

Work Participation and Length of Stay in HUD-Assisted Housing

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Abstract

To what extent do HUD-assisted tenants participate in paid work? How long do tenants remain assisted once admitted to one of the assistance programs? The authors use extracts from very large HUD tenant administrative data systems to answer these questions, with special attention to tenants who are neither elderly nor disabled.

Five out of every nine nonelderly nondisabled assisted tenants are employed; earnings for most of the employed do not exceed the federal poverty level. The typical current spell in housing assistance for the nonelderly nondisabled is approximately 3 years, with wide variance.

A version of this article was prepared initially as a brief for the Millennial Housing Commission, which was chartered by Congress in September 2000 to study the role of housing; analyze existing federal, state, and local housing programs; and propose a new framework for U.S. housing policy.¹

At the request of the commission, we tried to answer two questions:

- To what extent do assisted tenants participate in paid work?
- How long do tenants remain assisted, once admitted to one of the assistance programs?

The information contained in this article is purely descriptive. Our analysis covers the U.S. Department of Housing and Urban Development's (HUD's) three principal rental assistance programs—the Housing Choice Voucher program, public housing, and the project-based Section 8 program—and is based on extracts from large tenant administrative data systems maintained by HUD—the Multifamily Tenant Characteristics System (MTCS) and the Tenant Rental Assistance Certification System (TRACS). Because there

has been little demand to expand the work effort or reduce the tenure in assistance of people who are elderly and disabled, we give special attention to tenants who are neither. The problem of measuring the length of stay (LOS) of households in assisted housing receives special methodological treatment (see appendix).

Five out of nine nonelderly nondisabled assisted tenants are employed, and the earnings of most of these tenants are below the federal poverty level. The typical current LOS in housing assistance for nonelderly nondisabled tenants is approximately 3 years. However, results for both earnings and LOS vary widely.

Work Participation and Income Sources

Exhibit 1 provides information on the demographics of households in HUD’s three main rental assistance programs, showing the number that have a head of household that is elderly, disabled, or nonelderly nondisabled as well as the number in each of these three categories that have children. As of late 2000, 35.7 percent of the heads of households in HUD’s three major subsidized rental programs were elderly, 18.4 percent were disabled, and 45.9 percent were neither elderly nor disabled.

Exhibit 2 details income sources for nonelderly nondisabled households. More than half (at least 56.5 percent) of all households with nonelderly nondisabled heads had income from work, 20.6 percent had income from welfare but not work, and at least 6.4 percent had income from both welfare and work.² Approximately 7.0 percent reported no income that was countable in determining rent, and 15.9 percent reported income from other sources. In sum, at least 77.1 percent of all nonelderly nondisabled heads of households in HUD-assisted rental housing were either working or receiving welfare cash assistance that makes them subject to federal work requirements. (Some additional HUD-assisted households may be subject to work requirements under the Food Stamp program or state

Exhibit 1

Population of Public and Assisted Housing, by Household Type and Program

Household Type	Public Housing	Vouchers	Project-Based Section 8	Total
Elderly head	358,659	254,477	805,091	1,418,227
No children	342,013	239,168	707,092	1,288,273
Children	16,646	15,309	97,999	129,954
Disabled head	197,350	334,118	199,673	731,141
No children	151,837	224,733	136,481	513,051
Children	45,513	109,385	63,193	218,090
Nonelderly nondisabled head	566,703	912,621	345,247	1,824,571
No children	128,912	122,827	66,296	318,035
Children	437,791	789,794	278,951	1,506,536
Total households	1,122,712	1,501,215	1,350,012	3,973,939
No children	622,762	586,728	909,869	2,119,359
Children	499,950	914,487	440,143	1,854,580

Notes: Data are based on analysis of the September 2000 MTCS and December 2000 TRACS data sets. To account for underreporting and other factors, counts were adjusted upward to reflect assumed control totals. Where possible, analysts should focus on percentages of the population rather than counts.

Exhibit 2

Income Sources of Nonelderly Nondisabled Households: 2000

Income Source	Public Housing	Vouchers	Project-Based Section 8	Total
Income from work	292,201	516,287	222,910	1,031,399
No welfare	269,223	457,563	187,384	914,170
Plus welfare	22,978	58,725	35,526	117,229
Income from welfare but not work	124,782	194,775	55,821	375,378
Others (no wages, TANF, or GA)	149,720	201,558	66,516	417,794
No children	104,133	162,114	45,860	312,107
Children	45,587	39,444	20,657	105,687
Zero counted income	53,362	51,035	23,701	128,097
Children	33,872	37,909	14,243	86,023
No children	20,407	13,126	9,458	42,991

TANF = Temporary Assistance for Needy Families; GA = general assistance.

Notes: Data are based on analysis of the September 2000 MTCS and December 2000 TRACS data sets. To account for underreporting and other factors, counts were adjusted upward to reflect assumed control totals. Where possible, analysts should focus on percentages of the population rather than counts.

general assistance programs.) At least 89 percent of HUD-assisted households are elderly, disabled, or nonelderly nondisabled households with income from work and/or welfare.

