Evaluating Web Survey Respondents' Interaction with the Health Insurance Questions on the American Community Survey

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Abstract

The Patient Protection and Affordable Care Act (ACA), implemented in 2014, introduced new mechanisms for accessing health coverage, including the health insurance Marketplace. In addition, some people with incomes below a certain threshold may have been eligible to receive a subsidy or tax credit that covered part of the cost of Marketplace coverage. In 2019 the U.S. Census Bureau introduced a two-part health insurance premium and subsidy receipt question to the American Community Survey (ACS) that can be used to produce an approximation of the population with subsidized Marketplace coverage. Since the majority of the ACS person-level data come from the web instrument, we analyzed the 2019 ACS web survey paradata internal file in order to evaluate respondents' interactions with the health insurance coverage question and the two-part premium and subsidy question, as well as to identify potential problems that might impact data quality. Results suggest that respondents did not have issues interacting with the health insurance questions. However, some groups of respondents, such as those identifying as Asian, were more likely to access the "Help" link, use the "Previous" button, and change their answers.

[1] The Census Bureau has reviewed this data product to ensure appropriate access, use, and disclosure avoidance protection of the confidential source data used to produce this product (Disclosure Review Board (DRB) approval number: **CBDRB-FY23-SEHSD003-015)**.This paper is released to inform interested parties of ongoing research and to encourage discussion. Any views expressed are those of the author(s) and not those of the U.S. Census Bureau. All data are subject to error arising from a variety of sources, including sampling error, non-sampling error, model error, and any other sources of error. For further information on ACS statistical standards and accuracy, go to <https://www2.census.gov/programs-surveys/acs/tech_docs/accuracy/ACS_Accuracy_of_Data_2019.pdf>.

Introduction

Health insurance coverage is a complex topic for many survey respondents. Research has shown that participants tend to underreport Medicaid and other means-tested programs (Boudreaux, Ziegenfuss, Graven, Davern, and Blewett, 2011; Davern, Klerman, Baugh, Call, and Greenberg, 2009; Pascale, Roemer, and Resnick, 2009). Some reasons for underreporting may include respondents misunderstanding the health insurance coverage questions, not recognizing their coverage type in the response choices, being confused about the name or type of coverage they hold, and lacking knowledge of other household members' coverage (Wheaton, 2008). There is also evidence of direct-purchase coverage overreporting which may be due to respondents including non-comprehensive health plans (such as vision, dental, or single-service plans) as well as double-reporting of the same plan (Lynch, Kenney, Haley, and Resnick, 2011).

The ACA introduced a new way of obtaining health coverage, namely purchasing it directly through the Health Insurance Marketplace (Marketplace). People with family incomes within a certain range (100 to 400 percent of the federal poverty level) who purchase Marketplace coverage are eligible for federal tax subsidies to help pay health coverage premiums (Department of Health and Human Services, 2020; DeLeire, Chappel, Finegold, and Gee, 2017). After implementation of the ACA, there was a legislative need to differentiate respondents who had directly purchased coverage through the Marketplace from those have Medicaid or other means-tested programs (Pascale, Rodean, Leeman, Cosenza, and Schoua-Glusberg, 2013).

After several years of question development and testing, the Census Bureau introduced a two-part health insurance premium and subsidy receipt question to the American Community Survey (ACS) in 2019. The ACS is an annual, nationally representative survey that collects demographic, social, economic, and housing data on the U.S. population. As the largest federal household survey, it is the principal source of health insurance coverage information for state and sub-state geographies (Keisler-Starkey and Bunch, 2020).[2]

In the ACS, respondents indicate their coverage at the time of interview. They report whether they currently have any of six types of coverage (employer-sponsored, direct-purchase, Medicare, Medicaid, TRICARE, and VA Care) or Indian Health Service through 'Yes'-'No' responses.[3] Those who are not sure how to classify their type of coverage may report an "other" type of coverage through a write-in field, which the Census Bureau uses to determine their type

[2] The ACS began collecting information on health insurance coverage in 2008.
[3] Indian Health Service (IHS) is not considered comprehensive coverage. Therefore, people whose only coverage is through IHS are considered uninsured.

of comprehensive coverage (if any).[4] Using direct-purchase coverage and the premium and subsidy question, the ACS provides an approximation of subsidized Marketplace coverage.[5]

ACS data collection occurs year-round. For Housing Units (HUs), it follows a sequential mixed-mode design with three modes: web, mail, and in-person interviewing. Sampled HUs first receive a mailed request to respond via web, followed by an option to complete a paper questionnaire and return it by mail.[6] If no response is received by web or mail, the address may be selected for computer-assisted personal interviewing (CAPI).

All data collection modes include health insurance coverage content as well as the premium and subsidy questions. Although all persons in sample are in universe for the health insurance coverage question, the premium and subsidy question has a skip pattern that varies by data collection mode. In all interview modes except mail, only people reporting direct-purchase, Medicaid, or an "other" type of coverage are asked whether they pay a health insurance premium.[7] In the paper form, respondents who reported any coverage are instructed to provide information about premiums. Regardless of data collection mode, only persons who report a premium are asked about subsidy receipt.

Purpose of the Study

In order to evaluate respondents' interaction with the health insurance coverage question and the two-part premium and subsidy question, as well as to identify potential issues respondents had in answering these questions that might affect data quality, we analyzed the 2019 ACS web survey paradata internal file. Web survey paradata are data about the process of answering the survey itself, automatically generated when respondents answer web instruments (Couper, 1998). Paradata analysis is a tool that can be used to assess the quality of a survey and make improvements to its design.

In web surveys, paradata can be categorized into two broad categories. Device-type paradata provide information about the type of device (for example, a laptop, tablet, or smartphone) used to complete the survey. On the other hand, questionnaire navigation paradata describe the entire process of how the respondent interacts with the questionnaire. These paradata are collected on a

[4] Comprehensive health insurance covers basic health care needs. This definition excludes single service plans such as dental, vision, or prescription medicine plans.
[5] The Census Bureau also updated the VA Care coverage question in 2019 since veterans may qualify for subsidized Marketplace coverage and disenroll from VA health care.
[6] The primary data collection mode for Group Quarters (GQs), on the other hand, is computer-assisted personal interviewing (CAPI). A paper GQ questionnaire is distributed to GQ respondents only when a CAPI interview cannot be conducted. As a result, the analysis presented here does not include GQ responses. For more information about the ACS, see official documentation (U.S. Census Bureau, 2014).
[7] This skip pattern was not built into the paper forms in order to minimize respondent confusion (Berchick, O'Hara, Heimel, and Sawyer, 2017).

screen-by-screen or question-by-question basis, depending on the level of detail. Some examples include error messages rendered and changed answers, among others (Callegaro, 2013). In this study we used questionnaire navigation paradata measures to evaluate respondents' interaction with the health insurance questions (See Figures 1 and 2 for screenshots of the web survey coverage question and the two-part premium and subsidy question, respectively). We chose to focus on the web instrument instead of the other data collection modes since it allows us to learn how respondents are navigating the instrument..

In the final part of our study, we used results from the paradata analyses to identify whether some groups of respondents had more difficulty answering these questions (e.g., accessed the "Help" text or changed their answer) than others. We compared the characteristics of these respondents with those who visited each of the corresponding screens to determine which groups were overrepresented. We then conducted logistic regressions to determine which sociodemographic groups were more likely to have issues navigating the health insurance screens. Results from the analyses can inform recommendations to improve design of the ACS health insurance web survey questions.

Methodology

A. Sample

We used the 2019 ACS web survey paradata internal file and the 2019 ACS person-level file for these analyses.[8] We excluded persons in Group Quarters (GQ's) and those who answered the Puerto Rico Community Survey (PRCS) since these data collection modes do not include the web instrument.

In the ACS, one person may provide data for all members of the household. The Census Bureau refers to this person as the household respondent (U.S. Census Bureau, 2014). It is impossible to determine from the data who provided the answer to the health insurance questions (or any of the other ACS survey questions). Due to this, the word "respondent' in this study refers to each person in sample, and not just the household respondent.

B. Health Insurance Coverage, Premium and Subsidy Screens

The web version of the coverage question is considered a matrix or grid question. It has eight items, one per row (employer-sponsored, direct-purchase, Medicare, Medicaid, TRICARE, VA Care, Indian Health Service, and "other" type), a write-in field, and two "Yes" and "No" columns. Respondents can select either "Yes", "No", or leave blank any of the items. If

[8] Tables A1 and A2 in the Appendix include the list of variables used from the ACS paradata file and the ACS person-level file, respectively.

respondents click “Yes” on the “other” type of coverage part of the question, they are prompted to fill out the write-in field (See Figure 1).

