone-preferred panelists who end up taking the survey online are coded in the data based on the mode they took the survey, not their previously stated mode preference.

Panelists were offered the cash equivalent of \$2 for completing this survey.

The incentive provided to nonprobability sample is unknown to us. The method for getting completes does not necessarily involve reminders. Since probability is not involved, a higher response rate is not relevant for non-probability sample.

Data Processing & Data Quality Review

NORC prepared a fully labeled data file of respondent survey data and demographic data for NORC Public Affairs and Media Research on behalf of the University of Chicago.

NORC applied cleaning rules to the survey data for quality control. In total, 123 cases were removed from the final set of completed interviews based on two cleaning rules. Descriptions of the cleaning criteria and the counts from each are below (counts are overlapping).

- Removing Speeders (i.e., those that completed the survey in less than one-third the median duration)
 - 107 removed for speeding
- Removing Respondents with High Refusal Rates (i.e., those that skip or refused more than 50% of the eligible questions)
 - 52 removed for high refusal rates

Of those 123 cases removed:

- 87 cases were marked with one of the two flags above
- 36 cases were marked with both of flags above

AmeriSpeak is a probability-based panel, where respondents must be chosen by us to join, where access to surveys is controlled by the panelist secure log-in information to a web portal or app. E-mails, text invitations, or interview-operated telephone calls go directly to the address/number of the recruited panelist. When being called by phone, the panelist is requested by name. The way AmeriSpeak surveys are programmed and panelists are invited, panelists cannot take the survey more than once, and each panelist is always identifiable based on a unique ID. For these reasons, AmeriSpeak does not suffer the problem of “bots,” fabricated profiles, non-invited respondents, or individuals or members of the household repeatedly and illegitimately taking the same survey.

Two attention check questions were asked of Dynata respondents in their battery of demographic questions. Any Dynata respondents who failed either attention check were not allowed to participate in the survey.

Relevant ID was used as a way to prevent the possibility of the same respondent from different sample sources taking the survey multiple times.

Statistical Weighting & TrueNorth Calibration



The final weights that are delivered with the data are developed through three stages. First, probability and nonprobability sample weights are developed separately. Second, small area estimation is leveraged to model core response variables and generate raking benchmarks. Finally, the two samples are combined through TrueNorth calibration to create the final weights. These final two stages make up NORC's TrueNorth® Calibration.²

Stage 1: Core Probability and Nonprobability Weights

There are four unique steps to the development of core probability weights and two for core nonprobability weights. The four core probability weight steps are as follows:

AmeriSpeak Panel Weight: Since the sampling frame for the probability sample is the AmeriSpeak Panel, which itself is a sample, the starting point of the weighting process for the study is the AmeriSpeak panel weight³. The panel weight reflects the cumulative panel recruitment selection probabilities, nonresponse adjustments, and calibration to population benchmarks, both at the household and individual levels.

Probability Base Weight: The AmeriSpeak Panel Weight is then adjusted to account for the sample selection probability from the panel under the study sample design. The base weight for the study sample is a product of the AmeriSpeak Panel Weight and the inverse of selection probabilities associated with sample selection from the panel.

Nonresponse Adjusted Probability Weight: The nonresponse adjusted weight is created by adjusting the base weights for respondents to compensate for nonrespondents within nonresponse weighting classes defined by age, race/ethnicity, gender, and education. Within each weighting class, the nonresponse adjusted weight is the product of the base weight and the inverse of the weighted response rate.

Probability Weight is the nonresponse adjusted weight calibrated to population benchmarks through raking ratio adjustments. For the nonprobability sample cases, the raking adjustments are applied to their base weights. The raking variables are detailed after the description of the core nonprobability weight.

The nonprobability sample weights are developed in the following stages:

Nonprobability Base Weight: There are no known probabilities of selection for nonprobability sample cases.

Nonprobability Weight: The base weight is then raked to the same population benchmarks as those used for raking the probability sample.

Probability and Nonprobability Raking Benchmarks The benchmarks used for raking both probability and nonprobability samples are:

² More on TrueNorth Calibration can also be found here: <https://amerispeak.norc.org/us/en/amerispeak/our-capabilities/truenorth.html>.