Data from administrative sources probably underestimate the actual percentage of HUD-assisted households with income from work. There are at least four scenarios in which this underestimation might occur:

- Some tenants may have started working subsequent to the annual certification of income reported to HUD.³ Housing agencies have discretion regarding requirements for reporting of income between annual recertifications.
- Some tenants who worked during the previous year may have been unemployed at the time of annual recertification and thus recorded as tenants without earnings.
- Some tenants fail to report their earnings (tenant fraud).
- Some working tenants are misidentified as nonworking tenants for other reasons; for example, they may have reported earnings to the housing agency or owner, who subsequently did not properly record the information in the data systems (HUD, 2001).⁴

Among nonelderly nondisabled households that reported some income, but no income derived from work or welfare, the most common sources were child support (38 percent in public housing and vouchers combined and 31.3 percent in project-based Section 8), Supplemental Security Income (SSI) (17.5 and 15.5 percent, respectively), Social Security (16 and 17.1 percent), general assistance (13 and 9.9 percent), and unemployment insurance (10 and 7.9 percent). (Households with no reported income were excluded from this sample in calculating percentages.) Nonelderly nondisabled households may have income from SSI because of a disabled child. Social Security for this group may be attributed to survivor's benefits.

There are a number of potential explanations to account for the approximately 7 percent of nonelderly nondisabled households that report no income at all. As noted above, some agencies and owners fail to properly record earnings and other income that tenants report to them, and some tenants fail to fully disclose all earnings and other income. Still other tenants report income sources that are not counted by HUD toward rent and thus not captured in HUD's administrative records; for example, irregular sources of income such as gifts or in-kind resources such as food stamps or Medicare. HUD also excludes a few sources by statute or policy, such as foster care compensation, Holocaust reparations, earnings of minors, and student stipends.

Other potential explanations relate to state welfare policies. As shown in exhibit 3, the share of HUD-assisted nonelderly nondisabled households that had no reported income varies substantially from state to state. This could be due to the fact that different states have adopted different general assistance policies; approximately 20 to 25 percent of these households have no children. Variance by state in the level of welfare benefits may also play a role; in low-benefit states, families may conclude that they are likely to gain more from irregular child support payments than from welfare.

Earnings of the typical HUD-assisted nonelderly nondisabled tenant with earnings are roughly consistent with full-time employment for one person at the federal minimum wage.⁵ As shown in exhibit 4, the median annual earnings of these households as of 2000 were \$11,050 in the Section 8 project-based program, \$11,648 in the public housing program, and \$12,074 in the tenant-based voucher program. The 20th-percentile earnings were \$5,720 for public housing, \$6,240 for project-based Section 8, and \$6,803 for tenant-based vouchers—in all cases, more than half the earnings of a full-time minimum wage income.⁶ Earnings for the 80th percentile were \$16,640 for project-based Section 8, \$18,113 for tenant-based vouchers, and \$18,755 for public housing. Exhibit 4 also shows earnings percentiles for the same groups broken down by tenants who do or do not mix work and welfare.

For many of the reasons noted above, the actual earnings of HUD-assisted tenants probably exceed the levels reported in HUD's data systems. The effect of underreporting of income on earnings percentiles of working households is somewhat complicated. As evidenced by HUD's *Quality Control for Rental Assistance Subsidies Determination* (HUD, 2001), more accurate reporting of earnings would identify more low-wage working families. The data indicate that inclusion of these families in the distribution of earnings of working households would depress the earnings of the lower percentiles because the earnings of families not reported in the administrative system tend to be lower than the earnings that are reported. Conversely, more accurate reporting would show higher earnings for households already reported as working. In particular, the quality control data suggest higher earnings levels than the administrative data systems for the 70th percentile and above. Therefore, greater true variance in earnings exists than is suggested by the administrative data records.

Length of Stay Among Assisted Renters

Although a true longitudinal analysis examining LOS in HUD-assisted housing of particular individuals is not available, LOS may be estimated by calculating how long current tenants have been in public housing or the tenant-based voucher program. We present evidence of how LOS varies by household type, primary source of income, and amount of earned income in the public housing and tenant-based voucher programs. (Because of data limitations, we do not discuss LOS in the Section 8 project-based programs.)