The two-part premium and subsidy question, on the other hand, appears on two different screens (See Figure 2). The first screen includes the premium part of the question while the follow-up screen contains the subsidy receipt portion. Only respondents that select “Yes” on either direct-purchase, Medicaid, or “other” type on the coverage question are sent to the premium screen. Meanwhile, only those who click “Yes” on the premium screen get the follow-up subsidy screen.

C. Web Survey Screen-Level Paradata Measures

This section outlines the research questions that will be used to evaluate web respondents’ interaction with the health insurance screens. It also includes the corresponding screen-level paradata measures that will be used to answer these questions.

C.1. Error Messages Rendered

The health insurance coverage screen is the only one of the three screens that has an error message associated with it. If a person indicates having “Other” type of coverage but leaves the write-in field blank, the following error message is displayed at the top of the screen: ‘Please specify the other type of health insurance or health coverage plan this person receives’ (See Figure 3).

To determine if respondents had problems interacting with this question in terms of error messages rendered, we answered the following research questions using the screen-level paradata measures below:

1. What percent of respondents that selected “Other” type in the health insurance coverage question received an error message?

$$\frac{\text{Number of Respondents with Error Message After Selecting "Other" Type of Coverage Field}}{\text{Number of Respondents Selecting "Other" Type of Coverage Field}} * 100$$

2. In cases where an error message was rendered, what percent of respondents provided an answer in the health insurance write-in field?

$$\frac{\text{Number of Respondents that Provided an Answer in the Write} - \text{In Field}}{\text{Number of Respondents with Error Message After Selecting "Other" Type of Coverage Field}} * 100$$

C.2. Clicks on the “Help” Link

The health insurance coverage, premium, and subsidy screens each include the following eight links: Instructions, FAQs, Save and Logout, Contact Us, Accessibility, Privacy, Security, and

Help. Respondents generally use the help links if definitions are available for technical terms they do not know and if accessing them involves little effort (Conrad, Couper, Tourangeau and Peytchev, 2006). We focused on the "Help" link since respondents rarely access the other links (See Figures 4 and 5 for screenshots of the coverage screen's "Help" text and the one in the premium and subsidy screens, respectively).

We answered the following research questions using the screen-level paradata measure below.

What percentage of respondents clicked on the "Help" link from any of the health insurance screens?

$$\frac{\text{Number of Respondents that Clicked the "Help" Link in the Screen}}{\text{Number of Respondents With Visits to the Screen}} * 100$$

C.3. "Previous" Button Usage

The "Previous" button allows respondents to access prior screens on web instruments. Respondents generally use this button when they need to verify a response or go back to change an answer.

We answered the following research question using the screen-level paradata measure below.

What percent of respondents used the "Previous" button while answering any of the health insurance screens?

$$\frac{\text{Number of Respondents with "Previous" Button Clicks in the Screen}}{\text{Number of Respondents With Visits to the Screen}} * 100$$

C.4. Changed Answers

Respondents might change their answers for a variety of reasons, including confusion with the question layout and indecision about which response to use (Callegaro, 2013).

To determine if respondents changed their answers in the health insurance questions, we answered the following research question using the screen-level paradata measure below.

For the health insurance screens, which types of coverage had the highest percentage of respondents changing their answers?

$$\frac{\text{Number of Respondents with Changed Answers in the Field}}{\text{Number of Respondents With Visits to the Field}} * 100$$

D. Sociodemographic Characteristics Associated with Respondents Having Trouble Answering the Health Insurance Questions

Some respondents might have had issues interacting with and understanding the health insurance questions. In the final part of our study, we compared the characteristics of respondents that had trouble with the health insurance content on the ACS web instrument (i.e., received an error message, clicked the "Help" link, used the "Previous" button, or changed an answer) with those who visited each of the corresponding screens to determine which groups were overrepresented. We used the following sociodemographic variables in this study: Sex, Age, Race and Hispanic Origin, Educational Level, Income-to-Poverty Ratio (IPR), Speaks Another Language at Home, and Number of Persons in the Household (See Table A2 in the Appendix for a list of the variables used from the ACS person-level file).[9, 10] We included the variable Number of Persons in the Household in our analyses since we expected that a household respondent might not know everyone's health insurance coverage information.

Wald two-sided t-tests were used to determine if the proportions were statistically significantly different. We then conducted various logistic regressions, predicting each paradata result, to determine which sociodemographic groups were more likely to have problems with the health insurance screens (see formula below).[11] Our universe for each regression consisted of those respondents that visited each corresponding screen. The dependent variable was the screen-level paradata measure (for example, if respondents used or did not use the "Previous" button on this screen) while the independent variables were the sociodemographic characteristics mentioned above. For the regressions, negative replicate weights were set to zero.

$$Logit\ (p) = \beta_0 + \beta_i X_i + e\ ,\ where\ i = 1\ to\ 7$$

[9] Federal surveys give respondents the option of reporting more than one race. Therefore, two basic ways of defining a race group are possible. A group, such as Asian, may be defined as those who reported Asian and no other race (the race-alone or single-race concept) or as those who reported Asian regardless of whether they also reported another race (the race-alone or-in-combination concept). This working paper shows data using the first approach (race alone). The use of the single-race population does not imply that it is the preferred method of presenting or analyzing the data. The Census Bureau uses a variety of approaches.

[10] The Census Bureau uses information about income from the past twelve months and family size at the time of interview to calculate the income-to-poverty ratio (IPR). People in families are considered to be in poverty if their family income is less than their poverty threshold. People who live alone or only with nonrelatives have a poverty status defined by their own income compared to their poverty threshold. Distribution of poverty characteristics was measured with three mutually exclusive categories based on IPR thresholds: (1) below 100 percent of poverty, (2) between 100 percent and 399 percent of poverty, (3) at or above 400 percent of poverty.

[11] Logit(p) refers to the screen-level paradata measure outcome (received an error message, used the 'Help' link, used the "Previous" button, and changed an answer) for each of the health insurance screens. β_0 is the intercept, X_1 = Sex, X_2 = Age Groups, X_3 = Race and Hispanic Origin, X_4 = Educational Level, X_5 = Income-to-Poverty Ratio (IPR), X_6 = Speaks Another Language at Home, X_7 = Number of Persons per Household and e is the error term.

In the final step we included an interaction effect between race and Hispanic origin and whether or not the respondent speaks another language at home, controlling for the other sociodemographic characteristics, to explore whether the likelihood of having trouble with the health insurance questions for respondents of a given race and Hispanic origin varied by language spoken at home.

$$Logit\ (p) = \beta_0 + \beta_i X_{i\ +\ +} \beta_8 X_{race\ and\ Hispanic\ origin} + \beta_9 X_{language} + \beta_{10} X_{race\ and\ Hispanic\ origin} X_{language} + e,$$
$$where\ i = 1\ to\ 7$$

Results

Due to the layouts of the health insurance questions in the web survey, there were some minor differences in how we analyzed each of the screens using the paradata measures. Additionally, since the descriptive analyses produced the same substantive results as the regression models, this paper only includes results from the latter unless otherwise presented.[12]

1. Sociodemographic Characteristics of the Sample

The analytic web sample represents approximately 131 million people. Table A3 in the Appendix presents the distributions of select characteristics for both the web respondents and the total ACS respondents. About one-half of the web respondent sample was female (50.81 percent); most identified their race as White (70.38 percent); and more than half were 26 to 64 years old (54.99 percent). In terms of educational attainment, about one-third of respondents (34.46 percent) held a Bachelor's degree or higher, and an additional 23.22 percent had some college experience. The majority spoke only English at home (78.66 percent), had an IPR of 400 percent of poverty or above (54.46 percent) and lived in multi-person households (90.94 percent).

The ACS full sample is similar to our web sample except when it comes to the distributions of educational level and IPR.[13] The ACS web respondents were more educated and more economically advantaged than the full ACS sample. For example, 34.46 of web respondents held a bachelor's degree compared with 24.24 percent of the full sample. Further, 15.99 percent of the web sample held a terminal high school diploma, compared with 21.22 percent of the full ACS sample. In addition, more than one-half of the web sample (54.46 percent) had an IPR of 400 percent of poverty or above, compared with 41.44 percent of the full sample. Respondents in the web sample were also less likely to be in poverty than the full ACS sample (7.34 percent versus 12.09 percent). It's important to note that differences in characteristic distributions between the full ACS sample and Web sample, while meaningful, are statistically significantly different due

[12] Analyses not shown but available upon request.
[13] We removed from the full ACS sample persons in GQs and those that answered the PRCS since these data collection modes do not include a web option.

to the size of the ACS sample. The web survey paradata results can only accurately represent behavior of respondents who would respond to the ACS web instrument.

