

Background

Federal programs to assist lower-income renters began in the 1930s with the construction of public housing. Since then, rental housing programs have expanded to include privately owned assisted housing, where the federal subsidies are tied to the housing unit, and tenant-based assistance, where a federally subsidized voucher helps the tenant afford privately owned units. The number of households needing such rental assistance was originally estimated by counting those with low incomes that live in inadequate or overcrowded housing or pay excessive shares of income for housing.¹

Rental assistance has never been an entitlement, so admission is based on waiting lists. In 1979 and 1983, Congress gave preference in admission to rental assistance programs to income-eligible households with the most severe housing problems, including those who were homeless, lived in severely inadequate housing, or paid more than half of their income for rent and utilities. The subset of unassisted renters who had incomes below 50 percent of HUD-adjusted area median family income (HAMFI) as defined by Congress and the severe housing problems listed above became known as those with “worst case needs” for rental assistance.²

In 1990, the Senate Appropriations Committee directed HUD to report on worst case housing needs annually and “urge[d] the Department to develop a strategic plan [outlining] how the Federal Government . . . can help to eliminate or substantially reduce the number . . . in this worst case needs category.”³ All of HUD’s resulting reports provided data on the extent of worst case housing needs and also contributed new methodologies for analyzing those needs. As described in this appendix, several reports also discussed strategies for reducing needs.

HUD’s Worst Case Needs Reports

Between 1991 and 2007, HUD produced 10 reports to Congress using the American Housing Survey (AHS) as the primary data source.⁴ HUD’s reports to Congress detail the types of housing problems

¹ For rental housing programs, the 1974 Housing and Community Development Act defined low income as incomes less than or equal to 80 percent of area median family incomes as adjusted by the Secretary of HUD. Thus, all three of the income groups highlighted in this study are low income.

² HUD (2007) gives this definition of worst case needs, p. 1. Also, as noted in the first chapter of HUD’s 1998 Worst Case Needs report, the homeless population is given preference in admission into rental assistance programs, but estimates of the number of homeless are generally not included in the counts of worst case needs in HUD’s reports because the AHS surveys count only persons in housing units.

³ See HUD (1991), p. 1

⁴ The 2007 report lists all of the Worst Case Needs reports in its third footnote, p. 7. Most of the HUD Worst Case Needs publications are available online at <http://www.huduser.org>.

Definitions of Housing Problems

Housing problems include unaffordable gross rents, crowding, and physically inadequate housing. The AHS provides the most complete measure of physically inadequate housing but only at the national level and selected metropolitan areas.^a Most sources of data below the national level, including the decennial census and the ACS, ask only whether plumbing and kitchen facilities are complete. Key housing problems mentioned in this study include:

Cost/Rent Burdened (or severely burdened)	Paying more than 30 (or 50) percent of household income on gross rent (contract rent plus utilities)
Crowded ^b	Having more than one person per room
Physically Inadequate Housing	
Severely Inadequate Housing Unit (AHS definition)	Having severe plumbing, heating, upkeep, hallway, or electrical problems
Moderately Inadequate Housing Unit (AHS definition)	Having plumbing, heating, upkeep, hallway, or kitchen problems, but no severe problems
Lacking Complete Kitchen or Bathroom Facilities (the only census/ACS data on housing quality)	Facilities incomplete or not for exclusive use of the household
Worst Case Needs (HUD definition)	Unassisted renters with incomes at or below 50 percent of HAMFI who have one of two priority problems: 1. They are paying more than half of their income for housing; or 2. They are living in severely substandard housing.

^a A national AHS survey is conducted biennially, and AHS surveys for 47 selected metropolitan areas are conducted approximately every six years, on a rotating basis. See the U.S. Census Bureau's website for additional information on the AHS: <http://www.census.gov/hhes/www/housing/ahs/ahs.html>.

