2009 WORST CASE HOUSING NEEDS OF PEOPLE WITH DISABILITIES

Supplemental Findings of the *Worst Case Housing Needs 2009: Report to Congress*

U.S. Department of Housing and Urban Development | Office of Policy Development and Research

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U.S. Department of Housing and Urban Development
Office of Policy Development and Research

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U.S. DEPARTMENT OF HOUSING
AND URBAN DEVELOPMENT


PD&R

FOREWORD

2009 WORST CASE HOUSING NEEDS OF PEOPLE WITH DISABILITIES

I am pleased to present this report from the Department of Housing and Urban Development (HUD), *2009 Worst Case Housing Needs of People With Disabilities*. A supplement to the *Worst Case Housing Needs 2009: Report to Congress*, this document presents national estimates and information on the critical housing problems that confront low-income renting families that include people with disabilities. Worst case needs households are defined as very low-income renters who do not receive government housing assistance and who either pay more than one-half of their income for rent or live in severely inadequate conditions, or both. Worst case needs is an additional burden for people with disabilities, who often face housing discrimination and a limited availability of accessible housing units.

The report addresses a weakness of previous worst case needs reports: use of a rough proxy to estimate the number of people with disabilities who have severe housing needs. Its purpose is to provide a more accurate accounting of such people and assess the methodology used to calculate this. In this way, it analyzes the extent to which new questions about disability status added to the 2009 American Housing Survey (AHS) improve the estimation of people with disabilities and compares the estimates with other survey-based data sources.

In 2009, approximately 1 million households that included nonelderly people with disabilities had worst case needs––accounting for 38 percent of all very low-income renter households with disabilities. Between 2007 and 2009, there was a 13-percent increase of worst case needs households that included people with disabilities. The AHS disability estimates do not always align perfectly with estimates from other surveys. Although the American Community Survey and the National Health Interview Survey (NHIS) have higher disability rates overall, questions pertaining to activity limitation that use similar concepts show that the NHIS and the AHS estimates are, in fact, very similar.

The report finds that renter households that include people with disabilities are more likely than those that do not include people with disabilities to have very low incomes, experience worst case needs, pay more than one-half of their income for rent, and have other housing problems such as living in inadequate or overcrowded housing. On the other hand, housing assistance has been successful at targeting this population. Renter households that include people with disabilities are two times more likely to receive

housing assistance than those that do not include people with disabilities. This may be one reason why the increase in worst case needs households in this group is much less than the 20 percent increase for the population as a whole. The increase in worst case needs in recent years and the special challenges that people with disabilities face will require a continued effort to support these households in finding suitable, affordable, and accessible housing.

Raphael W. Bostic
Assistant Secretary for Policy Development and Research

2009 WORST CASE HOUSING NEEDS OF PEOPLE WITH DISABILITIES

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SUMMARY

2009 WORST CASE HOUSING NEEDS OF PEOPLE WITH DISABILITIES

This study presents national estimates of the number of households that include people with disabilities who have worst case housing needs and presents their characteristics. It provides a supplement to the *Worst Case Housing Needs 2009: Report to Congress,* released in February 2011.

People with disabilities face additional burdens to finding safe and affordable housing for several reasons, such as being subjected to housing discrimination and encountering limited availability of accessible housing units. This supplement responds to the need to improve the estimation of the number of people with disabilities with severe housing needs and address the known undercount of past estimations. This supplement also analyzes the extent to which new direct questions on disabilities, added to the 2009 American Housing Survey (AHS), improve the estimation of people with disabilities and it discusses remaining limitations toward identifying people with disabilities with severe housing needs using this survey.

WORST CASE NEEDS

Unassisted, very low-income renter households (below one-half of Area Median Income) who—

- Have a severe rent burden (pay more than one-half of their income for rent)

  and/or

- Live in severely inadequate conditions.

The major findings of the study are as follows:

1. The prevalence of nonelderly people with disabilities is higher among renter households than among owner households, although most households that include nonelderly people with disabilities are owner occupied.
2. Renter households that include nonelderly people with disabilities are more likely than those that do not include people with disabilities to have very low incomes, experience worst case needs, pay more than one-half of their income for rents, and have other housing problems, such as living in inadequate or overcrowded housing.
3. On the positive side, renter households that include nonelderly people with disabilities are two times more likely to receive housing assistance than those that do not include people with disabilities.

4. In 2009, 2.6 million very low-income renter households included nonelderly people who reported having at least one of the six measures of disabilities (visual, hearing, cognitive, ambulatory, self-care, and independent living limitations) and, of those, 987,000 experienced worst case needs, which put the prevalence of worst case needs at 38 percent among this group.

5. The estimated number of households with worst case needs that included people with disabilities was smaller using the direct measure than the income proxy measure, due to the income proxy measure's overcounting of people with disabilities in some cases and undercounting of people with disabilities in other cases.

6. According to the income proxy measure, between 2007 and 2009, the number of worst case needs households that included people with disabilities increased by 100,000, reaching 1.1 million households. In this time period, the prevalence of worst case needs among very low-income renters with disabilities increased from 38 to 41 percent.

7. Ambulatory, cognitive, and independent living limitations were the most prevalent limitations among households with worst case needs and with people with disabilities. Visual, hearing, and self-care limitations were found in a smaller share of those same households.

8. In the households that included nonelderly people with disabilities, 86 percent included nonelderly adults with disabilities, 18 percent included children with disabilities, and 4 percent included both instances.

9. In general, small differences exist between households with worst case needs that included people with disabilities and those that did not, by race/ethnicity and by geographical location.

10. Comparison with other data sources indicated that the AHS estimates of the number of people with disabilities (1) do not always align perfectly with estimates from other surveys; (2) are limited by a small set of questions that do not completely capture the complex concept of disability; and (3) do not include some population groups that have a high prevalence of people with disabilities.

BACKGROUND

2009 WORST CASE HOUSING NEEDS OF PEOPLE WITH DISABILITIES

In February 2011, the Department of Housing and Urban Development (HUD) published the *Worst Case Housing Needs 2009: Report to Congress* about the housing needs of unassisted very low-income renters. The biannual report estimated that 7.1 million renter households had worst case housing needs (hereafter referred to as worst case needs) in 2009, an increase of more than 20 percent from 2007 (HUD 2011).

Worst case needs are estimated with data from the AHS, a survey sponsored by HUD and conducted by the U.S. Census Bureau since 1973. The survey is the largest periodic national housing survey in the United States and provides nationally representative and up-to-date housing statistics to inform public policymakers and U.S. housing programs. National data have been collected every 2 years since 1985, using a fixed sample of about 50,000 housing units and an additional sample of newly constructed units each year, to ensure both continuity and timeliness of the data.

In 2009, the AHS included for the first time, direct questions on disability, presenting a unique opportunity to improve the estimates of the number of households that include people with disabilities who experience worst case needs. Until 2008, HUD identified households that include people with disabilities by using a proxy measure of several reported income sources that are typically associated with disabilities.[1] Although proxy measure improved significantly over the years as a result of better AHS data and methods, the proxy measure has acknowledged limitations, such as undercounting people with disabilities, in some cases, and flagging people who do not report disabilities, in other cases (HUD 2008).