Exhibit 3

Percentage of Assisted Households With Zero Counted Income, by State: 2000

State	Public Housing	Vouchers
Alabama	7.1	6.3
Alaska	0.9	1.0
Arizona	4.0	5.4
Arkansas	5.3	6.2
California	0.9	0.5
Colorado	5.0	6.3
Connecticut	2.7	3.8
Delaware	8.9	4.4
District of Columbia	6.3	4.7
Florida	6.6	3.3
Georgia	5.8	4.2
Guam	3.2	7.9
Hawaii	1.5	0.9
Idaho	3.0	5.2
Illinois	8.2	6.0
Indiana	9.1	7.4
Iowa	1.4	2.9
Kansas	2.4	3.8
Kentucky	5.4	3.6
Louisiana	7.3	2.2
Maine	1.2	3.0
Maryland	4.0	2.8
Massachusetts	1.9	2.3
Michigan	3.1	3.8
Minnesota	6.1	2.1
Mississippi	6.0	4.5
Missouri	4.9	5.5
Montana	11.2	10.6
Nebraska	2.3	3.1
Nevada	7.9	5.2
New Hampshire	1.0	1.3
New Jersey	1.3	0.8
New Mexico	5.4	4.4
New York	0.7	0.8
North Carolina	9.4	6.6
North Dakota	4.6	6.1
Ohio	7.2	5.1
Oklahoma	13.4	10.5
Oregon	3.2	3.7
Pennsylvania	3.5	2.4
Puerto Rico	7.1	17.6
Rhode Island	1.6	2.2
South Carolina	8.2	6.1
South Dakota	2.8	7.7
Tennessee	10.5	3.1
Texas	5.8	27.3
Utah	5.1	5.3
Vermont	0.6	13.5
Virgin Islands	5.0	4.5
Virginia	9.4	6.4
Washington	0.9	8.5
West Virginia	9.6	4.2
Wisconsin	1.7	2.6
Wyoming	1.6	1.5

Source: MTCS, September 2000. Tabulation not performed for TRACS for technical reasons.

Exhibit 4**Earnings Among Nonelderly Nondisabled Tenants With Earnings, by Percentile: 2000 (\$)**

Percentile	Public Housing			Tenant-Based Vouchers			Project-Based Section 8 Assistance		
	All (n = 27,735)	With No Welfare (n = 25,554)	With Welfare (n = 2,181)	All (n = 49,939)	With No Welfare (n = 44,192)	With Welfare (n = 5,747)	All (n = 16,345)	With No Welfare (n = 15,322)	With Welfare (n = 1,023)
10	2,832	3,120	1,040	4,692	5,148	2,857	4,368	4,522	2,619
20	5,720	6,020	3,000	6,803	7,280	4,680	6,240	6,424	4,800
30	7,800	8,130	5,088	8,647	9,149	6,000	7,800	8,034	5,859
40	9,750	10,140	6,309	10,400	10,920	7,280	9,491	9,750	6,768
50	11,648	11,960	7,693	12,074	12,506	8,580	11,050	11,360	7,920
60	13,520	13,818	9,360	13,761	14,352	9,800	12,740	13,000	9,305
70	15,600	16,120	11,162	15,600	16,200	11,373	14,560	14,792	10,712
80	18,755	19,240	13,464	18,113	18,622	13,520	16,640	16,909	12,480
90	24,910	25,373	17,206	21,840	22,320	16,640	20,180	20,464	15,207

Notes: These data are based on analysis of the September 2000 MTCS and December 2000 TRACS data sets.

For this analysis, we drew a 10-percent sample of the roughly 1.1 million public housing records and the 1.5 million voucher records submitted to MTCS as of September 30, 2000. Housing agencies are required to submit MTCS records for each household annually, although some housing agencies continue to have imperfect reporting. We excluded households whose last MTCS records were submitted because they were ending participation in the programs or were using their vouchers to move out of the housing agency's jurisdiction. Approximately 16 percent of public housing households and 15 percent of tenant-based voucher households fell into these categories. These exclusions focused the analysis on a definable population: current tenants.

Other records were excluded if admission dates were missing or out of range (for example, if admission occurred before the public housing program began in 1937 or the first tenant-based voucher contract on June 1, 1975, or if the admission date implied that a nonelderly head of a public housing household was admitted before age 18). These exclusions reduced the public housing sample by 13 percent (to 92,397) and the tenant-based voucher sample by 10 percent (to 131,467).

LOS was computed by converting dates to decimal years, then subtracting the date of admission from September 30, 2000.

Influence of Household Type on Length of Stay

Exhibit 5 provides an overview of the LOS of different types of households in the public housing and tenant-based voucher samples. LOS varied considerably by household type. (Note that households with elderly or disabled heads may have children.) The group total shows that median LOS was 4.69 years in public housing and 3.08 years in the tenant-based voucher program. LOS varied considerably by household type. Among all families with children, the median tenure was 3.39 years in public housing and 2.68 years in the voucher program. Median LOS for nonelderly nondisabled families with children was 3.17 years in public housing and 2.63 years in tenant-based voucher housing—the shortest median tenure among these household types. A longer spell is associated with disability and elderly status, with median tenures of 4.05 and 8.44 years, respectively, for public housing and 3.00 and 5.33 years, respectively, for the tenant-based voucher program.

Exhibit 6 presents demographic factors associated with LOS. In public housing, elderly households and nonelderly nondisabled households with children together accounted for more than 80 percent of the public housing program and therefore had the greatest influence on overall average tenure. The mean LOS for public housing residents of 8.50 years was substantially higher than the median (50th percentile) LOS of 4.69 years. The difference between these two measures of central tendency shows that the distribution of tenure was skewed, with a large proportion of short-term participants tapering off to a few households with long tenure. Tenure increases slowly with each percentile shown below the 50th percentile, followed by larger increases in succeeding percentiles.

