



Accessibility in Housing: Findings from the 2019 American Housing Survey



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PREFACE

In 1990, the Americans with Disabilities Act defined a goal of “equality of opportunity, full participation, independent living, and economic self-sufficiency” for individuals with disabilities. The availability of accessible housing is critical to enable persons with disabilities to live independent lives with minimal support. It is also essential to enable persons with disabilities to participate in society by visiting the homes of friends and family. Housing that meets the needs of persons with disabilities is increasingly important for the United States as the population ages.

As a part of its mission to create strong, sustainable, inclusive communities and quality affordable homes for all, the U.S. Department of Housing and Urban Development (HUD) periodically uses the biennial American Housing Survey (AHS) to assess the stock of homes accessible to those with disabilities. HUD used the AHS in 2011 to collect housing accessibility data and again in 2019 to reassess housing accessibility through a new module containing housing accessibility questions. As the questions substantively changed between the two iterations, no direct comparison between them was conducted.

The 2019 AHS data show that almost 2 in 10 U.S. households include a person with accessibility needs (i.e., households that include someone with a mobility-related disability; someone who uses a mobility-assistive device; someone with difficulty accessing their home; or someone who has difficulty accessing or using bedrooms, bathrooms, or kitchens). These households, however, largely live in homes that are not fully accessible—the 2019 AHS data find that almost 4 in 10 reported that their homes currently do not have accessibility features such as entry-level bedrooms or full bathrooms. Only a very small share of owner households reported plans to install such features or to make accessibility-related improvements to their homes.

This report discusses the findings from this module of housing accessibility questions.

EXECUTIVE SUMMARY

To better understand the level of accessibility in the U.S. housing stock, the U.S. Department of Housing and Urban Development (HUD) asked a series of questions as part of the 2019 American Housing Survey (AHS). The AHS is a HUD-sponsored national household survey that the U.S. Census Bureau (Census) administers every 2 years. The questions were designed to measure the share of U.S. homes that were accessible to those with mobility-related challenges. The following key findings were obtained from analyses of these data.¹

Key Findings

The 2019 AHS measures accessibility in several ways.

- The “Housing Accessibility” module asked if someone in the household used a mobility-assistive device, such as a cane, crutches, electric or manual wheelchair, or something else. A total of 13 percent of U.S. households, representing almost 16 million households, include someone who used at least one of these devices.
- The “Housing Accessibility” module also asked if the household includes someone who had difficulty entering their home, accessing or using the kitchen, accessing or using the bathroom, or accessing or using the bedroom because of a condition. Six percent of U.S. households, representing 6.9 million households, reported having at least one household member with one of these accessibility difficulties.
- The survey’s “Disability” module, which is part of the regular AHS, includes items to measure mobility-related challenges that persons within the household have with walking or climbing stairs or with dressing or bathing. Twelve percent of U.S. households, representing 15.3 million households, include at least one person with these difficulties. It is important to note that although having one of these challenges might indicate a need for accessibility features, the survey does not measure specific accessibility features (such as grab bars in bathrooms) that may help mitigate some of these challenges. It is presumed, however, that these individuals have accessibility-related needs of some type, and they were thus included in the analyses.
- Combining the three accessibility measurements shows that 19 percent of U.S. households, or 23.1 million households, include an individual who has a mobility-related disability, has difficulty accessing their home or accessing and using spaces in their homes, or uses a device to assist with their mobility—that is, *someone with accessibility needs*.
- Households that include someone with accessibility needs were more likely to be located in the South (specifically, in the South Atlantic or East South Central divisions of the United States) and in micropolitan or nonmetropolitan areas. Households of lower

¹ Statistical differences between groups were tested by using z-tests in SPSS, which allows for the testing of difference within each category in an item across various groups. Weaver and Wuensch (2013) compared the statistical tests across SAS (Statistical Analysis System; used primarily by Census and HUD) and SPSS (Statistical Package for the Social Sciences; used for this analysis) and found that the variances obtained and results of tests are mostly similar in both packages, especially when the raw data are used. In addition, the use of the weight for the split sample (SP2WGT) instead of replicate weights in the significance testing may overestimate standard errors slightly, and, as such, the tests may be more conservative compared with variances using replicate weights, as per communication from Census to HUD.

socioeconomic status (as measured by income and education) and households that include veterans or someone 65 years of age or older were also more likely to include someone with accessibility needs.

The “Housing Accessibility” module also included questions on accessibility features in the home, such as ramps, lifts, and the presence of bedrooms and bathrooms on the entry level of the home.

- Five percent of all homes reported having a ramp, whereas 1 percent reported having a chairlift, stairlift, or platform lift—overall, 6 percent of homes reported having a ramp or lift of some type. However, among the remaining 94 percent of homes, many may not require ramps or lifts. These homes may not have stairs leading to the entrance of the home, or they may have elevators servicing the home. Overall, the entrances to 47 percent of U.S. homes were inaccessible without climbing up or down any stairs. In addition, only 14 percent of households with persons with accessibility needs (as defined earlier) reported having a ramp or lift of some type. Of these households, 12 percent reported having a ramp, and 3 percent reported having a lift of some type. Among the 23.1 million households where persons with accessibility needs live, 40 percent (9.2 million) require residents to climb stairs to access the home and do not have ramps or lifts of some type.
- Homes were more likely to have full bathrooms (58 percent) than bedrooms (46 percent) on the entry level. Forty-four percent of homes had a full bathroom and bedroom on the entry level. In addition, 58 percent of households that include someone who has an accessibility issue reported having both a bedroom and bathroom on their entry level (61 and 69 percent reported either a bedroom or bathroom on the entry level, respectively).
- Households that include someone who uses a mobility-assistive device were asked how well their home’s layout and features met the household’s needs on a scale of 1 to 5, in which 1 was “not at all well” and 5 meant “very well.” More than one-half of respondents in these households (56 percent) said 5 (“very well”), whereas just 4 percent reported their home as 1 (“not at all well”); another 17 percent gave a rating of 4, and 11 percent each gave ratings of 2 and 3. Households living in rented units, those living in large metropolitan areas, and those that do not include persons 65 years or older (approximately 6 percent of each group) were more likely to respond with “not at all well” compared with households in owner units; those living outside large, but still metropolitan, areas; and those with members 65 years or older (approximately 3 to 4 percent of each group).

Owner households in which persons live in homes without an entry-level bedroom or full bathroom were asked if they were planning to add those features in the next 2 years. All owner households were asked if they were planning to do any home improvement projects in the next 2 years to make their homes more accessible for persons with physical limitations, such as persons using a wheelchair or a walker.

- Just 1 percent of owner households without an entry-level bedroom or full bathroom were planning to add both in the next 2 years.
- Among owner households without entry-level bedrooms, 1 percent were planning on adding them in the next 2 years.

- When it came to adding a full bathroom on the entry level, 2 percent of owner households without this feature reported intending to do so in the next 2 years.
- Five percent of all owner households reported plans to make their homes more accessible to those using wheelchairs or walkers in the next 2 years.
- Owner households that include persons with accessibility needs, those 65 years or older, or both were generally more likely to report plans for adding these features, but the share doing so was very low: 3 percent each for adding a bedroom or full bathroom on the entry level and 12 percent for making accessibility-related home improvements—that is, making their home more accessible for persons with physical limitations, such as persons using a wheelchair or a walker—in the next 2 years.

In conclusion, almost 2 in 10 U.S. households include a person with accessibility needs. These households, however, largely live in homes that are not fully accessible. For example, about 4 in 10 U.S. households that include a person with accessibility needs do not currently have accessibility features such as ramps, lifts, or a bedroom and full bathroom on the entry level, which are features that they might need. In addition, a negligible share of owner households are planning to add features to make their homes more wheelchair accessible. Still, owner households that include persons with accessibility needs are more likely to be planning to add these types of features to their homes.

