The House Next Door: A Comparison of Residences by Disability Status Using New Measures in the American Housing Survey

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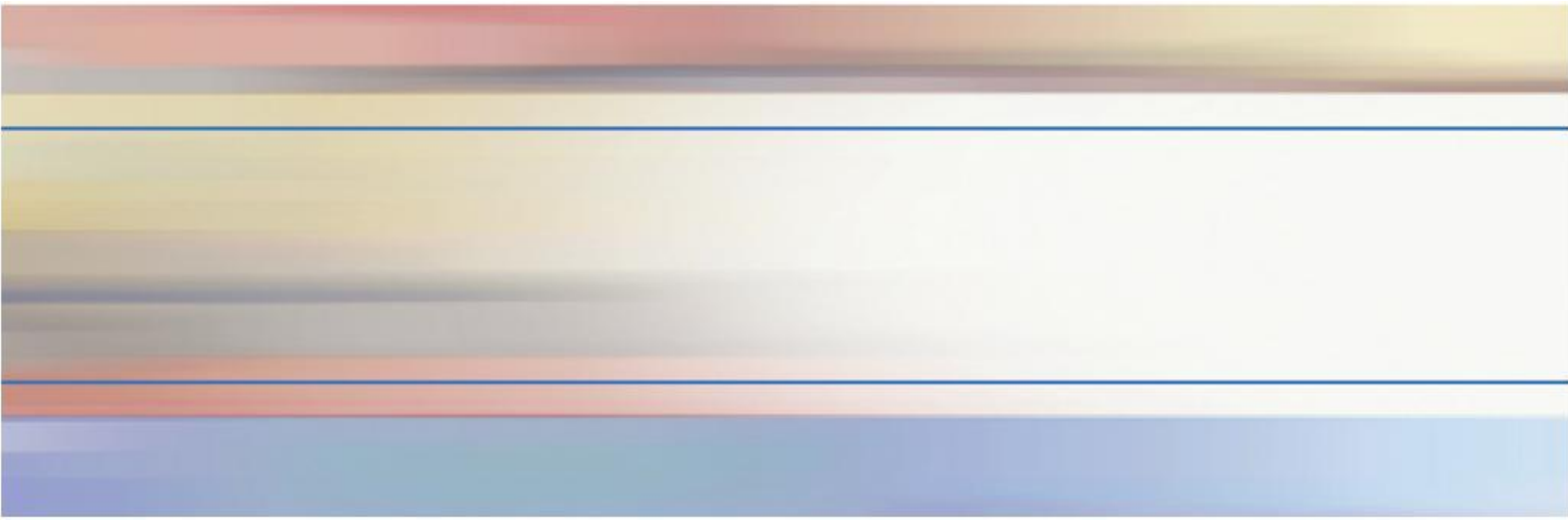

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I. INTRODUCTION

Researchers have thoroughly documented the struggles of working-age people (18 to 64 years old) with disabilities in terms of their employment, health insurance coverage, access to health care, and poverty status. However, the state of housing for this group has yet to be researched extensively, perhaps due in part to data limitations. Now, because of the inclusion of disability-related questions in the 2009 American Housing Survey (AHS), this issue can be analyzed in detail for the first time. Understanding the housing needs of working-age people with disabilities is crucial to developing housing policies for this population, such as the Section 811 program. By analyzing the differences in housing between adults with and without disabilities, we can identify areas in which housing for people with disabilities is lacking and assess the effect of housing policies on the likelihood that people with disabilities will have poor or unstable housing.

Most of the existing literature on housing and disabilities focuses on the elderly or children with disabilities. This paper is intended to fill the knowledge gap on the housing status of working-age people with disabilities. We also focus on this population because it represents a large and growing segment that relies heavily on state and federal government programs. In 2008, there were approximately 19 million working-age people with disabilities (U.S. Census Bureau 2008). In that same year, the federal government spent nearly $360 billion on programs and services used by working-age people with disabilities, or approximately $19,000 per person (Livermore et al. 2010). Although federal spending on housing-related programs represented only about one percent (or $3.8 billion) of these expenditures, people with disabilities represent a disproportionate share of those who need housing assistance. For example, the U.S. Department of Housing and Urban Development (HUD) estimates that 40 percent of homeless individuals in shelters have a disability (HUD 2010). We have also chosen to focus on working-age people with disabilities because they are the target of recent efforts to promote employment, reduce poverty, and reduce reliance on income assistance, primarily from the Social Security Disability Insurance (SSDI) and Supplemental Security Income (SSI) programs. However, such efforts are unlikely to be effective if many of these individuals are in poor or unstable housing situations. Recent research suggests that 1.1 million (U.S. Department of Housing and Urban Development 2008) to 1.4 million (Nelson 2008) households with a working-age person with a disability had "worst-case" housing needs in 2005. This status is defined as low-income household members paying more than half of their income in rent or living in severely substandard housing.

Before the release of the 2009 AHS, researchers made use of supplemental files to the AHS, the ACS, and other large national data sets to find basic housing information on persons with disabilities. Studies have identified differences in housing quality, including persons per room, unit size, number of families in the home, whether the unit is a mobile home, and neighborhood amenities, for households with and without members with disabilities (White et al. 1994; National Council on Disability 2010). Other researchers have compared household surroundings such as urbanicity, local crime, density, access to transportation, racial and age composition of neighborhood residents, and mobility barriers for working-age people with disabilities (National Council on Disability 2010) and for the elderly (Keysor et al. 2010; Freedman et al. 2008; Beard et al. 2009; Gilderbloom and Markham 1996).

The new disability-related questions in the 2009 AHS include questions on health-related functional impairments and on disability-income receipt. Specifically, the survey asks if a household member has a physical or mental condition that causes difficulties with hearing, vision, cognitive

functions, walking or climbing stairs, self-care, and performing errands. Other questions focus on the receipt of SSI and disability payments, defined as SSDI, worker's compensation, veterans' compensation or pension, or other disability payments received. These questions allow us to examine housing differences by self-reported disability status (problems with one of the six specific activities or receipt of disability income).

Disability status may be associated with a range of housing characteristics. Our analysis focuses on some characteristics that have been addressed in previous research as well as others that have not. The areas of housing we examine are:

- **Housing quality**. Overall rating, size, persons per room, square feet per person, manufactured/mobile home, community services available, amenities (appliances, cooling, safety devices, garage), and deficiencies (problems with the physical structure, equipment breakdowns, plumbing problems, rodents).
- **Neighborhood quality**. Overall rating, median income in the area, average fair market rent, benefits (proximity to public transportation and stores, police protection), and problems (crime, noise, odors, surrounding building and road conditions).

To help explain our findings, we also examined responses to questions about the reasons for choosing a particular residence.

