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**Cognitive Pretesting of
2019 American Housing Survey Modules**

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Abstract: At the request of the Department of Housing and Urban Development (HUD), staff from the Center for Behavioral Science Methods (CBSM) cognitively pretested new and revised survey questions for the 2019 American Housing Survey (AHS). It included several questions about home accessibility, and post-secondary education. Other questions were about contact information, number of floors in a home, home equipment, hazards or appliance breakdowns, and home improvements.

Results of 29 cognitive interviews conducted between April and June 2018 include the following: 1) several respondents found it challenging to answer home accessibility questions about "difficulty" with certain household tasks. These respondents indicated that they or someone else in the household has occasional difficulty with certain tasks but that this difficulty is not an everyday occurrence, and/or has a condition that could return at a future time and affect these; 2) respondents found it challenging to answer separate home accessibility questions about difficulty "using" certain rooms in the household. These respondents differed over whether difficulty reaching things in one or more rooms was sufficient to count as difficulty "using" these rooms, if it did not stem from a severe disability.

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1   EXECUTIVE SUMMARY

This report presents findings from cognitive testing of select questions and modules from the 2019 American Housing Survey (AHS), sponsored by the U.S. Department of Housing and Urban Development (HUD) and conducted by the Census Bureau. The 2019 questionnaire was based on the most recent administration of the survey, in 2017. Several questions were modified and some new questions were added across multiple modules, and one new module was added on Home Accessibility.

The Home Accessibility questions asked whether household members used any particular equipment or special features to get around inside the home, whether anyone had difficulty getting to or using certain rooms in the home, current home accessibility rating, and future plans to improve home accessibility. The questions were developed by a group of subject matter experts that included staff at HUD, the Joint Center for Housing Studies at Harvard University, the American Association of Retired Persons, New York University, the National Association of Homebuilders, and Owens Construction. The group used the 2011 AHS Accessibility module as a base. The 2011 AHS Accessibility module was based on a 1995 AHS supplement.

Researchers conducted 29 cognitive interviews over two rounds of testing. In the first round, we tested a streamlined questionnaire containing 78 questions from eight AHS survey modules: Front (e.g., questions on contact information), Housing Unit & Demographics, Inventory (e.g., questions on home layout and rooms), Equipment (e.g., questions on home appliances and fuel sources), Breakdown (e.g., questions on hazards or problems in a home), Home Improvements, Post-Secondary Education, and Home Accessibility. For two modules (Equipment and Breakdown), the sponsor made a late decision after the first round of testing to continue using question wordings that had been used in the 2017 AHS, so no further testing was conducted. Thus in the second round, we tested a revised questionnaire containing 64 questions from six of the original eight modules. Table 1 displays all the modules, along with the number of items in the modules. Note that many questions, and in some cases entire modules, were included only to provide context for the "target" questions – those explicated flagged for probing during cognitive testing. Table 1 displays the subset of questions that were flagged for cognitive testing and probing in each round – and the content of the modules and items that were tested.

Table 1. AHS Modules and Questions in Protocol

Module	Number of Questions				Module/Question Content Tested
	Round 1		Round 2		
	Total	Target	Total	Target	
Front	6[1]	6	6	6	• Contact information
Housing Unit & Demographics	8	0	8	0	• N/A
Inventory	12	3	11	0	• Number of stories in entire building • Number of floors in housing unit
Equipment	8	3	NA	NA	• Fuel sources for cooking, water, and heat
Breakdown	6	6	NA	NA	• Broken toilets in home • Signs of mice or rats in home • Signs of cockroaches in home
Home Improvements	14	1	14	1	• Improvements made for home accessibility

Post-Secondary Education	12	12	12	12	• Anyone attended high school last March
					• Education level of each household member
					• Anyone attended post-secondary school last March
					   o Enrollment type
					   o School type
					   o Residence type
					   o Program details

Home Accessibility	12	12	13	13	• Equipment & home features used to get around • Difficulty getting to rooms • Difficulty using rooms • Current home accessibility rating • Future plans to improve home accessibility

Respondents (at least 18 years old) were recruited based on certain criteria so that they would likely follow particular paths in the questionnaire and arrive at the target questions for testing. Given the set of target questions, respondents who lived in a household that met at least one of the following criteria were recruited: (i) someone in the household attended college or other school beyond high school in March 2018, (ii) someone in the household had physical difficulties or limitations, (iii) improvements were made to the home in the past two years, or (iv) resided in an apartment or condo. These criteria were identified in order to ensure that target questions would be administered to a sufficient number of respondents, since some questions could be skipped based on previous answers. The last criterion was dropped after Round 1 because they were designed to capture respondents for testing of target questions in the Equipment and Breakdown modules, which were dropped after Round 1.

For the modules prior to the Home Accessibility module, the new or revised questions generally performed well. Most questions were easy for interviewers to administer, and easy for respondents

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[1] In this table we count Q3a and Q3b as one question.

to understand and answer. Some required revisions, but most were minor modifications. For target questions in the modules for Inventory, Equipment, and Breakdown, the sponsor made a late decision after Round 1 to continue administering wordings used in the 2017 AHS; these test questions were removed from further testing.

In the Home Accessibility module, several respondents had difficulty answering one or more questions. Some of these respondents indicated that they or someone else in the household has occasional difficulty with certain tasks but that this difficulty is not an everyday occurrence, and/or has a condition that could return at a future time and affect these. These questions lacked a reference period in Round 1, but were modified in Round 2 to ask about "current" difficulty; this improved comprehension. Another theme that came up was with regard to questions about having any difficulty "using" certain rooms in the household. Some respondents also differed over whether difficulty reaching things in one or more rooms was sufficient to count as difficulty "using" these rooms, if it did not stem from a severe disability. This occurred in both rounds of testing; the questions were modified in Round 2 to address difficulty using rooms "due to a condition other than a temporary injury" but respondents still differed over including difficulty reaching things. We discussed this issue with the sponsor; it was decided that type of difficulty is sufficient for respondents to include, but the questions should not explicitly address this, leaving respondents free to include this or not.

2   BACKGROUND ON AHS

At the request of the U.S. Department of Housing and Urban Development (HUD), the Center for Behavioral Science Methods (CBSM) at the U.S. Census Bureau conducted cognitive testing of new and revised survey questions for the American Housing Survey (AHS). The AHS was first fielded in 1973 under the name of the Annual Housing Survey and it was conducted annually until 1981, at which point its name was changed to the American Housing Survey and data was collected biennially due to budget constraints. The AHS can be administered by either personal visit or telephone.

Data from the core modules of the AHS provides current information on a wide range of housing subjects. These include size and composition of the nation's housing inventory, vacancies, fuel usage, physical condition of housing units, characteristics of occupants, breakdown of household equipment (e.g., household appliances) home improvements, mortgages and other housing costs, persons eligible for and beneficiaries of assisted housing, home values, and characteristics of recent movers.

In addition to these core modules, the AHS includes "rotating" modules that may or may not be included in a given year. Past modules have asked questions about public transportation, emergency and disaster preparedness, community involvement, doubled-up households (movers entering and leaving unit), health and safety hazards, and modifications made to assist occupants with disabilities. Select questions from both core and rotating modules have been tested by the Census Bureau for prior versions of the AHS; the most recent of these was for the 2017 AHS (Virgile et al., 2018).

For cognitive testing of the 2019 AHS, survey questions from the following eight modules were administered: Front, Housing Unit & Demographics, Inventory, Equipment, Breakdown, Home Improvements, Post-Secondary Education, and Home Accessibility. See Table 1 from earlier for descriptions of the questions and content in each module.

Researchers conducted two rounds of cognitive testing with twenty-nine cognitive interviews that CBSM conducted between April and June 2018. The results of these cognitive interviews will help inform the final version of a revised AHS instrument, which will be administered in 2019.

3   STUDY METHODOLOGY

3.1   Data Collection

From April to June 2018, two rounds of cognitive testing with a total of 29 participants were conducted in the Washington, D.C. metropolitan area. The interviews were conducted by four CBSM staff members. Interviews were completed in person and each respondent who participated in the research study received $40 in compensation (unless they were employed by the Federal government, in which case payment is not allowed).

All respondents were asked to sign a consent form to participate in the research study and allow the interviewer to record the session via audio tape, and all agreed to be taped.

In each round, one version of the questionnaire was administered to respondents. However, respondents followed different paths of questions based on skip patterns within the questionnaire. For each round, we recruited respondents aged 18 years or older who met any of the following criteria:
1. Attended college or other school beyond high school in March 2018 (or lived with anyone who attended during this time);
2. Had physical disabilities or limitations (or lived with anyone who had these);
3. Made any home improvements in the past two years.

For Round 1, the fourth criteria was recruiting for respondents who lived in an apartment or condo. Many respondents satisfied this criterion in Round 1, and we made recommendations to test questions in the Inventory module based on Round 1 findings. However, the sponsor decided after Round 1 to continue administering wordings used in the 2017 AHS for these questions. Thus, this criterion was dropped from testing in Round 2.

We identified respondents who met at least one of the criteria, and selected respondents based on a multitude of demographic characteristics: gender, age, race, ethnicity, education level, and income (See AHS screener in Appendix A for more detail).

Recruitment mechanisms included advertisements on Craigslist.com and flyers posted in libraries, housing complexes, and coffee shops. In the beginning of each round, a broadcast message was also distributed to all U.S. Census Bureau employees who work at the headquarters building in Suitland, MD.

3.1.1 Respondent Characteristics

Our goal was to recruit at least five respondents satisfying each of the classification criteria in each round, which was achieved. We also aimed to recruit a subject pool that was fairly balanced on demographics including sex, age, education, race, ethnicity, and household income. We did not have an explicit goal to recruit from different geographic areas; all respondents lived in the Washington, D.C. metropolitan area.

In terms of demographics, as shown in Table 2 below, the majority of the participants were female in both rounds. For age, finding respondents younger than age 35 proved challenging - this may have been a result of the type of criteria in respondents we were targeting in recruiting, particularly those for physical limitations and making home improvements. Although we would expect the criterion for recent college attendance to attract younger respondents, those currently living in a college dormitory or other group housing were ineligible, which may have had an impact as well. Most respondents were White or Black /African American, with one Asian respondent. We were only able to complete one interview with a respondent of Hispanic origin. Education levels were slightly skewed towards those who attained a bachelor's or post-bachelor's degree in the first round, but this was evenly balanced with lower education levels in the second round. The annual household income levels were balanced across the income ranges.

Table 2. Respondent Characteristics by Round

AHS Respondent Characteristics by Round		Round 1	Round 2	Total
Sex	Male	6	3	9
	Female	13	7	20
Age	Less than 35	2	1	3
	35-49	7	4	11
	50 & above	10	5	15
Education	Completed High School	3	0	3
	Some College	3	4	7
	Associate's	2	1	3
	Bachelor's	4	4	8
	Post-Bachelor's	7	1	8
Race	White	7	3	10
	Black	11	7	18
	Asian	1	0	1
Ethnicity	Hispanic	1	0	1
	Non-Hispanic	18	10	28
Annual Household Income	Less than $25,000	7	2	9
	More than $25,000, less than $50,000	5	0	5
	More than $50,000, less than $100,000	1	5	6
	More than $100,000	6	3	9

3.1.2 The Cognitive Interview Protocol

For our cognitive interview protocol, we used a streamlined AHS questionnaire in Round 1 containing 78 questions, and a revised questionnaire in Round 2 containing 64 questions (protocols

from both rounds are provided in Appendix B and C). For Round 1, these questions were taken from eight modules in the following order:

1. Front
2. Housing Unit & Demographics
3. Inventory
4. Equipment
5. Breakdown
6. Home Improvements
7. Post-Secondary Education
8. Home Accessibility

For Round 2, the revised protocol removed the modules for Equipment and Breakdown, but otherwise followed the same order. All respondents in a round were asked some or all questions in each module, with the exception of Home Improvements. Only respondents who reported owning a home in the Housing Unit module were administered questions in the Home Improvements module.

Respondents were informed that the purpose of the interview was to collect their thoughts and opinions on how these new questions worked. They were instructed to answer the questions as if an interviewer had come to their home. Interviewers wrote down any issues respondents experienced while answering any of the items, which included question misunderstanding, recall, and difficulty selecting a response option.

For this interview, concurrent probing was used to address issues respondents had in answering test questions. In concurrent probing, interviewers administer follow-up questions immediately after a respondent answers a specific question (Willis, 2005). The probes in our test protocol asked respondents how they arrived at their answer, whether a question was easy or difficult to answer, and/or to define what a specific term or phrase in a question meant to them.

At the end of each cognitive interview, respondents were asked a series of debriefing items, including overall feelings about the interview, difficulty of the questions, and whether respondents had prior experience answering survey items about these housing topics. To conclude, respondents were asked if there were any questions they deemed might be sensitive to other people and any other last thoughts regarding the study.

After each round of testing, staff members in CBSM prepared written summaries for each interview they conducted, and discussed whether and how questions should be revised to improve comprehension or otherwise reduce measurement error. Consideration was given to the number of respondents who had an issue with a question, the nature of the issue(s), and whether CBSM staff could agree on a revised wording. After these discussions, CBSM shared recommendations with HUD staff, who made the final decision on whether and how to revise questions.

4   COGNITIVE INTERVIEW FINDINGS

Our findings from cognitive interviews are presented in two sections. The first section (4.1) contains findings for the questions that were tested in both rounds. These are from four modules and presented in the same order in which they appeared in our protocol - Front, Home

Improvements, the Post-Secondary Education series, and Home Accessibility. The second section (4.2) contains findings for the questions that were tested in only the first round. These are from three modules – Inventory, Equipment, and Breakdown.

For questions tested in both rounds (Section 4.1), the original test wording is provided, followed by the revised test wording (if applicable) and the decision on final wording for the 2019 AHS. For questions tested in Round 1 only (Section 4.2), the test wording is provided, followed by the proposed revised test wording that was not tested (if applicable), and finally the 2017 AHS question wording. For questions in Section 4.2, CBSM made recommendations for revised wording to be tested in Round 2, but a late decision was made by HUD to keep wording that was used in the 2017 AHS, so no further testing was needed.

Each respondent is assigned a five-character ID. In each round the first two characters are based on the round (either "R1" or "R2"), followed by the underscore symbol, and then followed by a unique two-digit number ranging from "01" to the number of respondents in that round (19 in Round 1, 10 in Round 2).

4.1   Modules Tested in Both Rounds

4.1.1   Front Module

Through two rounds, all twenty-nine respondents were administered each of the questions in this module.

4.1.1.1   Contact Telephone Number

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Original Wording Q1: Round 1
Q1.   What is the telephone number where you would like to be called?
Phone: (   )
Ext:
☐ DK
☐ RF

Revision 1 Q1: Round 2 and Final Wording
Q1.   What is the telephone number where you would like to be called?
[Probe, if more than one provided: **Which one would you prefer?**]
Phone: (   )
Ext:
☐ DK
☐ RF

</div>

Q1 Findings:

In Round 1, all nineteen respondents provided some telephone number in response to this question. Some respondents offered more than one telephone number; this complicated the following question (Q2) since it asks about the type of phone corresponding to the number, and only allows one option to be selected.

To resolve this, we added text in Round 2 to be read if more than one number is provided, asking which number the respondent would prefer. In Round 2, all ten respondents responded with some

telephone number, and were able to indicate a "preferred" number if they had initially given more than one number.

4.1.1.2   Contact Telephone Number Type

<u>**Original Wording Q2: Round 1**</u>
Q2.   Is this a mobile or cell, home, office, or other type of number?
-Current Number: ^PHONEFILL   ^ext.
1. ☐ Mobile or Cell Phone
2. ☐ Home
3. ☐ Office
4. ☐ Other – Specify: _____
☐ DK
☐ RF

<u>**Revision 1 Q2: Round 2 and Final Wording**</u>
Q2.   Is this a mobile or cell, home, ~~office~~ work, or other type of number?
-Current Number: ^PHONEFILL   ^ext.
1. ☐ Mobile or Cell Phone
2. ☐ Home
3. ☐ ~~Office~~ Work
4. ☐ Other – Specify: _____
☐ DK
☐ RF

Q2 Findings:

In Round 1, all nineteen respondents chose one of the first three response options (or two of these, if they had given more than one phone number in response to the prior question). Most respondents selected the first option "Mobile or Cell Phone," and the remainder chose either "Home" or "Office."

For Round 2 the sponsor decided to replace the third option "Office" with "Work," since this is more consistent with the category label that appears in cell phone contact lists. In Round 2, all ten respondents chose the first option "Mobile or Cell Phone."

4.1.1.3   Contact Email Address (1 of 2)

<u>**Original Wording Q3a: Round 1-2 and Final Wording (No Changes Made)**</u>
Q3a.   Do you also have an email address that we could use to contact you?
1. ☐ Yes
2. ☐ No
☐ DK
☐ RF

Q3a Findings:

Across both rounds, all twenty-nine respondents indicated that they had an email address and answered "Yes" to this question. There were no problems recorded for this question.

> **Original Wording Q3b: Round 1**
> **Q3b.**   **What is your email address?**
> _____
>
> **Revision 1 Q3b: Round 2 and Final Wording**
> **Q3b.**   **What is your email address?**
>   [Probe, if more than one provided: **Which one would you prefer?**]
>   _____

Q3b Findings:

In Round 1, all nineteen respondents provided some email address in response to this question. Some respondents offered more than one email address; the question was intended to capture just one email address but this was not clear to these respondents.

To resolve this, we added text in Round 2 to be read if more than one email address is provided, asking which address the respondent would prefer. In Round 2, all ten respondents responded with some email address, and were able to indicate a "preferred" address if they had initially given more than one address.

4.1.1.5   Number of Adults in Household with a Cell Phone

> **Original Wording Q4: Round 1**
> **Q4.**   **How many adults (age 18 and over) in this household have a cell phone for personal use?**
>   _____
>   ☐ DK
>   ☐ RF
> **Revision 1 Q4: Round 2 and Final Wording**
> **Q4.**   **How many adults (age 18 and over) in this household have a cell phone for personal use?**
>   **(Consider all adults in the household.)**
>   _____
>   ☐ DK
>   ☐ RF

Q4 Findings:

In Round 1, all nineteen respondents provided a number of people in response to the question. Some were unclear whether or not they should include themselves; they either gave two answers, specifying which number was including themselves and which was not, or asked directly whether to include themselves.

To resolve this, we added text in Round 2 to consider "all adults in the household." We had also discussed adding text about "including yourself" but this was not used, since it could come into conflict with other text about adults "age 18 and over" if the respondent is age 16-17, since 16 is the minimum age for an eligible respondent in the AHS. In Round 2, all ten respondents responded with a number of people in response to the question, and were clear that that should include themselves.

For Round 2, we also removed the parentheses around the text "age 18 and over" since the sponsor felt this was unnecessary.

Original Wording Q5: Round 1

Q5. **Is there [also] a land-line telephone in this household? Do not count cell phones, or any phone line that is used only for a computer or fax machine.**
   1. ☐ Yes
   2. ☐ No
   ☐ DK
   ☐ RF

Revision 1 Q5: Round 2 and Final Wording

Q5. **Is there [also] a ~~land-line~~ landline telephone in this household? Do not count cell phones, or any phone line that is used only for a computer or fax machine.**
   1. ☐ Yes
   2. ☐ No
   ☐ DK
   ☐ RF

Q5 Findings:

Between both rounds of testing, thirteen respondents answered "Yes" to having a landline telephone, and sixteen answered "No." For Round 2 the term "land-line" was changed to "landline" since the sponsor later decided that the hyphen was unnecessary; otherwise no changes were made.

Based on probes, respondents were clear about the meaning of a "landline" telephone. The most common answers were that this is a telephone that is connected to a wall in the home, and cannot be taken outside the home, which makes it different from a mobile or cell phone.

4.1.1.7 Preferred Method of Contact

Original Wording Q6: Round 1-2

Q6. **If we need to contact you, what is your preferred method of contact?**
   Mark all that apply.
   1. ☐ Personal visit
   2. ☐ Telephone call
   3. ☐ Text message
   4. ☐ Email
   ☐ DK
   ☐ RF

Revision 1 Q6: Final Wording

Q6. **If we need to contact you, what is your preferred method of contact?**
   (If respondent answers "phone", probe for call, text, or both.)
   Mark all that apply.
   1. ☐ Personal visit
   2. ☐ Telephone call
   3. ☐ Text message
   4. ☐ Email
   ☐ DK
   ☐ RF

Q6 Findings:

Between both rounds, all respondents indicated that their preferred method of contact was one (or more than one) of three options – a telephone call, text message, or email. None selected a personal visit.