INTRODUCTION: STUDY RATIONALE AND RESEARCH QUESTIONS

As part of its ongoing research agenda to better understand the housing stock in the United States, the U.S. Department of Housing and Urban Development (HUD) developed a module of questions to better understand the availability of housing accessible to those with mobility-related challenges. The questions were designed to measure the accessibility needs of U.S. households, the adequacy of U.S. homes' layout and features for persons with mobility-related challenges, and the expected improvements to accessibility features in U.S. homes in the next 2 years (see Appendix A for the exact question wording). This module of questions was asked as a part of the 2019 American Housing Survey (AHS), a biennial national survey sponsored by HUD and administered by the U.S. Census Bureau.

RESEARCH QUESTIONS

The AHS "Housing Accessibility" module asked questions about mobility issues experienced by residents. The module included questions related to the layout of their homes—which may mitigate these mobility issues—and plans for remodeling their homes with accessibility features in the next 2 years.

The analysis in this report examines the following research questions:

1. What does the 2019 AHS survey tell us about the accessibility needs of U.S. households? How do accessibility needs vary by household demographic and housing characteristics?
2. What does the 2019 AHS survey tell us about the adequacy of U.S. homes' layout and features for persons who report accessibility needs? How does the adequacy with respect to need vary by household demographic and housing characteristics?
3. What does the 2019 AHS survey tell us about U.S. household plans to make accessibility-related improvements to their homes in the next 2 years? How do expected improvements vary by household demographic and housing characteristics?

ABOUT THE DATA

The AHS is a longitudinal survey sponsored by HUD and conducted by the Census Bureau. It was conducted annually between 1973 and 1981 and then biennially from 1983 onward. The survey provides a current and continuous series of data on selected housing and demographic characteristics. The AHS collects data on occupied and vacant housing units and is conducted between May and September in odd-numbered years.

THE AHS SAMPLE

The survey uses computer-assisted in-person and telephone interviews to collect data from a nationally representative sample of approximately 86,000 housing units. As the AHS is a longitudinal survey, the same sample units participate in multiple waves; new units are added with each wave to ensure a representative sample. The sample also includes an oversample of HUD-assisted units and units in select metropolitan areas.

The sample was redesigned in 2015, and this module of "Housing Accessibility" questions was asked for the first time in 2019. The AHS included a module on housing accessibility in 2011, but it was substantially different from 2019's module. Given the differences in the samples between 2019 and 2011 and the differences in questions between the two iterations of a module

on housing accessibility, no longitudinal analysis of the data from this 2019 module is possible. More details on the methodology of the survey are available at <https://www.census.gov/programs-surveys/ahs/about/methodology.html>.

THE AHS QUESTIONNAIRE

The survey asks detailed questions about each housing unit, including unit characteristics, equipment, and appliances; the cost, tenure, and financing of the unit; home improvements completed in the units; and neighborhood characteristics. The survey also collects detailed demographic data about each resident in the housing unit, including age, gender, race and ethnicity, marital status, highest level of education completed, disability status, and income information.

The survey includes topical modules that are rotated in and out of various AHS iterations; they are usually asked of approximately one-half the sample to keep the survey at a reasonable length and reduce respondent burden. The “Housing Accessibility” module is one such topical module and was asked for the first time in 2019. The questions from this module are provided in Appendix A. The entire AHS questionnaire can be found at <https://www2.census.gov/programs-surveys/ahs/2019/2019%20ahs%20items%20booklet.pdf>.

It is important to note that HUD last used the AHS to collect housing accessibility data in 2011, but that module of questions was discontinued.² In 2019, HUD decided to use the AHS to reassess housing accessibility and created a new housing accessibility module to be administered with the 2019 AHS. Because the questions in housing accessibility changed substantially between the two iterations, no direct comparisons can be made between them.

WEIGHTING THE AHS DATA

As noted above, the “Housing Accessibility” question module was asked of approximately one-half the 2019 AHS sample but weighted to represent all U.S. households. The weights were created by the Census Bureau and are based on the AHS’s complex, stratified sampling plan. The weights account for nonresponses and are designed to make the data more representative of U.S. households. Statistics for the “Housing Accessibility” module are weighted by SP2WEIGHT, the weighting variable for this module.

It is important to note that differences among subgroups in the narrative are statistically significant at the 95-percent level of confidence—that is, in 95 of 100 times, the observed differences are expected to occur. Significance was tested using z-tests in SPSS, which allow for the testing of differences within each category in an item across various groups.³ SP2WEIGHT was used in the variance analysis to test for statistically significant differences; using replicate weights might yield slightly different results.⁴

HANDLING MISSING AND EDITED DATA

Missing data for variables in the “Housing Accessibility” module were not imputed. Instead, cases with missing data, refusals, or both were excluded from the analysis. The number of such cases varies by item but is no more than 3 percent of eligible cases for the items in the analysis.

² Additional information on the previous module of questions is available at <https://www.huduser.gov/portal/publications/mdrt/accessibility-america-housingstock.html>.

³ Weaver and Wuensch (2013) compared the statistical tests across SAS, which is primarily used by Census and HUD, and SPSS, which was used in this analysis, and found that the variances obtained and results of tests are mostly similar in both packages, especially when raw data are used.

⁴ According to communication from the Census Bureau, which was shared by HUD, this method of significance testing may overestimate standard errors slightly, and, as such, the tests may be more conservative compared with variances obtained using replicate weights.

In addition, the weighting scheme excludes cases not considered to be at least partially complete. However, the Census Bureau does provide imputed data for many AHS variables, such as demographic variables. Imputed data are reflected in the data where available.

THE AHS DATA

The 2019 AHS data represent 124.1 million households across the United States. Of these, 19 percent, or 23.1 million households, include at least one person who has a mobility-related disability, uses a mobility assistance device, or has difficulty entering their home or accessing or using bedrooms, bathrooms, or kitchens. Thirty percent of U.S. households, representing 37.2 million households, include at least one person age 65 years or older—a demographic group that is likely to have increasing mobility issues as they age. Of this group of households, 13.2 million include someone with a mobility issue—that is, someone who has a mobility-related disability, uses a mobility assistance device, or has difficulty getting around.

ACCESSIBILITY NEEDS OF U.S. HOUSEHOLDS

The 2019 AHS measures accessibility needs in several different ways. The survey’s “Housing Accessibility” module asked if someone in the household uses a mobility device, such as a cane, crutches, or electric or manual wheelchair; 13 percent of households, or almost 16 million households, included someone who uses at least one of these devices. The most commonly used device was a cane or walker, reported by 64 percent of households in which someone uses an assistive device. Almost one-third of the households with someone using an assistive device include someone who uses an electric wheelchair (32 percent), and 12 percent include at least one person who uses a manual wheelchair. Four percent of these households include someone who uses a crutch, whereas 4 percent reported someone using another type of assistive device. The “Housing Accessibility” module asked if the household includes someone who has difficulty with one of the following:

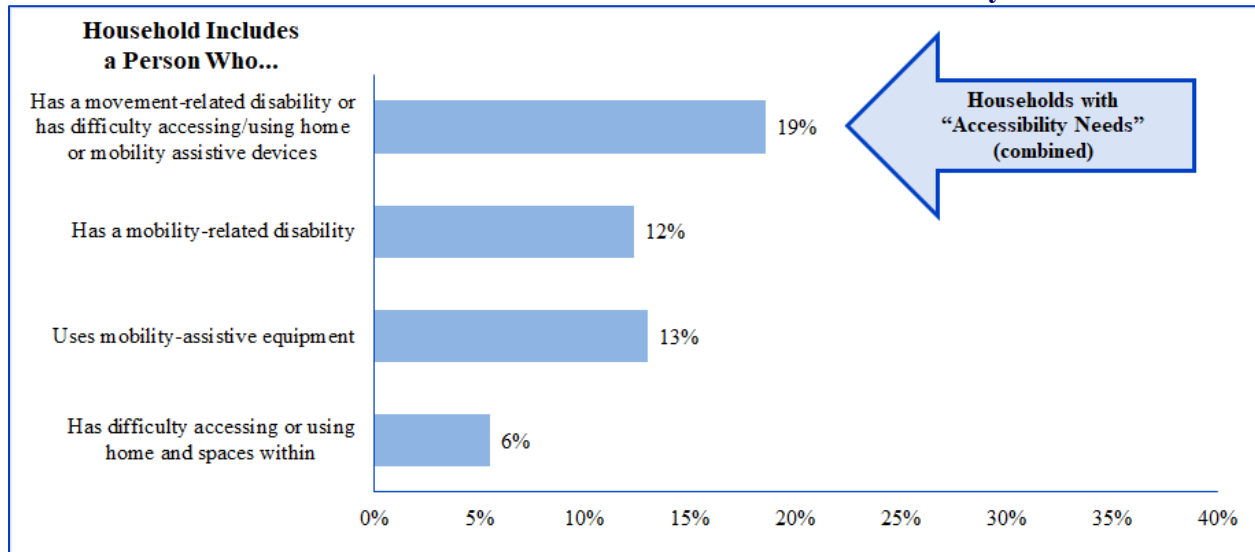
- Entering their home because of a condition—3 percent of households.
- Accessing the kitchen because of a condition—2 percent of households.
- Accessing the bathroom because of a condition—2 percent of households.
- Accessing the bedroom because of a condition—2 percent of households.
- Using the kitchen without assistance—3 percent of households.
- Using the bathroom without assistance—3 percent of households.
- Using the bedroom without assistance—2 percent of households.

Overall, 6 percent of U.S. households, representing 6.9 million households, reported having at least one person with one of these accessibility difficulties.

The survey’s “Disability” module (presented in Appendix B), asked as part of the regular AHS, includes items to measure challenges that persons within the households have with walking or climbing stairs challenges for those who have difficulty dressing or bathing. Twelve percent of U.S. households, representing 15.3 million households, include at least one person with these difficulties. It is important to note that although having one of these challenges might indicate a need for accessibility features, the survey does not measure specific accessibility features (such as grab bars in bathrooms) that may help mitigate some of these challenges. It is presumed, however, that these individuals have accessibility-related needs, and they were thus included in the analyses.

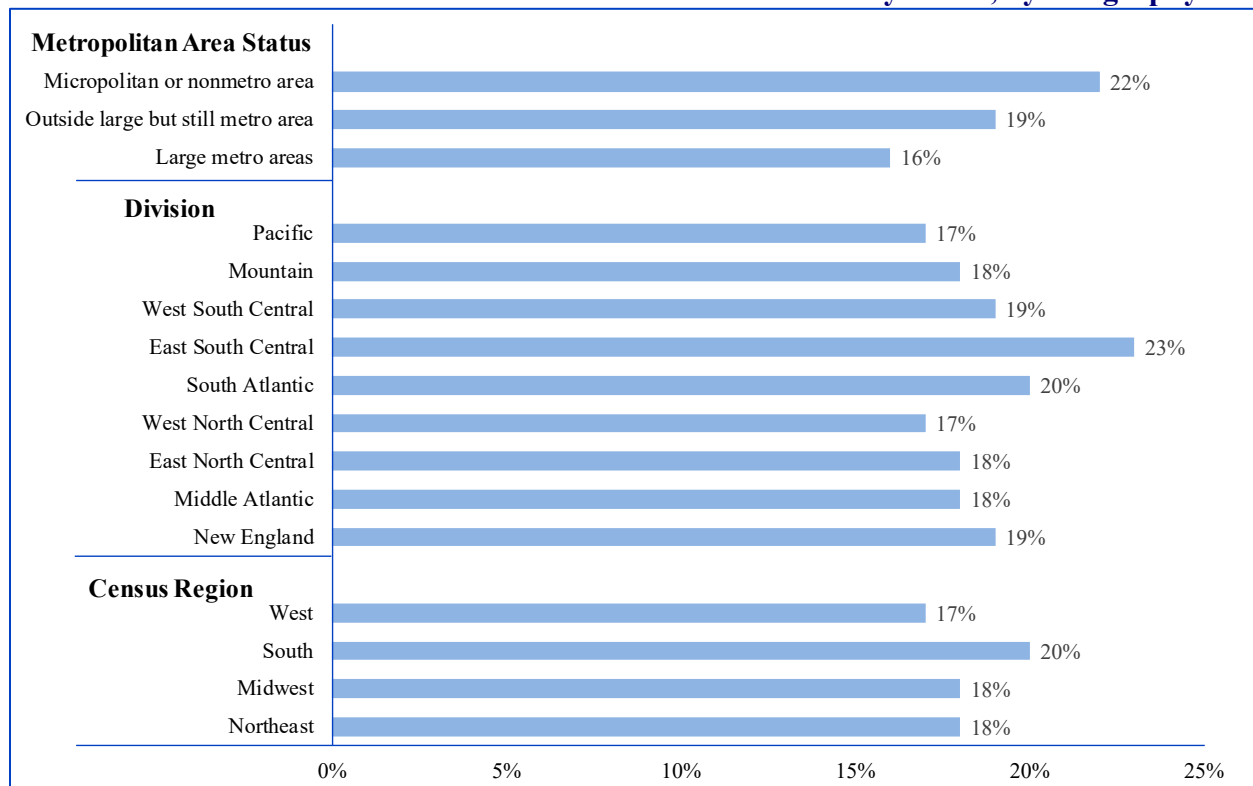
Combining the three measurements of accessibility needs described above yields 19 percent of U.S. households, or 23.1 million households, in which someone has a mobility-related disability, has difficulty accessing their home or accessing and using spaces in their homes, or uses a device to assist with their mobility. In short, these were the households in which at least one person has some sort of accessibility need (see Exhibit 1). As this combined variable covers all aspects of a resident’s home accessibility needs, further analyses by demographic and other characteristics focus on this variable; in this report, it is referred to as households that include persons with accessibility needs.

Exhibit 1: Households that Include Persons with Accessibility Needs



As Exhibit 2 shows, households that include at least one person with accessibility needs are more likely to be in the South (20 percent) compared with the Midwest (18 percent) or the West (17 percent). The census divisions of East South Central (23 percent) and South Atlantic (20 percent) have the largest share of households with persons with accessibility needs. In addition, households in micropolitan or nonmetropolitan areas (22 percent) are more likely to include persons with accessibility needs compared with those in large metropolitan areas (16 percent) and those outside large but still metropolitan areas (19 percent).

