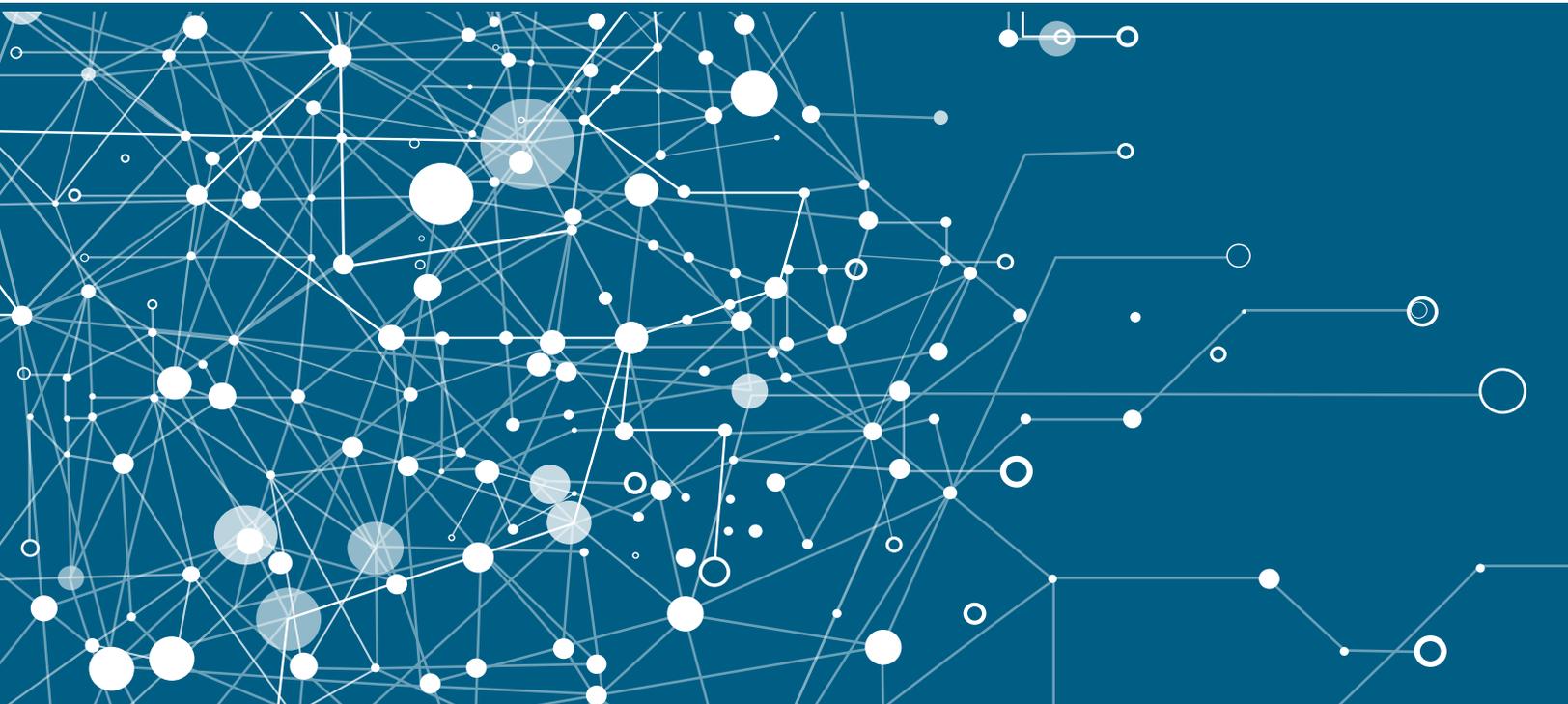


NATIONAL CENTER FOR HEALTH STATISTICS

# Vital and Health Statistics

Series 1, Number 64

October 2020



## The National Center for Health Statistics' 2015 and 2016 Research and Development Surveys

Programs and Collection Procedures



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES  
Centers for Disease Control and Prevention  
National Center for Health Statistics

NCHS reports can be downloaded from: <https://www.cdc.gov/nchs/products/index.htm>.

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Programs and Collection Procedures

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES  
Centers for Disease Control and Prevention  
National Center for Health Statistics

Hyattsville, Maryland  
October 2020

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# Contents

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Abstract . . . . .	1
Introduction . . . . .	1
Methods . . . . .	2
Background . . . . .	2
Questionnaire Design . . . . .	2
Summary of Operation Processes . . . . .	3
Sample Weights Development . . . . .	3
RANDS Data . . . . .	4
Variables . . . . .	4
Comparisons Between RANDS and NHIS . . . . .	4
Descriptive Statistics of Selected Variables . . . . .	5
Summary . . . . .	7
References . . . . .	8
Appendix I. Summary of Item Nonresponse Counts and Percentages for Selected Variables in the Data Sets Used. . . . .	16
Appendix II. RANDS 1 Questionnaire . . . . .	17
Appendix III. RANDS 2 Questionnaire . . . . .	34

## Text Figure

Percentage estimates and standard errors for selected health variables from Research and Development Surveys 1 and 2 and the National Health Interview Survey, 4th quarter 2015 and 2nd quarter 2016. . . . .	6
---	---

## Detailed Tables

1. Variables used in descriptive statistics of the Research and Development Survey. . . . .	9
2. Percent distribution of demographic groups in Research and Development Survey 1 and National Health Interview Survey, 4th quarter 2015 . . . . .	10
3. Percent distribution of demographic groups in Research and Development Survey 2 and National Health Interview Survey, 2nd quarter 2016 . . . . .	11
4. Percent distribution of selected health and social-behavioral variables in Research and Development Survey 1 and National Health Interview Survey, 4th quarter 2015 . . . . .	12
5. Percent distribution of selected health and social-behavioral variables in Research and Development Survey 2 and National Health Interview Survey, 2nd quarter 2016 . . . . .	14

# The National Center for Health Statistics' 2015 and 2016 Research and Development Surveys

by Yulei He, Ph.D., Bill Cai, M.S., Hee-Choon Shin, Ph.D., Vladislav Beresovsky, Ph.D., Van Parsons, Ph.D., Katherine Irimata, Ph.D., Paul Scanlon, Ph.D., and Jennifer Parker, Ph.D.

## Abstract

### Objective

This report provides a general description of the background and operation of the first two rounds of the Research and Development Survey (RANDS), a series of cross-sectional surveys from probability-sampled commercial survey panels. The Division of Research and Methodology of the National Center for Health Statistics (NCHS) conducted the first two rounds of RANDS in 2015 and 2016. RANDS 1 and 2 are being used primarily for question design evaluation and for investigating statistical methodologies for estimation.

### Methods

NCHS contracted with Gallup, Inc. to conduct RANDS 1 in Fall 2015 and RANDS 2 in Spring 2016. RANDS 1 and 2 were conducted using a web survey mode and included survey questions from the National Health Interview Survey (NHIS) that were specifically chosen to provide comparison and evaluation of the survey methodology properties of web surveys and traditional household surveys. In this report, some demographic and health estimates are provided from both sources to describe the RANDS data.

### Results

In RANDS 1, 2,304 out of the original 9,809 invited panel members completed the survey, for a completion rate of 23.5%. In RANDS 2, 2,480 of the initial 8,231 invited respondents completed the survey, for a completion rate of 30.1%. RANDS 1 and 2 participants were similar to the quarterly NHIS participants with respect to sex, census region, and whether they had worked for pay in the previous week. Other characteristics varied, including age, race and ethnicity, and income. Most health estimates differed between RANDS and NHIS. Public-use versions of the RANDS data can be found at: <https://www.cdc.gov/nchs/rands>.

### Conclusion

RANDS is an ongoing platform for research to understand the properties of probability-sampled recruited panels of primarily web users, investigating and developing statistical methods for using such data in conjunction with large nationally representative health surveys, and for extending question-design evaluations.

**Keywords:** health survey • official statistics • probability-sampled recruited panel • web survey • National Health Interview Survey

## Introduction

Sample surveys are a major approach to collecting information from populations for producing nationally representative estimates, informing policy decisions, and providing data for scientific research. In the past, the survey approach has mainly relied on three modes of data collection: face-to-face interviews, telephone interviews, and mail surveys. For many years, these traditional survey modes have been effective in collecting targeted information. In the field of health, an example is the [National Health Interview Survey \(NHIS\)](#), conducted by the National Center for Health Statistics (NCHS). NHIS is primarily based on face-to-face interviews and is a principal data source for providing official

statistics on important health variables, including health insurance coverage and prevalence of doctor-diagnosed conditions (e.g., hypertension and diabetes).

However, all major surveys using traditional data collection methods have been affected by decreasing response rates (1). Increasing nonresponse rates raise concerns of nonresponse bias of the survey estimates (2), although a high nonresponse rate does not necessarily lead to severe bias of estimates (3). In addition, for face-to-face, large-scale health surveys, the increasing unit cost creates additional challenges for implementation. Given the increasing implementation cost and decreasing response rates, survey researchers and administrators have sought economical

alternative approaches to collecting and disseminating information on the nation's health status that retain the scientific and methodological rigor of large-scale health surveys.

In the past 30 years, the internet has fundamentally changed the structure of daily communication channels. Exchanging emails and sending instant messages over the web are now regarded as ordinary activities in most developed countries, including the United States. Correspondingly, the field of survey methodology and practice has been experiencing an innovative and challenging expansion in the form of web surveys (4).

Although many federal data collection organizations are including the web as one mode for response, including NCHS (e.g., [National Hospital Care Survey](#)), many commercial probability-sampled recruited panels are designed for web surveys as the primary mode, accompanied by traditional telephone and mail modes. As the nation's primary health statistics agency, NCHS is interested in understanding the properties of these new data sources and their ability to provide health-related information. NCHS has used this platform to conduct a series of surveys known as the [Research and Development Survey](#) (RANDS). RANDS serves as a research platform for a variety of studies. It has three primary objectives:

1. To understand the properties of commercial probability-sampled recruited panel survey data;
2. To use the platform to evaluate survey question-response patterns using split-panel designs and embedded probe questions, and;
3. To investigate and develop statistical methods for combining and integrating commercial probability-sampled recruited panel web survey data with data from established reference surveys for estimation, in particular with NCHS' core population health data collections.

In web surveys, survey participants can complete the questionnaire online and the information is automatically transferred to the data collector via the internet. Not only do web surveys represent an advance in the evolution of self-administered questionnaires, but the overall cost of web surveys is also significantly lower than traditional data collection methods such as face-to-face interviews, in which each completed case may require multiple contacts with an interviewer and thus entails interviewer payments and logistical costs. Some web survey collections may also reduce the time from planning to data collection to data release. Despite these apparent advantages and some successful real-life applications, web surveys are not immune to various types of survey errors seen with traditional surveys, such as sampling error, coverage error, measurement error, and nonresponse error (5). These errors differ generally between web surveys conducted using nonprobability samples and those conducted using probability-based samples. There is

a strong demand for research, in terms of both methods and practice, to understand properties of different types of web surveys and improve their usefulness (2).

This report describes the background and implementation of the first two rounds of RANDS, conducted in 2015 and 2016, referred to as RANDS 1 and RANDS 2, respectively. Because RANDS 1 and 2 included survey questions from the National Health Interview Survey specifically designed for comparison, some demographic and health estimates are provided from both sources to describe the RANDS data. Overall, this report serves as an informational resource for using and evaluating RANDS 1 and RANDS 2. For the goal of evaluating question-response patterns, RANDS 2 also included embedded probes (questions specifically for measurement research). These results are described elsewhere (6).

## Methods

### Background

The NCHS Division of Research and Methodology contracted with Gallup, Inc. to conduct two web surveys (RANDS 1 and 2) on a variety of demographic, social, and health-related topics with the aforementioned objectives using its probability-sampled recruited panel, also known as the Gallup Panel. Gallup conducted RANDS 1 from November 2, 2015 through December 9, 2015, and RANDS 2 from March 29, 2016 through April 13, 2016.

