

Inadequate and Unhealthy Housing, 2007 and 2009

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Healthy homes are essential to a healthy community and population (1,2). They contribute to meeting physical needs (e.g., air, water, food, and shelter) and to the occupants' psychological and social health. Housing is typically the greatest single expenditure for a family. Safe housing protects family members from exposure to environmental hazards, such as chemicals and allergens, and helps prevent unintentional injuries. Healthy housing can support occupants throughout their life stages, promote health and safety, and support mental and emotional health. In contrast, inadequate housing contributes to infectious and chronic diseases and injuries and can affect child development adversely (1).

To assess the percentage of persons in the United States living in inadequate or unhealthy homes, CDC analyzed data from the American Housing Survey (AHS) for 2007 and 2009 (3). The U.S. Census Bureau conducts AHS to assess the quality of housing in the United States and to provide up-to-date statistics to the U.S. Department of Housing and Urban Development (HUD). AHS is a national representative survey that collects data on an average of 55,000 U.S. housing units, including apartments, single-family homes, mobile homes, and vacant housing units. The same housing units are visited every 2 years during odd-numbered years, with census bureau interviewers conducting home visits or telephone interviews during April through mid-September of each survey year (4). Information for unoccupied units is obtained from landlords, rental agents, or neighbors.

The definition of inadequate housing is related to the basic structure and systems of a housing unit, whereas the definition of unhealthy housing is related to exposure to toxins and other environmental factors. Inadequate housing is defined as an occupied housing unit that has moderate or severe physical problems (e.g., deficiencies in plumbing, heating, electricity, hallways, and upkeep) (5,6). Examples of moderate physical problems in a unit include two or more breakdowns of the toilets that lasted >6 months, unvented primary heating equipment, or lack of a complete kitchen facility in the unit. Severe physical problems include lack of running hot or cold water, lack of a working toilet, and exposed wiring. (The specific algorithm used to categorize a unit as inadequate has been published elsewhere [6]). For the purposes of this report, CDC has defined unhealthy housing as the presence of any additional characteristics that might negatively affect the health of its occupants, including evidence of rodents, water leaks, peeling paint in homes built before 1978, and absence of a working smoke detector. Other indicators of unhealthy housing, such as poor air quality from mold or radon, are not measured by AHS and therefore are not included in the analysis.

In AHS, housing unit is a house, an apartment, a flat, a manufactured (mobile) home, or one or more rooms occupied or intended for occupancy as separate living quarters. Separate living quarters have direct access to the unit from the outside or from a public hall. A household consists of all persons who occupy a housing unit. The householder is the first member contacted by the interviewer who is aged ≥ 18 years and is an owner or a renter of the housing unit. Household members might be a family or a nonfamily group of friends or unmarried partners. In AHS, each respondent belongs to a household, might be a householder, lives in a housing unit, or might be part of a family.

This report includes estimates of the percentage of occupied housing units that are classified as inadequate or unhealthy by selected demographic characteristics of the householder. Estimates of the relative disparity in the percentage of householders who live in inadequate housing by sex, race/ethnicity, annual income, highest level of completed education, geographic region, and disability status are reported as unadjusted odds ratios with 95% confidence intervals (CIs). Because the replicate weights are not made public, unadjusted odds ratios are the best estimates available, and CIs were calculated by using the probability weights included in the data set. This calculation method is the best available, but its use cannot determine sampling error associated with the sample design, and the method might overestimate the variance, making the CI narrower. To determine statistical significance between years or within a category, the CIs for the particular variables were compared. If the odds ratio (OR) did not fall within the confidence interval for the next year or other variable, the difference was considered statistically significant.

The proportion of housing units classified as inadequate in the United States in 2009 was 5.2%, a percentage that is unchanged from 2007 (Table 1). Female householders were 1.1 times more likely to occupy inadequate housing units than male householders. In 2009, by race/ethnicity, non-Hispanic blacks had the highest odds of householders living in inadequate housing (2.3), followed by Hispanics (2.0), American Indians/Alaskan Natives (1.9), and Asians/Pacific Islanders (1.1) when compared with non-Hispanic whites.