Worst case needs has been a useful measure because of its consistent definition over the years. Severe rent burden and physical adequacy of living conditions, continue to be key indicators to estimate the overall need for safe and affordable housing. People with disabilities confront additional burdens in finding safe and affordable housing for several reasons. First, people with disabilities are more likely to face housing discrimination. Although housing discrimination against people with disabilities has been illegal since 1988, when disability was added to the Fair Housing Act, complaints alleging disability discrimination have been the most common type of fair housing complaint received by HUD (HUD 2010). A study using

[1] Income sources used as proxy measure included Social Security and pensions, welfare and public assistance, Supplemental Security Income, and Social Security Disability Insurance.

statistically representative estimates of the incidence of discrimination in the metropolitan area of Chicago found significant levels of housing discrimination against people with disabilities. In fact, the study found that adverse treatment of people with disabilities occurred more often than adverse treatment of African-American or Hispanic renters in the study area (HUD 2005).

An additional burden for people with disabilities is the limited availability of accessible housing units. The study on the incidence of housing discrimination found that one-third of advertised rental housing units in the Chicago metropolitan area were not accessible for people with mobility limitations and that one in six requests for reasonable modification to make the units accessible were denied (HUD 2005). Another study of multifamily building compliance with accessibility requirements found that, although compliance was high, in general, the nationally representative sample of multifamily buildings built after 1991 did not wholly comply with the accessibility requirements in the Fair Housing Act (HUD 2003).

This report responds to the need to address the known undercount of past estimations and improve the identification of unassisted very low-income renter households that include people with disabilities and the characterization of their housing needs. The report is structured in three parts. Section 1 presents the estimate of the number of households that include people with disabilities using the new direct measure added to the 2009 AHS. It also discusses the demographic and geographic characteristics of households that include people with disabilities that also have worst case needs. Section 2 compares the estimation of the number of households with worst case needs that include people with disabilities, using the old income proxy and the new direct question measures. Section 3 compares the differences in estimates of the number of people with disabilities using the AHS, the American Community Survey (ACS), and the National Health Interview Survey (NHIS) data and discusses the limitations of the AHS data in identifying people with disabilities.

SECTION 1

DEMOGRAPHICS OF WORST CASE NEEDS HOUSEHOLDS THAT INCLUDE PEOPLE WITH DISABILITIES

2009 AHS New Direct Questions on Disabilities

The 2009 AHS added a set of six questions pertaining to disability that reflect the widely adopted International Classification of Functioning, Disability, and Health (ICF) concepts of impairment, activity limitation, and participation restriction.[2] These conceptual and operational definitions were based on the 2008 ACS questionnaire.

The questions measure four basic functional limitations: visual, hearing, cognitive, and ambulatory. These functional limitations are complemented by two questions that measure difficulties with Activities of Daily Living (ADL), such bathing and dressing (self-care difficulty), and Instrumental Activities of Daily Living (IADL), such as performing errands (independent living difficulty).

QUESTIONS ABOUT DISABILITIES IN THE 2009 AMERICAN HOUSING SURVEY

- Are you deaf or have serious difficulty hearing?
- Are you blind or have serious difficulty seeing, even when wearing glasses?
- Because of a physical, mental, or emotional condition, does anyone in this household have serious difficulty concentrating, remembering, or making decisions?
- Does anyone in this household have serious difficulty walking or climbing stairs?
- Does anyone in this household have serious difficulty dressing or bathing?
- [For all household members 15 years old or older] 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?

Source: HUD PD&R (2010)

Households That Include People With Disabilities

According to the 2009 AHS, 9.3 million households (or 8 percent) included nonelderly people reporting at least one of the six measures of disabilities (visual, hearing, cognitive, ambulatory, self-care, and independent living). The prevalence of nonelderly

[2] According to the Americans with Disabilities Act of 1990, disability is "a physical or mental impairment that substantially limits one or more of the major life activities, a record of such an impairment, or being regarded as having such an impairment."

people with disabilities was higher among renter households (3.9 million or 11 percent) than among owner households (5.4 million or 7 percent), even though most households that included nonelderly people with disabilities were owner occupied (Exhibit A-1 in the Appendix).

Housing Conditions of Renter Households That Include People With Disabilities

Exhibit 1 shows that renter households that included nonelderly people with disabilities (renter households with disabilities) were more likely to have very low incomes, to experience worst case needs, and to pay more than one-half of the household income for rent, than those renter households without disabilities. In 2009, two out of three (or 66 percent) of renter households with disabilities had very low incomes, and only 46 percent of renter households without disabilities had very low incomes. Approximately 25 percent of renter households with disabilities experienced worst case needs, and only 19 percent of renter households without disabilities experienced worst case needs. Finally, renter households with disabilities were almost one and one-half times more likely to pay more than one-half of their income for rent than renter households without disabilities.

Other measures of housing conditions, such as living in inadequate or overcrowded housing, affected a smaller share of renter households with disabilities, although these problems where more prevalent among households with disabilities than those without disabilities. Of renter households with disabilities, 4 percent lived in severely inadequate housing, 10 percent lived in moderately inadequate housing, and 5 percent lived in crowded housing.

On the positive side, renter households with disabilities were two times more likely to receive housing assistance than renter households without disabilities. Exhibit 2 shows that approximately 26 percent of renter household with disabilities received housing assistance, and only 12 percent of those without disabilities received assistance. Among very low-income renter households, 37 percent of those with disability received housing assistance, and 23 percent of those without disabilities received housing assistance.

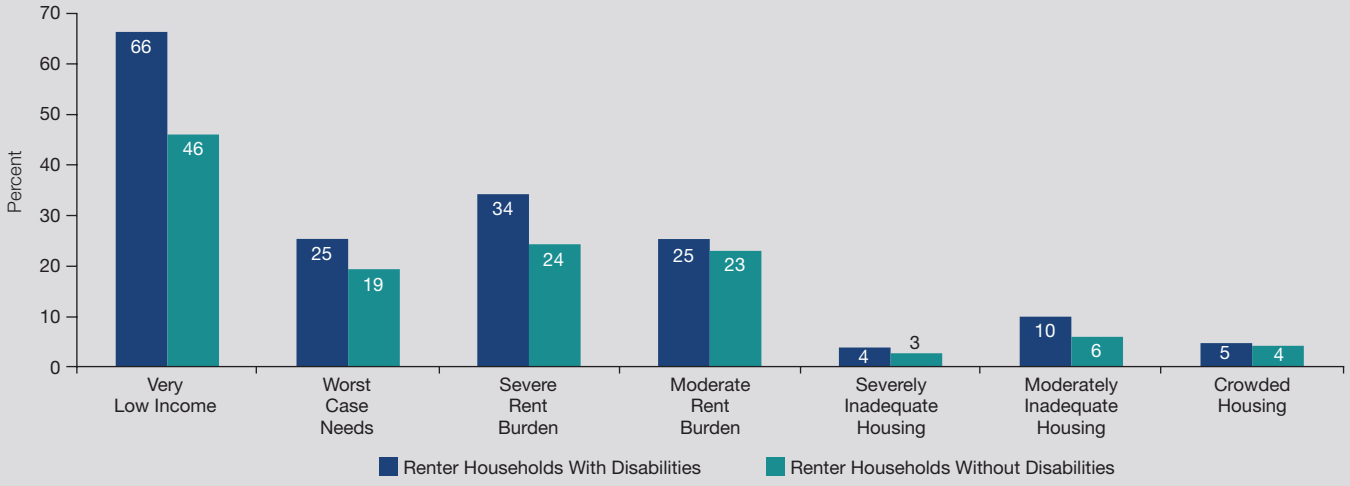
Disabilities Among Worst Case Needs Households