The difference between mean (4.75 years) and median (3.08 years) tenures in tenant-based vouchers also indicated a skewed distribution, with the bulk of households having short stays (exhibit 6). As in public housing, the pattern of increasing differences of tenure between members of the “nonelderly nondisabled with children” category and the “nonelderly nondisabled no children” group indicates that empty nesters are included in nonelderly nondisabled households. These nonelderly nondisabled groups together constituted 61.1 percent of households in the tenant-based voucher sample.

Among nonelderly nondisabled households, families with no children showed more rapid increases in LOS in the higher percentiles than families with children. In public housing,

Exhibit 5

LOS in Public Housing and Tenant-Based Voucher Program, by Household Type and Presence of Children

Variable	Elderly Head	Disabled Head	Nonelderly Nondisabled Head		Total
			Children	No Children	
Public housing					
No children					
Median LOS (years ^a)	8.25	3.90	NA	5.08	6.27
Households (n)	27,818	12,686	NA	10,384	50,888
Children					
Median LOS (years ^a)	17.68	4.67	3.17	NA	3.39
Households (n)	1,311	3,758	36,440	NA	41,509
Group total					
Median LOS (years ^a)	8.44	4.05	3.17	5.08	4.69
Households (n)	29,129	16,444	36,440	10,384	92,397
Tenant-based voucher					
No children					
Median LOS (years ^a)	5.41	3.00	NA	3.84	4.00
Households (n)	20,683	19,643	NA	10,630	50,956
Children					
Median LOS (years ^a)	4.45	2.96	2.63	NA	2.68
Households (n)	1,285	9,515	69,711	NA	80,511
Group total					
Median LOS (years ^a)	5.33	3.00	2.63	3.84	3.08
Households (n)	21,968	29,158	69,711	10,630	131,467

LOS = length of stay; NA = not applicable.

Note: Ten-percent sample, unweighted.

^aYears from September 30, 2000.

Source: September 2000 MTCS. For public housing: excluding 16 percent of households with end-of-participation (EOP) records; 87 percent of remaining records have complete data in logical range. For tenant-based vouchers: excluding 15 percent of households with EOP records; 90 percent of remaining records have complete data in logical range.

by the 90th percentile, the tenure of families without children (26.85 years) was nearly double the tenure of those with children (13.83 years). One explanation for this is category switching: When the youngest child becomes an adult, a family is classified as “nonelderly nondisabled without children” whether the adult children stay or leave, but the household’s tenure does not restart at zero. Family life cycles therefore account for some of the long tenures among families without children. However, the larger size of the “with children” group (almost four times larger) means that most families with children leave public housing after brief participation.

Among the family groups studied, median LOS for nonelderly nondisabled households without children was second in length only to elderly households: 5.08 years in the public housing program and 3.85 years in the voucher program. This represents a fairly small segment of HUD-assisted housing (4.9 percent of tenants in project-based Section 8, 8.2 percent of households with tenant-based vouchers, and 11.5 percent of public housing tenants) but may represent a particularly hard-to-serve group that needs special attention. Some in this group are formerly homeless individuals with problems not formally recognized as “disabilities”; others are parents whose children have left the unit.

Exhibit 6

LOS in Public Housing and Tenant-Based Voucher Program, by Household Type

Variable	Elderly Head	Disabled Head	Nonelderly Nondisabled Head		Total
			Children	No Children	
Public Housing					
Percentage of households	31.5	17.8	39.4	11.2	100.0
Mean LOS (years ^a)	12.49	7.07	5.59	9.76	8.50
Percentile					
Minimum	0.00	0.00	0.00	0.00	0.00
10	1.32	0.62	0.52	0.52	0.66
20	2.68	1.24	1.04	1.11	1.36
30	4.25	1.99	1.58	1.96	2.20
40	6.07	2.88	2.30	3.16	3.28
50	8.44	4.05	3.17	5.08	4.69
60	11.44	5.62	4.36	8.13	6.72
70	15.33	7.85	6.15	12.95	9.63
80	21.38	11.40	8.94	19.53	14.15
90	30.90	19.01	13.83	26.85	23.00
Maximum	60.83	45.02	44.47	44.91	60.83
Tenant-Based Voucher					
Percentage of households	16.7	22.2	53.0	8.1	100.0
Mean LOS (years ^a)	7.01	4.61	3.95	5.68	4.75
Percentile					
Minimum	0.00	0.00	0.00	0.00	0.00
10	0.81	0.50	0.45	0.50	0.50
20	1.65	1.00	0.91	1.08	1.00
30	2.57	1.50	1.39	1.73	1.56
40	3.75	2.21	1.96	2.58	2.25
50	5.33	3.00	2.63	3.85	3.08
60	7.16	4.08	3.50	5.50	4.25
70	9.47	5.62	4.83	7.39	5.83
80	12.12	7.85	6.57	10.13	8.08
90	16.08	11.31	9.49	13.83	11.57
Maximum	24.94	24.83	25.29	24.94	25.29

LOS = length of stay.