³ The AmeriSpeak panel weight existed prior to this study; the weighting procedures are described here for clarity and completeness.

Age: 18-24, 25-29, 30-39, 40-49, 50-59, 60-64, and 65+

Gender: Male and Female

Division: New England, Middle Atlantic, East North Central, West North Central, South Atlantic, East South Central, West South Central, Mountain, and Pacific

Race/Ethnicity: Non-Hispanic White, Non-Hispanic Black, Hispanic, and Non-Hispanic Other

Education: Less than High School, High School/GED, Some College, and BA and Above

Age x Gender: 18-34 Male, 18-34 Female, 35-49 Male, 35-49 Female, 50-64 Male, 50-64 Female, 65+ Male, and 65+ Female

Age x Race/Ethnicity: 18-34 Non-Hispanic White, 18-34 All Other, 35-49 Non-Hispanic White, 35-49 All Other, 50-64 All Other, 50-64 All Other, 65+ Non-Hispanic White, and 65+ All Other

Race/Ethnicity x Gender: Non-Hispanic White Male, Non-Hispanic White Female, All Other Male, and All Other Female

These population benchmarks are obtained from the Current Population Survey.

Stage 2: TrueNorth Small Area Modelling Calibration

At the core of the TrueNorth calibration method is a small area modeling⁴ procedure conducted in the following steps:

- First, we identify a set of three key response variables from the survey using a machine-learning approach called gradient-boosted tree modelling. This method is used to identify the key response variables that are associated with the largest bias in the nonprobability sample and are also highly correlated with other response variables.
- Second, we define a set of domains in the data, where each domain is a specific, relevant subgroup for data analysis and reporting. The domains used for this study are Education (2), Age (3), Race/Ethnicity (3), Gender (2). Overall, then, this study used 30 unique domains.
- Third, we fit domain-level small area models for each of the response variables identified earlier using the weighted probability sample and nonprobability sample domain-level estimates as input. These estimates are weighted estimates where the weights are the final probability and nonprobability weights, respectively. The model included covariates, domain-level random effects, and sampling errors. These sociodemographic characteristics are weighted to benchmarks from the March 2023 CPS. The Current Population Survey used is either the February CPS or the March Supplement, usually based on which is most recent.
- Fourth, the fitted small area models provide predicted totals for each domain and for each response variable category, which are then used as raking benchmarks in the final weighting step described below.

Stage 3: Final Combined Study Weight

The final combined probability and nonprobability sample weights were derived by raking sampled together, using the same benchmarks for age, gender, division, race/ethnicity, education, housing tenure, household phone status, age x gender, and age x race/ethnicity noted earlier, plus the predicted totals for each domain for each response variable modeled in the small area modeling process.

⁴ Rao J, Molina I. Small Area Estimation. 2nd ed. Hoboken, NJ: Wiley; 2015. doi:10.1002/9781118735855

Benchmark Comparisons

The following table shows the weighted and unweighted estimates for key demographics and compares them to population benchmarks.⁵

Demographic Category	Subcategory	Unweighted (%)	Weighted (%)	Benchmark (%)
Age	18 - 24	8.2	11.8	11.8
	25 - 29	8.0	8.4	8.4
	30 - 39	20.1	17.6	17.6
	40 - 49	14.8	15.8	15.8
	50 - 59	16.1	15.8	15.8
	60 - 64	9.4	8.1	8.1
	65 Plus	23.5	22.4	22.4
Sex	Male	48.5	49.0	49.0
	Female	51.5	51.0	51.0
Division	New England	4.6	4.7	4.7
	Middle Atlantic	12.8	12.7	12.7
	East North Central	15.8	14.1	14.1
	West North Central	6.6	6.4	6.3
	South Atlantic	20.5	20.6	20.6
	East South Central	4.9	5.9	5.8
	West South Central	11.2	12.1	12.1
	Mountain	7.8	7.6	7.6
	Pacific	15.8	16.1	16.1
Education Status	Less than High School	3.4	9.3	9.4
	High School Equivalent	21.0	28.8	28.9
	Some College/Associate Degree	36.9	26.4	26.4
	Bachelor's or Higher	38.8	35.4	35.4
Race/Ethnicity	Non-Hispanic White	56.3	61.3	61.3
	Non-Hispanic Black	10.1	12.1	12.1
	Hispanic	29.6	17.5	17.5
	All other	4.0	9.1	9.1

