The Housing Needs of Rental Assistance Applicants

Josh Leopold

United States Interagency Council on Homelessness

Abstract

Federal rental assistance programs are not funded adequately to serve all, or even most, eligible households. As a result, millions of households are on Public Housing Authority (PHA) waiting lists to receive a Housing Choice Voucher or a unit in a public housing development. Applicants typically wait years before being offered assistance, and many PHAs have closed their waiting lists to new applicants. Although this problem is longstanding and widely acknowledged, very little is known about the characteristics and experiences of households on waiting lists for rental assistance. A 2009 survey of nearly 1,000 nonelderly, nondisabled rental assistance applicants, selected from a nationwide sample of 25 PHAs, provides new information on these households. The survey shows that households that apply for and receive housing assistance differ significantly from households that the U.S. Department of Housing and Urban Development considers as having worst case housing needs (WCN). Specifically, most rental assistance applicants did not spend more than one-half of their income on housing, primarily because they reduced their housing costs by living with family or friends or by receiving some form of government subsidy. Applicants frequently reported other housing-related problems not included in the WCN measure, such as homelessness, overcrowding, and certain housing quality problems. In addition, many applicants appear to apply for rental assistance to form their own households rather than continue living with family or friends. These findings have implications for our understanding of housing needs and the function of rental assistance programs in addressing those needs.

Introduction

This article focuses on applicants to the public housing program and the Housing Choice Voucher Program (HCVP)—the two largest federal rental assistance programs, which serve roughly 1 and 2 million households, respectively. Public housing households live in units that the local housing

authority owns and operates, whereas HCVP (also called Section 8) households receive vouchers that they use to lease rental units in the private market. With some exceptions, households in both programs pay 30 percent of their monthly income—after taking certain deductions for childcare and medical expenses—toward rent, and the housing authority pays the difference between the tenants' rent contribution and the total cost of the unit.¹

To be eligible for public housing or the HCVP, a household's income must be less than 80 percent of the Area Median Income (AMI) within the Public Housing Authority's (PHA's) metropolitan area. Unlike the Supplemental Nutrition Assistance Program (food stamps), Medicaid, or other means-tested programs, however, housing assistance is not an entitlement, and only one in four eligible renter households currently receives any form of federal rental assistance (Steffen et al., 2011). Rental assistance applicants are placed on waiting lists and offered assistance as public housing units or vouchers become available.

Although no one knows exactly how many households are currently on public housing or HCVP waiting lists, the number is surely in the millions. The National Low Income Housing Coalition (NLIHC) surveyed the administrative plans of 134 PHAs for information about their waiting lists. More than 1.5 million people were on waiting lists just for those PHAs, and more would have been if many PHAs had not closed their waiting lists to new applicants (NLIHC, 2004). A 2009 survey of a nationally representative sample of PHAs with at least 500 units found that 15 percent of PHAs were not accepting new applicants for public housing and 58 percent of PHAs were not accepting new HCVP applicants (Buron et al., 2010). The same survey found that the wait for a public housing unit in most PHAs was 1 year or longer and the wait for a voucher was more than 2 years.

Federal and local policies regarding how to allocate rental assistance resources affect the amount of time applicants spend on waiting lists. In 1979, Congress established federal priorities for admission for households with severe rent burdens, households in severely substandard housing, and households that were displaced by government actions. The Quality Housing and Work Responsibility Act (QHWRA), enacted in 1998, removed these federal preferences. Today, housing agencies must ensure that 75 percent of new admits into the HCVP and 40 percent of new admits into public housing have extremely low incomes—meaning incomes of 30 percent or less of AMI. Other than meeting these quotas, PHAs have discretion to develop their own admissions preferences for selecting households from their waiting lists.

No national statistics are available on how PHAs set their admissions preferences. NLIHC's review of administrative plans found that 75 percent of the 134 PHAs in its sample used some sort of local preference system to order their waiting lists, whereas the other 25 percent selected applicants based on a lottery or a first-come, first-served system. The PHAs' admissions preferences rarely reflected the former federal preference for households that were rent burdened or living in

¹ Most housing authorities require households with zero reported income to pay a minimum monthly rent, which, at most, is \$50. In addition, some households in public housing units opt to pay a flat rent, which housing authorities set based on the market value of the unit. Voucher recipients also have the option of paying up to 40 percent of their income to rent units with rents that are greater than the PHA's payment standard at the time of the initial lease up, and many recipients pay more thereafter.

substandard housing. The most common PHA admissions preferences were for applicants who were employed, were involuntarily displaced as a result of natural disasters or government actions, were domestic violence victims, or lived or worked within the PHA's jurisdiction (NLIHC, 2004).

The characteristics of households on waiting lists for rental assistances are also not well understood. Studies that involve waitlisted households typically include them as a control group to study the effects of rental assistance. The high number of unassisted applicants and the lottery-based selection process that many PHAs use has allowed for several experimental evaluations of rental assistance programs. Jacob and Ludwig (2008) found that households that received a voucher through the Chicago Housing Authority (CHA) had lower quarterly earnings but higher Temporary Assistance for Needy Families takeup rates compared with households still on CHA's waiting list. An evaluation of the Welfare-to-Work program, which randomly assigned Section 8 applicants to the treatment (voucher) and control (remain on waiting list) groups, found that the treatment group had significantly lower rates of homelessness and overcrowding than the control group. These effects narrowed, however, as more people from the control group received assistance (Wood, Turnham, and Mills, 2009). Sharfstein et al. (2001) surveyed 74 families who had recently received a voucher through the Boston Housing Authority and found that applicants' housing units before receiving assistance were significantly more likely to have housing hazards, such as rats, lack of heat, and absence of running water, than their units after receiving assistance. No known studies have focused on why eligible households apply for rental assistance and how they would benefit from receiving it.

Although the literature on the specific characteristics and housing needs of rental assistance applicants is limited, the literature on the housing needs of very low-income unassisted renters (those with incomes of less than 50 percent of the AMI) is extensive. The most influential report on this subject is the U.S. Department of Housing and Urban Development's (HUD's) worst case housing needs (WCN) report to Congress. HUD submits this report, based on data from the American Housing Survey (AHS), to Congress every other year to "inform public policy decisions, including decisions on targeting existing resources, determining the need for additional resources, and the form housing assistance should take" (Steffen et al., 2011: 61). Only very low-income households that are living in a rental unit and not receiving government housing assistance can be considered WCN households. Two types of housing problems are considered WCN: severe rent burden and severely inadequate housing. Households have a severe rent burden if they spend 50 percent or more of their monthly income on housing (rent plus utilities). Severely inadequate housing units have one or more serious physical problems related to heating, plumbing, and electrical systems and maintenance (Steffen et al., 2011).