^b The Census Bureau does not have an official definition for overcrowding. This study considers overcrowding as households with more than one occupant per room. See Blake et al. (2007) for a detailed discussion of different definitions of overcrowding and a literature review.

experienced by renters and owners classified by income and household characteristics, for the nation as a whole, for four census regions, and within these regions, for cities, suburbs, and nonmetropolitan areas.⁵

Of most relevance to this study, HUD's Worst Case Needs reports find that:

- Between 1978 and 2001, the number of renter households with worst case needs rose from 3.96 million to 5.07 million, and most of that growth occurred before 1995.⁶ Between 2003 and 2005, the number of worst case needs households jumped to 5.99 million.⁷
- Among renters not receiving housing assistance in 2005, 72 percent of renters with extremely low

⁵ The AHS is conducted by the Census Bureau for HUD. Its purpose is to collect comprehensive data on the nation's housing stock, including "apartments, single-family homes, mobile homes, vacant housing units, household characteristics, income, housing and neighborhood quality, housing costs, equipment and fuels, size of housing unit, and recent movers." The national AHS survey is conducted biennially, and surveys for 47 selected metropolitan areas are conducted approximately every six years, on a rotating basis. The national sample covers some 55,000 housing units, while each metropolitan area sample covers 4,100 or more housing units. The U.S. Census Bureau's website has additional information: <http://www.census.gov/hhes/www/housing/ahs/ahs.html>.

⁶ The 1978-1999 trend is provided in "Trends in Worst Case Needs for Housing, 1978-1999" (2003), Table A-4, and the 2001 estimate on p. ix of that report.

⁷ See HUD (2007), p. 1.

incomes, but only 27 percent of renters with very low incomes, had worst case housing needs. More than three-fourths (77 percent) of those with worst case needs were ELI.⁸

- Severe “worst case” problems were rare among higher-income renters and owners. In 2005, only 7 percent of LI renters had severe rent burdens or severely inadequate housing.⁹
- Housing problems mainly occurred because households had excessive cost burdens. Between 1978 and 2005, among renters with incomes below 50 percent of HAMFI, the share with a severe cost burden rose from 30 to 46 percent. By contrast, the incidence of inadequate housing fell from 16 to 9 percent during the same period, and crowding remained at 4 percent.¹⁰ Whereas in 1978 two-thirds of worst case needs renters lived in adequate and uncrowded housing with severe rent burden as their only housing problem, by 2005 83 percent had only a rent burden.¹¹
- The 50 percent growth in worst case needs between 1978 and 2005 occurred despite increasing participation in rental assistance programs. The share of renters with incomes between 0-50 percent HAMFI who reported receiving housing assistance rose from 20 to 28 percent. Yet in both years, 37 percent of all renters at 0-50 percent HAMFI were unassisted with worst case needs.¹²

Measuring Housing Shortages in Worst Case Needs Reports¹³

In preparing its third Worst Case Needs report for Congress, published in June 1994, HUD considered possible factors underlying such needs. It found that worst case needs were strongly correlated with shortages of housing with rents affordable to ELI households.¹⁴ Since then, HUD reports have explored shortages of affordable housing in a variety of ways and documented their close relationship to worst case needs.

All of the HUD Worst Case Needs reports since 1994 have examined numbers of units affordable to extremely low-income renters and renters with incomes less than or equal to 50 percent, their changes over time and shortages compared to all renters, and geographic differences in trends and the extent of shortages. An important indicator developed in these reports is the “mismatch” ratio, an indicator to assess the discrepancy between the number of rental units needed by renters of various income categories and the number that are affordable to them.¹⁵

⁸ See HUD (2007), pp. 1-2.

⁹ See HUD (2007), Table A-1a, p. 56

¹⁰ 1978 data calculated from Table A-3 of HUD (2003), p. A-6, and 2005 data calculated from Table A-4 of HUD (2007), p. 61-62.

¹¹ 1978 data calculated from Table A-4 of HUD (2003), p. A-8, and 2005 data calculated from Table 7 of HUD (2007), p. 70.

¹² Calculated from 1978 data in Table A-3 of HUD (2003), p. A-6, and 2005 data in Table A-4 of HUD (2007), p. 61-62.

¹³ While this appendix primarily focuses on HUD’s Worst Case Needs reports, other studies have assessed the need for affordable rental housing using AHS data. Most notably, the Millennial Housing Commission (MHC), established by Congress in 2000 to assess affordable housing and HUD’s programs, used national AHS data in its report, *Meeting Our Nation’s Housing Challenges*. Like the Worst Case Needs reports, this report finds that there is a “critical shortage of affordable apartments” for ELI renters and that “higher-income households outbid lower-income households for rental units in an effort to limit their housing expenses, sharply reducing the number of units affordable to others.”

¹⁴ To measure shortages, rents affordable to ELI renter households are defined as rents less than or equal to 30 percent of income at the upper end of the ELI income range, which is 30 percent of local HAMFI. See HUD (1994), p. 3. HUD also found that in CHAS state-level data, severe rent burdens were, surprisingly, not related in 1990 to vacancy rates among affordable units.