2. Error Messages Rendered

Only the health insurance coverage screen has an error message associated with it. If a person clicks "Yes" on the radio button for "other" type of coverage, but leaves the write-in field blank, an error message is displayed. This gives the respondent the opportunity to provide an answer in the write-in field. However, if the person leaves it blank for the second time, the web instrument allows the respondent to skip it and proceed answering the rest of the survey.

Table 1 shows that most respondent selections on the "other" type of coverage field did not render an error message. Only 0.18 percent of respondents for whom "Other" was selected received an error message. Additional analyses indicate that 99.11 percent (MOE=1.06) of those who did receive an error message subsequently provided an answer in the write-in field.[14] Although we don't know if the write-in provided correctly identifies the respondent's health coverage, these results show that the error message worked as intended. As a result, we did not investigate which sociodemographic characteristics were associated with rendering an error message since most respondents were able to respond to this question with a write-in response after receiving the error message.

3. Clicks on the "Help" Text Link

The three health insurance screens each include the same eight links: Instructions, FAQs, Save and Logout, Contact Us, Accessibility, Privacy, Security, and Help. When a respondent clicks any of the links except "Help", the new window or text that shows up is the same for all three health insurance screens. On the other hand, when it comes to the "Help" link, the text that shows up in the health coverage screen differs from the one that appears in the premium and subsidy screens (See Figures 4 and 5 for screenshots of the coverage screen's "Help" text and the one in the premium and subsidy screens, respectively).

Most respondents did not access any of the links. In the rare instances that they did, the "Help" link was clicked most often compared to the others (see Table A4 in the Appendix). Table 2 presents results from multivariate analyses, showing the characteristics of people who were most likely to use the "Help" link on the health insurance screens. Even after controlling for additional characteristics, Asian respondents were more likely to use this link on the health insurance coverage, premium, and subsidy screens compared to those that identify their race as White (O.R.=1.78, O.R.=1.81, and O.R.=1.88, respectively). Those that identified as Other or Hispanic were also more likely to use this link on the three screens compared to those that identify their race as White. Respondents with an IPR below 399 percent of poverty and those that spoke

[14] Analyses not shown but available upon request.

another language at home were also more likely to use the "Help" link on all three screens compared to those whose IPR was 400 percent or above, and respondents who spoke only English at home, respectively. Single-person households were more likely to use this link compared to multiple-person households. The interaction effect of race and Hispanic origin with speaks another language at home was not statistically significant in any of the health insurance screens multivariate models predicting clicks on the "Help" link.

The reason respondents might be accessing the "Help" link is that they may have been looking for additional information about the question. Further, since respondents are asked whether they pay a premium only if they select "Yes" to direct-purchase, Medicaid, or "other" type in the coverage screen, and only those that have a premium are asked about subsidy, they might have been looking for additional information in order to verify that the answer they chose was the correct one. Cognitive testing, such as cognitive interviews, would help assess why respondents accessed the "Help" text on these screens.[15]

4. "Previous" Button Usage

The three health insurance screens contain the "Previous" button, which allow respondents to go back to the prior screens that appear in the web instrument. Most respondents did not use this button. When we compare the three screens (see Table 3), the premium one had the highest percent that used this button (3.13 percent) compared to the coverage and subsidy ones. For this analysis, we focused on the premium and subsidy screens only instead of all three because respondents' "Previous" button usage for the coverage screen was low relative to the percentages obtained in the premium and subsidy screens. Additionally, Horwitz, Guarino Tancreto, Zelenak, and Davis (2013) showed in a previous study that the five ACS screens with the highest proportion of respondents that used the "Previous" button had percentages higher than at least 1.7.

Multivariate results in Table 4 show that for both screens those that identified their race as Asian, Black or African American, or Hispanic and respondents aged 19 to 25 as well as those aged 65 or older were more likely to use the "Previous" button compared to those that identified their race as White and respondents aged 26 to 64. Those that spoke another language at home and respondents that live in multiple-person households were more likely to use the "Previous" button compared to those that spoke only English and respondents that live in single-person households, respectively. The interaction effect of race and Hispanic origin with speaks another language at home was not statistically significant in the premium and subsidy screens multivariate models.

[15] Cognitive interviewing is used to identify and analyze sources of response error in survey questionnaires by focusing on the cognitive process respondents use to answer questions. Its purpose is to determine if respondents understand the question, both consistently and in the way intended by the researcher (Haeger, Lambert, Kinzie, and Gieser, 2012).

Since only respondents that select "Yes" on either direct-purchase, Medicaid, or "other" type on the coverage question are sent to the premium screen, cognitive testing is needed to determine if respondents were going back to the coverage screen to change their answer, were seeking additional information, or were going back to other screens in the survey, among other possibilities.

5. Changed Answers

Respondents might change their answers for a variety of reasons, including confusion with the question layout and indecision about which response to use (Callegaro, 2013). In the following analyses, we defined changed answers as follows: the respondent changed the original answer in the field; the respondent provided an answer after originally leaving the field blank; and the respondent changed back to their original answer after changing the answer at least once. It doesn't matter how many times they do it; each changed answer counts individually. When it comes to the write-in field in the coverage screen, the respondent had to click out of the text box and then re-enter to be counted as a changed answer. In general, results showed that most respondents did not changed their answers in any of the health insurance coverage, premium, and subsidy fields located on each corresponding screen.

5.1 Write-In and Direct Purchase Coverage Fields

Table A5 in the Appendix shows that the health insurance write-in field had the most respondent visits for whom answers on a write-in field were changed (4.30 percent), followed by the direct-purchase coverage field (3.22 percent).[16] Multivariate analyses shown in Table 5 indicate that those that identified their race as Asian, Black or African American, or Other were more likely to change their answer in this field compared to those that identified as White. On the other hand, those aged 65 years and over, respondents without a High School diploma, those with an IPR below 399 percent of poverty, and respondents in multiple-person households were less likely to change their answer in the write-in field compared to those aged 26 to 64, respondents with a Bachelor's degree or higher, those with an IPR of 400 or above, and respondents in single-person households, respectively. These results may suggest that the household respondent was not sure about their answer or was correcting any entry errors. Further, due to how changed answers are determined in the write-in field, this analysis may undercount them.[17]

For direct-purchase coverage, results show that those that identified as Asian, or Black or African American were more likely to change their answer in this field compared to those that

[16] Direct-purchase refers to coverage through a plan purchased directly by an individual or an individual's relative from a private company. It also might include coverage purchased through the federal Health Insurance Marketplace as well as other state-based marketplaces.

[17] When it comes to the write-in field, the respondent had to click out of the text box and then re-enter to be counted as a changed answer.

identified as White. Additionally, males, those aged 19 to 25 or 65 and older, respondents that spoke another language at home, and those whose IPR was between 100 and 399 percent of poverty were more likely to change their answer in this field compared to females, those aged 26 to 64, respondents that spoke only English, and those whose IPR was 400 percent or above. On the other hand, respondents under 19 years and those with some college or less were less likely to change their answer in the direct-purchase coverage field compared to those aged 26 to 64 and respondents with a Bachelor's degree or higher. The interaction effect of race and Hispanic origin with speaks another language at home was not statistically significant in the write-in and direct purchase multivariate models.

For both of these fields, the household respondent might have been unsure about their answer for themselves or other people in the household, especially if they proceeded answering the survey and were prompted to answer the premium and subsidy question. Cognitive testing is needed to know why respondents were changing their answers in these fields.

5.2 Premium and Subsidy Screens

Table A5 in the Appendix shows that the premium screen had a higher percentage of screen visits that led to changed answers (2.47 percent) compared to the subsidy screen (2.31 percent). Multivariate analyses in Table 6 show that those that indicated their race as Asian, Black or African American, or Hispanic, respondents aged 19 to 25, those that spoke another language at home, and respondents whose IPR was between 100 and 399 percent of poverty were more likely to change their answer in the premium and subsidy screens compared to those that indicated their race as White, respondents aged 26 to 64, those that spoke only English at home, and respondents whose IPR was 400 percent of poverty or above. On the other hand, those aged 65 and older were less likely to change their answer in these screens than those aged 26 to 64. The interaction effect of race and Hispanic origin with speaks another language at home was not statistically significant in the premium and subsidy screens multivariate models.

