

RESEARCH INSTITUTE FOR HOUSING AMERICA SPECIAL REPORT

A PROFILE OF HOUSING AND HEALTH AMONG OLDER AMERICANS

GARY V. ENGELHARDT

SYRACUSE UNIVERSITY

MICHAEL D. ERIKSEN

TEXAS TECH UNIVERSITY

NADIA GREENHALGH-STANLEY

KENT STATE UNIVERSITY





RESEARCH INSTITUTE FOR HOUSING AMERICA SPECIAL REPORT

A PROFILE OF HOUSING AND HEALTH AMONG OLDER AMERICANS

GARY V. ENGELHARDT

Syracuse University

MICHAEL D. ERIKSEN

Texas Tech University

NADIA GREENHALGH-STANLEY

Kent State University

Report Prepared for the MacArthur Foundation Current Version: September 22, 2013

Research Institute for Housing America

BOARD OF TRUSTEES

Chair

Teresa Bryce Bazemore

Radian

Mark Fleming CoreLogic

Trisha Hobson *Citi*

Gleb Nechayev *CBRE*

Dena Yocom iMortgage

STAFF

Jay Brinkmann, Ph.D.

Trustee, Research Institute for Housing America
Senior Vice President, Research Education
Chief Economist
Mortgage Bankers Association

Michael Fratantoni, Ph.D.

Executive Director, Research Institute for Housing America
Vice President, Research and Economics

Mortgage Bankers Association

TABLE OF CONTENTS

Exe	cutive Summary
Intr	oduction
Back	ground and Data Description
Hon	neownership Among Older Americans9
Prof	ile of Homeowners
Prof	ile of Renters
A Pr	ofile of Functional Status and Health
Hon	ne Modifications
Con	clusions
Refe	rences
Autl	nor Biographies
TAE	BLES
1.	Selected Summary Statistics on Financial Characteristics for Homeowners
2.	Selected Summary Statistics on Rent, Income and Wealth by Demographic
3.	Selected Summary Statistics on Functional Status and Health for Homeowners
4.	Selected Summary Statistics on Functional Status and Health for Renters
5.	Incidence of Falls, Serious Falls and Hip Fractures of Older (65+) Americans
6.	Accessibility Modifications and Safety Features of Older (65+) Americans'
7.	Type of Accessibility Modifications and Safety Features of Older (65+) Americans'

FIGURES

1A.	Distribution of Near-Old and Older American Households by Race,
1B.	Distribution of Near-Old and Older American Households by Age
2A.	Housing Tenure Distribution of Near-Old and Older American Households
2B.	Housing Tenure Distribution of Near-Old and Older American Households
3.	Homeownership Rates by Age Group, 1982-2011
4A.	Distribution of Near-Old and Older American Households by Race,
4B.	Distribution of Near-Old and Older American Households by Age
5A.	Median Housing Equity-to-Income Ratio for Near-Old and Older
5B.	Median Housing Equity-to-Income Ratio for Near-Old and Older
6A.	Median Housing Equity Portfolio Share for Near-Old and Older
6B.	Median Housing Equity Portfolio Share for Near-Old and Older
7A.	Percent of Near-Old and Older American Homeowners
7B.	Percent of Near-Old and Older American Homeowners
8A.	Median Annual Mortgage Payment-to-Income Ratio for Near-Old
8B.	Median Annual Mortgage Payment-to-Income Ratio for Near-Old
9A.	Distribution of Near-Old and Older American Renters by Race,
9B.	Distribution of Near-Old and Older American Renters by Age
10A.	Percent of Near-Old and Older American Renters in Public or
10B.	Percent of Near-Old and Older American Renters in Public or

EXECUTIVE SUMMARY

With the aging of America, policy concerns at the intersection of housing and health for older Americans are growing. In a signal study a decade ago, the Commission on Affordable Housing and Health Facility Needs for Seniors in the 21st Century, also known as the Seniors Housing Commission, released its report to Congress on the challenges facing all levels of government and society in ensuring support for housing and health needs as the population ages.

This paper examines the housing and health status of older Americans roughly a decade after the Commission's report. It provides a profile of the housing, functional status and health status of the near old, individuals aged 55 through 64, and Americans aged 65 and older, using the most recent data available from the Health and Retirement Study (HRS). These data were drawn from interviews with approximately 25,000 Americans in 2010, as the nation was slowly transitioning out of the Great Recession. The paper is designed to lay out basic facts about the current state of housing and health among older Americans, and should be a useful statistical reference for policymakers, advocates and media interested in these issues in an aging society.

The principal findings are as follows:

- There were more than 47 million near old and older American households in 2010, of which 80 percent were homeowners.
- Housing is still the dominant asset in the portfolios of older Americans. Median housing equity for older American homeowners was \$125,000; the median housing equity-to-income ratio was 2.4:1; and 50 percent of the typical older homeowner's portfolio was composed of housing wealth.
- 44 percent of older renters spend more than 30 percent of annual gross income on rent, which suggests that the availability of affordable rental housing is a concern for older Americans.
- Older renters have almost double the number of limitations in their ability to conduct daily activities relative to homeowners.

1

- 36 percent of older individuals have fallen in the last two years, and one-third of these have been seriously injured in a fall. The likelihood of falls occurring rises steeply as housing quality declines.
- 31 percent of older Americans have residences that have special safety features. 13 percent have modified their home to be either more accessible or safer between 2008 and 2010.
- Approximately half of those reporting a home modification between 2008 and 2010 (7 percent) had associated out-of-pocket expenses. The median out-of-pocket expenditure was \$800; the mean expenditure was \$2,260.

INTRODUCTION

With the aging of America, policy concerns at the intersection of housing and health for older Americans are growing. In a signal study a decade ago, the Commission on Affordable Housing and Health Facility Needs for Seniors in the 21st Century, also known as the Seniors Housing Commission, released its report to Congress on the challenges facing all levels of government and society in ensuring support for housing and health needs as the population ages. In particular, this report documented that by 2020, one-sixth of the population will be 65 or older, of which one-third and one-fifth will have housing and service needs, respectively, that current government initiatives may not address adequately. The concerns addressed by the Commission are even more pressing today, as the population is now ten years older, with the first wave of Baby Boomers entering ages of entitlement for Social Security and Medicare benefits.

Against this backdrop, policymakers and advocates, who simultaneously seek to address private market shortcomings, increase affordable housing, promote health in older populations, relieve the burdens placed on uncompensated caregivers, and address the fiscal strain of an aging society, face a broad set of challenges. Moreover, the continued depth and length of the Great Recession and housing crisis have worsened these problems. Going forward in this environment, there will be a premium on detailed and accurate information on the housing and health of older Americans to frame and guide public policy debates.

This report examines the housing and health status of older Americans roughly a decade after the Commission's report. It provides a profile of the housing, functional status and health status of the near old, individuals aged 55 through 64 and older Americans, aged 65 and older, using the most recent data available from the Health and Retirement Study (HRS). These data were drawn from interviews with approximately 25,000 Americans in 2010, as the nation was slowly transitioning out of the Great Recession. This sample is representative of 69 million individuals and 47 million households aged 55 and older. The article is designed to lay out basic facts about the current state of housing and health among older Americans, and should be a useful statistical reference for the policymakers, advocates and media interested in these issues in an aging society.

There are a number of principal findings:

- There were more than 47 million near-old and older American households in 2010, of which 80 percent were homeowners.
- Housing is still the dominant asset in the portfolios of older Americans. Median housing equity for older American homeowners was \$125,000; the median housing-equity-to-income ratio was 2.4:1; and 50 percent of the typical older homeowner's portfolio was composed of housing wealth.
- 44 percent of older renters spend more than 30 percent of their annual gross income on rent, which suggests that the availability of affordable rental housing is a concern for older Americans.
- Older renters have almost double the number of limitations in their ability to conduct daily activities relative to homeowners.
- 36 percent of older individuals have fallen in the last two years, and one-third of these have been seriously injured in a fall. The likelihood of falls occurring rises steeply as housing quality declines.
- 31 percent of older Americans have residences that have special safety features. 13 percent have modified their home to be either more accessible or safer between 2008 and 2010.
- Approximately half of those reporting a home modification between 2008 and 2010 (7 percent) had associated out-of-pocket expenses. The median out-of-pocket expenditure was \$800; the mean expenditure was \$2,260.

Throughout this report, all individuals ages 65 and older are referred to as "older Americans," those ages 50 through 64 as "near old" and those 85 and older are referred to as "oldest old."

The report is organized as follows. Section II provides brief background information and a description of the HRS data. Section III profiles homeownership. Section IV presents a disaggregated analysis of homeowners. Section V is a parallel analysis of renters. Then the report turns to the functional status and health of older households, which are profiled in Section VI. Particular attention is paid to the prevalence of falls, a direct health risk resulting from inadequate housing and functional decline. Section VII presents new data on the incidence and types of home modifications to promote aging in place. There is a brief conclusion.

BACKGROUND AND DATA DESCRIPTION

An important factor in private and public sector efforts to address housing needs is the strong complementarity between health and housing at older ages, which manifests itself in a number of ways. First, there is a strong correlation between socio-economic status (SES) and health at all points in the life course. For the elderly, those affected most by affordability are also in poorer health along a number of well-recognized dimensions, including self-reported health status, functional limitations, clinical diagnoses, disease conditions, gross motor skills, activities of daily living (ADLs) and instrumental activities of daily living (IADLs) (Gibler, 2003; Engelhardt, 2005; among others). There is a large academic literature that attempts to disentangle the causal pathways between SES and health among the elderly (e.g., Adams, et al., 2003), but a strong consensus has yet to emerge. Second, there is a strong desire by the elderly to age in place. Over time, this can result in older individuals with health characteristics that are poorly matched to their housing. This, in turn, can have adverse consequences for health, especially for those living alone. One pathway to adverse consequences is through physical and health risks, such as falls (Gurley et al., 1996; Tromp et al., 1998; Cwikel et al., 1989; Reuben et al.,1992). An additional pathway is through attenuated social interaction that affects emotional and mental health (Berkman and Leonard,1979; Blazer, 1982; Zuckerman, Kasl, and Ostfeld, 1984; House, Landis, and Umberson, 1988). In principle, then, efforts to improve the well-being of the elderly should consider housing and health needs simultaneously.