¹⁵ See HUD (2007), p. 90.

In almost every period and location examined, numbers of rental units affordable to extremely low-income renters fell while the number of ELI renters grew.¹⁶ Between 1991 and 1999, for example, the “mismatch” ratio of numbers of units affordable per 100 ELI renters across the United States fell from 89 to 78.¹⁷

Some ratios above 100 in these reports suggested that there were more “affordable” units than renters needing them at incomes above 30 percent of HAMFI. But closer examination revealed that many of the units technically affordable to renters at a specific income threshold were actually occupied by renters with higher incomes, making them unavailable to renters with incomes below that threshold.

In response to this weakness, a second more specific “mismatch” ratio was developed to indicate shortages in the units that were both affordable *and* available to renters. From 1991 to 1999 and then 2005, the U.S. mismatch ratio for units affordable and available to ELI renter households fell from 52 to 42 to 40, while that for units affordable and available to renter households with incomes at or below 50 percent of HAMFI fell from 87 to 78 to 77.¹⁸

Recent Worst Case Needs reports have extended this concept to compare units that are affordable, available, and *adequate* to the numbers of renters needing them, thus documenting the even greater shortages of adequate units.¹⁹ Such an approach also illustrates the special difficulties facing large families. For example, comparing the 2005 supply of units with five+ rooms to households with five+ persons, the number of affordable, available, adequate, and sufficiently large units per 100 large ELI renter households was found to be only 20.7 averaged across the nation.²⁰

In studying shortages of affordable housing, HUD’s Worst Case Needs reports also explored the availability and characteristics of units with rents below local fair market rents (FMRs). FMRs are used in the voucher program to determine the maximum level of subsidy that a household with a voucher can receive.²¹ Whether a household can eliminate a rental cost burden by using a voucher depends on its ability to find a housing unit with a below-FMR rent.²² One would expect that the ease with which the household would be able to do so would be closely tied to the availability of *vacant* units with below-FMR rents. Evidence from the Worst Case Needs reports provides suggestive, though indirect, evidence that this is indeed the case. In 1999, for example “locations with lowest vacancy rates among units with rents below local FMRs were also those where shortages of housing both affordable and available to extremely low income renters were worst” and worst case needs were high. These vacancy rates were lowest in suburbs and cities in the West and

¹⁶ The 1997-99 period was an exception in which the number of ELI renters dropped more than the number of units affordable to them. See HUD (2003), p xi.

¹⁷ See HUD (2003), Table A-15, p. A-32.

¹⁸ See HUD (2007), Exhibit 4-3, p. 37, and HUD (2003), Table A-15, p. A-32. For a number of reasons these indicators are probably optimistic. For example, units are classified as affordable and available for ELI households based on income at the top of the ELI range but may not be affordable to those ELI households whose incomes are lower. In addition, some units classified as affordable and available may be too small for large ELI families or located in undesirable neighborhoods.

¹⁹ See HUD (2007), Chapter 4.

²⁰ See HUD (2007), Exhibit 4-14, p. 43.

²¹ See the Glossary for a discussion of how the maximum rental subsidy is determined.

²² See the Glossary for additional information on FMRs, rental subsidies, the use of vouchers, and the possibility that a household with a voucher will not necessarily eliminate cost burden.

Northeast and were particularly low for large units with three or more bedrooms.²³

The Worst Case Needs reports also consider a number of other issues of relevance for understanding how subsidized housing programs are likely to affect the housing options of the lowest-income renters. For example, they document disparities across MSAs in the income level (measured relative to HAMFI) at which the subsidy from a housing voucher phases out. As of 2002, this relative income ranged from a low of 34.5 percent of HAMFI in Cedar Rapids to a high of 76.3 percent of HAMFI in San Francisco, although, statutorily, no household with an income above 50 percent of HAMFI would actually be eligible for a voucher.²⁴ In addition, the reports discuss how the level of a community's FMR also affects the participation of the lowest-income households in other housing programs, such as LIHTC and HOME. The way that these issues play out in Pennsylvania is discussed in Appendix D.

Measuring Rental Housing Needs at State and Local Levels: CHAS Data

While the AHS has been the primary source of data for recent Worst Case Needs studies, neither the national AHS nor the AHS metropolitan area surveys provide data for states and local areas. The Cranston-Gonzalez National Affordable Housing Act of 1990 (NAHA) required states and local jurisdictions to prepare and submit "comprehensive housing affordability strategies" (or CHAS) describing their housing needs and housing market conditions in order to receive funds for many HUD programs.