The Gallup Panel is a probability-sampled recruited panel that is intended to be representative of the U.S. population. More specifically, at the time of data collection for RANDS, the Gallup Panel selected potential members using random digit dialing (RDD) of landline telephones and cellphones and address-based sampling to contact U.S. households. After Gallup recruited a panelist, depending on his or her internet access, Gallup invited him or her to complete surveys via either email, mail, or phone. Only the panel participants with internet access were included in RANDS, and those respondents completed the survey via the web. Additional details of the Gallup Panel and the quality of its data can be found elsewhere (7).

### Questionnaire Design

To allow for comparisons between RANDS and NHIS as part of the research into the properties of web surveys conducted using commercial panels, selected questions from NHIS were used in the questionnaires for RANDS 1 and RANDS 2. After consulting with subject-matter experts, a subset of NHIS questions fielded in 2015 and 2016, which are primarily from the NHIS Family and Sample Adult questionnaires, were used (72 questions in RANDS 1 and 73 questions in RANDS 2). In addition to the NHIS questions, a set of 21 targeted, embedded probe questions were included for use with question-response pattern assessments in RANDS 2 (6).

The detailed questionnaires are included in the [Appendixes](#). The questions described for this report were used in both rounds. The selected NHIS and embedded probe questions cover basic demographics and a wide variety of topic areas such as medical conditions, health insurance, and access to care.

## Summary of Operation Processes

Both RANDES 1 and RANDES 2 were designed to have a responding sample size of 2,000 based on a 40% panel response rate (i.e., the completion rate). Random sampling was used in multiple strata defined by race and ethnicity (non-Hispanic white only, non-Hispanic black only, all other non-Hispanic, or Hispanic), age (18–34, 35–54, or 55 and over), and education (high school or less, some college, or college graduate).

In both rounds, a “complete” was defined by Gallup as clicking the submit button at the end of the survey, whereas a “partial” was a participant who started the survey but never hit submit. In this report, the term completion rate is used to characterize the response rate of RANDES 1 and 2. In RANDES 1 and 2, the completion rate is defined as the number of complete interviews divided by the number of interviews (complete plus partial), which follows the definition of Response Rate 5 of the American Association for Public Opinion Research (8).

Some details about the operation processes for each round are described below. Additional information about the sampling and data collection can be found in the technical documentation for RANDES 1 and 2 (9,10).

### RANDES 1

Gallup sent 5,318 randomly selected panel members email invitations to RANDES 1 on Monday, November 2, 2015. Panelists who had not yet completed the survey also received email reminders on three dates (1st reminder: November 6; 2nd reminder: November 12; 3rd reminder: November 19).

On November 20, the completion rate was 28.8%, and 1,532 panelists of the original 5,318 had completed the survey. This fell short of the completion rate of 40% and 2,000 completes that were expected in the initial 2-week administration time for the survey. Based on the completion rate to that point, Gallup recommended sending two more reminders to the existing sample to try to maximize completion rates (4th reminder: November 24; 5th reminder: December 1).

While early reminders effectively boost completion rates, late reminders (such as the fourth and fifth) tend to have minimal benefit, and Gallup did not anticipate that these reminders would net an additional 500 completes.

Therefore, Gallup recommended drawing and placing into the field additional sample and extending the field period. Gallup selected an additional 4,491 panelists of each cell in the stratification plan, contacting this group according

to the following schedule: Invitation sent on November 24; 1st reminder sent on November 27; 2nd reminder sent on December 1; and 3rd reminder sent on December 7.

RANDES 1 reached the desired 2,000 completes on November 27, but Gallup let the survey remain active until the third reminder for the second sample group was sent. More difficult to reach demographic groups tend to be later survey participants, and allowing a survey to remain in the field until all reminders have been sent typically results in a more representative sample (11).

When the survey administration finished on December 9, Gallup had invited a total of 9,809 panelists to complete the survey. A total of 2,304 had completed it, for a completion rate of 23.5% (7). An additional 118 panelists started but did not complete the survey. These cases were not included in the descriptive analysis of this report.

### RANDES 2

Gallup sent a total of 8,231 panel members email invitations to the RANDES 2 on Tuesday, March 29, 2016. Panelists who had not yet completed the survey received email reminders on these dates (1st reminder: April 4; 2nd reminder: April 7; 3rd reminder: April 11).

RANDES 2 reached the desired 2,000 completes on April 7 but remained in the field until April 13 to allow time for panelists to complete the survey after the third reminder.

A total of 2,480 of the 8,231 invited panelists completed the survey, for a completion rate of 30.1% (8). An additional 148 panelists started but did not complete the survey. These cases were not included in the descriptive analysis of this report.

## Sample Weights Development

Gallup provided sample weights for producing national estimates for both RANDES 1 and RANDES 2. A brief summary on how these weights were developed is provided here. Because the Gallup Panel is a probability panel, each panel member on the sampling frame had an initial weight assigned to each sampled unit (the panel weight). The RANDES-specific base sampling weights are derived using a combination of the panel weight and the probability of selection into RANDES associated with the sampled panel member. This overall RANDES sampling weight was calculated as the panel weight for the Gallup Panel member multiplied by the inverse probability of selection of the Gallup Panel member for the RANDES where the probability of selection of a panelist within a stratum (defined by race and ethnicity, age, and education) was  $nh/Nh$ , the ratio of the number of panelists sampled ( $nh$ ) to the total number of panelists available ( $Nh$ ) in that stratum ( $h$ ).

These RANDES weights were “normalized” so that the sum of the weights was equal to the number of complete respondents. The sample weights (before normalizing)

for both rounds of RANDS data were benchmarked (poststratified) to U.S. population counts of adults to account for the sample design, differential nonresponse, and undercoverage of some groups on the sample frame using the Current Population Survey population totals. This process accounted for the initial sampling weight, nonresponse adjustment, and poststratification.

In the process of poststratification weighting, Gallup weighted the actual respondent data to match the known demographic characteristics of the U.S. population by age, race and ethnicity, sex, education, and region based on the latest available population projections. The poststratification weighting steps were as follows:

- First, Gallup poststratified respondents by a total of four regions, two sex groups, and five age groups (18–34, 35–44, 45–54, 55–64, or 65 and over), resulting in 40 poststratification adjustment cells for region, sex, and age.
- Second, Gallup poststratified respondents by education (high school or less, some college, or college graduate) within each of the five age groups.
- Third, Gallup poststratified respondents by sex within race groups (white only, black only, or all other race groups).
- Fourth, Gallup poststratified respondents by sex within ethnicity (Hispanic or non-Hispanic).

Gallup carried out these steps of adjustment iteratively in that order until the stepwise poststratification algorithm converged (i.e., the weighted proportions were close enough to the targeted proportions for each of the poststratification cells).

Finally, Gallup examined the weight distribution and performed some trimming of extreme weights to minimize the effect of such weights on the variance of estimates.

The public-use version of RANDS 1 and 2 data, as well as the full information about the exact questions and values used for the variables can be found on the [RANDS data website](#). Technical documentation that describes operational processes and weights development is available on the website (9,10).

## RANDS Data

### Variables

To describe the RANDS data and provide some comparison with a survey administered via a more traditional method, estimates from a subset of variables collected in RANDS were compared with NHIS estimates. The selected variables include some basic demographics, major health and related social-behavioral variables characterizing survey participants' access to health care, health service usage, health conditions, and related health behaviors. To facilitate a direct comparison of the estimates of these variables between RANDS and NHIS, the coding of the variables was

harmonized between the two data sources. More specifically, selected demographic variables and their groupings are included in [Table 1](#).

Both RANDS and NHIS have multiple questions on the general and detailed status of health insurance coverage of survey participants. For brevity, in this report only estimates from the initial question, "Are you covered by any kind of health insurance or some other kind of health plan?" are calculated and compared.

## Comparisons Between RANDS and NHIS

### National Health Interview Survey

NHIS is a cross-sectional survey conducted annually since 1957 by NCHS. NHIS uses a multistage geographically clustered design that results in a probability sample of households. All families within a selected household are included in the survey. Within a family, one adult and one child (if any) are randomly selected and face-to-face interviews are conducted with that sample adult and with an adult respondent for the sample child. This multistage probability design permits representative sampling of the civilian, noninstitutionalized U.S. population. The current sampling design for NHIS started in 2016; however, NHIS underwent a questionnaire and survey format redesign starting in 2019 ([https://www.cdc.gov/nchs/nhis/2019\\_quest\\_redesign.htm](https://www.cdc.gov/nchs/nhis/2019_quest_redesign.htm)). The 2015 and 2016 sample adult response rates were 55.2% and 54.3%, respectively. More information on NHIS, including public-use data sets and documentation, can be found at: <https://www.cdc.gov/nchs/nhis.htm>.

### Estimation procedure

In this report, public-use NHIS data are used. Variance units and sample weights are provided by NCHS for calculating nationally representative estimates and variances. These weights account for clustering and stratification. As for all probability-sampled surveys, NHIS sample weights are based on the inverse probability of selection into NHIS and are adjusted for nonresponse and possible coverage errors. Both NHIS and the RANDS Gallup Panel use the same general principles for weighting adjustments. For nonresponse, weighting adjustment cells are used, and for control total calibration, poststratification methods are used. Additional details on the methods used in NHIS can be found elsewhere (12).

While the NHIS and RANDS sample weights were calculated using the same general weighting adjustment principles, specifics for implementation of the weighting adjustment were different. First, in NHIS, one adult is sampled per family and nonresponse adjustments are at a geographical level. For RANDS, there was no limit on how many adults could be sampled within a household from the Gallup Panel. For RANDS, the full Gallup Panel was first stratified by race and ethnicity, sex, age, and education, with stratified

random sampling applied. Nonresponse adjustments for RANDS were based on region, age, sex, and education. For calibration to control totals, NHIS defined cross-classification cells according to age, sex, and race and ethnicity, which are adjusted by a poststratification factor. For RANDS, Gallup used an iterative raking (iterative poststratification) procedure controlling for variants of selected age, race and ethnicity, sex, and region cross-classes.

For selected variables in [Table 1](#), estimates of proportions are calculated and presented as percentages. The estimation is based on weighted response samples that are nonmissing. The frequency of missingness of the variables from data sets used is displayed in [Appendix I](#).

Percentage estimates from RANDS are obtained following established survey statistics procedures, using the sample weights and sampling strata information provided by Gallup (Section 2.1.1). Percentage estimates from NHIS are calculated using its survey design variables, following a standard survey data estimation procedure. In addition, because RANDS was conducted in the 4th quarter of 2015 (sample size 2,304) and in the 2nd quarter of 2016 (sample size 2,480), only data from NHIS, 4th quarter 2015 (sample size 7,723), and NHIS, 2nd quarter 2016 (sample size 8,256) are used for the estimation and comparison. Although RANDS sample weights are poststratified to annual benchmarks, the data were not collected throughout the year so may not be directly comparable to annual NHIS estimates, particularly for items that may have some seasonal variation.

The RANDS and NHIS samples are based on sampling without replacement designs, but for calculating estimates and standard errors for RANDS and NHIS data, the final survey weights were treated as the inverse of selection probability from sampling with replacement. This assumes that the sampling variation can be approximated by treating the corresponding sample weights as inverses of probabilities of selection and that the sampling is done with replacement. The variance estimation is based on the Taylor series linearization approximation approach. This follows standard procedures of analyzing complex survey data (13).

All estimates (proportions, standard errors, and 95% confidence intervals) were obtained using SAS PROC SURVEYMEANS (SAS 9.3 NC). All estimates meet NCHS standards for proportions (14). The statistical significance of the comparison of variables between RANDS and NHIS is based on the survey-data adjusted chi-squared tests (15) and the assumption that the survey degrees of freedom are large. Statistical significance at the 0.05 level is used in the comparison.

Note that the purpose of this report is not to present national official estimates of the selected variables using either RANDS or NHIS data. NCHS official estimates using NHIS are typically based on annual data, and related information including definition and coding of the variables of interest, the corresponding estimates, and scientific implications, can

be found in the literature documented at: <https://www.cdc.gov/nchs/nhis/index.htm>.