Based on the 2009 AHS, 2.6 million very low-income renter households included nonelderly people reporting at least one of the six measures of disability. Of those, 987,000 experienced worst case needs, which put the prevalence of worst case needs at 38 percent among this group. Exhibit 3 shows that of the four physical limitations, ambulatory (54 percent) and cognitive (48 percent) were the most prevalent limitations among households with worst case housing needs and disabilities. Hearing and visual limitations affected a smaller share of households, at 15 and 17 percent, respectively, of those with worst case needs and disabilities.

Between the two questions that measure difficulty with ADL and IADL, independent living, which indicates a difficulty in performing errands, was the most prevalent, affecting almost one in every three households with worst case needs and disabilities. Self-care, which indicates difficulty dressing or bathing, affected 14 percent of households with worst case needs and disabilities.

EXHIBIT 1. RENTER HOUSEHOLDS WITH DISABILITIES ARE MORE VULNERABLE AND MORE LIKELY TO HAVE HOUSING PROBLEMS

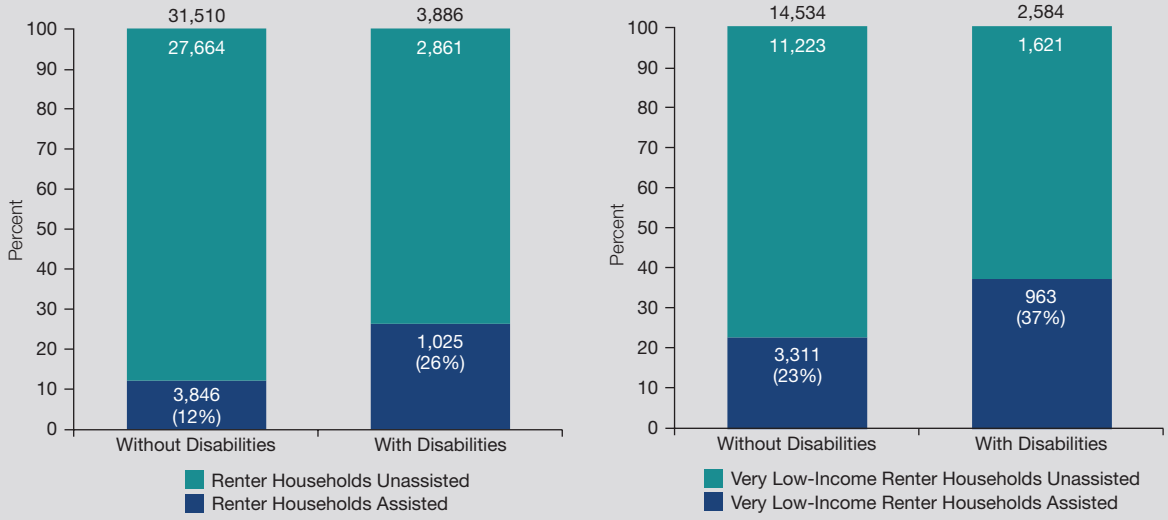
Share of renter households with selected indicators of income and housing conditions, 2009 (percent)



Source: Department of Housing and Urban Development, Office of Policy Development and Research, tabulations of American Housing Survey data

EXHIBIT 2. RENTER HOUSEHOLDS AND VERY-LOW INCOME RENTER HOUSEHOLDS WITH DISABILITIES ARE MORE LIKELY TO RECEIVE HOUSING ASSISTANCE

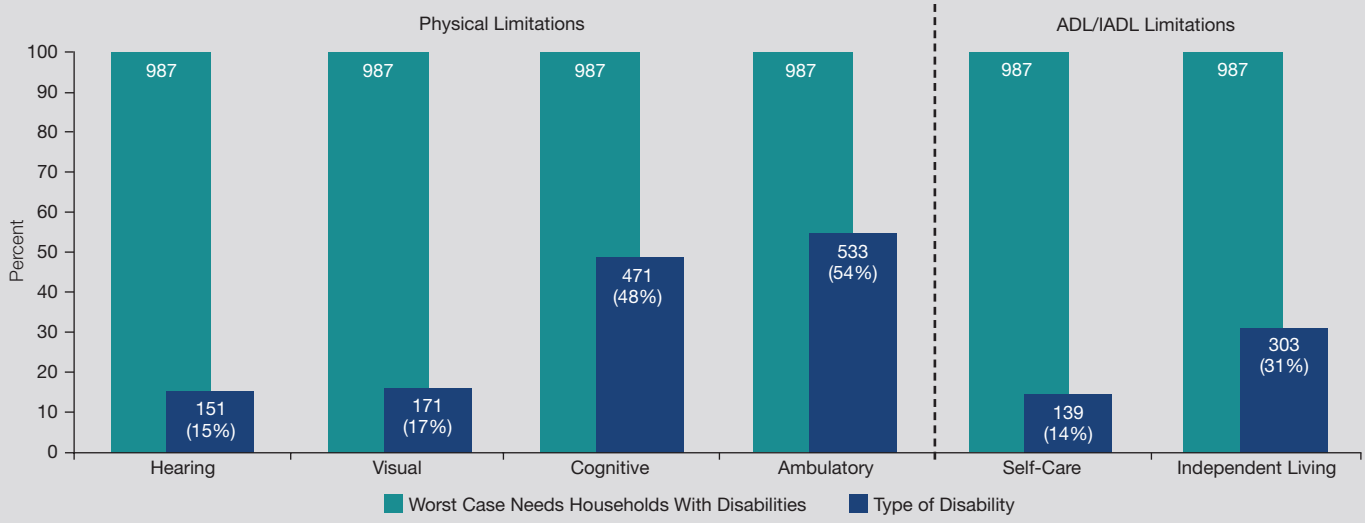
Share of assisted and unassisted renter and very low-income renter households with and without disabilities, 2009 (1,000 households and percent)



Source: Department of Housing and Urban Development, Office of Policy Development and Research, tabulations of American Housing Survey data

EXHIBIT 3. THERE IS A HIGH PREVALENCE OF COGNITIVE AND AMBULATORY LIMITATION AMONG HOUSEHOLDS WITH WORST CASE NEEDS AND DISABILITIES

Prevalence of types of disabilities among households with worst case needs and disabilities, 2009 (1,000 households and percent)

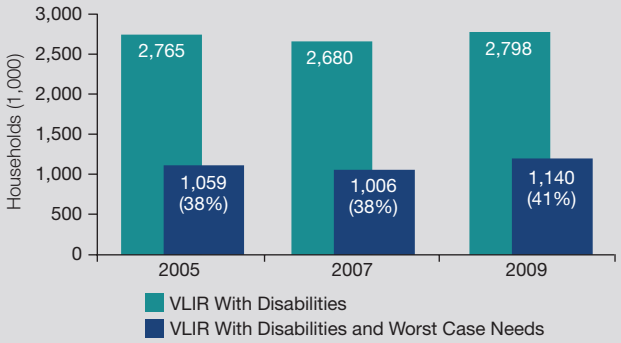


ADL = Activities of Daily Living. IADL = Instrumental Activities of Daily Living.