For this study, we conducted multivariate analyses of the likelihood of particular housing and neighborhood features while controlling for sociodemographic characteristics. In particular, we assessed the extent to which aspects of housing and neighborhood quality differ between working-age people with and without disabilities, holding income and other household characteristics constant. We also compared the AHS's estimates of the number of working-age persons with disabilities with estimates from the Current Population Survey (CPS) and the ACS. All three surveys contain identical disability questions, which allowed us to assess the extent to which the AHS fully captures the non-institutional population with disabilities. One concern is that the AHS does not survey those living in non-institutional group quarters; the percentage of residents with disabilities in some types of non-institutional group quarters is very high (U.S. Department of Housing and Urban Development 2008).

Our findings indicate that, other characteristics (including income) held constant, working-age individuals with disabilities live in lower-quality housing and lower-quality neighborhoods than their nondisabled counterparts. These results are consistent with other research showing that holding income constant, working-age people with disabilities are more likely to face a range of material hardships, which may be due in part to the higher costs and reduced household efficiency associated with activity limitations and disability (She and Livermore 2007). Further, similar results were found in previous studies on elderly persons with disabilities; these studies focused on a subset of the housing attributes analyzed here, although they often used different data sources and methods (as discussed in the following section).

The remainder of this paper is organized as follows. In Section II, we describe previous research related to housing and disability. In Section III, we discuss the 2009 AHS and its new disability measures. In Section IV, we present our findings on the association between disability and housing and neighborhood characteristics, controlling for important covariates such as income and household size. In Section V, we examine the role that housing assistance plays in the housing

attributes of people with disabilities. In Section VI, we conclude and discuss the policy implications of our findings.

II. DISABILITY AND HOUSING CHARACTERISTICS

Disability is likely to affect housing and neighborhood characteristics in a number of ways. First, disability may limit a person's income and assets, which in turn limits his or her housing options. Working-age people with disabilities are much more likely to be poor and to experience long-term poverty than those without disabilities (She and Livermore 2009). Poverty occurs primarily due to the impact of disability on earnings—the primary source of income for most working-age individuals.[1] Limited income and assets can restrict people with disabilities to low-cost, low-quality housing options. It can also inhibit their ability to save and purchase their own homes, thereby reducing the control and incentives they might have to make home improvements. Second, disability can affect perceived housing and neighborhood quality through its impact on the individual's needs. For example, individuals with disabilities might require specific modifications to make their housing safe and accessible. They might also require community services such as accessible public transportation. If such needs cannot be met by the affordable housing available, people with disabilities will be more likely to perceive their housing and neighborhoods to be of lower quality. Third, people with disabilities may find it difficult to address housing deficiencies (such as maintenance issues) that arise, which may lower the quality of their housing. Mobility, sensory, and cognitive limitations might affect an individual's ability to identify and address housing problems and low income may limit one's ability to purchase maintenance services.

A number of researchers have analyzed the relationship between disability and housing characteristics. Periodic HUD reports estimate worst-case housing needs, the most recent of which estimated that approximately one million non-elderly households with disabled members have worst-case needs, making disabled households the most likely of any family type to fall into this category (at a rate of 36 percent) (U.S. Department of Housing and Urban Development 2011).[2] Disability-advocacy groups have also examined the housing status of people with disabilities; one group found that housing affordability is the greatest need facing disabled households and that 41 percent of such households has trouble affording their housing costs (National Council on Disability 2010). The same conclusion was reached by an older study, which revealed that households with disabilities have higher housing-to-income ratios (White et al. 1994).

Other studies on the relationship between housing and disability have shown that, among the elderly, disability is associated with poor economic conditions (Freedman et al. 2008; Beard et al. 2009), neighborhood mobility barriers (Keysor et al. 2010; Freedman et al. 2008), a lack of transportation facilitators (Keysor et al. 2010), and higher levels of crime or perceived crime (Beard et al. 2009; Clark et al. 2009). These studies involved diverse populations, but all focused exclusively on individuals age 55 and older. A study conducted by Newman (2003) estimated the impact of disability on the number of unmet housing needs and dwelling modifications for the elderly. Newman's study was based on data from a one-time supplement to the 1995 AHS that contained

[1] Disability can negatively affect earnings through its impact on one's productivity and ability to work, and through its impact on human capital development (for example, limiting education because onset occurred during childhood).

[2] The study also notes that the data on which the numbers are based (the 2009 AHS) likely underestimates the number of households with members with disabilities relative to other surveys, such as the American Community Survey (ACS), implying that the number of disabled households with worst-case needs may be even higher.

information on disability and housing modifications. In the supplement, disability was defined as (1) difficulty entering and exiting the home; (2) difficulty getting around inside the home; (3) difficulty with personal activities; (4) difficulty seeing; (5) difficulty hearing; or (6) use or need of special modifications, equipment, or assistance. Using counts of difficulties as a proxy for disability, Newman estimated that each difficulty is associated with a 10 percent increase in the number of unmet needs and a 7 percent increase in the number of dwelling modifications.

III. DATA AND METHODS

A. Disability Measurement in the AHS

The AHS is the largest regular national housing survey in the United States (U.S. Census Bureau 2004). Conducted every two years by the U.S. Census Bureau on behalf of HUD, the AHS is designed to provide data on housing units between the decennial censuses, which also produce housing data. The AHS aims to survey 55,000 housing units, representing a cross-section of all U.S. housing (excluding group quarters such as barracks, dormitories, prison wards, group homes, and assisted-living facilities). The focus of the AHS is on the housing unit itself, the surrounding area, and inhabitants of the household, if applicable.

Because the AHS is representative of all U.S. housing units, vacant housing units are included in the sample, with information about each vacant unit gathered from neighbors, landlords, and rental agents. In our study, however, all vacant units are excluded. In addition, although the AHS is representative at the household level, information is gathered for every occupant of each housing unit, making it possible to conduct individual-level analyses. For our study, we analyzed data at both the individual and household levels, although we present only the individual-level estimates in what follows.[3] The sample of individuals used in this analysis includes only those of working age (18 to 64 years old). In the household-level analysis, we included only households with at least one member age 18 to 64.

Disability questions were first included in the standard core of the AHS in 2009.[4] Survey respondents were asked six questions regarding the existence of disabling limitations among all adult household members over age 16. These questions are as follows:

1. Is anyone in this household deaf, or do they have serious difficulty hearing?
2. Is anyone in this household blind, or do they have serious difficulty seeing, even when wearing glasses?
3. Because of a physical, mental, or emotional condition, does anyone in this household have serious difficulty concentrating, remembering, or making decisions?
4. Does anyone in this household have serious difficulty walking or climbing stairs?
5. Does anyone in this household have serious difficulty dressing or bathing?
6. Because of a physical, mental, or emotional condition, does anyone in this household have difficulty doing errands alone, such as visiting a doctor's office or shopping?

An affirmative answer to any of these questions was followed by the question "Who is that?" to attribute the limitation to specific household members. Hereafter, we refer to the limitations

[3] Household-level estimates are available from the authors upon request.