This study is a descriptive analysis of housing and health characteristics. It presents basic statistics from 2010 on older Americans, on housing and health characteristics for the older population as a whole, and then on subgroups defined by homeownership, race, education, marital status, age and structure type. The organization and exposition follows closely that of Engelhardt (2005), which was a similar analysis of older Americans in 2000.

The data for this analysis come from the HRS, a large, nationally representative sample of the American population aged 50 and older. Funded by the National Institute on Aging and the Social Security Administration, the HRS is, in many ways, a truly remarkable data-gathering effort. Specifically, the HRS is a stratified random sample of more than 25,000 individuals 50 and older, and their spouses (regardless of age), that began in 1992. Individuals in the study are interviewed every two years until they die, at which point an "exit" interview is conducted with their next of kin. Therefore, the HRS is a longitudinal or panel survey. Every six years (e.g., 1998, 2004, 2010, 2016, etc.), a new birth cohort of individuals in their mid-50s enters the study, refreshing the panel to ensure it remains representative of older Americans.

The HRS is unique in its breadth and depth. The public-use (or core) data contain detailed information on characteristics and behavior central to the study of older individuals: demographics; extended family structure; employment and retirement; pensions and Social Security; housing; health; health care utilization; health insurance; income; assets, debts and capital gains; transfers of time and money; information on children; disability; widowhood; expectations; life and long-term care insurance; and bequest motives.¹

The core housing information includes detail on homeownership, subsidized rental, structure type, structure characteristics, neighborhood quality, rental costs, ownership of other real estate, second homes, mortgages (first, second, home-equity lines, etc.) and health-related home modifications, among other information. The core health information is likewise extensive. Self-reported health information includes health status, a large number of diseases and medical conditions, indicators of depression, mental health, ADLs and IADLs, as well as height and weight.

For this study, we use data from 2010, which are the most recent available, weighted by the HRS respondent sampling weights so that all statistics reflect the population of older Americans.² In 2010, the Middle Baby Boomers (b. 1954-1960) entered the HRS as individuals in their mid-50s. Unfortunately, the data for this cohort were not fully cleaned and available for analysis at the time of writing. Therefore, we limit our analysis to individuals born in 1953 or earlier. These are the Early Baby Boomers and earlier birth cohorts. From a practical standpoint, this limits the analysis to individuals 55 and older.³

These data are publicly available and can be downloaded for free from the HRS website.

² At the time of writing, the 2012 wave of the HRS was still in the field. We intend to update this study when those data become available.

³ Engelhardt (2005) is a parallel analysis to this one that focuses on older Americans in 2000. That study included individuals aged 50-54 years old.

To illustrate the composition of the sample we study, Figure 1A shows the distribution of households ages 55 and older by race, marital and education groups. In general, the majority of older Americans are white, married and have had at least some college-level education. In particular, a total of 85.5 percent of households were white, just over nine percent of the households were African-American and five percent of households were those self-reporting other races. In terms of marital status, the two largest groups were married couples, 61.9 percent, and the widowed, 17.2 percent. Just over 13 percent were separated or divorced. A little more than half had some college or were college graduates. However, those with a high school degree comprised the largest portion of the older population (34.1 percent). About one-in-six individuals had less than a high school degree.

Figure 1A
Distribution of Near-Old and Older American Households
by Race, Marital and Education Groups

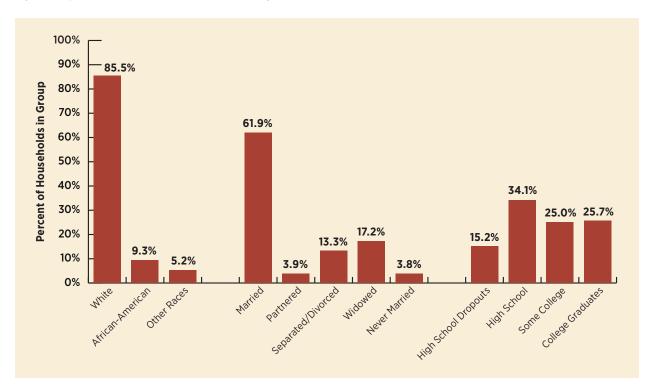


Figure 1B
Distribution of Near-Old and Older American Households
by Age and Housing-Structure Groups

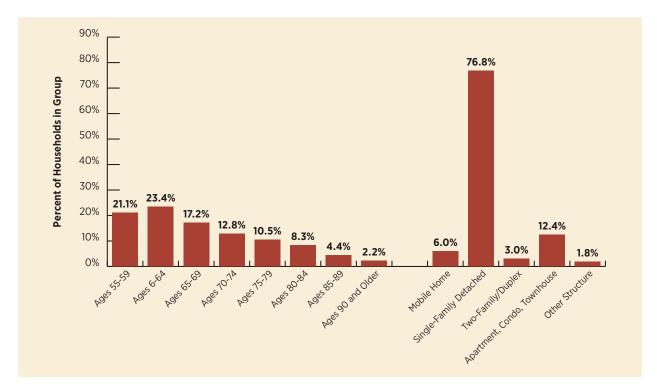


Figure 1B shows the distribution of older households across five-year age groups and housing-structure type. Roughly three-quarters of households live in single-family detached housing. About one-in-eight households live in an apartment, condo, or townhouse. A total of 61.6 percent of older Americans are under the age of 70. In addition, 6.6 percent are 85 and older. This group, often referred to as the "oldest old," is one of the fastest-growing portions of the total U.S. population. Currently, just under two percent of the U.S. population is 85 and older. However, the U.S. Census Bureau projects that this group will grow to 4.5 percent of the population over the next 35 years.

HOMEOWNERSHIP AMONG OLDER AMERICANS

With this sample composition in mind, the analysis next turns to the housing characteristics of older Americans. Figure 2A begins with the most cited and studied housing measure, housing-tenure status (homeowner, renter and those who neither own nor rent). The figure itself is a bar chart. It shows the breakdown of tenure by the population sub-group listed along the horizontal axis. The total height of each bar represents 100 percent of households in that category. Reading from left to right, the first bar indicates that the homeownership rate was 81 percent over all households. The remaining 19 percent were comprised of individuals who paid cash rent and those who neither owned nor rented. The latter primarily reside in structures owned by a relative (typically a child), and many actually previously owned the residence.

Figure 2A
Housing Tenure Distribution of Near-Old and Older American Households
by Race, Marital and Education Groups

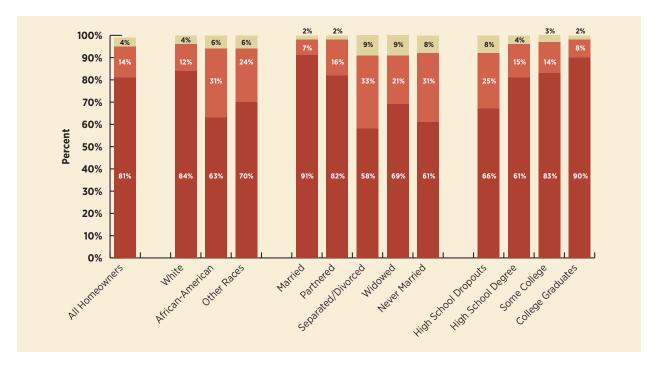


Figure 2B Housing Tenure Distribution of Near-Old and Older American Households by Age and Housing-Structure Groups

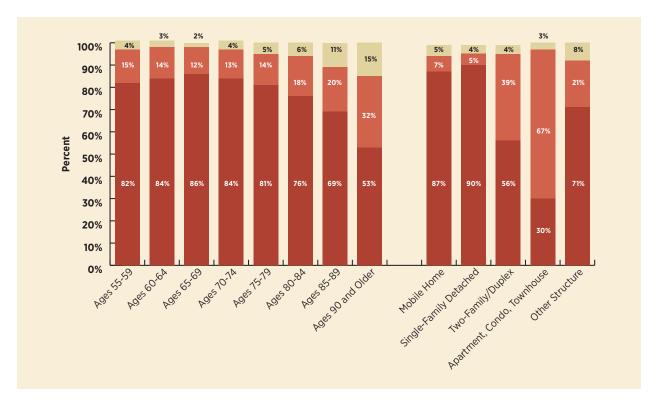
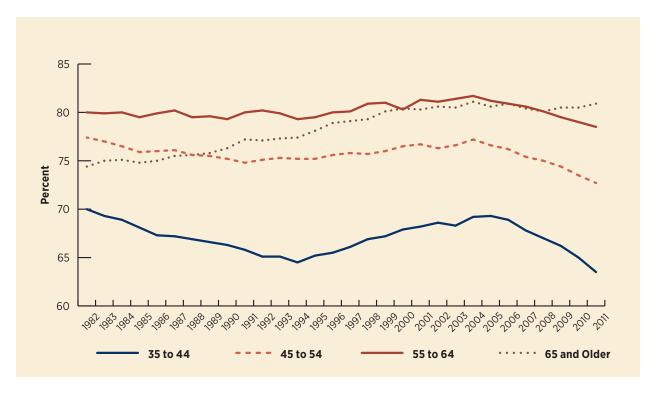


Figure 3 shows how the rate of homeownership has held up during the Great Recession. In particular, the figure plots the time series of the national homeownership rates for the last 30 years by broad age groups. These data are from the U.S. Census Bureau's Housing Vacancy Survey. The homeownership rates for age groups under 65 peaked in 2003-4 and then declined during the financial crisis and recession. The most substantial drop occurred for households in the 35-44 year-old group. However, even for the near old, homeownership declined. For those 65 and older, the tale is different. The homeownership rate for this group has remained roughly constant from 2003 to the present and actually has risen slightly since 2008. With little mortgage debt and constant inflation-adjusted income from Social Security, the homeownership of older Americans has emerged from the recession relatively unscathed. However, their children's generation has taken a direct hit.