One respondent in the first round (R1_09) who indicated preference for a telephone call gave a long answer which highlighted how some respondents could be unclear in their answer:

- "There's several ways you could contact me over my phone. I can get email on my phone, I can get a phone call on my phone, and I can get a text message on my phone. I would prefer a phone call on my phone."

Based on this, we became aware of the possibility that a respondent could indicate their phone was the preferred method of contact, but that this would be unclear how to code as a response, since different types of contact could be made by phone. We discussed this with the sponsor but kept the same wording for Round 2, since the sponsor had not seen evidence that this scenario may actually occur.

However, during the second round one respondent (R2_01) indicated preference for contact via "phone;" when probed the respondent indicated they meant "phone call or text." Since this scenario of concern did in fact occur, it was decided to add a specific interviewer instruction for the final wording that "If respondent answers 'phone,' probe for call, text, or both." We felt that this would avoid interviewers misinterpreting "phone" to mean any of the options other than that intended by the respondent.

4.1.2 Home Improvements Module

4.1.2.1 Home Improvements Done for Accessibility

Original Wording Q52: Round 1, Round 2, and Final Wording (No Changes Made)
52. Did you do any of these home improvements to make your home more accessible for people with physical limitations, such as people using a wheelchair or a walker?
1. ☐ Yes
2. ☐ No
☐ DK
☐ RF

Q52 Findings:
This question was only asked of those who own their home, and answered "Yes" to one or more preceding questions about having done some home improvement in the past two years (or since they've lived there, if they lived in the home for less than two years). Between both rounds of testing, this question was asked of fourteen respondents. Of these, two answered "Yes" and twelve answered "No." The two who answered "yes" explained the modifications to the house and that they were, indeed, intended to accommodate people with disabilities.

- R1_01: The respondent described doing "flooring" and adding ramps as home improvements for his mother-in-law, who had a health condition and required use of a walker and sometimes a wheelchair.
- R1_19: The respondent described adding railings to her bathroom, since she had had knee surgery and needed crutches.

Based on probes, respondents were clear about the meanings of "physical limitations" and "home improvements." Common understandings of "physical limitations" were having a physical disability or some difficulty with mobility, and this may require the aid of a wheelchair, cane, walker, ramp, or something else to get around. Common understandings of "home improvements" were upgrades made to a home for any number of reasons, such as improving accessibility for the disabled, making the home more attractive or functional, or bringing up the property value.

4.1.3 Post-Secondary Education Series

4.1.3.1 Anyone in Household Attending High School Last March (1 of 2)

Original Wording Q55: Round 1-2 and Final Wording (No Changes Made)
Q55. **Earlier I recorded [READ NAMES & AGES OF EACH MEMBER AGE 16-19]. In March of this year,** **[were you/was NAME/were either of [you/them]/were any of [you/them]] attending high school?** 1. ☐ Yes 2. ☐ No ☐ DK ☐ RF

Q55 Findings:

This question was asked only of those who reported any household members between age 16-19 earlier in the interview. Between both rounds of testing, this question was asked of six respondents. Of these, three answered "Yes" and three answered "No." There were no issues found for this question.

4.1.3.2 Anyone in Household Attending High School Last March (2 of 2)

Original Wording Q56: Round 1-2 and Final Wording (No Changes Made)
Q56. **Who was in high school?** (Indicate which members age 16-19 from household roster) Probe: **Anyone else?**

Q56 Findings:

Between both rounds of testing, this question was asked of three respondents. Of these, all indicated just one household member who was in high school; all three had just one household member age 16-19 for whom the prior question (Q55) was asked. Based on the fills in the prior question, this made the following question (Q56) unnecessary and redundant, since Q55 already asked whether this same household member was attending high school last March and referred to them by name.

Based on this, we kept the wording unchanged but proposed a new skip pattern for the final survey, so that anyone with just one household member age 16-19 and answering "Yes" to Q55 would be skipped past Q56. The sponsor agreed with this change.

4.1.3.3   Anyone in Household Attending Post-Secondary School Last March (1 of 2)

Original Wording Q57: Round 1-2 and Final Wording (No Changes Made)

Q57.   In March of this year, was anyone in this household attending college or some other type of school beyond high school, such as vocational, technical, trade, or business school?
    1. ☐ Yes
    2. ☐ No
    ☐ DK
    ☐ RF

Q57 Findings:

All twenty-nine respondents were asked this question. Of these, twelve answered "Yes" and seventeen answered "No." Most of the respondents who answered "Yes" described conventional undergraduate or graduate programs, while a few described more specialized programs:

- R1_13: The respondent said one household member was training for an Emergency Medical Technician (EMT) program, and another was in training for a Certified Nursing Assistant (CNA) program.
- R1_17: The respondent described being enrolled in a "professional studies program" at a local university learning to become an interpreter for American Sign Language.
- R2_06: "I was attending school, online training, yes … It was an energy healing class." The respondent described this program more during later questions and receiving certification upon completion.

Based on probes, respondents were clear about the meaning of "vocational, technical, trade, or business school." Some indicated that the first three terms were similar or identical ("vocational," technical," and "trade"), while the fourth term ("Business school") was more different from these in terms of the type of education. Respondents understood that these all covered types of post-secondary education other than a typical Bachelor's degree.

4.1.3.4   Anyone in Household Attending Post-Secondary School Last March (2 of 2)

Original Wording Q58: Round 1-2 and Final Wording (No Changes Made)

Q58.   Who was in college or some other type of school beyond high school?
    (Indicate which members from household roster)
    Probe: **Anyone else?**

Q58 Findings:

Between both rounds, twelve respondents were asked this question. All of them answered with the names of either one or two people. One respondent in Round 1 (R1_04) named her daughter, even though she had not been named as living at the household earlier in the interview. Based on this, we discussed whether an edit check would be needed in the survey instrument if the respondent answers with the name of someone not on the household roster. However, the sponsor indicated that FRs could add household members to the roster if a new person was discovered later

in the interview, or FRs could enter "96. Not Listed" to this question. Based on this, no changes were made. No other issues were found with this question.

4.1.3.5   *Highest Level of School Completed or Highest Degree Received*

<u>Original Wording Q59: Round 1-2</u>
Q59.   **What is the highest level of school [you have/NAME has] completed or the highest degree [you have/he has/she has] received?**
    1. ☐ Less than 1st grade   10. ☐ Some college but no degree
    2. ☐ 1st, 2nd, 3rd, or 4th grade   11. ☐ Diploma or certificate from a vocational, technical,
    3. ☐ 5th or 6th grade   trade, or business school beyond the High School level
    4. ☐ 7th or 8th grade   12. ☐ Associate degree – Occupational/vocational program
    5. ☐ 9th grade   13. ☐ Associate degree – Academic program
    6. ☐ 10th grade   14. ☐ Bachelor's degree (e.g., BA, AB, BS)
    7. ☐ 11th grade   15. ☐ Master's degree (e.g., MA, MS, MEng, MEd, MSW, MBA)
    8. ☐ 12th grade, no diploma   16. ☐ Professional School degree (e.g., MD, DDS, DVM, LLB, JD)
    9. ☐ HIGH SCHOOL   17. ☐ Doctorate degree (e.g., PhD, EdD)
        GRADUATE – High school
        DIPLOMA or equivalent (e.g., GED)
    ☐ DK
    ☐ RF

<u>Revision 1 Q59: Final Wording</u>
Q59.   **What is the highest level of school [you have/NAME has] completed or the highest degree [you have/he has/she has] received?** (If respondent answers "Associate's", probe for occupational, vocational, or academic.)
    1. ☐ Less than 1st grade   10. ☐ Some college but no degree
    2. ☐ 1st, 2nd, 3rd, or 4th grade   11. ☐ Diploma or certificate from a vocational, technical,
    3. ☐ 5th or 6th grade   trade, or business school beyond the High School level
    4. ☐ 7th or 8th grade   12. ☐ Associate's degree – Occupational/vocational program
    5. ☐ 9th grade   13. ☐ Associate's degree – Academic program (e.g., AA)
    6. ☐ 10th grade   14. ☐ Bachelor's degree (e.g., BA, AB, BS)
    7. ☐ 11th grade   15. ☐ Master's degree (e.g., MA, MS, MEng, MEd, MSW, MBA)
    8. ☐ 12th grade, no diploma   16. ☐ Professional School degree (e.g., MD, DDS, DVM, LLB, JD)
    9. ☐ HIGH SCHOOL   17. ☐ Doctorate degree (e.g., PhD, EdD)
        GRADUATE – High school
        DIPLOMA or equivalent (e.g., GED)
    ☐ DK
    ☐ RF

<u>Q59 Findings:</u>

All twenty-nine respondents were asked this question. All were able to name an education level for each member of their household. One respondent in Round 2 (R2_03) said she received an AA; it was initially unclear how to code this response since there are two options for Associate's degrees ("12. "Occupational/vocational program" and "13. Academic program"). The interviewer probed for more program information and the respondent indicated this was an academic program. We discussed this issue with the sponsor.

Based on this, the final wording will have an interviewer instruction "If respondent answers 'Associate's,' probe for occupational, vocational, or academic." Although it would be possible to train interviewers to probe about this without adding an interviewer instruction, the addition would help ensure that interviewers do not misinterpret one type of Associate's degree for another. Also

the sponsor wished to add an apostrophe and "s" after each of the "Associate" options, and the text "(e.g., AA")" after the second one, for consistency with the degree options that come after these.

4.1.3.6　Post-Secondary Education Enrollment Type

Original Wording Q60: Round 1-2 and Final Wording (No Changes Made)
Q60.　In March of this year, [were you/was NAME] attending college or school full-time or part-
　　　time?
　　　1. ☐ Full time
　　　2. ☐ Part-time
　　　☐ DK
　　　☐ RF

Q60 Findings:

Between both rounds, twelve respondents were asked this question. Of these, six answered "Full-time" and six answered "Part-time." Most respondents had no difficulty answering, while some had to consider a few factors while answering:

- R1_19 ("Part-time"): "But I wasn't really attending college, the place I work at was allowing me to take classes for a certification, certain different college courses. I would say yes [to part-time] anyway."
- R2_01 ("Full-time"): The respondent hesitated before answering, and explained that he was taking two "part-time" classes which he felt made up a total "full-time" workload.
- R2_09 ("Part-time"): The respondent was answering for his girlfriend; he said she was taking online classes 3-4 days a week which was "part-time" because he would consider "full-time" to mean five days a week, since this is how he thinks of a "full-time" job.

Based on probes, respondents understood "full-time" enrollment to mean a more full workload and time commitment than "part-time." Some respondents also said that "part-time" attendees may be working at a job in addition to attending school, and that "full-time" attendees would not be doing this or it would be unlikely. There was not a clear consensus from respondents on an exact threshold between "full-time" and "part-time" in terms of number of courses or credit hours, but the sponsor did not feel that the question required additional text to define "full-time" and "part-time;" thus, no changes were made.

4.1.3.7　Post-Secondary School Ownership Type

Original Wording Q61: Round 1-2 and Final Wording (No Changes Made)
Q61.　Is the college or school Public or Private?
　　　1. ☐ Public
　　　2. ☐ Private
　　　☐ DK
　　　☐ RF

Q61 Findings:

Between both rounds, eleven respondents were asked this question. Of these, six answered "Public," four answered "Private," and one answered "Don't Know." Two respondents had some difficulty with the question:

- R2_09 ("Don't Know") – "To be honest, I don't know. Don't want to tell you a fib." He was answering for his girlfriend and did not know whether her online program was offered by a public or private institution.
- R2_01 ("Public") – The respondent initially answered "Private" but later changed his answer to "Public" when thinking more about the institution, since he described it as a "publicly traded company."

Based on probes, respondents were able to explain what "public" and "private" colleges or schools meant to them, with "public" meaning funded partially by the state and "private" meaning not funded by the state. Several of the respondents mentioned a particular college or university when probed, and their response or examples for "public" or "private" matched how these institutions classify themselves. Some respondents also understood "public" institutions to mean being open to the public, and "private" institutions to be more elite and selective. Overall, we found that most respondents understood the question, and the sponsor did not feel that the question required additional text to define "public" and "private;" thus, no changes were made.

4.1.3.8   Living in Household During Post-Secondary School

Original Wording Q62: Round 1-2 and Final Wording (No Changes Made)
Q62.   [Were/Was] [you/NAME] living at this [home/apartment/unit] in March of this year while [you/they] were attending college or school?
1. ☐ Yes
2. ☐ No
☐ DK
☐ RF

Q62 Findings:

Between both rounds, eleven respondents were asked this question. Of these, seven answered "Yes" and four answered "No." There were no problems found for this question. Those who answered "Yes" were clear that they or the person(s) enrolled in school lived at their current home; those who answered "No" indicated between this question and the following one that they or the person(s) enrolled in school lived elsewhere, such as a dorm or an off-campus residence.

4.1.3.9   Living in School Housing During Post-Secondary School

Original Wording Q63: Round 1-2 and Final Wording (No Changes Made)
Q63.   [Were/Was] [you/NAME] living in housing owned by the university, such as a dorm, in March of this year?
1. ☐ Yes
2. ☐ No
☐ DK
☐ RF

Q63 Findings:

Between both rounds, four respondents were asked this question. Of these, three answered "Yes" and one answered "No." There were no problems found for this question.

Based on probes, respondents understood "housing owned by the university" to mean dormitories, and may also include certain apartments or residences off of a university campus if a university

owns them. Respondents understood "dorms" to mean living spaces for students; some elaborated on this with descriptions of shared spaces or facilities for the students living there.

<u>**Original Wording Q64: Round 1-2 and Final Wording (No Changes Made)**</u> **Q64.   [Are you/Is NAME] still enrolled in college or school or will [you/NAME] be in the next few months?** 1. ☐ Yes 2. ☐ No ☐ DK ☐ RF

<u>**Q64 Findings:**</u>

Between both rounds, eleven respondents were asked this question. Of these, eight answered "Yes" and three answered "No." Those who answered "Yes" either were still enrolled in college or school, or planned to enroll in the next few months, or both:

- R1_04: The respondent indicated that her daughter was enrolled at a community college and would be graduating within the next few months, and would not be returning for the next semester.
- R1_12: The respondent said that another household member was in their second year of study and planned to continue.

There were no problems found for this question.

<u>**Original Wording Q65: Round 1**</u> **Q65.   What type of degree or certificate [are you/is NAME] working towards?** 1. ☐ Vocational, technical, trade or business certificate or credential (Less than 2 years) 2. ☐ Associate's degree (2-year community or technical college) 3. ☐ Bachelor's degree (For example: BA, AB, BS) 4. ☐ Master's degree (For example: MA, MS, MBA) 5. ☐ Professional School degree (For example: MD, DDS, JD) 6. ☐ Doctorate degree (For example: PhD, EdD) 7. ☐ Non-Degree program ☐ DK ☐ RF **<u>Revision 1 Q65: Round 2</u>** **Q65.   What ~~type of~~ degree or certificate [are you/is NAME] working towards, if any?** (Read options if needed.) 1. ☐ Vocational, technical, trade or business certificate or credential (Less than 2 years) 2. ☐ Associate's degree (2-year community or technical college) 3. ☐ Bachelor's degree (For example: BA, AB, BS) 4. ☐ Master's degree (For example: MA, MS, MBA) 5. ☐ Professional School degree (For example: MD, DDS, JD) 6. ☐ Doctorate degree (For example: PhD, EdD) 7. ☐ Non-Degree program ☐ DK ☐ RF **<u>Revision 2 Q65: Final Wording</u>** **Q65.   What degree or certificate [are you/is NAME] working towards, if any?** (Read options if needed.)

1. ☐ Vocational, technical, trade or business certificate or credential (Less than 2 years)
2. ☐ Associate's degree (2-year community or technical college)
3. ☐ Bachelor's degree (For example: BA, AB, BS)
4. ☐ Master's degree (For example: MA, MS, MBA)
5. ☐ Professional School degree (For example: MD, DDS, JD)
6. ☐ Doctorate degree (For example: PhD, EdD)
7. ☐ Non-Degree program
☐ DK
☐ RF

Q65 Findings:

The original wording of this question was asked of six respondents in Round 1. Of these, four had some issue answering:

- Some respondents misunderstood the question to be asking for the field of study rather than the rank of degree. For example, R1_06 said "Communications" and R1_10 said "Engineering." In both cases the interviewer then read the options aloud and the respondent chose "Bachelor's degree."
- R1_12: "Don't Know." The respondent was answering for someone else in their home and did not know the answer.
- R1_19: The respondent indicated feeling that there was not an applicable option. "I'm not working towards any degree or certificate. I have just received a certificate, and I intend to get more certificates … " It appeared that the respondent was uncertain how to answer since the wording of the question did not specify that a non-degree program was an option.

Based on the first issue, we proposed adding an interviewer note to "Read options if needed" to indicate that the question is about the degree rank rather than the field of study. Based on the last issue, we also proposed adding the text "if any?" to the end of the question, to indicate that a non-degree program is an acceptable answer. The sponsor agreed to both of these changes for Round 2, and also changed the text "What type of degree or certificate" to simply "What degree or certificate," since the term "type" might be misunderstood to mean the field of study.

The first revised wording of this question was asked of five respondents in Round 2. Of these, one had some issue answering:

- R2_06: "What degree? It was … I don't know the name of it, it's a healing certification. Like an energy healing certification." The interviewer then read all the options aloud. "It's somewhere between non-degree and credential, because there is a degree that is awarded when you complete it. But it's not a degreed credential." After several probes the respondent said that "Non-degree credential" would be appropriate description for her.

Based on this case, the sponsor designed help text to be used in the final wording that explains a "non-degree program."

4.1.3.12   Completion of Post-Secondary School Program

Original Wording Q66: Round 1-2 and Final Wording (No Changes Made)
Q66. Did [you/NAME] complete the program?
1. ☐ Yes
2. ☐ No
☐ DK
☐ RF

Q66 Findings:

Between both rounds, just one respondent was asked this question; they answered "Yes." There were no problems found for this question.

4.1.4   Home Accessibility Module
4.1.4.1   Personal Equipment Used for Long-Term Condition

Original Wording Q67a: Round 1
Q67a. [Do you/Does anyone in the household] use any of the following equipment because of a long-term condition? Exclude temporary injuries. (Please answer this question for everyone in the household.) (Read all categories; mark all that apply)
1. ☐ **Manually Operated Wheelchair**
2. ☐ **Motorized Wheelchair, Cart, or Scooter**
3. ☐ **Chairlift, stairlift or platform lift**
4. ☐ **Crutches**
5. ☐ **Cane or Walker**
6. ☐ **Something Else**
7. ☐ None
☐ DK
☐ RF
Revision 1 Q67a: Round 2
Q67a. [Do you/Does anyone in the household] currently use any of the following equipment to get around because of a long-term condition? Exclude temporary injuries. (Please answer this question for everyone in the household.) (Read all categories; mark all that apply. A response of any bed type is not considered equipment; if this is mentioned and no other equipment then code as '6' (None).)
1. ☐ **Manually Operated Wheelchair**
2. ☐ **Motorized Wheelchair, Cart, or Scooter**
3. ☐ ~~Chairlift, stairlift or platform lift~~
3. ☐ **Crutches**
4. ☐ **Cane or Walker**
5. ☐ ~~Something Else~~ **Some Other Mobility Aid**
6. ☐ None
☐ DK
☐ RF
Revision 2 Q67a: Final Wording
Q67a. [Do you/Does anyone in the household] currently use any of the following equipment to get around because of a long-term condition? Exclude temporary injuries. (Please answer this question for everyone in the household.) (Read all categories; mark all that apply.)
(Help text: A response of any bed type is not considered equipment; if this is mentioned and no other equipment then code as '6' (None).)
1. ☐ **Manually Operated Wheelchair**
2. ☐ **Motorized Wheelchair, Cart, or Scooter**
3. ☐ **Crutches**

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   4. ☐ Cane or Walker
   5. ☐ Some Other Mobility Aid
   6. ☐ None
   ☐ DK
   ☐ RF
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Q67a Findings:

The original wording of this question was asked of all nineteen respondents in Round 1. Of these, eleven chose "None." One respondent chose this based on currently not using equipment but mentioned a condition that caused her to use a cane years before, and that the condition could relapse at any time.