[4] Before the 2009 AHS, supplements containing disability-related questions were added to the 1978 and 1995 surveys.

mentioned in these six questions as (1) hearing, (2) visual, (3) cognitive, (4) ambulatory, (5) self-care, and (6) independent-living disabilities, respectively. AHS respondents were also asked two questions regarding receipt of disability income: (1) "Did _____ receive any disability payments, such as SSDI, workers' compensation, veterans' disability, or other disability payments?" and (2) "Did _____ receive any SSI payments?" We refer to a household member who is recorded as having income from either source as a person who received a disability payment.

Table 1 shows disability prevalence rates at the individual and household levels, based on AHS data. To make these rates nationally representative, estimates were conducted using sample weights. The unweighted sample sizes for these statistics are also shown in Table 1. Disability prevalence rates are uniformly higher at the household level because a household only needs one working-age member with one of the six limitations to be considered a household with a disability. Six percent of the individual sample and 10 percent of the household sample reported having at least one of the six limitations. Ambulatory disability was the most common, with 3.3 percent of individuals and 5.9 percent of households reporting this limitation. The least common limitations were vision and self-care. Independent of limitations, approximately 4.7 percent of individuals and 7.8 percent of households reported receiving disability payments. Aggregating responses across all limitations and receipt of disability payments, 8.7 percent of individuals and 13.9 percent of households had a disability or a household member with a disability.

Table 1. Disability Prevalence Among Individuals Age 18 to 64 and Households with Members Age 18 to 64

	Individuals		Households	
	Number	Percent	Number	Percent
Hearing disability	69,305	1.2	36,705	2.2
Visual disability	69,308	0.8	36,706	1.4
Cognitive disability	69,255	1.9	36,673	3.4
Ambulatory disability	69,285	3.3	36,688	5.9
Self-care disability	69,285	0.7	36,689	1.4
Independent-living disability	69,283	1.7	36,690	3.0
Any of the six limitations	69,225	6.0	36,656	10.1
Receipt of disability payments	65,519	4.7	36,817	7.8
Any of the six limitations or receipt of disability payments	65,040	8.7	36,540	13.9

Source: 2009 AHS.

The six questions on functional limitations in the 2009 AHS are the same as those in the CPS and ACS in 2009. These questions were developed by a federal interagency workgroup for the 2000 Decennial Census, and they are becoming the new survey standard for identifying disability (Adler et al. 1999). Consistency in the questions across the three surveys allows us to compare the findings from each survey on the size of the population with disabilities. Table 2 shows the individual-level rates of disability prevalence based on the AHS, CPS, and ACS. The rates from the AHS are lower than those from the CPS, and both of these are lower than the rates from the ACS.[5]

[5] Individual-level rates of disability prevalence in the AHS were also calculated without sample weights and with an alternate sample weight; all weighting mechanisms produced similar statistics.

Table 2. Rates of Disability Prevalence for Individuals Age 18 to 64, by Data Source

	AHS	CPS (N=189,087,636)		ACS (N=189,181,224)	
	Weighted Percent	Weighted Percent	Percentage-Point Difference from AHS	Weighted Prevalence	Percentage-Point Difference from AHS
Hearing disability	1.20	1.47	0.27***	2.07	0.87***
Visual disability	0.80	1.08	0.28***	1.73	0.93***
Cognitive disability	1.92	2.90	0.98***	4.16	2.24***
Ambulatory disability	3.29	4.24	0.95***	5.18	1.89***
Self-care disability	0.75	1.24	0.49***	1.78	1.03***
Independent-living disability	1.68	2.49	0.82***	3.47	1.79***
Any of the six limitations	5.96	7.84	1.8***	10.07	4.11***

Sources: 2009 AHS, 2009 CPS, and 2009 ACS (American FactFinder, Table B18101).

*Indicates significance at the 10-percent level.
**Indicates significance at the 5-percent level.
***Indicates significance at the one-percent level.

Although the limitation questions in all three surveys are the same, the sampling methodologies differ. As mentioned, the AHS does not survey those living in group quarters, but the ACS does (Weathers 2009). The CPS is limited to the non-institutionalized population but includes members of the armed forces living in civilian housing units. It is unclear how these differences affect disability rates derived from the three surveys. We intend to investigate this issue further.

To assess the extent to which the populations with disabilities in the three surveys are similar, we developed descriptive statistics for the working-age sample with disabilities in the AHS, CPS, and ACS (Table 3). The ACS statistics are based on published estimates (U.S. Census Bureau 2009) and the samples over which the ACS statistics were calculated varied by age. To make the statistics comparable across surveys, we used these same age groups to compute the AHS and CPS statistics (as noted in parentheses for each variable). Table 3 indicates that people who reported limitations in the CPS and ACS have similar, although generally statistically different, characteristics compared with those who reported limitations in the AHS. Given the size of the CPS and ACS, which provide estimates for more than 300 million people overall and more than 30 million persons with disabilities, statistics across the surveys would have to be nearly identical to avoid being statistically different. Therefore, the small percentage differences suggest that the populations with disabilities are similar across the three surveys.

Table 3. Individual-Level Characteristics of People with Disabilities Identified via the Six Questions on Functional Limitations, by Data Source

	AHS	CPS		ACS	
	Disabled (Percent)	Disabled (Percent)	Percentage-Point Difference from AHS	Disabled (Percent)	Percentage-Point Difference from AHS
Male (age 18-64)	48.6	49.5	-1.0***	49.7	-1.2***
Less than high school graduate (age 25+)	24.8	26.1	-1.2***	27.6	-2.8***
High school grad, GED (age 25+)	34.0	36.0	-2.0***	34.2	-0.2
Some college or associate's degree (age 25+)	25.3	24.2	1.0***	25.1	0.2
Bachelor's degree or higher (age 25+)	15.9	13.6	2.3***	13.1	2.8***
Employed (age 16+)	22.1	19.4	2.6***	23.0	-0.9***
Below 100 percent of the federal poverty level (age 16+)	21.2	20.2	1.0***	21.0	0.2

Sources: 2009 AHS, 2009 CPS, and 2009 ACS (American FactFinder, Table B18101).

*Indicates significance at the 10-percent level.
**Indicates significance at the 5-percent level.
***Indicates significance at the one-percent level.

B. Descriptive Statistics

The focus of our analysis is comparing the housing-related characteristics of working-age people with and without disabilities. We defined a person with a disability as someone of working age who reported having any of the six limitations or receiving disability income. Accordingly, we limited our analytic sample to working-age individuals who responded to all six limitation questions and the disability-income questions. This restriction led us to exclude 479 people who were missing information for one or more of the six limitation questions; 4,185 who were missing information on receipt of disability income; and 26 who were missing information on both sets of questions.[6] Of the remaining 65,040 people, 8.7 percent (5,564 people) had a disability according to our definition.