The most recent WCN study, based on AHS data from 2009, found that 7.1 million households, or 55 percent of all unassisted renters with very low incomes, had WCN. Of these households, 94 percent had a severe rent burden but were living in adequate housing, 3 percent were in severely inadequate housing but not severely rent burdened, and 3 percent were both severely rent burdened and living in severely inadequate housing.

The WCN reports have consistently identified severe rent burden as the dominant cause of WCN among very low-income renters (Bostic, 2011). Based on this evidence, a common assumption is that most households that apply for and receive rental assistance are also severely rent burdened.

The WCN report states that, "most assisted households would otherwise experience worst case needs" (Steffen et al., 2011: 10). Other studies that analyzed the relationship between the number of households receiving rental assistance in an area and the number of households with WCN have estimated that between 68 and 76 percent of households that receive housing assistance are selected from the WCN population (McClure, 2011; Shroder, 2002).

These findings have shaped an assumption among some housing policy experts that rental assistance, particularly Section 8, "generally does not materially improve the physical housing conditions experienced by its target population" (Grigsby and Bourassa, 2004: 815). Rather, for most recipients, rental assistance essentially functions as an income support. Assisted households use rental assistance to reduce their housing costs, enabling them to consume more of other goods such as food, clothing, education, and health care. Grigsby and Bourassa (2004: 816) argue in their call for fundamental reform of the Section 8 Program that "[t]he purpose of Section 8 has become not improvement in the housing inventory at affordable rents, but for all practical purposes, affordability alone that is, to reduce rent/income ratios to 30 or 40 percent." Therefore, the authors argued that Section 8 should be converted into an income-transfer program, giving money directly to eligible households that would presumably spend the money on housing, because it is their greatest expense (Grigsby and Bourassa, 2004).

It is not clear, however, that the WCN measure is a reliable proxy for understanding who applies for assistance and how they benefit from receiving it. Besides very low-income renter households, a variety of other groups might apply for rental assistance. For example, although reducing homelessness is one of the primary functions of rental assistance (Khadduri, 2008), homelessness is not included in the WCN measure because the AHS does not survey households not living in a housing unit. The authors of the WCN report acknowledge this omission as a limitation of the measure.

The WCN measure also excludes renters currently receiving government housing assistance. It does not place restrictions on assisted households applying for other forms of rental assistance, however. For example, nothing prevents a household in a public housing unit from applying for a Section 8 voucher. Using AHS data, Koebel and Renneckar (2003) found that roughly 1.5 million households that claimed to receive rental assistance were either severely rent burdened or living in severely substandard housing. Thus, reported receipt of some form of rental assistance is not necessarily an indication that a household is not motivated to apply for other forms of rental assistance.

When the WCN measure was originally developed, it reflected the federal priorities for rental assistance, as established by Congress. The authors of the WCN report acknowledge that many other housing-related needs are not included in this measure. Applicants may seek rental assistance because they are living in housing that is overcrowded, of poor quality (although not severely substandard), or in a poor-quality neighborhood (Koebel and Renneckar, 2003). They may also apply for assistance so they can afford to live closer to where they work or go to school (Belsky, Goodman, and Drew, 2005). Finally, applicants may use rental assistance as a means to establish their own household rather than live with family or friends (Shroder, 2002). PHAs may offer assistance to applicants with these needs rather than to applicants with worst case needs.

Survey of Waitlisted Households

This article is based on a survey of rental assistance applicants conducted as part of the *Study of Rents and Rent Flexibility*, a study of possible changes to the rent structure of HUD's public housing and the HCVP (Buron et al., 2010). The study team interviewed 1,204 nonelderly, nondisabled families from 25 PHAs who were either still waiting for housing assistance or had started receiving assistance within the past 12 months.

In selecting the sample, Buron et al. (2010) purposively chose PHAs in Cambridge, Massachusetts; Keene, New Hampshire; and Tulare, California, because they had used their enhanced flexibility as Moving to Work (MTW) sites to implement major reforms to their rent structures.² These 3 PHAs account for a small percentage of all assisted households but 28 percent of all survey respondents. Buron et al. (2010) selected the other 22 PHAs included in the survey through a stratified, random sampling process based on location, size, and the cost of rental housing within the PHA.

One-half of all sampled households were still waiting to be offered assistance; the other half had been offered assistance within the past year and was living in public housing or in a rental unit leased with a Housing Choice Voucher. The survey asked households currently receiving assistance to report on their housing status both before and after receiving assistance. The analysis focuses on the housing status of waitlisted households at the time they were interviewed and of new admits immediately before being offered assistance. For purposes of this article, both waitlisted and new-admit households are referred to as rental assistance applicants. Because this was a cross-sectional survey, it is not possible to determine if the housing issues experienced by applicants were the same problems that motivated them to apply for assistance or if their housing situation adapted over time.

Exhibit 1 shows the number of households within each PHA that completed a survey. Overall, 1,875 households were sampled, and 1,204 completed a survey. Although the sampling process was intended to screen out applicants with disabilities or who were elderly, 211 respondents were removed from the analysis because they reported having a disability or being elderly. Survey results are based on the responses of the 993 remaining applicants.

The survey had a response rate of 64 percent. The response rate for new admits (71 percent) was higher than that for waitlisted applicants (58 percent). The nonresponses were primarily the result of an inability to locate applicants. The research team was unable to locate 15 percent of new admits and 23 percent of applicants still on a waiting list. Rental assistance applicants are likely to be living in tenuous or transient living arrangements and, not surprisingly, many were no longer living at the address listed on the PHA's waiting list. An additional 16 percent of the sample refused to be interviewed, were unable to schedule an interview during the data collection period, or had a language barrier or other issue that prevented them from completing the survey.

The low response rate to the survey raises the problem of nonresponse bias. The results may underrepresent the worst off applicants, because homeless or tenuously housed applicants were the

² The MTW program was implemented as part of the QHWRA. MTW PHAs have the flexibility to implement reforms not generally allowed under HUD regulations. Some MTW sites used this flexibility to implement reforms such as charging all households a flat rent, establishing work requirements, and implementing time limits for housing assistance.