## Descriptive Statistics of Selected Variables

Descriptive statistics of item nonresponses for selected variables in RANDS 1 and 2 are shown in [Appendix I](#). For most of the variables, the item nonresponse rates are low, ranging between 0% and 5%. The two variables with considerable nonresponse rates are family income (around 20%) and marital status (around 10%). They are higher than those from the NHIS data, which are around 9% and under 1%, respectively. Note that NCHS produces multiple imputed income files for NHIS data. These files for NHIS 2016 are available at: [https://www.cdc.gov/nchs/nhis/nhis\\_2016\\_data\\_release.htm](https://www.cdc.gov/nchs/nhis/nhis_2016_data_release.htm). In this report, because the analysis involves the use of multiple incomplete variables, all of which are not imputed except for income, only nonmissing cases were used for consistency.

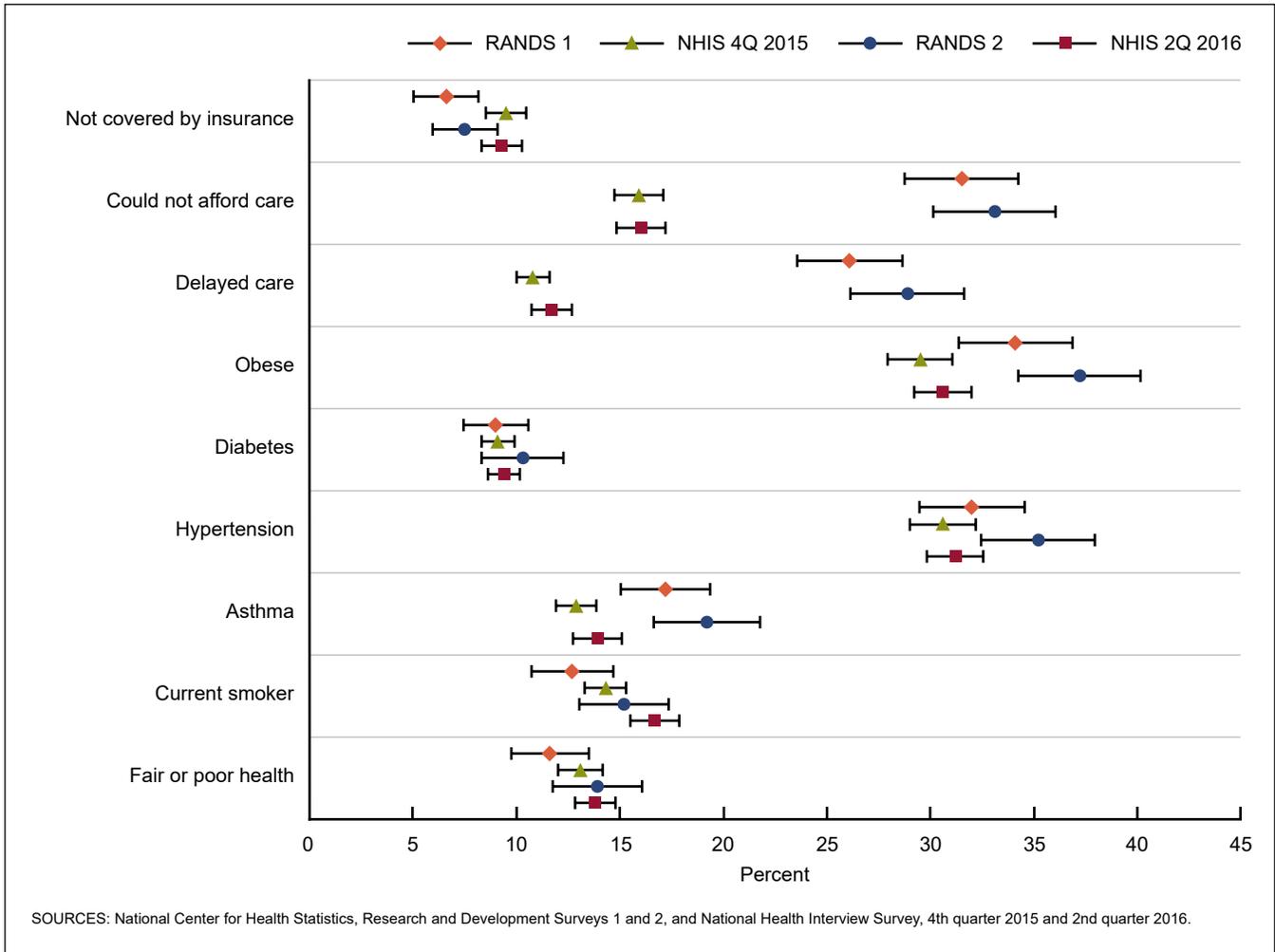
Percentage estimates of selected demographic variables and their standard errors from RANDS 1 and NHIS, 4th quarter 2015 based on nonmissing values (i.e., excluding the item nonresponses) are presented in [Table 2](#). No significant differences were seen in the distribution of age, sex, census region, and whether the respondent worked for pay in the last 7 days; however, significant differences were observed for all other demographic variables.

Percentage estimates of selected demographic variables and their standard errors from RANDS 2 and NHIS, 2nd quarter 2016 are presented in [Table 3](#). Unlike RANDS 1, there was a significant difference in the age distribution, although similarities between sex, census region, and working for pay remained. Percentages for all other demographic variables were significantly different between RANDS and NHIS. Generally, both the RANDS 1 and 2 populations tended to be more educated, middle income or higher, and non-Hispanic white.

Percentage estimates and standard errors of all selected social-behavioral and health variables from RANDS 1 and NHIS, 4th quarter 2015 are shown in [Table 4](#) and the [Figure](#) (with 95% confidence intervals). For the majority of the variables, percentage estimates from RANDS were higher compared with NHIS. The percentages that had health insurance, could not afford health care in the last 12 months, delayed getting health care in the last 12 months, ever had asthma, drank more than 12 drinks in the last 12 months, felt sad in the last 30 days, and used the internet for health information were all significantly higher among RANDS participants. In addition, significant differences were seen in weight status, meeting physical activity guidelines, self-reported health status, and report of worrying about food.

Percentage estimates and standard errors of all selected social-behavioral and health variables from RANDS 2 and NHIS, 2nd quarter 2016 are shown in [Table 5](#) and the [Figure](#) (with 95% confidence intervals). The pattern was mostly like

**Figure. Percentage estimates and standard errors for selected health variables from Research and Development Surveys 1 and 2 and the National Health Interview Survey, 4th quarter 2015 and 2nd quarter 2016**



that from RAN DS 1 and NHIS, as the majority of the variables were significantly different, with RAN DS reporting higher percentages. For example, for the variable “couldn’t afford health care (last 12 months),” the percentage estimate in RAN DS 2 was more than twice the estimate in NHIS (33.1% compared with 16.0%); for the variable “delayed getting care (last 12 months),” the percentage estimate in RAN DS 2 was much higher than in NHIS (28.9% compared with 11.7%); and for the variable “asthma (ever),” the percentage estimate was higher in RAN DS 2 than in NHIS (19.2% compared with 13.9%). However, a few differences were noted in the patterns between RAN DS 1 and RAN DS 2 when compared with NHIS. For example, the percentage estimates of the variable “covered by insurance” were not significantly different between RAN DS 2 and NHIS (92.5% compared with 90.7%) yet were statistically different between RAN DS 1 and NHIS (93.4% compared with 90.5%). However, in both cases, the estimates were above 90%. In addition, no significant differences were seen by smoking status and having more than 12 drinks in the last year between RAN DS 2 and NHIS, although the percentages of these estimates were

similar to RAN DS 1. In addition, reported hypertension was significantly higher in RAN DS 2 compared with NHIS.

Although samples from RAN DS 1 and 2 are independent, their respective estimates for both the demographic and health variables are fairly similar, which can be seen in [Tables 2–5](#) and the [Figure](#). This is consistent with the fact that both samples were from the Gallup Panel, and they were sampled approximately two quarters apart.

Both RAN DS and NHIS implement poststratification and nonresponse adjustments to the U.S. population totals of certain groups, although the exact processes and benchmark totals differ. Differences in the adjustment processes might explain why percentage estimates for some demographics (e.g., sex and census regions), which are used in the poststratification processes for both sources, are similar yet not identical, and estimates for other factors such as age and race and Hispanic origin are significantly different between the two data sources. Application of alternative poststratification adjustments for RAN DS data were not done for this report. For two variables, marital status and family income, caution needs to be taken for understanding the

comparisons because the item nonresponse rates for these two variables in RANDS are relatively high, ranging from 10% to 20%. In addition, the distribution of demographic variables from RANDS are in general similar between the two rounds.

## Summary

RANDS is a series of cross-sectional surveys from probability-sampled commercial survey panels that began in 2015. RANDS has been used for methodological research at NCHS, including the understanding of properties of commercial panels, the use of closed-ended probe questions and split-panel experiments for evaluating question-response patterns, and the development of statistical methodology for the calibration of survey estimates that leverage the strength of national survey data. RANDS data are available for public use. This report described the first two rounds of RANDS, RANDS 1 and 2, and presented tabulations of selected estimates from the surveys alongside comparable estimates from NHIS to inform the understanding of properties of commercial panels.

Research on the web mode of survey administration continues to grow and the use of web survey modes is increasing in the government sector. At NCHS, for example, the web had been used to collect data for the National Electronic Health Records Survey. In addition, the web is used as a mode of data collection for the 2020 Census and in the American Community Survey conducted by the U.S. Census (16).

All surveys are subject to error, both systematic and random (5). Recently, there has been growing development and use of commercial probability-based panels, which collect data either solely or primarily through online questionnaires. Recruitment of potential members for commercial probability-sampled panels takes place through a stringent probability-sampled process. In principle, probability-sampled panels are expected to be representative of the target population and are far less expensive than the established household surveys based on face-to-face interviews. As a result, probability-sampled recruited panels have been viewed by the research community as possible alternatives to more expensive traditional probability-sample surveys for some applications. However, in practice many of the properties of these panels are less well understood. For example, although the Gallup Panel is a commercial probability panel mainly generated by RDD, RANDS 1 and 2 only include those who had internet access, who may differ from the general population in terms of health and related characteristics (17); although other modes of data collection are often available for commercial patterns, these cost more than the web mode. Further, commercial panels experience nonresponse at both the panel establishment stage and for specific surveys. RANDS 1 and 2 had relatively high conditional nonresponse rates (only around 20% completion

rates conditional on panel response). Characteristics of those who respond and participate in commercial panels may differ from those who respond to established surveys. Literature on these issues is expanding (18).

Despite the potential of web surveys based on commercial probability-sampled recruited panels for practical use, there is scarce literature on assessing the performance of their data relative to data from traditional established probability-sampled household population health surveys (e.g., NHIS) for important health outcomes, with or without data from their other modes (e.g., telephone). As a methodological research platform, RANDS 1 and 2 questionnaires were designed, in part, to include a large number and variety of NHIS questions to study the performance of these panel-based surveys using NHIS as the benchmark survey. Comparing RANDS with NHIS provides some basic descriptive patterns and serves as the basis for future research. Differences between RANDS and NHIS were identified for several health and related variables (e.g., asthma, obesity, and access to care). However, it is difficult to identify patterns or causes of differences. In addition to mode effects, coverage, and differential response, other factors related to differences in estimates between established household health surveys and web surveys from probability-sampled commercial panels include differences in sample weighting methods and sampling variability.

One of the primary research objectives for RANDS is to investigate and develop statistical methodologies for combining information from commercial probability-sampled panel surveys with national health survey data. Prior studies have demonstrated the advantages of combining data from multiple surveys to improve the quality of the estimates or to obtain better estimates for items available from only one source (19). Furthermore, estimates from opt-in web surveys are often calibrated to higher-quality, traditional surveys to adjust for possible errors in the web survey (20). To achieve this, statistical techniques (e.g., poststratification, propensity score, and statistical matching methods) may be used to calibrate the probability panel web survey estimates to NHIS and may reduce or eliminate some differences between the data sources (21–23) and lead to better estimates overall. NCHS is currently evaluating some of these techniques for this purpose (24).

RANDS provides a unique data source for researchers to better understand the properties of survey data from probability-sampled recruited panels in terms of collecting and estimating health information and for combining with other surveys. In addition to statistical methods investigations, in-depth analyses of probe questions in web surveys for better understanding question-response patterns and complementary cognitive research studies are ongoing (6). Additional RANDS web surveys have been conducted, or are currently being planned, to address specific research areas in measurement and estimation, as well as test their ability to be used in a timely way to respond to public health crises, such as the COVID-19 pandemic.