The demographic characteristics of people with and without disabilities differ significantly (Table 4). Those with disabilities are significantly older, have lower levels of education, are less likely to be married, are more likely to be a U.S. citizen, and are more likely to be non-Hispanic or nonwhite relative to their nondisabled counterparts. People with disabilities also have significantly lower household incomes; their incomes are less than 60 percent of those without disabilities. Location, both relative to the city and in several regions of the country, is similar for both groups.

[6] Due to missing information on key disability variables, we excluded 6.7 percent of AHS respondents. Based on the information available, rates of disability prevalence among excluded respondents were similar to or lower than the rates among included respondents: for those missing information on receipt of disability income, 5.4 percent had any of the six limitations (compared with 6.0 percent in the sample), and for those missing information on limitations, 5.0 percent received disability income (compared with 4.7 percent in the sample).

Table 4. Demographic Characteristics, by Disability Status

	People with Disabilities (N=5,564)	People without Disabilities (N=59,476)	Difference
Age (years)	47.8	40.7	7.1***
Less than high school (%)	18.4	9.5	8.9***
High school degree (%)	67.2	60.5	6.7***
College or above (%)	14.4	30.0	-15.6***
Married (%)	45.4	60.6	-15.1***
Male (%)	47.7	48.3	-0.6
Non-U.S. citizen (%)	3.6	10.2	-6.5***
White (%)	78.0	81.9	-3.9***
African American (%)	16.5	10.8	5.7***
Other race± (%)	5.5	7.3	-1.8***
Hispanic (%)	12.6	16.0	-3.4***
Household income ($)	47,273	82,592	-35,319***
City (%)	28.7	27.9	0.9
Northeast (%)	18.0	18.2	-0.2
Midwest (%)	22.2	22.4	-0.3
South (%)	39.0	36.2	2.7***
West (%)	20.9	23.2	-2.3***

Source: 2009 AHS. Estimates are based on individual-level data.

± Other race represents all races other than White and African American.

*Indicates significance at the 10-percent level.
**Indicates significance at the 5-percent level.
***Indicates significance at the one-percent level.

Table 5 shows housing characteristics by disability status. People with disabilities reported lower ratings of satisfaction with their housing unit than their nondisabled counterparts (ratings were between 0 and 10, with higher ratings indicating higher levels of satisfaction). A closer examination of specific aspects of housing suggests that these lower ratings are justified: people with disabilities have smaller housing units and are more likely to live in a manufactured or mobile home than people without disabilities. The former group also has fewer amenities on average, such as a dishwasher, washing machine, dryer, central air conditioning, garbage disposal, stove or oven, fire extinguisher, carbon monoxide detector, and garage.[7] People without disabilities have a higher number of all such amenities, although the gaps between the two groups in the shares with a dishwasher, garbage disposal, and garage are the largest. People with disabilities are also more likely to live in units with at least one deficiency and with more deficiencies on average, such as holes in the floor, large areas of peeling paint, evidence of rodents, leaks inside or outside, recent toilet breakdowns, incomplete plumbing, unsafe drinking water, open cracks in the foundation, and rooms missing electrical outlets.[8] The largest differences exist for evidence of rodents, open cracks, and indoor or outdoor leaks. People with disabilities were, however, more likely to live in a housing unit where community services (day care and shuttle buses) are provided. Further, people with and without disabilities have similar amounts of square footage per person in their housing units; the fact

[7] Means for each housing amenity and deficiency, along with the total number of observations for all variables, are presented in Appendix Table A1.

[8] Ibid.

that people without disabilities have larger residences may reflect a higher number of occupants in nondisabled households.

Table 5. Average Housing Characteristics, by Disability Status

	People with Disabilities	People without Disabilities	Difference
Rating of unit	7.93	8.25	-0.32***
Square footage	1,704	2,067	-363***
Persons per room	2.56	2.35	0.21***
Square feet per person	768	781	-12
Manufactured or mobile home (%)	9.3	4.7	4.6***
Community services provided (%)	20.9	17.3	3.6***
Number of amenities	6.17	6.99	-0.82***
Any of the 10 deficiencies (%)	47.7	38.1	9.6***
Number of deficiencies	0.81	0.55	0.27***

Source: 2009 AHS. Estimates are based on individual-level data.

Note: Ratings of units are between 0 and 10, with higher ratings indicating higher levels of satisfaction. Amenities include a dishwasher, washing machine, dryer, central air conditioning, garbage disposal, stove or oven, fire extinguisher, carbon monoxide detector, and garage. Deficiencies include holes in the floor, large areas of peeling paint, evidence of rodents, leaks inside or outside, recent toilet breakdowns, incomplete plumbing, unsafe drinking water, open cracks in the foundation, and rooms missing electrical outlets. See Table A1 for a complete list of summary statistics for all amenities and deficiencies, by disability status.

*Indicates significance at the 10-percent level.
**Indicates significance at the 5-percent level.
***Indicates significance at the one-percent level.

Similar to housing characteristics, neighborhood characteristics tend to be better for nondisabled individuals than for those with disabilities (Table 6). Individuals with disabilities report lower overall neighborhood ratings (ratings are between 0 and 10, with higher ratings indicating higher levels of satisfaction) and live in areas with lower median incomes and lower fair market rent values, on average. Neighborhood benefits, including access to public transportation, proximity to stores, and satisfactory police protection, are all slightly lower for individuals and households with disabilities than for those without disabilities.[9] People with disabilities also experience more frequent neighborhood problems, including crime, odors, noise, vandalism, trash, proximity to roads in need of repair, and proximity to high-traffic areas (such as four-lane highways and airports) than nondisabled individuals.[10]

[9] Means for each neighborhood benefit and problem, along with the total number of observations for all variables, are presented in Appendix Table A2.

[10] Ibid.

Table 6. Average Neighborhood Characteristics, by Disability Status

	People with Disabilities	People without Disabilities	Difference
Rating of Neighborhood	7.70	8.09	-0.39***
Median Income in Area ($)	63,668	65,842	-2,174***
Average Fair Market Rent ($)	1,014	1,135	-121***
Number of Benefits	2.39	2.45	-0.06***
Any of the Seven Problems (%)	75.5	65.5	11.0***
Number of Problems	1.60	1.14	0.47***

Source: 2009 AHS. Estimates are based on individual-level data.

Note: Neighborhood ratings are between 0 and 10, with higher ratings indicating higher levels of satisfaction. Benefits include access to public transportation, proximity to stores, and satisfactory police protection. Problems include crime, odors, noise, vandalism, trash, proximity to roads in need of repair, and proximity to high-traffic areas.

*Indicates significance at the 10-percent level.
**Indicates significance at the 5-percent level.
***Indicates significance at the one-percent level.