Exhibit 1
Household Survey Respondents by PHA and Sample Type

	Waitir	ng List	New A	Admits	
Housing Authority Name	Vouchers	Public Housing	Vouchers	Public Housing	Total
Austin Housing Authority	19	5	15	23	62
Bessemer Housing Authority	5	15	6	12	38
Birmingham Housing Authority	8	9	28	15	60
Boise City Housing Authority	15	2	20	0	37
Cambridge Housing Authority	18	10	29	18	75
Charleston/Kanawha Housing Authority	20	4	16	7	47
Charlotte Housing Authority	22	11	4	35	72
Chicago Housing Authority	35	0	26	10	71
Dubuque Housing Authority	12	0	21	0	33
Eastern Iowa Housing Authority	12	3	15	3	33
Framingham Housing Authority	12	1	16	4	33
Gastonia Housing Authority	10	5	18	6	39
Idaho Housing Finance Association—Section 8	19	0	19	0	38
Keene Housing Authority	65	27	11	4	107
Lake County Housing Authority	9	4	12	5	30
McKeesport Housing Authority	17	1	4	14	36
Muncie Housing Authority	13	1	6	7	27
Pittsburgh Housing Authority	30	14	12	37	93
Santa Barbara City Housing Authority	9	0	20	2	31
Santa Barbara County Housing Authority	8	1	10	5	24
Somerville Housing Authority	7	4	14	1	26
Travis County Housing Authority	23	2	6	2	33
Tulare Housing Authority	34	10	40	14	98
Vancouver Housing Authority	12	3	12	7	34
Waterbury Housing Authority	6	4	12	5	27
Total	440	136	392	236	1,204

PHA = Public Housing Authority. Source: Buron et al. (2010)

hardest to locate. Possibly, however, applicants who were not located had applied for assistance less recently but were not necessarily worse off, or applicants who declined to be interviewed were better off and no longer needed or were interested in receiving rental assistance.

Because the survey relied solely on self-reporting, there is also some risk of response bias. Respondents were not required to provide documentation to verify their reported incomes or expenses. In addition, new admits were asked to report on their housing expenses and housing quality both before and after receiving housing assistance. In some cases, new admits may have had a difficult time remembering the condition of their former housing or exactly how much they were paying for rent and utilities. Also, respondents may have underreported their income under the mistaken assumption that the information they reported would be shared with HUD and used to set their monthly rent contribution.

The survey of rental assistance applicants and the population of renters with possible WCN differ in several important ways. First, because the survey of rental assistance applicants was originally

intended to study the effects of rental assistance on earned income, it excluded applicants with disabilities or who were elderly. By contrast, one-third of WCN households include people who either have disabilities or are elderly (Steffen et al., 2011). Second, unlike the WCN measure, the survey of rental assistance applicants included households that were homeless, were already receiving some form of housing assistance, were living in owner-occupied housing, or had incomes exceeding 50 percent of AMI. Finally, the WCN measure is based on a survey of households, whereas the survey of rental assistance applicants asks questions about the applicant and the family the applicant heads. For cases in which an applicant is living with people with whom he or she will no longer live after receiving assistance, the survey does not capture the household's total housing cost or income.

Characteristics of Rental Assistance Applicants

Exhibit 2

Because the number of surveyed households is fairly small and not nationally representative, some question exists regarding how comparable they are with the national profile of rental assistance applicants. Unfortunately, no survey collects national data on the demographic characteristics of rental assistance applicants. HUD, however, requires PHAs to report on the characteristics of assisted households. Exhibit 2 compares the demographic characteristics of rental assistance applicants with the characteristics of all nonelderly, nondisabled households in public housing and the HCVP as of 2008. Other than the slightly higher proportion of American Indians among surveyed

Characteristics of Surveyed Households Compared With All Nonelderly, Nondisabled Assisted Households

Characteristics	Nonelderly, Nondisabled Assisted Households (N = 1,895,256)	Surveyed Rental Assistance Applicants (N = 993)
Gender of adults	2201	224
Female	89%	82%
Ethnicity		
Hispanic	23%	21%
Race		
White	43%	42%
Black	53%	52%
American Indian or Alaska Native	1%	4%
Asian	2%	1%
Native Hawaiian or other Pacific Islander	1%	1%
Age		
Average age	36	34
18–24	13%	22%
25–34	36%	39%
35–44	27%	21%
45–62	23%	18%
Income		
Median monthly income	\$862	\$1,000

Sources: Buron et al. (2010); 2008 U.S. Department of Housing and Urban Development, Office of Policy Development and Research, Public and Indian Housing Information Center data set

households, the racial and ethnic demographics of the two groups were nearly identical. Adults in surveyed households were slightly younger, which could be a result of the long wait times typical for rental assistance. Survey respondents were also slightly more likely to be men.

Survey respondents reported slightly higher median monthly incomes than assisted households. This difference could be a result of the high proportion of MTW sites, which were purposively selected because their rent structures were designed to be more attractive to working households (Buron et al., 2010). The income disparity could also emerge, however, because applicants with lower incomes were more likely to be offered assistance because of federal quotas for admitting extremely low-income applicants. In addition, studies have found that household income sometimes decreases after the receipt of rental assistance (Jacob and Ludwig, 2008).

At the time they were interviewed, 48 percent of surveyed households were still waiting for rental assistance and 52 percent had begun receiving assistance within the past 12 months. New admits reported that they spent an average of 2.6 years on the waiting list before being offered assistance, and the average reported wait time for households currently on the waiting list was 2.5 years. A few households with very long waits skew these averages. The median wait time for new admits was 1 year, whereas the median wait time for waitlisted households was 2 years.

New admits may have different characteristics and housing needs than applicants still on the waiting list because of federal income quotas and PHA admissions preferences. Only 4 of the 25 PHAs included in the sample reported that they selected households from their waiting lists on a lottery or first-come, first-served basis. The other 21 PHAs used admissions preferences to prioritize assistance for certain households. The two most common preferences, each cited by 48 percent of PHAs, were for applicants who were displaced by either natural disasters or government action and for applicants who were employed or enrolled in some kind of training program. The next most common preferences were for applicants living within the PHA service area (40 percent) and homeless applicants (24 percent). Only 8 percent of PHAs reported a preference for applicants who were rent burdened or living in substandard housing.

It is unclear what effect these admissions preferences had on whether eligible households applied for or received assistance. Some PHAs reported that the QHWRA income quotas limited their ability to prioritize assisting working households, because these households often do not have extremely low incomes. In addition, local admissions preferences might not have been well understood by potential applicants or well-advertised by PHAs. For instance, only 14 percent of applicants in PHAs with a preference for working households reported being told by their local housing authority that they would receive assistance sooner if someone in their household were working for pay.

Exhibit 3 shows that waitlisted households had higher average monthly incomes than new admits. Whether new admits had a lower income at the time they were offered assistance or their incomes decreased after receiving assistance, however, is unclear. New admits may have had a greater incentive to underreport their income if they mistakenly believed that their responses would be shared with the local housing authority and used to determine their rent contribution. On the other hand, new admits may have had a greater incentive to report their income accurately if they believed the housing authority data would be validated against the Enterprise Income Verification system. In

any case, although the difference in incomes was statistically significant, waitlisted households also had low incomes; 75 percent had extremely low incomes and 92 percent had very low incomes.