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**Table 1. Variables used in descriptive statistics of the Research and Development Survey**

Variable	Content and grouping
Age	18–34, 35–54, 55–64, 65–74, 75 and over
Sex	Female, male
Race and Hispanic origin	Non-Hispanic white only, non-Hispanic black only, non-Hispanic Asian only, other non-Hispanic, Hispanic
Education	Less than high school, high school, Associate's degree or some college, Bachelor's degree or higher
Marital status	Married or living with partner; single or never married; separated, divorced, or widowed
Family income	Less than \$50,000, \$50,000–\$99,999, \$100,000 or more
Census region of residence	Northeast, Midwest, South, West
Employment status (last 7 days)	Response to the question, “During the last week, are you working for pay at a job or business?” Yes, no.
Health insurance coverage	Response to the question, “Are you covered by any kind of health insurance or some other kind of health plan?” Yes, no.
Could not afford health care (last 12 months)	Response to the question, “During the past 12 months, was there any time when you couldn't afford and didn't get any of the health care services?” Yes, no.
Delayed getting care (last 12 months)	Response to the question, “Have you delayed getting care for any reason in the past 12 months?” Yes, no.
Obesity	Underweight (BMI less than 18.5), normal weight (BMI 18.5–24.9), overweight (BMI 25.0–29.9), or obese (BMI 30.0 or more). BMI is calculated by the ratio between body weight (kg) and the square of height (meters).
Diagnosed diabetes (ever)	Response to the question, “Other than during pregnancy, have you ever been told by a doctor that you have diabetes or sugar diabetes?” Yes, no.
Diagnosed hypertension (ever)	Response to the question, “Have you ever been told by a doctor that you have hypertension (high blood pressure)?” Yes, no.
Diagnosed asthma (ever)	Response to the question, “Have you ever been told by a doctor that you have asthma?” Yes, no.
Cigarette smoking status (current, former, never)	Based on responses to the questions, “Have you smoked at least 100 cigarettes in your entire life?” Yes, no. “How often do you now smoke cigarettes? Every day, some days, or not at all?”
More than 12 drinks (12 months)	Response to the question, “In any one year, have you had at least 12 drinks of any type of alcoholic beverage?” Yes, no.
Feel sad (last 30 days)	Response to the question, “During the past 30 days, did you feel all or most of the time any of the following: sad/nervous/restless/hopeless/an effort/worthless?” Yes, no.
Meet physical activity guidelines	Calculated as the percentage who met the 2008 federal physical activity guidelines for aerobic activity through leisure-time aerobic activity (inactive, insufficiently active, active) based on responses to the open-ended questions, “How often do you do vigorous leisure-time physical activities for at least 10 minutes that cause heavy sweating or large increases in breathing or heart rate?”; “How often do you do light or moderate leisure-time physical activities for at least 10 minutes that cause only light sweating or a slight to moderate increase in breathing or heart rate?”; and “How often do you do leisure-time physical activities specifically designed to strengthen your muscles, such as lifting weights or doing calisthenics?”
Self-rated health status	Response to the question, “Would you say your health in general is excellent, very good, good, fair, or poor?” Excellent, very good, good, fair, poor.
Use internet for health information (last 12 months)	Response to the question, “During the past 12 months, have you ever used computers to look up health information on the internet?” Yes, no.
Worry about food	Response to the statement, “I worried whether my food would run out before I got money to buy more.” Often true, sometimes true, never true.

NOTE: BMI is body mass index.

SOURCES: National Center for Health Statistics, Research and Development Surveys 1 and 2.

**Table 2. Percent distribution of demographic groups in Research and Development Survey 1 and National Health Interview Survey, 4th quarter 2015**

Variable	Research and Development Survey 1		National Health Interview Survey	
	Percent	Standard error	Percent	Standard error
Age ( $p = 0.06$ )				
18–34	29.5	0.9	29.6	0.9
35–54	33.7	1.0	34.4	0.8
55–64	17.0	0.9	16.7	0.6
65–74	13.4	0.8	11.3	0.5
75 and over	6.4	0.6	8.0	0.4
Sex ( $p = 0.68$ )				
Female	51.1	1.5	51.8	0.8
Male	48.9	1.5	48.2	0.8
Census region ( $p = 0.72$ )				
Northeast	18.1	1.2	18.6	0.8
Midwest	21.3	1.2	22.4	0.9
South	36.8	1.4	36.8	1.0
West	23.8	1.2	22.2	0.9
Education ( $p < 0.01$ )				
Less than high school	3.6	0.7	15.3	0.7
High school	37.0	1.0	20.9	0.7
Associate's degree or some college	29.2	0.9	30.4	0.8
Bachelor's degree or higher	30.3	0.9	33.4	1.0
Family income ( $p < 0.01$ )				
Less than \$50,000	38.2	1.6	44.9	1.0
\$50,000–\$99,999	34.3	1.6	29.0	0.8
\$100,000 or more	27.5	1.4	26.1	0.9
Marital status ( $p = 0.05$ )				
Married or living with partner	62.4	1.5	60.4	0.8
Single or never married	23.2	1.2	22.1	0.7
Separated, divorced, or widowed	14.4	1.0	17.5	0.6
Race and Hispanic origin ( $p < 0.01$ )				
Non-Hispanic white	72.4	0.9	65.3	1.0
Non-Hispanic black	11.5	0.7	12.1	0.6
Non-Hispanic Asian	1.0	0.2	5.9	0.4
Other non-Hispanic	0.3	0.1	1.1	0.2
Hispanic	14.8	0.7	15.7	0.8
Working for pay (last 7 days) ( $p = 0.90$ )				
Yes	60.4	1.4	60.2	0.8
No	39.6	1.4	39.8	0.8

NOTE:  $p$  values are from chi-square tests for comparing Research and Development Survey and National Health Interview Survey.

SOURCES: National Center for Health Statistics, Research and Development Survey 1, and National Health Interview Survey, 4th quarter 2015.

**Table 3. Percent distribution of demographic groups in Research and Development Survey 2 and National Health Interview Survey, 2nd quarter 2016**

Variable	Research and Development Survey 2		National Health Interview Survey	
	Percent	Standard error	Percent	Standard error
Age ( $p < 0.01$ )				
18–34	26.9	0.9	30.0	0.8
35–54	34.7	1.0	33.7	0.7
55–64	17.9	1.0	16.7	0.5
65–74	15.5	1.1	11.5	0.4
75 and over	5.0	0.7	8.0	0.4
Sex ( $p = 0.50$ )				
Female	50.6	1.6	51.8	0.8
Male	49.4	1.6	48.2	0.8
Census region ( $p = 0.91$ )				
Northeast	17.7	1.3	17.3	0.6
Midwest	21.8	1.3	22.6	0.6
South	37.0	1.5	36.1	0.8
West	23.6	1.3	24.1	0.8
Education ( $p < 0.01$ )				
Less than high school	2.2	0.5	16.3	0.6
High school	36.5	1.1	22.9	0.7
Associate's degree or some college	30.8	0.9	30.8	0.7
Bachelor's degree or higher	30.5	1.0	30.0	0.8
Family income ( $p < 0.01$ )				
Less than \$50,000	32.1	1.6	43.2	0.9
\$50,000–\$99,999	34.1	1.6	30.1	0.7
\$100,000 or more	33.7	1.6	26.7	0.8
Marital status ( $p < 0.01$ )				
Married or living with partner	65.6	1.6	59.9	0.7
Single or never married	21.4	1.4	23.2	0.7
Separated, divorced, or widowed	13.0	1.1	16.9	0.5
Race and Hispanic origin ( $p < 0.01$ )				
Non-Hispanic white	73.2	0.9	65.0	1.1
Non-Hispanic black	11.7	0.6	12.2	0.6
Non-Hispanic Asian	1.1	0.2	6.0	0.4
Other non-Hispanic	0.6	0.2	1.1	0.2
Hispanic	13.3	0.7	15.8	0.9
Working for pay (last 7 days) ( $p = 0.69$ )				
Yes	57.7	1.5	58.4	0.7
No	42.3	1.5	41.6	0.7

NOTE:  $p$  values are from chi-square tests for comparing Research and Development Survey and National Health Interview Survey.

SOURCES: National Center for Health Statistics, Research and Development Survey 2, and National Health Interview Survey, 2nd quarter 2016.

**Table 4. Percent distribution of selected health and social-behavioral variables in Research and Development Survey 1 and National Health Interview Survey, 4th quarter 2015**

Variable	Research and Development Survey 1		National Health Interview Survey	
	Percent	Standard error	Percent	Standard error
Health insurance coverage ( $p < 0.01$ )				
Yes	93.4	0.8	90.5	0.5
No	6.6	0.8	9.5	0.5
Could not afford health care (last 12 months) ( $p < 0.01$ )				
Yes	31.5	1.4	15.9	0.6
No	68.5	1.4	84.1	0.6
Delayed getting care (last 12 months) ( $p < 0.01$ )				
Yes	26.1	1.3	10.8	0.4
No	73.9	1.3	89.2	0.4
Obesity ( $p = 0.01$ )				
Underweight (BMI less than 18.5)	1.2	0.4	1.7	0.2
Normal weight (BMI 18.5–24.9)	30.9	1.4	34.9	0.7
Overweight (BMI 25.0–29.9)	33.8	1.4	33.9	0.7
Obese (BMI 30.0 or more)	34.1	1.4	29.5	0.8
Diabetes (ever) ( $p = 0.91$ )				
Yes	9.0	0.8	9.1	0.4
No	91.0	0.8	90.9	0.4
Hypertension (ever) ( $p = 0.34$ )				
Yes	32.0	1.3	30.6	0.8
No	68.0	1.3	69.4	0.8
Asthma (ever) ( $p < 0.01$ )				
Yes	17.2	1.1	12.9	0.5
No	82.8	1.1	87.1	0.5
Smoking status ( $p < 0.01$ )				
Current	12.7	1.0	14.3	0.5
Former	29.9	1.3	22.3	0.6
Never	57.4	1.4	63.4	0.8
More than 12 drinks (12 months) ( $p < 0.01$ )				
Yes	70.3	1.4	64.4	0.8
No	29.7	1.4	35.6	0.8
Feel sad (last 30 days) ( $p < 0.01$ )				
Yes	18.4	1.2	13.5	0.6
No	81.6	1.2	86.5	0.6
Meet physical activity guideline ( $p < 0.01$ )				
Insufficiently active	13.4	1.0	32.8	0.9
Sufficiently active	25.3	1.3	20.0	0.7
Active	61.3	1.4	47.2	0.9
Self-rated health status ( $p < 0.01$ )				
Excellent	12.7	1.0	28.1	0.7
Very good	41.5	1.5	31.6	0.8
Good	34.2	1.4	27.2	0.7
Fair	9.6	0.9	10.2	0.5
Poor	2.0	0.4	2.9	0.2

See footnote at end of table.

**Table 4. Percent distribution of selected health and social-behavioral variables in Research and Development Survey 1 and National Health Interview Survey, 4th quarter 2015—Con.**

Variable	Research and Development Survey 1		National Health Interview Survey	
	Percent	Standard error	Percent	Standard error
Use internet for health information (last 12 months) ( $p < 0.01$ )				
Yes	82.8	1.1	52.9	0.9
No	17.2	1.1	47.1	0.9
Worry about food ( $p < 0.01$ )				
Often true	5.0	0.7	4.0	0.3
Sometimes true	15.8	1.1	9.8	0.5
Never true	79.3	1.2	86.1	0.6

NOTE:  $p$  values are from chi-square tests for comparing Research and Development Survey and National Health Interview Survey.

SOURCES: National Center for Health Statistics, Research and Development Survey 1, and National Health Interview Survey, 4th quarter 2015.