Since only respondents that select "Yes" on either direct-purchase, Medicaid, or "other" type on the coverage screen are sent to the premium screen, it could be that respondents were changing their answers on this screen after changing their answer in the previous question.

Discussion

Paradata results from this study revealed that respondents generally had no significant issues interacting with the health insurance content on the ACS web survey. Almost all provided an answer in the coverage write-in field when prompted. Very few respondents used the non-question links and, among those who used them, most accessed the "Help" link on all three health insurance screens. Few used the "Previous" button on the premium and subsidy screens or changed their answers. Asians, Black or African Americans, and respondents who spoke another

language at home were the few groups more likely to have issues in all three health insurance screens.

Preliminary data evaluation using the subsidized Marketplace coverage variable in the ACS microdata showed that the new question worked as intended and that respondents were willing and able to provide the information (Hernandez-Viver and Berchick, 2020). However, one possible solution to reduce respondents' "Previous" button usage in the subsidy screen is to include the premium part of the question on the same screen. Overall, for all three health insurance screens, Asian respondents were more likely to access the "Help" text, use the "Previous" button, or change their answers. Findings may reflect a language barrier (the web instrument is only offered in English and Spanish) or translation issues. Additional cognitive testing could shed light on how this group interacts and understands the survey questionnaire.

It is also critical to understand how those with an IPR of 399 percent of poverty or less interacted with the health insurance content, especially the premium and subsidy question, since IPR is a key variable used in the imputation of the subsidized Marketplace coverage variable in the ACS microdata (Hernandez-Viver and Berchick, 2020). Since we are not able to determine from the paradata this group's understanding of and interaction with the health insurance questions, we recommend cognitive testing to understand respondents' intentions and interpretation of the health insurance content on the ACS.

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Screenshots

Figure 1: 2019 ACS Health Insurance Coverage Screen (Web Instrument)

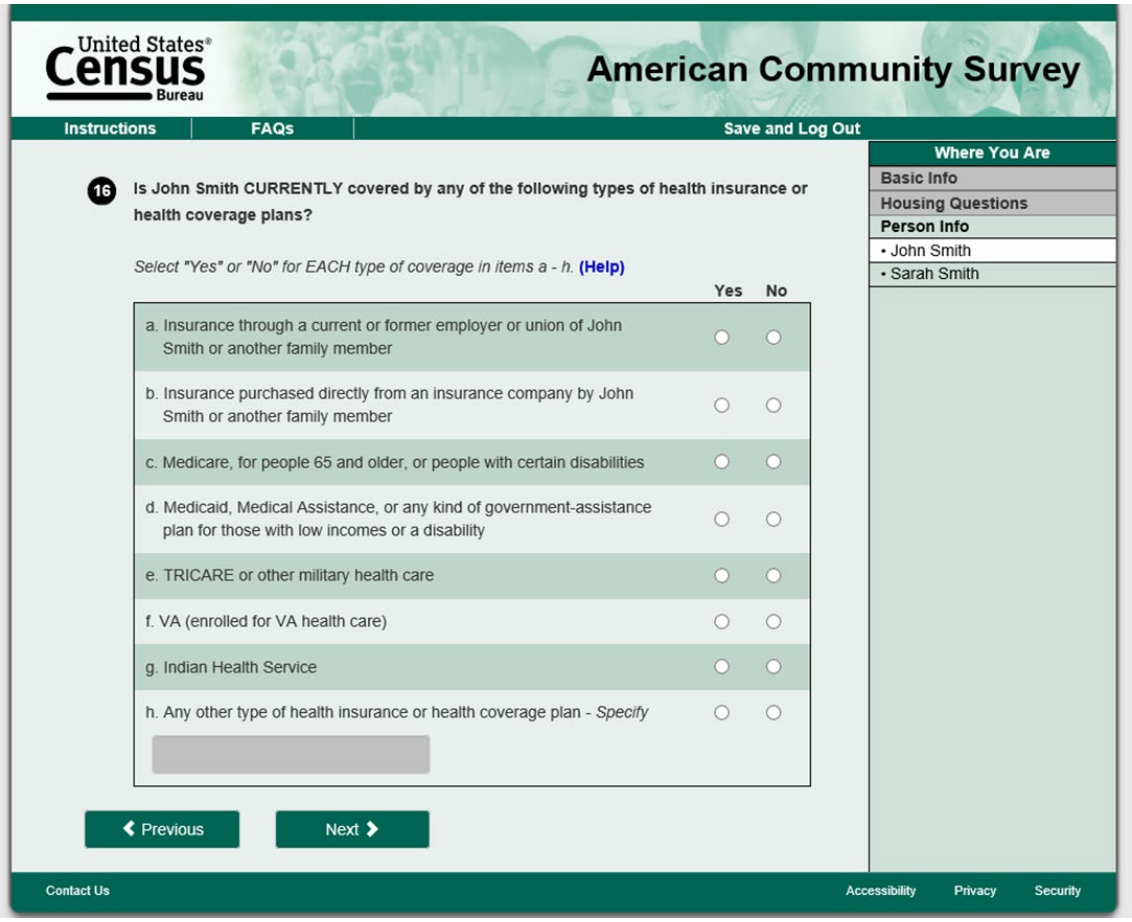
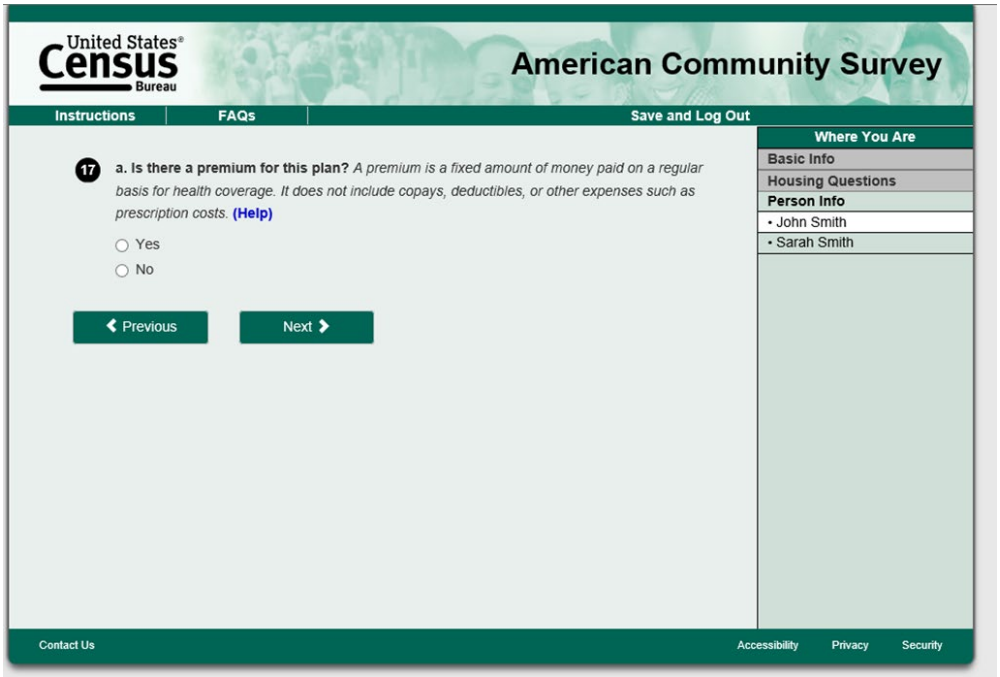


Figure 2: 2019 ACS Health Insurance Premium and Subsidy Question (Web Instrument)