Note: Ten-percent sample, unweighted.

^aYears from September 30, 2000.

Source: September 2000 MTCS. For public housing: excluding 16 percent of households with end-of-participation (EOP) records; 87 percent of remaining records have complete data in logical range. For tenant-based vouchers: excluding 15 percent of households with EOP records; 90 percent of remaining records have complete data in logical range.

Influence of Income Source

Exhibits 7 (public housing) and 8 (tenant-based voucher program) show the relationship between primary source of income and tenure. The exhibits are organized by whether households obtain more than half of their income from working, welfare, or other sources. The percentage of households are those in the sample that meet the specified definitions for household type and income source.

As seen in exhibit 7, the 18.8-percent share of nonelderly nondisabled households with children that had earned income was more than twice the share of similar households that received welfare income (9.2 percent). Median LOS of working households with children

Exhibit 7

Distribution of LOS in Public Housing, by Household Type and Primary Income Source

Variable	Elderly Head	Disabled Head	Nonelderly Nondisabled Head		Total
			Children	No Children	
≥ 50% Earnings					
Percentage of households	1.4	1.0	18.8	5.9	27.1
Mean LOS (years ^a)	19.37	8.32	6.05	11.20	7.92
Percentile					
Minimum	0.03	0.03	0.00	0.00	0.00
10	1.68	0.82	0.55	0.60	0.58
20	3.65	1.49	1.16	1.33	1.24
30	6.77	2.31	1.81	2.41	2.00
40	11.39	3.42	2.60	4.03	2.96
50	18.06	4.98	3.59	6.75	4.18
60	24.71	7.05	4.90	11.19	6.03
70	29.19	10.04	6.83	16.41	8.83
80	34.01	14.25	9.77	22.33	13.25
90	39.97	22.34	14.82	28.48	22.24
Maximum	60.83	42.34	44.47	44.91	60.83
≥ 50% Welfare					
Percentage of households	0.3	0.5	9.2	0.9	10.9
Mean LOS (years ^a)	17.30	8.07	5.03	10.45	5.92
Percentile					
Minimum	0.13	0.01	0.00	0.02	0.00
10	1.66	0.46	0.51	0.74	0.54
20	3.16	1.06	0.94	1.42	0.99
30	5.17	1.85	1.41	2.74	1.50
40	7.70	3.24	1.97	4.27	2.15
50	13.63	4.84	2.73	6.98	3.05
60	20.05	7.24	3.82	9.54	4.26
70	27.24	10.04	5.37	13.61	6.23
80	32.96	13.56	7.86	20.14	9.20
90	39.27	22.56	12.25	26.97	15.13
Maximum	54.30	42.34	44.16	44.12	54.30
Other Source					
Percentage of households	29.8	16.1	8.3	2.5	56.7
Mean LOS (years ^a)	12.14	6.98	5.83	8.59	9.60
Percentile					
Minimum	0.00	0.00	0.00	0.00	0.00
10	1.30	0.62	0.54	0.48	0.83
20	2.66	1.24	1.08	1.08	1.67
30	4.20	1.99	1.66	1.79	2.74
40	5.95	2.86	2.44	2.69	4.07
50	8.28	4.01	3.37	4.14	5.74
60	11.14	5.54	4.67	6.30	8.06
70	14.90	7.73	6.63	10.31	11.25
80	20.20	11.20	9.50	16.58	16.00
90	29.93	18.81	14.31	24.40	25.22
Maximum	60.25	45.02	44.16	44.25	60.25

Exhibit 7 (continued)**Distribution of LOS in Public Housing, by Household Type and Primary Income Source**

Variable	Elderly Head	Disabled Head	Nonelderly Nondisabled Head		Total
			Children	No Children	
			No Income		
Percentage of households	0.1	0.2	3.2	1.9	5.3
Mean LOS (years^a)	12.34	4.63	3.92	6.48	4.97
Percentile					
Minimum	0.05	0.00	0.01	0.01	0.00
10	0.71	0.36	0.45	0.44	0.44
20	1.72	0.65	0.81	0.80	0.80
30	2.94	1.02	1.17	1.21	1.18
40	5.14	1.66	1.60	1.87	1.69
50	7.39	2.41	2.18	2.83	2.36
60	10.43	3.31	2.92	4.35	3.28
70	17.33	4.77	3.97	6.52	4.77
80	27.58	7.17	5.63	10.64	7.25
90	36.31	11.25	9.45	19.82	12.78
Maximum	48.00	36.55	41.19	42.80	48.00

LOS = length of stay.

Note: Ten-percent sample, unweighted.

^aYears from September 30, 2000.

Source: September 2000 MTCS, excluding 16 percent of households with end-of-participation records; 87 percent of remaining records have complete data in logical range.

(3.59 years) exceeded the median tenure of welfare households with children (2.73 years). Among the 5.3 percent of total households with no income, the median tenure was 2.36 years. LOS of this population was generally shorter than for other groups at every percentile.