- R1_07: "So does this include at one point had to use those, due to a long-term disability, or at the current point using those as a long-term disability? The reason I'm asking is because I have a condition that comes and goes. It's defined as a disability but the disability status, my kind of limitations, change." The respondent talked about having to use a cane to walk 7 years ago "due to a long term condition, but I have progressed out of needing that due to medication ... at one point I might need to use that again, which is why that question is kind of difficult to answer. I would say no."

Between the eight respondents who chose at least one equipment type, all of the six original options were selected at least once. A few respondents chose the "Something Else" option and mentioned a "hospital bed," "adjustable bed," or "ramp."

We discussed these issues with the sponsor after the first round. Based on the first issue – difficulty answering due to inconsistent use of equipment – the sponsor decided to have the questions focus on "current" use, and the term "currently" was added to clarify the reference period; this was implemented for the question in the second round, as well as several other questions in this module. The sponsor also felt that the responses given for "Something Else" were out of scope, and that the question was intended to capture only mobility equipment that could be used inside and outside the home. Based on this, the option "Something Else" was reworded to "Some Other Mobility Aid" in the second round; also the text "to get around" was added to further clarify that the question is about certain types of mobility equipment. Also, the third option "stairlift, chairlift, or platform lift" was removed since these are different from the other mobility equipment that a respondent takes with them, and this option was included in a new question for Round 2 (see Section 4.1.4.2). Finally, an interviewer instruction was added to not code bed types as an equipment type.

The first revised wording of this question was asked of all ten respondents in Round 2. Of these, five chose "None" while the other five chose "cane or walker;" one chose this along with "crutches." Two of the five respondents said "sometimes" or "occasionally" in reference to how often they use either equipment type that was read aloud. The interviewer probed in both cases, and both respondents said they would report the equipment.

Based on this, we recommended keeping the first revised wording for the final survey. The sponsor wished to change the interviewer instruction to help text, but otherwise agreed with the question wording.

Based on probes, most respondents understood "long-term condition" to mean being handicapped for life with no possibility of recovery, and/or having a chronic condition. A minority of respondents said that this could also include things for which recovery was possible, and defined a minimum recovery period in terms of months or years.

Respondents understood "temporary injuries" to mean injuries from which one would recover, over time and/or with physical therapy or other treatment. Some respondents estimated a length of time for recovery period but varied on the length for this – some estimated in terms of weeks, some in months, and some up to one or two years.

4.1.4.2   Home Equipment Used for Long-Term Condition

Original Wording Q67b: Round 2

Q67b.   Does your home have any of the following features to help [you/anyone in the household] because of a long-term condition? Exclude temporary injuries.

(Read all categories; mark all that apply.)
1. ☐ **Ramp**
2. ☐ **Chairlift, Stairlift, or Platform Lift**
3. ☐ **Something Else**
4. ☐ None
   ☐ DK
   ☐ RF

Revision 1 Q67b-67c: Final Wording

Q67b.   Does your [house/apartment/manufactured/mobile home/living quarters] have a ramp?
1.   ☐ Yes
2.   ☐ No
   ☐ DK
   ☐ RF

Q67c.   Does your [house/apartment/manufactured/mobile home/living quarters] have a chairlift, stairlift, or platform lift?
1.   ☐ Yes
2.   ☐ No
   ☐ DK
   ☐ RF

Q67b Findings:

This question was not asked in Round 1 – this was added in Round 2 since the sponsor felt Q67a in Round 1 should only cover mobility equipment that can be used inside or outside a home, and a separate question should be asked about other types of assistance such as ramps and chairlifts.

This question was asked of all ten respondents in Round 2 – of these, six chose "None" and four chose one or more of the other options. Several issues arose with this question. First, for respondents in apartment buildings, some seemed to differ over whether the question was asking about their specific unit or about the whole building.

- One of these respondents (R2_05) said "Yes" to all three options and mentioned an elevator for the "Something else" option; these were all in reference to her building.
- Another of these respondents (R2_06) said "None" even though the interview took place at their building and the interviewer observed ramps and elevators at the building; she may

have been thinking about her unit only, and/or did not consider an elevator as "something else."

Another issue was that two respondents mentioned "hand rails" for the "something else" option, and it was unclear whether this was in scope or how "hand rails" should be defined.

- One of these (R2_02) mentioned this in reference to the rail on a standard staircase in her house; she debated whether this should count and decided it should since she needs to use it for help.

These issues were discussed with the sponsor after Round 2. The sponsor decided to remove this question from the final survey, and instead replace it with two questions asking directly whether the home has (i) a ramp, and (ii) a chairlift, stairlift, or platform lift. The sponsor indicated that these were the only features for which they aimed to produce estimates based on survey data, and therefore there was no need to ask about "Something Else." The sponsor also indicated that for respondents living in multi-unit buildings, the intent of the question was capture info on the unit rather than the building; they acknowledged that the final question wordings would not resolve this confusion for those in multi-unit buildings, and could result in false positives.

4.1.4.3   Difficulty Entering Home

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Original Wording Q68: Round 1

Q68.   Without assistance from another person, [do you/does anyone in the household 6 years of age and older] have difficulty entering the home or property because of a condition other than a temporary injury?
1. ☐ Yes
2. ☐ No
☐ DK
☐ RF

Revision 1 Q68: Round 2 and Final Wording

Q68.   The next questions are about whether [you/anyone in the household 6 years of age and older] [have/has] difficulty getting around or doing certain activities in your home. We are only interested in whether these are difficult without assistance from another person or because of a long-term condition. Do NOT include things that are difficult due to a temporary injury.

Without assistance from another person, [do you/does anyone in the household 6 years of age and older] currently have difficulty entering the home or property because of a condition other than a temporary injury?
1. ☐ Yes
2. ☐ No
☐ DK
☐ RF

</div>

Q68 Findings:

The original wording of this question was asked of all nineteen respondents in Round 1. Of these, three respondents said "Yes" and sixteen said "No." Those answering "Yes" described the difficulty entering their home for themselves or others:

- R1_17: "Sometimes." The respondent mentioned occasional recurring issues (pain, back spasms) because of a car accident three years ago.

- R1_11: The respondent mentioned their spouse having trouble going downstairs to enter their house from a basement level.

One respondent who answered "No" (R1_15) said that someone living with them takes a long time to enter the home, but can do so without help. We discussed with the sponsor whether this should be answered "No" given the situation, and the sponsor confirmed since the amount of time taken to enter was outside the scope of the question. Also the respondent previously mentioned for Q67a had difficulty with this question for the same reason – a condition that could relapse, and created past difficulty, but not current difficulty:

- R1_07: "Now, no. Kind of the same thought process as I went through before. If you're asking now, I would say no."

Finally, one respondent indicated that the question was cognitively difficult and needed it repeated:

- R1_16: "It was a bit wordy. Kind of changed the thought process two to three different times, one being the age, and then going to the difficulty entering the home, then you went to needing assistance entering the home. So those were three thought processes I had as far as needing to repeat the question."

Based on these, we proposed adding "currently" for a reference period, and also some introductory text before the question explaining all of the factors to consider so that this question would be less cognitively burdensome (and so that these would not have to be repeated for the following questions). The sponsor accepted these changes for the second round. We also discussed cases of respondents answering "sometimes" and whether response options should cover frequency of difficulty, rather than binary "yes/no" options; we decided to continue with "yes/no" options.

The revised wording of the question was asked of all ten respondents in Round 2, and all of them answered "No." No issues were found with the revised wording.

Based on the probe, respondents understood "have difficulty entering" to mean difficulty getting through a doorway to enter their home, getting up stairs to enter their home, or going up ramps or not having them at all. Many said these would require help from another person, or that help would be preferred, and without help the task would be physically painful or impossible. Some elaborated with specific scenarios, such as a wheelchair being too wide to fit through a narrow doorway; one respondent also mentioned a hypothetical case of someone being too obese to fit through a doorway.

4.1.4.4   *Difficulty Getting to Rooms*

Original Wording Q69: Round 1

Q69.   Without assistance from another person, [do you/does anyone in the household 6 years of age and older] have difficulty getting to any of the following rooms:

Kitchen?
1. ☐ Yes
2. ☐ No
☐ DK
☐ Ref

Bathroom?
1. ☐ Yes
2. ☐ No
☐ DK
☐ Ref

Bedroom?
1. ☐ Yes
2. ☐ No
☐ DK
☐ RF

Revision 1 Q69: Round 2

Q69.   (Without assistance from another person,) [Do you/does anyone in the household 6 years of age and older] currently have difficulty getting to any of the following rooms (because of a condition other than a temporary injury):

Kitchen?
1. ☐ Yes
2. ☐ No
☐ DK
☐ Ref

Bathroom?
1. ☐ Yes
2. ☐ No
☐ DK
☐ Ref

Bedroom?
1. ☐ Yes
2. ☐ No
☐ DK
☐ RF

Revision 2 Q69: Final Wording

Q69.   (Without assistance from another person,) [Do you/does anyone in the household 6 years of age and older] currently have difficulty getting to any of the following rooms (because of a condition other than a temporary injury):

[The/A] Kitchen?
1. ☐ Yes
2. ☐ No
☐ DK
☐ Ref

[The/A] Bathroom?
1. ☐ Yes
2. ☐ No
☐ DK
☐ Ref

[The/A] Bedroom?
1. ☐ Yes
2. ☐ No

Q69 Findings:

The original wording of this question was asked of all nineteen respondents in Round 1. Of these, three respondents answered "Yes" to difficulty of anyone getting to at least one of the kitchen, bathroom, or bedroom.

- R1_11: The respondent answered "Yes" for all three rooms, in reference to their stepson who had [a medical condition] and severe mobility issues.
- R1_01: The respondent answered "Yes" for the bathroom only, in reference to their mother-in-law who found it difficult to use a walker with obstacles in the bathroom such as the toilet. This respondent may have confused difficulty "getting to" the bathroom with difficulty "using" the bathroom, which was the subject of Q71 (the respondent answered "Yes" to this question as well).
- R1_15: The respondent answered "Yes" for the bathroom only, in reference to another household member who had difficulty going upstairs where the bathroom was located.

The sixteen remaining respondents answered "No" to each of the three rooms. For the second round we revised the question to address "current" difficulty, and made some of the text optional to read to reduce cognitive burden and repetition. The first revised wording of this question was asked of all ten respondents in Round 2. Of these, one respondent answered "Yes" to all three rooms but indicated that answering for the bathroom was unclear, since the home had more than one bathroom.

- R2_02: "That's a tricky question because there's a bathroom on entry level, so that's no problem. The bathroom by the bedroom is two half flights of steps, so that's a little hard." The respondent decided to answer "Yes" based on difficulty getting to one of the bathrooms.

The nine remaining respondents answered "No" to each of the rooms. Based on the confusion of the one respondent, for the final wording we proposed changing each of the rooms types from singular to plural ("kitchens," "bathrooms," and "bedrooms"). The sponsor chose to keep the room types singular, but add a fill before each room type, and the correct text would be determined based on how many rooms of each type were indicated earlier in the interview. If one room type was recorded (e.g., one bathroom) then the fill would read "The" (making the text "The bathroom"), but if two or more room types were recorded (e.g. two bathrooms) then the fill would read "A" (making the text "A bathroom").

Based on the probe, respondents understood the phrase "have difficulty getting to" to mean difficulty or inability to physically move from one point into or out of the specified room entrance without help. The one exception was the respondent mentioned in Round 1 (R1_01) who may have conflated difficulty "getting to" a room with difficulty "using" a room.

Original Wording Q70: Round 1

Q70.   Without assistance from another person, [do you/does anyone in the household 6 years of age and older] have difficulty using the kitchen? Consider such activities as reaching and opening kitchen cabinets or the refrigerator, turning the stove on and off, reaching and using kitchen counters or the sink.

    1. ☐ Yes
    2. ☐ No
    ☐ DK
    ☐ RF

Revision 1 Q70: Round 2 and Final Wording

Q70.   (Without assistance from another person,) [Do you/does anyone in the household 6 years of age and older] currently have difficulty using the kitchen because of a condition other than a temporary injury? Consider such activities as reaching and opening kitchen cabinets or the refrigerator, turning the stove on and off, reaching and using kitchen counters or the sink.

1. ☐ Yes
2. ☐ No
☐ DK
☐ RF

Q70 Findings:

The original wording of this question was asked of all nineteen respondents in Round 1. Of these, nine answered "Yes" and ten answered "No." Respondents appeared to disagree on the intent of this question – some answered "Yes" based on someone being too short to reach things without using a stepladder or something to help them, while others answered "No" based on this since they did not consider height to be relevant and understood the question to be strictly about disability. One respondent first answered "No" but changed to "Yes" based on changing their interpretation.

- R1_02: The respondent answered "Yes" in reference to his youngest daughter who was six years old and too short to reach the sink on her own. She needed a plastic step to "make dishes" using the sink which was her hobby.
- R1_09: "No. As long as there's stools available. It wouldn't be because of a disability. It would be because of a height thing."
- R1_10: "Sometimes my nephew might need a chair to get to the end of the cabinets, above the refrigerator." The respondent answered "Yes" to the question.
- R1_13: The respondent first answered "No" but changed to "Yes." She needed a chair to reach high places, but did not consider this a disability.

We discussed whether respondents should be including this specific difficulty in their answer or not. The consensus from the sponsor was that difficulty reaching things is sufficient to answer "Yes" regardless of whether a person is simply below average height or whether it stems from a more serious condition. For the second round we made the global change of adding "currently" for reference period, making the opening text "Without assistance from another person" optional to read to reduce cognitive burden and repetition, and added "because of a condition other than a temporary injury" to the end of the first sentence. Although the "temporary injury" text was made optional to read for other questions, it was kept as mandatory to read for this question, since it may help respondents decide whether or not to include the "height" issue mentioned in their answer.

The revised wording of this question was asked of all ten respondents in Round 2. Of these, four answered "Yes" and six answered "No." Of the four who answered "Yes," two answered based on things that are commonly thought of as long-term conditions (one was blind, and one had vertigo), while the other two answered based on difficulty reaching things. We discussed the "height" issue again after this round, and the sponsor again felt that difficulty reaching things was sufficient to answer "Yes." No further changes were made to the question.

Based on the probe for other kitchen activities, most respondents thought the examples in the question thoroughly covered those for which people might have difficulty. Three respondents mentioned cooking or cutting up food as additional examples. However, we would not propose adding these to the question since people may have difficulty with these for reasons besides mobility issues (such as limited cooking experience). Others mentioned difficulty reaching things as additional examples, but this is already included in the question.

4.1.4.6   Difficulty Using Bathroom

Original Wording Q71: Round 1
Q71. Without assistance from another person, [do you/does anyone in the household 6 years of age and older] have difficulty using the bathroom? Consider such activities as reaching and using the sink, turning sink or tub or shower faucets on or off, getting into or out of the bathtub or shower.
1. ☐ Yes
2. ☐ No
☐ DK
☐ RF
Revision 1 Q71: Round 2 and Final Wording
Q71. (Without assistance from another person,) [Do you/does anyone in the household 6 years of age and older] currently have difficulty using the bathroom (because of a condition other than a temporary injury)? Consider such activities as reaching and using the sink, turning sink or tub or shower faucets on or off, getting into or out of the bathtub or shower.
1. ☐ Yes
2. ☐ No
☐ DK
☐ RF

Q71 Findings:
The original wording of this question was asked of all nineteen respondents in Round 1. Of these, four answered "Yes" and fifteen answered "No." We identified potential issues with the question from two respondents who answered "No."

- R1_03: The respondent answered "No" based on her current health, but mentioned a past time when she had trouble using the bathroom due to rheumatoid arthritis and could not get in or out of her bathtub.
- R1_12: The respondent answered "No" but indicated that they keep a chair in the shower to sit if needed since they have difficulty standing for extended periods of time. They may have chosen "No" since they can still get into and out of the shower and turn the faucets without difficulty, so they can still "use" things in the bathroom on their own without a problem.

For the second round we made the global change of adding "currently" for reference period, making the opening text "Without assistance from another person" optional to read to reduce

cognitive burden and repetition, and adding optional text "because of a condition other than a temporary injury" to the end of the first sentence.

The revised wording of this question was asked of all ten respondents in Round 2. Of these, two answered "Yes" and eight answered "No." No further issues were found with the question.

Based on the probe for other bathroom activities, most respondents thought the examples in the question thoroughly covered those for which people might have difficulty. Two respondents mentioned using the toilet as an additional example. However, we would not propose adding this to the question since respondents indicated they were considering this anyway in their responses to the question, and the question is long in examples already.

4.1.4.7 Difficulty Using Bedroom

Original Wording Q72: Round 1
Q72. **Without assistance from another person, [do you/does anyone in the household 6 years of age and older] have difficulty using a bedroom? Consider such activities as getting dressed, getting in or out of bed.**
1. ☐ Yes
2. ☐ No
☐ DK
☐ RF

Revision 1 Q72: Round 2
Q72. **(Without assistance from another person,) [Do you/does anyone in the household 6 years of age and older] currently have difficulty using a bedroom (because of a condition other than a temporary injury)? Consider such activities as reaching and opening closets or windows, getting dressed, or getting in or out of bed.**
1. ☐ Yes
2. ☐ No
☐ DK
☐ RF

Revision 2 Q72: Final Wording
Q72. **(Without assistance from another person,) [Do you/does anyone in the household 6 years of age and older] currently have difficulty using a bedroom because of a condition other than a temporary injury? Consider such activities as reaching and opening closets or windows, getting dressed, or getting in or out of bed.**
1. ☐ Yes
2. ☐ No
☐ DK
☐ RF

Q72 Findings:

The original wording of this question was asked of all nineteen respondents in Round 1. Of these, four answered "Yes" and fifteen answered "No." Those who answered "Yes" mentioned difficulty for someone getting dressed, or getting in and out of bed.

No issues were found with this question, but for the following round we added "currently" to clarify the reference period, and made some text strings optional as in the other questions about difficulty using rooms. Also based on probes, most respondents thought the examples in the question thoroughly covered those for which people might have difficulty using a bedroom. Two respondents mentioned opening windows as an additional example, and one mentioned accessing

closets. Based on this, we proposed adding the text "reaching and opening closets or windows" to the end of the question, to add to the examples of activities, and because this question was shorter than the two before it. The sponsor agreed with this change, and also added the word "or" to the last sentence before the last activity to make this a complete sentence.

The first revised wording of this question was asked of all ten respondents in Round 2. Of these, one answered "Yes" and nine answered "No." Potential issues with the question were found based on two respondents.

- R2_06: The respondent answered "Yes" based on difficulty reaching high closet shelves in her bedroom and needing a ladder; she was clear earlier in the interview that she does not have "anything that precludes mobility or anything."
- R2_08: The respondent answered "No" and explained that she completely avoids using or getting anything from high closet shelves (but presumably this would be difficult for her if she had to do it).

After this round we discussed the "height" issue as we did for Q70. The sponsor decided that difficulty reaching things was sufficient to answer "Yes" to the question so no change was needed. However, for the final wording the text "because of a condition other than a temporary injury" was made bold for the interviewer to read aloud, as it was for Q70, rather than optional as it was for other questions.

Based on probes, respondents understood the phrase "without assistance from another person" to mean ability to do something independently without help. One respondent asked about service animals aloud, since the questions only address assistance from "another person." This was discussed with the sponsor; the consensus was that assistance from service animals would be out of scope, so no other change was needed.

4.1.4.8   Home Support for Accessibility Needs

Original Wording Q73: Round 1

Q73. On a scale of 1 to 5 (where 1=Not at all, 5=Very well):
   How well do you think your current home layout and features support the accessibility needs of [you/anyone in your household]?

   _____
   ☐ DK
   ☐ Ref

Revision 1 Q73: Round 2 and Final Wording

Q73. On a scale of 1 to 5 (where 1=Not at all, 5=Very well):
How well do you think your current home layout and features support ~~the accessibility needs of~~ [~~you~~ your accessibility needs/the accessibility needs of anyone in your household]?

   _____
   ☐ DK
   ☐ RF

Q73 Findings:

The original wording for this question was asked of nine respondents in Round 1. Eight respondents picked a value between 2 and 5; the other chose "5" based on their condition right now, but said this would be "1" if their condition relapsed.