In the 2009 survey, Hispanic female householders (7.4%) were significantly less likely than Hispanic male householders (8.1%) to live in inadequate housing (Table 1). Non-Hispanic black female householders were significantly more likely than non-Hispanic white female householders to live in unhealthy housing during both 2007 and 2009 (OR = 1.3 and 1.4, respectively) (Table 2). Although the

TABLE 1. Selected characteristics of householders* in inadequate housing† — American Housing Survey, United States, 2007 and 2009

Characteristic	2007					2009				
	Total occupied housing units	No.	(%)	Unadjusted OR	(95% CI)	Total occupied housing units	No.	(%)	Unadjusted OR	(95% CI)
Sex										
Male	61,206	2,862	(4.7)	Ref.	—	60,721	2,962	(4.9)	Ref.	—
Female	49,486	2,909	(5.9)	1.1	(1.1–1.2)	51,084	2,795	(5.5)	1.1	(1.1–1.2)
Race/Ethnicity										
White, non-Hispanic	78,744	3,174	(4.0)	Ref.	—	79,333	3,222	(4.1)	Ref.	—
Hispanic	12,609	966	(7.7)	2.0	(1.7–2.3)	12,739	991	(7.8)	2.0	(1.7–2.3)
Black, non-Hispanic	13,437	1,292	(9.6)	2.5	(2.2–3.0)	13,609	1,228	(9.0)	2.3	(2.0–2.7)
Asian/Pacific Islander	4,050	174	(4.3)	1.1	(0.8–1.5)	4,181	192	(4.6)	1.1	(0.8–1.5)
American Indian/Alaska Native	707	51	(7.2)	1.8	(1.0–3.5)	730	55	(7.5)	1.9	(1.1–3.4)
Sex, by race/ethnicity										
Male										
White, non-Hispanic	45,116	1,638	(3.6)	Ref.	—	44,537	1,704	(3.8)	Ref.	—
Hispanic	7,086	508	(7.2)	2.1	(1.6–2.6)	7,160	577	(8.1)	2.2	(1.8–2.7)
Black, non-Hispanic	5,545	548	(9.9)	2.9	(2.3–3.7)	5,520	512	(9.3)	2.6	(2.1–3.2)
Asian/Pacific Islander	2,536	95	(3.7)	1.0	(0.7–1.6)	2,577	117	(4.6)	1.2	(0.8–1.7)
American Indian/Alaska Native	348	18	(5.3)	1.5	(0.6–3.9)	352	27	(7.8)	2.1	(0.9–4.8)
Female										
White, non-Hispanic	33,628	1,536	(4.6)	Ref.	—	34,795	1,518	(4.4)	Ref.	—
Hispanic	5,523	458	(8.3)	1.9	(1.5–2.4)	5,580	414	(7.4)	1.8	(1.4–2.2)
Black, non-Hispanic	7,892	744	(9.4)	2.2	(1.8–2.7)	8,090	716	(8.9)	2.1	(1.8–2.6)
Asian/Pacific Islander	1,514	79	(5.2)	1.2	(0.7–2.0)	1,604	75	(4.7)	1.1	(0.7–1.8)
American Indian/Alaska Native	359	32	(9.0)	2.1	(0.9–4.8)	378	27	(7.2)	1.7	(0.7–3.9)
Annual income (\$)										
≤24,999	46,912	2,771	(9.4)	4.9	(4.1–5.9)	49,240	2,615	(8.5)	3.8	(3.2–4.6)
25,000–49,999	31,170	1,650	(5.3)	2.6	(2.2–3.2)	29,757	1,711	(5.7)	2.5	(2.1–3.1)
50,000–74,999	18,985	700	(3.7)	1.8	(1.4–2.3)	18,557	663	(3.6)	1.5	(1.2–1.9)
≥75,000	31,137	650	(2.1)	Ref.	—	32,558	768	(2.4)	Ref.	—
Education level										
Less than high school	16,779	1,507	(9.0)	2.2	(1.9–2.6)	15,229	1,278	(8.4)	2.1	(1.8–2.5)
High school diploma	30,559	1,564	(5.1)	1.2	(1.1–1.4)	30,692	1,770	(5.8)	1.4	(1.3–1.6)
Any college education	63,354	2,700	(4.3)	Ref.	—	65,884	2,709	(4.1)	Ref.	—
U.S. Census region										
Northeast	23,128	1,096	(5.4)	1.3	(1.0–1.5)	23,316	1,320	(6.5)	1.6	(1.3–1.9)
Midwest	29,202	1,063	(4.2)	1.0	(0.8–1.2)	29,403	1,092	(4.3)	1.0	(0.9–1.3)
South	48,324	2,554	(6.3)	1.5	(1.3–1.7)	49,372	2,332	(5.6)	1.5	(1.2–1.6)
West	27,550	1,058	(4.3)	Ref.	—	28,021	1,013	(4.2)	Ref.	—
Disability status										
Yes	3,657	245	(6.7)	1.3	(1.0–1.8)	3,647	226	(6.2)	1.2	(0.9–1.6)
No	107,035	5,526	(5.2)	Ref.	—	108,151	5,531	(5.1)	Ref.	—
Total	110,692	5,771	(5.2)	—	—	111,800	5,757	(5.2)	—	—