Premium Screen



Subsidy Screen

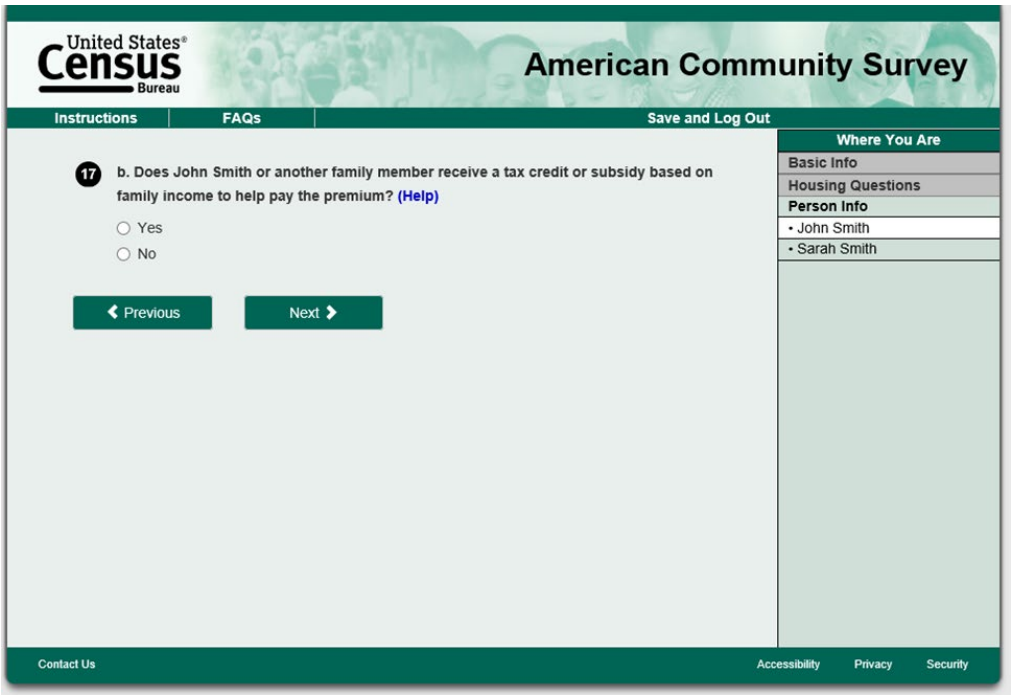


Figure 3: 2019 ACS Health Insurance Coverage Screen Error Message

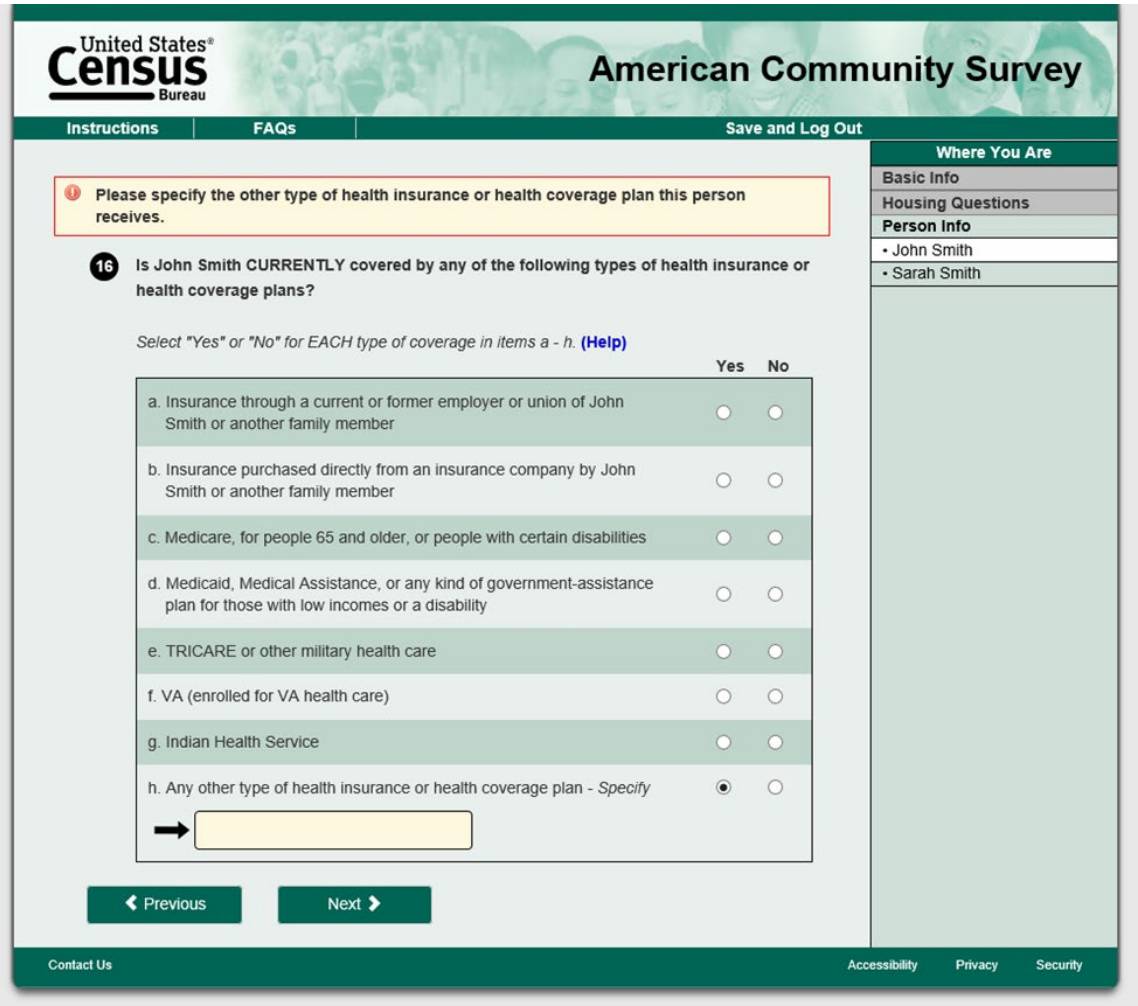


Figure 4: 2019 ACS Health Insurance Coverage Screen Help Text

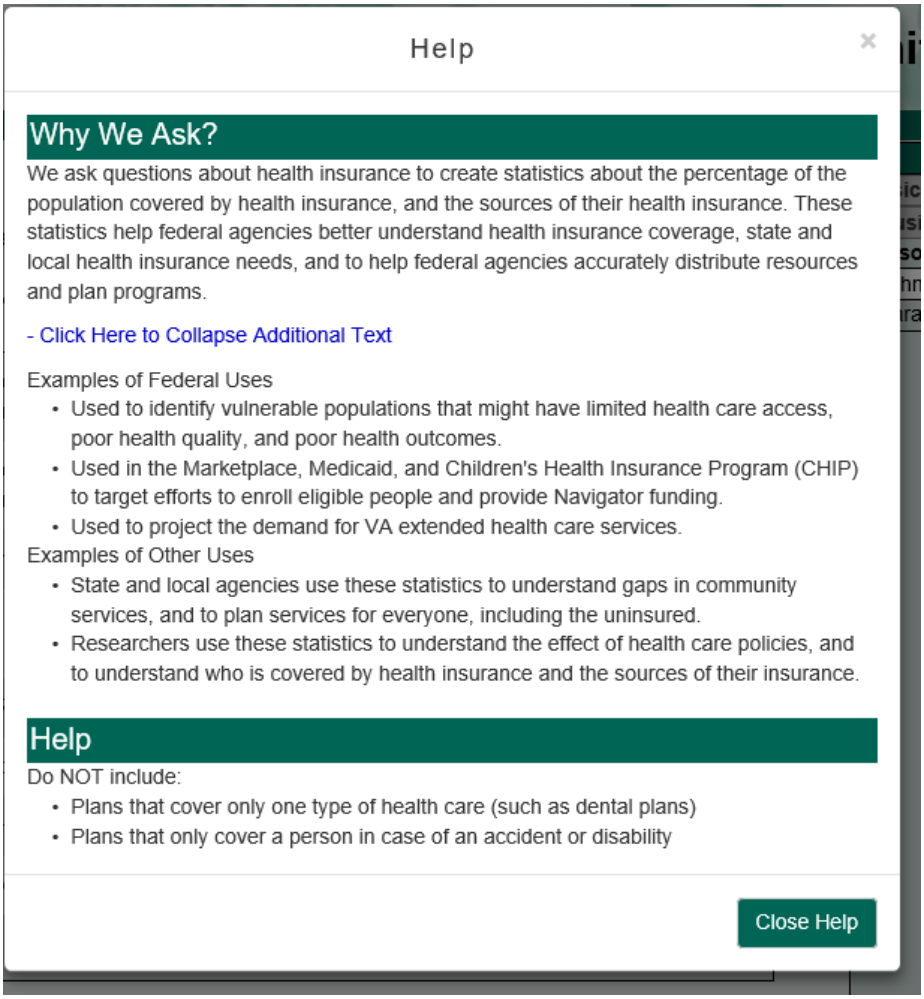
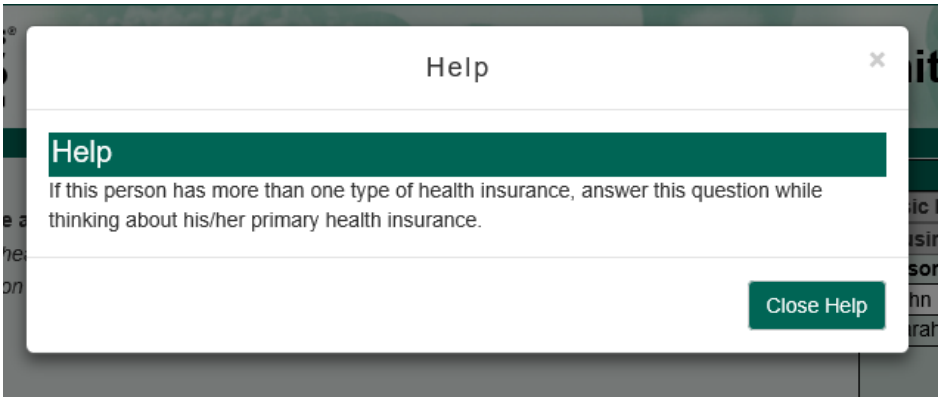