Exhibit 4 shows the living situations of waitlisted households at the time they were interviewed and of new admits immediately before receiving assistance. Among all applicants, 40 percent were living with family or friends, 38 percent were living independently without government assistance, 16 percent were living independently but receiving some form of housing subsidy, and 7 percent were homeless or living in an institutional setting. Among applicants living independently, 4 percent were owners and the other 96 percent were renters. The survey did not ask doubled-up applicants if they were living in owner-occupied or rental housing.

Households currently on the waiting list were more likely than new admits to report living independently without a subsidy (44 versus 31 percent) and were less likely to report being homeless or living in an institutional setting (4 versus 10 percent).

As shown in exhibit 4, the largest share of rental assistance applicants were living in doubled-up situations with family or friends. Exhibit 5 provides more detail about the living situation of these applicants. Of doubled-up applicants, 80 percent were living with family and slightly more than one-half of these applicants were paying some portion of the household's housing costs. The other 20 percent of doubled-up applicants were living with friends; one-half of these applicants helped pay rent and one-half did not.

Exhibit 3

Reported Monthly Income of Waitlisted and New-Admit Respondents

	Median Monthly Income (\$)	Percent With Extremely Low Incomes (≤ 30% of AMI)	Percent With Very Low Incomes (≤ 50% of AMI)
Waiting list (N = 518)	1,190ª	75	93
New admits (N = 473)	807	82	98

AMI = Area Median Income.

Note: Information on income was missing for 2 newly admitted applicants, and 131 waitlisted and newly admitted applicants did not know or refused to provide their monthly income.

Source: Buron et al. (2010)

Exhibit 4

Living Situation of Applicants Before Receiving Assistance

	Waiting List		New	New Admits		All Sampled Households	
	(N)	(%)	(N)	(%)	(N)	(%)	
Living independently—no subsidy	227	44	146	31	373	38	
Living independently—with subsidy	81	16	77	16	158	16	
Living with family or friends	190	37	203	43	393	40	
Other living arrangement ^a	19	4	46	10	65	7	
Total	517	100	472	100	989	100	

^a This group includes people who were incarcerated or living in dorms, barracks, hospitals, nursing homes, specialty schools, hotels, or motels.

Note: Information on income was missing for four respondents.

^a The difference in means was statistically significant at the .01 level.

Exhibit 5

Details About Rental Assistance Applicants Living With Family or Friends

	Applicants (N)	Doubled-Up Applicants (%)	Paying Some Rent (%)	Paying No Rent (%)
Living with family	314	80	55	45
Living with friends	79	20	50	50

Source: Buron et al. (2010)

Exhibit 6 shows the characteristics of rental assistance applicants based on their living situation before receiving assistance. On average, applicants living with family or friends were more than 4 years younger than applicants living on their own without a subsidy (31.1 versus 35.2 years old). Doubled-up applicants were also more likely to report extremely low incomes than were applicants living on their own without a subsidy (82 versus 72 percent). This factor might explain why a higher proportion of doubled-up applicants were offered assistance compared with applicants living independently—because housing agencies must ensure that a certain percentage of new admits have extremely low incomes. Both groups of applicants had similarly sized households and were almost equally likely to have young children.

On average, rental assistance applicants paid \$481 each month for housing, but housing costs varied greatly based on living situation (exhibit 7). Applicants who were living independently spent an average of \$771 on housing each month, whereas applicants receiving a housing subsidy spent an average of \$434. Applicants who were living with family or friends and helping with the rent spent an average of \$401 each month; these applicants paid almost the same in rent as subsidized applicants but paid slightly less for utilities. Also, a large group of applicants who lived with family or friends did not have any housing costs. This analysis does not include the housing costs of applicants who were homeless or living in an institutional setting, because the survey did not collect their housing costs. The survey asked applicants only about the housing costs for the family that they headed and not the total costs of their housing unit, so the total rent of the housing unit is not known.

Exhibit 6

Characteristics of Rental Assistance Applicants by Living Situation

			, ,		
	Applicants (N)	Average Age	Applicants With Extremely Low Incomes (%)	Average Household Size	Applicants With Young Children ^a (%)
Living independently—no subsidy	373	35.2	72	3.4	55
Living independently—with subsidy	158	34.9	78	3.2	63
Living with family or friends	393	31.1	82	3.7	57
Other living arrangement	65	34.5	89	3.3	52
Total	989	33.5	78	3.5	57

^a Children less than 7 years old.

Note: This information was missing for four respondents.

Exhibit 7

Average Monthly Housing Costs of Rental Assistance Applicants

	Applicants (N)	Total Housing Costs (\$)	Rent (\$)	Utilities (\$)
Living independently—no subsidy	373	771	619	152
Living independently—with subsidy	158	434	329	106
Living with family or friends—paying some rent	219	401	330	72
Living with family or friends—paying no rent	174	0	0	0
Total	924	481	384	97

Notes: Excludes applicants who were homeless or living in institutional settings. Rent + utilities may not equal total housing costs because of rounding.

Source: Buron et al. (2010)

Housing Needs

This section discusses the incidence of housing needs identified by the household survey, specifically rent burden, homelessness, housing quality issues, and overcrowding. The analysis looks at how housing needs differ based on households' housing status—living independently, living with family or friends, or other—and, whenever possible, compares waitlisted households with very low-income renters in the same metropolitan areas.

Housing Affordability

Exhibit 8 shows the percentage of rental assistance applicants who were rent burdened. The survey did not ask new admits to report their monthly income before receiving rental assistance. Therefore, the analysis of rent burden applies only to applicants who were still waiting to receive assistance. Roughly one-third of all waitlisted applicants were severely rent burdened, an additional 22 percent were moderately rent burdened, and nearly one-half (46 percent) were not rent burdened. Not surprisingly, the incidence of severe rent burden varied significantly depending on housing applicants' living situation. Most (55 percent) applicants living independently without a housing subsidy were

Exhibit 8

Incidences of Rent Burden Among Rental Assistance Applicants by Living Situation

	Applicants (N)	Applicants Not Rent Burdened (0-30% of Income) (%)	Applicants Moderately Rent Burdened (31–50% of Income) (%)	Applicants Severely Rent Burdened (>50% of Income) (%)
Living independently—no subsidy	204	14	31	55
Living independently—with subsidy	72	61	25	14
Living with family or friends— paying some rent or mortgage	84	58	19	23
Living with family or friends— paying no rent or mortgage	85	100	0	0
Total	445	46	22	32

Notes: Excludes applicants who were homeless or living in institutional settings. Information on monthly housing costs and/or monthly income was missing for 40 waitlisted applicants.

severely rent burdened. Some applicants who were doubled up and paying some rent or receiving a housing subsidy were also severely rent burdened. A substantial portion of applicants did not have any housing costs, however, because they lived with family or friends and did not pay rent.