Source: Department of Housing and Urban Development, Office of Policy Development and Research, tabulations of American Housing Survey data

EXHIBIT 4. THERE HAS BEEN AN INCREASE IN THE NUMBER AND PREVALENCE OF WORST CASE NEEDS AMONG VERY LOW-INCOME RENTER HOUSEHOLDS WITH DISABILITIES

Number of worst case needs households with disabilities and prevalence among very low-income renter households with disabilities using income proxy measure, 2005 to 2009 (1,000 households and percent)

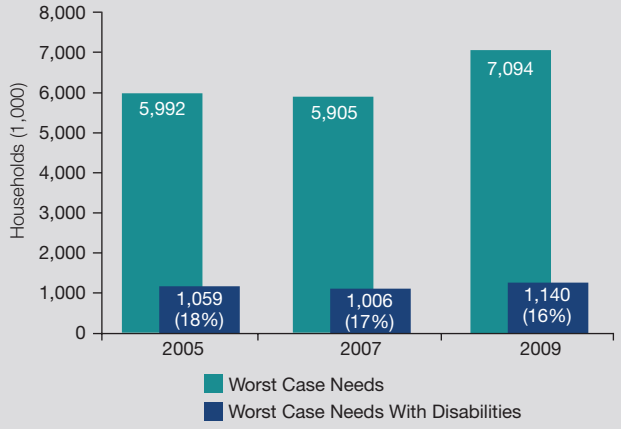


VLIR = very low-income renter.

Source: Department of Housing and Urban Development, Office of Policy Development and Research, tabulations of American Housing Survey data

EXHIBIT 5. THERE WAS A RECENT DECREASE IN THE PREVALENCE OF DISABILITIES AMONG WORST CASE NEEDS HOUSEHOLDS

Disability among worst case needs households using income proxy measure, 2005 to 2009 (1,000 households and percent)



Source: Department of Housing and Urban Development, Office of Policy Development and Research, tabulations of American Housing Survey data

Trends in Worst Case Needs and Disabilities Between 2005 and 2009

In 2009, the number and prevalence of worst case needs increased among very low-income renters with disabilities. Because direct measure was not available before the 2009 AHS, changes overtime have to rely on the income proxy measure.[3] According to income proxy measure, after a stagnant period between 2005 and 2007, the number of worst case needs households with disabilities increased by 140,000 between 2007 and 2009, affecting 1.1 million households. Exhibit 4 shows that the prevalence of these households among very low-income renters (VLIR) with disabilities increased from 38 to 41 percent during this same time period.

The prevalence of disabilities among worst case needs households decreased in 2009. This decrease resulted from a large increase in the number of worst case needs households, which was not accompanied by a proportional increase in those households with disabilities. Worst case needs grew by 20 percent between 2007 and 2009, and those households with disabilities grew by 13 percent during the same period. As a result, the prevalence of disabilities among worst case needs households decreased from 17 percent in 2007 to 16 percent in 2009 (Exhibit 5).

Age Groups of People With Disabilities and Worst Case Needs

Of the 987,000 households with worst case needs and disabilities, 18 percent include children with disabilities, 86 percent include nonelderly adults with disabilities, and 4 percent include both. Elderly people (62 years old and older) with disabilities are not included in this estimation. There are 619,000 households with worst case needs that include elderly people with disabilities.[4]

Race/Ethnicity of Worst Case Needs Households With and Without People With Disabilities

Small differences exist in the share of worst case needs households with and without disabilities, by race and ethnicity. Worst case needs households with disabilities have a greater share of non-Hispanic Whites, and a smaller share of Hispanics, compared with households without disabilities. Little difference is apparent in the share of non-Hispanic Black households with and without disabilities. Exhibit 6 shows that approximately 55 percent of worst case needs households with disabilities are White, compared with 47 percent of those without disabilities. The share of worst case needs households with disabilities that have a Hispanic ethnicity is 19 percent, and those without disabilities and a Hispanic ethnicity is 23 percent.

[3] The analysis is limited to 2005 because, before that year, a different methodology was used to estimate the number of people with disabilities based on income proxy measures. For more detail on the income proxy measures and the main differences between this measure and the direct one, see section 2 of this report.

[4] Elderly people with disabilities have not been included in past estimations or in this one, because other federal programs are designed specifically to address the housing needs of this population.

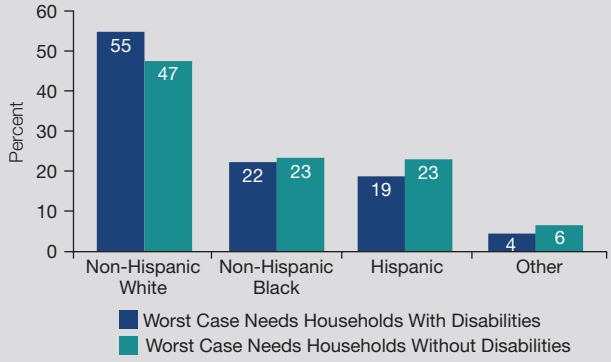
Regional and Urban Geography of Worst Case Needs Households With and Without People With Disabilities

The distribution of worst case needs households with disabilities by the four major regions—Northeast, Midwest, South, and West—is similar compared with the distribution for those without disabilities, with a slightly higher share of households that include people with disabilities in the Midwest and a slightly smaller share in the West and Northeast. Exhibit 7 shows that approximately 23 percent of worst case needs households with disabilities live in the Midwest, and 19 percent of those without disabilities live in this region. The share of households with disabilities that live in the West and the Northeast is 19 and 24 percent, respectively, compared with 20 and 26 percent of those without disabilities that live in these regions.

Larger differences are apparent in the distribution of worst case needs households with disabilities by metropolitan locations compared with those without disabilities. Exhibit 7 shows that a greater percentage of those households with disabilities are located in non-metropolitan areas (21 percent) compared with those without disabilities (15 percent). On the other hand, a smaller percentage of those households with disabilities are located in central cities (41 percent) compared with those without disabilities (48 percent). In suburbs, a similar percentage of worst case needs households with and without disabilities live in these areas.