Figure 3
Homeownership Rates by Age Group, 1982-2011



The remaining bars in Figures 2A and 2B break down homeownership in 2010 for the same demographic groups shown in Figures 1A and 1B. For example, the homeownership rate for white households was 84 percent, for African-Americans was 63 percent and among those self-reporting other races was 70.5 percent. Differences in homeownership are equally striking by marital status and education. Over 90 percent of married couples were owners. However, 69.1 and 60.6 percent of the widowed and never married were owners, respectively. Almost 90 percent of college graduates were owners, but only two-thirds of those with less than a high school education owned their homes.

Figure 2B shows tenure status by structure type. In 2010, most older Americans lived in a single-family, detached home, and almost all (90.4 percent) of these were owner-occupied. Not surprisingly, the highest proportion of renters lived in apartment, condominium or townhouse structures. Approximately six percent of those ages 55 and older lived in mobile homes, and about 87 percent of these mobile homes were owner-occupied.

Finally, the figure shows the housing-tenure distribution of older households across five-year age groups. The homeownership rate was hump-shaped in age, with a peak for 65-59 year olds. Among those 90 and older, the homeownership rate was 53.5 percent. Therefore, homeownership continues to be very important well into old age.

When interpreting the tabulations by age group, it should be emphasized that, since this figure shows data for a single calendar year, the pattern of behavior across age groups cannot be interpreted necessarily as the pure relationship of homeownership to age. This occurs because members of each age group also uniquely represented the same year-of-birth cohort, and behavior may have varied across cohorts for a variety of reasons that were independent of age. In a separate study (Engelhardt, Eriksen, and Greenhalgh-Stanley, 2012), we used the HRS data from 1992-2010 on all birth cohorts to address this, and found within birth cohorts the same hump-shaped profile of homeownership with age as shown in Figure 2B. For those 90 and older, the ownership rate was about 50 percent at age 90 and declined to around 10 percent by age 105. Based on the HRS "exit" interviews with next of kin, approximately 35 percent of older Americans died as homeowners. These results confirm what is shown in Figure 2B: homeownership is important among all older Americans.

PROFILE OF HOMEOWNERS

Next, the analysis turns to just those households in 2010 who were homeowners. The distribution of homeowners by demographic and structure-type groups is shown in Figures 4A and 4B. Not surprisingly, the majority of older homeowners are white, married, have had at least some college-level education and live in single-family, detached homes.

Figure 4A
Distribution of Near-Old and Older American Homeowners
by Race, Marital and Education Groups

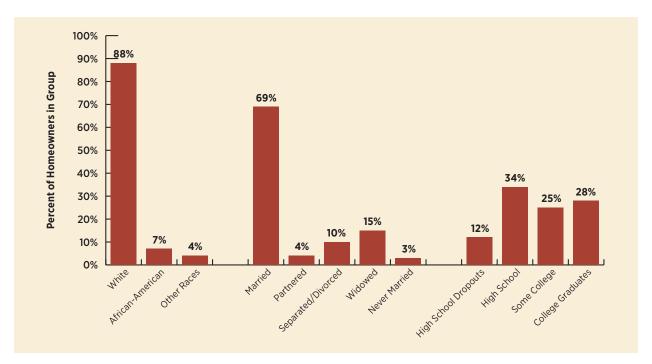


Figure 4B
Distribution of Near-Old and Older American Homeowners
by Age and Housing-Structure Groups

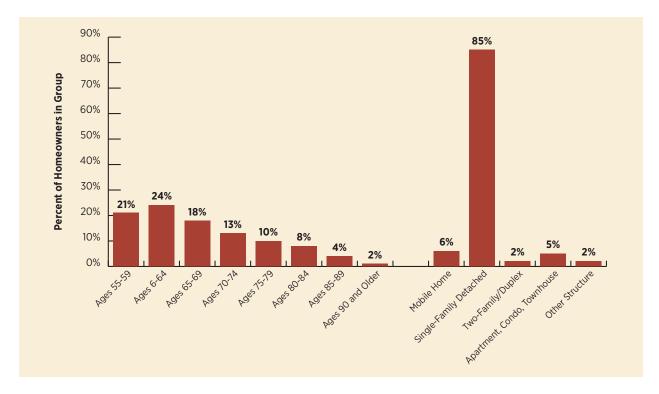


Table 1 presents selected statistics on financial characteristics for the sub-sample of homeowners only. Each column represents a housing- or financial-behavior outcome; each row represents the relevant population subgroup. Two statistics are reported for each of the outcomes: the mean value (expressed in 2010 dollars); and the median value. The mean represents the average value of the outcome across all homeowners. With the tabulations in Figures 1A, 1B, 4A and 4B, these means can be used to construct national estimates for the population or subgroup as a whole. The median represents the midpoint in the distribution of that outcome, such that half of the homeowners in that row's population subgroup had outcomes above the median level, and half had outcomes below the median level. The median is a useful summary statistic, especially when the outcome is very skewed, i.e., a small slice of households has disproportionately large (or small) values. For example, most homeowners have a modest amount of home equity. In the first row of the table, for which the population group is all homeowners, median housing equity, defined as the difference between housing asset value (including the secondary residence, if any) and associated mortgage debt, was \$125,000. Thus, half of older homeowners had housing equity greater than \$125,000 and half had less than \$125,000. However, a small number of older homeowners have amassed a great deal of home equity. This figures into the mean, which is much larger at \$184,387, but not the median. For the purposes of this study, the median is the preferred measure, unless otherwise noted. It should be thought of as measuring the outcome for the typical homeowner.

Figure 5A

Median Housing Equity-to-Income Ratio for Near-Old and

Older American Homeowners by Race, Marital and Education Groups

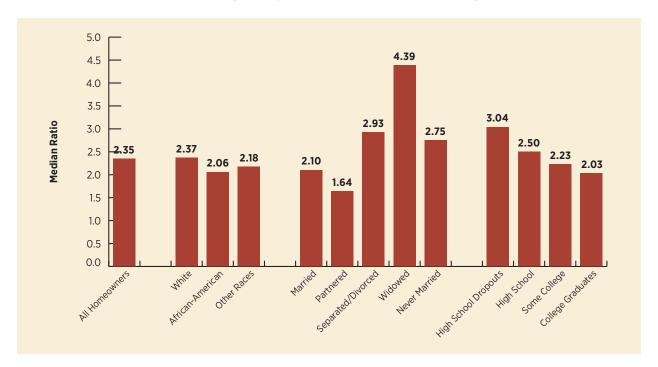


Figure 5B
Median Housing Equity-to-Income Ratio for Near-Old and
Older American Homeowners by Age and Housing-Structure Groups

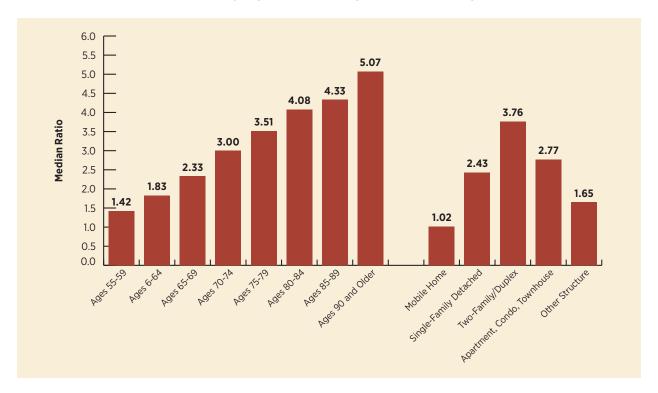


Table 1
Selected Summary Statistics on Financial Characteristics for Homeowners by Demographic Characteristics and Housing Structure Type

All dollar figures are mean in 2010 dollars, with medians in square brackets.

	(1)	(2)	(3)	(4)	(5) Annual
Sample	Housing Equity	Income	Wealth	Mortgage Debt	Mortgage Payments
All Homeowners	184,387	76,563	553,633	130,515	15,521
	[125,000]	[50,583]	[273,000]	[92,000]	[10,344]
		A. By Race			
White	189,814	78,830	587,089	128,974	15,710
	[130,000]	[52,180]	[296,748]	[93,000]	[10,500]
African-American	109,760	53,187	199,312	110,346	12,970
	[75,000]	[35,512]	[106,000]	[75,000]	[8,196]
Other Races	197,344	69,397	462,895	190,965	16,192
	[100,000]	[40,852]	[157,000]	[118,185]	[12,500]
	В. В	By Marital Status			
Married	197,828	90,088	620,023	136,219	16,427
	[135,000]	[62,684]	[317,113]	[100,000]	[10,836]
Partnered	157,423	74,199	554,109	124,118	14,329
	[95,000]	[54,600]	[222,000]	[92,400]	[8,400]
Separated/Divorced	153,730	47,446	368,045	113,148	13,431
	[89,000]	[28,015]	[150,000]	[90,000]	[8,736]
Widowed	157,181	37,340	378,088	109,604	10,693
	[104,000]	[23,352]	[196,000]	[63,000]	[7,200]
Never Married	135,947	48,914	457,676	102,188	13,776
	[96,000]	[32,348]	[203,900]	[75,000]	[9,312]
	C. By	Education Group			
Less Than High School	111,024	34,609	219,649	76,595	9,771
	[78,000]	[24,048]	[106,000]	[55,000]	[7,200]
High School Diploma	145,967	55,677	371,018	97,910	11,116
	[100,000]	[41,524]	[207,300]	[72,000]	[8,400]
Some College and More	172,514	75,454	501,676	130,569	16,620
	[130,000]	[54,380]	[281,000]	[95,000]	[10,440]
College Graduates	273,274	120,900	964,280	167,219	19,313
	[180,000]	[85,871]	[524,000]	[121,000]	[13,200]

From columns 1 and 2 of Table 1, median home equity for all older homeowners was \$125,000, and median household income from all sources (not just labor-market earnings) was \$50,583. Figures 5A and 5B show the median housing-equity-to-income ratio by demographic and structure group. Over all homeowners, the median ratio was 2.35:1, which means that the typical older homeowner household had housing equity more than twice its annual income. This ratio is 4:1 for widows and rises strongly with age, confirming the view that many older homeowners are relatively house rich and income poor.