Abbreviations: CI = confidence interval; OR = odds ratio.

* First household member contacted by interviewer who is aged ≥18 years and is an owner or renter of the housing unit.

† Inadequate housing: moderate or severe deficiencies in plumbing, heating, electricity, and upkeep.

‡ The total number of inadequate households in this category does not equal the total number of occupied housing units because the multiracial/unknown race category was excluded.

TABLE 2. Selected characteristics of householders* in unhealthy housing† — American Housing Survey, United States, 2007 and 2009

Characteristic	2007					2009				
	Total occupied housing units	Unhealthy housing units				Total occupied housing units	Unhealthy housing units			
		No.	(%)	Unadjusted odds ratio	(95% CI)		No.	(%)	Unadjusted odds ratio	(95% CI)
Sex										
Male	61,206	14,037	(22.9)	Ref.	—	60,721	13,647	(22.5)	Ref.	—
Female	49,486	12,303	(24.9)	1.1	(1.1–1.2)	51,084	12,549	(24.6)	1.1	(1.1–1.2)
Race/Ethnicity										
White, non-Hispanic	78,744	18,446	(23.4)	Ref.	—	79,333	17,992	(22.7)	Ref.	—
Hispanic	12,609	2,754	(21.8)	0.9	(0.8–1.0)	12,739	3,079	(24.2)	1.1	(1.0–1.2)
Black, non-Hispanic	13,437	3,849	(28.6)	1.3	(1.2–1.4)	13,609	3,847	(28.3)	1.3	(1.2–1.5)
Asian/Pacific Islander	4,050	705	(17.4)	0.7	(0.6–0.8)	4,181	720	(17.2)	0.7	(0.6–0.8)
American Indian/Alaska Native	707	218	(30.8)	1.5	(1.0–2.1)	730	233	(31.9)	1.6	(1.1–2.3)
Sex, by race/ethnicity										
Male										
White, non-Hispanic	45,116	10,384	(23.0)	Ref.	—	44,537	9,895	(22.2)	Ref.	—
Hispanic	7,086	1,433	(20.2)	0.9	(0.7–1.0)	7,160	1,625	(22.7)	1.0	(0.9–1.2)
Black, non-Hispanic	5,545	1,524	(27.5)	1.3	(1.1–1.5)	5,520	1,439	(26.1)	1.2	(1.1–1.4)
Asian/Pacific Islander	2,536	398	(15.7)	0.6	(0.5–0.8)	2,577	433	(16.8)	0.7	(0.6–0.9)
American Indian/Alaska Native	348	106	(30.4)	1.5	(0.9–2.4)	352	120	(34.1)	1.8	(1.1–3.0)
Female										
White, non-Hispanic	33,628	8,062	(24.0)	Ref.	—	34,795	8,097	(23.3)	Ref.	—
Hispanic	5,523	1,321	(23.9)	1.0	(0.9–1.2)	5,580	1,454	(26.1)	1.2	(1.0–1.3)
Black, non-Hispanic	7,892	2,325	(29.5)	1.3	(1.2–1.5)	8,090	2,408	(29.8)	1.4	(1.3–1.6)
Asian/Pacific Islander	1,514	308	(20.3)	0.8	(0.6–1.1)	1,604	288	(17.9)	0.7	(0.6–1.0)
American Indian/Alaska Native	359	112	(31.2)	1.4	(0.8–2.5)	378	113	(29.8)	1.4	(0.9–2.3)
Annual income (\$)										
≤24,999	46,912	8,004	(27.2)	1.3	(1.2–1.5)	49,240	8,219	(26.6)	1.4	(1.3–1.5)
25,000–49,999	31,170	7,215	(23.1)	1.1	(1.0–1.2)	29,757	7,079	(23.8)	1.2	(1.1–1.3)
50,000–74,999	18,985	4,330	(22.8)	1.1	(1.0–1.2)	18,557	4,065	(21.9)	1.1	(1.0–1.2)
≥75,000	31,137	6,791	(21.8)	Ref.	—	32,558	6,833	(21.0)	Ref.	—
Education level										
Less than high school	16,779	4,283	(25.5)	1.1	(1.0–1.2)	15,229	3,795	(24.9)	1.1	(1.0–1.1)
High school diploma	30,559	6,635	(21.7)	0.9	(0.8–0.9)	30,692	6,829	(22.3)	0.9	(0.9–1.0)
Any college education	63,354	15,422	(24.3)	Ref.	—	65,884	15,572	(23.6)	Ref.	—
U.S. Census region										
Northeast	23,128	6,390	(31.3)	2.0	(1.8–2.1)	23,316	5,538	(27.1)	1.6	(1.4–1.7)
Midwest	29,202	6,426	(25.4)	1.5	(1.3–1.6)	29,403	6,878	(27.1)	1.6	(1.4–1.7)
South	48,324	8,889	(21.9)	1.2	(1.1–1.3)	49,372	9,088	(21.9)	1.2	(1.1–1.3)
West	27,550	4,635	(19.0)	Ref.	—	28,021	4,692	(19.2)	Ref.	—
Disability status										
Yes	3,657	987	(27.0)	1.2	(1.0–1.4)	3,647	1,100	(30.2)	1.4	(1.2–1.7)
No	107,035	25,353	(23.7)	Ref.	—	108,151	25,096	(23.2)	Ref.	—
Total	110,692	26,196	(23.4)	—	—	111,800	26,340	(23.8)	—	—