EXHIBIT 6. THERE ARE SMALL DIFFERENCES IN THE SHARE OF WORST CASE NEEDS HOUSEHOLDS WITH AND WITHOUT DISABILITIES BY RACE/ETHNICITY

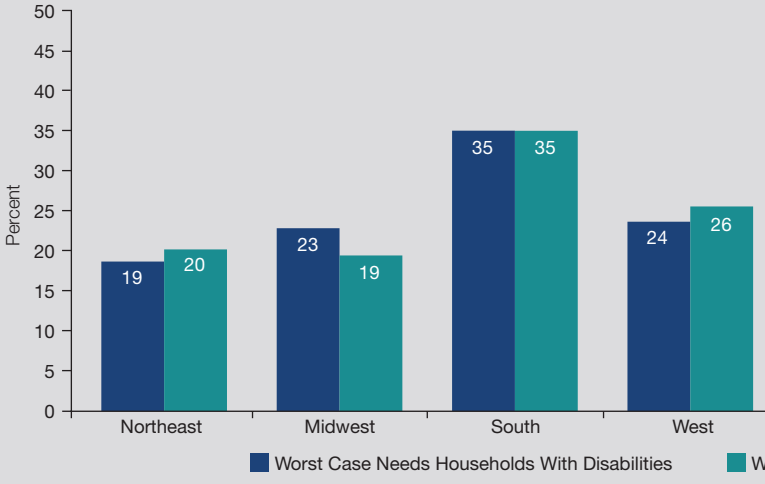
Share of worst case needs households with and without disabilities by race/ethnicity, 2009 (percent)



Source: Department of Housing and Urban Development, Office of Policy Development and Research, tabulations of American Housing Survey data

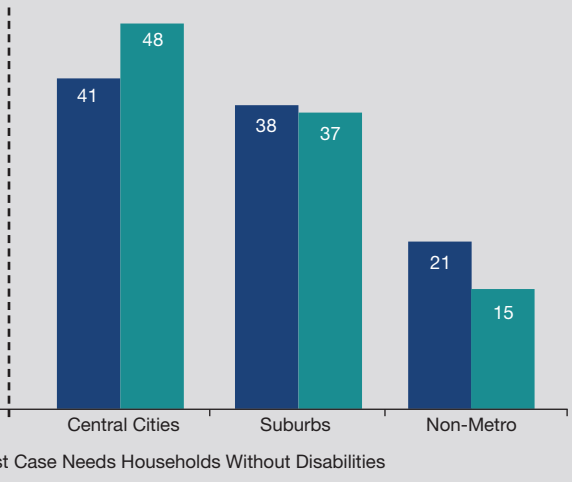
EXHIBIT 7. THERE ARE SMALL DIFFERENCES IN THE DISTRIBUTION OF WORST CASE NEEDS HOUSEHOLDS WITH AND WITHOUT DISABILITIES BY REGION...

Share of worst case needs households with and without disabilities by region, 2009 (percent)



...BUT THERE ARE SLIGHTLY LARGER DIFFERENCES BY METROPOLITAN LOCATION

Share of worst case needs households with and without disabilities by metropolitan region, 2009 (percent)



Source: Department of Housing and Urban Development, Office of Policy Development and Research, tabulations of American Housing Survey data

SECTION 2

CHANGES IN DISABILITY MEASURES OF WORST CASE NEEDS HOUSEHOLDS

Past reports on worst case needs households used an income proxy measure to identify households that include nonelderly adults with disabilities. Initially, three income sources were used as a proxy for nonelderly adults with disabilities among nonelderly households without children: Social Security and pensions, welfare and public assistance, and Supplemental Security Income (SSI). In 2005, the AHS added Social Security Disability Insurance (SSDI) as a specific income source and split the question on SSI and welfare income in two. As a result, four income sources were adopted as a proxy for people with disabilities among nonelderly households without children: (1) Social Security and pensions, (2) welfare and other public assistance, (3) SSI, and (4) SSDI.

Revisions to the 2005 AHS questions on income sources made estimating the presence of people with disabilities among families with children possible. When SSI and welfare income were reported on the same question, it was not possible to exclude income from public assistance directed toward families with children. As a result, families with children were not previously included among households that include people with disabilities. With the disaggregation of these questions and the inclusion of the question on SSDI in the 2005 AHS, HUD adopted three income sources as a proxy for disabilities among families with children: Social Security and pensions, SSI, and SSDI.

DIRECT MEASURE OF DISABILITY

All households with a nonelderly individual who reported at least one of the six types of disability asked about in the 2009 AHS.

INCOME PROXY MEASURE OF DISABILITY

For nonelderly households, it represents childless households with nonelderly adults identified as having a disability, using the four-income proxy measure (Social Security/pensions, welfare/public assistance, SSI, and SSDI).

For families with children it represents nonelderly adults identified as having a disability, using the three-income proxy measure (Social Security/pensions, SSI, and SSDI).

Comparing Income Proxy and Direct Measures of Disability in the 2009 AHS

Overall, a small decrease exists in the total number of worst case needs households that include people with disabilities, using the new direct measure of disabilities, but the prevalence among very low-income renter households is similar.[5] In 2009, 2.8 million very low-income renter households included people with disabilities, using the income proxy measure, compared with 2.6 million very low-income households that included people with disabilities, using the new direct measure. Among them, those with worst case needs were 1,140,000 using the income proxy measure, compared with 987,000 using the new direct measure, as shown in Exhibit 8. Thus the share of worst case needs among very low-income renter households that include people with disabilities was 38 percent using new direct measure down from 41 percent using income proxy measure.

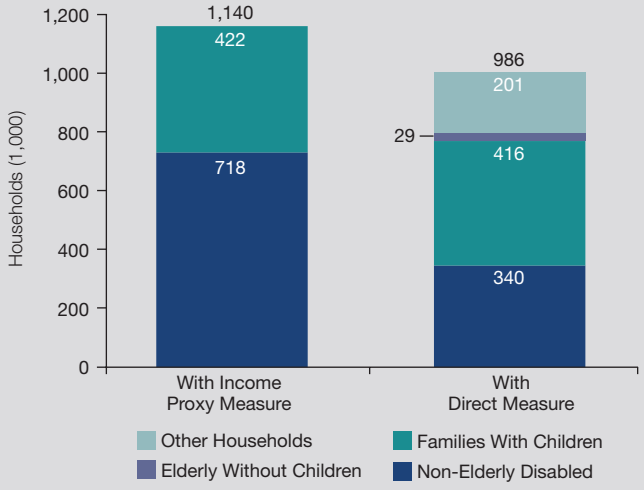
Previous worst case needs reports identified four major household types: (1) families with children, (2) elderly without children, (3) nonelderly disabled, and (4) other households.[6] For nonelderly disabled households, the number of worst case needs households with disabilities estimated using the direct measure is less than one-half the number estimated using the income proxy measure. Exhibit 8 shows that in 2009, the income proxy estimated 718,000 nonelderly households with worst case needs and disabilities. The new direct measure estimated only 340,000 nonelderly households with worst case needs and disabilities, a 53-percent reduction.