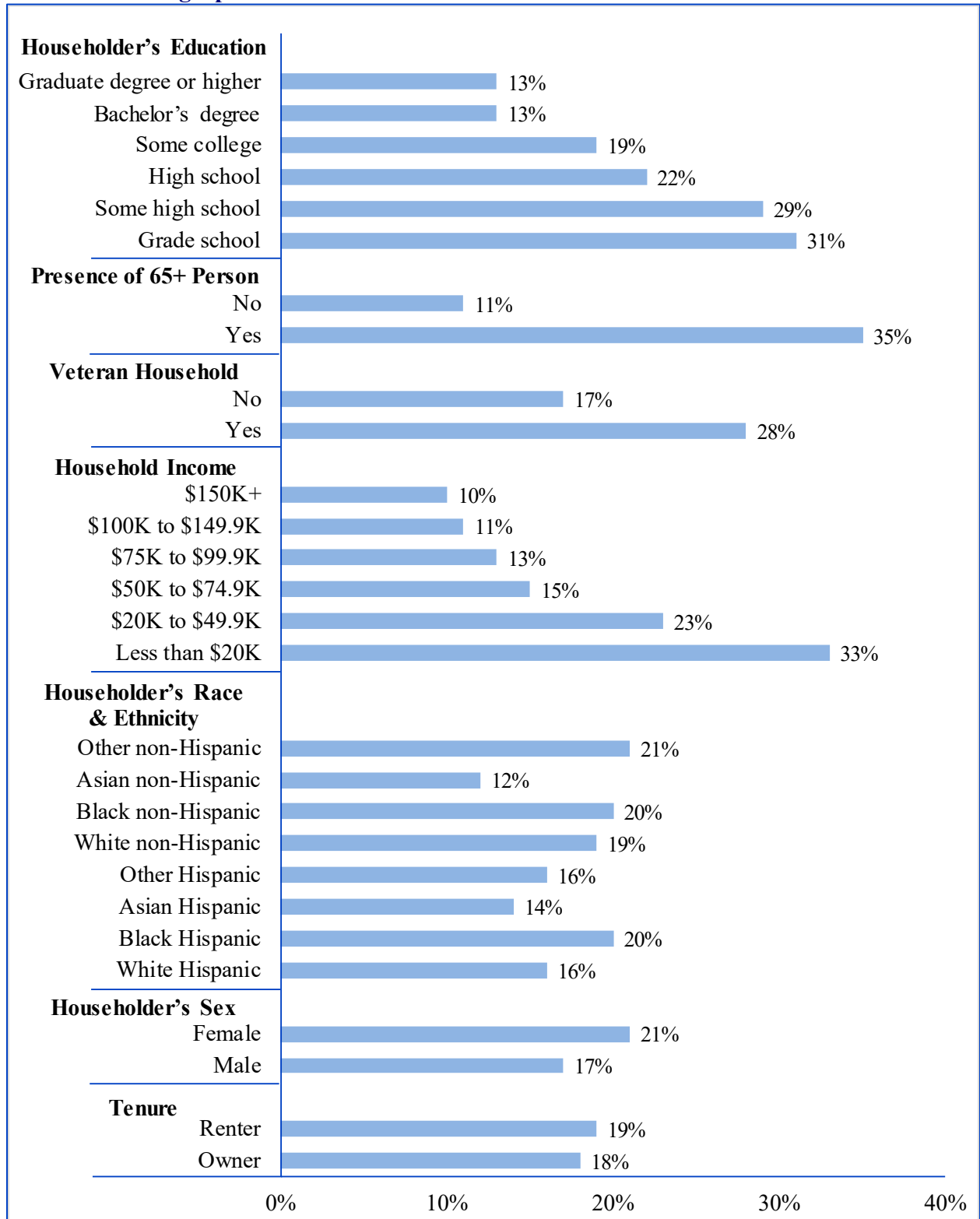
Exhibit 2: Households that Include Persons with Accessibility Needs, by Geography



Households headed by women (21 percent) were more likely to include persons with accessibility needs compared with those headed by men (17 percent); Exhibit 3 shows these differences. Asian non-Hispanic-headed households (12 percent) were the least likely to report including someone with accessibility needs, whereas Other non-Hispanic households (21 percent) were the most likely to include someone with accessibility needs, followed by Black Hispanic- and non-Hispanic-headed households (20 percent each) and White non-Hispanic-headed households (19 percent). Households that include veterans (28 percent) and someone age 65 years or older (35 percent) were more likely to include a person with accessibility needs than those without veterans (17 percent) or those without anyone over 65 years (11 percent).

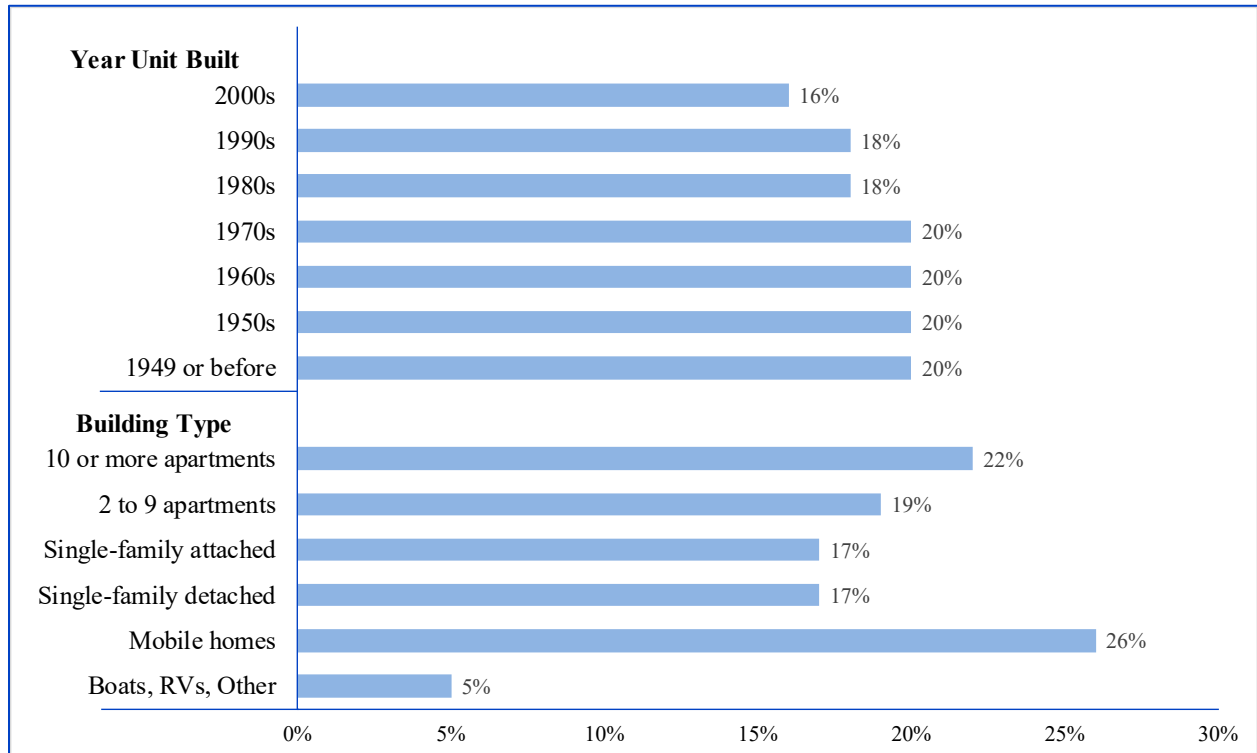
As Exhibit 3 illustrates, households with lower incomes were more likely to include someone with accessibility needs. Fully one-third of households with household incomes under \$20,000 per year and almost one-fourth (23 percent) of households with annual household incomes of \$20,000 to \$49,999 included someone with an accessibility issue, compared with 10 to 15 percent of households with higher annual household incomes. Similarly, households headed by those reporting lower levels of education (31 percent, 29 percent, 22 percent, and 19 percent of those with only grade school education, some high school, a high school diploma, and some college education, respectively) were more likely to include someone with accessibility needs compared with those reporting college degrees or more (13 percent).