- R1_07: "Right now, I would say 5. But I'm gonna put a little asterisk because I know my physical disability can fluctuate, depending if I have a relapse. I don't know what that level of relapse could be, and when it will come. So in an extreme relapse, and I am reduced to using a walker or wheelchair, which is quite a possibility, then it will be down to a 1. Just because all the bedrooms are on the top floor, separate from the main floor, and there's stairs required."

For the second round the sponsor wished to change the fill for the question, which was awkwardly phrased to read "the accessibility needs of you" if a respondent lived alone. The fill was adjusted in Round 2 to read "your accessibility needs" in this case. The revised wording for this question was asked of eight respondents in Round 2. All respondents picked a value between 2 and 5.

Based on probes respondents understood "accessibility needs" to mean the home accommodating people to get around safely and comfortably, with minimal difficulty and without assistance.

4.1.4.9   Bedroom on Home Entry Level

Original Wording Q74: Round 1-2 and Final Wording (No Changes Made)
Q74. Does [your/the] home currently have a bedroom on the entry level, that is accessible without going up or down steps or stairs? 1. ☐ Yes 2. ☐ No ☐ DK ☐ RF

Q74 Findings:

Between both rounds of testing, this question was asked of fifteen respondents. Of these respondents, eight answered "Yes" and seven answered "No."

Based on the probe, most respondents understood "entry level" to mean the level on which people enter their home, and thought this was an adequate phrase. One respondent (R1_05) was inconsistent in whether "entry level" was restricted to their main entrance, or whether this could also include a basement entrance that was accessible from outside their home.

4.1.4.10   Adding Bedroom to Home Entry Level in Next Two Years

Original Wording Q75: Round 1-2 and Final Wording (No Changes Made)
Q75. Do you plan to add this feature to your home in the next 2 years? 1. ☐ Yes 2. ☐ No ☐ DK ☐ RF

Q75 Findings:

Between both rounds of testing, this question was asked of four respondents. Of these, all answered "No." There were no issues with this question.

Original Wording Q76: Round 1-2 and Final Wording (No Changes Made)

Q76. Does [your/the] home currently have a full bathroom on the entry level, that is accessible without going up or down steps or stairs?
    1. ☐ Yes
    2. ☐ No
    ☐ DK
    ☐ RF

Q76 Findings:

Between both rounds of testing, this question was asked of fourteen respondents. Of these respondents, six answered "Yes" and eight answered "No." Aside from one respondent (R1_05) who was inconsistent about their meaning of "entry level" (mentioned for Q74), there were no issues with this question.

4.1.4.12   Adding Full Bathroom to Home Entry Level in Next Two Years

Original Wording Q77: Round 1-2 and Final Wording (No Changes Made)

Q77. Do you plan to add this feature to your home in the next 2 years?
        1. ☐ Yes
        2. ☐ No
        ☐ DK
        ☐ RF

Q77 Findings:

Between both rounds of testing, this question was asked of five respondents. Of these, one answered "Yes" and four answered "No." There were no issues with this question.

4.1.4.13   Other Home Accessibility Improvements in Next Two Years

Original Wording Q78: Round 1-2 and Final Wording (No Changes Made)

Q78. In the next 2 years, do you plan to do any home improvement projects to make your home more accessible for people with physical limitations, such as people using a wheelchair or a walker?
    1. ☐ Yes
    2. ☐ No
    ☐ DK
    ☐ RF

Q78 Findings:

Between both rounds of testing, this question was asked of seventeen respondents. Of these, four answered "Yes," twelve answered "No," and one answered "Don't Know." All respondents understood the question but some had difficulty selecting an option because they were uncertain whether or not they might make certain home improvements in the next two years:

- R1_05: "Probably not, but maybe. Depending on what mood my mother-in-law's in. I would probably say no, because I think she values her independence and we'll probably end up putting her in a nursing home when she gets to that point." The respondent settled on "No" for their answer.

- R1_07: "There is nothing planned.   There is always the cognizant recognition that something might need to be done, based on if I have relapse. I obviously don't plan on having a relapse, so nothing's planned." The respondent chose "No" based on not currently having a "plan" for improvements.
- R1_10: "That I couldn't say." The respondent chose "Don't Know" for their answer.
- R2_02: "That's a hard one … Next two years, huh?" The respondent chose "Yes" since she and her husband talked about making home improvements but had not made formal plans yet.

Of the four respondents who answered "Yes," their plans included adding ramps, a shower to a bathroom, a bedroom to the first floor, changing door frames, and moving a bathroom sink.

Based on probes, respondents were clear about the meaning of "physical limitations."   They provided similar descriptions for this as those respondents asked about the same phrase in Q52 (see Section 4.1.2).

4.2   Modules Tested in Round 1 Only

Each of the questions presented here was tested in the first round only.   After this round was completed, HUD decided to replace these with question wordings that had been administered in the 2017 AHS.

4.2.1   Inventory Module

This module was included in both rounds of testing. However, the three questions for testing were only administered in the first round. For the second round, two of the questions were replaced with older or revised wordings and were administered for context and skip purposes only. The third question was removed entirely.

4.2.1.1   Number of Stories in Entire Building

> **Original Wording Q17: Round 1**
> **Q17.   How many stories are in this ENTIRE building?**
> _____
> **Proposed Revision 1 Q17 (not tested)**
> **Q17.   How many ~~stories~~ floors are there in this ENTIRE building?**
> _____
> **HUD Decision Q17: Final Wording**
> HUD decided to keep the wording previously used in the 2017 AHS:
>
> **How many stories are in [that/this] multifamily building?**
> ◆ If split level, count greatest number of stories on top of each other
> ◆ Enter a whole number
> ◆ Enter 21 for any number 21 or greater.

Q17 Findings:
Nine respondents were administered this question.   Of these, eight respondents provided a numerical answer and one respondent answered "Don't Know." A majority of respondents were clear when answering this question but a few issues arose for others:

- R1_06: The respondent answered "Don't Know" because he did not understand the term "stories" at all; English was his second language.
- R1_13: The respondent realized during probes that she gave an incorrect answer, because she initially forgot to count the lobby level of her building.
- R1_10: The respondent gave a numerical answer but was unsure whether her answer was correct because some units on the top level of her condo complex had more than one floor, but others on that level had just one floor. She was unclear whether the "correct" answer should count the top level as one or two stories.

During probes, some respondents said they would rephrase this question to ask about "floors" or "levels," rather than "stories." We proposed having "floors" in the revised question for these reasons, and for consistency with the question that follows it. However, HUD decided to keep the wording previously used in the 2017 AHS, which asks about the number of stories in a "multifamily" building. This wording was used in the Round 2 protocol for context and skip pattern purposes, but was not treated as a test question and no probes were administered for this.

4.2.1.2   Number of Floors in Unit

Original Wording Q18: Round 1

Q18. How many floors are in [this/that] [house / apartment / manufactured/mobile home / unit] ["including the basement and any finished attics" (if Q15. CELAR1Q="With a basement")/**"including finished attics"** (if home with no basement)]**?"**

-If split level, count greatest number of floors on top of each other.

_____

Proposed Revision 1 Q18 (not tested)

Q18. ["Thinking ONLY about your apartment/unit," (if home is a bldg. with 2 or more apartments)] **How many floors are in [this/that] [house / apartment / manufactured/mobile home / unit] ["including the basement and any finished attics"** (if Q15. CELAR1Q="With a basement")/**"including finished attics"** (if house with no basement)]**?"**

-If split level, count greatest number of floors on top of each other.

_____

HUD Response Q18: Final Wording

HUD decided to keep the wording previously used in the 2017 AHS:

How many floors are in [this/that] unit [including finished attics/including the basement and any finished attics]?

◆ If split level, count greatest number of floors on top of each other
◆ Enter a whole number
◆ Enter 21 for any number 21 or greater.

Q18 Findings:

All nineteen respondents were asked this question in Round 1. More respondents had difficulty with this question than any other, particularly those in multi-unit buildings.

- Three respondents thought the question asked about the entire building, not just their own unit, and reported incorrectly. One of them suggested using the word "unit" instead of "apartment."
- Another respondent asked for clarification as to whether the intent was to count floors in her unit or the building, and another started thinking about the building but realized that question was focused on just her unit.

- One respondent initially answered by repeating the number of stories in her building; when the question was repeated, she appeared not to understand the question at all, as she responded by describing the types and number of rooms in her apartment.

Most respondents interpreted "floors" as intended. Several respondents qualified "floors" as being separated by stairs, or used terms like "upstairs," "second floor," etc. The non-native-English speaker did not recognize the word "floors" until the interviewer to spelled it for him (at the respondent's request). When asked to paraphrase the question or suggest an alternative term for "floors," most respondents used "levels," and several thought "levels" would be clearer than "floors."

The instruction to include "the basement and any finished attics" caused confusion for some.

- One respondent who did not count the basement said "floors" means "something you stand on."
- Another respondent asked whether to count the basement, and noted that when a house is listed for sale, the basement is not counted in the number of floors.
- One respondent deliberated because she did not know the definition of a finished attic. Ultimately, she decided she would not include her attic because it was not being used for any purpose.
- Another respondent considered usage, but had no problem not counting the attic, saying it is not a space large enough to be used.

For a revised question we proposed adding text at the beginning to remind respondents to be "thinking ONLY about your apartment/unit" (if they live in a multi-unit building). However, HUD decided to keep the wording previously used in the 2017 AHS.

HUD questioned whether changing the fill "[this/that]" to "[this/that/your]" would help to further emphasize that respondents should consider their unit only, and not the entire building if they live in a multifamily building. HUD also questioned whether it would help to replace "unit" with a fill for the home type previously reported (e.g. "house," "apartment," or something else). For Round 2 we inserted in a revised wording with these changes, but there are no plans to implement these changes for the 2019 AHS.

4.2.1.3   Confirm Number of Stories and Floors

Original Wording Q19: Round 1 and Final Recommendation
Q19. To confirm, there are [VALUE from Q18. FLOORSQ] floors in your unit and [VALUE from Q17. STORIES] in the whole building?
1. ☐ Yes
2. ☐ No
☐ DK
☐ RF
HUD Response Q19: Final Wording
HUD decided for the final survey to replace this with an error screen that only FRs see (and do not read to respondents):

You have just recorded ^F_FLOORS floors in this unit and ^F_STORIES stories for the entire building. Is this correct?
 -If yes, suppress and continue.
 -If no, go back to STORIES or FLOORSQ and correct

Q19 Findings:

All nine respondents who were administered this question answered "Yes." No issues arose with this question. We proposed staying with this same wording for the final survey. However, HUD decided to replace this screen with an error screen that would only be visible to FRs for the final survey, and not read aloud to respondents. This question was removed entirely from testing in Round 2.

4.2.2   Equipment Module

This module included three test questions in Round 1. However, it was removed from the protocol entirely in Round 2.

4.2.2.1   Fuel or Power Used Most for Cooking

Original Wording Q30: Round 1 and Final Recommendation

Q30. What type of fuel or power is used MOST for cooking--electricity, gas or something else?
If "something else," ask "What is used?"
1. ☐ Electricity
2. ☐ Gas, LP Gas (liquid propane (LP) same as bottled gas)
3. ☐ Other
4. ☐ No fuel used
☐ DK
☐ RF

HUD Response Q30: Final Wording
HUD decided to keep the wording previously used in the 2017 AHS:

What fuel is used MOST for cooking--electricity, gas or something else?
◆If "something else," ask "What is used?"
1. ☐ Electricity
2. ☐ Gas, LP Gas (liquid propane (LP) same as bottled gas)
3. ☐ Other
4. ☐ No fuel used
☐ DK
☐ RF

Q30 Findings:

All nineteen respondents chose either electricity or gas. A few respondents indicated that they were uncertain in their answer, but they understood the question; they just lacked complete knowledge about their cooking equipment.

We recommended using this question wording going forward. However, HUD decided to keep the wording previously used in the 2017 AHS, which asks "What fuel" rather than "What type of fuel or power."

4.2.2.2 *Fuel or Power Used Most to Heat Water*

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Original Wording Q32: Round 1 and Final Recommendation

Q32. What type of fuel or power is used MOST to heat the water?

1. ☐ Electricity
2. ☐ Gas, LP Gas (liquid propane (LP) same as bottled gas)
3. ☐ Fuel Oil
4. ☐ Solar energy
5. ☐ Other – Specify: _____
☐ DK
☐ RF

HUD Response Q32: Final Wording

HUD decided to keep the wording previously used in the 2017 AHS:

What type of fuel is used MOST to heat the water?

1. ☐ Electricity
2. ☐ Gas, LP Gas (liquid propane (LP) same as bottled gas)
3. ☐ Fuel Oil
4. ☐ Solar energy
5. ☐ Other – Specify: _____
☐ DK
☐ RF

</div>

Q32 Findings:

Of the nineteen respondents administered this question, several respondents had some difficulty answering. Five respondents said "Don't Know"; the remainder chose either electricity or gas. Those who said "Don't Know" or indicated uncertainty understood the question, but lacked complete knowledge about their water-heating equipment.

- R1_02: "I have no idea. It's gas or electric. I don't know anything about that. If I had to guess, I'd check off gas but I don't know."
- R1_08: "If I were asked this right now, I would say gas with a question mark. I actually don't know. I know the HVAC is gas, but I would assume the water heater was gas also. But I don't know for sure."

One other respondent asked aloud whether the question referred to a hot water heater or to heating water on the stove, and decided on the latter (incorrect) interpretation. This error may have been due to this question coming soon after one about cooking. Some others had to spend time thinking to come up with an answer. One respondent who had not been down in her basement in years because of mobility issues finally recalled that she pays a Washington Gas bill and concluded she has gas hot water.

We recommended using this question wording going forward. However, HUD decided to keep the wording previously used in the 2017 AHS, which asks "What type of fuel" rather than "What type of fuel or power."

4.2.2.3   *Fuel or Power Used Most to Heat Home*

Original Wording Q33: Round 1 and Final Recommendation

Q33. What type of fuel or power is used MOST for heating your [house / apartment / manufactured/mobile home / unit]?

1. ☐ Electricity
2. ☐ Gas, LP Gas (liquid propane (LP) same as bottled gas)
3. ☐ Fuel oil
4. ☐ Kerosene or other liquid fuel
5. ☐ Coal or coke
6. ☐ Wood
7. ☐ Solar energy
8. ☐ Other; specify _____
9. ☐ None
☐ DK
☐ RF

HUD Response Q33: Final Wording

HUD decided to keep the wording previously used in the 2017 AHS:

What fuel is used MOST for heating [you/the/that] ^HTYPEFILL?

1. ☐ Electricity
2. ☐ Gas, LP Gas (liquid propane (LP) same as bottled gas)
3. ☐ Fuel oil
4. ☐ Kerosene or other liquid fuel
5. ☐ Coal or coke
6. ☐ Wood
7. ☐ Solar energy
8. ☐ Other; specify _____
9. ☐ None
☐ DK
☐ RF

Q33 Findings:

Of the nineteen respondents administered this question, most respondents were able to answer this question without problems. They indicated they were knowledgeable about their heating systems and/or their heating bills.   One respondent indicated the home was heated by a mix of electricity and gas, but said he would choose gas. A smaller number of respondents experienced problems similar to those found with Question 32, owing to a lack of knowledge about their heating equipment. For example,
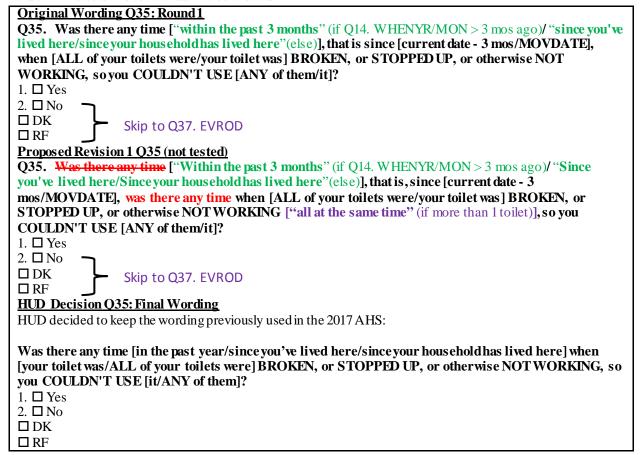
- R1_02: "I'm assuming gas? I think the answer to almost all of these is gas but I'm not certain. That might just be I know the inner workings of the house less than [spouse] does."
- R1_05: The respondent initially selected "oil" but then said he was not sure whether it was kerosene or propane. When probed how he came up with his answer, he said he sees the propane truck in his neighborhood, and also when the fuel has run out, he has had to go out and buy kerosene.

We recommended using this question wording going forward. However, HUD decided to keep the wording previously used in the 2017 AHS, which asks "What type of fuel" rather than "What type of fuel or power."

4.2.3 Breakdown Module

This module included six test questions in Round 1. However, it was removed from the protocol entirely in Round 2.

4.2.3.1 Toilets Broken in Past Three Months

Original Wording Q35: Round 1

Q35. Was there any time ["**within the past 3 months**" (if Q14. WHENYR/MON > 3 mos ago)/ "**since you've lived here/since your household has lived here**"(else)]**, that is since [current date - 3 mos/MOVDATE], when [ALL of your toilets were/your toilet was] BROKEN, or STOPPED UP, or otherwise NOT WORKING, so you COULDN'T USE [ANY of them/it]?**

1. ☐ Yes
2. ☐ No
☐ DK ⎫
☐ RF ⎭ — Skip to Q37. EVROD

Proposed Revision 1 Q35 (not tested)

Q35. ~~Was there any time~~ ["**Within the past 3 months**" (if Q14. WHENYR/MON > 3 mos ago)/ "**Since you've lived here/Since your household has lived here**"(else)]**, that is, since [current date - 3 mos/MOVDATE], was there any time when [ALL of your toilets were/your toilet was] BROKEN, or STOPPED UP, or otherwise NOT WORKING ["all at the same time"** (if more than 1 toilet)]**, so you COULDN'T USE [ANY of them/it]?**

1. ☐ Yes
2. ☐ No
☐ DK ⎫
☐ RF ⎭ — Skip to Q37. EVROD

HUD Decision Q35: Final Wording

HUD decided to keep the wording previously used in the 2017 AHS:

Was there any time [in the past year/since you've lived here/since your household has lived here] when [your toilet was/ALL of your toilets were] BROKEN, or STOPPED UP, or otherwise NOT WORKING, so you COULDN'T USE [it/ANY of them]?

1. ☐ Yes
2. ☐ No
☐ DK
☐ RF

Q35 Findings:

Of the nineteen respondents administered this question in Round 1, four answered "Yes" and fifteen answered "No." However, two of the four answering "Yes" did so erroneously. In both these situations, each respondent had more than one toilet in the household but only one toilet was not working. Another respondent originally answered "Yes." However, during probing, the respondent mentioned one of the toilets was leaking and the valve had to be replaced. After the interviewer clarified that the question was about all non-working toilets, the respondent changed the answer to "No."

For all other respondents who reported "No," this was easy to answer. Based on our findings, we proposed reordering some text so that the reference period would be read first, and inserting text emphasizing whether toilets were not working "all at the same time," if the home had more than one toilet based on prior questions. However, HUD decided to keep the wording previously used in the 2017 AHS, which asks whether toilets were broken in the "past year" rather than "past 3 months."

Original Wording Q36: Round 1 and Final Recommendation

Q36. How many times since [current date – 3 mos /MOVDATE] [was/were] the [toilet/toilets] not working for SIX HOURS or MORE?

_____

☐ DK
☐ RF

HUD Decision Q36: Final Wording

HUD decided to keep the wording previously used in the 2017 AHS:

And how many of those times ^were_was not working for SIX HOURS or MORE?
  ◆Enter 8 for 8 or more

_____
☐ DK
☐ RF

Q36 Findings:

Of the four respondents who were administered this question, two respondents answered "one" and two answered "none." Of the two who answered "one," one respondent said the problem only lasted a day. This respondent had one toilet affected, not all toilets affected. The other respondent who reported '1' said her grandchildren used too much toilet paper and it stopped the toilet.
One issue did come up as a respondent said that it happened for "2 hours" when the interviewer was reading the question. However, once the question was fully read, she realized her instance was out of scope and correctly said it happened zero times for six hours or more.