Figure 5: 2019 ACS Premium and Subsidy Screens Help Text



Tables

Table 1: Percent of Respondents Selecting "Other" Type of Coverage Field that Received an Error Message

Health Insurance Coverage Field	Number of Respondents Selecting "Other" Type of Coverage Field	Number of Respondents with Error Message After Selecting "Other" Type of Coverage Field	Percent of Respondents Selecting "Other" type of Coverage Field that Received an Error Message
	Number (Margin of Error)	Number (Margin of Error)	Percent (Margin of Error)
"Other" Type of Coverage	67,720,000 (1,094,000)	119,000 (5,000)	0.18 (0.01)

Note: Numbers rounded to thousands

Source: U.S Census Bureau, 2019 American Community Survey (ACS), 1-Year Data; 2019 American Community Survey (ACS) Web Survey Paradata Internal File. For information on confidentiality protection, sampling error, nonsampling error, and definitions in the ACS, see <www.census.gov/programs-surveys/acs/technical-documentation/code-lists.html>.

Table 2: Weighted Logistic Regressions Results: Sociodemographic Characteristics of Respondents that Used the "Help" Link in the Health Insurance Screens

(Universe: Respondents that Accessed Each Corresponding Health Insurance Screen)

Characteristic	Odds Ratio (Confidence Interval)		
	Health Insurance Coverage Screen	Premium Screen	Subsidy Screen
Sex (ref. = Female)			
Male	0.95 (0.88 – 1.03)	1.05 (0.95 – 1.15)	0.92 (0.83 – 1.02)*
Race and Hispanic Origin (ref. = White)[1]			
Black or African American	0.98 (0.78 – 1.24)	1.33 (1.12 – 1.58)**	1.31 (1.03 – 1.67)**
Asian	1.78 (1.47 – 2.16)***	1.81 (1.51 – 2.16)***	1.88 (1.57 – 2.26)***
Other	1.30 (0.95 – 1.77)*	1.32 (0.97– 1.80)*	1.47 (1.10 – 1.97)**
Hispanic	1.19 (0.98– 1.45)*	1.28 (1.09 – 1.51)**	1.57 (1.33 – 1.84)***
Age (ref. = Aged 26 to 64)			
Under age 19	0.65 (0.49 – 0.84)**	0.62 (0.50 – 0.76)***	0.80 (0.63 – 1.03)*
Aged 19 to 25	1.03 (0.87 – 1.22)	2.06 (1.80 – 2.34)***	1.37 (1.15 – 1.63)***
Aged 65 and older	2.36 (2.13 – 2.63)***	1.18 (1.04 – 1.33)**	0.49 (0.43 – 0.56)***
Speaks Another Language at Home (ref. = Speaks Only English at Home)			
Speaks another language at home	1.15 (0.98 – 1.36)*	1.66 (1.46 – 1.89)***	1.27 (1.11 – 1.45)***
Educational Attainment (ref. = Bachelor's degree or higher)			
No high school diploma	0.68 (0.55 – 0.84)***	0.96 (0.79 – 1.15)	0.97 (0.74– 1.26)
High school graduate (includes equivalency)	0.83 (0.74 – 0.93)**	1.00 (0.89 – 1.14)	1.04 (0.91 – 1.19)
Some college, no degree or associate's degree	0.94 (0.83 – 1.06)	1.00 (0.87 – 1.14)	1.07 (0.92 – 1.25)
Income-to-Poverty Ratio (ref. = At or above 400 percent of poverty)			
Below 100 percent of poverty	1.55 (1.28 – 1.87)***	1.31 (1.11 – 1.55)**	1.87 (1.53 – 2.29)***
Between 100 to 399 percent of poverty	1.66 (1.48 – 1.86)***	1.19 (1.06 – 1.35)**	1.77 (1.57 – 2.00)***
Number of Persons in the Household (ref. = Single-Person Household)			
Multiple-Person Household	0.57 (0.51– 0.64)***	0.59 (0.51 – 0.69)***	0.69 (0.60 – 0.80)***
Number of People (Weighted)	123,000,000	30,550,000	18,320,000
Likelihood Ratio Chi-Square	65.13***	52.69***	51.10***

Statistical significance at *p<.10, **p<.05, ***p<.001

Note: Number of persons rounded to thousands.

Note: The interaction term of race and Hispanic origin with speaks another language at home was not statistically significant in any of the health insurance screens multivariate models so it's not shown on the table.

1. Federal surveys give respondents the option of reporting more than one race. Therefore, two basic ways of defining a race group are possible. A group, such as Asian, may be defined as those who reported Asian and no other race (the race-alone or single-race concept) or as those who reported Asian regardless of whether they also reported another race (the race-alone or-in-combination concept). This working paper shows data using the first approach (race alone). The use of the single-race population does not imply that it is the preferred method of presenting or analyzing the data. The Census Bureau uses a variety of approaches.

Source: U.S Census Bureau, 2019 American Community Survey (ACS), 1-Year Data; 2019 American Community Survey (ACS) Web Survey Paradata Internal File. For information on confidentiality protection, sampling error, nonsampling error, and definitions in the ACS, see <www.census.gov/programs-surveys/acs/technical-documentation/code-lists.html>.

Table 3: Percent of Respondent Visits that Led to Using the "Previous" Button by Screen

Screen	Number of Respondents With Visits to the Screen	Number of Respondents with "Previous" Button Clicks in the Screen	Percent of Respondent Visits that Led to Using the "Previous" Button
	Number (Margin of Error)	Number (Margin of Error)	Percent (Margin of Error)
Health Insurance Coverage	130,700,000 (1,981,000)	1,778,000 (32,000)	1.36 (0.01)
Premium	32,930,000 (557,000)	1,030,000 (21,000)	3.13 (0.05)
Subsidy	19,000,000 (271,000)	447,000 (12,000)	2.35 (0.05)

Note: Numbers rounded to thousands

Source: U.S Census Bureau, 2019 American Community Survey (ACS), 1-Year Data; 2019 American Community Survey (ACS) Web Survey Paradata Internal File. For information on confidentiality protection, sampling error, nonsampling error, and definitions in the ACS, see <www.census.gov/programs-surveys/acs/technical-documentation/code-lists.html>.

Table 4: Weighted Logistic Regressions Results: Sociodemographic Characteristics of Respondents that Used the "Previous" Button in the Premium and Subsidy Screens

(Universe: Respondents that Accessed Each Corresponding Health Insurance Screen)

Characteristic	Odds Ratio (Confidence Interval)	
	Premium Screen	Subsidy Screen
Sex (ref. = Female)		
Male	1.02 (0.97 – 1.07)	0.98 (0.91 – 1.07)
Race and Hispanic Origin (ref. = White)[1]		
Black or African American	1.28 (1.14 – 1.45)***	1.29 (1.09 – 1.53)**
Asian	1.43 (1.26 – 1.61)***	1.70 (1.46 – 1.97)***
Other	1.11 (0.94 – 1.30)	1.20 (0.91 – 1.58)
Hispanic	1.18 (1.07 – 1.29)***	1.39 (1.19 – 1.62)***
Age (ref. = Aged 26 to 64)		
Under age 19	0.59 (0.52 – 0.67)***	0.70 (0.59 – 0.83)***
Aged 19 to 25	1.25 (1.13 – 1.39)***	1.55 (1.37 – 1.76)***
Aged 65 and older	1.29 (1.23 – 1.35)***	1.32 (1.21 – 1.44)***
Speaks Another Language at Home (ref. = Speaks Only English at Home)		
Speaks another language at home	1.18 (1.08 – 1.29)***	1.40 (1.25 – 1.57)***
Educational Attainment (ref. = Bachelor's degree or higher)		
No high school diploma	0.92 (0.82 – 1.02)	1.30 (1.11 – 1.53)**
High school graduate (includes equivalency)	1.01 (0.94 – 1.08)	1.08 (0.97 – 1.21)
Some college, no degree or associate's degree	0.98 (0.91 – 1.05)	1.03 (0.93 – 1.14)
Income-to-Poverty Ratio (ref. = At or above 400 percent of poverty)		
Below 100 percent of poverty	0.74 (0.67 – 0.81)***	1.56 (1.34 – 1.82)***
Between 100 to 399 percent of poverty	0.86 (0.81 – 0.92)***	1.19 (1.09 – 1.29)***
Number of Persons in the Household (ref. = Single-Person Household)		
Multiple-Person Household	1.21 (1.11 – 1.31)***	1.34 (1.19 – 1.50)***
Number of Persons (Weighted)	30,550,000	18,320,000
Likelihood Ratio Chi-Square	64.64***	39.67***

Statistical significance at *p<.10, **p<.05, ***p<.001

Note: Number of persons rounded to thousands.