As a part of the AAPOR Transparency Initiative, it is incumbent on us to state that there are no perfect studies, and all research and methods have their limitations. The purpose of this document is to make apparent, for this study, some possible limitations, the steps taken to minimize them, and the potential or known sources of measurable or estimated error whenever possible. However, there is always going to be some unmeasured and unknowable error with all forms of public opinion research, including ours.

Design Effect and Sampling Margin of Error Calculations

Study design effect: 1.62

Study margin of error: +/- 1.7%

Under TrueNorth calibration, combined probability and nonprobability sample weights yield approximately unbiased population estimates. The margins of error reported here reflect the sampling variation of the probability sample as well as the TrueNorth model-assisted calibration procedures that generate the

⁵ Because we trim the weights to remove extreme weights and hold down weight variation, the final study weights may end up deviating from exact populations benchmarks by small but acceptable amounts. Even without trimming, there can be a limit in the ability to perfectly match benchmarks along all variables and categories included in the raking procedure. Our goal is to rake as close as possible before trimming.

combined sample weights. As such, it is reasonable for analysts using this data to employ standard methods for approximating margins of error and statistical significance, although there is currently no statistically agreed upon approach to variance estimation when utilizing nonprobability samples.

Deliverables

The following files were created for NORC Public Affairs and Media Research on behalf of the University of Chicago as part of the study deliverables:

- Survey interview data file in both SAS and CSV formats
- Survey frequency SPSS output in an Excel format (both weighted and unweighted)
- Codebook in an Excel format
- Final questionnaire – in a complete programming format, in Word document
- Final questionnaire – in a simpler format (standard AmeriSpeak intro and outro language, programming language, Spanish (if relevant), and CATI version or interviewer instruction (if relevant) are removed), in Word document
- Project report documenting study procedures and information on the AmeriSpeak Panel
- Three sets of banner tables in both Word and Excel formats

How to Describe AmeriSpeak and NORC @ the University of Chicago

For purposes of publication, when describing the AmeriSpeak Panel and its methodology, we recommend using the following language:

Funded and operated by NORC at the University of Chicago, **AmeriSpeak®** is a probability-based panel designed to be representative of the US household population. Randomly selected US households are sampled using area probability and address-based sampling, with a known, non-zero probability of selection from the NORC National Sample Frame. These sampled households are then contacted by US mail, telephone, and field interviewers (face to face). The panel provides sample coverage of approximately 97% of the U.S. household population. Those excluded from the sample include people with P.O. Box only addresses, some addresses not listed in the USPS Delivery Sequence File, and some newly constructed dwellings. While most AmeriSpeak households participate in surveys by web, non-internet households can participate in AmeriSpeak surveys by telephone. Households without conventional internet access but having web access via smartphones are allowed to participate in AmeriSpeak surveys by web. AmeriSpeak panelists participate in NORC studies or studies conducted by NORC on behalf of governmental agencies, academic researchers, and media and commercial organizations.

For more information, email AmeriSpeak-BD@norc.org or visit AmeriSpeak.norc.org.

If editors or reviewers are requesting anything more specific or any other detail, please reach out to us to make certain you are using accurate language.

For a less technical, panel-specific description of **AmeriSpeak**, we recommend:

AmeriSpeak is the first U.S. multi-client household panel to combine the speed and cost-effectiveness of panel surveys with enhanced representativeness of the U.S. population, an industry-leading response rate, and an innovative and thorough Project Methods and Transparency Report. Since its founding by NORC at the University of Chicago in 2015, AmeriSpeak has produced more than 1000 surveys, been cited by dozens of media outlets, and become the primary survey partner of the nation's preeminent news service, The Associated Press. AmeriSpeak is the most scientifically rigorous multi-client panel available in the U.S. market. Amerispeak.norc.org.