**Table 5. Percent distribution of selected health and social-behavioral variables in Research and Development Survey 2 and National Health Interview Survey, 2nd quarter 2016**

Variable	Research and Development Survey 2		National Health Interview Survey	
	Percent	Standard error	Percent	Standard error
Health insurance coverage ( $p = 0.06$ )				
Yes	92.5	0.8	90.7	0.5
No	7.5	0.8	9.3	0.5
Could not afford health care (last 12 months) ( $p < 0.01$ )				
Yes	33.1	1.5	16.0	0.6
No	66.9	1.5	84.0	0.6
Delayed getting care (last 12 months) ( $p < 0.01$ )				
Yes	28.9	1.4	11.7	0.5
No	71.1	1.4	88.3	0.5
Obesity ( $p < 0.01$ )				
Underweight (BMI less than 18.5)	1.3	0.4	1.8	0.2
Normal weight (BMI 18.5–24.9)	29.6	1.5	34.1	0.7
Overweight (BMI 25.0–29.9)	31.8	1.5	33.6	0.6
Obese (BMI 30.0 or more)	37.2	1.5	30.6	0.7
Diabetes (ever) ( $p = 0.41$ )				
Yes	10.3	1.0	9.4	0.4
No	89.7	1.0	90.6	0.4
Hypertension (ever) ( $p = 0.01$ )				
Yes	35.2	1.4	31.2	0.7
No	64.8	1.4	68.8	0.7
Asthma (ever) ( $p < 0.01$ )				
Yes	19.2	1.3	13.9	0.6
No	80.8	1.3	86.1	0.6
Smoking status ( $p < 0.01$ )				
Current	15.2	1.1	16.7	0.6
Former	30.2	1.4	21.8	0.6
Never	54.6	1.6	61.4	0.8
More than 12 drinks (12 months) ( $p = 0.14$ )				
Yes	67.5	1.5	65.0	0.8
No	32.5	1.5	35.0	0.8
Feel sad (last 30 days) ( $p < 0.01$ )				
Yes	19.8	1.3	13.6	0.5
No	80.2	1.3	86.4	0.5
Meet physical activity guideline ( $p < 0.01$ )				
Insufficiently active	17.7	1.2	27.1	0.9
Sufficiently active	22.4	1.3	19.7	0.6
Active	60.0	1.6	53.2	0.8
Self-rated health status ( $p < 0.01$ )				
Excellent	12.8	1.0	27.0	0.7
Very good	37.2	1.5	31.8	0.7
Good	36.1	1.5	27.5	0.7
Fair	10.5	1.0	10.7	0.5
Poor	3.4	0.6	3.1	0.2

See footnote at end of table.

**Table 5. Percent distribution of selected health and social-behavioral variables in Research and Development Survey 2 and National Health Interview Survey, 2nd quarter 2016—Con.**

Variable	Research and Development Survey 2		National Health Interview Survey	
	Percent	Standard error	Percent	Standard error
Use internet for health information (last 12 months) ( $p < 0.01$ )				
Yes	83.7	1.2	51.3	0.9
No	16.3	1.2	48.7	0.9
Worry about food ( $p < 0.01$ )				
Often true	4.4	0.6	3.9	0.3
Sometimes true	14.6	1.1	9.6	0.5
Never true	81.1	1.2	86.5	0.6

NOTE:  $p$  values are from chi-square tests for comparing Research and Development Survey and National Health Interview Survey.

SOURCES: National Center for Health Statistics, Research and Development Survey 2, and National Health Interview Survey, 2nd quarter 2016.

# Appendix I. Summary of Item Nonresponse Counts and Percentages for Selected Variables in the Data Sets Used

**Table. Item nonresponse counts and percentages for selected variables in the data sets used**

Characteristic	Research and Development Survey 1 (n = 2,304)	Research and Development Survey 2 (n = 2,480)	National Health Interview Survey, 4th quarter 2015 (n = 7,723)	National Health Interview Survey, 2nd quarter 2016 (n = 8,256)
	Count (percent) of nonresponses			
Age	0 (0.00%)	0 (0.00%)	0 (0.00%)	0 (0.00%)
Sex	0 (0.00%)	0 (0.00%)	0 (0.00%)	0 (0.00%)
Census region	6 (0.26%)	3 (0.12%)	0 (0.00%)	0 (0.00%)
Education	0 (0.00%)	0 (0.00%)	24 (0.31%)	27 (3.27%)
Family income	512 (22.22%)	501 (20.20%)	622 (8.05%)	666 (8.07%)
Marital status	144 (6.25%)	320 (12.90%)	18 (0.23%)	16 (0.19%)
Race and Hispanic origin	19 (0.82%)	13 (0.52%)	0 (0.00%)	0 (0.00%)
Working for pay (last 7 days)	0 (0.00%)	0 (0.00%)	0 (0.00%)	0 (0.00%)
Health insurance coverage	10 (0.43%)	17 (0.69%)	32 (0.41%)	39 (0.47%)
Could not afford health care (last 12 months)	86 (3.73%)	100 (4.03%)	80 (1.04%)	77 (0.93%)
Delayed getting care (last 12 months)	101 (4.38%)	98 (3.95%)	87 (1.13%)	79 (0.96%)
Obesity	70 (3.04%)	86 (3.47%)	267 (3.46%)	276 (3.34%)
Diabetes (ever)	10 (0.43%)	22 (0.89%)	3 (0.04%)	7 (0.08%)
Hypertension (ever)	17 (0.74%)	36 (1.45%)	6 (0.08%)	13 (0.16%)
Asthma (ever)	15 (0.65%)	25 (1.00%)	4 (0.05%)	4 (0.05%)
Smoking status	18 (0.78%)	35 (1.41%)	35 (0.45%)	29 (0.35%)
More than 12 drinks (12 months)	20 (0.87%)	22 (0.89%)	60 (0.78%)	57 (0.69%)
Feel sad (last 30 days)	0 (0.00%)	0 (0.00%)	0 (0.00%)	0 (0.00%)
Meet physical activity guideline	0 (0.00%)	0 (0.00%)	133 (1.72%)	167 (2.02%)
Self-rated health status	14 (0.61%)	19 (0.77%)	5 (0.06%)	3 (0.04%)
Use internet for health information (last 12 months)	17 (0.74%)	25 (1.01%)	3 (0.04%)	1 (0.01%)
Worry about food	21 (0.91%)	22 (0.89%)	143 (1.85%)	112 (1.36%)

SOURCES: National Center for Health Statistics, Research and Development Surveys 1 and 2, and National Health Interview Survey, 4th quarter 2015 and 2nd quarter 2016.

# Appendix II. RANDS 1 Questionnaire

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## **RANDS1 Questionnaire**

### **PHSTAT**

Would you say health in general is excellent, very good, good, fair, or poor?

- 1 Excellent
- 2 Very good
- 3 Good
- 4 Fair
- 5 Poor
- 9 (*Don't Know*)

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### **NEW SCREEN**

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These next questions are about whether you were always able to afford the food you needed in the last 30 days.

First, you are going to see several statements that people have made about their food situation. For these statements, please indicate whether the statement was often true, sometimes true, or never true for you in the last 30 days.

### **FSRUNOUT**

I worried whether my food would run out before I got money to buy more

- 1 Often true
- 2 Sometimes true
- 3 Never true
- 9 (*Don't Know*)

**FSLAST**

The food that I bought just didn't last, and I didn't have money to get more.

- 1 Often true
- 2 Sometimes true
- 3 Never true
- 9 (*Don't Know*)

**FSBALANC**

I couldn't afford to eat balanced meals.

- 1 Often true
- 2 Sometimes true
- 3 Never true
- 9 (*Don't Know*)

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**NEW SCREEN**

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**FSSKIP**

In the last 30 days, did you ever cut the size of your meals or skip meals because there wasn't enough money for food?

- 1 Yes
- 2 No
- 9 (*Don't Know*)

**FSLESS**

In the last 30 days, did you ever eat less than you felt you should because there wasn't enough money for food?

- 1 Yes
- 2 No
- 9 (*Don't Know*)

**FSHUNGRY**

In the last 30 days, were you ever hungry but didn't eat because there wasn't enough money for food?

- 1 Yes
- 2 No
- 9 (*Don't Know*)

**FSWEIGHT**

In the last 30 days, did you lose weight because there wasn't enough money for food?

- 1 Yes
- 2 No
- 9 (*Don't Know*)

\_\_\_\_\_ **NEW SCREEN** \_\_\_\_\_

**FHCDV2W**

During the last 2 weeks, did you see a doctor or other health care professional at a doctor's office, a clinic, an emergency room, or some other place?

- 1 Yes
- 2 No
- 9 (*Don't Know*)

**Skip: (If code 1 in FHCDV2W, continue, otherwise skip to F10DVRY)**

\_\_\_\_\_ **NEW SCREEN** \_\_\_\_\_

**PHCDVN2W**

How many times did you visit a doctor or other health care professional during the last 2 weeks?

Please enter a number between 0 and 14.

\_\_\_\_\_ **NEW SCREEN** \_\_\_\_\_

**F10DVYR**

During the past 12 months, did you receive care from doctors or other health care professionals 10 or more times? Do not include telephone calls.

- 1 Yes
- 2 No
- 9 (*Don't Know*)

\_\_\_\_\_ **NEW SCREEN** \_\_\_\_\_

**FHICOV**

The next few questions are about health insurance, including health insurance obtained through employment, purchased directly, as well as government programs like Medicare and Medicaid that provide Medical care or help pay medical bills.

Are you covered by any kind of health insurance or some other kind of health care plan?

- 1 Yes
- 2 No
- 9 (Don't Know)

**Skip: (If code 2 in FHICOV skip to WRKCOR, otherwise continue)**

---

**NEW SCREEN**

---

**HIKIND**

Do you have any of the following kinds of health insurance or health care coverage? Include those plans that pay for only one type of service, such as nursing home care, accidents, or dental care. Exclude private plans that only provide extra cash while hospitalized.

- 1 Yes
- 2 No
- 9 (Don't know)

- HIKIND\_1 Private Health Insurance
- HIKIND\_2 Medicare
- HIKIND\_3 Medi-Gap
- HIKIND\_4 Medicaid
- HIKIND\_5 SCHIP (CHIP/Children's Health Insurance Program)
- HIKIND\_6 Military health care (TRICARE/VA/CHAMP-VA)
- HIKIND\_7 Indian Health Service
- HIKIND\_8 State-sponsored health plan
- HIKIND\_9 Other government program
- HIKIND\_10 Single service plan (e.g., dental, vision, prescriptions)

**Skip: (If code 1 in HIKIND 1, continue, otherwise skip to WRKCOR)**

---

**NEW SCREEN**

---

**PLNMGD**

What type of private plan do you have?

- 1 HMO (Health Maintenance Organization)
- 2 IPA (Individual Practice Plan)
- 3 PPO (Preferred Provider Organization)
- 4 POS (Point of Service)
- 5 Fee-for-Service
- 6 Indemnity
- 7 Some Other Kind of Plan
- 9 (*Don't Know*)

**MGCHMD**

Under your private plan, can you choose any doctor or must you choose one from a specific group or list of doctors?

- 1 Choose Any Doctor
- 2 Choose from a Group or List
- 9 (*Don't Know*)

**PCPREQ**

Does this plan require you to have a primary care doctor who approves all your care?

- 1 Yes
- 2 No
- 9 (*Don't Know*)

---

**NEW SCREEN**

---

The next questions are about the work you do.

**WRKCOR**

Which of the following were you doing last week?

- 1 Working for pay at a job or business
- 2 With a job or business but not at work
- 3 Looking for work
- 4 Working, but not for pay, at a family-owned job or business
- 5 Not working at a job or business and not looking for work
- 9 (*Don't Know*)

**Skip note: (If code 2,3,4, or 5 continue, otherwise skip to HYPEV)**

**WHYNOWK2**

What is the main reason you did not work last week?

- 1 Taking care of house or family
- 2 Going to school
- 3 Retired
- 4 On a planned vacation from work
- 5 On family or maternity leave
- 6 Temporarily unable to work for health reasons
- 7 Have job or contract and off-season
- 8 On layoff
- 9 Disabled
- 10 Other
- 99 (*Don't Know*)

---

**NEW SCREEN**

---

The next series of questions will ask you about certain medical conditions.

**HYPEV**

Have you ever been told by a doctor or other health professional that you had hypertension, also called high blood pressure?