Note: The interaction term of race and Hispanic origin with speaks another language at home was not statistically significant in any of the health insurance screens multivariate models so it's not shown on the table.

1. Federal surveys give respondents the option of reporting more than one race. Therefore, two basic ways of defining a race group are possible. A group, such as Asian, may be defined as those who reported Asian and no other race (the race-alone or single-race concept) or as those who reported Asian regardless of whether they also reported another race (the race-alone or-in-combination concept). This working paper shows data using the first approach (race alone). The use of the single-race population does not imply that it is the preferred method of presenting or analyzing the data. The Census Bureau uses a variety of approaches.

Source: U.S Census Bureau, 2019 American Community Survey (ACS), 1-Year Data; 2019 American Community Survey (ACS) Web Survey Paradata Internal File. For information on confidentiality protection, sampling error, nonsampling error, and definitions in the ACS, see <www.census.gov/programs-surveys/acs/technical-documentation/code-lists.html>.

Table 5: Weighted Logistic Regressions Results: Sociodemographic Characteristics of Respondents that Changed their Answer in the Health Insurance Coverage Write-In and Direct-Purchase Fields
(Universe: Respondents that Accessed Each Corresponding Health Insurance Screen)

Characteristic	Odds Ratio (Confidence Interval)	
	Write-In Field	Direct-Purchase Field
Sex (ref. = Female)		
Male	0.98 (0.89 – 1.09)	1.04 (1.01 – 1.08)**
Race and Hispanic Origin (ref. = White)[1]		
Black or African American	1.57 (1.18 – 2.08)**	1.07 (0.99 – 1.16)*
Asian	1.55 (1.19 – 2.01)**	1.55 (1.44 – 1.66)***
Other	1.56 (1.13 – 2.16)**	1.08 (0.96 – 1.21)
Hispanic	1.16 (0.95 – 1.43)	1.01 (0.94 – 1.09)
Age (ref. = Aged 26 to 64)		
Under age 19	0.78 (0.56 – 1.08)	0.72 (0.66 – 0.79)***
Aged 19 to 25	0.95 (0.78 – 1.17)	1.50 (1.43 – 1.58)***
Aged 65 and older	0.79 (0.70 – 0.88)***	1.61 (1.56 – 1.67)***
Speaks Another Language at Home (ref. = Speaks Only English at Home)		
Speaks another language at home	1.07 (0.89 – 1.30)	1.18 (1.10 – 1.26)***
Educational Attainment (ref. = Bachelor's degree or higher)		
No high school diploma	0.69 (0.53 – 0.89)**	0.68 (0.63 – 0.74)***
High school graduate (includes equivalency)	0.80 (0.67- 0.96)**	0.79 (0.75 – 0.83)***
Some college, no degree or associate's degree	1.05 (0.92 – 1.20)	0.95 (0.91 – 0.99)**
Income-to-Poverty Ratio (ref. = At or above 400 percent of poverty)		
Below 100 percent of poverty	0.73 (0.57 – 0.92)**	1.03 (0.97 – 1.10)
Between 100 to 399 percent of poverty	0.80 (0.70 – 0.92)**	1.09 (1.04 – 1.13)***
Number of Persons in the Household (ref. = Single-Person Household)		
Multiple-Person Household	0.85 (0.72 – 0.99)**	0.97 (0.92 – 1.02)
Number of Persons (Weighted)	4,444,000	72,200,000
Likelihood Ratio Chi-Square	11.09***	178.90***

Statistical significance at *p<.10, **p<.05, ***p<.001
Note: Number of persons rounded to thousands.
Note: The interaction term of race and Hispanic origin with speaks another language at home was not statistically significant in any of the health insurance screens multivariate models so it's not shown on the table.
1. Federal surveys give respondents the option of reporting more than one race. Therefore, two basic ways of defining a race group are possible. A group, such as Asian, may be defined as those who reported Asian and no other race (the race-alone or single-race concept) or as those who reported Asian regardless of whether they also reported another race (the race-alone or-in-combination concept). This working paper shows data using the first approach (race alone). The use of the single-race population does not imply that it is the preferred method of presenting or analyzing the data. The Census Bureau uses a variety of approaches.
2. The interaction effect of race and Hispanic Origin with speaks another language at home was not statistically significantly different in the write-in field multivariate model.

Source: U.S Census Bureau, 2019 American Community Survey (ACS), 1-Year Data; 2019 American Community Survey (ACS) Web Survey Paradata Internal File. For information on confidentiality protection, sampling error, nonsampling error, and definitions in the ACS, see <www.census.gov/programs-surveys/acs/technical-documentation/code-lists.html>.

Table 6: Weighted Logistic Regressions Results: Sociodemographic Characteristics of Respondents that Changed their Answer in the Premium and Subsidy Screens

(Universe: Respondents that Accessed Each Corresponding Health Insurance Screen)

Characteristic	Odds Ratio (Confidence Interval)	
	Premium Screen	Subsidy Screen
Sex (ref. = Female)		
Male	1.03 (0.97 – 1.09)	1.01 (0.94 – 1.10)
Race and Hispanic Origin (ref. = White)[1]		
Black or African American	1.17 (1.04 – 1.30)**	1.29 (1.10 – 1.53)**
Asian	1.64 (1.46 – 1.84)***	1.51 (1.26 – 1.81)***
Other	1.07 (0.90 – 1.28)	1.16 (0.87 – 1.55)
Hispanic	1.16 (1.05 – 1.29)**	1.20 (1.01 – 1.43)**
Age (ref. = Aged 26 to 64)		
Under age 19	1.09 (0.95 – 1.25)	0.83 (0.69 – 1.01)*
Aged 19 to 25	2.10 (1.93 – 2.30)***	1.42 (1.24 – 1.62)***
Aged 65 and older	0.70 (0.63 – 0.76)***	0.45 (0.39 – 0.50)***
Speaks Another Language at Home (ref. = Speaks Only English at Home)		
Speaks another language at home	1.28 (1.17 – 1.40)***	1.54 (1.35 – 1.75)***
Educational Attainment (ref. = Bachelor's degree or higher)		
No high school diploma	1.09 (0.96 – 1.25)	1.34 (1.11 – 1.61)**
High school graduate (includes equivalency)	0.96 (0.86 – 1.07)	1.07 (0.94 – 1.22)
Some college, no degree or associate's degree	1.00 (0.90 – 1.10)	1.18 (1.06 – 1.31)**
Income-to-Poverty Ratio (ref. = At or above 400 percent of poverty)		
Below 100 percent of poverty	1.06 (0.96 – 1.17)	1.70 (1.47 – 1.96)***
Between 100 to 399 percent of poverty	1.12 (1.04 – 1.20)**	1.47 (1.35 – 1.61)***
Number of Persons in the Household (ref. = Single-Person Household)		
Multiple-Person Household	0.95 (0.86 – 1.06)	1.07 (0.93 – 1.22)
Number of Persons (Weighted)	30,020,000	18,100,000
Likelihood Ratio Chi-Square	73.38***	79.64***

Statistical significance at *p<.10, **p<.05, ***p<.001

Note: Number of persons rounded to thousands.

Note: The interaction term of race and Hispanic origin with speaks another language at home was not statistically significant in any of the health insurance screens multivariate models so it's not shown on the table.