NORC at the University of Chicago is best described as follows:

NORC at the University of Chicago conducts research and analysis that decision-makers trust. As a nonpartisan research organization and a pioneer in measuring and understanding the world, NORC has studied almost every aspect of the human experience and every major news event for more than eight decades. Today, NORC partners with government, corporate, and nonprofit clients around the world to provide the objectivity and expertise necessary to inform the critical decisions facing society.

www.norc.org

Please refer to the full name "NORC at the University of Chicago" when first mentioning us. Using simply "NORC," thereafter, is fine. Our name is now only the acronym and does not need to be spelled out.

APPENDIX

TECHNICAL OVERVIEW OF THE AMERISPEAK® PANEL NORC'S PROBABILITY-BASED HOUSEHOLD PANEL

Updated February 8, 2022

This technical overview provides the basic information about AmeriSpeak®, a large probability-based panel funded and operated by NORC at the University of Chicago. AmeriSpeak is designed to be representative of the U.S. household population, including all 50 states and the District of Columbia. U.S. households are randomly selected with a known, non-zero probability from the NORC National Frame as well as address-based sample (ABS) frames, and then recruited by mail, telephone, and by field interviewers face to face. AmeriSpeak panelists participate in NORC studies or studies conducted by NORC on behalf of governmental agencies, academic institutions, the media, and commercial organizations.

The construction of the AmeriSpeak panel started in 2014 with pilot samples. In 2015, about 7,000 households were recruited from a sample of around 60,000 addresses. In 2016, about 128,000 addresses were sampled to expand the panel to around 20,000 recruited households. About 51,000 addresses were selected for the 2017 recruitment, which led to the expansion of the regular AmeriSpeak panel to 23,000 recruited households. The AmeriSpeak Panel expanded to approximately 30,000 households in 2018 and 35,000 households in 2019 through further recruitment efforts. The current panel size is 54,001 panel members aged 13 and over residing in over 43,000 households.

In addition to the regular panel for general population studies, AmeriSpeak also contains sub-panels to support studies of special populations, including AmeriSpeak Latino, AmeriSpeak Teen, and AmeriSpeak Young Adult 18-34 (which features an oversample of African Americans, Hispanics, and Asians). AmeriSpeak is also the probability sample source for TrueNorth®, the NORC calibration solution for combining probability and non-probability samples for estimation through small area modeling that leverages data from AmeriSpeak, the American Community Survey, Current Population Survey, and other data sources for improved statistical efficiency.⁶ AmeriSpeak is also the sample source for the Foresight 50+ panel, which is a partnership between AARP and NORC that provides a high-quality panel for organizations looking for insights from older adults living in the United States.⁷

Panel Sample Frame

The primary sampling frame for AmeriSpeak is the 2010 NORC National Frame, a multistage probability sample that fully represents the U.S. household population. We provide a brief description of how the National Frame was constructed after the 2010 Census.

The primary sampling units (PSUs) in the first stage sample selection are 1,917 National Frame Areas (NFAs), each of which is an entire metropolitan area (made up of one or more counties), a county, or a group of counties with a minimum population of 10,000. A total of 126 NFAs are selected in the first stage, including 38 certainty NFAs, 60 urban NFAs, and 28 non-urban NFAs. The largest 38 NFAs, those with a population of at least 1,543,728 (0.5 percent of the 2010 Census U.S. population), were selected into the National Frame with certainty.

Within the 126 selected NFAs, the secondary sampling units (SSUs) are segments defined from Census tracts or block groups, where each segment contains at least 300 housing units according to the 2010 Census. Within the certainty NFAs, a sample of 896 segments was selected using systematic PPS sampling, where the size of a segment is the number of housing units. Implicit stratification was achieved

⁶ For more information about TrueNorth, see <http://amerispeak.norc.org/our-capabilities/Pages/TrueNorth.aspx>.