- 1 Yes
- 2 No
- 9 (*Don't Know*)

**Skip: (If code 1 in HYPEV continue, otherwise skip to EPHEV)**

---

**NEW SCREEN**

---

**HYPMDEV2**

Has a doctor ever prescribed any medicine for your high blood pressure?

- 1 Yes
- 2 No
- 9 (*Don't Know*)

**HYPMED2**

Are you now taking any medicine prescribed by a doctor for your high blood pressure?

- 1 Yes
- 2 No
- 9 (*Don't Know*)

---

**NEW SCREEN**

---

**EPHEV**

Have you ever been told by a doctor or other health professional that you had emphysema?

- 1 Yes
- 2 No
- 9 (*Don't Know*)

**COPDEV**

Have you ever been told by a doctor or other health professional that you had chronic obstructive pulmonary disease, also called COPD?

- 1 Yes
- 2 No
- 9 (*Don't Know*)

**AASMEV**

Have you ever been told by a doctor or other health professional that you had asthma?

- 1 Yes
- 2 No
- 9 (*Don't Know*)

**Skip: (If code 1 AASMEV continue, otherwise skip to DIBEV)**

---

**NEW SCREEN**

---

**AASSTILL**

Do you still have asthma?

- 1 Yes
- 2 No
- 9 (*Don't Know*)

**AASMYR**

During the past 12 months have you had an episode of asthma, or an asthma attack?

- 1 Yes
- 2 No
- 9 (*Don't Know*)

**AASMERYR**

During the past 12 months have you had to visit an emergency room or urgent care center because of asthma?

- 1 Yes
- 2 No
- 9 (*Don't Know*)

---

**NEW SCREEN**

---

**DIBEV**

Other than during pregnancy, have you ever been told by a doctor or other health professional that you have diabetes or sugar diabetes?

- 1 Yes
- 2 No
- 3 Borderline
- 9 (*Don't Know*)

***Skip: (If code 1 in DIBEV skip to DIBAGE, if code 3 skip to INSLN, otherwise continue)***

---

**NEW SCREEN**

---

**DIBPRE1**

Have you ever been told by a doctor or other health professional that you have any of the following: prediabetes, impaired fasting glucose, impaired glucose tolerance, borderline diabetes, or high blood sugar?

- 1 Yes
- 2 No
- 9 (*Don't Know*)

**Skip: (All in DIBPRE1: If code 1 in DIBPRE1 skip to INSLN, otherwise skip to CBRCHRY)**

\_\_\_\_\_ **NEW SCREEN** \_\_\_\_\_

**DIBAGE**

How old were you when a doctor or other health professional first told you that you had diabetes or sugar diabetes?

[OPEN ENDED]

**Skip: (If code 1 in DIBEV or code 1 in DIBRE1, continue, otherwise skip to CBRCHRY)**

\_\_\_\_\_ **NEW SCREEN** \_\_\_\_\_

**INSLN**

Are you now taking insulin?

- 1 Yes
- 2 No
- 9 (Don't Know)

**DIBPILL**

Are you now taking diabetic pills to lower your blood sugar? These are sometimes called oral agents or oral hypoglycemic agents.

- 1 Yes
- 2 No
- 9 (Don't Know)

\_\_\_\_\_ **NEW SCREEN** \_\_\_\_\_

**CBRCHYR**

Have you ever been told by a doctor or other health professional that you had chronic bronchitis?

- 1 Yes
- 2 No
- 9 (Don't Know)

\_\_\_\_\_ **NEW SCREEN** \_\_\_\_\_

**SMKEV**

These next questions are about cigarette smoking. Have you smoked at least 100 cigarettes in your entire life?

- 1 Yes
- 2 No
- 9 (Don't Know)

**Skip: (If code 1 SMKEV continue, otherwise skip to SMKAY)**

\_\_\_\_\_ **NEW SCREEN** \_\_\_\_\_

**SMKNOW**

How often do you now smoke cigarettes? Every day, some days or not at all?

- 1 Every Day
- 2 Some Days
- 3 Not At All
- 9 (Don't Know)

**Skip: (If code 3 continue, if code 1 or 2 skip to CIGQTRY, if code 9 or blank skip to VIGNO)**

\_\_\_\_\_ **NEW SCREEN** \_\_\_\_\_

**SMKQTNO**

How long has it been since you quit smoking cigarettes?

[OPEN ENDED]

\_\_\_\_\_ **NEW SCREEN** \_\_\_\_\_

**CIGQTYR**

During the past 12 months, have you stopped smoking for more than one day because you were trying to quit smoking?

- 1 Yes
- 2 No
- 9 (Don't Know)

**Skip: (All in CIGQTRY skip to VIGNO)**

\_\_\_\_\_ **NEW SCREEN** \_\_\_\_\_

**Programmer: (Only ask SMKANY of those who were code 2, 9, or blank in SMKEV)**

**SMKANY**

Have you ever smoked a cigarette even one time?

- 1 Yes
- 2 No
- 9 (Don't Know)

---

**NEW SCREEN**

---

The next questions are about physical activities (exercise, sports, physically active hobbies...) that you may do in your leisure time.

**VIGNO**

How often do you do vigorous leisure-time physical activities for at least 10 minutes that cause heavy sweating or large increases in breathing or heart rate?

[OPEN ENDED]

**MODNO**

How often do you do light or moderate leisure time physical activities for at least 10 minutes that cause only light sweating or a slight to moderate increase in breathing or heart rate?

[OPEN ENDED]

**STRNGNO**

How often do you do leisure time physical activities specifically designed to strengthen your muscles such as lifting weights or doing calisthenics?

[OPEN ENDED]

---

**NEW SCREEN**

---

These next questions are about drinking alcoholic beverages. Included are liquor such as whiskey or gin, beer, wine, wine coolers, and any other type of alcoholic beverage.

**ALC1YR**

In any one year, have you had at least 12 drinks of any type of alcoholic beverage?

- 1 Yes
- 2 No
- 9 (Don't Know)

**Skip: (If code 1 in ALC1YR skip to ALC12MNO, otherwise continue)**

---

**NEW SCREEN**

---

**ALCLIFE**

In your entire life, have you had at least 12 drinks of any type of alcoholic beverage?

- 1 Yes
- 2 No
- 9 (Don't Know)

***Skip: (If code 1 continue, otherwise skip to AHGT FT)***

---

**NEW SCREEN**

---

**ALC12MNO**

In the past year, how often did you drink any type of alcoholic beverage?

[OPEN ENDED]

**ALCAMT**

On those days that you drank alcoholic beverages in the past year, , how many drinks did you have on the average?

[OPEN ENDED]

---

**NEW SCREEN**

---

**ALC5UPNO**

In the past year, on how many days did you have [**(Programmer: If code 2 in DEMO GENDER):4/ (Programmer: If code 1 in DEMO GENDER):5**] or more drinks of any alcoholic beverage?

[OPEN ENDED]

**BINGE**

Considering all types of alcoholic beverages, during the past 30 days, how many times did you have [**(Programmer: If code 2 in DEMO GENDER):4/ (Programmer: If code 1 in DEMO GENDER):5**] or more drinks on an occasion?

[OPEN ENDED]

---

**NEW SCREEN**

---

**AHGT\_FT**

How tall are you without shoes?

[OPEN ENDED]

**AWGT\_LB**

How much do you weigh without shoes?

[OPEN ENDED]

---

**NEW SCREEN**

---

There are many reasons people delay getting medical care. Have you delayed getting care for any of the following reasons in the past 12 months?

**AHCDLY\_1**

You couldn't get through on the telephone.

- 1 Yes
- 2 No
- 9 (*Don't Know*)

**AHCDLY\_2**

You couldn't get an appointment soon enough.

- 1 Yes
- 2 No
- 9 (*Don't Know*)

**AHCDLY\_3**

Once you get there, you have to wait too long to see the doctor.

- 1 Yes
- 2 No
- 9 (*Don't Know*)

**AHCDLY\_4**

The clinic or doctor's office wasn't open when you could get there.

- 1 Yes
- 2 No
- 9 (*Don't Know*)

**AHCDLY\_5**

You didn't have transportation.

- 1 Yes
- 2 No
- 9 (*Don't Know*)

---

**NEW SCREEN**

---

During the past 12 months, was there any time when you needed any of the following, but didn't get it because you couldn't afford it?

**AHCAFY\_1**

Prescription medicines.

- 1 Yes
- 2 No
- 9 (*Don't Know*)

**AHCAFY\_2**

Mental health care or counseling.

- 1 Yes
- 2 No
- 9 (*Don't Know*)

**AHCAFY\_3**

Dental care (including checkups).

- 1 Yes
- 2 No
- 9 (*Don't Know*)

**AHCAFY\_4**

Eyeglasses.

- 1 Yes
- 2 No
- 9 (*Don't Know*)

**AHCAFY\_5**

To see a specialist.

- 1 Yes
- 2 No
- 9 (*Don't Know*)

**AHCAFY\_6**

Follow-up care.

- 1 Yes
- 2 No
- 9 (*Don't Know*)

---

**NEW SCREEN**

---

During the past 12 months, have you ever used computers for any of the following?

**HIT1A**

Look up health information on the Internet.

- 1 Yes
- 2 No
- 9 (*Don't Know*)

**HIT3A**

Schedule an appointment with a health care provider.

- 1 Yes
- 2 No
- 9 (*Don't Know*)

---

**NEW SCREEN**

---

During the past 30 days, how often did you feel...

**ACISAD**

So sad that nothing could cheer you up?

- 1 All of the time
- 2 Most of the time
- 3 Some of the time
- 4 A little of the time
- 5 None of the time
- 9 (*Don't Know*)

**ACINERV**

Nervous?

- 1 All of the time
- 2 Most of the time
- 3 Some of the time
- 4 A little of the time
- 5 None of the time
- 9 (*Don't Know*)

**ACIRSTLS**

Restless or fidgety?

- 1 All of the time
- 2 Most of the time
- 3 Some of the time
- 4 A little of the time
- 5 None of the time
- 9 (*Don't Know*)

**ACIHOPLS**

Hopeless?

- 1 All of the time
- 2 Most of the time
- 3 Some of the time
- 4 A little of the time
- 5 None of the time
- 9 (*Don't Know*)

**ACIEFFRT**

That everything was an effort?

- 1 All of the time
- 2 Most of the time
- 3 Some of the time
- 4 A little of the time
- 5 None of the time
- 9 (*Don't Know*)

**ACIWTHLS**

Worthless?

- 1 All of the time
- 2 Most of the time
- 3 Some of the time
- 4 A little of the time
- 5 None of the time
- 9 (*Don't Know*)

---

**NEW SCREEN**

---

**AWEBOFNO**

How often do you use the Internet?

[OPEN ENDED]

---

**NEW SCREEN**

---

**ANX\_1**

How often do you feel worried, nervous or anxious?

- 1 Daily
- 2 Weekly
- 3 Monthly
- 4 A Few Times a Year
- 5 Never
- 9 (*Don't Know*)

**ANX\_2**

Do you take medication for these feelings?

- 1 Yes
- 2 No
- 9 (*Don't Know*)

**Skip: (If code 5 in ANX 1 AND code 2 in ANX 2 skip to submit screen, otherwise continue)**

---

**NEW SCREEN**

---

**ANX\_3**

Thinking about the last time you felt worried, nervous or anxious, how would you describe the level of these feelings? ]?

- 1 A Little
- 2 A Lot
- 3 Somewhere in Between a Little and a Lot
- 4
- 9 (*Don't Know*)

[END]

# Appendix III. RANDS 2 Questionnaire

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## **RANDS2 Questionnaire**

### **PHSTAT**

Would you say your health in general is excellent, very good, good, fair, or poor?

- 1 Excellent
- 2 Very good
- 3 Good
- 4 Fair
- 5 Poor
- 9 (*Don't Know*)

### **PROBE1**

Why did you answer that way?