Abbreviations: CI = confidence interval; OR = odds ratio.

* First household member contacted by interviewer who is aged ≥18 years and is an owner or renter of the housing unit.

† Unhealthy housing: characteristics (in addition to those of inadequate housing) that negatively affect the health of the occupants (e.g., rodents seen in unit recently, leak in preceding 12 months, peeling paint, or no working smoke alarm).

‡ The total number of inadequate households in this category does not equal the total number of occupied housing units because the multiracial/unknown race category was excluded.

odds of a Hispanic female living in inadequate housing decreased from 2007 to 2009, the odds were still elevated (OR = 1.9 and 1.8, respectively) (Table 1).

In 2009, householders earning an annual salary of \leq \$24,999 were almost five times more likely to live in inadequate housing than those earning \geq \$75,000 (8.5% versus 2.4%, respectively); however, the odds of householders earning \leq \$24,999 and living in inadequate housing decreased significantly from 2007 to 2009 (Table 1). Householders without a high school diploma were more than twice as likely as those with some college education to live in inadequate housing (Table 1). In 2009, for households with at least one person living with a disability, the odds of living in inadequate housing was 1.2 times higher compared with households without a person living with a disability (Table 1).

The proportion of unhealthy housing units did not change significantly from 2007 to 2009. Among housing units classified as unhealthy, the magnitude of disparities varied, especially across racial/ethnic, income, and education level categories. For example, a householder earning $<$ \$25,000/year was approximately 4 times more likely to live in an inadequate housing unit as a householder making \geq \$75,000 a year but was only 1.3 times more likely to live in an unhealthy, as opposed to an inadequate, home. The decrease likely can be attributed to more common characteristics associated with unhealthy homes (e.g., presence of rodents and interior water leaks), compared with inadequate homes. For example, in 2009, approximately 36.9% of surveyed respondents in housing units indicated observing rodents recently, and 10% reported having had a water leak during the previous 12 months (Table 3).