Exhibit 3: Households that Include Persons with Accessibility Needs, by Householder Demographics



Analysis by building type provides further evidence of these socioeconomic differences. As Exhibit 4 shows, households living in mobile homes (26 percent) were more likely to include persons with accessibility needs compared with those living in single-family attached units or those living in small apartment buildings with two to nine units.

Exhibit 4: Households that Include Persons with Accessibility Needs, by Home Characteristics



In short, households in the South (specifically, in the South Atlantic or East South Central divisions of the United States), households in micropolitan or nonmetropolitan areas, households of lower socioeconomic status (as measured by income and education), and households that include veterans and those 65 years or older were the most likely to include someone with accessibility needs.

ACCESSIBILITY OF U.S. HOMES

The “Housing Accessibility” module included questions on accessibility features in the home, such as ramps, lifts, and the presence of bedrooms and bathrooms on the entry level of the home.

Overall, 5 percent of homes reported having a ramp, and 1 percent reported having a chairlift, stairlift, or platform lift, with 6 percent of all homes reporting a ramp or lift of some type. It should be noted, however, that among the remaining 94 percent of homes, many may not require ramps or lifts, as these homes may not have stairs leading to the entrance of the home or may have elevators servicing the home—52 percent of all American homes are accessible without climbing up or down any stairs; but in 47 percent of homes, climbing up or down stairs to enter the home is required. Among the homes where persons with accessibility needs live, 56 percent

are accessible without climbing up or down stairs.⁵ It should be further noted that among the 23.1 million households where persons with accessibility needs live, 9.2 million (40 percent) require climbing stairs to access and do not have ramps or lifts of some type.

Just 14 percent of households that include persons with accessibility needs reported having a ramp or lift of some type; 12 percent of these households reported having a ramp, and 3 percent reported a lift. The questions in the module did not specify the location of the ramp or lift. It is unclear if ramps or lifts reported are to access the home or are located within the home to allow access to different levels of the home.

Another common accessibility feature is the presence of bedrooms and full bathrooms at the entry level so that a person with mobility issues does not have to navigate floors within the home to sleep or bathe. Homes are more likely to have full bathrooms on the entry level (58 percent of homes) compared with bedrooms (46 percent). Forty-four percent of homes reported having a full bathroom and bedroom on the entry level.

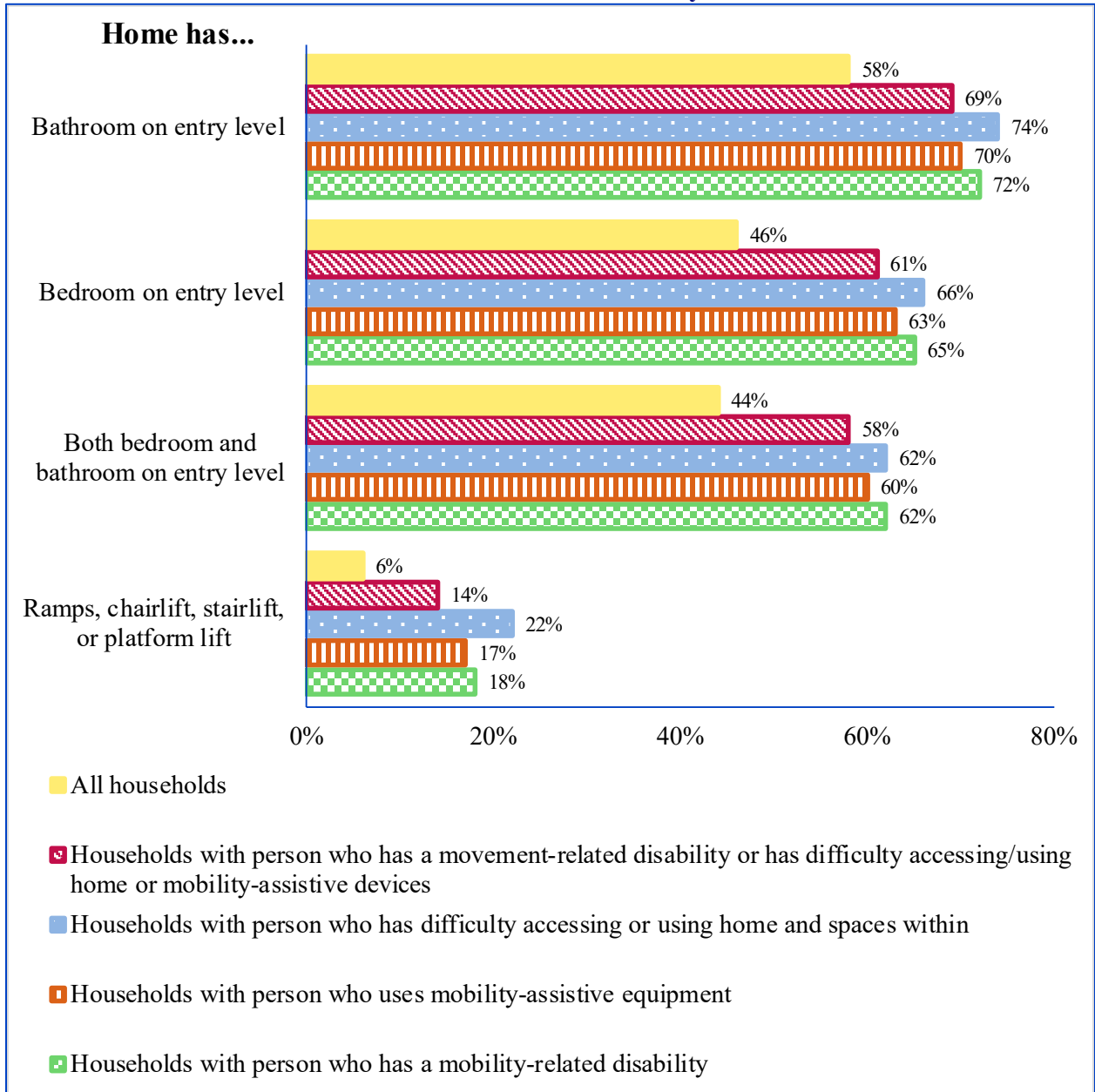
Those who may require these features because of accessibility needs are more likely to have these accessibility features (see Exhibit 5). More than one-half (58 percent) of households that include persons with accessibility needs reported having both a bedroom and a full bathroom on the entry level (61 percent and 69 percent reported either entry-level bedrooms or bathrooms, respectively).

Sixty-two percent of households that include persons with difficulty accessing or using their bedroom, bathroom, or kitchen have a bedroom and bathroom on the entry level (66 percent reported entry-level bedrooms, and 74 percent reported entry-level bathrooms). Approximately 22 percent reported a ramp or lift of some type. Households that include persons using mobility-assistive devices or persons with a mobility-related disability were less likely to report having these features (see Exhibit 5).

Exhibit 5 shows the share of all households living in homes with these accessibility features, as well as the subsets of households that include residents with different types of accessibility needs both separately (has difficulty accessing spaces, uses mobility devices, or has a mobility-related disability) and combined (that is, the 19 percent of households that include at least one person with at least one of the three accessibility needs).

⁵ Additional investigation based on data available in the 2019 public data file reveals that 64 percent of units with no ramps or lifts are in buildings with multiple stories (it was not possible to assess if these buildings include an elevator, as these data are not available in the public data file); many of these buildings (49 percent) have multiple floors, indicating that many of these units might be challenging for those with accessibility needs to navigate.