The housing-equity-to-income ratio was calculated first on a household-by-household basis, and then the median and mean of this ratio was calculated. In general, the ratio of the median housing equity in Column 2 to the median income in Column 3 will not equal the median of the ratio of housing equity to income.

Table 1 (Continued)

Selected Summary Statistics on Financial Characteristics for Homeowners by Demographic Characteristics and Housing Structure Type

All dollar figures are mean in 2010 dollars, with medians in square brackets.

Sample	(1) Housing Equity	(2)	(3) Wealth	(4) Mortgage Debt	(5) Annual Mortgage Payments
	D.	By Age Group			
Ages 55-59	166,413	98,663	512,272	140,511	17,093
	[104,000]	[75,000]	[237,000]	[100,000]	[11,892]
Ages 60-64	188,132	92,736	530,568	129,793	16,245
	[120,000]	[63,054]	[260,000]	[98,000]	[10,800]
Ages 65-69	187,928	76,882	630,984	127,733	14,657
	[130,000]	[51,292]	[304,000]	[86,000]	[9,720]
Ages 70-74	192,119	63,905	572,862	129,714	14,719
	[135,000]	[42,346]	[301,000]	[90,000]	[9,600]
Ages 75-79	187,393	54,103	557,809	102,978	10,718
	[140,000]	[36,500]	[295,500]	[70,000]	[7,704]
Ages 80-84	202,883	44,505	548,502	104,504	10,012
	[140,000]	[31,800]	[281,500]	[68,000]	[7,200]
Ages 85-89	173,990	36,917	525,041	130,067	9,289
	[125,000]	[27,816]	[257,000]	[100,000]	[8,160]
Ages 90 and older	176,101	34,713	464,452	114,693	13,516
	[140,000]	[21,600]	[262,350]	[70,000]	[6,000]
	E. B	y Structure Type			
Mobile Home	44,912	35,803	115,583	63,202	8,497
	[30,000]	[29,149]	[52,500]	[45,000]	[6,000]
Single-Family Detached	191,482	78,680	576,153	130,731	15,586
	[130,000]	[53,048]	[292,185]	[93,000]	[10,800]
Two-Family/Duplex	212,293	75,270	492,265	176,987	19,956
	[165,000]	[43,648]	[294,000]	[131,000]	[14,100]
Apartment, Condo, Townhouse	249,824	85,115	806,030	155,765	18,159
	[150,000]	[55,536]	[389,500]	[115,000]	[12,036]
Other	138,694	104,607	459,482	111,815	12,092
	[95,000]	[44,544]	[213,833]	[92,000]	[9,000]

Column 3 of Table 1 shows the median (and mean) total household wealth. For this study, wealth is measured as the sum of housing equity, the value of vehicles, collectibles, businesses and financial assets, less the value of all debt. It excludes the net present value of public and private pension benefits. Median wealth was \$273,000 in 2010. Mean wealth was much higher, \$553,633. This reflects the skewness of the distribution of wealth: some older homeowners have amassed a great deal of wealth.

A great portion of this wealth is in housing. This is illustrated in Figures 6A and 6B. They show the housing-to-wealth ratio. This is defined as the fraction of all wealth that is in housing. For the typical older homeowner, 50 percent of total wealth was in the form of housing. For minority and less-educated homeowners, this percentage is even higher: roughly 83 percent for both typical African-Americans and high school drop-outs. These households have very little wealth beyond their home.

Figure 6A
Median Housing Equity Portfolio Share for Near-Old and
Older American Homeowners by Race, Marital and Education Groups

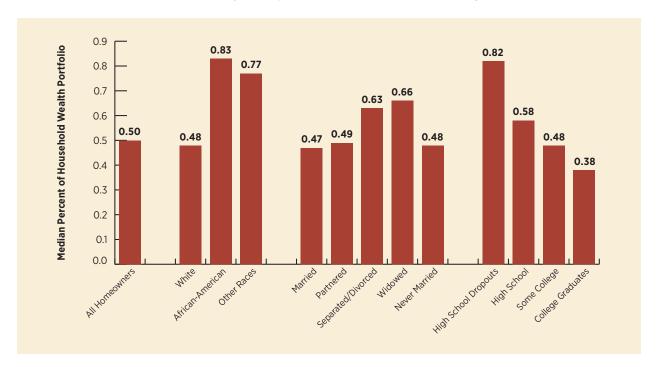
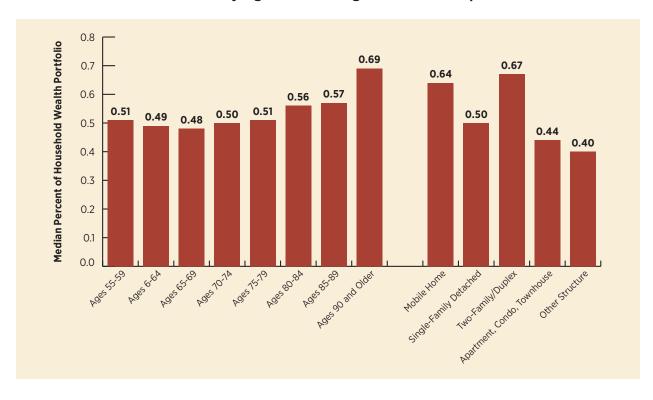


Figure 6B
Median Housing Equity Portfolio Share Near-Old and
Older American Homeowners by Age and Housing-Structure Groups

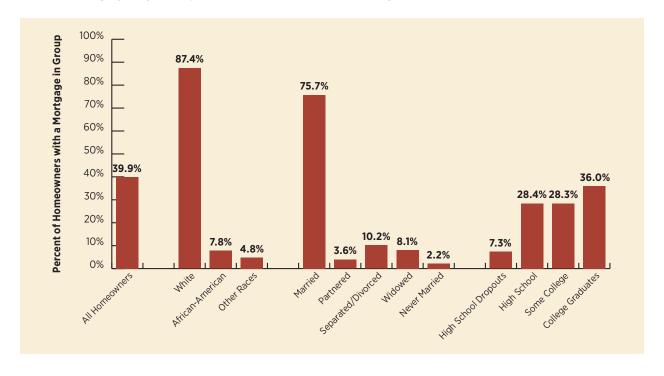


The subsequent five panels of Table 1 (Panels A-E) provide separate tabulations for elderly homeowners by race, marital status, education, age and structure type. In panel A, white homeowners had higher housing equity, income and wealth than African-American homeowners and those of other races. Married couples had the highest housing equity, income and wealth (see Panel B); widows had the lowest. Housing equity rose with education (Panel C) and with age (Panel D) up until age 85, after which it declined.

Figures 7A and 7B show the percent of older homeowners who had a mortgage on either the primary or secondary (if any) residence by demographic and structure group. Roughly 40 percent of older homeowners had a mortgage in 2010. The mean and median mortgage debts, conditional on having a mortgage, were \$130,515 and \$92,000, respectively, as shown in Column 4 of Table 1.5 Column 5 shows the mean and median annual mortgage payments, which were \$15,521 (or \$860 per month) and \$10,344 (or \$1,300 per month), respectively. To get a sense of this mortgage burden, Figures 8A and 8B show the median of the ratio of annual mortgage payments to household income by demographic and structure group for those homeowners with a mortgage. For all such homeowners, the median ratio was 0.16. Therefore, the typical older homeowner with a mortgage made payments equal to 16 percent of annual gross income. Widowed homeowners had one of the highest ratios. Their mortgage payments were 27 percent of income at the median.

Figure 7A

Percent of Near-Old and Older American Homeowners
with a Mortgage by Race, Marital and Education Groups



⁵ Mortgage balances and payments are the sum of those for up to three mortgages on the primary residence and for a second residence.

Figure 7B

Percent of Near-Old and Older American Homeowners
with a Mortgage by Age and Housing-Structure Groups

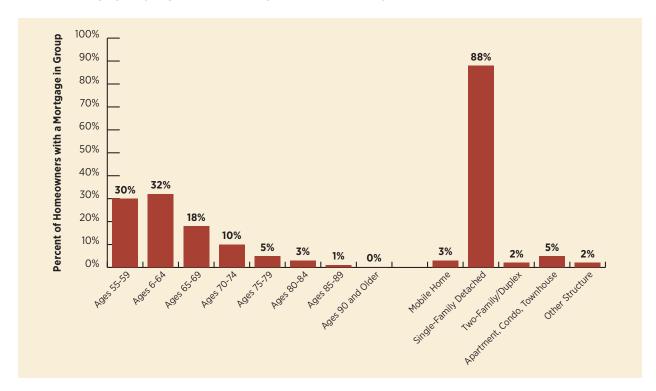


Figure 8A Median Annual Mortgage Payment-to-Income Ratio for Near-Old and Older American Homeowners with a Mortgage by Race, Marital and Education Groups

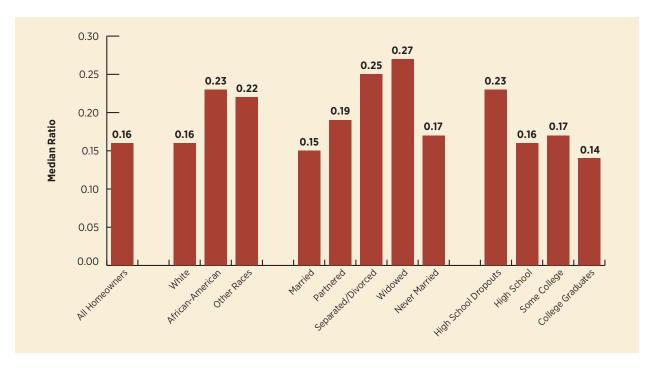
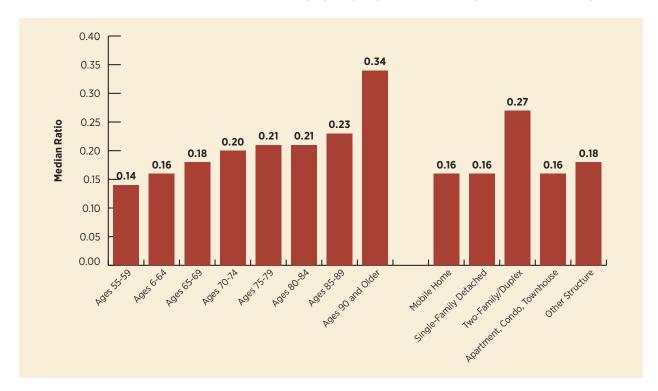


Figure 8B

Median Annual Mortgage Payment-to-Income Ratio for Near-Old and

Older American Homeowners with a Mortgage by Age and Housing-Structure Groups



PROFILE OF RENTERS

Figures 9A–9B show the distribution of older renters by demographic and structure group. A "renter" is defined as someone paying cash rent. We do not provide a separate analysis of those who neither owned nor rented, because these households only represented 4.1 percent of all older households (Figure 2A). The sample sizes become too small for disaggregated analysis.