To help states and local jurisdictions develop the CHAS strategies mandated by the NAHA, HUD funded special tabulations of 1990 census data that classified renter and owner households and their housing problems by income and housing units and their characteristics by affordability.²⁵ Both household income and housing unit affordability were categorized based on HUD's HAMFI groups to make the data directly relevant to HUD's major housing and community development programs. The primary purpose of CHAS data was to make it possible to assess housing needs and shortages of affordable housing at smaller geographic levels, including all states and counties.²⁶

When the 1990 CHAS data became available, the third HUD Worst Case Needs report compared CHAS data results on income distribution, housing problems, and affordable housing against AHS data.²⁷ The two sources were found to be "remarkably similar with regard to the incidence of rent burden and severe rent burden." The report also concluded that severe rent burdens "can serve as a quite complete proxy for worst case needs."²⁸

A decade later, HUD funded equivalent CHAS tabulations from 2000 census data. After the 2000

²³ See HUD (2003), p. 70.

²⁴ See HUD (2003), p. 72.

²⁵ See the Library of Congress's website (<http://thomas.loc.gov/>) for NAHA language. Data elements on the CHAS special tabulations include income, tenure, household type, race and ethnicity, and housing problems of households, and affordability, size, age, vacancy status, and physical condition of housing units.

²⁶ The basic CHAS data are available at <http://socds.huduser.org/scripts/odbc.exe/chas/reports.htm>.

²⁷ The CHAS data report income more completely than the AHS because the decennial census questionnaire has more detailed income questions than the AHS does. Nevertheless, the shares of renters identified as having ELI or VLI were quite similar in the two data sources. See HUD's 1994 report, Appendix C.

²⁸ See HUD (1994), p. 39.

CHAS data became available, the National Low Income Housing Coalition (NLIHC) examined how housing problems and shortages of affordable housing varied among states and changed from 1990-2000. Its report *Losing Ground in the Best of Times: Low Income Renters in the 1990s* documented that while housing conditions improved for most Americans throughout the decade, housing problems, including severe rent burdens, became more concentrated among ELI renters and their access to affordable rental units declined.²⁹

Strategies to Reduce Worst Case Needs and Provide Affordable Housing

Federal Strategies

As noted above, HUD was charged in 1990 with developing a strategic plan to reduce worst case needs within limited resources. Similarly, the NAHA required states and local jurisdictions to develop CHAS in order to receive funds from HUD for the new HOME program, as well as for community development block grants (CDBGs) and other assisted rental housing programs.

In the second Worst Case Needs report (HUD 1992), the first Bush administration responded to Congress's charge in some detail. Examining rental housing conditions in the late 1980s in 44 large MSAs with 46 percent of the U.S. population and half of U.S. renters, the report concluded that tenant-based assistance could solve most worst case problems. Certificates or vouchers could be used in their current home for the many worst case households whose only housing problem was a severe rent burden, or they could be used in other units with below-FMR rents for most of those who needed to move because their current units were overcrowded or inadequate. Direct comparisons of vacant below-FMR units with the number of households needing other housing "demonstrate that in most of these [metropolitan areas] *all* worst case needs could be solved through tenant-based assistance and light rehabilitation."³⁰ The report argued that units provided through HOME and the LIHTC could provide the expanded supply needed to eliminate worst case needs in several years if funds for those programs were better directed to the locations and households that most need them. To summarize, the cost-effective strategies advocated were:

- Primary reliance on tenant-based assistance
- Preference in rental assistance programs, including public housing and assisted projects, for worst-case families
- Cost-effective use of HOME and CDBG funds for moderate rehabilitation and better targeting of LIHTC funds toward the most needy locations and households.

No Worst Case Needs report issued under the Clinton administration developed a strategic plan to reduce worst case needs as explicitly as the 1992 report. But each report advocated continued targeting of assistance to worst case needs or extremely low-income renters, and "most important of all—[continued] Federal funding for expanding rental housing assistance."³¹ When Congress was considering raising income levels and dropping preferences for admission to rental assistance and assisted projects, Secretary

²⁹ See Nelson et al. (2004), p. 1.

³⁰ HUD (1992), p. x.

³¹ HUD (1996), p. ii.

of Housing and Urban Development Andrew Cuomo argued, based on the worst case results, that three-fourths of tenant-based assistance should be reserved for extremely low-income families. The administration also sought to expand tenant-based assistance and production of affordable housing through HOME and the LIHTC.³² Under the second Bush administration, the three worst case reports published were strictly factual, with none mentioning or advocating any strategies. In 2008, however, Congress cited the severe shortages of housing affordable to extremely low-income renters in authorizing the National Housing Trust Fund.