Exhibit 5: Homes with Accessibility Features



In short, these data suggest that approximately 4 in 10 U.S. households that would find having a bedroom and full bathroom on the entry level useful do not currently have both of these features; another 4 in 10 households that might find a ramp or lift of some type useful do not currently have one.

The remainder of the analysis of accessibility features in the home focuses on the 19 percent of U.S. households that include at least one person who has a mobility-related disability, has difficulty accessing their home or spaces within the home, or uses a mobility-assistive device.

As Exhibit 6 shows, the presence of ramps or lifts of some type in homes with persons with accessibility needs is similar across regions and census divisions. Among these homes, those in

micropolitan or nonmetropolitan areas (18 percent) are more likely to have ramps or lifts of some type compared with their counterparts in large metropolitan areas (12 percent).

Exhibit 6 also shows that among households with someone with accessibility needs, those in the Midwest (65 percent) are more likely to live in homes with bedrooms and full bathrooms on the entry level compared with similar households in the East (52 percent) and the West (54 percent)—59 percent of these households live in homes with entry-level bedrooms and bathrooms in the South. Those living in the East South Central (75 percent) and the East North Central (67 percent) census divisions are the most likely to have bedrooms and bathrooms on the entry level; households in the Mountain (46 percent) and Middle Atlantic (49 percent) census divisions were the least likely. Households that include someone with an accessibility issue are most likely to live in homes with entry-level bedrooms and full bathrooms in micropolitan or nonmetropolitan areas (68 percent) compared with those in large metropolitan areas (52 percent) and those outside large, but still in metropolitan, areas (58 percent).

Exhibit 6: Presence of Accessibility Features in Homes of Households that Include Persons with Accessibility Needs, by Geography

Home has...	Ramps, Chairlift, Stairlift, or Platform Lift (%)	Both Bedroom and Bathroom on Entry Level (%)	Bedroom on Entry Level (%)	Bathroom on Entry Level (%)
<i>Region</i>				
East	17	52	56	63
Midwest	14	65	67	76
South	14	59	62	71
West	13	54	57	67
<i>Census Division</i>				
New England	16	60	64	68
Middle Atlantic	17	49	53	60
East North Central	12	67	69	77
West North Central	17	62	63	71
South Atlantic	14	53	56	66
East South Central	18	75	77	84
West South Central	13	65	71	73
Mountain	13	46	49	64
Pacific	13	58	62	69
<i>Metropolitan Area Status</i>				
Large Metropolitan Area	12	52	56	64
Outside Large, but Still Metropolitan, Area	15	58	61	70
Micropolitan or Nonmetropolitan Area	18	68	71	80

As shown in Exhibit 7, among households that include persons with accessibility needs, owner homes (16 percent) are more likely to have ramps or lifts of some type compared with renter homes (12 percent); households headed by White non-Hispanics (16 percent) are more likely to live in homes with ramps or lifts of some type compared with their Asian non-Hispanic

(5 percent) counterparts; and households with annual household incomes between \$20,000 and \$49,999 (18 percent) are more likely to have these features compared with households with annual household incomes of \$150,000 or more (9 percent). Veteran households (19 percent) and those with persons age 65 years or older (18 percent) are more likely to have these features when compared with those without veterans (13 percent) or someone age 65 years or older (10 percent). Among these households, those living in mobile homes (23 percent) are more likely to have ramps or lifts of some type than those living in single-family homes and small apartment buildings (8 to 15 percent).

In short, the data on ramps and lifts suggest that homes of households that include persons with accessibility needs are more likely to have these features if they are in micropolitan or nonmetropolitan areas, in the Midwest region, owner households, headed by White non-Hispanics, veteran households, or households that include a person 65 years or older. Mobile homes are also more likely to have these features. Still, only one-seventh of U.S. homes of persons with accessibility needs currently have these features.

Among households that include persons with accessibility needs, White non-Hispanic households (62 percent) are more likely to live in homes with entry-level bedrooms and full bathrooms compared with their White Hispanic counterparts (42 percent); those with annual household incomes of \$20,000 to \$49,999 (59 percent) and \$75,000 to \$99,999 (67 percent) are more likely to live in such homes compared with those with annual household incomes of \$100,000 to \$149,999 (47 percent). Among households that include persons with accessibility needs, those living in single-family detached homes (61 percent) are more likely to have these features compared with those living in single-family attached homes (25 percent) or small apartment buildings with two to nine units (44 percent). Almost three-fourths (73 percent) of homes in larger apartment buildings (10 or more units) that have someone with an accessibility issue residing in them have a full bathroom and bedroom on the entry level—possibly because apartments in larger buildings often comprise just one level and are accessible by building elevators (householders in these buildings may not have considered the steps required to climb to the relevant building floor, especially if it is accessible by elevator, and may consider their whole unit to be at entry level).⁶

A common recommended feature of accessible homes is a bedroom and full bathroom on the entry level of the home. Almost 4 in 10 households that include someone with an accessibility need currently do not have both of these features in their homes. Households that include persons with accessibility needs are more likely to be in micropolitan or nonmetropolitan areas or in the Midwest, headed by a White non-Hispanic householder, or live in single-family detached homes.

⁶ In the 2019 AHS, homes occupied by those with accessibility needs in apartment buildings with 10 or more units were largely in buildings with multiple stories (92 percent compared with 70 percent of apartments dwelt in by similar residents in smaller buildings), and these buildings may be more likely to have elevators. These homes were slightly more likely to have only one floor within the unit (76 percent compared with 73 percent of those in smaller buildings).

Exhibit 7: Presence of Accessibility Features in Homes of Households that Include Persons with Accessibility Needs, by Householder Demographic and Home Characteristics