The 2007–2009 AHS data indicate that the percentage of inadequate housing units in the United States is relatively stable and that the proportion of families living in inadequate housing declined among demographic groups with the highest percentages. However, the disparity by race/ethnicity, socioeconomic status, and education level is still substantial. Interventions to reduce this disparity even further are available. Specific housing interventions that increase the health and safety of housing have been demonstrated to reduce disease among residents (7). For example, mitigation of active radon (which is not measured by AHS) in areas at high risk for contamination has been reported to reduce radon to acceptable levels (i.e., $<$ 4 picocuries per liter [pCi/L]), in 95% of remediated homes, with 69% of such homes reduced to levels $<$ 2 pCi/L (8). In addition, integrated pest management to reduce exposure to pesticide residue has resulted in significant decreases in both cockroach infestations and levels of pyrethroid insecticides in indoor air samples ($p = 0.02$) (9).

Vigorous efforts to decrease disparities in access to healthy housing will have the immediate effect of decreasing disparities in

health status. Among the approximately 110 million housing units in the United States, approximately 5.8 million are classified as inadequate and 23.4 million are considered unhealthy. Inadequate and unhealthy housing disproportionately affects the populations that have the fewest resources (e.g., persons with lower income and limited education). Substantial actions are needed to reduce the overall proportion of inadequate and unhealthy housing among these persons. Results presented in this report can assist organizations in focusing prevention programs and interventions for these populations.

The findings in this report are subject to at least five limitations. First, data were collected through a home visit or a telephone survey. Because data are self-reported, certain demographic characteristics (e.g., income level) might have been reported incorrectly, resulting in possible misclassification. In addition, the results might overestimate or underestimate the actual number of persons living in inadequate or unhealthy homes. AHS has attempted to survey the same, or nearly the same, sample of houses for each cycle since the survey began. Therefore, the survey administrators are persistent in their efforts to contact residents, substantially reducing typical non-response problems associated with phone surveys. Second, certain types of living quarters were excluded from the sample, including transient accommodations, barracks for workers or members of the armed forces, and institutional accommodations (e.g., dormitories, wards, and rooming houses). Third, the replicate weights are not made public; therefore, CIs calculated by using the probability weights included in the data set are likely narrower than they would be if the replicate weights could be used. Fourth, only 2 years of data were analyzed, which makes interpretation of trends difficult. Last, AHS does not link questions regarding housing to any other surveys containing health status information. CDC is working with HUD to include health status questions in the 2011 survey.

Although AHS does not link questions regarding housing to any other surveys containing health status information, the connection between health and both inadequate and unhealthy housing has been well-documented (10–14). Persons living in inadequate or unhealthy housing as defined in this analysis might be more likely to be exposed to pests and mold that exacerbate asthma (10,11) as well as to lead paint hazards that limit the intellectual development of children (12). They might also be more likely to die in house fires as a result of faulty or missing smoke detectors (13,14). However, whether healthy, safe, and affordable housing benefits the well-being of its inhabitants beyond reducing exposures to toxins and offering protection from the risk for death by fire is unclear. The effect of housing on mental health, obesity, and healthy aging is also an area in need of additional research.

TABLE 3. Selected characteristics of householders,* by specific unhealthy housing characteristics — American Housing Survey, United States, 2009