For families with children, the estimates of worst case needs households with disabilities do not vary much using the new direct measure and the income proxy measure. The income proxy measure estimates 422,000 families with children with worst case needs and disabilities, and the direct measure estimates 416,000 families with children with worst case needs and disabilities.

For elderly without children and other household types, the new direct measure permits the identification of households that include people with disabilities for the very first time. The direct measure estimates 29,000 and 201,000 households with worst case needs that include people with disabilities, respectively, in these household groups.

EXHIBIT 8. ESTIMATION OF DISABILITIES IS SMALLER WITH DIRECT MEASURE THAN WITH INCOME PROXY...

Number of worst case needs households with disabilities by family type, 2009 (1,000 households)



...BUT PREVALENCE AMONG VERY LOW-INCOME RENTERS WITH DISABILITIES IS SIMILAR

Share of very low-income renters with disabilities and worst case needs, 2009 (percent)

VLIR = Very low-income renter.

Source: Department of Housing and Urban Development, Office of Policy Development and Research, tabulations of American Housing Survey data

[5] The direct measure of disabilities not only changes the methodology from an income proxy to a self-reported measure, but it also includes children with disabilities. In the past, the income proxy methodology attempted to estimate only the number of nonelderly adults with disabilities, while the direct measure now includes the number of nonelderly adults and children with reported disabilities. In both cases, the number of elderly people with disabilities is not included in the estimations.

[6] Family with children represents households in which a child under 18 years old is present. The household is presumed to meet the definition of family through relation by birth or adoption (including grandparents as parents). Elderly without children represents households in which at least one householder or spouse is aged 62 or older and no children are present. Nonelderly disabled represents households that (1) are not families with children, (2) are not elderly without children, and (3) have an adult identified as having a disability, using a four-income proxy measure of disabilities.

Understanding the Differences Between Income Proxy and Direct Measures of Disability

Two main factors contribute to the differences between the income proxy and the direct measures of disability: the income proxy measure overcounts the number of people with disabilities in some cases and undercounts the number in others. In the first case, overcounting the number is a result of high rates of *false positives*, or the percentage of households that report having an income source proxy associated with disabilities but that do not answer positive to at least one of the six questions about disabilities. Depending on the income source, the rate of false positives ranges from 36 to 55 percent among VLIR nonelderly households without children and is even larger among families with children, ranging from 51 to 60 percent false positives, as shown in Exhibit 9. As a whole, the income proxy incorrectly identifies 43 percent of nonelderly households without children and 57 percent of households among families with children as having a household member with a disability.

In the second case, undercounting the number of people with disabilities is a result of high rates of *false negatives*, or the percentage of all households that reported a member with a disability that the income source proxy did not identify. Within both household groups, SSI is the proxy with the lowest rate of false positives, yet it still fails to identify 66 percent of all VLIR nonelderly households without children with people with disabilities and 75 percent of families with children with people with disabilities. Together, the income proxy does a better job at identifying people with disabilities, but it still fails to identify 31 percent of all VLIR nonelderly households without children with people with disabilities and 59 percent of families with children with people with disabilities.

EXHIBIT 9. INCOME PROXY MEASURE HAS HIGH RATES OF MISIDENTIFCATIONS

Reported disabilities by disability-related income source among very low-income renter households, 2009 (1,000 households and percent)

	Total (N)	Reported Disabilities (N)	Rate of False Positives (%)	Rate of False Negatives (%)
VLIR: nonelderly without children	6,724	1,493		
With income source:				
Social Security/railroad retirement	662	385	42	74
Supplemental Security Income	832	505	39	66
Public assistance	283	126	55	92
Retirement, survivor, or disability payments	471	299	37	80
Unduplicated total (any of the above sources)	1,831	1,036	43	31
VLIR: families with children	6,758	1,002		
With income source:				
Social Security/railroad retirement	300	120	60	88
Supplemental Security Income	514	250	51	75
Retirement, survivor, or disability payments	317	132	58	87
Unduplicated total (any of the above sources)	967	412	57	59

VLIR = very low-income renter.

Source: Department of Housing and Urban Development, Office of Policy Development and Research, tabulations of American Housing Survey data

Exhibit 10 shows that among VLIR nonelderly households without children, the income proxy incorrectly identifies 795,000 households as having people with disabilities and it fails to identify 457,000 households that reported having people with disabilities. Because the number of false positives is higher than the number of false negatives, the net effect is a reduction in the total estimated number of households that include people with disabilities, using the new direct measure.

Among VLIR families with children, the income proxy incorrectly identifies 555,000 households as having people with disabilities and it fails to identify 590,000 households that reported having people with disabilities. Because the number of false positives is similar to the number of false negatives, the net effect leads to a very small change in the total estimated number of households that include people with disabilities, using the new direct measure.

EXHIBIT 10. INCOME PROXY MEASURE OF DISABILITIES MISIDENTIFIES A LARGE NUMBER OF HOUSEHOLDS

Number of misidentifications of income proxy measure of people with disabilities among very low-income renter households, 2009 (1,000 households)

	With Income-Proxy Disabilities	With Reported Disabilities	False Positives	False Negatives
VLIR: nonelderly without children	1,831	1,493	795	457
VLIR: families with children	967	1,002	555	590

VLIR = very low-income renter.

Source: Department of Housing and Urban Development, Office of Policy Development and Research, tabulations of American Housing Survey data

SECTION 3

COMPARING THE AHS DISABILITY ESTIMATES WITH THE ESTIMATES FROM OTHER DATA SOURCES

The new direct measure represents an improvement from previous efforts to estimate the number of households with worst case needs that include people with disabilities. The new direct measure allows us to know more about the characteristics of renter households with disabilities and severe housing burdens. When compared with other data sources, however, the AHS disability estimates (1) do not always align perfectly with estimates from other surveys, (2) are limited by a small set of questions that do not completely capture a complex concept like disability, and (3) do not include some population groups that have high prevalence of people with disabilities.

This section compares estimates of the number of people with disabilities from the AHS, the American Community Survey (ACS), and the National Health Interview Survey (NHIS) and shows differences between them. It also discusses the remaining limitations of the AHS to estimate people with disabilities.

Comparing the AHS Disability Estimates With the ACS Estimates

Because the AHS and the ACS use similar questions to identify people with disabilities and they both inquire about income sources using similar questions, ACS can be used to validate AHS reporting on people with disabilities. It is important to use caution when comparing different surveys, because survey results are affected by each survey's different purposes, scopes, population of interest, modes of collection, contexts, and even minor differences in question wording and order. Therefore, it is unlikely that data will yield identical estimates.

As it would be expected, the estimates in the ACS are different from those in the AHS, with ACS presenting higher disability rates among VLIR nonelderly households without children and VLIR families with children. Exhibit 11 show that in 2009, there were an estimated 2.1 million VLIR nonelderly households without children with disabilities and 1.7 million VLIR families with children with disabilities, according to ACS data. The disability rate was 29 and 24 percent among these household groups, respectively. In contrast, the disability rate using AHS was only 22 and 15 percent among these household groups.