Figure 9A
Distribution of Near-Old and Older American Renters
by Race, Marital and Education Groups

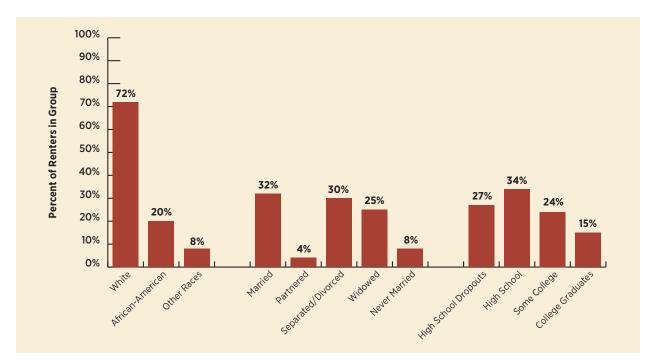


Figure 9B
Distribution of Near-Old and Older American Renters
by Age and Housing Structure Groups

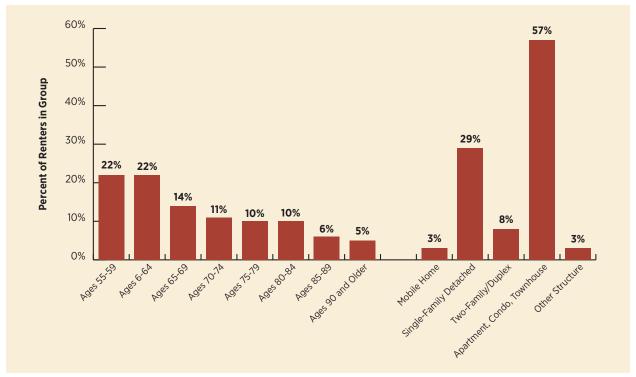


Table 2 provides a financial profile of older renters. Not surprisingly, renters were substantially less well off than owners. Their median income was \$21,509, about 40 percent of the median income of homeowners. In addition, the median wealth of renters was \$3,000. Thus, the typical elderly renter had almost no assets.

In interpreting these tabulations, it is important to note that older renters are comprised of two main groups. The first group is those who have had relatively lower lifetime socio-economic status (SES). Approximately 10 percent of elderly individuals have never owned a home at any point in their lives. These individuals had low lifetime and current incomes. The second group consists of prior homeowners who have sold their homes and now rent. The presence of the second group can be seen in the first row of Table 2. There, even though the median renter wealth was \$3,000, the mean wealth was \$103,916. This vast spread between the median and mean indicates the presence of some very wealthy renters. Wealth disparities also can be seen in Panel C of the table. It shows that renter wealth rose steeply with education.

Column 3 shows that the median annual rent for all renters was \$6,828, or \$569 per month. To get a sense of the rent burden for older households, Column 4 shows the annual rent-to-income ratio. The median rent-to-income ratio is 0.27. This indicates that the typical elderly renter spent 27 percent of annual gross income on rent.

Table 2
Selected Summary Statistics on Rent, Income, and Wealth for Renters by Demographic Characteristics and Housing Structure Type

All Dollar Figures are Means in 2010 Dollars with Medians in Square Brackets.

	(1)	(2)	(3)	(4)	(5) Percent
Sample	Income	Wealth	Annual Rent	Annual Rent-to-Ratio Income	with +30% Rent-to-Income Ratio
All Homeowners	38,089 [21,509]	103,916 [3,000]	9,116 [6,828]	39% [27%]	44%
		A. By Race			
White	42,803 [24,000]	139,250 [6,247]	9,896 [7,200]	38% [26%]	40%
African-American	24,418 [16,048]	8,756 [0]	6,659 [6,000]	43% [31%]	52%
Other Races	28,721 [18,722]	17,270 [700]	8,006 [6,600]	41% [32%]	53%
	В. Е	By Marital Status			
Married	59,294 [37,243]	207,432 [6,206]	11,480 [8,700]	32% [23%]	32%
Partnered	51,325 [37,792]	92,493 [11,200]	10,501 [9,060]	27% [24%]	24%
Separated/Divorced	28,591 [17,288]	30,737 [1,455]	6,905 [5,880]	38% [28%]	46% ·
Widowed	22,815 [16,136]	66,104 [3,000]	9,171 [6,000]	53% [35%]	59% ·
Never Married	32,436 [19,500]	101,948 [1,751]	7,491 [6,000]	38% [29%]	45%
	C. By	Education Group			
Less Than High School	17,510 [13,488]	12,797 [30]	5,980 [4,800]	46% [31%]	54%
High School Diploma	30,264 [22,032]	55,853 [3,920]	8,111 [6,048]	36% [27%]	42%
Some College	44,747 [29,000]	73,248 [6,900]	10,151 [8,220]	37% [25%]	38%
College Graduates	81,154 [48,400]	426,167 [50,000]	15,220 [11,160]	38% [24%]	37%

Table 2 (Continued)

Selected Summary Statistics on Rent, Income and Wealth for Renters by Demographic Characteristics and Housing Structure Type

All Dollar Figures are Means in 2010 Dollars with Medians in Square Brackets.

	(1)	(2)	(3)	(4)	(5) Percent
Sample	Income	Wealth	Annual Rent	Annual Rent-to-Ratio Income	with +30% Rent-to-Income Ratio
	D.	. By Age Group			
Ages 55-59	51,801 [26,184]	59,106 [2,000]	9,375 [7,800]	38% [25%]	39%
Ages 60-64	42,989	83,120	7,878	32%	35%
	[26,300]	[1,500]	[6,300]	[23%]	
Ages 65-69	32,886	68,465	7,980	38%	39%
	[19,200]	[2,230]	[6,180]	[26%]	
Ages 70-74	31,929	124,704	8,072	38%	41%
	[18,689]	[3,000]	[6,000]	[27%]	
Ages 75-79	25,942	115,971	7,773	38%	51%
	[16,717]	[2,900]	[5,940]	[30%]	
Ages 80-84	27,096	148,166	10,341	47%	55%
	[19,258]	[6,000]	[6,396]	[31%]	
Ages 85-89	31,964	176,391	12,481	48%	61%
	[19,924]	[20,000]	[7,200]	[34%]	
Ages 90 and older	37,729	255,134	15,358	60%	66%
	[23,274]	[55,000]	[9,600]	[41%]	
	E. B	y Structure Type			
Mobile Home	22,270 [19,300]	9,661 [1,500]	4,903 [4,560]	33% [27%]	43%
Single-Family Detached	42,855 [27,200]	89,410 [2,327]	9,133 [7,200]	40% [24%]	38%
Two-Family/Duplex	32,042	45,511	8,224	37%	51%
	[21,660]	[3,200]	[7,800]	[31%]	
Apartment, Condo, Townhouse	37,609 [20,052]	123,065 [3,879]	9,116 [6,600]	38% [28%]	44%
Other	33,934	131,067	17,958	75%	70%
	[20,000]	[24,826]	[10,380]	[48%]	

Column 5 shows an alternative measure of rent burden: the percentage of renters who paid 30 percent or more of annual gross income in rent. This threshold is a commonly used cut-off in studies of housing affordability, and one of the factors used by the federal government and housing authorities to determine the amount of subsidy for public and Section 8 housing.⁶ For all older renters, 44 percent had rent-to-income burdens of over 30 percent, suggesting that the availability of affordable rental housing is an important issue for older persons. Finally, Figures 10A and 10B show the percent of older renters who lived in public or subsidized rental housing. Just over six percent of all renters lived in such housing. Most subsidized renters were non-white, widowed or high-school dropouts.

Specifically, eligibility is based on a family's total annual gross income, family size, and citizenship status. Generally speaking, part of the basis for eligibility is that the family must have income below the "very low" income limit, defined to be 50 percent of the median income in the county of residence, although it is possible for a family to qualify if income is below the "low" income limit, defined to be 80 percent of county median income. If qualified, the family pays rent equal to the larger of 30 percent of income (after some adjustments) or its welfare rent payment (if any), so that the amount of the effective subsidy depends on the relationship between fair market rent for the unit and 30 percent of adjusted family income.