We recommended using this question wording going forward. However, HUD decided to keep the wording previously used in the 2017 AHS, which was preceded by two questions asking (i) whether the time(s) of the broken toilet(s) was/were within the past three months, and (ii) how many times this occurred in the past three months. The 2019 AHS will administer these preceding questions as well.

4.2.3.3   Signs of Mice or Rats in Last Twelve Months

Original Wording Q37: Round 1 and Final Recommendation

Q37. ["**In the last 12 months**" (if Q14. WHENYR/MON > 1 yr ago)/ "**Since you've lived here/Since your household has lived here**" (else)]**, that is since [current date 2017 /MOVDATE], have you ever seen signs of mice or rats INSIDE your [house/apartment/manufactured/mobile home/living quarters] [building/" "]?**
1. ☐ Yes
2. ☐ No ┐
☐ DK ├─ Skip to Q39. EROACH
☐ RF ┘

HUD Decision Q37: Final Wording

HUD decided to keep the wording previously used in the 2017 AHS:

Have you ever seen signs of mice or rats INSIDE your ^HTYPEFILL ^building?
(Exclude rats/mice kept as pets, snake food or otherwise deliberately brought inside).
1. ☐ Yes
2. ☐ No
☐ DK
☐ RF

Q37 Findings:

Of the nineteen respondents administered this question in Round 1, six answered "Yes" and thirteen answered "No." Those answering "Yes" had no issue answering this question. Two respondents mentioned seeing the mice alive. One respondent mentioned that he had mouse traps and was able to catch them. One respondent mentioned that an inspector had found two mice. Only two respondents had trouble answering this question but both respondents ultimately said 'No' as their final answer; both mentioned potential signs of mice or rats, but had not personally "seen" these. One of these respondents mentioned an exterminator who came over to her house and told her there were mouse burrows in the attic. The other respondent mentioned she had not seen any signs but her cats wanted to go down to the basement, which made the respondent suspect there were mice down there.

Based on probes, respondents generally were able to determine what constituted "signs of mice or rats." Signs like seeing the actual mice or mouse droppings, or hearing specific sounds, were the most common answers.

- **R1_03:** "Seeing some sort of evidence of chewing, some sort of evidence droppings, sounds in the walls, things like that."
- R1_04: "Visibly seeing a mouse, mouse droppings, gnawing at food or something."
- R1_05: "Either you'd see them or you'd see their droppings. Or you'd see where they'd been foraging for food. Damage to food packaging, things like that."

We recommended using this question wording going forward. However, HUD decided to keep the wording previously used in the 2017 AHS, which asked whether signs of mice or rats were seen "ever," rather than "in the last 12 months."

4.2.3.4   Frequency of Signs of Mice or Rats in Last Twelve Months

---

Original Wording Q38: Round 1
Q38. How often have you seen any signs of mice or rats INSIDE your home since [current date 2017 /MOVDATE]?
Would you say it was daily, weekly, monthly, or a few times?
1. ☐ Daily
2. ☐ Weekly
3. ☐ Monthly
4. ☐ A few times
☐ DK
☐ RF
Proposed Revision 1 Q38 (not tested)
Q38. How often have you seen any signs of mice or rats INSIDE your ~~home~~
[house/apartment/manufactured/ mobile home/living quarters] [building/" "] since [current date 2017 /MOVDATE]?
Would you say it was daily, weekly, monthly, or once to a few times?
1. ☐ Daily
2. ☐ Weekly
3. ☐ Monthly
4. ☐ Once to a few times
☐ DK
☐ RF
HUD Decision Q38: Final Wording
HUD decided to keep the wording previously used in the 2017 AHS:

> **How often have you seen any evidence of mice or rats in your home since [current date last year /MOVDATE]?**
> **Would you say it was daily, weekly, monthly, or a few times?**
> 1. ☐ Daily
> 2. ☐ Weekly
> 3. ☐ Monthly
> 4. ☐ A few times
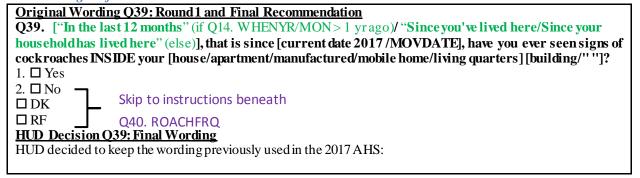> ☐ DK
> ☐ RF

Q38 Findings:

The six respondents who were administered this question in Round 1 generally understood what the question was asking. One respondent answered "monthly" as he said he buys mouse traps every month since he said that's when he sees proof of mice. A second respondent who reported "monthly" mentioned seeing signs every 3 or 4 months. A third respondent initially said "every other day" during the question reading but then said "daily" after hearing the rest of the question. A fourth respondent mentioned that she saw signs of mice about twice a week from June through September (the interview was in April) but it was not happening at the time of the interview. After she was probed for what her answer would be, she said "a few times."

One respondent had difficulty answering, as it only had happened "one time." The respondent did not provide a codeable answer, as she mentioned the response categories should be changed to include this.

Respondents were asked about phrases that could be used other than "signs of mice or rats." One respondent mentioned the phrase "proof of mice or rats." A second respondent mentioned the word "evidence." A third respondent mentioned the phrases "mouse or rat droppings" and "have you actually seen any in front of you."

Following Round 1, we proposed changing the wording of the category "A few times" to "Once to a few times" to accommodate those cases where a person may have only seen signs once. However, HUD decided to keep the wording previously used in the 2017 AHS, which asked about signs "in your home" rather than "INSIDE your home" and retained the final option as "a few times." The 2019 AHS will also administer a prior question that was used in 2017, asking whether signs of mice or rats were seen in the last 12 months (or since the respondent lived in the home, if less than 12 months).

4.2.3.5   Signs of Cockroaches in Last Twelve Months

> **Original Wording Q39: Round 1 and Final Recommendation**
> **Q39.** ["**In the last 12 months**" (if Q14. WHENYR/MON > 1 yr ago)/ "**Since you've lived here/Since your household has lived here**" (else)], **that is since [current date 2017 /MOVDATE], have you ever seen signs of cockroaches INSIDE your [house/apartment/manufactured/mobile home/living quarters] [building/" "]?**
> 1. ☐ Yes
> 2. ☐ No ─┐
> ☐ DK   ├─ Skip to instructions beneath
> ☐ RF ─┘   Q40. ROACHFRQ
> **HUD Decision Q39: Final Wording**
> HUD decided to keep the wording previously used in the 2017 AHS:

> **Have you ever seen signs of live or dead cockroaches or cockroach feces INSIDE your ^HTYPEFILL ^building?**
> 1. ☐ Yes
> 2. ☐ No
> ☐ DK
> ☐ RF

Q39 Findings:

Of the nineteen respondents administered this question in Round 1, six answered "Yes" and thirteen answered "No." All but one respondent understood the question and were able to answer without any difficulty. The one respondent who struggled answering this question mentioned that the cockroaches were not in her specific apartment unit but they were in her apartment building. She eventually answered "No" for this question, even though she should have answered "Yes" (If the respondent lives in the apartment, the interviewer is supposed to read the fill in the question as "apartment building").

Respondents were probed on what "signs of cockroaches" meant. Almost all of the respondents mentioned seeing the bug whether it was alive or not. A few respondents also mentioned that they were not sure of any other signs other than seeing the actual cockroach.

- R1_08: "If I've seen them visually, I don't know what cockroach droppings look like. But we have had cockroaches before, and I know because I've seen the, scurrying."
- R1_05: "Don't know what their droppings would look like, I'd actually have to see them."

A few respondents did mention seeing eggs as a signs of cockroaches:

- R1_10: "If not themselves, maybe eggs or something."

We recommended using this question wording going forward. However, HUD decided to keep the wording previously used in the 2017 AHS, which asked explicitly about "signs of live or dead cockroaches or cockroach feces" (rather than the more broad term "signs of cockroaches"), and whether these were seen "ever" (rather than "in the last 12 months").

4.2.3.6 Frequency of Signs of Cockroaches in Last Twelve Months

> **Original Wording Q40: Round 1**
> **Q40. How often have you seen any signs of cockroaches INSIDE your home since [current date 2017 /MOVDATE]?**
> **Would you say it was daily, weekly, monthly, or a few times?**
> 1. ☐ Daily
> 2. ☐ Weekly
> 3. ☐ Monthly
> 4. ☐ A few times
> ☐ DK
> ☐ RF
> **Proposed Revision 1 Q40 (not tested)**
> **Q40. How often have you seen any signs of cockroaches INSIDE your [house/apartment/manufactured/ mobile home/living quarters] [building/" "] since [current date 2017 /MOVDATE]?**
> **Would you say it was daily, weekly, monthly, or once to a few times?**
> 1. ☐ Daily
> 2. ☐ Weekly
> 3. ☐ Monthly
> 4. ☐ Once to a few times
> ☐ DK
> ☐ RF

Q40 Findings:

The six respondents who were administered this question in Round 1 found this easy to answer. One respondent answered "a few times" because there was no option for a lower frequency than that, and signs of cockroaches were only seen once. Respondents were probed about whether there were other phrases that could be used other than "signs of cockroaches." One respondent using the word "insects" since that covers a wider range. However, this is not in scope. The other respondents thought "signs of cockroaches" was the best wording.

Following Round 1, we proposed changing wording of the category "A few times" to "Once to a few times" to accommodate those cases where a person may have only seen signs once. However, HUD decided to keep the wording previously used in the 2017 AHS, which retained the final option as "a few times." The 2019 AHS will also administer a prior question that was used in 2017, asking whether signs cockroaches were seen in the last 12 months (or since the respondent lived in the home, if less than 12 months).

5   CONCLUSIONS

For this research we first tested a streamlined questionnaire containing 78 questions from eight survey modules. Then, in a second round, we tested a revised questionnaire containing 64 questions from six survey modules. The new and revised questions in most modules – Front, Inventory, Equipment, Breakdown, Home Improvements, and Post-Secondary Education - generally performed well. Some of these were improved for the second round based on findings from the first round. Of those questions that required revisions, most were minor modifications. Questions from three modules – Inventory, Equipment, and Breakdown – were not tested after the first round, since HUD decided to continue using question wordings for these that had been administered in the 2017 AHS.

The final module – Home Accessibility – included new questions and was tested in its entirety. Several respondents had difficulty answering one or more questions. One type of difficulty was respondents' uncertainty on a "correct" answer if they or someone else in the household has varying difficulty over time with certain tasks, and/or has a condition that could return at a future time and affect these. These questions lacked a reference period in the first round, but were modified in the second round to ask about "current" difficulty; this resolved the issue and improved comprehension. Another type of difficulty was respondents disagreeing over whether difficulty

reaching things in one or more rooms was sufficient to count as difficulty "using" these rooms, if it did not stem from a severe disability. This occurred in both rounds of testing; the questions were modified in the second round to address difficulty using rooms "due to a condition other than a temporary injury" but this did not resolve the issue, since respondents still differed over including difficulty reaching things. We discussed this issue with the sponsor since there was no clear solution; it was decided that type of difficulty is sufficient for respondents to include, but the questions should not explicitly address this, leaving respondents free to include this or not.

6   REFERENCES

United States Census Bureau. (2016). *American Housing Survey: About*. Retrieved from
    https://www.census.gov/programs-surveys/ahs/about.html
Virgile, Matt, Jonathan Katz, Jasmine Luck, and Mary C. Davis (2018). "Cognitive Pretesting of 2017 American Housing Survey Modules." Final Report. Center for Survey Measurement, U.S. Census Bureau.
Willis, G.B. (2005). "Cognitive Interviewing: A Tool for Improving Questionnaire Design." Thousand Oaks, CA: Sage.

7 APPENDIX A: AHS RECRUITMENT SCREENER

CBSM Universal Telephone Screener

Hello, I'm _____ from the Census Bureau.
- Thank you for contacting us about participating in one of our studies.
- I just need to get a little bit of background information to start.

- Auto filled: ID Number
- Auto filled: Last Contact Date
- Auto filled: Eligible Date

1. What is your name?
   First name: [   ]
   Last name: [   ]
2. What is your daytime telephone number?
   [Probe for all 3 phone numbers]
   Mobile   ([   ]) [   ] – [   ]
   Home (if not mobile) ([   ]) [   ] – [   ]
   Work (if any)   ([   ]) [   ] – [   ] EXT.[   ]

3. In what city, state, and ZIP code do you currently live?

   City: [   ]   State: Select State   ▾   ZIP Code: [   ]

4. In what year were you born?
   [   ]
5. Are you male or female?
   o Male
   o Female

6. Are you of Hispanic, Latino, or Spanish origin?
   o Yes
   o No
   o Prefer Not to Answer

7. What is your race? Please select one or more. White, Black or African American, American Indian or Alaska Native, Asian, or Native Hawaiian or other Pacific Islander?

   (Allow up to 3 answers)
   [ ] White
   [ ] Black or African American
   [ ] American Indian or Alaska Native
   [ ] Asian
   [ ] Native Hawaiian or other Pacific Islander
   [ ] Other - Specify: [   ]
   [ ] Refused

8. What is the highest grade of school you have completed, or the highest degree you have received?

(do not read categories to respondent)
○ Less than high school
○ Completed high school
○ Some college, no degree
○ Associate's degree (AA/AS)
○ Bachelor's Degree (BA/BS)
○ Post-Bachelor's degree (For example MA, MS, Ph.D, JD, etc.)

9. Are you working for pay full-time, part-time, or are you not working for pay at this time?

o Full-time (ask both follow-up questions)
o Part-time (ask both follow-up questions)
o Not working for pay at this time (skip to next question)

    a.   What is your current job title or job description?
       [   ]

    b.   Are you employed by the Federal Government? *(if federal contractor, mark NO)*

       o Yes
       o No

10. How many people age 18 or older currently live in your household, INCLUDING yourself?
    [   ]

11. How many people younger than 18 currently live in your household?
    [   ]

12. Do you speak a language other than English at home?

o Yes (ask follow-up question)
o No (skip to next question)

    a. What language or languages do you speak at home? Please select one or more.
      [ ] Spanish
      [ ] French
      [ ] Chinese
      [ ] Korean
      [ ] Vietnamese
      [ ] Arabic
      [ ] Russian

[ ] Other - Specify [   ]

13. Do you own a cell phone?

o Yes (ask follow-up questions)
o No (skip to 14)
o Not sure (skip to 14)

    a. Some cell phones are called "smartphones" because of certain features they have. Is your cell phone a smartphone, such as an iPhone, Android, Blackberry or Windows phone, or are you not sure?

       ○ Yes
       ○ No
       ○ Not sure

    b. What type of smartphone do you have?
       o iPhone
       o Android
       o Blackberry
       o Windows phone
       o Not sure

14. Do you own a desktop or laptop computer, or both?

o Desktop computer
o Laptop computer
o Both desktop and laptop computer
o Neither

15. Do you own a tablet computer such as an iPad, Samsung Galaxy Tab, Google Nexus, or Kindle Fire?

o Yes
o No

16. Do you have at least one year of Internet experience?

o Yes (ask follow-up question)
o No (skip to next question)

    a. How often do you use the Internet either on a computer or on a mobile device like a smartphone or tablet? ... Several times a day, about once a day, a few times a week, a few times a month, or a few times a year?

       ○ Several times a day
       ○ About once a day
       ○ A few times a week

○ A few times a month
○ A few times a year
○ Not at all *[do not read to respondent]*

    b. Name two things you do on the Internet besides e-mail.
        [   ]
        [   ]
        <u>Internet Activities</u>
        [ ] Research
        [ ] Social media/communication (Facebook, Twitter, Craigslist)
        [ ] Shopping
        [ ] Banking or paying bills online
        [ ] Music / movies / videos
        [ ] Gaming
        [ ] News
        [ ] Travel (directions/reservations)
        [ ] Employment
        [ ] Other - Specify: [   ]

17. How did you hear about this research opportunity?
   ○ E-mail link
   ○ Census Bureau employee
   ○ Friend or family member (but not a Census Bureau employee)
   ○ Facebook
   ○ Craigslist
   ○ Google advertisement
   ○ Flyer
   ○ Newspaper advertisement
   ○ Other – Specify [   ]

18. Have you participated in any research studies with the U.S. Census Bureau?
   o Yes
   o No

19. Would you be willing to come to our office in Suitland, Maryland, to participate in a research study?
   o Yes
   o No

20. What is the e-mail address we should use when sending directions to our office, should you qualify for a study?
   [   ]

21. Is your household's annual income …

   o Less than $15,000

     o $15,000 to $25,000
     o $25,000 to $50,000
     o $50,000 to $100,000
     o More than $100,000

22. Are you a United States citizen? You do not have to be a U.S. citizen to participate in our studies.
     o Yes
     o No - Cannot come to headquarters

23. Did the ad you are responding to tell you to mention a code? *[If yes]* What was the code?
     [   ]

AHS-SPECIFIC TELEPHONE SCREENER

1. Do you live in a college dormitory, a nursing home, or in any other kind of group housing?
   [If ineligible, thank caller and end call]

○	Yes	-	INELIGIBLE
○			No
○	Don't Know	-	INELIGIBLE
○ Refused - INELIGIBLE			

2. Is your home owned, rented, or occupied without payment of rent?
   [If Owned proceed to Q3; else go to Q5]

○	Owned
○	Rented
○ Occupied without payment of rent	

3. In the past two years, have any home improvement projects been done to your home?
   [If Yes proceed to Q3; if No go to Q5]

     ○ Yes
     ○ No

4. What home improvement projects have been done?
     Project 1: [   ]
     Project 2: [   ]
     Project 3: [   ]

5. What type of home do you live in?

○	House	or	townhouse
○	Apartment	or	condo
○	Manufactured/mobile		home
○ Other residence - specify: [ ]			

6. Do you or does anyone in your household have any physical disabilities or other physical limitations? Do not include a temporary injury.
     ○ Yes

○ No

7. Is anyone in your household aged 16 to 19?
        ○ Yes
        ○ No

8. *[Round 1 only]* Are you or is anyone in your household currently attending college or some other school beyond high school?
        ○ Yes
        ○ No

9. *[Round 2 only]* In March of this year, were you or was anyone in your household attending college or some other school beyond high school?
        ○ Yes
        ○ No

10. Does your home have any toilets that were ever out of order in the past 3 months?
        ○ Yes
        ○ No

11. Has your home ever had any problems with pest control in the past year?
[Read only if respondent is confused by pest control: "Pest control may include mice, rats, ants, or roaches in your home."]

        ○ Yes
        ○ No

8 APPENDIX B: AHS ROUND 1 PROTOCOL

Cognitive Testing of AHS – Round 1 Protocol
Cognitive Interview Protocol Guide

PARTICIPANT ID #: _____   **DATE:**
_____ / _____ / 2018

COGNITIVE INTERVIEWER NAME: _____

START TIME: _____: _____ AM / PM

SECTION I. INTRODUCTION

(COGNITIVE INTERVIEWER: READ/PARAPHRASE)

Hello, I'm [NAME OF COGNITIVE INTERVIEWER]. I work for the Census Bureau. Thanks for agreeing to help me today.

Let me begin by telling you a little more about what we'll be doing today. The United States Census Bureau counts the population in the U.S and also conducts various kinds of surveys.
Today, with your help, we will be testing some new questions that were developed for a national survey called the American Housing Survey. I will first ask you some survey questions and you'll answer the questions just like you would if you were doing it with an interviewer in a regular survey. We are interested in how you understand these questions and how these questions work for you.
Our goal here is to get a better idea how well the new questions work with people such as yourself before we actually use them in the survey. So the purpose of our session today is to collect your thoughts and opinions on these new questions and materials. I just want to remind you that I'm only asking for your thoughts and opinions on these materials. There is no right or wrong answer. We are simply trying to make sure the question wording is clear and easy for most people to understand. Your feedback will be very useful for helping make sure these questions will make sense to other people.
Your participation in this interview and the review of the materials is very important because it will help the Census Bureau with improving these questions.
Do you have any questions before we begin?"

[Wait for questions, then turn page]

(COGNITIVE INTERVIEWER: READ)

SECTION II. INTERVIEW CONSENT

PLACE THE CONSENT FORM IN FRONT OF PARTICIPANT

Before we start, I would like you to read over the document in front of you. This document explains a little bit about this interview and provides information about your rights as a participant. It also asks for your permission to have this session audio recorded.