Because of:

- My diet and nutrition
- My exercise habits
- My unhealthy behaviors such as smoking or drinking habits
- My health problems or conditions
- The amount of times I seek health care
- The amount of pain or fatigue that I have
- My conversations with my doctor

**These next questions are about whether you were always able to afford the food you needed in the last 30 days.**

**First, you are going to see several statements that people have made about their food situation. For these statements, please indicate whether the statement was often true, sometimes true, or never true for you in the last 30 days.**

### **FSRUNOUT**

I worried whether my food would run out before I got money to buy more

- 1 Often true
- 2 Sometimes true
- 3 Never true
- 9 (*Don't Know*)

### **FSLAST**

The food that I bought just didn't last, and I didn't have money to get more.

- 1 Often true
- 2 Sometimes true
- 3 Never true
- 9 (*Don't Know*)

### **FSBALANC**

I couldn't afford to eat balanced meals.

- 1 Often true
- 2 Sometimes true
- 3 Never true
- 9 (*Don't Know*)

**PROBE2**

When answering the last question, how did you define "balanced meal"?

- A meal with all the major food groups
- A meal that includes a starch, a vegetable, and a protein
- A meal without a lot of fat, salt or sugar
- A homemade or home-cooked meal
- A meal that does not include processed ingredients

**FSSKIP**

In the last 30 days, did you ever cut the size of your meals or skip meals because there wasn't enough money for food?

- 1 Yes
- 2 No
- 9 (*Don't Know*)

**FSLESS**

In the last 30 days, did you ever eat less than you felt you should because there wasn't enough money for food?

- 1 Yes
- 2 No
- 9 (*Don't Know*)

**FSHUNGRY**

In the last 30 days, were you ever hungry but didn't eat because there wasn't enough money for food?

- 1 Yes
- 2 No
- 9 (*Don't Know*)

**FSWEIGHT**

In the last 30 days, did you lose weight because there wasn't enough money for food?

- 1 Yes
- 2 No
- 9 (Don't Know)

**PROBE3**

Do you do any of the following things?

- Give your share of food to a family member so they get more to eat
- Skip meals in order to make your food last
- Keep to a strict budget when buying food
- Plan out your meals to avoid running out of food
- Add fillers like pasta or bread to stretch food
- Save money by not splurging on unnecessary foods
- Only buy store-brand or generic foods to save money

**FHCDV2W**

During the last 2 weeks, did you see a doctor or other health care professional at a doctor's office, a clinic, an emergency room, or some other place?

- 1 Yes
- 2 No
- 9 (Don't Know)

**(If Yes continue, otherwise skip to F10DVRY)**

**PHCDVN2W**

How many times did you visit a doctor or other health care professional during the last 2 weeks?

Please enter a number between 0 and 14.

**F10DVYR**

During the past 12 months, did you receive care from doctors or other health care professionals 10 or more times? Do not include telephone calls.

- 1 Yes
- 2 No
- 9 (Don't Know)

**FHICOV**

The next few questions are about health insurance, including health insurance obtained through employment, purchased directly, as well as government programs like Medicare and Medicaid that provide Medical care or help pay medical bills.

Are you covered by any kind of health insurance or some other kind of health care plan?

- 1 Yes
- 2 No
- 9 (Don't Know)

**Skip: (If code 2 in FHICOV skip to WRKCOR, otherwise continue)**

**HIKIND**

Do you have any of the following kinds of health insurance or health care coverage? Include those plans that pay for only one type of service, such as nursing home care, accidents, or dental care. Exclude private plans that only provide extra cash while hospitalized.

- HIKIND\_1** Private Health Insurance
- HIKIND\_2** Medicare
- HIKIND\_3** Medi-Gap
- HIKIND\_4** Medicaid
- HIKIND\_5** SCHIP (CHIP/Children's Health Insurance Program)
- HIKIND\_6** Military health care (TRICARE/VA/CHAMP-VA)
- HIKIND\_7** Indian Health Service
- HIKIND\_8** State-sponsored health plan
- HIKIND\_9** Other government program
- HIKIND\_10** Single service plan (e.g., dental, vision, prescriptions)

**PROBE4**

Which of the following best describes how you got your health insurance?

- It's given to all people older than 65
- It's obtained through an employer
- It's through one of my parent's or guardian's employers
- It's provided by the government to people who have difficulty affording health insurance
- It's obtained through healthcare.gov or one of the state health insurance marketplaces
- It's obtained through a government job

**Skip: (If code 1 in HIKIND 1, continue, otherwise skip to WRKCOR)**

**PLNMGD**

What type of private plan do you have?

- 1 HMO (Health Maintenance Organization)
- 2 IPA (Individual Practice Plan)
- 3 PPO (Preferred Provider Organization)
- 4 POS (Point of Service)
- 5 Fee-for-Service
- 6 Indemnity
- 7 Some Other Kind of Plan
- 9 (*Don't Know*)

**MGCHMD**

Under your private plan, can you choose any doctor or must you choose one from a specific group or list of doctors?

- 1 Choose Any Doctor
- 2 Choose from a Group or List
- 9 (*Don't Know*)

**PCPREQ**

Does this plan require you to have a primary care doctor who approves all your care?

- 1 Yes
- 2 No
- 9 (*Don't Know*)

**PROBE5**

How much do you know about the features of your health insurance plan?

- None
- A Little
- Somewhere in between a little and a lot
- A lot

**PROBE6**

How confident are you about your answers to the health insurance questions?

- Not at all confident
- A Little
- Somewhere in between a little and very
- Very confident

**The next questions are about the work you do.**

**WRKCOR**

Which of the following were you doing last week?

- 1 Working for pay at a job or business
- 2 With a job or business but not at work
- 3 Looking for work
- 4 Working, but not for pay, at a family-owned job or business
- 5 Not working at a job or business and not looking for work
- 9 (Don't Know)

**Skip: (If code 2,3,4, or 5 continue, otherwise skip to HYPEV)**

**WHYNOWK2**

What is the main reason you did not work last week?

- 1 Taking care of house or family
- 2 Going to school
- 3 Retired
- 4 On a planned vacation from work
- 5 On family or maternity leave
- 6 Temporarily unable to work for health reasons
- 7 Have job or contract and off-season
- 8 On layoff
- 9 Disabled
- 10 Other
- 99 (Don't Know)

**The next series of questions will ask you about certain medical conditions.**

**HYPEV**

Have you ever been told by a doctor or other health professional that you had hypertension, also called high blood pressure?

- 1 Yes
- 2 No
- 9 (Don't Know)

**Skip: (If code 1 in HYPEV continue, otherwise skip to NEWLUNG)**

**HYPMDEV2**

Has a doctor ever prescribed any medicine for your high blood pressure?

- 1 Yes

- 2 No
- 9 (Don't Know)

**HYPMED2**

Are you now taking any medicine prescribed by a doctor for your high blood pressure?

- 1 Yes
- 2 No
- 9 (Don't Know)

**NEWLUNG**

Have you ever been told by a doctor or other medical professional that you have Chronic Obstructive Pulmonary Disease or COPD, emphysema, or chronic bronchitis?

- 1 Yes
- 2 No
- 9 (Don't Know)

**Skip: (If Yes continue, otherwise skip to AASMEV)**

**PROBE7**

Thinking about the condition that your doctor or other medical professional told you that you had, how long did the symptoms last:

- Less than one week
- Less than one month
- Between one month and three months
- More than three months

**PROBE8**

Which condition were you told you had?

- COPD
- Emphysema
- Chronic Bronchitis
- Bronchitis
- Other \_\_\_\_\_

**AASMEV**

Have you ever been told by a doctor or other health professional that you had asthma?

- 1 Yes
- 2 No
- 9 (Don't Know)

**Skip: (If code 1 AASMEV continue, otherwise skip to DIBEV)**

**AASSTILL**

Do you still have asthma?

- 1 Yes
- 2 No
- 9 (Don't Know)

**AASMYR**

During the past 12 months have you had an episode of asthma, or an asthma attack?

- 1 Yes
- 2 No
- 9 (Don't Know)

**AASMERYR**

During the past 12 months have you had to visit an emergency room or urgent care center because of asthma?

- 1 Yes
- 2 No
- 9 (Don't Know)

**DIBEV**

Other than during pregnancy, have you ever been told by a doctor or other health professional that you have diabetes or sugar diabetes?

- 1 Yes
- 2 No
- 3 Borderline
- 9 (Don't Know)

**Skip: (If code 1 in DIBEV skip to DIBAGE, if code 3 skip to INSLN, otherwise continue)**

**DIBPRE1**

Have you ever been told by a doctor or other health professional that you have any of the following: prediabetes, impaired fasting glucose, impaired glucose tolerance, borderline diabetes, or high blood sugar?

- 1 Yes
- 2 No
- 9 (Don't Know)

**Skip: (All in DIBPRE1: If code 1 in DIBPRE1 skip to INSLN, otherwise skip to SMKEV)**

**DIBAGE**

How old were you when a doctor or other health professional first told you that you had diabetes or sugar diabetes?

\_\_\_\_\_ [OPEN ENDED]

**PROBE9**

Where you told that you have Type 1 or Type 2 diabetes?

- \_\_\_ Type 1
- \_\_\_ Type 2
- \_\_\_ Another Type
- \_\_\_ Don't Know

**Skip: (If code 1 in DIBEV or code 1 in DIBRE1, continue, otherwise skip to SMKEV)**

\_\_\_\_\_ **NEW SCREEN** \_\_\_\_\_

**INSLN**

Are you now taking insulin?

- 1 Yes
- 2 No
- 9 (Don't Know)

**DIBPILL**

Are you now taking diabetic pills to lower your blood sugar? These are sometimes called oral agents or oral hypoglycemic agents.

- 1 Yes
- 2 No
- 9 (Don't Know)

**These next questions are about cigarette smoking.**

**SMKEV**

These next questions are about cigarette smoking. Have you smoked at least 100 cigarettes in your entire life?

- 1 Yes
- 2 No
- 9 (Don't Know)

**Skip: (If code 1 SMKEV continue, otherwise skip to SMKAY)**

**SMKNOW**

How often do you now smoke cigarettes? Every day, some days or not at all?

- 1 Every Day
- 2 Some Days
- 3 Not At All
- 9 (Don't Know)

**Skip: (If code 3 continue, if code 1 or 2 skip to CIGQTRY, if code 9 or blank skip to VIGNO)**

**SMKQTNO**

How long has it been since you quit smoking cigarettes?

[OPEN ENDED]

**CIGQTYR**

During the past 12 months, have you stopped smoking for more than one day because you were trying to quit smoking?

- 1 Yes
- 2 No
- 9 (Don't Know)

**Skip: (All in CIGQTRY skip to VIGNO)**

**Programmer: (Only ask SMKANY of those who were code 2, 9, or blank in SMKEV)**

**SMKANY**

Have you ever smoked a cigarette even one time?

- 1 Yes
- 2 No
- 9 (Don't Know)

**PROBE10**

In the previous question, what kind of cigarettes were you thinking of?

- Tobacco cigarettes
- Cigars
- Marijuana cigarettes
- E-cigarettes

**The next questions are about physical activities (exercise, sports, physically active hobbies...) that you may do in your leisure time.**

**NEWPHYSACT**

In the past week, on how many days have you done a total of 30 minutes or more of physical activity, which was enough to raise your breathing rate? This may include sports, exercise, and brisk walking or cycling for recreation or to get to and from places, but should not include housework or physical activity that may be part of your job.

\_\_\_\_\_ Days

**PROBE11**

Which of the following types of physical activity, if any, were you thinking about?

- Running
- Jogging
- Walking or hiking for exercise
- Walking to or from an activity
- Walking at work
- Housework or yardwork
- Working with exercise equipment
- Playing sports
- Cycling
- Swimming
- Yoga \_\_\_\_\_

**VIGNO**

How often do you do vigorous leisure-time physical activities for at least 10 minutes that cause heavy sweating or large increases in breathing or heart rate?

[OPEN ENDED]

**VIGLNGNO**

About how long do you do these vigorous leisure-time physical activities?

[OPEN ENDED]\_\_\_\_\_Minutes

**PROBE12**

Which of the following types of physical activity, if any, were you thinking about?

- Running
- Jogging
- Walking or hiking for exercise
- Walking to or from an activity
- Walking at work
- Housework or yardwork
- Working with exercise equipment
- Playing sports
- Cycling
- Swimming
- Yoga\_\_\_\_\_

**MODNO**

How often do you do light or moderate leisure time physical activities for at least 10 minutes that cause only light sweating or a slight to moderate increase in breathing or heart rate?