Rental assistance applicants were far less likely to be severely rent burdened than were very low-income renters identified as having WCN. This finding is not surprising, given that severe rent burden is one of two measures used to identify WCN and that the other measure—severely substandard housing—has become increasingly rare. It is more instructive to compare incidence of severe rent burden among rental assistance applicants with that of all very low-income renters within the same metropolitan area.³

This comparison of rental assistance applicants with other very low-income households does not include applicants who were homeless or living in an institutional setting, because these groups are not captured in the AHS. This comparison does, however, include very low-income renters currently receiving rental assistance, because this group is included in the AHS and, as shown in exhibit 4, many assisted households apply for and receive assistance from other housing programs. The AHS comparison group also includes households with people who have disabilities or who are elderly. Filtering these households out of the analysis might have made for a more direct comparison, but it would have restricted the sample size such that the analysis would not have been feasible. The comparison is based on first calculating the proportion of severely rent-burdened respondents within each PHA (for the survey of applicants) and metropolitan area (for the AHS comparison group), then calculating a weighted average based on the number of respondents within each site. Because the waitlisted respondents are not a representative sample, this analysis compares only the incidences of severe rent burden among the surveyed waitlisted applicants with that among very low-income AHS respondents within the same metropolitan areas. Thus, the results are only suggestive of differences between the total populations of rental assistance applicants and all very low-income renters.

On average, 36 percent of rental assistance applicants were severely rent burdened compared with 56 percent of very low-income renters surveyed by the AHS in the same metropolitan areas. The z-test showed that the difference in means was significant at the .01 level (exhibit 9). Thus, rental assistance applicants were significantly less likely to be severely rent burdened than were very low-income renters in the same metropolitan areas.

The survey asked new admits to report their monthly housing costs both before and after receiving rental assistance. The comparison shows that, on average, new admits experienced a \$112 reduction in their monthly housing costs. New admits who had been living independently without a subsidy reduced their housing costs by \$390 per month after receiving assistance. Households already receiving a housing subsidy reduced their housing costs by an average of \$125. The average monthly housing costs of applicants living with family or friends increased by \$93 after receiving assistance (exhibit 10).

³ The AHS public data set includes only a household-level metropolitan statistical area code for metropolitan areas with populations of 100,000 or more. Thus, this analysis applies only to the 14 sampled PHAs in 9 metropolitan areas of at least 100,000 people.

⁴ Appendix A presents the formulas for the analysis.

Exhibit 9

Comparison of Rent Burden Between Rental Assistance Applicants and All Very Low-Income Renters

	Rental Assistance Applicants (N = 190)	Very Low-Income Renters (N = 381)
Percent of applicants rent burdened by PHA (n = 375)	35.8	55.9
Variance	.0012	.0006
z-test		- 3.3
p-value		< 0.01

AHS = American Housing Survey. PHA = Public Housing Authority.

Notes: Includes only applicants in metropolitan areas with populations of 100,000 or more. Data on very low-income renters are from households within the same metropolitan areas surveyed by the American Housing Survey.

Sources: AHS; Buron et al. (2010)

Exhibit 10

Average Monthly Housing Costs of Newly Admitted Applicants Before and After Receiving Assistance

	All Applicants (N = 426)	Applicants Living Independently— No Subsidy (N = 146)	Applicants Living Independently— With Subsidy (N = 77)	Applicants Living With Family or Friends (N = 203)
Housing costs before assistance Housing costs after assistance Change in housing costs after receiving assistance	\$476 \$364 - \$112	\$802 \$412 - \$390	\$548 \$423 - \$125	\$215 \$308 + \$93

Note: Excludes newly admitted applicants who were homeless or living in institutional settings before receiving assistance. Source: Buron et al. (2010)

Homelessness and Housing Instability

To assess housing instability, the survey asked rental assistance applicants if, at any time in the past 12 months, they did not have a place of their own to stay. In addition to the 7 percent of applicants who were literally homeless at the time they were interviewed or immediately before receiving assistance, 23 percent of housing applicants reported that they had been without a place of their own to live at some point during the past 12 months (exhibit 11). Among applicants without a place of their own to live, 64 percent reported that this problem persisted for more than 2 months. The survey asked applicants who were without a place of their own to live if they spent time living either in a shelter or on the streets, the HUD definition of literally homeless. Of these applicants, 15 percent reported living in a shelter at some point when they did not have a place of their own and 17 percent reported living on the streets.

Applicants living with friends appeared to be at greater risk of homelessness than applicants living independently or with family. Applicants living with friends were the most likely (54 percent) to

⁵ Waitlisted applicants were asked if, at any time in the past 12 months, they did not have a place of their own to stay, and new admits were asked about the 12-month period immediately before they began receiving assistance.

report being without a place of their own to live in the past 12 months, the most likely (78 percent) to report that this condition lasted for more than 2 months, and the most likely (26 percent) to report living on the streets during this period.

As another measure of housing stability, applicants were asked how long they had been living at their current address.⁶ On average, applicants had been living at their current address for more than 3 years (exhibit 12). Applicants living with friends reported the shortest average tenure at their current address (1.8 years) and applicants living with family reported the longest tenure (5 years).

Exhibit 11

Rental Assistance Applicants With No Place of Their Own To Live During the Past 12 Months

	All Applicants (N = 924)	Applicants Living Independently (N = 531)	Applicants Living With Family (N = 314)	Applicants Living With Friends (N = 79)
Percent of applicants with no place of their own to live during the past 12 months Among applicants with no place of their own to live, the percent who	23	15	34	54
were without a place of their own for more than 2 months	64	54	66	78
stayed in a shelter	15	16	14	15
stayed on the streets, in their cars, or in abandoned buildings	17	14	16	26

Notes: Excludes applicants who were homeless or living in institutional settings. Newly admitted applicants were asked about the 12-month period before they were offered assistance.

Source: Buron et al. (2010)

Exhibit 12

Average Tenure at Current Address Among Rental Assistance Applicants

	All Applicants	Applicants Living Independently	Applicants Living With Family	Applicants Living With Friends
Years at current address	3.2	2.3	5.0	1.8

Notes: N = 924. Excludes applicants who were homeless or living in institutional settings. Includes only waitlisted respondents. Source: Buron et al. (2010)

Substandard Housing

The survey of housing applicants asked waitlisted households about housing quality problems in their current residence and new admits about housing quality problems in their last residence before receiving housing assistance. The housing quality questions asked of applicants were taken from a study of housing quality problems in the Gulf States after Hurricane Katrina. Therefore, the results cannot be compared directly with the AHS questions used to identify renter households in severely substandard housing.

 $^{^{6}}$ New admits were asked about their tenure at their last address before receiving assistance.

 $^{^{7}}$ Appendix B compares each housing quality question asked of applicants with the most similar housing quality question included in the AHS.