Local Differences and Local Strategies

In 1993, the Urban Institute published a report by Amy Bogdon, Joshua Silver, and Margery Austin Turner. Based on regional and metropolitan summaries of the newly released 1990 CHAS data, it examined housing conditions and problems to “illustrate ways in which communities throughout the U.S. may describe and then analyze their local housing markets in order to develop strategies for addressing housing problems and needs.”³³ In developing local strategies, it stressed the importance of identifying the underlying causes of local housing market problems, noting that the market dynamics underlying excessive housing cost burdens among very low-income renters “vary substantially from place to place. Different remedies are called for in high-growth communities with an absolute shortage of units from those preferable for slow-growth communities with persistently high vacancy rates.”³⁴

The handbook recommended that those developing local strategies ask which groups of households most need public-sector assistance to meet their housing needs and which housing activities are best suited to addressing these priority needs for housing assistance. To illustrate this, they discuss which combinations of housing market factors affect the strengths and weaknesses of the three basic tools available to deliver housing assistance. These are subsidized production of new units, subsidized acquisition and rehabilitation of existing units, and direct rental assistance to households so that they can afford existing units.³⁵

For a conference evaluating the impact of high-tech economies on local housing problems during the late 1990s, Nelson developed “effective local low-income housing strategies from market characteristics” and discussed the implications of these different strategies for desirable federal policies. After exploring how housing problems and market characteristics vary across 44 MSAs, she examined eight MSAs with great variation in local housing market conditions to identify “a desirable program mix..., whether more vouchers could be used or whether additional supply is needed and, if so, at what rents.” She concludes that “federal policy should target sufficient resources to severe housing needs through many more vouchers and programs that permit and encourage effective local choices.”³⁶

³² HUD (1998), pp. 37-38.

³³ Bogdon et al. (1993), p. 1.

³⁴ Bogdon et al. (1993), p. 76.

³⁵ Bogdon et al. (1993), pp. 94-97.

³⁶ Nelson (2002), p. 417.

A New Resource to Measure Rental Housing Needs: American Community Survey

Since 1996, the Census Bureau has been phasing in the American Community Survey (ACS) to provide economic, social, demographic, and housing data annually. The 2005 ACS survey was the first to represent a full sample for the United States, including approximately 3 million housing units.³⁷

The main advantage of the ACS is that the data are provided annually by the Census Bureau. However, because the sample size for ACS data is much smaller than that for the decennial census housing and population long form, annual ACS results are not as accurate for small regions. Another problem for our purpose is that rather than identifying each county, the ACS micro-data files identify public use micro-data areas, or PUMAs.³⁸ In addition, as is the case with standard census products, the ACS data do not group households by HAMFI low-income categories, so users are not able to use them to assess the affordability of rental housing to ELI, VLI, and LI renters, or the housing problems of households in these income groups, without combining them with other data.

Despite the limitations of this data set, ACS data provide a valuable new resource for assessing rental housing affordability between decennial censuses.³⁹ In *Housing at the Half: A Mid-Decade Progress Report from the American Community Survey*, the NLIHC analyzed 2005 state-level ACS data and found that there were large shortages of affordable and available housing for ELI renter households in all 50 states and the District of Columbia. There were shortages as measured by this indicator for renter households with incomes between 0-50 percent AMI in 49 states and the District of Columbia.⁴⁰

³⁷ The Census Bureau's Technical Paper 67, "Design and Methodology: American Community Survey," discusses the ACS and its history: <http://www.census.gov/acs/www/Downloads/tp67.pdf>. In 2006, the ACS added data on group quarters, but they are not included in the analysis of rental housing in this study.

³⁸ Appendix E provides a more detailed description of PUMAs and their relationship to PA counties. It also documents how PUMAs and counties were consolidated for analysis in this study and the other adjustments made to the ACS data.

³⁹ HUD is now planning to fund CHAS tabulations from the ACS for 2005-07. These data have not yet been released.

⁴⁰ Pelletiere and Wardrip (2008), p. 12. North Dakota was the only state without a shortage of units for renters with incomes between 0-50 percent AMI. In this study, households were grouped into ELI, VLI, and LI categories by comparing household income to each state's median family income. Thus, the estimates of income groups are less accurate than ones that compare each household's income to its county's official HAMFI.