⁷ For more information about Foresight 50+, see <https://www.norc.org/Research/Capabilities/Pages/Foresight50.aspx>

by sorting the segments by location (NFA, state, and county), principal city indicator, and by ethnic and income indicators. From each urban and rural NFA, a sample of 8 and 5 segments was selected, respectively, using systematic PPS sampling where the measure of size is the number of housing units per segment. A total of 618 segments are selected from the non-certainty NFAs⁸. Overall, a stratified probability sample of 1,514 segments was selected into the National Frame in the second stage sampling.

Within the selected segments, all housing units are listed using the U.S. Postal Service Delivery Sequence File (DSF). In the 123 segments where the DSF coverage is deemed inadequate, the DSF address list is enhanced with an in-person field listing to improve coverage. The final National Frame, consisting of all listed households in the sample segments, is estimated to provide over 97 percent coverage of the U.S. household population. It contains almost 3 million households, including over 80,000 rural households that are added through the in-person listing. In addition to NORC's National Frame, the DSF is used as a supplemental sample frame in four states. Although nationally representative, the National Frame does not include households from Alaska, Iowa, North Dakota, and Wyoming. Since 2016, the annual panel recruitment sample has included a small address-based sample from these four states to assure AmeriSpeak presence in all U.S. States and Washington, D.C.

In 2017, an enhanced DSF frame was also used to develop a new Latino Panel with adequate representation of Spanish-language-dominant Hispanics. Census tracts with a high incidence (at least 30%) of Spanish-dominant Hispanics were targeted for this recruitment. Furthermore, within these Census tracts, households that were flagged as Hispanic based on consumer vendor data (that are typically used for direct-mail marketing) were oversampled.

Panel Sample Selection

For panel sample selection between 2014 and 2018 and in 2020, National Frame segments were stratified into six sampling strata based on the race/ethnicity and age composition of each segment, as below:

- Hispanic, high youth segments
- Hispanic, not high youth segments
- Non-Hispanic Black, high youth segments
- Non-Hispanic Black, not high youth segments
- Other, high youth segments
- Other, not high youth segments

Hispanic segments are those where Hispanics make up at least a third of the population and the Hispanic share in the population is greater than that of non-Hispanic Black. Similarly, non-Hispanic Black segments are those where non-Hispanic Black make up at least a third of the population and the non-Hispanic Black share in the population is greater than that of Hispanics. Finally, High Youth refers to segments in which 18-24-year-old adults are at least 12% of the total adult population. The above stratification is used to oversample housing units in areas with a higher concentration of young adults, Hispanics, and non-Hispanic African Americans. The resulting household sample is referred to as the initial AmeriSpeak sample or sample for initial panel recruitment.

To support the second stage of panel recruitment, initially sampled but nonresponding housing units are subsampled for a nonresponse follow-up (NRFU)⁹. At this stage, consumer vendor data are matched to

⁸ A sample of 5 segments was selected from each of the 28 non-urban NFAs. However, 2 sample segments were later subsampled out in Montana due to cost.

⁹ A small fraction of initially nonresponding housing units is not eligible for NRFU, including "hard refusals" and those with an appointment for a call back from NORC.

the pending housing units, and housing units that are flagged as having a young adult¹⁰ (18-34 years of age) or minority (Hispanic¹¹, non-Hispanic Black¹²) are oversampled for the NRFU sample. Overall, approximately one in five initially nonresponding housing units are subsampled for NRFU using the same six sampling strata defined above. Due to NRFU, these initially nonresponding housing units have a higher selection probability compared to the housing units that were recruited during the first stage of panel recruitment.

A two-phase state-based ABS sample design was used for the 2019 AmeriSpeak recruitment. NORC's National Frame is designed to represent the U.S. household population nationally. At the state level, however, the panel may have more significant clustering effects from the use of the National Frame, especially for states with a small population. The primary objective of the 2019 design is to improve state-level representation by selecting the recruitment sample mostly from areas that are outside the National Frame. A stratified systematic sample was selected in the first phase, where each state constitutes a sampling stratum, and the sample was allocated to the strata proportional to the square root of the state population. In the second phase, young adults, Hispanic, non-Hispanic Black, and conservatives are oversampled based on commercial data sources to improve their representation in the panel. Because the 2019 design did not use NRFU face-to-face recruitment, the 2019 design did not involve geographic clustering.