In public housing, few of the households with elderly or disabled heads relied on either earnings or welfare as their primary income source. Their relative prominence in the “other source” group reflects their reliance on Social Security or SSI.

In the voucher program, median LOS of working families (2.91 years) exceeded the median tenure of welfare families (2.50 years) by less than 6 months (exhibit 8). A slightly smaller share of voucher households (3.6 percent) than public housing households (5.3 percent) had no income; at 2.00 years, the tenant-based households with no income had a shorter median tenure than any of the other income groups.

Influence of Income Amount

Forty-eight percent of nonelderly nondisabled households with children had earnings as their primary income source. Exhibit 9 examines this group in greater detail, showing the relationship between amount of earnings and LOS for the nonelderly nondisabled households with and without children. Median LOS was low in both public housing (3.43 years) and the tenant-based voucher program (2.75) and relatively constant across earnings groups for households both with and without children. However, the median tenure was higher for families without children that had earnings of \$15,000 or more, especially

Exhibit 8

Distribution of LOS in Tenant-Based Voucher Program, by Household Type and Primary Income Source

Variable	Elderly Head	Disabled Head	Nonelderly Nondisabled Head		Total
			Children	No Children	
≥ 50% Earnings					
Percentage of households	0.5	1.3	28.0	4.3	34.1
Mean LOS (years ^a)	6.32	4.43	4.10	5.95	4.38
Percentile					
Minimum	0.08	0.03	0.00	0.00	0.00
10	0.78	0.50	0.46	0.51	0.48
20	1.40	1.00	0.95	1.12	0.99
30	2.25	1.45	1.44	1.84	1.50
40	3.14	2.16	2.07	2.75	2.15
50	4.83	3.00	2.79	4.14	2.91
60	6.24	3.91	3.73	5.90	3.99
70	8.44	5.39	5.07	7.96	5.36
80	10.96	7.33	6.83	10.80	7.26
90	14.72	10.98	9.83	14.24	10.58
Maximum	23.96	23.43	24.58	24.58	24.58
≥ 50% Welfare					
Percentage of households	0.1	0.5	10.4	0.8	11.9
Mean LOS (years ^a)	7.36	3.59	3.69	5.61	3.87
Percentile					
Minimum	0.08	0.02	0.00	0.08	0.00
10	1.14	0.33	0.41	0.58	0.41
20	1.82	0.66	0.83	1.25	0.83
30	2.71	1.08	1.26	2.14	1.30
40	3.79	1.49	1.80	2.84	1.87
50	5.25	2.11	2.41	4.18	2.50
60	7.25	3.00	3.25	5.65	3.41
70	10.47	4.25	4.50	7.19	4.66
80	13.68	6.32	6.16	9.40	6.50
90	17.02	9.07	8.90	12.78	9.29
Maximum	23.54	22.25	24.00	24.58	24.58
Other Source					
Percentage of households	16.0	20.3	12.0	2.1	50.4
Mean LOS (years ^a)	7.03	4.66	3.98	5.66	5.29
Percentile					
Minimum	0.00	0.00	0.00	0.03	0.00
10	0.81	0.50	0.50	0.51	0.58
20	1.66	1.00	0.96	1.04	1.14
30	2.58	1.52	1.41	1.70	1.75
40	3.75	2.25	2.00	2.58	2.50
50	5.39	3.01	2.67	3.83	3.46
60	7.21	4.16	3.54	5.58	4.88
70	9.50	5.70	4.82	7.41	6.65
80	12.16	7.91	6.58	9.96	9.16
90	16.08	11.41	9.58	13.74	12.83
Maximum	24.94	24.83	25.29	24.94	25.29

Exhibit 8 (continued)

Distribution of LOS in Tenant-Based Voucher Program, by Household Type and Primary Income Source

Variable	Elderly Head	Disabled Head	Nonelderly Nondisabled Head		Total
			Children	No Children	
			No Income		
Percentage of households	0.0	0.1	2.6	0.9	3.6
Mean LOS (years ^a)	5.45	2.67	3.13	4.47	3.45
Percentile					
Minimum	0.37	0.06	0.02	0.01	0.01
10	0.61	0.32	0.41	0.41	0.41
20	1.49	0.52	0.75	0.75	0.75
30	2.52	0.89	1.08	1.16	1.08
40	3.49	1.16	1.50	1.72	1.51
50	4.02	1.36	1.91	2.49	2.00
60	5.60	1.96	2.58	3.69	2.75
70	7.79	2.75	3.50	5.28	3.83
80	11.04	4.08	4.87	7.91	5.41
90	17.75	6.74	7.69	12.16	8.80
Maximum	18.14	21.41	22.86	23.08	23.08

LOS = length of stay.

Note: Ten-percent sample, unweighted.

^aYears from September 30, 2000.

Source: September 2000 MTCS, excluding 15 percent of households with end-of-participation records; 90 percent of remaining records have complete data in logical range.

in public housing. These households may represent empty nesters with more work experience or households with working adult children.

Neither in public housing nor in the voucher programs do we observe striking associations of LOS with the level of earnings. Clearly, however, many tenants leave the program each year. Presumably, many of these families leave because they have improved their material conditions to the extent that better options have become available.