More than one-half (51 percent) of rental assistance applicants reported at least one specific problem with the quality of their housing before receiving assistance, and one-third reported two or more problems (exhibit 13). Applicants living independently were more likely to report housing quality problems than were applicants living with family or friends.

Exhibit 14 shows the specific housing quality problems of rental assistance applicants. The most commonly reported housing quality problem, reported by 24 percent of applicants, was mildew, mold, or water damage. Applicants also reported problems with their heating (18 percent), electricity (15 percent), and plumbing (14 percent).

Exhibit 13

Frequency of Housing Quality Problems Among Rental Assistance Applicants

Number of Housing Quality Problems	All Applicants	Applicants Living Independently— No Subsidy	Applicants Living Independently— With Subsidy	Applicants Living With Family or Friends
Percent of households with no housing quality problems	49	45	48	54
Percent of households with one housing quality problem	19	21	20	16
Percent of households with two or more housing quality problems	32	3	32	30

Notes: N = 924. Excludes applicants who were homeless or living in institutional settings. Includes only waitlisted respondents. Source: Buron et al. (2010)

Exhibit 14

	Percent Reporting Pro
Housing Quality Problems Ar	mong Rental Assistance Applicants

	Percent Reporting Problem			
Type of Housing Quality Problems	All Applicants	Applicants Living Independently— No Subsidy	Applicants Living Independently— With Subsidy	Applicants Living With Family or Friends
Mildew, mold, or water damage	24	29	30	18
Floor problems, such as having boards, tiles, carpeting, or linoleum that are missing, curled, or loose	20	21	21	19
Use of oven to heat home in cold weather	18	18	20	16
In the past 3 months, toilet has not worked for 6 hours or more	16	18	12	16
In the past 3 months, electricity has not worked for 2 hours or more	15	13	16	17
In the past 3 months, bathroom floor has been covered by water because of a plumbing problem	14	16	8	14
Holes or large cracks where outdoor air or rain can come in	13	16	16	10
Bad odors such as sewage or natural gas	10	10	9	10

Notes: N = 924. Excludes applicants who were homeless or living in institutional settings. Includes only waitlisted respondents. Source: Buron et al. (2010)

Overcrowding

The survey of housing applicants asked about the number of residents living in the applicant's housing unit and the number of rooms in the unit, excluding bathrooms and hallways. Exhibit 15 examines the incidence of overcrowding among rental assistance applicants. This analysis considers a housing unit overcrowded if the number of people in the housing unit exceeds the number of rooms. The AHS uses the same measure to identify overcrowded units. The WCN report classifies overcrowding as a "moderate" housing problem rather than a WCN.

Overall, 18 percent of rental assistance applicants lived in overcrowded housing units. Surprisingly, applicants living independently were more likely than applicants living with family or friends to live in overcrowded units. Applicants in subsidized units were the least likely to live in overcrowded housing. Applicants with young children, defined as children less than 6 years old, were three times as likely to be in overcrowded households as other applicants (25 versus 8 percent). Because young children can share a bedroom with their parents or siblings, these units may not feel as crowded as similarly sized units with only adults and older children. Immigrant cultures are often perceived to have more permissive attitudes towards overcrowding and doubling up (Koebel and Renneckar, 2003). This is consistent with our results, which found that Hispanic and Asian applicants were more likely to live in overcrowded conditions.

Exhibit 16 compares the incidence of overcrowding among rental assistance applicants with that of very low-income renters in the same metropolitan area. As in exhibit 9, this comparison is based

Exhibit 15

Percentage of Rental Assistance Applicants Who Live in Overcrowded Housing		
	Percent	
All applicants (N = 922)	18.0	
Applicants by housing status before receiving assistance		
Living independently—no subsidy (N = 373)	19.8	
Living independently—with subsidy (N = 158)	14.5	
Living with family or friends (N = 391)	17.6	
Applicants by presence of children less than age 6		
Households with children less than age 6 (N = 526)	8.0	
Households without children less than age 6 (N = 396)	25.0	
Applicants by ethnicity		
Hispanic (N = 189)	21.0	
Non-Hispanic (N = 727)	14.0	
Applicants by race		
White (N = 368)	23.0	
African American (N = 472)	12.0	
American Indian or native Alaskan (N = 30)	20.0	
Asian (N = 11)	55.0	
Native Hawaiian or other Pacific Islander (N = 3)	0.0	

Notes: Excludes applicants who were homeless or living in institutional settings. Includes only waitlisted respondents. Two applicants were missing information on the number of rooms in their housing unit, 8 applicants were missing information on ethnicity, and 40 applicants were missing information on race.

Exhibit 16

Comparison of Overcrowding Among Rental Assistance Applicants and All Very Low-Income Renters in the Same Metropolitan Areas

	Rental Assistance Applicants (N = 403)	Very Low-Income Renters (N = 404)
Percent of households with young children	51	19
Percent of households in overcrowded housing	13.4	6.2
Variance	0.0003	0.0001
z-test	3.46	
p-value	< 0.01	
Excluding households with young children		
Number of households	196	328
Percent of households in overcrowded housing	6.1	1.5
Variance	0.0003	0.0001
z-test	2.5	
p-value	0.01	

AHS = American Housing Survey

Note: Includes only applicants in metropolitan areas with populations of 100,000 or more.

Sources: AHS; Buron et al. (2010)

on first calculating the proportion of overcrowded respondents within each PHA (for the survey of applicants) and metropolitan area (for the AHS comparison group), then calculating a weighted average based on the number of respondents within each site.⁸

Rental assistance applicants were more than twice as likely as very low-income renters to live in overcrowded housing (13 versus 6 percent). These differences were statistically significant at the .01 level. Rental assistance applicants were also more likely than very low-income renters to have young children (51 versus 19 percent). Excluding households with young children from both population groups, applicants were still significantly more likely than very low-income renters to live in overcrowded housing (p-value = 0.01).

Household Formation

Low-income families may choose to live with people with whom they would rather not live if they could afford to live independently. The inability to form a household of one's own is not considered a WCN, but it could be a major reason why households choose to apply for rental assistance (Shroder, 2002). Of applicants on waiting lists for rental assistance, 63 percent reported that they currently lived with one or more other adults. More than two-thirds of these applicants (68 percent) said that they did not plan on living with all of the other adults in their household after receiving assistance (exhibit 17). The preponderance of single female-headed households in assisted housing is sometimes viewed as a negative effect of the rent subsidy structure, because

⁸ Appendix A presents the formulas for the analysis. As noted, regarding exhibit 9, because the waitlisted respondents are not a representative sample, this analysis compares only the incidence of overcrowding among the surveyed waitlist applicants with that among very low-income AHS respondents within the same metropolitan areas. Thus, the results are only suggestive of differences between the populations of rental assistance applicants and all very low-income renters.