In 2020 we returned to the "standard" sampling strategy employed in 2014 through 2018, with intentions to conduct a robust NRFU. However, the COVID-19 pandemic prevented NORC from utilizing field interviewers and the NRFU was limited to its usual first stage, a Federal Express mailing to 20% of the total sample. After an analysis of state-level representativity after 2019 recruitment, it was determined that further statewide representativity was needed in four states: WI, MO, WA, and CO. As such, statewide samples using the USPS DSF file were generated for supplemental recruitment.

In 2021, NORC also recruited into an AmeriSpeak probability sample of persons aged 50 and older using a random national consumer address file (estimated 96% sample coverage of all households in the U.S.). AmeriSpeak re-empaneled approximately 6,000 study participants in this initiative.

It was clear at the start of 2021 that NORC would not immediately be able to conduct in-person interviewing given the ongoing COVID-19 pandemic. However, NORC sought to test new sampling strategies (noted below) early in 2021 in the hopes of documenting their efficacy and continuing and improving on them for the rest of 2021. Additionally, it was hoped that NORC would be able to conduct in-person interviewing in the second half of 2021. As such, the 2021 recruiting sample was split into five replicates, the first of which utilized DSF sample, and was released early in the calendar year, while future replicates were sampled using the NORC National Frame and were held until mid-year for recruiting.

At the end of 2020, a major assessment of panel representativeness was conducted to inform the 2021 sampling strategy. This analysis again explored representativity by state, but as well explored a full range of demographic variables. This analysis was conducted both with the full panelist dataset as well as by assessing "effective panelists," a measure of the likely demographic distributions that would occur among complete cases in any typical AmeriSpeak survey. This analysis found that AmeriSpeak could benefit from additional panelists in seven groups: households earning over \$200,000, household with children, Hispanics, Hispanics that specifically speak Spanish, African Americans, persons ages 18 to 24, and persons with less than a High School education. As such, the sample was stratified using NORC Big Data Classifiers (Dutwin et al, 2022), a technique utilizing available consumer and other public Big Data to

¹⁰ A young adult flagged household refers to a household where MSG or TargetSmart indicated there was an 18-24-year-old adult in the household. In 2016 and 2017, a slightly different definition was used, and a young adult flagged household was defined as having an 18-34-year-old adult in the household by MSG or 18-30-year-old adult by TargetSmart.

¹¹ A Hispanic flagged household refers to a household where MSG or TargetSmart indicated the presence of a Hispanic adult in the household.

¹² A non-Hispanic Black-flagged household refers to a household where MSG or TargetSmart indicated the presence of a non-Hispanic Black adult in the household.

make predictions on a range of household attributes during survey sampling. Households predicted to be one of these seven attributes were oversampled, while households predicted only hold persons aged 50 and older, or otherwise not predicted hold someone with one of the seven attributes, were under sampled. This sampling method was tested in the first sampling replicate, and given very positive results, was continued in all other 2021 replicates.

NORC's strategy of "waiting it out" was effective, as the sample replicates released mid-year allowed NORC, to wait for an effective "COVID window" to conduct in-person interviewing. In short, in-person interviewing commenced after the peak of the Delta variant in 2021 and concluded with the peak of the Omicron variants. NORC was able to conduct a full NRFU in-person effort during this time.

Panel Recruitment Procedures

AmeriSpeak Panel recruitment is a two-stage process: (i) initial recruitment using USPS mailings, telephone contact, and modest incentives, and (ii) a more elaborate NRFU recruitment using FedEx mailings, enhanced incentives, and in-person visits by NORC field interviewers.

For the initial recruitment, sample households are invited to join AmeriSpeak online by visiting the panel website AmeriSpeak.org or by calling a toll-free telephone line (inbound/outbound supported). Both English and Spanish languages are supported for online and telephone recruitment. The initial recruitment data collection protocol features the following: an over-sized pre-notification postcard, a USPS recruitment package in a 9"x12" envelope (containing a cover letter, a summary of the privacy policy, FAQs, and a study brochure), two follow-up postcards, and contact by NORC's telephone research center for sample units with a matched telephone number.