Figure 10A

Percent of Near-Old and Older American Renters in Public or Subsidized Housing by Race, Marital and Education Groups

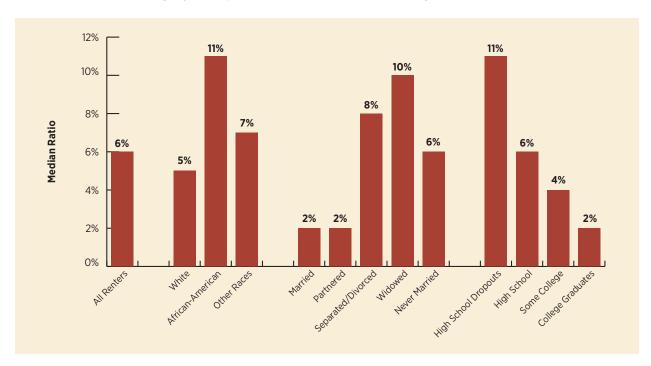
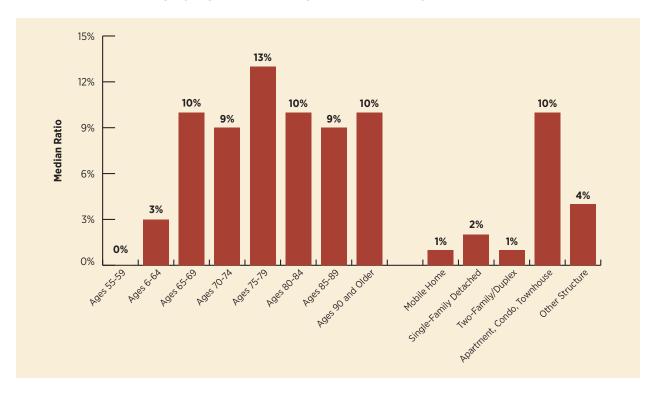


Figure 10B
Percent of Near-Old and Older American Renters in Public or Subsidized Housing by Age and Housing-Structure Groups



A PROFILE OF FUNCTIONAL STATUS AND HEALTH

Tables 3 and 4 are modeled after Tables 1 and 2, and present a profile of functional status and health, and how they are related to demographic characteristics and structure type, for homeowners and renters, respectively. The tables report on six indices of functional status and health commonly used to measure health and well-being for older individuals.

The first measure is a count of the number of limits to ADLs. These activities are bathing, eating, dressing, walking across a room and getting in and out of bed. They are used to measure various dimensions of an individual's ability to function in his or her residential space. For each of the five tasks, the index records a "1" if the respondent had difficulty with that task and a "0" otherwise. The scores are summed for the five tasks, so that the ADL index ranges from 0 (no difficulties with any of the tasks) to 5 (difficulties with all of the tasks).

The second measure is a count of the number of limits to five different aspects of mobility: walking several blocks, walking one block, walking across the room, climbing several flights of stairs and climbing one flight of stairs. For each of the five tasks, the index records a 1 if the respondent reports having had difficulty with that task and a 0 otherwise. Then the scores are summed for the five tasks, so that, like the ADL and IADL indices, the mobility index ranges from 0 (no difficulties with any of the tasks) to 5 (difficulties with all of the tasks). Therefore, this index measures mobility outside of the living space.

The third measure is a count of the number of limits to IADLs. There are five such activities: using a telephone, taking medication, handling money, shopping and preparing meals. These activities are "instrumental" in the sense that they are the types actions needed to live independently. They reflect, in many cases, the ability to navigate inside and outside of the residential space. For each of the five tasks, the index records a 1 if the respondent reports having had difficulty with that task and a 0 otherwise. Then the scores are summed for the five tasks, so that the IADL index ranges from 0 (no difficulties with any of the tasks) to 5 (difficulties with all of the tasks).

Table 3
Selected Summary Statistics on Functional Status and Health
for Homeowners by Demographic Characteristics and Housing Structure Type

Sample	(1) Mean Number of Limits to ADLs	(2) Mean Number of Limits to IADLs	(3) Mean Number of Limits to Mobility	(4) Mean CESD Score	(5) Mean Number of Health Conditions	(6) Mean Body Mass Index
All Homeowners	0.36	0.32	1.34	1.61	2.61	30.08
			A. By Race			
White	0.35	0.30	1.32	1.56	2.61	29.95
African-American	0.48	0.43	1.52	1.81	2.73	31.30
Other Races	0.49	0.41	1.45	2.14	2.51	30.62
		В. Е	By Marital Status			
Married	0.38	0.34	1.38	1.58	2.71	30.88
Partnered	0.52	0.33	1.41	2.06	2.84	30.67
Separated/Divorced	0.27	0.19	1.08	1.52	2.14	28.23
Widowed	0.35	0.30	1.40	1.74	2.55	27.62
Never Married	0.22	0.20	0.82	1.32	1.86	27.79
		C. By	Education Group			
Less than High School	0.67	0.62	1.97	2.29	3.05	30.26
High School Diploma	0.38	0.33	1.52	1.71	2.81	30.61
Some College	0.34	0.28	1.29	1.60	2.57	30.16
College Graduates	0.23	0.21	0.88	1.20	2.22	29.29
		D.	. By Age Group			
Ages 55-59	0.27	0.20	0.98	1.73	2.03	31.00
Ages 60-64	0.31	0.25	1.16	1.70	2.46	30.89
Ages 65-69	0.30	0.24	1.33	1.43	2.76	30.90
Ages 70-74	0.35	0.29	1.43	1.45	2.88	29.78
Ages 75-79	0.45	0.42	1.68	1.54	3.06	28.83
Ages 80-84	0.58	0.59	1.83	1.75	3.06	27.76
Ages 85-89	0.70	0.78	1.98	1.72	3.04	26.36
Ages 90 and Older	0.83	0.92	2.10	1.33	2.60	24.96
		E. B	y Structure Type			
Mobile Home	0.61	0.53	2.00	2.19	3.13	31.02
Single-Family Detached	0.35	0.30	1.30	1.58	2.58	30.13
Two-Family/Duplex	0.29	0.27	1.33	1.37	2.79	30.80
Apartment, Condo, Townhou	se 0.36	0.32	1.11	1.51	2.48	28.14
Other	0.28	0.26	1.25	1.41	2.50	27.98

The remaining three indices utilized below all measure aspects of health. The first is an index of depression known as the Center for Epidemiological Studies Depression (CESD) score. The one employed here is an eight-point measure, ranging from 0 to 8. Specifically, it is the sum of two components. The first component is a count of the number of "negative" sentiments the respondent indicated were present in response to the CESD questions. The six negative sentiments were "feeling depressed," "feeling everything is an effort," "sleep is restless," "feeling alone," "feeling sad" and "feeling that one could not get going." The second component is a count of the number of "positive" sentiments the respondent indicated were absent. The two positive sentiments were "feeling happy" and "enjoying life." Therefore, the larger the CESD score was, the more "negative" the individual felt, and the more depressed the state of the individual. This measurement approach is frequently used in surveys and has been validated numerous times in clinical studies of depression.

The second health measure is an index of medical conditions the individual had reported. In particular, the HRS asks whether a doctor had ever told the respondent he or she had one of the following conditions: high blood pressure, diabetes, cancer, lung disease, heart disease, stroke, psychiatric problems or arthritis. The index employed then is a count of the number of such conditions. It ranges from 0 (the absence of all eight conditions) to 8 (the presence of all eight conditions) where, obviously, a larger index value indicates poorer health.⁷

⁷ As one might imagine, the presence of all eight conditions is quite rare. In fact, only 16 individuals in the 2010 wave indicated they had been told by a doctor they had all eight conditions.

Table 4
Selected Summary Statistics on Functional Status and Health
for Renters by Demographic Characteristics and Housing Structure Type

Sample	(1) Mean Number of Limits to ADLs	(2) Mean Number of Limits to IADLs	(3) Mean Number of Limits to Mobility	(4) Mean CESD Score	(5) Mean Number of Health Conditions	(6) Mean Body Mass Index
All Homeowners	0.70	0.57	1.92	2.31	2.94	29.96
			A. By Race			
White	0.67	0.56	1.89	2.23	2.93	29.59
African-American	0.75	0.57	2.03	2.45	2.88	30.87
Other Races	0.77	0.63	2.01	2.69	3.21	31.08
		В. Е	By Marital Status			
Married	0.76	0.64	2.06	2.31	3.16	31.56
Partnered	0.59	0.47	1.58	3.09	2.90	31.31
Separated/Divorced	0.62	0.49	1.77	2.35	2.79	29.53
Widowed	0.79	0.65	2.10	2.13	3.06	28.23
Never Married	0.53	0.37	1.68	2.29	2.37	29.48
		C. By	Education Group			
Less than High School	1.02	0.84	2.35	2.81	3.27	30.62
High School Diploma	0.65	0.53	1.95	2.40	3.02	29.68
Some College	0.58	0.45	1.83	2.10	2.76	30.32
College Graduate	0.44	0.39	1.31	1.56	2.48	28.85
		D.	. By Age Group			
Ages 55-59	0.52	0.34	1.59	2.50	2.52	31.66
Ages 60-64	0.64	0.49	1.71	2.67	2.85	30.91
Ages 65-69	0.66	0.57	1.98	2.06	3.04	31.15
Ages 70-74	0.84	0.63	2.14	2.26	3.23	30.16
Ages 75-79	0.72	0.61	2.06	2.08	3.20	28.95
Ages 80-84	0.75	0.69	2.20	2.08	3.26	27.79
Ages 85-89	0.87	0.85	2.23	2.04	3.15	25.97
Ages 90 and Older	1.27	1.22	2.74	1.86	2.97	24.22
		E. B	y Structure Type			
Mobile Home	0.48	0.57	1.58	2.64	2.95	29.48
Single-Family Detached	0.77	0.55	1.94	2.49	2.86	30.71
Two-Family/Duplex	0.62	0.30	1.75	1.99	2.58	30.56
Apartment, Condo, Townhou	ıse 0.66	0.58	1.94	2.25	3.04	29.59
Other	1.17	1.34	2.59	2.37	3.26	28.01

The last health measure is the body-mass index (BMI). BMI is defined as weight, expressed in kilograms, divided by the square of height, measured in meters. An individual with a BMI value of less than 18.5 is considered underweight; between 18.5 and 24.9 is considered normal; between 25 and 29.9 is considered overweight; and 30 or higher is considered clinically obese.⁸

As was done for housing, the analysis of health is performed separately for homeowners and renters. Table 3 is for owners; Table 4 is for renters. The first row in each table shows the overall mean of each of the six measures of functional status. Since the housing decisions of older married couples often are driven by the needs of the frailest member, the higher of the spouses' index values is used to classify the "health status" of the household for those who are married.

Broadly speaking, Tables 3 and 4 show that renters are in worse health than owners. The mean number of limits to ADLs for homeowners was 0.36 (Table 3). The comparable number for renters was 0.70 (Table 4). A similar pattern emerges for the IADLs: the mean for homeowners was 0.32 and the mean for renters was 0.57. Homeowners had an average of 1.34 limitations to mobility and renters had 1.92 limitations.