Characteristics	Total occupied housing units	Rodent seen in unit recently				Leaks during preceding 12 months			
		No.	(%)	Unadjusted odds ratio	(95% CI)	No.	(%)	Unadjusted odds ratio	(95% CI)
Sex									
Male	60,721	3,716	(35.2)	Ref.	—	5,748	(9.6)	Ref.	—
Female	51,084	3,219	(38.9)	1.2	(1.0–1.3)	5,215	(10.3)	1.1	(1.0–1.2)
Race/Ethnicity									
White, non-Hispanic	51,084	4,692	(33.4)	Ref.	—	8,077	(10.3)	Ref.	—
Hispanic	79,333	849	(51.3)	2.1	(1.7–2.6)	997	(7.9)	0.7	(0.6–0.9)
Black, non-Hispanic	12,739	1,028	(44.8)	1.6	(1.3–2.0)	1,447	(10.7)	1.1	(0.9–1.2)
Asian/Pacific Islander	13,609	172	(43.9)	1.6	(1.1–2.3)	229	(5.5)	0.5	(0.4–0.7)
American Indian/Alaska Native	4,181	77	(53.0)	2.3	(1.1–4.7)	81	(11.2)	1.1	(0.7–1.8)
Sex, by race/ethnicity									
Male									
White, non-Hispanic	44,537	2,739	(33.0)	Ref.	—	4,439	(10.1)	Ref.	—
Hispanic	7,160	398	(44.8)	1.7	(1.2–2.2)	545	(7.7)	0.7	(0.6–0.9)
Black, non-Hispanic	5,520	353	(41.0)	1.4	(1.0–1.9)	561	(10.3)	1.0	(0.8–1.2)
Asian/Pacific Islander	2,577	115	(46.3)	1.8	(1.1–2.9)	113	(4.4)	0.4	(0.3–0.6)
American Indian/Alaska Native	352	55	(65.1)	3.8	(1.3–11.1)	42	(11.9)	1.2	(0.6–2.4)
Female									
White, non-Hispanic	34,795	1,953	(34.0)	Ref.	—	3,639	(10.6)	Ref.	—
Hispanic	5,580	451	(59.0)	2.8	(2.0–3.9)	452	(8.1)	0.8	(0.6–0.9)
Black, non-Hispanic	8,090	675	(47.1)	1.7	(1.3–2.2)	885	(11.1)	1.1	(0.9–1.2)
Asian/Pacific Islander	1,604	57	(39.9)	1.3	(0.7–2.5)	116	(7.3)	0.7	(0.5–1.0)
American Indian/Alaska Native	378	22	(36.1)	1.1	(0.4–3.3)	39	(10.5)	1.0	(0.5–1.9)
Annual income (\$)									
≤24,999	49,240	2,388	(45.1)	1.9	(1.6–2.2)	2,957	(9.7)	1.0	(0.9–1.1)
25,000–49,999	29,757	1,913	(38.0)	1.4	(1.2–1.7)	2,915	(9.9)	1.0	(0.9–1.1)
50,000–74,999	18,557	971	(32.1)	1.1	(0.9–1.3)	1,881	(10.3)	1.0	(0.9–1.2)
≥75,000	32,558	1,663	(30.5)	Ref.	—	3,209	(9.9)	Ref.	—
Education level									
Less than high school	15,229	1,270	(44.1)	1.5	(1.3–1.8)	1,297	(8.6)	0.8	(0.7–0.9)
High school diploma	30,692	1,955	(38.2)	1.2	(1.0–1.4)	2,698	(8.9)	0.8	(0.7–0.9)
Any college education	65,884	3,709	(34.3)	Ref.	—	6,969	(10.7)	Ref.	—
U.S. Census region									
Northeast	23,316	1,850	(43.1)	1.6	(1.3–2.0)	2,285	(11.3)	1.8	(1.6–2.1)
Midwest	29,403	1,571	(33.9)	1.1	(0.9–1.4)	3,694	(14.7)	2.4	(2.1–2.8)
South	49,372	2,485	(37.3)	1.3	(1.0–1.6)	3,383	(8.3)	1.3	(1.1–1.5)
West	28,021	1,029	(31.9)	Ref.	—	1,600	(6.6)	Ref.	—
Disability status									
Yes	3,647	289	(41.6)	1.2	(0.9–1.7)	469	(12.9)	1.4	(1.1–1.7)
No	108,151	6,646	(36.7)	Ref.	—	10,494	(9.8)	Ref.	—
Total	111,800	6,935	(36.9)	—	—	10,960	(9.9)	—	—

Abbreviations: CI = confidence interval; OR = odds ratio.

* First household member contacted by interviewer who is aged ≥18 years and is an owner or renter of the housing unit.

† The total number of households in this category does not equal the total number of occupied housing units because the multiracial/unknown race category was excluded.