C. Multivariate Methods

The differences in housing and neighborhood characteristics by disability status, as described above, represent correlations between each characteristic and disability status. Other variables correlated with disability might similarly affect housing and neighborhood characteristics. For example, people with disabilities generally have lower levels of education than people without disabilities; it is therefore possible that low education (rather than disability status) is driving the relationship between disability and negative housing and neighborhood attributes. Likewise, people with disabilities are less likely to be married, and the lack of spousal income (rather than disability status) might be lowering their housing quality. Unmarried individuals also may lack others with whom they can share responsibility for housing maintenance. The same may be true of many other characteristics, particularly income. To control for other individual and household characteristics, we produced regression-adjusted estimates of the likelihood of experiencing selected housing and neighborhood attributes, taking into account age, education, marital status, gender, race, ethnicity, U.S. citizenship, household income, region, urbanicity, and the number of people in the household. To account for correlation within households, regressions were calculated using standard errors clustered at the household level.[11]

We estimated an ordinary least squares (OLS) regression model for each housing and neighborhood characteristic. These characteristics include those shown in Tables 5 and 6: (1) rating of housing unit, (2) total square footage, (3) persons per room, (4) square feet per person, (5) whether unit is a mobile home, (6) community services provided, (7) number of housing amenities, (8) whether there are housing deficiencies, (9) number of housing deficiencies, (10) rating of neighborhood, (11) average median income in neighborhood, (12) average fair market rent in neighborhood, (13) number of neighborhood benefits, (14) presence of any neighborhood deficiencies, and (15) number of neighborhood deficiencies. We estimated each model separately, resulting in 15 initial regression models. We also estimated additional models to explore differences

[11] For more information on clustering, refer to Cameron and Trivedi (2005).

based on the level of disability severity. All estimates were weighted to account for the AHS sample design.

We used the available data in the AHS to control for many confounding variables in our analysis, but we were unable to observe or control for many other factors. We included controls for household income in our analysis, but we do not have a measure of savings.[12] Savings are essential to purchasing a home and can be used to help a household weather difficult financial periods, including those triggered by the onset of disability. Expenditures and needs also are not accounted for in our analyses. If two otherwise similar households have the same income but one has higher medical needs and costs related to disability, that household may have less money to pay for housing. People with disabilities may also have limited housing options if they must live near family members or friends who assist them or if they face discrimination in the housing market; however, neither proximity to family nor discrimination are controlled for in this analysis. Finally, our analysis does not permit us to attribute causality. We have estimated relationships between disability and housing and neighborhood conditions, but these relationships are not necessarily causal.

[12] We plan to utilize information on receipt of interest income as a proxy for savings in future specifications.

IV. FINDINGS FROM THE MULTIVARIATE ANALYSES

The descriptive statistics presented in the previous section suggest that disability is associated with poorer housing and neighborhood attributes. However, other variables that are correlated with disability might be driving these relationships. To explore this issue, we estimated a set of regression models that control for individual and household characteristics that might also be correlated with housing and neighborhood attributes.

The first column of Table 7 presents coefficient estimates on the disability variable in a series of regression models that estimate the likelihood of reporting particular housing and neighborhood attributes. The second column shows the simple (unadjusted) differences between people with and without disabilities. Controlling for other characteristics produces largely the same findings on housing attributes as did the unadjusted statistics. If other characteristics are held constant, living with a disability is associated with a lower housing-unit rating (-0.27 percentage points), a greater likelihood of living in a mobile home (+2.5 percentage points), 0.40 fewer amenities, and 0.25 more deficiencies, compared to those without a disability. However, people with disabilities are also 3.4 percentage points more likely to live in units where community services are offered, possibly due to a greater demand for such services among those with disabilities. Living with a disability is also associated with having a unit that is 165 square feet smaller, with 111 fewer square feet per person, compared to having no disability. These results indicate that people with disabilities live in residences with a lower number of square feet per person but also fewer people per room, a variable that is often used in the literature to reflect house size while accounting for the number of people living in a household. However, people per room may reflect differences in the structure of housing for people with disabilities. We believe square feet per person to be the more relevant measure of housing size.

With all else held constant, people with disabilities live in less desirable neighborhoods compared to people without disabilities. Having a disability is associated with a lower overall rating of one's neighborhood (-0.32 percentage points) as well as lower median income and average fair market rent, which suggest that people with disabilities live in poorer neighborhoods. People with disabilities are also significantly more likely to reside in neighborhoods with fewer benefits and are 8 percentage points more likely to live in a neighborhood with at least one of the seven problems queried.

Table 7. Relationship Between Disability and Housing and Neighborhood Attributes

	Regression-Adjusted Difference	Unadjusted Difference
Housing Attributes		
Rating of unit	-0.27***	-0.32***
Square footage	-165***	-363***
Persons per room	-0.17***	0.21***
Square feet per person	-111***	-12
Manufactured or mobile home (%)	2.5***	4.6***
Community services (%)	3.4***	3.6***
Number of amenities	-0.40***	-0.82***
Any deficiencies (%)	9.4***	9.6***
Number of deficiencies	0.25***	0.27***
Neighborhood Attributes		
Rating of neighborhood	-0.32***	-0.39***
Median income in area ($)	-764***	-2,174***
Average fair market rent ($)	-54***	-121***
Number of benefits	-0.03***	-0.06***
Any of the seven problems (%)	7.9***	11.0***
Number of problems	0.37***	0.47***

Source: 2009 AHS. Estimates are based on individual-level data.

Note: The statistics represent coefficients on the disability variables in a series of separate OLS regressions. Full regression estimates are available from the authors upon request.

*Indicates significance at the 10-percent level.
**Indicates significance at the 5-percent level.
***Indicates significance at the one-percent level.

The measure of disability used up to this point encompasses many types of disabilities and levels of severity. To explore the differential effects by type of disability, we estimated a regression model that included two new measures of disability in addition to the basic measure ("any disability") used in our previous analyses. The first new measure represented those with multiple disabilities (i.e., those who responded affirmatively to two or more of the limitation questions), and the second represented those who received disability income. Out of the 5,564 individuals who have any type of disability, 1,454 have multiple disabilities; 3,023 receive disability income; and 676 have multiple disabilities and receive disability income. Estimates for these three variables indicate that those with multiple disabilities experience worse housing and neighborhood characteristics compared to those with any disability (Table 8). Having multiple disabilities is associated with a lower overall rating of the housing unit, fewer amenities, more deficiencies, a lower neighborhood rating, and more neighborhood problems. Overall, the findings suggest that the severity of disability, as measured by the number of limitations, has a large, negative impact on most housing and neighborhood characteristics, both overall and relative to those with nonsevere disabilities.