The last three columns of the tables show the mean values of the three health indices. Renters experienced more depression (mean CESD score of 2.31) than owners. On average, renters had a somewhat higher number of medical conditions (2.94) than homeowners (2.61). Owners and renters had similar BMI. Overall, homeowners appear to have had better health than renters. All of the differences in means between renters and owners shown in the first rows of Tables 3 and 4 were statistically significant at the five-percent level of significance, except BMI.

For the purposes of comparability with the housing- and financial-behavior outcomes for homeowners and renters in Tables 1 and 2, respectively, the remainder of Tables 3 and 4 present disaggregated statistics on the six functional status and health measures by race, marital status, education, age and structure type. Most notably, the disaggregated patterns conform to what is widely known about functional status, health, race and SES: higher SES groups, such as the highly educated and homeowners had fewer functional limitations and had better health than low SES groups; whites had better functional status and health than African-Americans; and functional status and health declined with age.

Although these tables show a general correlation between homeownership and health outcomes, perhaps the most direct link between housing and health for older Americans occurs through falls. Falls can have devastating physical and psychological impacts on older individuals, and are a leading cause of accidental deaths among the elderly. Residential structures that are of low quality and difficult to navigate may contribute to falls.

⁸ Although the BMI is widely used as a measure of total body fat, and is highly correlated with the risk of poor health, disease, and death, it has limitations. In particular, it overstates obesity and being overweight for individuals with an athletic build and understates body fat in older individuals, especially those who have lost muscle mass, which is important in the context of studying older individuals.

Table 5 gives summary statistics on the incidence of falls among individuals 65 and older, self-reported in the HRS. As shown in the first row, 36 percent of individuals reported having fallen at least once during the last two years. Eleven percent reported having had a fall serious enough to warrant medical attention. In addition, about one percent reported having suffered a hip fracture in the last two years, falls being the leading cause. The final three columns of the table show similar statistics not measured over the last two years, but ever. Just over 60 percent of individuals reported having ever fallen, with 28 percent ever having had to seek medical attention. About one-in-20 individuals over 65 have ever suffered a hip fracture.

The remaining rows of the table show the incidence of falls for various subgroups. The likelihood of falling rises sharply with age, and is highest among renters, widows and the poor. Over 40 percent of the widowed reported having fallen in the last two years. Roughly one-in-five individuals 85 and older have had a hip fracture. The rate of hip fractures for renters is almost double that for owners, as is the rate for those under the poverty line relative to those above it.

The final panel of the table documents the incidence of falls by self-reported housing quality. There are five quality categories in descending order: excellent, very good, good, fair and poor. The prevalence of falls rises sharply as housing quality declines. Fifty-four percent of individuals 65 and older in poor-quality housing had fallen in the last two years, compared to 34 percent for those in excellent-quality housing. The severity of the falls was also greater in poorer-quality housing.

⁹ The HRS did not ask those younger than 65 about falls.

Table 5
Incidence of Falls, Serious Falls and Hip Fractures
of Older (65+) Americans by Selected Demographics

		Between 2008 and 20	010	Have Ever During Lifetime		
Sample	(1) Fallen Down	(2) Been Seriously Hurt During Fall	(3) Fractured Hip	(4) Fallen Down	(5) Been Seriously Hurt During Fall	(6) Fractured Hip
All 65+ Americans	0.36	0.11	0.01	0.61	0.28	0.05
		А	. By Tenure			
Homeowners	0.35	0.10	0.01	0.59	0.26	0.04
Renters	0.41	0.15	0.02	0.68	0.36	0.09
			B. By Race			
White	0.37	0.11	0.01	0.63	0.29	0.06
African-American	0.30	0.10	0.01	0.53	0.22	0.04
Other Races	0.35	0.09	0.01	0.54	0.22	0.05
		C. By	Marital Status			
Married	0.33	0.09	0.01	0.56	0.23	0.04
Partnered	0.35	0.07	0.02	0.59	0.17	0.03
Separated/Divorced	0.39	0.12	0.01	0.60	0.27	0.03
Widowed	0.41	0.14	0.01	0.73	0.41	0.10
Never Married	0.38	0.11	0.01	0.63	0.25	0.05
		D. By I	Education Group			
Less than High School	0.41	0.14	0.02	0.68	0.33	0.08
High School Diploma	0.41	0.16	0.02	0.67	0.36	0.10
Some College	0.45	0.16	0.01	0.68	0.39	0.08
College Graduates	0.36	0.13	0.01	0.70	0.39	0.08
		E. 6	By Age Group			
Ages 65-69	0.31	0.08	0.01	0.41	0.13	0.01
Ages 70-74	0.34	0.10	0.01	0.59	0.23	0.02
Ages 75-79	0.37	0.11	0.01	0.71	0.34	0.08
Ages 80-84	0.41	0.12	0.01	0.78	0.41	0.10
Ages 85-89	0.43	0.14	0.03	0.79	0.47	0.13
Ages 90 and Older	0.52	0.21	0.03	0.89	0.60	0.20
		F. By	Structure Type			
Mobile Home	0.40	0.08	0.01	0.65	0.26	0.04
Single-Family Detached	0.36	0.10	0.01	0.60	0.26	0.05
Two-Family/Duplex	0.38	0.13	0.01	0.59	0.27	0.06
Apartment, Condo, Townhouse	0.38	0.14	0.02	0.66	0.36	0.09
Other	0.37	0.11	0.01	0.70	0.37	0.06
		G. By Hous	ing Structure Qua	lity		
Excellent	0.34	0.10	0.01	0.59	0.27	0.05
Very Good	0.35	0.10	0.01	0.61	0.28	0.06
Good	0.39	0.11	0.01	0.64	0.28	0.06
Fair	0.39	0.12	0.02	0.64	0.31	0.06
Poor	0.54	0.17	0.01	0.71	0.33	0.09

HOME MODIFICATIONS

There is a strong desire by the elderly to age in place (AARP, 2000; 2003). Over time, this can result in older individuals with health characteristics that are poorly matched to their housing. One way to promote healthy aging in place is to modify the housing structure to better support the health and functional needs associated with aging.

Table 6 presents basic statistics on the prevalence of selected home modifications. The HRS differentiates between housing accessibility features that make it easier to get around (i.e., ramps, railings and wheelchair modifications) and those features to safeguard older persons or someone with a disability (i.e., grab bars, shower seat, call device to get help, etc.). In the first row of Table 6, we report 21 percent of individuals 65 and older lived in a home with an accessibility feature and 31 percent lived in a home with a safety feature. Just under half of these individuals had the modification done in the last two years (Column 3). Prevalence rose with age, and was highest among renters, the widowed and those with less than a high school degree. Overall, about seven percent of those 65 and older had out-of-pocket expenses for home modifications in the past two years, approximately half of those reporting to have made an modification within the same timeframe. Though not shown in the table, the median and mean out-of-pocket amounts spent on those modifications were \$800 and \$2,260, respectively.

Table 7 shows the type of accessibility or safety feature present. The most frequent modifications were in the shower/bath (grab bars or shower seats), 29 percent, and railings, 13 percent. Renters and the widowed had the highest frequency of these features. For example, two-in-five renters had grab bars or a shower seat; roughly one-in-five had a safety call system, a ramp and modifications for a wheelchair, respectively. Overall, renters have much better access to these features than homeowners. Finally, the incidence of these features rises sharply with age and is positively associated with self-reported housing quality.

Table 6
Accessibility Modifications and Safety Features of
Older (65+) Americans' Housing by Selected Demographics

Sample	Home Has Accessibility Features	Home Has Special Safety Features	Modified Home to be More Accessible or Safe During Last 2 years	Paid Out-of-Pocket Housing Mod Expense Last 2 Years
All 65+ Americans	0.21	0.31	0.13	0.07
		A. By Tenure		
Homeowners	0.19	0.28	0.13	0.08
Renters	0.31	0.43	0.10	0.04
		B. By Race		
White	0.21	0.31	0.12	0.08
African-American	0.19	0.25	0.14	0.04
Other Races	0.20	0.23	0.17	0.07
		C. By Marital Stat	us	
Married	0.18	0.26	0.13	0.09
Partnered	0.14	0.27	0.16	0.11
Separated/Divorced	0.16	0.24	0.09	0.03
Widowed	0.30	0.43	0.14	0.07
Never Married	0.20	0.29	0.11	0.05
		D. By Education Gr	oup	
Less than High School	0.25	0.31	0.15	0.06
High School Diploma	0.21	0.30	0.12	0.07
Some College	0.20	0.31	0.13	0.08
College Graduates	0.19	0.30	0.11	0.08
		E. By Age Group)	
Ages 65-69	0.11	0.15	0.11	0.06
Ages 70-74	0.17	0.26	0.13	0.08
Ages 75-79	0.22	0.35	0.12	0.07
Ages 80-84	0.29	0.44	0.15	0.09
Ages 85-89	0.40	0.52	0.15	0.08
Ages 90 and Older	0.45	0.62	0.15	0.08
		F. By Structure Ty	pe	
Mobile Home	0.26	0.31	0.16	0.11
Single-Family Detached	0.19	0.28	0.13	0.08
Two-Family/Duplex	0.18	0.28	0.07	0.04
Apartment, Condo, Townhouse	0.30	0.43	0.10	0.05
Other	0.33	0.42	0.12	0.07
		G. By Housing Structure	e Quality	
Excellent	0.22	0.35	0.10	0.07
Very Good	0.20	0.30	0.13	0.08
Good	0.22	0.29	0.15	0.08
Fair	0.17	0.20	0.13	0.04
Poor	0.18	0.24	0.18	0.04

Table 7

Type of Accessibility Modifications and Safety Features of Older (65+) Americans' Housing by Selected Demographics