TABLE 3. *Continued.* Selected characteristics of householders,* by specific unhealthy housing characteristics — American Housing Survey, United States, 2009

Characteristics	Peeling paint				No working smoke alarm			
	No.	(%)	Unadjusted odds ratio	(95% CI)	No.	(%)	Unadjusted odds ratio	(95% CI)
Sex								
Male	1,170	(1.9)	Ref.	—	3,352	(5.6)	Ref.	—
Female	1,207	(2.4)	1.2	(1.0–1.5)	2,806	(5.6)	1.2	(1.0–1.5)
Race/Ethnicity								
White, non-Hispanic	1,471	(1.9)	Ref.	—	3,542	(4.5)	Ref.	—
Hispanic	311	(2.4)	1.3	(1.0–1.7)	1,447	(11.4)	2.7	(2.4–3.1)
Black, non-Hispanic	480	(3.5)	1.9	(1.5–2.4)	795	(5.9)	1.3	(1.1–1.6)
Asian/Pacific Islander	38	(0.9)	0.5	(0.3–0.9)	212	(5.2)	1.2	(0.9–1.5)
American Indian/Alaska Native	34	(4.7)	2.6	(1.2–5.7)	78	(10.8)	2.6	(1.5–4.4)
Sex, by race/ethnicity								
Male								
White, non-Hispanic	780	(1.8)	Ref.	—	1,907	(4.3)	Ref.	—
Hispanic	155	(2.2)	1.2	(0.9–1.8)	845	(11.9)	3.0	(2.5–3.6)
Black, non-Hispanic	189	(3.4)	2.0	(1.4–2.9)	403	(7.3)	1.8	(1.4–2.2)
Asian/Pacific Islander	21	(0.8)	0.5	(0.2–1.1)	117	(4.6)	1.1	(0.7–1.6)
American Indian/Alaska Native	20	(5.7)	3.4	(1.1–10.2)	44	(12.6)	3.2	(1.5–6.7)
Female								
White, non-Hispanic	691	(2.0)	Ref.	—	1,635	(4.8)	Ref.	—
Hispanic	156	(2.8)	1.4	(1.0–2.0)	601	(10.8)	2.4	(2.0–3.0)
Black, non-Hispanic	291	(3.6)	1.8	(1.4–2.5)	393	(4.9)	1.0	(0.8–1.3)
Asian/Pacific Islander	18	(1.1)	0.6	(0.2–1.4)	96	(6.0)	1.3	(0.8–2.0)
American Indian/Alaska Native	14	(3.7)	1.9	(0.6–5.5)	34	(9.1)	2.0	(0.9–4.3)
Annual income (\$)								
≤24,999	1,969	(4.0)	3.4	(2.7–4.2)	5,679	(12.6)	5.4	(4.6–6.3)
25,000–49,999	639	(2.1)	1.8	(1.4–2.3)	1,826	(6.2)	2.5	(2.1–3.0)
50,000–74,999	332	(1.8)	1.5	(1.1–2.0)	752	(4.1)	1.6	(1.3–2.0)
≥75,000	399	(1.2)	Ref.	—	843	(2.6)	Ref.	—
Education level								
Less than high school	446	(2.9)	1.5	(1.2–1.9)	1,800	(12.0)	3.6	(3.1–4.1)
High school diploma	636	(2.1)	1.1	(0.9–1.3)	1,962	(6.5)	1.8	(1.6–2.1)
Any college education	1,295	(2.0)	Ref.	—	2,396	(3.7)	Ref.	—
U.S. Census region								
Northeast	648	(2.8)	1.5	(1.2–2.0)	1,093	(4.9)	0.7	(0.6–0.8)
Midwest	980	(3.3)	1.9	(1.5–2.3)	1,694	(6.0)	0.8	(0.7–1.0)
South	1,199	(2.4)	1.3	(1.1–1.7)	4,382	(9.3)	1.3	(1.2–1.5)
West	512	(1.8)	Ref.	—	1,931	(7.1)	Ref.	—
Disability status								
Yes	148	(4.1)	2.0	(1.3–3.0)	194	(5.4)	1.0	(0.7–1.3)
No	2,230	(2.1)	Ref.	—	5,961	(5.6)	Ref.	—
Total	2,378	(2.1)	—	—	6,157	(5.6)	—	—

Abbreviations: CI = confidence interval; OR = odds ratio.

* First household member contacted by interviewer who is aged ≥18 years and is an owner or renter of the housing unit.

† The total number of households in this category does not equal the total number of occupied housing units because the multiracial/unknown race category was excluded.