Exhibit 17

Influence of Rental Assistance on Number of Adults in Household		
	Number	Percent
Waitlisted applicants living with other adults	328	63
Will all adults remain with you after receiving assistance?a		
Yes, all adults will remain in household after receiving assistance	100	32
No, not all adults will remain in household after receiving assistance	216	68

^a Information is missing for 12 respondents living with other adults. Source: Buron et al. (2010)

households with multiple wage earners pay higher rents. Most applicants, however, reported that the reason other adults would not live with them after receiving assistance was because they preferred to live independently.

Discussion

Although these results are from a relatively small and not nationally representative sample, they have important implications for our understanding of housing needs and the function of rental assistance programs. These results suggest that households that apply for and receive rental assistance differ in important ways from WCN renters or from very low-income unassisted renters in general. Specifically, more than one-half of rental assistance applicants are not rent burdened, because they are either doubled up with family or friends or receiving some form of housing assistance. These applicants may experience a variety of other housing-related hardships, however, including homelessness, substandard housing, and a lack of independence.

The results do not suggest that the WCN report is in error. The WCN measure is an assessment of housing needs among very low-income unassisted renters and does not claim to represent the housing needs of all rental assistance applicants. In addition, nothing requires that PHAs prioritize WCN applicants over applicants with other housing needs. The WCN report, however, is meant to inform our understanding of the need for housing assistance and the form that assistance should take. Housing policy experts sometimes use WCN households as a proxy for households that apply for and receive rental assistance. The survey results suggest that relying on the WCN measure to understand the effects of rental assistance overestimates the direct financial benefits of assistance in reducing housing costs and underestimates its benefits for increasing housing consumption. This reliance may also lead policy experts to underestimate the value of the nonfinancial components of rental assistance programs, such as housing quality standards.

The WCN measure would be more representative of rental assistance applicants if it included homeless people and households already receiving some form of government housing assistance. Nearly one-fourth of rental assistance applicants fall into one of these two categories.

The WCN measure does not include homelessness because the AHS captures only people living in housing units. At the time the WCN measure was initially developed, no regular efforts were made to count the homeless, and national estimates of homelessness varied widely (Koebel and Rennecker, 2003). HUD now produces an Annual Homeless Assessment Report to Congress and

its estimates of homelessness have become increasingly precise. In 2010, almost 650,000 people were homeless on a single night and more than 1.6 million people used homeless shelters during a 12-month period (HUD, 2011). Despite the danger of double counting households that experience both homelessness and other WCN, including homeless households in the WCN report would lead to a more accurate picture of WCN and the need for rental assistance.

The WCN measure excludes households currently receiving some form of housing assistance, because these households are assumed to be living in adequate and affordable housing, but 16 percent of rental assistance applicants reported already receiving some form of housing subsidy. Of those applicants, 25 percent were severely rent burdened and 55 percent reported at least one housing quality problem. Thus, some subsidized applicants appear to have serious housing problems. In addition, other studies of AHS data have shown that households often mistakenly believe that they are receiving housing assistance (Koebel and Renneckar, 2003). Excluding these households may cause the WCN report to underestimate the number of WCN households.

Although many rental assistance applicants were not rent burdened, they did experience a variety of hardships related to the quality of their housing. More than one-half of applicants reported one or more housing quality problems. This finding is surprising, because incidences of severely substandard housing, as measured by the WCN report, have become rare, which is often taken as an indication that even low-income renters live in housing that is physically adequate (Grigsby and Bourassa, 2004).

The housing quality questions asked in the survey were originally developed to test damages to the housing stock after Hurricanes Katrina and Rita and are not specific enough to judge the severity of applicants' housing problems. Nonetheless, some of the problems reported by applicants are potentially very serious. Almost one-fourth of applicants lived in housing with mold or water damage, which is positively associated with asthma and other respiratory problems (Bush et al., 2006). More than 10 percent of applicants reported problems with their electric, plumbing, or heating systems. Some of these problems may be only inconveniences, whereas others are potentially unsanitary and unsafe. In addition, 18 percent of applicants lived in overcrowded housing, which has been associated with higher risk of meningitis, tuberculosis, and other respiratory problems (Office of the Deputy Prime Minister, 2004) and food insecurity (Cutts et al., 2011). The housing quality problems reported by applicants are especially troubling because most of these households include young children.

The high incidence of housing quality problems suggests that the lack of adequate, affordable housing is a public health issue as well as an economic and social problem. Further research is needed to determine the severity of these housing quality problems and whether they are representative of problems among very low-income households in general. These results suggest, however, that the quality of the housing stock for very low-income households remains a problem even if incidences of severely substandard housing have become rare.

Finally, the survey of applicants raises some questions about whether rental assistance is being targeted to households with the greatest housing needs. Of new admits, 16 percent were already receiving some form of housing assistance. Although subsidized applicants were not immune from having severe rent burdens or other housing hardships, they were less likely to experience these

problems than were applicants not receiving a subsidy. Assisted applicants, however, were as likely to be selected from the waiting list as were unassisted applicants. PHAs may want to consider prioritizing waitlisted households that are not already receiving housing assistance.

The treatment of doubled-up applicants is a larger issue for rental assistance policy. Among all rental assistance applicants, 40 percent were living with family or friends. Because these applicants were typically extremely low income, they appear to be more likely to be selected from the waiting list than applicants living independently without a subsidy. Doubled-up applicants, however, were less likely than applicants living independently to be severely rent burdened or to live in housing with quality problems and, counterintuitively, were also less likely to live in overcrowded housing.

These findings raise the question of whether doubling up is a solution to a housing affordability problem or is a serious housing need itself. The answer depends in part on the stability of the doubled-up arrangement. The survey results suggest that living with friends is often not a viable long-term living arrangement. Applicants living with friends had the shortest average tenure at their current address and were the most likely to report being literally homeless at some point during the past 12 months. By contrast, applicants living with family had been in their current address for an average of 5 years, suggesting that, for many applicants, living with other family members was a stable, long-term living arrangement.

Of course, anyone who has ever moved back in with their parents recognizes that this is not an ideal long-term living arrangement and many doubled-up applicants have a strong desire to form their own households. A number of studies have established that rental assistance is a means by which families can create their own household (Shroder, 2002). Household formation has psychological benefits; assisted households have reported decreases in stress and depression as a result of having their own home rather than having to "mooch" off of family or friends (Wood, Turnham, and Mills, 2009). Household formation may also have positive effects for the development of human capital and for the overall economy (Painter, 2010; Shroder, 2002). Some policymakers may not see household formation as one of the primary goals of rental assistance, however, and may prefer to see scarce resources allocated to applicants who are homeless, severely rent burdened, or living in substandard housing.