Those who receive disability income report better housing and neighborhood characteristics compared to individuals with disabilities who do not receive this assistance.[13] Because SSDI and SSI

[13] Of the 3,023 sample members who received disability payments, 1,781 received disability income, defined as "SSDI, workers' compensation, veterans' disability, or other disability payments"; 1,352 received SSI; and 110 report receiving both types of income.

beneficiaries generally have very severe disabilities, the finding that receipt of disability payments has a smaller negative effect on housing and neighborhood characteristics than those who do not receive disability income was unexpected. However, the six-question series on disability may fail to identify those with severe mental illnesses and other types of disabilities, and characteristics that are unique to those with mental illnesses or other conditions (who may be identified only by receipt of disability payments) may be driving the results. Or, because SSDI, worker's compensation, and veteran's disability payments are usually awarded to former workers,[14] these individuals may have had greater housing assets and savings before the onset of disability, which allowed them to make better living arrangements compared to those with limitations (no work history is necessary to claim a limitation). However, because qualifying for SSI is based on having income and assets below a certain threshold, we cannot make this argument for the SSI population.

Table 8. Effects of Disability on Housing and Neighborhood Characteristics, by Severity of Disability

	Coefficient on Any Disability	Coefficient on Multiple Limitations	Coefficient on Receipt of Disability Income
Housing Characteristics			
Rating of unit	-0.35***	-0.15**	0.22***
Square footage	-152***	-22	-13
Persons per room	-0.12***	-0.07*	-0.05
Square feet per person	-79***	-56**	-33*
Manufactured or mobile home (%)	1.6**	1.3	1.0
Community services (%)	4.4***	1.3	-2.5**
Number of amenities	-0.34***	-0.16**	-0.03
Any deficiencies (%)	11.2***	7.4***	-6.9***
Number of deficiencies	0.25***	0.24***	-0.12***
Neighborhood Characteristics			
Rating of neighborhood	-0.38***	-0.18**	0.20***
Median income in area ($)	-790***	120	-8
Average fair market rent ($)	-51***	-15*	1
Number of benefits	-0.04***	-0.03	0.03*
Any of the seven problems (%)	7.1***	5.5***	-1.3
Number of problems	0.37***	0.26***	-0.12***

Source: 2009 AHS. Estimates are based on individual-level data.

Note: The statistics represent coefficients on the disability variables in a series of separate OLS regressions. Full regression estimates are available from the authors upon request.

*Indicates significance at the 10-percent level.
**Indicates significance at the 5-percent level.
***Indicates significance at the one-percent level.

To better understand why people with disabilities live in less desirable homes and neighborhoods, we examined self-reported reasons for moving, choosing a unit, and choosing a neighborhood. Survey respondents who had moved within the two years before the interview were asked about their main reason for moving, choosing their current unit, and choosing their current neighborhood. There were 16 possible responses for moving and 9 responses each for unit choice

[14] Generally, a person must have worked for a certain amount of time to become an SSDI beneficiary, must be injured on the job to receive workers' compensation, and must have served in the military to receive veterans' disability benefits.

and household choice. Many of the responses did not differ by disability status. Similar shares of people with and without disabilities reported moving due to a change in marital status, selecting a housing unit for its yard or quality of construction, or selecting a neighborhood for its proximity to leisure activities or the design of the neighborhood.

Table 9 shows the responses that did differ significantly. People without disabilities reported moving or selecting a neighborhood based on a job or school more frequently than people with disabilities did. Those with disabilities reported moving or selecting a neighborhood to be closer to relatives and friends more often, suggesting that proximity to family may trump other household and neighborhood benefits for this group. We found similar results when we calculated the percentage of people with disabilities by their reason for moving. These differences highlight the unique preferences and needs of those with disabilities, which may be contributing to the link between disability and negative housing and neighborhood attributes. For example, if people with disabilities select units based on financial reasons, it is not surprising that they have few amenities in their homes.

Table 9. Reasons for Moving, Choosing a Unit, and Choosing a Neighborhood, by Disability Status

	Persons with Disabilities	Persons without Disabilities	Difference
Main Reason Moved			
N	1,310	13,124	
New job or job transfer (%)	6.0	11.2	-5.2***
To be closer to work/school (%)	5.0	9.1	-4.2***
To establish own household (%)	8.3	10.3	-2.0***
Needed a larger home (%)	7.1	11.9	-4.8***
Family/personal related (%)	11.2	7.2	4.0***
Main Reason Unit Chosen			
N	1,357	13,257	
Financial reasons (%)	31.0	26.6	4.4***
Room layout/design (%)	13.1	16.8	-3.6***
Main Reason Neighborhood Chosen			
N	1,354	13,314	
Convenient to job (%)	9.2	21.9	-12.7***
Convenient to family (%)	19.8	13.3	6.5***
Good schools (%)	5.1	7.5	-2.4***

Source: 2009 AHS. Estimates are based on individual-level data.

*Indicates significance at the 10-percent level.
**Indicates significance at the 5-percent level.
***Indicates significance at the one-percent level.

V. HOUSING ASSISTANCE

People with disabilities often struggle to find accessible and affordable housing that fit their unique needs (Perl 2008). To assist this population, policy makers have implemented several federal and local housing policies that aim to help people with disabilities find suitable, affordable housing.

The first housing program to specifically aid people with disabilities was established by the Housing Act of 1961. This legislation expanded the eligibility criteria for public housing, which had previously been limited to the poor and the elderly, to include households with an adult member with a disability. In 1990, federal funding to create housing exclusively for people with disabilities, known as Section 811 housing, began. Under Section 811, households in public-housing units pay no more for rent than a certain percentage of their income, typically 30 percent, making housing more affordable for qualifying households. The legislation that established Section 811 also established Project Rental Assistance Contracts, under which contractors receive subsidies from the government to make up the difference between operating costs and rent received from tenants (capped at approximately 30 percent of a tenant's income). Introduced in 1983 and updated in 1997, people with disabilities are also eligible to receive housing vouchers to rent units in the private market. Privately owned, subsidized housing is available to people with disabilities as well. Subsidized rental differs from housing vouchers in that vouchers are given directly to eligible individuals, whereas in subsidized rental agreements HUD assists apartment owners in offering reduced rent to qualifying tenants. Public housing, housing vouchers, and subsidized rentals are generally available to people with disabilities who have incomes below certain limits. The definition of disability varies slightly across programs, but income limits are typically set to earnings below 50 percent of the median income in the area.[15]

Although not specifically targeted to people with disabilities, many other housing programs may be used by this group. One such program is rent control, which exists in certain cities (such as New York, San Francisco, and Los Angeles) and acts as a price ceiling for rent. Another program, operated at the state and local level, provides low-cost mortgages.

We examined the use of these programs by working-age AHS respondents with and without disabilities. The findings are shown in the first three columns of Table 10. People with disabilities are significantly more likely to live in public-housing units, to receive rent subsidies, and to use a housing voucher compared to people without disabilities.[16] Take-up rates for the two programs that are not specifically targeted to people with disabilities (rent control and low-cost mortgages) were similar for both groups. Use of any housing assistance, defined as participation in at least one of the

[15] Section 811 defines a person with a disability as "an individual having a physical, mental, or emotional impairment (1) that is expected to be of long-continued and indefinite duration, (2) that substantially impedes his or her ability to live independently, and (3) is of such a nature that the ability to live independently could be improved by more suitable housing conditions." Section 8 extends this definition to include those unable to participate in substantial gainful activity. Eligibility for persons with HIV/AIDS also varies across programs; see Perl (2008).