[OPEN ENDED]

**MODLNGNO**

About how long do you do these light or moderate leisure-time physical activities?

[OPEN ENDED]\_\_\_\_\_Minutes

**PROBE13**

Which of the following types of physical activity, if any, were you thinking about?

- Running
- Jogging
- Walking or hiking for exercise
- Walking to or from an activity
- Walking at work
- Housework or yardwork
- Working with exercise equipment
- Playing sports
- Cycling
- Swimming
- Yoga\_\_\_\_\_

**STRNGNO**

How often do you do leisure time physical activities specifically designed to strengthen your muscles such as lifting weights or doing calisthenics?

[OPEN ENDED]

**These next questions are about drinking alcoholic beverages. Included are liquor such as whiskey or gin, beer, wine, wine coolers, and any other type of alcoholic beverage.**

**ALC1YR**

In any one year, have you had at least 12 drinks of any type of alcoholic beverage?

- 1 Yes
- 2 No
- 9 (Don't Know)

***Skip: (If code 1 in ALC1YR skip to ALC12MNO, otherwise continue)***

**ALCLIFE**

In your entire life, have you had at least 12 drinks of any type of alcoholic beverage?

- 1 Yes
- 2 No
- 9 (Don't Know)

***Skip: (If code 1 continue, otherwise skip to AHGT FT)***

**ALC12MNO**

In the past year, how often did you drink any type of alcoholic beverage?

[OPEN ENDED]

**ALCAMT**

On those days that you drank alcoholic beverages in the past year, how many drinks did you have on the average?

[OPEN ENDED]

**PROBE14**

When answering the previous question, which of the following, if any, did you count:

- The number of cans or bottles of beer or malt liquor, glasses of wine, or shots of liquor.
- The number of bottles of wine or bottles of liquor.
- The number of drinks you purchased from a restaurant or bar.
- The number of drinks you made or poured for yourself.

**ALC5UPNO**

In the past year, on how many days did you have [(Programmer: If code 2 in DEMO GENDER):4/ (Programmer: If code 1 in DEMO GENDER):5] or more drinks of any alcoholic beverage?

[OPEN ENDED]

**BINGE**

Considering all types of alcoholic beverages, during the past 30 days, how many times did you have [(Programmer: If code 2 in DEMO GENDER):4/ (Programmer: If code 1 in DEMO GENDER):5] or more drinks on an occasion?

[OPEN ENDED]

**PROBE15**

Thinking about your answer to the previous question, how long did the occasions you drank [5 or 4] more drinks at once last on average?

- A couple of hours or less
- Between 2 and 12 hours
- Between 12 and 24 hours
- More than a day

**AHGT\_FT**

How tall are you without shoes?

[OPEN ENDED]

**AWGT\_LB**

How much do you weigh without shoes?

[OPEN ENDED]

**There are many reasons people delay getting medical care. Have you delayed getting care for any of the following reasons in the past 12 months?**

**AHCDLY\_1**

You couldn't get through on the telephone.

- 1 Yes
- 2 No
- 9 (*Don't Know*)

**AHCDLY\_2**

You couldn't get an appointment soon enough.

- 1 Yes
- 2 No
- 9 (*Don't Know*)

**AHCDLY\_3**

Once you get there, you have to wait too long to see the doctor.

- 1 Yes
- 2 No
- 9 (*Don't Know*)

**AHCDLY\_4**

The clinic or doctor's office wasn't open when you could get there.

- 1 Yes
- 2 No
- 9 (*Don't Know*)

**AHCDLY\_5**

You didn't have transportation.

- 1 Yes
- 2 No
- 9 (*Don't Know*)

**During the past 12 months, was there any time when you needed any of the following, but didn't get it because you couldn't afford it?**

**AHCAFY\_1**

Prescription medicines.

- 1 Yes
- 2 No
- 9 (*Don't Know*)

**AHCAFY\_2**

Mental health care or counseling.

- 1 Yes
- 2 No
- 9 (*Don't Know*)

**AHCAFY\_3**

Dental care (including checkups).

- 1 Yes
- 2 No
- 9 (*Don't Know*)

**AHCAFY\_4**

Eyeglasses.

- 1 Yes
- 2 No
- 9 (*Don't Know*)

**AHCAFY\_5**

To see a specialist.

- 1 Yes
- 2 No
- 9 (*Don't Know*)

**AHCAFY\_6**

Follow-up care.

- 1 Yes
- 2 No
- 9 (*Don't Know*)

**During the past 12 months, have you ever used computers for any of the following?**

**HIT1A**

Look up health information on the Internet.

- 1 Yes
- 2 No
- 9 Don't Know

**HIT3A**

Schedule an appointment with a health care provider.

- 1 Yes
- 2 No
- 9 Don't Know

**During the past 30 days, how often did you feel...**

**ACISAD**

So sad that nothing could cheer you up?

- 1 All of the time
- 2 Most of the time
- 3 Some of the time
- 4 A little of the time
- 5 None of the time
- 9 (*Don't Know*)

**ACINERV**

Nervous?

- 1 All of the time
- 2 Most of the time
- 3 Some of the time
- 4 A little of the time
- 5 None of the time
- 9 (*Don't Know*)

**PROBE16**

Which of the following statements, if any, describe your feelings of nervousness:

- Sometimes the feelings can be so intense that my chest hurts and I have trouble breathing.
- These are positive feelings that help me to accomplish goals and be productive.
- The feelings sometimes interfere with my life, and I wish that I did not have them.
- I have been told by a medical professional that I have anxiety.

**ACIRSTLS**

Restless or fidgety?

- 1 All of the time
- 2 Most of the time
- 3 Some of the time
- 4 A little of the time
- 5 None of the time
- 9 (*Don't Know*)

**PROBE17**

Would you consider restlessness and fidgetiness a good thing or a bad thing?

- Good Thing
- Bad Thing
- Neither good nor bad

**PROBE18**

How concerned are you about these feelings?

- A lot
- Somewhere in between a lot and a little
- A little
- Not at all

**ACIHOPLS**

Hopeless?

- 1 All of the time
- 2 Most of the time
- 3 Some of the time
- 4 A little of the time
- 5 None of the time
- 9 (*Don't Know*)

**ACIEFFRT**

That everything was an effort?

- 1 All of the time
- 2 Most of the time
- 3 Some of the time
- 4 A little of the time
- 5 None of the time
- 9 (*Don't Know*)

**PROBE19**

Would you consider everything being an effort a good thing or a bad thing?

- Good Thing
- Bad Thing
- Neither good nor bad

**PROBE20**

How concerned are you about these feelings?

- A lot
- Somewhere in between a lot and a little
- A little
- Not at all

**ACIWTHLS**

Worthless?

- 1 All of the time
- 2 Most of the time
- 3 Some of the time
- 4 A little of the time
- 5 None of the time
- 9 (*Don't Know*)

**AWEBOFNO**

How often do you use the Internet?

[OPEN ENDED]

**ANX\_1**

How often do you feel worried, nervous or anxious?

- 1 Daily
- 2 Weekly
- 3 Monthly
- 4 A Few Times a Year
- 5 Never
- 9 (Don't Know)

**ANX\_2**

Do you take medication for these feelings?

- 1 Yes
- 2 No
- 9 (Don't Know)

**Skip: (If code 5 in ANX 1 AND code 2 in ANX 2 skip to submit screen, otherwise continue)**

\_\_\_\_\_ **NEW SCREEN** \_\_\_\_\_

**ANX\_3**

Thinking about the last time you felt worried, nervous or anxious, how would you describe the level of these feelings?

- 1 A Little
- 2 A Lot
- 3 Somewhere in Between a Little and a Lot
- 4
- 9 (Don't Know)

**PROBE21**

Which of the following statements, if any, describes your feelings:

- \_\_\_ Sometimes the feelings can be so intense that my chest hurts and I have trouble breathing.
- \_\_\_ These are positive feelings that help me to accomplish goals and be productive.
- \_\_\_ The feelings sometimes interfere with my life, and I wish that I did not have them.
- \_\_\_ I have been told by a medical professional that I have anxiety.

# Vital and Health Statistics Series Descriptions

## Active Series

- Series 1. Programs and Collection Procedures**  
Reports describe the programs and data systems of the National Center for Health Statistics, and the data collection and survey methods used. Series 1 reports also include definitions, survey design, estimation, and other material necessary for understanding and analyzing the data.
- Series 2. Data Evaluation and Methods Research**  
Reports present new statistical methodology including experimental tests of new survey methods, studies of vital and health statistics collection methods, new analytical techniques, objective evaluations of reliability of collected data, and contributions to statistical theory. Reports also include comparison of U.S. methodology with those of other countries.
- Series 3. Analytical and Epidemiological Studies**  
Reports present data analyses, epidemiological studies, and descriptive statistics based on national surveys and data systems. As of 2015, Series 3 includes reports that would have previously been published in Series 5, 10–15, and 20–23.

## Discontinued Series

- Series 4. Documents and Committee Reports**  
Reports contain findings of major committees concerned with vital and health statistics and documents. The last Series 4 report was published in 2002; these are now included in Series 2 or another appropriate series.
- Series 5. International Vital and Health Statistics Reports**  
Reports present analytical and descriptive comparisons of U.S. vital and health statistics with those of other countries. The last Series 5 report was published in 2003; these are now included in Series 3 or another appropriate series.
- Series 6. Cognition and Survey Measurement**  
Reports use methods of cognitive science to design, evaluate, and test survey instruments. The last Series 6 report was published in 1999; these are now included in Series 2.
- Series 10. Data From the National Health Interview Survey**  
Reports present statistics on illness; accidental injuries; disability; use of hospital, medical, dental, and other services; and other health-related topics. As of 2015, these are included in Series 3.
- Series 11. Data From the National Health Examination Survey, the National Health and Nutrition Examination Surveys, and the Hispanic Health and Nutrition Examination Survey**  
Reports present 1) estimates of the medically defined prevalence of specific diseases in the United States and the distribution of the population with respect to physical, physiological, and psychological characteristics and 2) analysis of relationships among the various measurements. As of 2015, these are included in Series 3.
- Series 12. Data From the Institutionalized Population Surveys**  
The last Series 12 report was published in 1974; these reports were included in Series 13, and as of 2015 are in Series 3.
- Series 13. Data From the National Health Care Survey**  
Reports present statistics on health resources and use of health care resources based on data collected from health care providers and provider records. As of 2015, these reports are included in Series 3.

- Series 14. Data on Health Resources: Manpower and Facilities**  
The last Series 14 report was published in 1989; these reports were included in Series 13, and are now included in Series 3.
- Series 15. Data From Special Surveys**  
Reports contain statistics on health and health-related topics from surveys that are not a part of the continuing data systems of the National Center for Health Statistics. The last Series 15 report was published in 2002; these reports are now included in Series 3.
- Series 16. Compilations of Advance Data From Vital and Health Statistics**  
The last Series 16 report was published in 1996. All reports are available online; compilations are no longer needed.
- Series 20. Data on Mortality**  
Reports include analyses by cause of death and demographic variables, and geographic and trend analyses. The last Series 20 report was published in 2007; these reports are now included in Series 3.
- Series 21. Data on Natality, Marriage, and Divorce**  
Reports include analyses by health and demographic variables, and geographic and trend analyses. The last Series 21 report was published in 2006; these reports are now included in Series 3.
- Series 22. Data From the National Mortality and Natality Surveys**  
The last Series 22 report was published in 1973. Reports from sample surveys of vital records were included in Series 20 or 21, and are now included in Series 3.
- Series 23. Data From the National Survey of Family Growth**  
Reports contain statistics on factors that affect birth rates, factors affecting the formation and dissolution of families, and behavior related to the risk of HIV and other sexually transmitted diseases. The last Series 23 report was published in 2011; these reports are now included in Series 3.
- Series 24. Compilations of Data on Natality, Mortality, Marriage, and Divorce**  
The last Series 24 report was published in 1996. All reports are available online; compilations are no longer needed.

For answers to questions about this report or for a list of reports published in these series, contact:

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