Exhibit 9**LOS in Public Housing and Tenant-Based Voucher Program of Nonelderly Nondisabled Households, by Annual Earned Income and Presence of Children**

Variable	Earned Income (\$)						Total
	None	<4,999	5,000– 9,999	10,000– 14,999	15,000– 19,999	20,000+	
Public Housing							
No children							
Percentage of households							
Mean LOS (years ^a)	10.2	2.8	2.8	2.6	1.5	2.4	22.2
Minimum	0.00	0.00	0.01	0.01	0.01	0.01	0.00
Median	3.90	6.30	3.70	5.56	6.17	16.40	5.08
Maximum	44.25	44.91	43.45	44.41	42.32	44.25	44.91
Children							
Percentage of households	38.7	5.7	10.0	10.9	6.5	6.0	77.8
Mean LOS (years ^a)	5.08	7.05	5.14	5.46	5.78	8.27	5.59
Minimum	0.00	0.00	0.00	0.00	0.01	0.00	0.00
Median	2.80	3.97	2.99	3.38	3.67	5.16	3.17
Maximum	44.16	44.47	43.33	44.05	44.00	44.41	44.47
Group total							
Percentage of households	48.9	8.5	12.7	13.5	8.0	8.4	100.0
Mean LOS (years ^a)	5.72	8.32	5.79	6.34	6.64	10.63	6.52
Minimum	0.00	0.00	0.00	0.00	0.01	0.00	0.00
Median	2.95	4.46	3.14	3.65	3.97	6.68	3.43
Maximum	44.25	44.91	43.45	44.41	44.00	44.41	44.91
Tenant-Based Voucher							
No children							
Percentage of households	5.9	1.3	2.1	1.9	1.1	0.8	13.1
Mean LOS (years ^a)	5.35	5.54	5.52	6.06	6.43	6.85	5.68
Minimum	0.01	0.04	0.04	0.03	0.08	0.00	0.00
Median	3.50	3.91	3.58	4.10	4.58	5.35	3.84
Maximum	24.94	23.75	24.58	24.58	24.08	23.62	24.94
Children							
Percentage of households	37.8	4.8	12.8	14.5	9.8	7.0	86.8
Mean LOS (years ^a)	3.70	3.92	3.89	3.97	4.19	4.97	3.95
Minimum	0.00	0.00	0.00	0.01	0.00	0.03	0.00
Median	2.41	2.57	2.50	2.66	2.96	3.71	2.63
Maximum	25.29	23.76	24.56	23.84	24.58	23.50	25.29
Group total							
Percentage of households	43.7	6.2	14.9	16.4	10.9	7.9	100.0
Mean LOS (years ^a)	3.93	4.27	4.12	4.22	4.42	5.16	4.18
Minimum	0.00	0.00	0.00	0.01	0.00	0.00	0.00
Median	2.51	2.75	2.58	2.82	3.04	3.90	2.75
Maximum	25.29	23.76	24.58	24.58	24.58	23.62	25.29

LOS = length of stay.

Note: Ten-percent sample, unweighted.

^aYears from September 30, 2000.

Source: September 2000 MTCS. For public housing: excluding 16 percent of households with end-of-participation (EOP) records; 87 percent of remaining records have complete data in logical range. For tenant-based vouchers: excluding 15 percent of households with EOP records; 90 percent of remaining records have complete data in logical range.

Appendix: Methodology

The ideal source for calculating length of stay (LOS), in assisted housing would be longitudinal data that tracks LOS of all households that enter in a particular year. Unfortunately, such data are not available. We used the best available data source, the U.S. Department of Housing and Urban Development's Multifamily Tenant Characteristics System (MTCS), to develop an estimated LOS in the public housing and voucher programs. However, this data source has several limitations.

The MTCS data set consists of records of actions by public housing agencies (PHAs). These actions include, among others, admission, annual recertification, and end-of-participation (EOP). The data set contains records submitted during the 18 months preceding September 30, 2000.

The data set can be used to determine the date of admission for all current tenants for whom a PHA had submitted records. In addition, the EOP records in the file contain admission dates for tenants who left assisted housing within the past 18 months. With respect to admission dates, the only real issue concerns records with no dates or illogical dates. For our analysis, those records were excluded.

Two choices are available to determine the current date for use in calculating LOS since admission: the date of the most recent action in the file or the date of the file itself (September 30, 2000). Neither approach is foolproof. Because of a possible delay in filing EOP records, use of the file date as the current date may include statistics for LOS for some tenants who have already left assisted housing. On the other hand, use of the transaction date would cause an underestimation of current tenants' actual LOS as of September 30, 2000.

We used the file date as the current date for this article. As long as the population examined remains the same, the main effect of using the date of transaction rather than the file date is to shorten LOS by approximately 6 months. (This effect occurs because recertifications are roughly spread out through the year.) Under the date-of-transaction approach, however, it no longer makes sense to include new admissions because they would have a LOS of zero. Exhibit A-1 shows the results for LOS using a date-of-transaction approach, excluding new admissions. As seen in exhibit A-1, the alternative approach would yield LOS that are somewhat longer than but not appreciably different from the approach adopted in this article. Moreover, exclusion of new admissions would probably lead to overestimation of LOS of current residents of assisted housing as of September 30, 2000.