[16] Note that although all three programs have provisions that are targeted towards persons with disabilities, the programs also target low-income individuals more generally.

five programs listed in Table 10, is twice as high among those with disabilities (15 percent) than for those without disabilities (6 percent).[17]

Table 10 also shows the prevalence of disability among those receiving each type of assistance. Relative to the general working-age population, rates of disability prevalence were very high among those receiving each type of assistance, except for rent control and low-cost mortgages. Disability prevalence was about 20 percent among those receiving any housing assistance, compared to about 9 percent in the general population.

Table 10. Receipt of Housing Assistance, by Disability Status

	Take-Up Rates (Percent)			Disability Prevalence (Percent)		
	People with Disabilities	People without Disabilities	Difference	Among Those Receiving Assistance	All Individuals Age 18-64	Difference
Public housing	3.3	0.8	2.4***	26.9	8.7	18.2***
Subsidized rent	10.8	2.0	8.8***	33.7	8.7	25.0***
Housing vouchers	4.9	0.8	4.1***	37.0	8.7	28.3***
Rent control	0.8	0.6	0.2	11.2	8.7	2.5
Low-cost mortgage	3.1	2.8	0.2	9.3	8.7	0.6
Any housing assistance	14.6	5.5	9.1***	20.2	8.7	11.5***

Source: 2009 AHS. Estimates are based on individual-level data.

*Indicates significance at the 10-percent level.
**Indicates significance at the 5-percent level.
***Indicates significance at the one-percent level.

Table 11 shows the findings from our multivariate analysis of the relationship between disability and use of housing assistance. After controlling for the same variables used in the regression models estimating the likelihood of specific housing and neighborhood attributes, we found that having a disability is associated with an eight percentage-point increase in the use of housing assistance. Of all variables included in the regression, disability is the most statistically significant (highest t-value) and has the largest coefficient estimate, indicating its importance as a determinant of housing-assistance receipt.

[17] HUD considers public housing units, Section 8 housing, and households using housing vouchers all as public housing (National Center for Health in Public Housing. 2010). The statistics shown in Table 10 are based on self-reports, and as such may be inconsistent with official statistics for public housing and other related programs.

Table 11. The Effect of Individual Characteristics on the Likelihood of Receiving Housing Assistance

	Estimate
Disability (%)	8.0***
Age (years)	0.00***
Less Than High School Degree (%)	2.8***
College Degree or Above (%)	-0.6***
Married (%)	-1.5***
Male (%)	-1.8***
Non-U.S. Citizen (%)	-2.5***
African American (%)	7.8***
Other Race± (%)	2.0***
Hispanic (%)	2.0***
Household Income	-0.000***
Northeast (%)	2.5***
Midwest (%)	0.7**
West (%)	1.3***
City (%)	3.5***
Number in Household	0.00

Source: 2009 AHS. Estimates are based on individual-level data.

± Other race represents all races other than White and African American.

*Indicates significance at the 10-percent level.
**Indicates significance at the 5-percent level.
***Indicates significance at the one-percent level.

Because a nontrivial share of working-age people with disabilities (15 percent) receive housing assistance, we explored the extent to which housing assistance affects the likelihood that this group will report adverse housing and neighborhood attributes. In Table 12, we present the coefficient estimates for the disability variable from two separate regression models: one in which the model includes control variables for each of the five assistance programs, and another in which the model does not control for housing assistance (the regression-adjusted estimates presented in Table 7). The impact of disability on the likelihood of reporting negative housing attributes is generally dampened when we control for housing assistance. For example, disability is associated with 0.40 fewer amenities if we do not account for housing assistance, compared to 0.34 fewer amenities if we do account for housing assistance. Similarly, disability is associated with a decline of 0.32 points in the overall neighborhood rating if we do not account for housing assistance, but only 0.29 points if we do account for housing assistance. These findings suggest that housing assistance provides a modest benefit to people with disabilities in terms of their housing and neighborhood. However, note that controlling for housing assistance leads to a stronger association between living with a disability and residing in a mobile or manufactured unit.

In the specifications controlling for the type of assistance received, low-cost mortgages were the most beneficial in improving housing characteristics for all individuals (coefficient estimates not shown). For example, receiving a low-cost mortgage is associated with a 0.16 point increase in housing rating, a 2.2 percentage-point decrease in the probability of living in a manufactured or mobile home, and an increase in the number of amenities of 0.39. However, no type of housing assistance was associated with a uniform improvement in all housing and neighborhood characteristics for the general population. Living in public housing was associated with negative effects for nearly every housing and neighborhood characteristic considered.

Table 12. Differential Effects of Disability on Housing and Neighborhood Characteristics, by Receipt of Housing Assistance

	Adjusted, with Controls for Housing Assistance	Adjusted, without Controls for Housing Assistance
Housing Characteristics		
Rating of unit	-0.26***	-0.27***
Square footage	-154***	-165***
Persons per room	-0.15***	-0.17***
Square feet per person	-102***	-111***
Manufactured or mobile home (%)	3.0***	2.5***
Community services (%)	2.8***	3.4***
Number of amenities	-0.34***	-0.40***
Any deficiencies (%)	9.4***	9.4***
Number of deficiencies	0.25***	0.25***
Neighborhood Characteristics		
Rating of neighborhood	-0.29***	-0.32***
Median income in area ($)	-770***	-764***
Average fair market rent ($)	-50***	-54***
Number of benefits	-0.04***	-0.03***
Any of the seven problems (%)	7.6***	7.9***
Number of problems	0.35***	0.37***

Source: 2009 AHS. Estimates are based on individual-level data.

Note: The statistics represent coefficients on the disability variables in a series of separate OLS regressions. Full regression estimates are available from the authors upon request.

*Indicates significance at the 10-percent level.
**Indicates significance at the 5-percent level.
***Indicates significance at the one-percent level.

The benefit of housing assistance programs might vary by disability status. Previous research has shown that people with disabilities spend a larger share of their income on housing compared to people without disabilities. If people with disabilities use the remainder of their income to purchase other basic necessities (such as food, clothing, medical needs, and transportation), they may be unable to spend higher proportions of their income on housing. Therefore targeted housing assistance may grant this population the ability to obtain better housing that was not previously possible. Further, people with disabilities are in worse housing and neighborhoods on average, so there is likely more room for improvement in housing for this population. To test this hypothesis, we estimated a model including controls for each of the five types of housing assistance and all housing assistance variables interacted with our indicator of disability. Results of these estimations (not shown) confirm that the benefit of housing assistance differs for persons with and without disabilities for many of the outcomes considered. For example, in the general population, low-cost mortgages are associated with an increase in the number of amenities of 0.30, but for people with disabilities they are associated with an increase in the number of amenities of 0.90, an effect that is three times as large. Among people with disabilities, housing vouchers is the most beneficial housing program: receiving a housing voucher is associated with a 0.40 increase in satisfaction rating of housing unit, an increase in the number of amenities of 0.70, and an increase of almost $2,500 in average area median income.