		Type of A	accessibility Modific	cations	Type of Safety Feature			
Sample	(1) Ramp	(2) Railings	(3) Modifications for a Wheelchair	(4) Other Type of Modifications	(5) Grab Bars or Shower Seat Available	(6) Safety Call System	(7) Other Safety Guards	
All 65+ Americans	0.08	0.13	0.08	0.03	0.29	0.07	0.02	
7 til 65 7 tillerleans	0.00	0.13		y Tenure	0.23	0.07	0.02	
Homeowners	0.07	0.12	0.06	0.02	0.27	0.04	0.02	
Renters	0.15	0.20	0.18	0.03	0.41	0.22	0.03	
			В. Е	By Race				
White	0.08	0.14	0.08	0.02	0.30	0.07	0.03	
African-American	0.09	0.13	0.06	0.02	0.23	0.05	0.02	
Other Races	0.13	0.11	0.03	0.01	0.22	0.05	0.02	
			C. By M	arital Status				
Married	0.08	0.11	0.06	0.02	0.25	0.04	0.02	
Partnered	0.07	0.09	0.03	0.01	0.27	0.03	0.01	
Separated/Divorced	0.06	0.10	0.08	0.02	0.23	0.07	0.01	
Widowed	0.13	0.20	0.12	0.04	0.40	0.13	0.04	
Never Married	0.07	0.16	0.08	0.01	0.28	0.09	0.03	
			D. By Edu	cation Group				
Less than High School	0.12	0.17	0.09	0.03	0.29	0.08	0.02	
High School Diploma	0.09	0.13	0.07	0.02	0.29	0.06	0.02	
Some College	0.08	0.12	0.08	0.03	0.30	0.07	0.03	
College Graduates	0.07	0.12	0.08	0.02	0.29	0.08	0.02	
			E. By /	Age Group				
Ages 65-69	0.05	0.07	0.03	0.01	0.15	0.02	0.02	
Ages 70-74	0.08	0.10	0.06	0.02	0.25	0.05	0.02	
Ages 75-79	0.08	0.13	0.08	0.03	0.34	0.08	0.03	
Ages 80-84	0.13	0.20	0.11	0.03	0.43	0.11	0.04	
Ages 85-89	0.16	0.29	0.17	0.04	0.49	0.16	0.05	
Ages 90 and Older	0.18	0.31	0.20	0.03	0.58	0.24	0.02	
			F. By Str	ucture Type				
Mobile Home	0.16	0.16	0.06	0.03	0.30	0.05	0.03	
Single-Family Detached	0.07	0.12	0.06	0.02	0.27	0.04	0.02	
Two-Family/Duplex	0.07	0.14	0.06	0.02	0.27	0.07	0.03	
Apartment, Condo, Townhouse	0.15	0.18	0.18	0.03	0.41	0.22	0.02	
Other	0.16	0.22	0.19	0.04	0.41	0.17	0.05	
			G. By Housing	Structure Quali	ty			
Excellent	0.08	0.13	0.11	0.03	0.33	0.09	0.02	
Very Good	0.08	0.13	0.06	0.03	0.29	0.07	0.03	
Good	0.10	0.15	0.07	0.02	0.28	0.06	0.02	
Fair	0.08	0.11	0.05	0.01	0.20	0.04	0.01	
Poor	0.14	0.11	0.04	0.01	0.21	0.05	0.01	

CONCLUSIONS

This report provides a statistical profile of housing and health for a large, nationally representative sample of individuals ages 55 and older in 2010. These individuals, who came from the early-Baby Boom and earlier cohorts, represented about 67 million individuals residing in 47 million American households.

A number of interesting findings emerged. First, 80 percent of households aged 55 and older are homeowners. The homeownership rate of those who are 65 and older has emerged from the recession unscathed, almost surely because this group had comparatively little mortgage debt and maintained their income levels via the constancy of Social Security. For those under 65, the tale is different, with a sharp drop off in homeownership. Tracing out the long-term impact of the Great Recession on the homeownership and mortgage behavior of older Americans is an important topic for further research.

Second, 44 percent of older renters spend more than 30 percent of their annual gross income on rent. Engelhardt (2005) reported that only 30 percent had such high rent-to-income ratios in 2000. This suggests that the availability of affordable rental housing has declined substantially over the last decade, and is an important current concern for older Americans. In order to address this through income programs alone, we calculate that approximately 2.8 million renter households would need a \$25.2b increase in aggregate income (i.e., an average income increase of \$8,997, median of \$8,000) to bring their rent-to-income ratios down to the 30-percent standard. An alternative metric is that a voucher program targeted towards these 2.8 million households that would fill the gap between 30 percent of their current income and the rent they currently pay would cost approximately \$7.5b per year, or an average subsidy required of \$2,699. 10

Finally, falls among older individuals are very prevalent and are strongly related to housing quality. Modifying existing structures to be safer, improving the quality of the housing stock and designing new construction to better match health and housing needs are important priorities.

¹⁰ See Redfoot and Kochera (2004) for detailed analysis of housing needs in the rental market.

REFERENCES

Adams, P., M. Hurd, D. McFadden, A. Merrill, and T. Ribeiro (2003). Healthy, wealthy, and wise? Tests for direct causal paths between health and socioeconomic status. *Journal of Econometrics*, 112(1), 3–56.

American Association of Retired Persons (2000). *Fixing to Stay: A National Survey of Housing and Home Modification Issues*. AARP: Washington, D.C.

American Association of Retired Persons (2003). These 4 Walls. AARP: Washington, D.C.

Berkman, Lisa F., and S. Leonard Syme (1979). "Social Networks, Host Resistance, and Mortality: A Nine-Year Follow-Up Study of Alameda County Residents," *American Journal of Epidemiology*, 109, 186–204.

Blazer, Dan G. (1982). "Social Support and Mortality in an Elderly Community Population," *American Journal of Epidemiology*, 115, 684–94.

Commission on Affordable Housing and Health Facility Needs for Seniors in the 21st Century (2002). *A Quiet Crisis in America*. Commission on Affordable Housing and Health Facility Needs for Seniors in the 21st Century: Washington, D.C.

Cwikel, J., A. V. Fried, and D. Galinsky (1989). "Falls and Psychosocial Factors among Community-Dwelling Elderly Persons: A Review and Integration of Findings from Israel," *Public Health Review*, 17(1), 39–50.

Engelhardt, Gary V. (2005). "Housing Older Americans," Fannie Mae Papers, Volume IV, Issue 1.

Engelhardt, Gary V., Michael D. Eriksen, and Nadia Greenhalgh-Stanley (2012). "Homeownership at Older Ages," Mimeo., Syracuse University.

Gibler, Karen (2003). Aging Subsidized Housing Residents: A Growing Problem in U.S. Cities," *Journal of Real Estate Research*, 25:4, 395–420.

Gurley, R. Jan, Nancy Lum, Merle Sande, Bernard Lo, and Mitchell Katz (1996). "Persons Found in their Homes Helpless or Dead," *The New England Journal of Medicine* (June 27) 334:26, 1710–6.

House, James S., Landis, Karl R., and Debra Umberson (1988). "Social Relationships and Health," *Science*, 241, 540–45.

Redfoot, Donald L., and Andrew Kochera (2004). "Targeting Services to Those Most at Risk: Characteristics of Residents in Federally Subsidized Housing," AARP Public Policy Institute.

Reuben, D. B., L. V. Rubenstein, S. H. Hirsch, R. D. Hayes (1992). "Value of Functional Status as a Predictor of Mortality: Results from a Prospective Study," *The American Journal of Medicine*, 93(6), 663–9.

Tromp, A. M., Smit, J. H., Deeg, D. J., Bouter, L. M., and P. Lips (1998). "Predictors for Falls and Fractures in the Longitudinal Aging Study, Amsterdam," *Journal of Bone and Mineral Research*, 13(12), 1932–9.

Zukerman, Diana M., Stanislav V. Kasl, and Adrian M. Ostfeld (1984). "Psychosocial Predictors of Mortality Among the Elderly Poor: The Role of Religion, Well-Being, and Social Contacts," *American Journal of Epidemiology*, 119, 410–23.

AUTHOR BIOGRAPHY

Gary V. Englehardt

Dr. Gary V. Engelhardt is the Melvin A. Eggers Faculty Scholar and Professor of Economics in the Maxwell School of Citizenship and Public Affairs at Syracuse University, and a Faculty Associate in the Syracuse University Aging Studies Institute. He holds a B.A. in economics from Carleton College and a Ph.D. in economics from the Massachusetts Institute of Technology. Dr. Engelhardt's specialties are the economics of aging and housing markets. His current research focuses on the impact of access to affordable housing on the health and living arrangements of the elderly, sponsored by the MacArthur Foundation. His work and commentary have been featured nationally, including in The Wall Street Journal, New York Times, Washington Post, Chicago Tribune, Los Angeles Times, Fox News, CNBC, MSNBC, National Public Radio's Morning Edition and American Public Media's Marketplace.

Michael Eriksen

Dr. Michael Eriksen is an Assistant Professor of Finance at Texas Tech University. He has previously authored research on the Low-Income Housing Tax Credit (LIHTC), Housing Choice Vouchers and the social benefits of homeownership that has appeared in the top academic journals in economics and real estate. Most recently, Dr. Eriksen received a three-year grant from the John D. and Catherine T. MacArthur Foundation, along with colleagues at Syracuse University and Kent State University to investigate the impact of safety housing modifications on the health and well-being of older Americans. He received his Ph.D. and M.A. in economics from Syracuse University and a B.A. in economics and biology from Gonzaga University. He is originally from Redmond, Washington, and was on the faculty at the University of Georgia between 2008-2013 before moving to Texas Tech University during the summer of 2013.

Nadia Greenhalgh-Stanley

Dr. Nadia Greenhalgh-Stanley graduated summa cum laude with a B.A. in economics from Wittenberg University and a M.A. and Ph.D. in economics from Syracuse University. She is currently an Assistant Professor of Economics in the Department of Economics at Kent State University, where she teaches urban economics, economics of healthcare and principles of microeconomics. Her research interests are in urban economics and public finance. More specifically, she focuses on the effects of changes in social insurance programs on elderly housing decisions, living arrangements and home equity investments. Her work has been published in the Journal of Law and Economics, Journal of Urban Economics and Public Finance Review. Her research has been funded by the Social Security Administration, the Institute for Poverty on Research at the University of Wisconsin, the U.S. Department of Agriculture and the MacArthur Foundation.