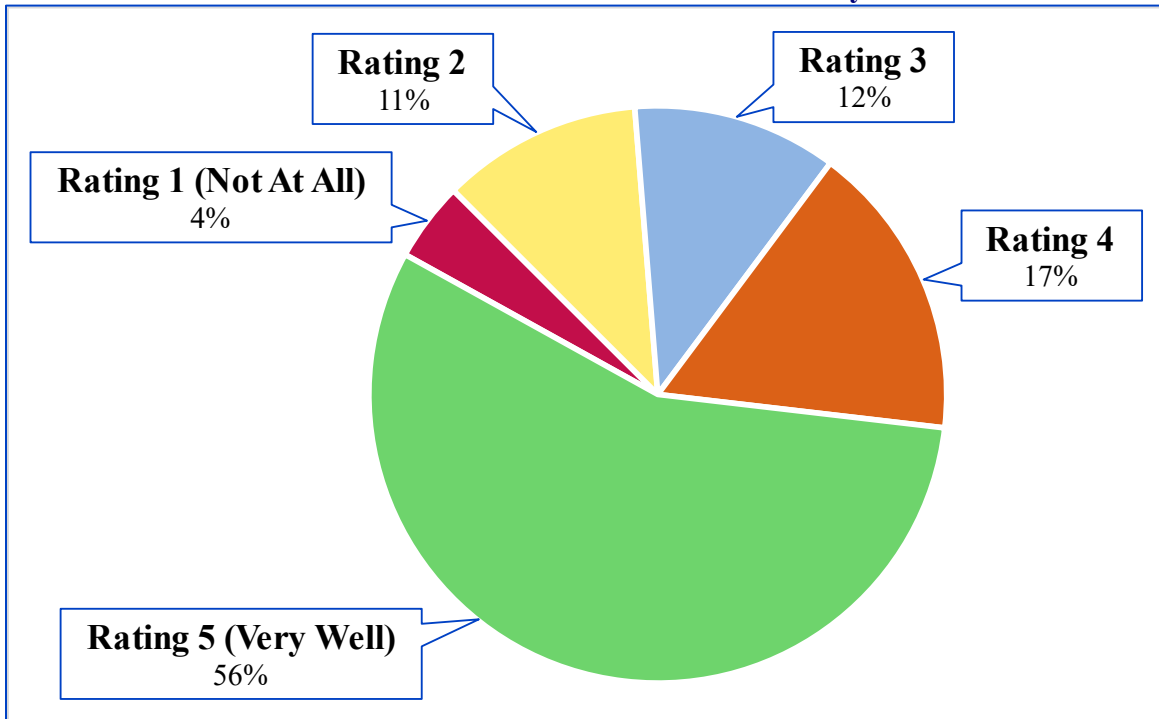
Home has...	Ramps, Chairlift, Stairlift, or Platform Lift (%)	Both Bedroom and Bathroom at Entry Level (%)	Bedroom at Entry Level (%)	Bathroom at Entry Level (%)
<i>Tenure</i>				
Owner	16	58	62	71
Renter	12	57	59	66
<i>Householder's Sex</i>				
Male	15	57	60	69
Female	14	59	62	70
<i>Householder's Race and Ethnicity</i>				
White Hispanic	11	42	46	58
Black Hispanic	21	49	49	49
Asian Hispanic	4	44	44	100
Other Hispanic	3	30	30	64
White non-Hispanic	16	62	66	73
Black non-Hispanic	11	50	54	60
Asian non-Hispanic	5	49	51	59
Other non-Hispanic	15	59	59	66
<i>Household Income</i>				
Less than \$20K	14	63	66	73
\$20K to \$49.9K	18	59	63	73
\$50K to \$74.9K	13	56	61	67
\$75K to \$99.9K	13	67	69	78
\$100K to \$149.9K	11	47	50	58
\$150K+	9	53	55	62
<i>Veteran Household</i>				
Yes	19	64	67	75
No	13	56	60	68
<i>Presence of 65+ Person</i>				
Yes	18	62	65	74
No	10	53	56	64
<i>Householder's Education</i>				
Grade School	20	66	66	82
Some High School	14	60	62	70
High School	15	64	66	75
Some College	15	57	60	69
Bachelor's Degree	12	55	58	67
Graduate Degree or Higher	13	51	56	60
<i>Building Type</i>				
Single-Family Detached	15	61	65	73
Single-Family Attached	10	25	28	36

Home has...	Ramps, Chairlift, Stairlift, or Platform Lift (%)	Both Bedroom and Bathroom at Entry Level (%)	Bedroom at Entry Level (%)	Bathroom at Entry Level (%)
2–9 Apartments	8	44	48	55
10 or More Apartments	15	73	73	79
Mobile Homes	23	Not asked	Not asked	Not asked
Boats, RVs, Other	0	Not asked	Not asked	Not asked
<i>Year Unit Built</i>				
1949 or Before	13	55	59	67
1950s	16	68	71	76
1960s	16	69	71	76
1970s	16	52	55	62
1980s	14	48	51	63
1990s	15	59	62	73
2000s	11	58	60	68

RV = recreational vehicle.

The “Housing Accessibility” module asked those respondents with a household member who uses a mobility-assistive device to rate how well their home’s layout and features meet the household’s needs (note that the respondent is not necessarily the person using the mobility assistive device). As Exhibit 8 shows, more than one-half of these households (56 percent) rated their home as meeting their household’s needs “very well”; another 17 percent gave their home a rating of 4 on a scale of 1 to 5, where 1 equaled “not at all” and 5 equaled “very well.” Eleven percent of these householders rated their home as 3, which is neutral on the scale, and another 11 percent gave their home a rating of 2. Just 4 percent of householders said their home was “not at all” meeting household needs.

Exhibit 8: Rating of Homes' Layout and Features Meeting Household's Needs Among Households with a Person Who Uses a Mobility-Assistive Device



Renters (6 percent) were more likely to say that their home was “not at all” meeting their household’s needs compared with owners (3 percent); those living in large metropolitan areas (6 percent) were more likely to say “not at all” compared with those living outside large, but still metropolitan, areas (4 percent). Households that included someone 65 years of age or older (4 percent) were less likely to rate their home as not meeting their household’s needs compared with those comprising only younger household members (6 percent).

PLANS TO ADD ACCESSIBILITY FEATURES

Owner households that reported not having an entry-level bedroom or full bathroom were asked if they had plans to add those features in the next 2 years; all owner households were asked if they were planning to do any home improvement projects in the next 2 years to make their homes more accessible for persons with physical limitations, such as persons using a wheelchair or a walker.

Just 1 percent of owner households planned to add both an entry-level bedroom and a full bathroom in the next 2 years in homes lacking such features. Among these households, those that include someone with accessibility needs (2 percent), those reporting someone with a mobility-related disability (2 percent), and those that include someone who has difficulty accessing or using spaces in their homes (3 percent) were more likely to have plans to add both these features to their homes compared with 1 percent of households without such persons (see Exhibit 9).

One percent of owner households without entry-level bedrooms were planning to add them in the next 2 years. Owner households without this feature were more likely to have plans to add an entry-level bedroom to their homes at the following rates:

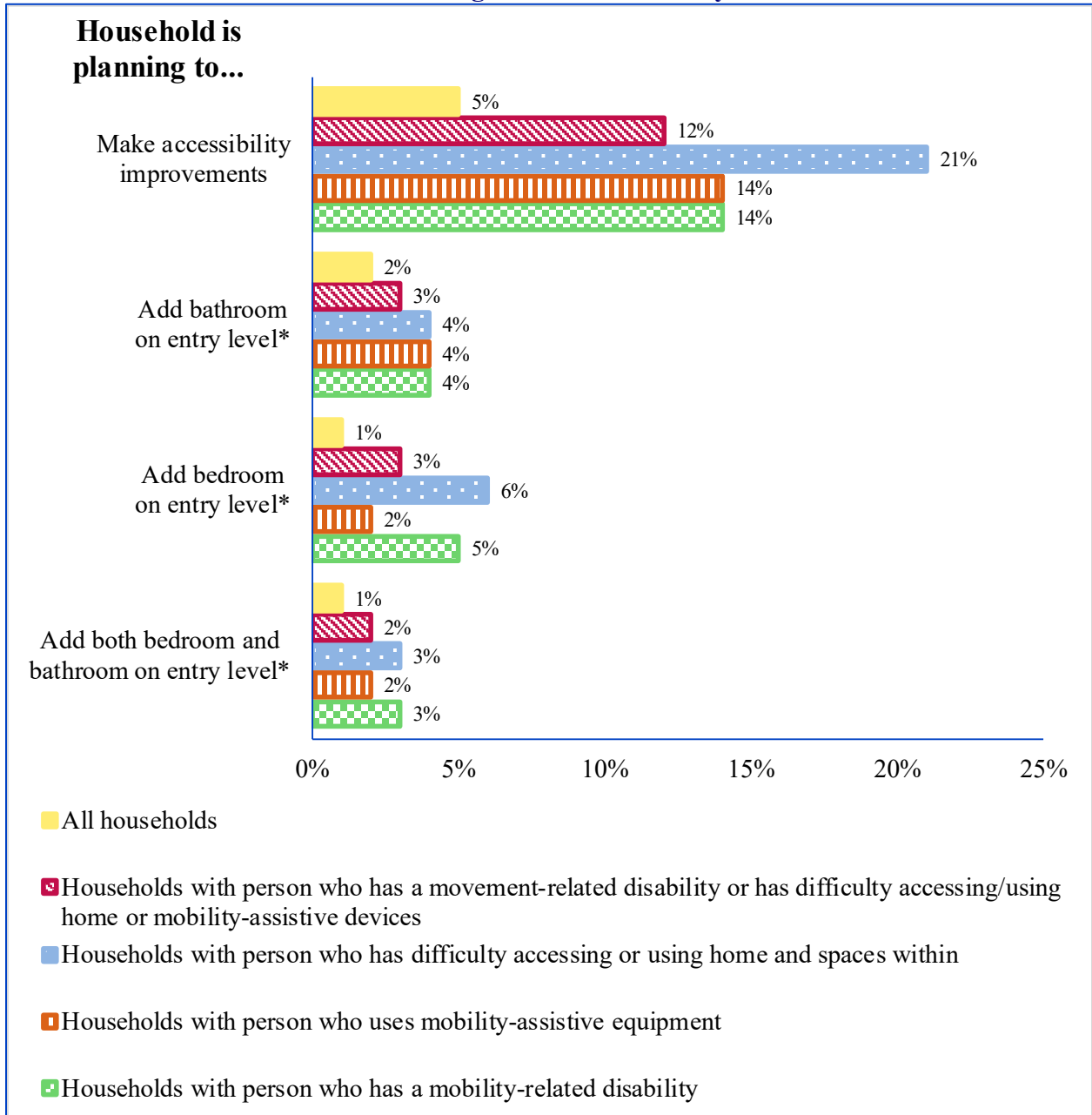
- Households in which someone has an accessibility issue (3 percent).
- Households reporting someone with a mobility-related disability (5 percent).
- Households that include someone who has difficulty accessing or using spaces in their home (6 percent).
- Households that include someone age 65 years or older (2 percent).