[IF OBSERVER PRESENT]: **I also want to let you know that this interview is being observed by** [DESCRIBE OBSERVER'S ROLE: e.g., someone who works on the American Housing Survey]. **They are observing the interview because they are also interested in how the questions work for people like you.**

Please ask me any questions you have about this document. Once you have finished reading the document, please sign it.

- PARTICIPANT READS AND SIGNS FORM

B. IF PARTICIPANT PROVIDES CONSENT TO HAVE THE SESSION AUDIO-TAPED: **I will now turn on the audio recorder.**

TEST AUDIO RECORDER AND TURN IT ON AGAIN AFTER TEST

READ: For the upcoming questions, I am interested in your answers, but I am also interested in the process you go through in your mind when you answer the questions. So I'd like you to think aloud as you answer the questions, just tell me everything you are thinking about as you go about answering each question. From time to time, I'll ask you some questions about your answers, or about the questions themselves.

THINK-ALOUD PRACTICE

Let's begin with a practice question. Remember to try to think aloud as you answer.

Practice Question 1. How many windows are there in the house or apartment where you live?
WINDOWS _____

[IF NEEDED:] *Try to visualize the place where you live, and think about how many windows there are in that place. As you count up the windows, tell me what you are seeing and thinking about.*
PROBES:
- How did you come up with that answer?
- Tell me more about that. Why did you say [ANSWER]?
- I noticed that you hesitated. Tell me what you were thinking.

Okay, let's get started. Please answer the questions as you would if an interviewer had come to your home. I will now begin with the first set of questions in the survey.

NOTE TO COGNITIVE INTERVIEWER: START INTERVIEW. NOTE ANY PROBLEMS /COMMENTS /QUESTIONS /PUZZLED LOOKS/EXASPERATED SIGHS RESPONDENT HAS DURING THE INTERVIEW. WHEN NECESSARY, PROBE ON THESE AFTER THE RESPONDENT ANSWERS THE QUESTION.

Front Module
PHINTRO
We would like to collect some additional contact information in case we need to continue the interview later or follow up on missing information.

1. BCKAREA/BCKNUM/BCKEXT
What is the telephone number where you would like to be called?
Phone: (   )
Ext:
☐ DK
☐ RF

2. BCKHO
Is this a mobile or cell, home, office, or other type of number?
-Current Number: ^PHONEFILL   ^ext.
1. ☐ Mobile or Cell Phone
2. ☐ Home
3. ☐ Office
4. ☐ Other – Specify: _____
☐ DK
☐ RF
Probes:
Is this your usual phone type?
What does a "home" phone mean to you in this question?
How about "mobile or cell phone?

3a. EMAIL1
Do you also have an email address that we could use to contact you?
1. ☐ Yes
2. ☐ No
☐ DK   Skip to Q4. TELCELL
☐ RF

3b. EMAIL2
What is your email address?
_____

4. TELCELL
How many adults (age 18 and over) in this household have a cell phone for personal use?
_____
☐ DK
☐ RF

5. TELAND

Is there [also] a land-line telephone in this household? Do not count cell phones, or any phone line that is used only for a computer or fax machine.

1. ☐ Yes
2. ☐ No
☐ DK
☐ RF

Probes:

What does the phrase "land-line" mean to you in this question?

Is this the same as or different from a "home" phone?

6. PREFCON

If we need to contact you, what is your preferred method of contact?

Mark all that apply.

1. ☐ Personal visit
2. ☐ Telephone call
3. ☐ Text message
4. ☐ Email
☐ DK
☐ REF

Probes:

What other methods of contact might some people prefer?

Housing Unit & Demographics Modules

7. NAME	**Now I will ask you some questions about the people who live here. What are the names of all persons living or staying here? Start with yourself.**
8. AGE	**What is [your/NAME's] age?**
9. REL	*IF NOT RESPONDENT:* **How is [NAME] related to you?**

1.	Spouse	7.	Foster Child
2.	Unmarried Partner	8.	Housemate/Roommate
3.	Child	9.	Roomer/Boarder
4.	Grandchild	10.	Other Non-relative
5.	Parent	11.	Dk
6.	Other relative (Aunt, Cousin, Nephew, Mother-in-law, etc.)	12.	Ref

Ask Q7. NAME, Q8. AGE, and Q9. REL for 1st HH member (respondent). Then ask for next HH member. Repeat for every member of HH.

Once completed, proceed to Q10. TENURE.

10. TENURE   **Is your home…**
                (Read categories until "yes" reply is received)
                1. ☐ **Owned?**
                2. ☐ **Rented?**
                3. ☐ **Occupied without payment of rent?**

11. OWNER   **In whose name or names is this home [fill with answer to TENURE]?**
                (Place an asterisk (*) next to owners'/renters' name on Household Roster)

12. HTYPE   **Is this unit a house, an apartment, a manufactured/mobile home, or some other type of residence?** *(Refer to separate Help Screen if needed)*
                1. ☐ House
                2. ☐ Apartment
                3. ☐ Manufactured/mobile home – skip to Q14. WHENYR/MON
                4. ☐ Other residence

13. STYPE   **Are your living quarters in a…**
                (Read categories until "yes" reply is received. Refer to separate Help Screen if needed)
                1. ☐ **1 unit building, detached from any other building?**
                2. ☐ **1 unit building, attached to one or more buildings?**
                3. ☐ **Building with two or more apartments?**
                4. ☐ **Manufactured/Mobile Home?**

14. WHENYR/MON **When did you move to this [house / apartment / manufactured/mobile home / unit]?**
                If lived there since birth, ask for birth month and year.

                _____ Month   _____ Year

Inventory Module
INV_INTRO
The next questions are about your home.

> Refer to Q13. STYPE (page 6) to determine the next question:
>
> - If home is a 1-unit building (Q13. STYPE = 1 or 2), then proceed to Q15. CELAR1Q.
> - If home is a bldg. with 2+ apartments (Q13. STYPE = 3), then skip to Q17. STORIES.
> - If home is a manufactured/mobile home (Q13. STYPE = 4), then skip to Q18. FLOORSQ.

15. CELAR1Q
Is this house built-
(Read categories until a "yes" reply is received. Refer to separate Help Screen if needed.)
1. ☐ **With a basement?** – Proceed to Q16 CELAR2Q
2. ☐ **With a crawl space?**
3. ☐ **On a concrete slab?**
4. ☐ **In some other way?** (Specify): _____   Skip to instructions below Q16. CELAR2Q
☐ DK
☐ Ref

16. CELAR2Q
And, is that basement under ALL the house, or is it under PART of the house?
("HOUSE" refers to living space only, i.e. basement doesn't need to be under garage/carport to count as "all")
1. ☐ All
2. ☐ Part
☐ DK
☐ Ref

> Refer to Q13. STYPE (page 6) to determine the next question:
>
> - If home is a bldg. with 2+ apartments (Q13. STYPE = 3), then proceed to Q17. STORIES.
> - Otherwise, skip to Q18. FLOORSQ (page 9).

17. STORIES
How many stories are in this ENTIRE building?
_____
Probes:
How easy or difficult was this to answer?
How did you come up with your answer? Tell me more about that.
What does "stories" mean to you in this question? Is there another way you might phrase this survey question?

18. FLOORSQ

How many floors are in [this/that] [house / apartment / manufactured/mobile home / unit] ["**including the basement and any finished attics**" (if Q15. CELAR1Q="With a basement") / "**including finished attics**" (if home with no basement)]**?**"
-If split level, count greatest number of floors on top of each other.
_____

Refer to Q13. STYPE (page 6) to determine the next question:

- If home is a bldg. with 2+ apartments (Q13. STYPE = 3), then proceed to Q19. E_FLOORS.
- Otherwise, skip to INTROROOMS.

19. E_FLOORS
To confirm, there are [VALUE from Q18. FLOORSQ] floors in your unit and [VALUE from Q17. STORIES] in the whole building?
1. ☐ Yes
2. ☐ No
☐ DK
☐ Ref
Probes:
How easy or difficult was this to answer?
Tell me more about that.

INTROROOMS
The next few questions are about the number and kinds of rooms in your [house / apartment / manufactured/mobile home / unit].

20. BEDRMS
["**Thinking about all of the different floors**," (if home is NOT a bldg. with 2+ apartments (Q13. STYPE ne 3) and has at least 2 floors (Q18. FLOORSQ >1))] **How many bedrooms are there in your [house / apartment / manufactured/ mobile home / unit]?**

_____
☐ DK
☐ Ref

21. BATHS
A full bathroom is one that has a sink with running water, a toilet, and either a bathtub or shower. How many full bathrooms are there in your home? [Read if help needed, or think-aloud indicates possible error: **Include bathrooms in finished attics or finished basements.**]

_____
☐ DK

□ Ref

22. HALFB
A half-bathroom is one that has either a toilet or a bathtub or a shower.
How many half bathrooms are there in your home? [Read if help needed, or think-aloud indicates possible error: **Include bathrooms in finished attics or finished basements.**]

_____
□ DK
□ Ref

23. KITCH
How many kitchens?

_____
□ DK
□ Ref

24. DINING
How many SEPARATE dining rooms? [Read if help needed, or think-aloud indicates possible error: **A separate dining room is one that's separated from other rooms by archways or walls extending at least six inches.**]

_____
□ DK
□ Ref

25. LIVING
How many living rooms?

_____
□ DK
□ Ref

If there are no bedrooms (Q20. BEDRMS=0) and no kitchens (Q23. KITCH=0) and no more than one living room (Q25. LIVING=0 or 1), then proceed to Q26. STUDIO.

Otherwise, skip to Equipment Module (page 11).

26. STUDIO
Is this a one room efficiency or studio apartment?
1. □ Yes
2. □ No
□ DK
□ RF

Equipment Module
EQPINTRO
Turning now to questions about appliances and other household equipment.

27. COOKQ
Does your [house / apartment / manufactured/mobile home / unit] have some type of cooking stove, or a range with an oven--one that is in working order?
1. ☐ Yes – Skip to Q30. CFUELQ
2. ☐ No
☐ DK
☐ RF

28. BURNERQ
Does your [house / apartment / manufactured/mobile home / unit] have any built-in cooking burners that are in working order?
1. ☐ Yes – Skip to Q30. CFUELQ
2. ☐ No
☐ DK
☐ RF

29. OVENQ
Does your [house / apartment / manufactured/mobile home / unit] have a microwave oven that is in working order?
1. ☐ Yes – Proceed to Q30. CFUELQ
2. ☐ No ⎤
☐ DK ⎬ Skip to Q31. HOTPIPP
☐ RF ⎦

Q30. CFUELQ
What type of fuel or power is used MOST for cooking--electricity, gas or something else?
If "something else," ask "What is used?"
1. ☐ Electricity
2. ☐ Gas, LP Gas (liquid propane (LP) same as bottled gas)
3. ☐ Other
4. ☐ No fuel used
☐ DK
☐ REF
Probes:
How easy or difficult was this to answer?
How did you come up with your answer? Tell me more about that.

Q31. HOTPIPP
Is there both hot and cold water anywhere in your home?
1. ☐ Yes
2. ☐ No ⎤
☐ DK ⎬ Skip to Q33. HFUELA
☐ RF ⎦

Q32. WFUELQ

What type of fuel or power is used MOST to heat the water?
1. ☐ Electricity
2. ☐ Gas, LP Gas (liquid propane (LP) same as bottled gas)
3. ☐ Fuel Oil
4. ☐ Solar energy
5. ☐ Other – Specify: _____
☐ DK
☐ REF

33. HFUELA
What type of fuel or power is used MOST for heating your [house / apartment / manufactured/mobile home / unit]?
1. ☐ Electricity
2. ☐ Gas, LP Gas (liquid propane (LP) same as bottled gas)
3. ☐ Fuel oil
4. ☐ Kerosene or other liquid fuel
5. ☐ Coal or coke
6. ☐ Wood
7. ☐ Solar energy
8. ☐ Other; specify _____
9. ☐ None
☐ DK
☐ Ref

> If no type of fuel or power is used most (Q33. HFUELA = "None"), then proceed to Q34. HFUELB.
>
> Otherwise, skip to Breakdown Module (page 13).

34. HFUELB
Is that because you do not HAVE any heating equipment or is that because you are not USING your heating equipment?
◆ Enter 1 if does not have any heating equipment. Include equipment that is broken and WILL NOT be fixed.
◆ Enter 2 if not using heating equipment. Include equipment that is TEMPORARILY broken but WILL BE fixed.
1. ☐ Do not have any heating equipment
2. ☐ Not using heating equipment
☐ DK
☐ Ref

Breakdown Module
BRKDNINTRO
The next series of questions are about problems that some people have experienced with their homes. We are interested in knowing if you have experienced these types of problems too.

> If respondent has no full bathrooms (Q21. BATHS = 0) and no half bathrooms (Q22. HALFB = 0), skip to Q37. EVROD.
>
> Otherwise, proceed to Q35. IFTLT.

35. IFTLT
Was there any time ["**within the past 3 months**" (if Q14. WHENYR/MON > 3 mos ago)/ "**since you've lived here/since your household has lived here**"(else)**], that is since [current date - 3 mos/MOVDATE], when [ALL of your toilets were/your toilet was] BROKEN, or STOPPED UP, or otherwise NOT WORKING, so you COULDN'T USE [ANY of them/it]?**
1. ☐ Yes
2. ☐ No
☐ DK   Skip to Q37. EVROD
☐ Ref
Probes:
How easy or difficult was this to answer?
How did you come up with your answer? Tell me more about that.
(If "Yes") When [was/were] the [toilet/toilets] not useable?
(If "No") Have you ever had this problem, outside the past 3 months?

36. NUMTLT
How many times since [current date – 3 mos /MOVDATE] [was/were] the [toilet/toilets] not working for SIX HOURS or MORE?

_____
☐ DK
☐ Ref
Probes:
How easy or difficult was this to answer?
How did you come up with your answer? Tell me more about that.

37. EVROD
["**In the last 12 months**" (if Q14. WHENYR/MON > 1 yr ago)/ "**Since you've lived here/Since your household has lived here**" (else)**], that is since [current date 2017 /MOVDATE], have you ever seen signs of mice or rats INSIDE your [house/apartment/manufactured/mobile home/living quarters] [building/" "]?**
1. ☐ Yes
2. ☐ No
☐ DK   Skip to Q39. EROACH
☐ Ref
Probes:

38. RATFREQ

How often have you seen any signs of mice or rats INSIDE your home since [current date 2017 /MOVDATE]?
Would you say it was daily, weekly, monthly, or a few times?
1. ☐ Daily
2. ☐ Weekly
3. ☐ Monthly
4. ☐ A few times
☐ DK
☐ Ref
Probes:
How easy or difficult was this to answer?
How did you come up with your answer? Tell me more about that.
Are there any phrases that could be used other than "signs of mice or rats" in this question?

39. EROACH

["**In the last 12 months**" (if Q14. WHENYR/MON > 1 yr ago)/ "**Since you've lived here/Since your household has lived here**" (else)], **that is since [current date 2017 /MOVDATE], have you ever seen signs of cockroaches INSIDE your [house/apartment/manufactured/mobile home/living quarters] [building/" "]?**
1. ☐ Yes
2. ☐ No
☐ DK   Skip to instructions beneath Q40. ROACHFRQ
☐ Ref
Probes:
How easy or difficult was this to answer?
How did you come up with your answer? Tell me more about that.
What does the phrase "signs of cockroaches" mean to you in this question?

40. ROACHFRQ

How often have you seen any signs of cockroaches INSIDE your home since [current date 2017 /MOVDATE]?
Would you say it was daily, weekly, monthly, or a few times?
1. ☐ Daily
2. ☐ Weekly
3. ☐ Monthly
4. ☐ A few times
☐ DK
☐ Ref
Probes:
How easy or difficult was this to answer?
How did you come up with your answer? Tell me more about that.

Are there any phrases that could be used other than "signs of cockroaches" in this question?

If home is owned (Q10. TENURE = 1), proceed to Home Improvement Module (page 15).

Otherwise, skip to Demographics Supplement, Post-Secondary Education Series (page 18).

Home Improvement Module

HINTRO2
The next series of questions deal with only home remodeling and major improvements and replacements in the last two years. DO NOT include routine minor work such as painting or fixing a broken water pipe. Also DO NOT include work such as decorating or landscaping.

41. BTHKIT
In the last two years, did you remodel any kitchens or bathrooms?
By remodeling, we mean SUBSTANTIAL changes to the room like replacing the bathtub or retiling the shower or floor. Do not count jobs that were just painting, papering, or simple replacement of a toilet or sink.
1. ☐ Yes
2. ☐ No
☐ DK   Skip to instructions below Q42. BKROOM
☐ Ref

42. BKROOM
Which rooms?
◊ Mark all that apply.
☐ 1. Bathroom(s)
☐ 2. Kitchen

Refer to Q13. STYPE (page 6) to determine the next question:

- If home is NOT a bldg. with 2+ apartments (Q13. STYPE = 1, 2, or 4) then proceed to Q43. BULTOUT1.
- Otherwise, skip to HINTRO4 (page 16).

43. BULTOUT1
In the last two years, was anything built onto the outside of your home, such as an attached garage or carport?
1. ☐ Yes
2. ☐ No
☐ DK
☐ Ref

44. BULTOUT2
In the last two years, was anything else built onto the outside of your home, such as a porch, deck, patio, or terrace?
1. ☐ Yes
2. ☐ No
☐ DK
☐ Ref

HINTRO4
Next are questions about OTHER work you may have done to your home in the last two years. We are only interested in jobs that were MAJOR alterations or improvements, such as rewiring, a new roof, new windows or doors. Do NOT include minor repairs or other routine maintenance. Also, do not include work already reported because we don't want to count jobs twice.

Q45. DOORWIN
Have you added or replaced any of the following:
doors or windows?
1. ☐ Yes
2. ☐ No
☐ DK
☐ Ref

Q46. PLUMFXT
(Have you added or replaced any of the following:)
plumbing fixtures, such as sinks or bathtubs?
1. ☐ Yes
2. ☐ No
☐ DK
☐ Ref

Q47. WIRING
(Have you added or replaced any of the following:)
electrical wiring, fuse boxes, breaker panels or built-in lighting?
1. ☐ Yes
2. ☐ No
☐ DK
☐ Ref

Q48. FLRWLLS
In the last two years, have you installed any wall-to-wall carpeting, flooring such as hardwood, tile, marble, or vinyl, or any paneling, ceiling tiles, or drywall?
1. ☐ Yes
2. ☐ No
☐ DK
☐ Ref

Refer to Q13. STYPE (page 6) to determine the next question:

- If home is NOT a bldg. with 2+ apartments (Q13. STYPE = 1, 2, or 4), then proceed to Q49. DRIVEWY (page 17).
- If home is a bldg. with 2+ apartments (Q13. STYPE = 3), and ANY prior questions in this module were answered "Yes," then skip to Q52. HMRACCESS (page 17).
- If home is a bldg. with 2+ apartments (Q13. STYPE = 3), and NO prior questions in this module were answered "Yes," then skip to Demographics Supplement, Post-Secondary Education Series (page 18).

Q49. DRIVEWY
Now, about work done to your LOT or YARD, in the last two years, have you added or replaced driveways or walkways?
1. ☐ Yes
2. ☐ No
☐ DK
☐ Ref

Q50. MISSOUT
Did we miss any other MAJOR remodeling, improvement or replacement jobs done to your LOT or YARD in the last two years?
1. ☐ Yes
2. ☐ No ⎤
☐ DK ⎬ Skip to instructions below Q51. MISOUTA
☐ Ref ⎦

Q51. MISOUTA
What was the job?

_____

If ANY prior questions in this module were answered "Yes," proceed to Q52. HMRACCESS.

If NO prior questions in this module were answered "Yes," skip to Demographics Supplement, Post-Secondary Education Series (page 18).

Q52. HMRACCESS
Did you do any of these home improvements to make your home more accessible for people with physical limitations, such as people using a wheelchair or a walker?
1. ☐ Yes
2. ☐ No
☐ DK
☐ Ref
Probes:
(If "Yes") Which home improvement(s)? Can you tell me more about that?
(All respondents) What does the phrase "physical limitations" mean to you in this question?
(All respondents) What does the phrase "home improvements" mean to you in this question?

Q53. HMRENEFF

Did you do any of these home improvements to improve energy efficiency?

1. ☐ Yes
2. ☐ No
☐ DK
☐ Ref

Q54. HMRSALE

Did you do any of these home improvements to get your house ready for sale?