Whether to include EOP records in the analysis was also an issue. Including the EOP records has the advantage of using all available data for the estimate. Whether a population that includes all current tenants, as well as tenants with EOP records maintained in the system for an arbitrary period, is a meaningful population to study is unclear.

We excluded households represented by EOP records. This method has the advantage of preventing double counting of housing units or vouchers that had both a household ending participation and a household newly admitted during the 18 months covered by the data file. As exhibit A-2 shows, households that ended their participation generally had a substantially shorter tenure, both on average and in each percentile. EOP households had average stays of 4.16 years in public housing, compared with 8.50 years for non-EOP households. The tenant-based voucher program showed a similar pattern: 3.17 years for EOP households versus 4.75 years for non-EOP households. However, because EOP households represent a small share of records, the weighted mean tenure for all households (including both EOP and non-EOP records) is 7.89 years for public housing and households. The tenant-based voucher program showed a similar pattern: 3.17 years for

Exhibit A-1

Distribution of LOS Based on Years From File Date (September 30, 2000) Versus Transaction Date (Years)

Percentile	Public Housing		Voucher Program	
	Transaction Date (n = 92,966)	File Date (n = 92,397)	Transaction Date (n = 111,310)	File Date (n = 131,467)
Minimum	0.01	0.00	0.01	0.00
10	0.93	0.66	0.96	0.50
20	1.57	1.36	1.06	1.00
30	2.42	2.20	1.99	1.56
40	3.68	3.28	2.49	2.25
50	5.04	4.69	3.33	3.08
60	7.18	6.72	4.77	4.25
70	10.25	9.63	6.09	5.83
80	14.97	14.15	8.49	8.08
90	24.93	23.00	11.96	11.57
Maximum	60.67	60.83	24.95	25.29
Mean	8.94	8.50	5.03	4.75

LOS = length of stay.

EOP households versus 4.75 years for non-EOP households. However, because EOP households represent a small share of records, the weighted mean tenure for all households (including both EOP and non-EOP records) is 7.89 years for public housing and 4.57 years for the voucher group—quite close to that of the non-EOP sample used throughout this article.

Exhibit A-2

Distribution of LOS Based on EOP Versus Non-EOP Records (From September 30, 2000) (Years)

Percentile	Public Housing		Voucher Program	
	Non-EOP (n = 92,397)	EOP (n = 15,064)	Non-EOP (n = 131,467)	EOP (n = 16,683)
Minimum	0.00	0.00	0.00	0.00
10	0.66	0.34	0.50	0.42
20	1.36	0.62	1.00	0.79
30	2.20	0.95	1.56	1.00
40	3.28	1.33	2.25	1.38
50	4.69	1.88	3.08	1.92
60	6.72	2.64	4.25	2.50
70	9.63	3.94	5.83	3.44
80	14.15	6.09	8.08	4.91
90	23.00	NA	11.57	NA
Maximum	60.83	60.67	25.29	24.40
Mean	8.50	4.16	4.75	3.17

LOS = length of stay; EOP = end-of-participation; NA = not available.

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Notes

1. Statements of opinion in this article are the authors' and do not necessarily reflect the policy of the U.S. Department of Housing and Urban Development (HUD).
2. All earnings data in this article represent the share of nonelderly nondisabled *households* with reported earnings as opposed to *adults* living in HUD-assisted housing with reported earnings. In some households with more than one adult, only one adult may be working.
3. HUD's MTCS and TRACS data systems do not reflect a survey of all tenants at a single time but rather the reports filed by housing agencies and owners of actions involving tenants. Actions included in the systems are new admissions, annual recertifications, interim recertifications, and end-of-participation (EOP) records. The systems cannot reflect events that have transpired since the most recently filed action or data that are not properly entered into the systems.
4. *Quality Control for Rental Assistance Subsidies Determination* (HUD, 2001) was a study undertaken to measure the extent of error in income and rent determinations in HUD-assisted housing caused by the failure of agencies and owners to properly follow HUD's income verification procedures. This study found that the verified employment rate for households with nonelderly nondisabled heads was 7 percentage points higher than the reported rate, indicating that some agencies and owners failed to report tenant earnings to HUD. The study was not designed to measure the extent of error caused by tenant fraud in failing to report income.
5. The earnings data used in this analysis represent housing agency and owner estimates of tenants' annual incomes as reflected in the most recent action (for example, an annual or interim certification of income) in HUD's data systems.
6. The minimum wage is \$5.15 per hour; therefore, a full-time minimum wage worker would earn approximately \$10,000 annually.

Reference

U.S. Department of Housing and Urban Development (HUD). 2001. *Quality control for rental assistance subsidies determination*. Washington, DC: U.S. Department of Housing and Urban Development.