1. Federal surveys give respondents the option of reporting more than one race. Therefore, two basic ways of defining a race group are possible. A group, such as Asian, may be defined as those who reported Asian and no other race (the race-alone or single-race concept) or as those who reported Asian regardless of whether they also reported another race (the race-alone or-in-combination concept). This working paper shows data using the first approach (race alone). The use of the single-race population does not imply that it is the preferred method of presenting or analyzing the data. The Census Bureau uses a variety of approaches.

Source: U.S Census Bureau, 2019 American Community Survey (ACS), 1-Year Data; 2019 American Community Survey (ACS) Web Survey Paradata Internal File. For information on confidentiality protection, sampling error, nonsampling error, and definitions in the ACS, see <www.census.gov/programs-surveys/acs/technical-documentation/code-lists.html>.

Appendix

Table A1: Paradata File Variables

Variable	Description
CMID	Identifies the Housing Unit
ID	Identifies which person in the Housing Unit the questions refer to
TYPE	Type of event that occurred. Possible values include: entry, exit, and error trigger, among others
TIME	Time when each event occurred
PAGE	Page on which each event occurs. Most questions are in one page (also referred as screen).
NAME	Name of the response option field. Typically, there is only per screen unless the question has multiple response options (for example, the health insurance coverage question).
VALUE	Value that was entered into the field name
MESSAGE	Provides the text of the error message that the respondent saw. Only populated when variable TYPE='error_trigger'.

Source: U.S Census Bureau, 2019 American Community Survey (ACS) Web Survey Paradata Internal File.

Table A2: Person-Level File Variables

Variable	Description
CMID	Identifies the Housing Unit
PNUM	Identifies which person in the Housing Unit the questions refer to
SEX	Sex
AGE	Age
TOTRACE	Race combinations specified by recipient
HSGP	Hispanic Origin group
SCHL	Educational attainment
POVPI	Poverty index
NP	Number of Persons (adjudicated)
LANX	Speaks Another Language at Home
REPW0	Final person weight
REPW1-REPW80	Final person replicate weights

Source: U.S Census Bureau, 2019 American Community Survey (ACS), 1-Year Data.

Table A3: Percentage Distributions Sample by Select Characteristics Respondents

Characteristic	Estimate (Margin of Error)		Difference in Percent
	ACS Full Sample[3]	ACS Web Sample	ACS Full Sample – ACS Web Sample
Sex			
Male	48.93 (0.01)	49.19 (0.05)	-0.26*
Female	51.07 (0.01)	50.81 (0.05)	0.26*
Race and Hispanic Origin[1]			
White	60.05 (0.01)	70.38 (0.23)	-10.33*
Black	12.14 (0.02)	6.94 (0.11)	5.20*
Asian	5.64 (0.01)	7.19 (0.06)	-1.55*
Other	3.63 (0.03)	3.64 (0.06)	-0.01
Hispanic	18.54 (0.01)	11.85 (0.12)	6.69*
Age			
Under 19 years	23.90 (0.02)	22.60 (0.10)	1.30*
19 to 25 years	8.72 (0.02)	7.99 (0.07)	0.73*
26 to 64 years	50.97 (0.02)	54.99 (0.07)	-4.02*
65 years and over	16.42 (0.01)	14.42 (0.09)	2.00*
Speaks Another Language At Home[2]			
Speaks only English at home	73.18(0.07)	78.66 (0.08)	-5.48*
Speaks another language at home	20.76 (0.06)	15.60 (0.07)	5.16*
Educational Attainment[2]			
No high school diploma	27.83 (0.05)	22.89 (0.09)	4.94*
High school graduate (includes equivalency)	21.22 (0.06)	15.99 (0.06)	5.23*
Some college, no degree or associate's degree	23.20 (0.04)	23.32 (0.06)	-0.12*
Bachelor's degree or higher	24.24 (0.08)	34.46 (0.15)	-10.22*
Income-to-Poverty Ratio[2]			
Below 100 percent of poverty	12.09 (0.08)	7.34 (0.07)	4.75*
Between 100 to 399 percent of poverty	46.10 (0.10)	37.92 (0.16)	8.18*
At or above 400 percent of poverty	41.44 (0.14)	54.46 (0.21)	-13.02*
Number of Persons in the Household			
Single-Person Household	10.85 (0.03)	9.06 (0.04)	1.79*
Multiple-Person Household	89.15 (0.03)	90.94 (0.04)	-1.79*

* Differences between the estimates are statistically significant from zero at the 90 percent confidence level.

1. Federal surveys give respondents the option of reporting more than one race. Therefore, two basic ways of defining a race group are possible. A group, such as Asian, may be defined as those who reported Asian and no other race (the race-alone or single-race concept) or as those who reported Asian regardless of whether they also reported another race (the race-alone or-in-combination concept). This working paper shows data using the first approach (race alone). The use of the single-race population does not imply that it is the preferred method of presenting or analyzing the data. The Census Bureau uses a variety of approaches.

2. The percent does not add to one hundred due to some respondents not being in universe for this variable.

3. Excludes persons in GQ's and those who answered the PRCS since these data collection modes do not include the web instrument.

Source: U.S Census Bureau, 2019 American Community Survey (ACS), 1-Year Data; 2019 American Community Survey (ACS) Web Survey Paradata Internal File. For information on confidentiality protection, sampling error, nonsampling error, and definitions in the ACS, see <www.census.gov/programs-surveys/acs/technical-documentation/code-lists.html>.

Table A4: Percent Distribution of Non-Question Links Accessed from Each Health Insurance Screen

Non-Question Links	Health Insurance Coverage Screen	Premium Screen	Subsidy Screen
	Percent (Margin of Error)	Percent (Margin of Error)	Percent (Margin of Error)
Total (Number)	490,000	344,000	252,000
Accessibility	1.34 (0.24)	0.22 (0.13)	0.11 (0.09)
Contact Us	1.11 (0.62)	0.29 (0.16)	0.10 (0.09)
FAQs	1.75 (0.27)	0.42 (0.15)	0.30 (0.15)
Help	60.32(1.27)	92.45 (0.66)	96.20 (0.59)
Instructions	1.88 (0.27)	0.31 (0.16)	0.18 (0.10)
Privacy	0.58 (0.15)	0.19 (0.11)	0.03 (0.04)
Save and Logout	32.30 (1.06)	5.91 (0.60)	2.96 (0.59)
Security	0.63 (0.16)	0.18 (0.11)	0.10 (0.09)

Note: Numbers rounded to thousands

Source: U.S Census Bureau, 2019 American Community Survey (ACS), 1-Year Data; 2019 American Community Survey (ACS) Web Survey Paradata Internal File. For information on confidentiality protection, sampling error, nonsampling error, and definitions in the ACS, see <www.census.gov/programs-surveys/acs/technical-documentation/code-lists.html>.

Table A5: Percent of Respondent Visits to the Health Insurance Fields in the Coverage Screen that Led to Persons Changing their Answers

Screen/Field	Number of Respondents With Visits to the Field	Number of Respondents with Changed Answers in the Field	Percent of Respondent Visits that Led to Persons Changing their Answers
	Number (Margin of Error)	Number (Margin of Error)	Percent (Margin of Error)
Health Insurance Coverage			
Employer-Provided Coverage	110,000,000 (1,672,000)	3,212,000 (58,000)	2.92 (0.02)
Direct-Purchase Coverage	76,810,000 (1,216,000)	2,470,000 (43,000)	3.22 (0.03)
Medicare	78,900,000 (1,218,000)	952,000 (20,000)	1.21 (0.02)
Medicaid	74,960,000 (1,233,000)	1,139,000 (28,000)	1.52 (0.03)
TRICARE	71,230,000 (1,152,000)	305,000 (11,000)	0.43 (0.01)
VA Care	70,420,000 (1,136,000)	256,000 (10,000)	0.36 (0.01)
Indian Health Service	69,320,000 (1,120,000)	181,000 (8,000)	0.26 (0.01)
"Other" Type of Coverage	67,720,000 (1,094,000)	1,100,000 (23,000)	1.62 (0.03)
Write-In Field	4,639,000 (77,000)	199,000 (8,000)	4.30 (0.15)
Premium	32,370,000 (548,000)	800,000 (19,000)	2.47 (0.04)
Subsidy	18,770,000 (268,000)	433,000 (12,000)	2.31 (0.05)

Note: Numbers rounded to thousands

Source: U.S Census Bureau, 2019 American Community Survey (ACS), 1-Year Data; 2019 American Community Survey (ACS) Web Survey Paradata Internal File. For information on confidentiality protection, sampling error, nonsampling error, and definitions in the ACS, see <www.census.gov/programs-surveys/acs/technical-documentation/code-lists.html>.