1. ☐ Yes
2. ☐ No
☐ DK
☐ Ref

Demographics Supplement, Post-Secondary Education Series

PSEINTRO

The next questions are about education for people in your home.

Refer to HOUSEHOLD ROSTER to determine the following questions.

If household has ANY member(s) age 16-19, then proceed to Q55. ENROLLH.

If household has NO members age 16-19, skip to Q57. ENROLLC.

55. ENROLLH

Earlier I recorded [READ NAMES/AGES OF MEMBERS AGE 16-19]. In March of this year, [were you/was NAME/were either of [you/them]/were any of [you/them]] attending high school?
1. ☐ Yes
2. ☐ No
☐ DK
☐ Ref
Skip to Q57. ENROLLC

56. HSTUDENT

Who was in high school?
(Indicate which members age 16-19 from household roster)
Probe: **Anyone else?**

57. ENROLLC

In March of this year, was anyone in this household attending college or some other type of school beyond high school, such as vocational, technical, trade, or business school?
1. ☐ Yes
2. ☐ No
☐ DK
☐ Ref
Skip to Q59. EDUCA (page 18)

Probes:
Did you find this easy or difficult to answer?
What does the phrase "vocational, technical, trade, or business school" mean to you in this question?
Are there differences between these types of schools?

58. PSCSTUDENT

Who was in college or some other type of school beyond high school?
(Indicate which members from household roster)
Probe: **Anyone else?**

59. EDUCA
What is the highest level of school [you have/NAME has] completed or the highest degree [you have/he has/she has] received?
1. ☐ Less than 1st grade
2. ☐ 1st, 2nd, 3rd, or 4th grade
3. ☐ 5th or 6th grade
4. ☐ 7th or 8th grade
5. ☐ 9th grade
6. ☐ 10th grade
7. ☐ 11th grade
8. ☐ 12th grade, no diploma
9. ☐ HIGH SCHOOL GRADUATE – High school DIPLOMA or equivalent (e.g., GED)
10. ☐ Some college but no degree
11. ☐ Diploma or certificate from a vocational, technical, trade, or business school beyond the High School level
12. ☐ Associate degree – Occupational/vocational program
13. ☐ Associate degree – Academic program
14. ☐ Bachelor's degree (e.g., BA, AB, BS)
15. ☐ Master's degree (e.g., MA, MS, MEng, MEd, MSW, MBA)
16. ☐ Professional School degree (e.g., MD, DDS, DVM, LLB, JD)
17. ☐ Doctorate degree (e.g., PhD, EdD)
☐ DK
☐ Ref

> Repeat Q59. EDUCA for each household member.
>
> If household has any members attending college or some other type of school beyond high school (Q57. ENROLLC = "Yes"), then proceed to Q60. PSCATTEND. Ask the set of questions for each household member named in Q58. PSCSTUDENT.
>
> Otherwise, skip to Home Accessibility Module (page 22).

60. PSCATTEND
In March of this year, [were you/was NAME] attending college or school full-time or part-time?
1. ☐ Full time
2. ☐ Part-time
☐ DK
☐ REF
Probes (first time only):
Did you find this easy or difficult to answer?
How did you come up with your answer?
What does the phrase "full-time" mean to you in this question?
How about "part-time?"

61. PSCPUBPV
Is the college or school Public or Private?
1. ☐ Public
2. ☐ Private
☐ DK
☐ Ref
Probes (first time only):

62. PSCLIVE

[Were/Was] [you/NAME] living at this [home/apartment/unit] in March of this year while [you/they] were attending college or school?

1. ☐ Yes – Skip to Q64. PSCSTILL
2. ☐ No – Proceed to Q63. PSCDORM
☐ DK
☐ Ref ⎫ Skip to Q64. PSCSTILL

63. PSCDORM

[Were/Was] [you/NAME] living in housing owned by the university, such as a dorm, in March of this year?

1. ☐ Yes
2. ☐ No
☐ DK
☐ Ref

Probes (first time only):
What does "housing owned by the university" mean to you in this question?
What does "dorm" mean to you in this question?

64. PSCSTILL

[Are you/Is NAME] still enrolled in college or school or will [you/NAME] be in the next few months?

1. ☐ Yes
2. ☐ No ⎫
☐ DK ⎬ Skip to Q66. PSCCOMP
☐ Ref ⎭

Probes (first time only):
Did you find this easy or difficult to answer?
How did you come up with your answer? Can you tell me more about that?

65. PSCDEGREE

What type of degree or certificate [are you/is NAME] working towards?

1. ☐ Vocational, technical, trade or business certificate or credential (Less than 2 years)
2. ☐ Associate's degree (2-year community or technical college)
3. ☐ Bachelor's degree (For example: BA, AB, BS)
4. ☐ Master's degree (For example: MA, MS, MBA)
5. ☐ Professional School degree (For example: MD, DDS, JD)
6. ☐ Doctorate degree (For example: PhD, EdD)
7. ☐ Non-Degree program
☐ DK
☐ Ref

Probes (first time only):

What other types of degrees or certificates might people be working towards?

If household member is still enrolled in college or school or will be in the next 6 months (Q64. PSCSTILL = 'Yes'), skip Q66. PSCCOMP.

66. PSCCOMP
Did [you/NAME] complete the program?
1. ☐ Yes
2. ☐ No
☐ DK
☐ Ref

Repeat Q60-Q66 for all household members attending college or some type of school beyond high school. Once this is completed, proceed to Home Accessibility Module (page 22).

Home Accessibility Module

The next questions are about accessibility for everyone in your household.

67. HAEQUIP
[Do you/Does anyone in the household] use any of the following equipment because of a long-term condition? Exclude temporary injuries.
(Read all categories; mark all that apply)
1. ☐ **Manually Operated Wheelchair**
2. ☐ **Motorized Wheelchair, Cart, or Scooter**
3. ☐ **Chairlift, stairlift or platform lift**
4. ☐ **Crutches**
5. ☐ **Cane or Walker**
6. ☐ **Something Else**
7. ☐ None
☐ DK
☐ Ref
Probes:
Did you find this easy or difficult to answer?
How did you come up with your answer?
What does the phrase "long-term condition" mean to you in this question?
How about "temporary injuries?"

68. HADIFFENT
Without assistance from another person, [do you/does anyone in the household 6 years of age and older] have difficulty entering the home or property because of a condition other than a temporary injury?
1. ☐ Yes
2. ☐ No
☐ DK
☐ Ref
Probes:
(If needed) You answered ["Yes"/"No"]. Can you tell me more about that?
(All) What does the phrase "have difficulty entering" mean to you in this question?

69. HAGETROOM
Without assistance from another person, [do you/does anyone in the household 6 years of age and older] have difficulty getting to any of the following rooms:
Kitchen?
1. ☐ Yes
2. ☐ No
☐ DK
☐ Ref
Bathroom?

1. ☐ Yes
2. ☐ No
☐ DK
☐ Ref
Bedroom?
1. ☐ Yes
2. ☐ No
☐ DK
☐ Ref

70. HAKITDIFF

Without assistance from another person, [do you/does anyone in the household 6 years of age and older] have difficulty using the kitchen? Consider such activities as reaching and opening kitchen cabinets or the refrigerator, turning the stove on and off, reaching and using kitchen counters or the sink.
1. ☐ Yes
2. ☐ No
☐ DK
☐ Ref

71. HABTHDIFF

Without assistance from another person, [do you/does anyone in the household 6 years of age and older] have difficulty using the bathroom? Consider such activities as reaching and using the sink, turning sink or tub or shower faucets on or off, getting into or out of the bathtub or shower.
1. ☐ Yes
2. ☐ No
☐ DK
☐ Ref

72. HABDDIFF

Without assistance from another person, [do you/does anyone in the household 6 years of age and older] have difficulty using a bedroom? Consider such activities as getting dressed, getting in or out of bed.

1. ☐ Yes
2. ☐ No
☐ DK
☐ Ref

> If equipment is used by anyone in the household due to a long-term condition (Q67. HAEQUIP = 1-6), proceed to Q73. HASUPP.
>
> If no equipment is used (Q67. HAEQUIP = "None"), and home has more than one floor (Q18. FLOORSQ > 1), skip to Q74. HABDADD (page 24).
>
> Otherwise, skip to instructions after Q77. HABTHADD2 (page 25).

73. HASUPP

On a scale of 1 to 5 (where 1=Not at all, 5=Very well):
How well do you think your current home layout and features support the accessibility needs of [you/anyone in your household]?

_____
☐ DK
☐ Ref

> If home has more than one floor (Q18. FLOORSQ > 1), proceed to Q74. HABDADD.
>
> Otherwise, skip to instructions after Q77. HABTHADD2 (page 25).

74. HABDADD

Does [your/the] home currently have a bedroom on the entry level, that is accessible without going up or down steps or stairs?

1. ☐ Yes – Skip to Q76. HABTHADD
2. ☐ No
☐ DK ⎱ See instructions below

□ Ref

Probes:

Did you find this easy or difficult to answer?

How did you come up with your answer?

What does the phrase "entry level" mean to you in this question? What other words or phrases would you use for this?

If Q74. HABDADD = "No" and home is owned (Q10. TENURE = 1), proceed to Q75. HABDADD2.

Otherwise, skip to Q76. HABTHADD.

---

75. HABDADD2

Do you plan to add this feature to your home in the next 2 years?

1. □ Yes
2. □ No
□ DK
□ Ref

---

76. HABTHADD

Does [your/the] home currently have a full bathroom on the entry level, that is accessible without going up or down steps or stairs?

1. □ Yes – Skip to instructions after Q77. HABTHADD2 (page 26)
2. □ No
□ DK   See instructions below this question
□ Ref

Probes:

Did you find this easy or difficult to answer?

How did you come up with your answer?

(If Q74. HABDADD not asked) What does the phrase "entry level" mean to you in this question? What other words or phrases would you use for this?

If Q76. HABTHADD = "No" and home is owned (Q10. TENURE = 1), proceed to Q77. HABTHADD2 (page 26).

Otherwise, skip to Debriefing Questions (page 27).

---

77. HABTHADD2

Do you plan to add this feature to your home in the next 2 years?

1. □ Yes
2. □ No
□ DK
□ Ref

If home is owned (Q10. TENURE = 1) AND respondent plans to add bedroom or full bathroom to entry level in next 2 years (Q75. HABDADD2 = "Yes" or Q77. HABTHADD2 = "Yes"), then skip to Debriefing Questions (page 27).

If home is owned (Q10. TENURE = 1) otherwise, proceed to Q78. HAFUTURE.

78. HAFUTURE

In the next 2 years, do you plan to do any home improvement projects to make your home more accessible for people with physical limitations, such as people using a wheelchair or a walker?

1. ☐ Yes
2. ☐ No
☐ DK
☐ Ref

Probes:

Can you tell me more about that?

(If Q52. HMRACCESS not asked) What does the phrase "physical limitations" mean to you in this question?

SECTION IV. DEBRIEFING QUESTIONS

AFTER THE INTERVIEW:
Now, I am going to ask you some questions about your answers and about the questions themselves. I am really interested in how these questions work for you, so <u>there are no right or wrong answers</u>.

- **Overall, what did you think of this interview?** [If needed: **Was it easy or difficult? Can you tell me why it was easy or difficult?**]

- **Have you ever answered survey questions about your housing (inventory, equipment, breakdowns ["or home improvements"** (if home owned)**]) in the past? If yes, what was the survey? What was the experience like for you?**

- **Have you ever answered survey questions about post-secondary education, in the past? If yes, what was the survey? What was the experience like for you?**

- **Have you ever answered survey questions about home accessibility, in the past? If yes, what was the survey? What was the experience like for you?**

JUST A FEW FINAL QUESTIONS TO WRAP UP –

- **Overall, do you think some people might find these questions sensitive?**

- **Do you have anything else you would like to tell us that you haven't had a chance to mention yet?**

I want to thank you very much for your participation. I will now give you $40 and I will ask you to sign a receipt form verifying that you received the money.

TURN OFF THE TAPE RECORDER. HAND THE CASH INCENTIVE TO THE PARTICIPANT.

Cognitive Testing of AHS – Round 2 Protocol
Cognitive Interview Protocol Guide

PARTICIPANT ID #: _____
DATE: ____ / ____ / 2018

COGNITIVE INTERVIEWER NAME: _____

START TIME: _____:_____ AM / PM

SECTION I. INTRODUCTION

(COGNITIVE INTERVIEWER: READ/PARAPHRASE)

Hello, I'm [NAME OF COGNITIVE INTERVIEWER]. I work for the Census Bureau. Thanks for agreeing to help me today.

Let me begin by telling you a little more about what we'll be doing today. The United States Census Bureau counts the population in the U.S and also conducts various kinds of surveys.
Today, with your help, we will be testing some new questions that were developed for a national survey called the American Housing Survey. I will first ask you some survey questions and you'll answer the questions just like you would if you were doing it with an interviewer in a regular survey. We are interested in how you understand these questions and how these questions work for you.
Our goal here is to get a better idea how well the new questions work with people such as yourself before we actually use them in the survey. So the purpose of our session today is to collect your thoughts and opinions on these new questions and materials. I just want to remind you that I'm only asking for your thoughts and opinions on these materials. There is no right or wrong answer. We are simply trying to make sure the question wording is clear and easy for most people to understand. Your feedback will be very useful for helping make sure these questions will make sense to other people. Your participation in this interview and the review of the materials is very important because it will help the Census Bureau with improving these questions.
Do you have any questions before we begin?"

[Wait for questions, then turn page]

(COGNITIVE INTERVIEWER: READ)

PLACE THE CONSENT FORM IN FRONT OF PARTICIPANT

SECTION II. INTERVIEW CONSENT

Before we start, I would like you to read over the document in front of you. This document explains a little bit about this interview and provides information about your rights as a participant. It also asks for your permission to have this session audio recorded.

[IF OBSERVER PRESENT]: **I also want to let you know that this interview is being observed by** [DESCRIBE OBSERVER'S ROLE: e.g., someone who works on the American Housing Survey]. **They are observing the interview because they are also interested in how the questions work for people like you.**

Please ask me any questions you have about this document. Once you have finished reading the document, please sign it.

- PARTICIPANT READS AND SIGNS FORM

B. IF PARTICIPANT PROVIDES CONSENT TO HAVE THE SESSION AUDIO-TAPED: **I will now turn on the audio recorder.**

TEST AUDIO RECORDER AND TURN IT ON AGAIN AFTER TEST

READ: For the upcoming questions, I am interested in your answers, but I am also interested in the process you go through in your mind when you answer the questions. So I'd like you to think aloud as you answer the questions, just tell me everything you are thinking about as you go about answering each question. From time to time, I'll ask you some questions about your answers, or about the questions themselves.

THINK-ALOUD PRACTICE

Let's begin with a practice question. Remember to try to think aloud as you answer.

Practice Question 1. How many windows are there in the house or apartment where you live? WINDOWS _____

[IF NEEDED:] *Try to visualize the place where you live, and think about how many windows there are in that place. As you count up the windows, tell me what you are seeing and thinking about.*
PROBES:
- How did you come up with that answer?
- Tell me more about that. Why did you say [ANSWER]?
- I noticed that you hesitated. Tell me what you were thinking.

Okay, let's get started. Please answer the questions as you would if an interviewer had come to your home. I will now begin with the first set of questions in the survey.

NOTE TO COGNITIVE INTERVIEWER: START INTERVIEW. NOTE ANY PROBLEMS /COMMENTS /QUESTIONS /PUZZLED LOOKS/EXASPERATED SIGHS RESPONDENT HAS DURING THE INTERVIEW. WHEN NECESSARY, PROBE ON THESE AFTER THE RESPONDENT ANSWERS THE QUESTION.

Front Module
PHINTRO
We would like to collect some additional contact information in case we need to continue the interview later or follow up on missing information.

1. BCKAREA/BCKNUM/BCKEXT
What is the telephone number where you would like to be called?
[Probe, if more than one provided: **Which one would you prefer?**]
Phone: (   )
Ext:
☐ DK
☐ RF

2. BCKHO
Is this a mobile or cell, home, work, or other type of number?
-Current Number: ^PHONEFILL   ^ext.
1. ☐ Mobile or Cell Phone
2. ☐ Home
3. ☐ Work
4. ☐ Other – Specify: _____
☐ DK
☐ RF
Probes:
Is this your usual phone type?
What does a "home" phone mean to you in this question?
How about "mobile or cell phone?

3a. EMAIL1
Do you also have an email address that we could use to contact you?
1. ☐ Yes
2. ☐ No
☐ DK
☐ RF
Skip to Q4. TELCELL

3b. EMAIL2
What is your email address?
[Probe, if more than one provided: **Which one would you prefer?**]
_____

4. TELCELL
How many adults age 18 and over in this household have a cell phone for personal use?
[Consider all adults in the household.]

_____
☐ DK
☐ RF

5. TELAND
Is there [also] a landline telephone in this household? Do not count cell phones, or any phone line that is used only for a computer or fax machine.
1. ☐ Yes
2. ☐ No
☐ DK
☐ RF

6. PREFCON
If we need to contact you, what is your preferred method of contact?
Mark all that apply.
1. ☐ Personal visit
2. ☐ Telephone call
3. ☐ Text message
4. ☐ Email
☐ DK
☐ REF

Housing Unit & Demographics Modules

7. NAME **Now I will ask you some questions about the people who live here. What are the names of all persons living or staying here? Start with yourself.**

8. AGE **What is [your/NAME's] age?**

9. REL *IF NOT RESPONDENT:* **How is [NAME] related to you?**

1. Spouse	7. Foster Child
2. Unmarried Partner	8. Housemate/Roommate
3. Child	9. Roomer/Boarder
4. Grandchild	10. Other Non-relative
5. Parent	11. Dk
6. Other relative (Aunt, Cousin, Nephew, Mother-in-law, etc.)	12. Ref

Ask Q7. NAME, Q8. AGE, and Q9. REL for 1st HH member (respondent). Then ask for next HH member. Repeat for every member of HH.

Once completed, proceed to Q10. TENURE.

10. TENURE **Is your home…**
   (Read categories until "yes" reply is received)
   1. ☐ **Owned?**
   2. ☐ **Rented?**
   3. ☐ **Occupied without payment of rent?**

11. OWNER **In whose name or names is this home [fill with answer to TENURE]?**
   (Place an asterisk (*) next to owners'/renters' name on Household Roster)

12. HTYPE **Is this unit a house, an apartment, a manufactured/mobile home, or some other type of residence?** *(Refer to separate Help Screen if needed)*
   1. ☐ House
   2. ☐ Apartment
   3. ☐ Manufactured/mobile home – skip to Q14. WHENYR/MON
   4. ☐ Other residence

13. STYPE **Are your living quarters in a…**
   (Read categories until "yes" reply is received. Refer to separate Help Screen if needed)
   1. ☐ **1 unit building, detached from any other building?**
   2. ☐ **1 unit building, attached to one or more buildings?**

3. ☐ **Building with two or more apartments?**
4. ☐ **Manufactured/Mobile Home?**

14. WHENYR/MON **When did you move to this [house / apartment / manufactured/mobile home / unit]?**
If lived there since birth, ask for birth month and year.

_____ Month   _____ Year

Inventory Module
INV_INTRO
The next questions are about your home.

Refer to Q13. STYPE (page 6) to determine the next question:

- If home is a 1-unit building (Q13. STYPE = 1 or 2), then proceed to Q15. CELAR1Q.
- If home is a bldg. with 2+ apartments (Q13. STYPE = 3), then skip to Q17. STORIES.
- If home is a manufactured/mobile home (Q13. STYPE = 4), then skip to Q18. FLOORSQ.

15. CELAR1Q
Is this house built-
(Read categories until a "yes" reply is received. Refer to separate Help Screen if needed.)
1. ☐ **With a basement?** – Proceed to Q16 CELAR2Q
2. ☐ **With a crawl space?**
3. ☐ **On a concrete slab?**
4. ☐ **In some other way?** (Specify): _____   Skip to instructions below Q16. CELAR2Q
☐ DK
☐ Ref

16. CELAR2Q
And, is that basement under ALL the house, or is it under PART of the house?
("HOUSE" refers to living space only, i.e. basement doesn't need to be under garage/carport to count as "all")
1. ☐ All
2. ☐ Part
☐ DK
☐ Ref

Refer to Q13. STYPE (page 6) to determine the next question:

- If home is a bldg. with 2+ apartments (Q13. STYPE = 3), then proceed to Q17. STORIES.
- Otherwise, skip to Q18. FLOORSQ (page 9).