For the second stage NRFU recruitment, a stratified random sample is selected from the nonrespondents of the initial recruitment. Units sampled for NRFU are sent a new recruitment package by Federal Express with an enhanced incentive offer. Shortly thereafter, NORC field interviewers make personal, face-to-face visits to the pending cases to encourage participation. Once the households are located, the field interviewers administer the recruitment survey in-person using CAPI or else encourage the respondents to register online or by telephone.

Panel Recruitment Response Rate and Other Panel Statistics

A sample household is considered recruited or responded if at least one adult in the household joins the panel. The weighted household response rate (AAPOR RR3) is about 6% for initial recruitment and 28% for NRFU recruitment. We report two recruitment response rates: one for all the panel recruitment years (2014-2021) and one for the recruitment years with NRFU (2014-2018 and 2021). For all recruitment years, the cumulative weighted household response rate is 21.9%; for recruitment years with NRFU, and the cumulative weighted household response rate is 34.0%.¹³ For client studies requiring a panel recruitment response rate exceeding 30%, the sampling frame may be restricted to the panelists recruited in the NRFU years. The panel recruitment response rate calculation methodology is consistent with AAPOR guidelines and fully documented.¹⁴ The annual panel retention rate is about 85%.

For individual client surveys based on the AmeriSpeak Panel, the AAPOR RR3 response rate is between 10% to 20% depending on specific study parameters such as target population, survey length, time in the field, salience of subject, and the like. This response rate takes into account panel recruitment rate, panel retention rate, and survey participation rate.¹⁵

¹³ As the 2021 NRFU is continuing to wind down, response rates noted here are estimated for 2021 sample cases.

¹⁴ See http://amerispeak.norc.org/research/Pages/WhitePaper_ResponseRateCalculation_AmeriSpeak_2016.pdf

¹⁵ A properly calculated cumulative AAPOR response rate for panel-based research takes into account all sources of non-response at each stage of the panel recruitment, management, and survey administration process (see https://www.aapor.org/AAPOR_Main/media/publications/Standard-Definitions20169theditionfinal.pdf, page 48-9). A common misapplication of the term "response rate" in online panel surveys is to represent the survey-specific cooperation rate as the

Other important panel statistics with respect to the 2014-2019 and 2021 recruited households are as follows: 68% are recruited in the initial stage and 32% are recruited via NRFU; 92% of the active panelists prefer to do web or online surveys, while 8% prefer to participate in telephone surveys; 16% of the recruited households are non-Internet¹⁶; 82% are cell phone only or cell phone mostly; 17% are African-American and 18% Hispanic; and 29% have household income below \$30,000 (compared to CPS benchmark of 26%).¹⁷

Impact of Non-Response Follow-Up

NRFU is instrumental in producing the industry-leading response rate for AmeriSpeak Panel recruitment. Moreover, due to the more intensive effort, NRFU recruitments better represent hard-to-reach groups and are therefore more representative of the target population. For example, initial recruitment tends to under-represent young adults 18-34 years of age. NRFU recruitment corrects for this bias by bringing the age distribution of the panel closer to ACS benchmarks.

Overall, NRFU recruitment significantly improves the representation of the panel with respect to demographic segments that are under-represented among the respondents to the initial recruitment, including young adults (persons 18 to 34 years of age), African Americans, Hispanics, lower-income households, renters, cellphone-only households, and persons with lower educational attainment (e.g., no college degree). To the extent that these demographic characteristics are correlated with substantive survey variables, NRFU helps to reduce potential non-response bias in the sample estimates. NORC's research indicates that NRFU respondents are indeed somewhat different from initial respondents for many common survey variables. For example, compared to the panelists recruited during the initial stage, NRFU panelists tend to be more conservative politically, more likely to attend church, less interested in current events or topics in the news report, less knowledgeable about science, less likely to be in favor of gun control policies, less likely to read a print newspaper (more likely to read the news online and use social media), more likely to eat at fast-food restaurants, and so on¹⁸. These observations illustrate that NRFU recruitment is critical for achieving a more balanced panel and for making the substantive estimates in AmeriSpeak studies more accurate. Even though NRFU panelists are more reluctant to complete surveys, the addition of NRFU panelists reduced total absolute bias on average 5 to 21 percentage points when compared to the initial stage recruits (among examined surveys).¹⁹