VI. CONCLUSIONS

Using data from the 2009 AHS, we quantified the differences in housing and neighborhood characteristics for people with and without disabilities. We found that, compared to their nondisabled counterparts, working-age people with disabilities are more likely to reside in smaller, lower-rated housing units; manufactured or mobile homes; and homes with fewer amenities (such as a dishwasher, central air conditioning, or a garage) and more deficiencies (such as evidence of rodents, leaks, and open cracks). People with disabilities were also more likely to live in lower-rated neighborhoods with lower median income, lower fair market rent values, fewer benefits (such as access to public transportation and stores and satisfactory police protection), and more problems (such as neighborhood crime, roads in need of repair, and heavy street noise). These differences persisted when we measured disability at the household level. Further, housing and neighborhood characteristics generally got worse as the severity of a person's disability—or the number of limitations—increased.

It is perhaps not surprising that people with disabilities are more likely to report living in poorer-quality housing and neighborhoods than those without disabilities, even after controlling for income and other characteristics. As noted previously, other research has shown that this population experiences other types of material hardships at significantly higher rates than people without disabilities. Those with disabilities also are more likely than others to experience long-term poverty and are more likely to be homeless. High rates of poverty, especially long-term poverty, likely reduce the quality of housing for these individuals, but other consequences of disability may also lead to poor-quality housing. For example, people with disabilities may have more costs (related to health and personal care, for example) than their nondisabled counterparts and therefore might have to make a choice between purchasing disability-related necessities or having better housing. Disabilities might also make it difficult for a person to identify and fix housing deficiencies, such as structural problems and rodent infestations.

For all of these reasons, housing support is warranted for people with disabilities. Indeed, some policies are already in place to help people with disabilities secure affordable housing that meets their needs. Our findings suggest that such assistance improves the living conditions of those with disabilities. Housing vouchers, for example, appear to be associated with improved housing characteristics for people with disabilites.

However, we did not examine the costs or quantify the full benefits of such housing assistance in this study, partly because it is difficult to do so accurately.[18] HUD provides many services and programs to people with disabilities as well as to other groups, such as the elderly, making it difficult to isolate the costs for people with disabilities only. The benefits of housing assistance are also hard to quantify because the value of these benefits is not available in the AHS, which only asks whether respondents receive various types of housing assistance. The AHS also lacks information on the length of time a person has received housing assistance. Further, housing assistance may provide

[18] A variety of methods may be used to estimate the value of housing costs, but these methods all produce a wide range of estimates. According to Johnson et al. (2010), the median values of housing assistance received (regardless of disability status) range from $1,920 to $6,564 per year.

many indirect benefits beyond the dollar value of the assistance. For example, having a secure residence and a place to store belongings may make it easier for a person to obtain stable employment, higher wages, and other employment benefits. But despite the limits of this study, our findings do suggest that housing assistance improves the housing and neighborhood conditions for those with disabilities.

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APPENDIX

Table A1. Detailed Housing Characteristics

	Persons with Disabilities		Persons without Disabilities	
	N	Average	N	Average
Rating of unit	5,444	7.93	57,601	8.25
Square footage	4,948	1,704	54,165	2,067
Persons per room	5,564	2.56	59,476	2.35
Square feet per person	4,948	768	54,165	781
Manufactured or mobile home	5,564	0.09	59,476	0.05
Community services provided	5,564	0.21	59,476	0.17
Amenities in Housing Unit				
Working dishwasher	5,564	0.53	59,476	0.71
Working washer	5,564	0.80	59,476	0.87
Working dryer	5,564	0.77	59,476	0.85
Central air conditioning	5,564	0.58	59,476	0.67
Garbage disposal	5,534	0.40	59,364	0.54
Stove/oven	5,564	0.99	59,476	1.00
Fire extinguisher	5,501	0.44	58,506	0.48
Smoke detector	5,539	0.92	59,144	0.95
Carbon-monoxide detector	5,483	0.33	58,576	0.39
Garage	5,563	0.57	59,465	0.71
Number of amenities	5,564	6.17	59,476	6.99
Deficiencies of Housing Unit				
Holes in floor	5,564	0.02	59,476	0.01
Large area of peeling paint	5,564	0.05	59,476	0.02
Evidence of rodents	5,564	0.22	59,476	0.17
Inside water leaks (past year)	5,544	0.12	59,141	0.08
Outside water leaks (past year)	5,543	0.14	59,139	0.10
Toilet breakdowns (last three months)	5,536	0.04	59,154	0.02
Incomplete plumbing facilities	5,564	0.01	59,476	0.01
Water unsafe for drinking	5,514	0.11	59,146	0.08
Open cracks	5,564	0.09	59,476	0.05
Rooms missing electrical outlets	5,564	0.02	59,402	0.01
Any of the 10 deficiencies	5,485	0.48	58,764	0.38
Number of deficiencies	5,485	0.81	58,764	0.55

Source: 2009 AHS. Estimates based on individual-level data.
Note: Several of the questions on amenities and deficiencies have missing values, and many values are missing across different individuals. The total number of amenities and deficiencies includes only those who do not have missing values for any of these variables.

Table A2. Detailed Neighborhood Characteristics

	Persons with Disabilities		Persons without Disabilities	
	N	Average	N	Average
Rating Neighborhood	5,442	7.70	57,569	8.09
Median Income in Area ($)	5,564	63,668	59,476	65,842
Average Fair Market Rent ($)	5,564	1,014	59,476	1,135
Neighborhood Benefits				
Public Transportation in the Area	5,469	0.55	58,088	0.55
Neighborhood Stores within One Mile	5,522	0.96	58,852	0.97
Satisfactory Police Protection	5,452	0.88	58,307	0.93
Number Neighborhood Benefits	5,367	2.39	57,243	2.45
Neighborhood Problems				
Serious Neighborhood Crime in Last Year	5,499	0.24	58,616	0.18
Bad Odors	5,542	0.10	59,011	0.05
Abandoned/Vandalized Buildings within 1/2 Block	5,443	0.12	57,908	0.06
Trash in Street within 1/2 Block	5,471	0.15	58,046	0.08
Roads within 1/2 Block Need Repairs	5,459	0.46	57,951	0.39
Heavy Street Noise	5,543	0.33	59,013	0.22
Heavy Transportation within 1/2 Block	5,480	0.22	58,098	0.17
Any of the Seven Neighborhood Problems	5,378	0.75	57,345	0.64
Number Neighborhood Problems	5,378	1.60	57,345	1.14

Source: 2009 AHS. Estimates based on individual-level data.
Note: Several of the questions on benefits and problems have missing values, and many values are missing across different individuals. The total number of benefits and problems includes only those who do not have missing values for any of these variables.

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