17. STORIES
How many stories are in [that/this] multifamily building?

_____

18. FLOORSQ
How many floors are in [your/this/that] ^HTYPEFILL ["including the basement and any finished attics" (if Q15. CELAR1Q="With a basement") / **"including finished attics"** (if home with no basement)**]?"**
-If split level, count greatest number of floors on top of each other.

_____

INTROROOMS
**The next few questions are about the number and kinds of rooms in your [house /
apartment / manufactured/mobile home / unit].**

19. BEDRMS
["**Thinking about all of the different floors**," (if home is NOT a bldg. with 2+ apartments
(Q13. STYPE ne 3) and has at least 2 floors (Q18. FLOORSQ >1))] **How many bedrooms are
there in your [house/apartment / manufactured/ mobile home / unit]?**

_____
☐ DK
☐ Ref

20. BATHS
**A full bathroom is one that has a sink with running water, a toilet, and either a bathtub or
shower. How many full bathrooms are there in your home?** [Read if help needed, or think-
aloud indicates possible error: **Include bathrooms in finished attics or finished basements.**]

_____
☐ DK
☐ Ref

21. HALFB
A half-bathroom is one that has either a toilet or a bathtub or a shower.
How many half bathrooms are there in your home? [Read if help needed, or think-aloud
indicates possible error: **Include bathrooms in finished attics or finished basements.**]

_____
☐ DK
☐ Ref

22. KITCH
How many kitchens?

_____
☐ DK
☐ Ref

23. DINING
How many SEPARATE dining rooms? [Read if help needed, or think-aloud indicates possible
error: **A separate dining room is one that's separated from other rooms by archways or
walls extending at least six inches.**]

_____
☐ DK
☐ Ref

24. LIVING
How many living rooms?

_____
☐ DK
☐ Ref

> If there are no bedrooms (Q19. BEDRMS=0) and no kitchens (Q22. KITCH=0) and no more than one living room (Q24. LIVING=0 or 1), then proceed to Q25. STUDIO.
>
> Otherwise, if home is owned (Q10. TENURE = 1), skip to Home Improvement Module (page 11). If not, skip to Demographics Supplement, Post-Secondary Education Series (page 14).

25. STUDIO
Is this a one room efficiency or studio apartment?
1. ☐ Yes
2. ☐ No
☐ DK
☐ RF

Home Improvement Module

HINTRO2
The next series of questions deal with only home remodeling and major improvements and replacements [in the last two years/since you've lived here/since your household has lived here]. DO NOT include routine minor work such as painting or fixing a broken water pipe. Also DO NOT include work such as decorating or landscaping.

26. BTHKIT
[In the last two years/Since you've lived here/Since your household has lived here], did you remodel any kitchens or bathrooms?
By remodeling, we mean SUBSTANTIAL changes to the room like replacing the bathtub or retiling the shower or floor. Do not count jobs that were just painting, papering, or simple replacement of a toilet or sink.
1. ☐ Yes
2. ☐ No ┐
☐ DK ├─ Skip to instructions below Q27. BKROOM
☐ Ref ┘

27. BKROOM
Which rooms?
◊ Mark all that apply.
☐ 1. Bathroom(s)
☐ 2. Kitchen

Refer to Q13. STYPE (page 6) to determine the next question:

- If home is NOT a bldg. with 2+ apartments (Q13. STYPE = 1, 2, or 4) then proceed to Q28. BULTOUT1.
- Otherwise, skip to HINTRO4 (page 12).

28. BULTOUT1
[In the last two years/Since you've lived here/Since your household has lived here], was anything built onto the outside of your home, such as an attached garage or carport?
1. ☐ Yes
2. ☐ No
☐ DK
☐ Ref

29. BULTOUT2
[In the last two years/Since you've lived here/Since your household has lived here], was anything else built onto the outside of your home, such as a porch, deck, patio, or terrace?
1. ☐ Yes
2. ☐ No
☐ DK

☐ Ref

HINTRO4
Next are questions about OTHER work you may have done to your home [in the last two years/since you've lived here/since your household has lived here]. We are only interested in jobs that were MAJOR alterations or improvements, such as rewiring, a new roof, new windows or doors. Do NOT include minor repairs or other routine maintenance. Also, do not include work already reported because we don't want to count jobs twice.

30. DOORWIN
Have you added or replaced any of the following:
doors or windows?
1. ☐ Yes
2. ☐ No
☐ DK
☐ Ref

31. PLUMFXT
(Have you added or replaced any of the following:)
plumbing fixtures, such as sinks or bathtubs?
1. ☐ Yes
2. ☐ No
☐ DK
☐ Ref

32. WIRING
(Have you added or replaced any of the following:)
electrical wiring, fuse boxes, breaker panels or built-in lighting?
1. ☐ Yes
2. ☐ No
☐ DK
☐ Ref

33. FLRWLLS
In the last two years, have you installed any wall-to-wall carpeting, flooring such as hardwood, tile, marble, or vinyl, or any paneling, ceiling tiles, or drywall?
1. ☐ Yes
2. ☐ No
☐ DK
☐ Ref

Refer to Q13. STYPE (page 6) to determine the next question:

- If home is NOT a bldg. with 2+ apartments (Q13. STYPE = 1, 2, or 4), then proceed to Q34. DRIVEWY (page 13).
- If home is a bldg. with 2+ apartments (Q13. STYPE = 3), and ANY prior questions in this module were answered "Yes," then skip to Q37. HMRACCESS (page 13).
- If home is a bldg. with 2+ apartments (Q13. STYPE = 3), and NO prior questions in this module were answered "Yes," then skip to Demographics Supplement, Post-Secondary Education Series (page 14).

34. DRIVEWY
Now, about work done to your LOT or YARD, [in the last two years/since you've lived here/since your household has lived here], have you added or replaced driveways or walkways?
1. ☐ Yes
2. ☐ No
☐ DK
☐ Ref

35. MISSOUT
Did we miss any other MAJOR remodeling, improvement or replacement jobs done to your LOT or YARD [in the last two years/since you've lived here/since your household has lived here]?
1. ☐ Yes
2. ☐ No ┐
☐ DK ├ Skip to instructions below Q36. MISOUTA
☐ Ref ┘

36. MISOUTA
What was the job?
_____

If ANY prior questions in this module were answered "Yes," proceed to Q37. HMRACCESS.

If NO prior questions in this module were answered "Yes," skip to Demographics Supplement,

37. HMRACCESS
Did you do any of these home improvements to make your home more accessible for people with physical limitations, such as people using a wheelchair or a walker?
1. ☐ Yes
2. ☐ No
☐ DK
☐ Ref
Probes:
(If "Yes") Which home improvement(s)? Can you tell me more about that?

38. HMRENEFF
Did you do any of these home improvements to improve energy efficiency?
1. ☐ Yes
2. ☐ No
☐ DK
☐ Ref

39. HMRSALE
Did you do any of these home improvements to get your house ready for sale?
1. ☐ Yes
2. ☐ No
☐ DK
☐ Ref

Demographics Supplement, Post-Secondary Education Series
PSEINTRO
The next questions are about education for people in your home.

> Refer to HOUSEHOLD ROSTER to determine the following questions.
>
> If household has ANY member(s) age 16-19, then proceed to Q40. ENROLLH.
>
> If household has NO members age 16-19, skip to Q42. ENROLLC.

40. ENROLLH
Earlier I recorded [READ NAMES/AGES OF MEMBERS AGE 16-19]. In March of this year, [were you/was NAME/were either of [you/them]/were any of [you/them]] attending high school?
1. ☐ Yes
2. ☐ No
☐ DK   Skip to Q42. ENROLLC
☐ Ref

41. HSTUDENT
Who was in high school?
(Indicate which members age 16-19 from household roster)
Probe: **Anyone else?**

42. ENROLLC
In March of this year, was anyone in this household attending college or some other type of school beyond high school, such as vocational, technical, trade, or business school?
1. ☐ Yes

2. ☐ No
☐ DK
☐ Ref

Probes:
Did you find this easy or difficult to answer?
What does the phrase "vocational, technical, trade, or business school" mean to you in this question?
Are there differences between these types of schools?

43. PSCSTUDENT

Who was in college or some other type of school beyond high school?
(Indicate which members from household roster)
Probe: **Anyone else?**

Proceed to Q44. EDUCA. If household has any members attending college or some other type of school beyond high school (Q42. ENROLLC = "Yes"), then also ask Q45. PSCATTEND and the following set of questions for each household member named in Q43. PSCSTUDENT before returning to Q44. EDUCA for the next household member.

Otherwise, proceed to Q44. EDUCA, then skip to Home Accessibility Module (page 18).

44. EDUCA

What is the highest level of school [you have/NAME has] completed or the highest degree [you have/he has/she has] received?

1. ☐ Less than 1st grade
2. ☐ 1st, 2nd, 3rd, or 4th grade
3. ☐ 5th or 6th grade
4. ☐ 7th or 8th grade
5. ☐ 9th grade
6. ☐ 10th grade
7. ☐ 11th grade
8. ☐ 12th grade, no diploma
9. ☐ HIGH SCHOOL GRADUATE – High school DIPLOMA or equivalent (e.g., GED)
10. ☐ Some college but no degree
11. ☐ Diploma or certificate from a vocational, technical, trade, or business school beyond the High School level
12. ☐ Associate degree – Occupational/vocational program
13. ☐ Associate degree – Academic program
14. ☐ Bachelor's degree (e.g., BA, AB, BS)
15. ☐ Master's degree (e.g., MA, MS, MEng, MEd, MSW, MBA)
16. ☐ Professional School degree (e.g., MD, DDS, DVM, LLB, JD)
17. ☐ Doctorate degree (e.g., PhD, EdD)

☐ DK
☐ Ref

45. PSCATTEND

In March of this year, [were you/was NAME] attending college or school full-time or part-time?
1. ☐ Full time
2. ☐ Part-time
☐ DK
☐ REF

46. PSCPUBPV

Is the college or school Public or Private?
1. ☐ Public
2. ☐ Private
☐ DK
☐ Ref

47. PSCLIVE

[Were/Was] [you/NAME] living at this [home/apartment/unit] in March of this year while [you/they] were attending college or school?
1. ☐ Yes – Skip to Q49. PSCSTILL
2. ☐ No – Proceed to Q48. PSCDORM
☐ DK
☐ Ref ⎫ Skip to Q49. PSCSTILL

48. PSCDORM

[Were/Was] [you/NAME] living in housing owned by the university, such as a dorm, in March of this year?
1. ☐ Yes
2. ☐ No
☐ DK
☐ Ref

49. PSCSTILL

[Are you/Is NAME] still enrolled in college or school or will [you/NAME] be in the next few months?
1. ☐ Yes
2. ☐ No
☐ DK ⎫ Skip to Q51. PSCCOMP
☐ Ref

50. PSCDEGREE
What degree or certificate [are you/is NAME] working towards, if any? (Read options if needed.)
1. ☐ Vocational, technical, trade or business certificate or credential (Less than 2 years)
2. ☐ Associate's degree (2-year community or technical college)
3. ☐ Bachelor's degree (For example: BA, AB, BS)
4. ☐ Master's degree (For example: MA, MS, MBA)
5. ☐ Professional School degree (For example: MD, DDS, JD)
6. ☐ Doctorate degree (For example: PhD, EdD)
7. ☐ Non-Degree program
☐ DK
☐ Ref

Probes (first time only):
What other degrees or certificates might people be working towards?

If household member is still enrolled in college or school or will be in the next 6 months (Q49. PSCSTILL = 'Yes"), skip Q51. PSCCOMP.

---

51. PSCCOMP
Did [you/NAME] complete the program?
1. ☐ Yes
2. ☐ No
☐ DK
☐ Ref

Repeat Q44. EDUCA for all household members, and Q45-Q51 for all household members attending college or some type of school beyond high school. Once this is completed, proceed to Home Accessibility Module (page 18).

Home Accessibility Module

The next questions are about accessibility for everyone in your household.

52. HAEQUIP

[Do you/Does anyone in the household] currently use any of the following equipment to get around because of a long-term condition? Exclude temporary injuries. (Please answer this question for everyone in the household.)

(Read all categories; mark all that apply. A response of any bed type is not considered equipment; if this is mentioned and no other equipment then code as '6' (None).))

1. ☐ **Manually Operated Wheelchair**
2. ☐ **Motorized Wheelchair, Cart, or Scooter**
3. ☐ **Crutches**
4. ☐ **Cane or Walker**
5. ☐ **Some Other Mobility Aid**
6. ☐ None
☐ DK
☐ Ref

Probes:
Did you find this easy or difficult to answer?
How did you come up with your answer?
What does the phrase "long-term condition" mean to you in this question?
How about "temporary injuries?"

53. HAEQUIP2

Does your home have any of the following features to help [you/anyone in the household] because of a long-term condition? Exclude temporary injuries.

(Read all categories; mark all that apply.)

1. ☐ **Ramp**
2. ☐ **Chairlift, Stairlift, or Platform Lift**
3. ☐ **Something Else**
4. ☐ None
☐ DK
☐ Ref

Probes:
Did you find this easy or difficult to answer?
How did you come up with your answer? Can you tell me more about that?
(If "elevator" mentioned, ask for more information – whether elevator is there specifically to help them or others in their home with disability, or whether it's there for general convenience of home or building residents and not specific to anyone's disability)

HAINTRO2

The next questions are about whether [you/anyone in the household 6 years of age and older] [have/has] difficulty getting around or doing certain activities in your home. We are only interested in whether these are difficult without assistance from another person or

because of a long-term condition. Do NOT include things that are difficult due to a temporary injury.

54. HADIFFENT

Without assistance from another person, [do you/does anyone in the household 6 years of age and older] currently have difficulty entering the home or property because of a condition other than a temporary injury?

1. ☐ Yes
2. ☐ No
☐ DK
☐ Ref

Probes:

(If needed) You answered ["Yes"/"No"]. Can you tell me more about that?

(All) What does the phrase "have difficulty entering" mean to you in this question?

55. HAGETROOM

(Without assistance from another person,) [Do you/does anyone in the household 6 years of age and older] currently have difficulty getting to any of the following rooms (because of a condition other than a temporary injury):

Kitchen?

1. ☐ Yes
2. ☐ No
☐ DK
☐ Ref

Bathroom?

1. ☐ Yes
2. ☐ No
☐ DK
☐ Ref

Bedroom?

1. ☐ Yes
2. ☐ No
☐ DK
☐ Ref

Probes:

(If living in a studio) Did you find each of these easy or difficult to answer?

(If needed) You answered ["Yes"/"No"] to [INSERT KITCHEN/BATHROOM/BEDROOM]. Can you tell me more about that?

(All) What does the phrase "have difficulty getting to" mean to you in this question?

56. HAKITDIFF

(Without assistance from another person,) [Do you/does anyone in the household 6 years of age and older] currently have difficulty using the kitchen because of a condition other than a temporary injury? Consider such activities as reaching and opening kitchen cabinets or the refrigerator, turning the stove on and off, reaching and using kitchen counters or the sink.

1. ☐ Yes
2. ☐ No
☐ DK
☐ Ref

57. HABTHDIFF

(Without assistance from another person,) [Do you/does anyone in the household 6 years of age and older] currently have difficulty using the bathroom (because of a condition other than a temporary injury)? Consider such activities as reaching and using the sink, turning sink or tub or shower faucets on or off, getting into or out of the bathtub or shower.
1. ☐ Yes
2. ☐ No
☐ DK
☐ Ref

58. HABDDIFF

(Without assistance from another person,) [Do you/does anyone in the household 6 years of age and older] currently have difficulty using a bedroom (because of a condition other than a temporary injury)? Consider such activities as reaching and opening closets or windows, getting dressed, or getting in or out of bed.
1. ☐ Yes
2. ☐ No
☐ DK
☐ Ref

If equipment is used by anyone in the household due to a long-term condition (Q52. HAEQUIP = 1-5), or home has select features to help them (Q53. HAEQUIP2= 1-3), proceed to Q59. HASUPP.

If no equipment is used (Q52. HAEQUIP = "None") and home has no select features (Q53. HAEQUIP2 = "None"), and home has more than one floor (Q18. FLOORSQ > 1), skip to Q60. HABDADD.

Otherwise, skip to instructions after Q63. HABTHADD2 (page 22).

59. HASUPP
On a scale of 1 to 5 (where 1=Not at all, 5=Very well):
How well do you think your current home layout and features support [your accessibility needs/the accessibility needs of anyone in your household]?

_____
☐ DK
☐ Ref
Probes:
How did you come up with your answer?
What does the phrase "accessibility needs" mean to you in this question?

If home has more than one floor (Q18. FLOORSQ > 1), proceed to Q60. HABDADD.

Otherwise, skip to instructions after Q63. HABTHADD2 (page 22).

60. HABDADD
Does [your/the] home currently have a bedroom on the entry level, that is accessible without going up or down steps or stairs?
1. ☐ Yes – Skip to Q62. HABTHADD
2. ☐ No
☐ DK   See instructions below
☐ Ref
Probes:
Did you find this easy or difficult to answer?
How did you come up with your answer?
What does the phrase "entry level" mean to you in this question? What other words or phrases would you use for this?

If Q60. HABDADD = "No" and home is owned (Q10. TENURE = 1), proceed to Q61. HABDADD2.

Otherwise, skip to Q62. HABTHADD (page 22).

61. HABDADD2
Do you plan to add this feature to your home in the next 2 years?
1. ☐ Yes
2. ☐ No
☐ DK

☐ Ref

62. HABTHADD

Does [your/the] home currently have a full bathroom on the entry level, that is accessible without going up or down steps or stairs?

1. ☐ Yes – Skip to instructions after Q63. HABTHADD2
2. ☐ No ⎤
☐ DK ⎬ See instructions below this question
☐ Ref ⎦

Probes:

Did you find this easy or difficult to answer?

How did you come up with your answer?

(If Q60. HABDADD not asked) What does the phrase "entry level" mean to you in this question? What other words or phrases would you use for this?

> If Q62. HABTHADD = "No" and home is owned (Q10. TENURE = 1), proceed to Q63. HABTHADD2.
>
> Otherwise, skip to Debriefing Questions (page 23).

63. HABTHADD2

Do you plan to add this feature to your home in the next 2 years?

1. ☐ Yes
2. ☐ No
☐ DK
☐ Ref

> If home is owned (Q10. TENURE = 1) AND respondent plans to add bedroom or full bathroom to entry level in next 2 years (Q61. HABDADD2 = "Yes" or Q63. HABTHADD2 = "Yes"), then skip to Debriefing Questions (page 23).
>
> If home is owned (Q10. TENURE = 1) otherwise, proceed to Q64. HAFUTURE.
>
> If home is NOT owned (Q10. TENURE ne 1), skip to Debriefing Questions (page 23).

64. HAFUTURE

In the next 2 years, do you plan to do any home improvement projects to make your home more accessible for people with physical limitations, such as people using a wheelchair or a walker?

1. ☐ Yes
2. ☐ No
☐ DK
☐ Ref

Probes:

Can you tell me more about that?

SECTION IV. DEBRIEFING QUESTIONS

AFTER THE INTERVIEW:
Now, I am going to ask you some questions about your answers and about the questions themselves. I am really interested in how these questions work for you, so <u>there are no right or wrong answers</u>.

- **Overall, what did you think of this interview?** [If needed: **Was it easy or difficult? Can you tell me why it was easy or difficult?**]

- **Have you ever answered survey questions about your housing (inventory, ["or home improvements"** (if home owned)]**) in the past? If yes, what was the survey? What was the experience like for you?**

- **Have you ever answered survey questions about post-secondary education, in the past? If yes, what was the survey? What was the experience like for you?**

- **Have you ever answered survey questions about home accessibility, in the past? If yes, what was the survey? What was the experience like for you?**

JUST A FEW FINAL QUESTIONS TO WRAP UP –

- **Overall, do you think some people might find these questions sensitive?**

- **Do you have anything else you would like to tell us that you haven't had a chance to mention yet?**

I want to thank you very much for your participation. I will now give you $40 and I will ask you to sign a receipt form verifying that you received the money.

TURN OFF THE TAPE RECORDER. HAND THE CASH INCENTIVE TO THE PARTICIPANT.