Two percent of owner households without an entry-level full bathroom reported having plans to add one in the next 2 years. Owner households that consisted of someone with a mobility-related disability were more likely to be planning to add it in the next 2 years (5 percent compared with 1 percent of owner households without such persons).

Five percent of all owner households reported having plans to make their homes more accessible to those using wheelchairs or walkers in the next 2 years. The owner households that were more likely to have plans to add these features to their homes were the following:

- Those that include someone with accessibility needs (12 percent compared with 3 percent of households without such persons).
- Those reporting someone with a mobility-related disability (14 percent compared with 3 percent of households without such persons).
- Those that include someone who has difficulty accessing or using spaces in their home (21 percent compared with 4 percent of households without such persons).
- Those with someone using a mobility-assistive device (14 percent compared with 3 percent of households without such persons).
- Those that include someone 65 years or older (6 percent compared with 4 percent of households with younger members).

Exhibit 9: Owner Households Planning to Add Accessibility Features in the Next 2 Years



* Homeowners were asked if there were plans to add these features only if the home did not already have the feature.

Among owner households without an entry-level bedroom or full bathroom that include at least one person with accessibility needs, those that include someone 65 years or older were more likely to be planning to add an entry-level bedroom, with 4 percent of these households reporting plans to add this feature in the next 2 years compared with 1 percent of households without such persons. Households that include veterans were more likely to be planning to add an entry-level full bathroom in the next 2 years compared with those without veterans, at 6 percent and 2 percent, respectively.

Among owner households that include someone with an accessibility issue, those in micropolitan or nonmetropolitan areas (14 percent) were more likely to be making plans for these improvements in the next 2 years than those in large metropolitan areas (12 percent) and those outside large, but still metropolitan, areas (11 percent). Households that include veterans (14 percent vs. 12 percent of households without veterans) and households that include someone age 65 years or older (13 percent vs. 11 percent of households without such persons) were more likely to be planning such improvements.

In conclusion, almost 2 in 10 U.S. households include a person with accessibility needs. These households, however, largely live in homes that are not fully accessible. For example, about 4 in 10 U.S. households that include a person with accessibility needs do not currently have accessibility features such as ramps, lifts, or a bedroom and full bathroom on the entry level, all of which are features that they might need. In addition, a negligible share of owner households are planning to add features to make their homes more wheelchair accessible. Still, owner households that include persons with accessibility needs are more likely to be planning to add these types of features to their homes.

APPENDIX A: “HOUSING ACCESSIBILITY” MODULE QUESTIONS

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

^Anyone_You 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.

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

Does your ^HTYPEFILL have a ramp?

1. Yes
2. No

Does your ^HTYPEFILL have a chairlift, stairlift, or platform lift?

1. Yes
2. No

The next questions are about whether you or anyone Has or have 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, ^anyone_you_6yrs currently have difficulty entering the home or property because of a condition other than a temporary injury?

1. Yes
2. No

Without assistance from another person, ^anyone_you_6yrs currently have difficulty getting to The/A Kitchen kitchen (because of condition other than a temporary injury)?

1. Yes
2. No

(Without assistance from another person, ^anyone_you_6yrs currently have difficulty getting to) **The/A Bathroom bathroom** (because of a condition other than a temporary injury)?

1. Yes
2. No

(Without assistance from another person, ^anyone_you_6yrs currently have difficulty getting to) **The/A Bedroom bedroom** (because of a condition other than a temporary injury)?

1. Yes
2. No

(Without assistance from another person,) **^anyone_you_6yrs 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

(Without assistance from another person,) **^anyone_you_6yrs 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

(Without assistance from another person,
^anyone_you_6yrs 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

[ASK IF USES MOBILITY DEVICE] On a scale
of 1 to 5 (1=Not at all, 5=Very well):

How well do you think your current home
layout and features support
^anyone_you_midsentence?

Does ^your_the home currently have any of
the following features: Bedroom on entry
level?

1. Yes
2. No

[ASK IF NO ABOVE] Do you plan to
add this feature to your home in the
next 2 years?

1. Yes
2. No

Does ^your_the home currently have any of
the following features: Full bathroom on the
entry level?

1. Yes
2. No

[ASK IF NO ABOVE] Do you plan to
add this feature to your home in the
next 2 years?

1. Yes
2. No

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

APPENDIX B: “DISABILITY” MODULE QUESTIONS

Now thinking about everyone in your household. ^Are_Is3 deaf or do ^You_They2 have serious difficulty hearing?

1. Yes
2. No

Who is that?

Enter all that apply, separate with commas. Probe: **Anyone else?**

96. Not Listed

^Are_Is3 blind or do ^You_They2 have serious difficulty seeing even when wearing glasses?

1. Yes
2. No

Who is that?

Enter all that apply, separate with commas. Probe: **Anyone else?**

96. Not Listed

Because of a physical, mental, or emotional condition, ^Anyone_You2 have serious difficulty concentrating, remembering, or making decisions?

1. Yes
2. No

Who is that?

Enter all that apply, separate with commas. Probe: **Anyone else?**

96. Not Listed

^Anyone_You have serious difficulty walking or climbing stairs?

1. Yes
2. No

Who is that?

Enter all that apply, separate with commas. Probe: **Anyone else?**

96. Not Listed

^Anyone_You have difficulty dressing or bathing?

1. Yes
2. No

Who is that?

Enter all that apply, separate with commas. Probe: **Anyone else?**

96. Not Listed

Because of a physical, mental, or emotional condition, ^You_Anyone2 have difficulty doing errands alone such as visiting a doctor's office or shopping?

1. Yes
2. No

Who is that?

Enter all that apply, separate with commas. Probe: **Anyone else?**

96. Not Listed

REFERENCES

Weaver, Bruce, and Karl L. Wuensch. 2013. "SPSS and SAS Programs for Comparing Pearson Correlations and OLS Regression Coefficients," *Behavior Research Methods* 45 (3): 880–895. <https://doi.org/10.3758/s13428-012-0289-7>.

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