Another important difference between these estimates is that although both surveys have similar reporting of income sources associated with disabilities, ACS has a better

correlation between people reporting these income sources and reporting disabilities. Exhibit 12 shows that ACS has lower rates of false positives than AHS data estimates, especially for SSI. The rate of false positives for SSI is 39 percent among VLIR nonelderly households without children for AHS data, although it is only 5 percent for ACS data. The rate of false positives for SSI is 51 percent among VLIR families with children for AHS data, although it is only 22 percent for ACS data. This discrepancy seems to indicate that AHS respondents might be underreporting disabilities.

Together, the income source proxy estimates based on ACS data also yield lower rates of false positives than estimates based on AHS data. Among VLIR nonelderly households without children, the ACS income proxy incorrectly identifies 28 percent of households as having people with disabilities, although the AHS incorrectly identifies as many as 43 percent of households. Among VLIR families with children, the income proxy incorrectly identifies 46 percent of households as having people with disabilities, although the AHS incorrectly identifies as many as 57 percent of households.

AHS performs better in the rate of false negatives but only because AHS estimates of the number of households including people with disabilities is smaller than ACS estimates. Among VLIR nonelderly households without children, the income proxy fails to identify 33

EXHIBIT 11. COMPARISON OF AHS AND ACS DISABILITY ESTIMATES AMONG VERY LOW-INCOME RENTERS

Reported disability among very low-income renter households, 2009 (1,000 households)

	Total (N)	Reported Disabilities (N)	Prevalence (%)
American Housing Survey (AHS)			
VLIR: nonelderly without children	6,724	1,493	22
VLIR: families with children	6,758	1,002	15
American Community Survey (ACS)			
VLIR: nonelderly without children	7,286	2,107	29
VLIR: families with children	6,920	1,668	24

VLIR = very low-income renter.

Source: Department of Housing and Urban Development, Office of Policy Development and Research, tabulations of AHS and ACS data

EXHIBIT 12. ACS HAS HIGHER DISABILITY RATES AND LOWER MISIDENTIFCATIONS RATES THAN AHS

Reported disability by disability-related income source among very low-income renter households, ACS 2009 (1,000 households)

	Total (N)	Reported Disabilities (N)	Rate of False Positives (%)	Rate of False Negatives (%)
VLIR: nonelderly without children	7,286	2,107		
With income source:				
Social Security/railroad retirement	953	643	33	69
Supplemental Security Income	798	762	5	64
Public assistance	389	207	47	90
Retirement, survivor, or disability payments	186	67	64	97
Unduplicated total (any of the above sources)	1,946	1,410	28	33
VLIR: families with children	6,920	1,668		
With income source:				
Social Security/railroad retirement	580	217	63	87
Supplemental Security Income	414	324	22	81
Retirement, survivor, or disability payments	186	67	64	96
Unduplicated total (any of the above sources)	960	522	46	69

ACS = American Community Survey. AHS = American Housing Survey. VLIR = very low-income renter.

Source: Department of Housing and Urban Development, Office of Policy Development and Research, tabulations of ACS data

percent of households that reported having people with disabilities using ACS data, although AHS fails to identify 31 percent of households that reported having people with disabilities. Among VLIR families with children, the income proxy fails to identify 69 percent of households that reported having people with disabilities using ACS data, although AHS fails to identify 59 percent of households that reported having people with disabilities.

A number of possible reasons may explain differences in disability rates between ACS and AHS. These surveys have different purposes and context, with the AHS focusing on housing units and the ACS focusing on people. Results might also be affected by the different modes of collection. AHS uses only personal and telephone interviews and ACS relies more on a mailed form. Finally, AHS and ACS questions are grouped differently, have slight wording differences, and some of the questions are applied to different age groups. Although three questions in ACS are applied only to people 5 years old or older, they are applied to people of all ages in AHS. Even when surveys use similar questions, slight variations in wording or question sequence can yield different results. [7]

Comparing the AHS Disability Estimates With the NHIS Estimates

The NHIS is the principal source of information on the health of the noninstitutionalized civilian population of the United States and it includes a large set of questions about disability. The NHIS inquires about activity limitations that are not included in the AHS, such as work limitation, limitations that are specific to children, the degree of difficulty in a number of limitations, the condition or health problem associated with that limitation, as well as the length of time the individual has experienced the condition. Because of these differences, comparing general estimates from both surveys is not straightforward.

As expected, the NHIS and AHS have different estimates of the number of households that include people with disabilities, as shown in Exhibit 13. The 2009 AHS estimates a total of 9.3 million households that include nonelderly people with any of the six measures of disabilities discussed previously, and the 2009 NHIS estimates 14.2 million households that include nonelderly people with any of nine types of activity limitation.[8] These numbers are not strictly comparable because this NHIS estimate does not include some measures of physical limitation such as vision or hearing that are included in the AHS estimate.[9] On the other hand, the NHIS does include measures of activity limitation not included in the AHS, such as children's limitation with play activities, children's special education or early intervention needs, and adults' work limitation.

Despite these differences, concerning questions pertaining to activity limitation that use similar concepts, the NHIS and AHS estimates are, in fact, very similar. For example, in 2009, in questions related to ADL, the AHS estimates that 1.2 million households have a nonelderly individual who has *serious difficulty dressing or bathing*, and the NHIS estimates 1.1 million households have a nonelderly individual who *needs help with bathing and dressing*. In questions

EXHIBIT 13. COMPARISON OF SELECTED DISABILITY ESTIMATES FROM THE NHIS AND AHS

Selected measures of activity limitation and disability, 2009 (1,000 households and percent)

	Self-Care (ADL)	Independent Living (IADL)	Ambulatory Limitation	Cognitive Limitation	Any of Nine Activity Limitations (NHIS)	Any of Six Disability Measures (AHS)
NHIS						
Households (1,000)	1,107	2,526	3,190	2,640	14,247	
Percentage of total households	1.1%	2.5%	3.2%	2.6%	14.3%	
AHS						
Households (1,000)	1,232	2,535	4,767	3,721		9,293
Percentage of total households	1.1%	2.3%	4.3%	3.3%		8.3%

ADL = Activities of Daily Living. AHS = American Housing Survey. IADL = Instrumental Activities of Daily Living. NHIS = National Health Interview Survey.

Source: Department of Housing and Urban Development, Office of Policy Development and Research, tabulations of NHIS and AHS data

[7] Although AHS uses only computer-assisted personal interviewing (CAPI) and computer-assisted telephone interviewing (CATI), ACS starts with a mail response and follows up with CAPI and CATI modes only when respondents fail to return the mail form. The ACS mail form has the same questions found in AHS, but they are structured in three questions, with a total of six subparts. Each question applies to different age groups: the first to all people, the second to people 5 years old or older, and the last to people 15 years old or older.

[8] The NHIS activity limitation estimation is based on questions that address 9 limitations: (1) children under 5 years old who are limited in play activities, (2) children under 18 years old who receive special education or early intervention services, (3) people 3 years old or older who need help with personal care needs, (4) adults who need help with routine needs, (5) adults who are not able to work because of a condition or limitation, (6) adults who are limited in the kind or amount of work, (7) people who have difficulty walking, (8) people who have difficulty remembering and making decisions, and (9) people who have difficulty with any other activity.