Mixed-Mode Data Collection

The AmeriSpeak Panel supports mixed-mode data collection to improve response rate and the representativeness of the complete surveys. During the recruitment survey, AmeriSpeak panelists are offered an opportunity to choose their preferred mode—web or phone—for future participation in AmeriSpeak surveys. A recruited household can consist of both web- and phone-mode panelists. Panelists predominantly prefer web over phone mode. As of February 2020, 92% of the active panelists prefer to do web or online surveys, while 8% prefer to participate in telephone surveys. The telephone mode encompasses panelists without internet access, panelists whose only internet access is via a smartphone, and panelists with internet access but are unwilling to share an email address.

"cumulative survey response rate." See "Response Rate Calculation Methodology for Recruitment of a Two-Phase Probability-Based Panel: The Case of AmeriSpeak" authored by Robert Montgomery, J. Michael Dennis, N. Ganesh. The paper is available at <https://amerispeak.norc.umd.edu/research/>.

¹⁶ The non-internet households (HHs) are those that do not select "High-speed, broadband internet at home (such as cable or DSL)" or "Dial-up internet at home" response options when they are asked "What kind of internet access do you have? Please select all that apply" item in the recruitment survey. The non-internet HHs include those that only use internet on a cell connection or mobile phone.

¹⁷ For transparency purposes, unweighted percentages are presented in this section. Hence, these results do not take into account selection probabilities. The base weighted distributions that take into account selection probabilities can be provided upon request.

¹⁸ See "The Undercounted: Measuring the Impact of 'Nonresponse Follow-up' on Research Data and Outcome Measures" authored by Ipek Bilgen, J. Michael Dennis, N. Ganesh. The paper will be soon available at <https://amerispeak.norc.umd.edu/research/>.

¹⁹ See "Nonresponse Follow-up Impact on AmeriSpeak Panel Sample Composition and Representativeness" authored by Ipek Bilgen, J. Michael Dennis, N. Ganesh. The paper is available at <https://amerispeak.norc.umd.edu/research/>.

To the extent that non-internet households or “net averse” persons are different from the rest of the population, mixed-mode surveys have better population coverage and produce more accurate population estimates. NORC’s telephone interviewers administer the telephone surveys using a data collection system supporting both the phone and web modes, providing an integrated sample management and data collection platform. For panelists using smartphones for web-mode surveys, the NORC survey system renders an optimized presentation of the survey questions for these mobile users.

Panel Management and Maintenance

Panel management and maintenance are crucial for panel health and efficiency. NORC maintains strict panel management rules to limit respondent burden, reduce panel attrition, and minimize the risk of panel fatigue. On average, AmeriSpeak panelists are invited to participate in client studies two to three times a month. AmeriSpeak works with NORC clients to create surveys that provide an appropriate user experience for AmeriSpeak panelists. AmeriSpeak will not field surveys that in our professional judgment will result in a poor user experience for our panelists. AmeriSpeak also has a designated website and a telephone number for panelist communications.

Panel maintenance is a dynamic process because the AmeriSpeak Panel is supplemented and refreshed regularly over time to grow the panel, compensate for panel attrition, and improve panel representation for specific subpopulations. For example, the Latino Panel and Teen Panel are created to support studies of Hispanics and teenagers, respectively; the 2019 recruitment is primarily designed to improve sample representation at the state level. As panelists are added or/and removed from the panel, the panel refreshment process takes place to ensure that the refreshed panel fully represents the corresponding target population.

ADDITIONAL RESOURCES

To learn more about AmeriSpeak or to share an RFP, please contact AmeriSpeak at AmeriSpeak-BD@norc.org. Information about AmeriSpeak capabilities and research papers are available online at AmeriSpeak.NORC.org.