Appendix A. Formulas for Comparing Rental Assistance Applicants With Very Low-Income Households in the Same Metropolitan Area

The comparison of incidences of severe rent burden and overcrowding between the two groups was done using a weighted average approach. The mean was calculated for each site, and the weighted mean was the average across all sites weighted by the number of respondents in each site such that

$$m_s = \frac{1}{N_s} \sum_{j=1}^{s} \left(m_{sj} \right) \left(n_j \right)$$

where

$$m_{sj} = \frac{1}{n_j} \sum_{i=1}^{n_j} x_{ij}$$

so that

$$m_{s} = \frac{1}{N_{s}} \sum_{i=1}^{N_{s}} \sum_{i=1}^{n_{j}} \left(\frac{x_{ij}}{n_{j}} \right) (n_{j})$$

where

M_s = the mean outcome for the survey sample;

N_s = the total number of survey respondents;

 M_{si} = the mean outcome for the survey sample in the site;

 N_i = the number of survey respondents in the j^{th} site; and

 X_{ij} = the outcome for the ith respondent in the jth site.

The calculation used to determine the variance of each population was

$$\sigma^2 = \frac{p(1-p)}{n}$$

where

P = the weighted mean outcome; and

N =the number of respondents.

Appendix B. Comparison of Housing Quality Questions Asked in the Survey of Rental Assistance Applicants and the American Housing Survey

Survey of Rental Assistance Applicants	Most Comparable Question in the American Housing Survey
Does your housing have any mildew, mold, or water damage on any wall, floor, or ceiling?	Did water leak in from the outside within the past 12 months?
Does your housing have any floor problems such as boards, tiles, carpeting, or linoleum that are missing, curled, or loose?	Are any holes in the floors big enough for someone to catch their foot on?
Does your housing have any holes or large cracks where outdoor air or rain can come in?	In the inside walls or ceilings of this housing unit are there any open holes or cracks wider than the edge of a dime? Does the roof have any holes?
Does your housing have any bad odors such as sewer, natural gas, etc.?	Has the sewage system broken down in your home since the last interview?
	[If yes] How many of these breakdowns lasted 6 hours or more?
In the last 3 months has any bathroom floor been covered by water because of a plumbing problem?	Did water leak in from the outside within the past 12 months?
In the last 3 months has your toilet not worked for 6 hours or more?	Was there any time in the last 3 months when the toilet broke, or stopped up, or otherwise was not working, so you couldn't use it?
	[If yes] And how many of those times was the toilet not working for 6 hours or more?
In the last 3 months has your electricity not worked for 2 hours or more?	Does every room have an electric outlet or wall plug that works?
	Have any fuses blown or circuit breakers tripped in your home?
	[If yes] How many times have fuses blown or breakers tripped in last 3 months?
In cold weather, do you ever need to use your over to heat your home?	Last winter, for any reason, was your housing unit so cold for 24 hours or more that it was uncomfortable?
	[If yes] Was that because the main heating equipment broke down?
	[If yes] How many times did main heating equipment break down for 6 hours or more?

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Author

Josh Leopold is a management and program analyst at the United States Interagency Council on Homelessness.

References

Belsky, Eric S., Jack Goodman, and Rachel Drew. 2005. *Measuring the Nation's Rental Housing Affordability Problems*. Cambridge, MA: Harvard University, Joint Center for Housing Studies.

Bostic, Raphael. 2011. "Foreword." In *Worst Case Housing Needs 2009: Report to Congress*. Washington, DC: U.S. Department of Housing and Urban Development, Office of Policy Development and Research.

Buron, Larry, Jill Khadduri, Josh Leopold, and Sarah Gibson. 2010. *Study of Rents and Rent Flexibility: Final Report*. Report by the Urban Institute and Applied Real Estate Analysis. Washington, DC: U.S. Department of Housing and Urban Development, Office of Public Policy and Legislative Initiatives.

Bush, Robert K., Jay Portnoy, Andrew Saxon, Abba Terr, and Robert Wood. 2006. "The Medical Effects of Mold Exposure," *Journal of Allergy and Clinical Immunology* 117: 326–333.

Cutts, Diana B., et al. 2011. "Housing Insecurity Associated With Food Insecurity and Poor Health in Children," *Journal of Clinical Outcomes Management* 18 (9): 395–398.

Grigsby, William G., and Steven C. Bourassa. 2004. "Section 8: The Time for Fundamental Program Change," *Housing Policy Debate* 15: 805–834.

Jacob, Brian A., and Jens Ludwig. 2008. The Effects of Housing Assistance on Labor Supply: Evidence From a Voucher Lottery. Working Paper 14570. Cambridge, MA: National Bureau of Economic Research.

Khadduri, Jill. 2008. *Housing Vouchers Are Critical for Ending Family Homelessness*. Washington, DC: National Alliance to End Homelessness.

Koebel, C. Theodore, and Patricia Renneckar. 2003. *A Review of the Worst Case Needs Measure*. Washington, DC: U.S. Department of Housing and Urban Development, Office of Policy Development and Research.

McClure, Kirk. 2011. *Reduction of Worst Case Housing Needs by Assisted Housing*. Washington, DC: U.S. Department of Housing and Urban Development.

National Low Income Housing Coalition (NLIHC). 2004. A Look at Waiting Lists: What Can We Learn From the HUD Approved Annual Plans? NLIHC Research Note #04-03. Washington, DC: National Low Income Housing Coalition.

Office of the Deputy Prime Minister. 2004. *The Impact of Overcrowding on Health and Education:* A Review of the Evidence and Literature. London, United Kingdom: Office of the Deputy Prime Minister. Also available at http://www.communities.gov.uk/documents/housing/pdf/140627.pdf.

Painter, Gary. 2010. What Happens to Household Formation in a Recession? Washington, DC: Research Institute for Housing America.

Sharfstein, Joshua, Megan Sandel, Robert Kahn, and Howard Bauchner. 2001. "Is Child Health at Risk While Families Wait for Housing Vouchers?" *American Journal of Public Health* 91 (8): 1191–1192.

Shroder, Mark. 2002. "Does Housing Assistance Perversely Affect Self-Sufficiency? A Review Essay," *Journal of Housing Economics* 11: 381–417.

Steffen, Barry L., Keith Fudge, Marge Martin, Maria Teresa Souza, David A. Vandenbroucke, and Yung Gann David Yao. 2011. *Worst Case Housing Needs* 2009: *Report to Congress*. Washington, DC: U.S. Department of Housing and Urban Development, Office of Policy Development and Research.

U.S. Department of Housing and Urban Development (HUD). 2011. *The 2010 Annual Homeless Assessment Report to Congress*. Washington, DC: U.S. Department of Housing and Urban Development, Office of Community Planning and Development.

Wood, Michelle, Jennifer Turnham, and Gregory Mills. 2009. "Housing Affordability and Family Well-Being: Results From the Housing Voucher Evaluation," *Housing Policy Debate* 19 (2): 367–412.