[9] Although the NHIS has questions related to vision and hearing limitation, they are part of a module applied to a sample of adults and children of families included in the NHIS. As a result, aggregated information at the household level on these health conditions is more challenging to produce and was not included in this analysis.

related to IADL, the AHS estimates that 2.5 million households have a nonelderly individual who has *difficulty doing errands alone (visiting a doctor's office or shopping)*, and the NHIS estimates the same number of households have a nonelderly individual who has *difficulty handling routine needs (household chores, doing necessary business, shopping, or getting around for other purposes)*. Despite slight differences in wording, these surveys arrive at very similar estimates in the number of households that include nonelderly people with these self-care and independent living limitations (see Exhibit 13).

In some cases, differences in wording seem to lead to slightly larger differences in estimates, even for questions with similar concepts. In these cases, the AHS accounts for larger estimates of the number of households that include people with disabilities than the NHIS. For example, the AHS estimates 4.8 million households with a nonelderly individual who has *serious difficulty walking or climbing stairs*, and the NHIS estimates only 3.2 million households with a nonelderly individual who has *difficulty walking without using any special equipment*. Both questions try to capture ambulatory limitation, but the inclusion of limitation with climbing stairs in the AHS question seems to lead to larger number of reported disabilities.

Cognitive limitation provides a similar example of differences in estimates for similar concepts that might be a result of differences in language. The AHS estimates 3.7 million households with a nonelderly individual who has *serious difficulty concentrating, remembering, or making decisions because of a physical, mental, or emotional condition*. The NHIS, in contrast, estimates only 2.6 million households with a nonelderly individual who is *limited in any way because of difficulty remembering or because of periods of confusion*. Both questions try to capture cognitive limitation, but the AHS seems to trigger a higher response rate despite having the question restricted to serious difficulty.

In conclusion, the AHS disability estimates do not always align perfectly with estimates from other sources. In comparison with the ACS, the AHS has lower disability rates among very low-income renter households. For some reason, there seems to be a higher disability rate in the context of the ACS than in the context of the AHS that needs further investigation to draw a conclusion. In comparison with NHIS, on the other hand, the AHS seems to be getting similar disability estimates for questions that use similar concepts. But AHS has a more limited conceptual and operational definition of disability and is not able to capture all disability measures included in NHIS. As a result, the NHIS has a higher overall disability rate than the AHS. The Office of Policy Development and Research at HUD is conducting a systematic comparison of the AHS disability results with other surveys that use the same questions. This study might elucidate the reasons for these differences.

AHS Limitations To Estimate the Number of People With Disabilities and Severe Housing Needs

One limitation of the AHS is the small set of questions to estimate such a complex concept as disability. The set of disability questions in the ACS, which are ultimately the ones that were adopted in the AHS, have undergone major improvements from their original form. Their conceptual and operational definition was subject to a major review by a subcommittee on disability measurement led by the National Center for Health Statistics and its implementation was carefully tested in the 2006 ACS content test (Brault, 2009). Although these questions represent a conceptual and empirical improvement from earlier versions, it is challenging to capture a complex, dynamic, and multifaceted conceptual definition of disability using such a limited set of questions. Because disability is a concept that has different dimensions and exists in a continuum, establishing criteria that determine the presence of a disability with only six questions is admittedly constraining.

Other surveys, such as the NHIS, have a larger set of questions that allow for the use of broader concepts and operational definitions of disability. As discussed before, the NHIS captures limitations that are specific to children, limitations that affect employment, and other limitations that are not included in the AHS. In many cases, these limitations can be picked up by the questions that are included in the AHS because people with activity limitation report limitations in multiple areas. But these questions are not always able to pick up limitations not included in the survey and, as a result, NHIS captures larger numbers of people with activity limitation and have higher disability rates than the AHS does.

Another AHS limitation is that it excludes homeless people and people living in noninstitutional group quarters from its sample.[10] Noninstitutional group quarters include places such as homeless shelters and group homes where there is a high prevalence of people with disabilities. Since 2006, the ACS was expanded to include the population living in group quarters facilities, and the 2009 ACS estimates a total of 856,425 people (21 percent) with at least one of the six measures of disability living in homeless shelters, group homes, and other noninstitutional group quarters facilities.[11]

Despite these limitations, estimates of households that include people with disabilities and worst case needs will continue to use the AHS, because the AHS is the only survey of housing units measuring both rent burden and physical housing condition. The addition of direct questions about disabilities status improves AHS estimates and provides important demographic and geographic information about people with disabilities and severe housing needs. This additional information will have important policy implications, and improve the identification, characterization, and targeting of this population.

[10] *Group quarters* are places where people live or stay in a group living arrangement that is owned or managed by an entity or organization providing housing and services for the residents. They include *institutional group quarters* (for example, correctional, nursing, and healthcare facilities) and *noninstitutional group quarters* (for example, college residence halls, military quarters, homeless shelters, and group homes) (U.S. Census Bureau, American Community Survey, *2009 Group Quarters Definition*).

[11] The estimation of the population living in group quarters facilities includes (1) emergency and transitional shelters, (2) group homes intended for adults (noncorrectional), (3) residential treatment centers for adults (noncorrectional), (4) workers' group living quarters and job corps centers, and (5) religious group quarters.

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APPENDIX

EXHIBIT A–1. HOUSING CONDITIONS OF RENTER HOUSEHOLDS BY DISABILITY TYPE, 2009

	Total	With Disabilities[a]	Physical Limitations				ADL/IADL Limitations	
			Hearing	Visual	Cognitive	Ambulatory	Self-Care	Independent Living
All households (1,000)	111,861	9,293	1,945	1,328	3,721	4,767	1,232	2,535
Renter households	35,396	3,886	727	600	1,803	1,962	493	1,088
Owner households	76,465	5,407	1,218	728	1,918	2,804	739	1,447
Renter households (1,000)								
Unassisted w/ severe problems	8,085	1,059	162	188	494	568	148	316
Unassisted w/ nonsevere problems only	8,229	815	175	132	370	352	72	192
Unassisted w/ no problems	14,211	987	240	118	409	465	108	234
Assisted	4,871	1,025	150	162	530	578	166	347
Very low income	17,118	2,584	406	382	1,272	1,372	359	809
Worst case needs	7,095	987	151	171	471	533	139	303
Rent burden >50% of income	9,000	1,332	209	226	649	727	201	421
Rent burden 30–50% of income	8,240	986	178	144	491	484	107	260
Severely inadequate housing	998	149	25	36	83	67	26	39
Moderately inadequate housing	2,264	387	87	101	200	181	49	114
Crowded housing	1,499	183	31	67	78	49	14	35

ADL = Activities of Daily Living. IADL = Instrumental Activities of Daily Living.

[a] Households with disabilities include those in which nonelderly people report at least one of the six measures of disabilities.

Source: Department of Housing and Urban Development, Office of Policy Development and Research, tabulations of American Housing Survey data

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