

## **Data Shop**

*Data Shop, a department of Cityscape, presents short papers or notes on the uses of data in housing and urban research. Through this department, PD&R introduces readers to new and overlooked data sources and to improved techniques in using well-known data. The emphasis is on sources and methods that analysts can use in their own work. Researchers often run into knotty data problems involving data interpretation or manipulation that must be solved before a project can proceed, but they seldom get to focus in detail on the solutions to such problems. If you have an idea for an applied, data-centric note of no more than 3,000 words, please send a one-paragraph abstract to David.A.Vandenbroucke@hud.gov for consideration.*

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# HUD-Assisted Housing 101: Using “A Picture of Subsidized Households: 2000”

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## **Abstract**

*“A Picture of Subsidized Households” is a series of reports showing aggregated data for various U.S. Department of Housing and Urban Development programs and at different geographic levels. This article demonstrates one of the uses of these data for research, including data limitations.*

## **Introduction**

One objective of the Office of Policy Development and Research (PD&R) at the U.S. Department of Housing and Urban Development (HUD) is to provide access to HUD program data to researchers and policy analysts. This provision is accomplished in a way that supports research and, hence, policy formulation, without revealing information about individual people. As part of this effort, PD&R has compiled a series of comprehensive information on subsidized households from HUD's major data collection systems. In the 1990s, this compilation resulted in printed publications

called “A Picture of Subsidized Households” (Picture). Previous publications include Picture as of the 1970s, 1996, 1997, and 1998. Paul Burke (a former staff member in PD&R) conceptualized and created these data summaries. The current Picture 2000 uses the same concepts and general layout for presentation as the original summaries. A few items have been revised or deleted and some new items were added. Although all the reports are available for downloading from the web, “A Picture of Subsidized Households: 2000” (Picture 2000) is the first one with a web-based query and download tool.<sup>1</sup> The updates and improvements to this data system are the responsibility of the Program Monitoring and Research Division within PD&R.

In this article, we first describe the scope of the data and then provide illustrative examples of how researchers might use the database and discuss some limitations of its use.

## Scope of the Data

The goal of Picture is to provide basic information for a researcher (or anyone interested in housing policy) to be able to sketch the characteristics of participants in the HUD-subsidized housing program, know some information about the public housing agencies (PHAs) or contracts/projects, and gain knowledge about the neighborhoods where the participants lives.

The report (and accompanying database) includes household data, aggregated by program at various geographic levels. The programs are Public Housing, Housing Choice Voucher Program (HCVP, formerly called Section 8 Certificates or Vouchers), Moderate Rehabilitation (Mod Rehab), Project-based Section 8—New Construction and Substantial Rehabilitation, Section 236, Below Market Interest Rate, Section 202 Supportive Housing for the Elderly, and Section 811 Supportive Housing for Persons with Disabilities. The geographic levels are national, metropolitan statistical area (MSA), state, city, census tract, and PHA.<sup>2</sup> Summaries at the MSA and city levels are new in 2000 and will be available in future issues of Picture.

The data included in Picture are primarily characteristics of the participants in HUD’s rental subsidy program. These characteristics include social and economic categories such as age, race, rent, and income; household type, such as elderly, disabled, and families with children; and certain characteristics of the housing unit and, where appropriate, neighborhood. In general, the summary characteristics are provided as a percent and averages with the denominator as the number of reported households. In addition to providing the tenant data, the report also includes some limited data related to projects or PHAs, such as total units, percent occupied, number reported, percent reported, and spending. Project-level summaries are available for Multifamily Assisted Housing Programs and Public Housing. The geographic summaries are provided at the national, state, county, and census tract levels. In addition to including geographic location, the report provides some neighborhood characteristics, such as poverty, minority, and single-family home ownership.

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<sup>1</sup> See [www.huduser.org/picture2000/index.html](http://www.huduser.org/picture2000/index.html) for a more complete description of the data elements in Picture 2000.

<sup>2</sup> Individual households in the Housing Choice Voucher Program and Moderate Rehabilitation program provide addresses as part of their report to HUD. Addresses for Public Housing and Multifamily Assisted Housing Programs were derived from project addresses. These addresses are geocoded to determine the metropolitan statistical area, city, county, and census tract location of the household.

These neighborhood characteristics are obtained directly from Census 2000 (SF3) at the census tract level. A weighted version of these characteristics is calculated for other geography levels.<sup>3</sup> Data in Picture 2000 represent households reported in the 18-month period ending December 31, 2000.

## Uses and Limitations of the Data

Picture provides easy access to information about the size of HUD’s assisted programs and about the participants. Although Picture does not make all information about tenants available, it provides key factors for policy analysis, according to what PD&R believes to be key factors. The underlying data come from HUD’s administrative data systems, which are designed to capture information about all assisted tenants. In HUD’s database system, each household that receives a subsidy is required to report at least annually. In fact, only about 92 percent of active households had information reported as of December 2000.

Beginning with Picture 2000, users can obtain the data through a web-based query tool. This access enables researchers to select the programs, demographic characteristics, and summary levels of interest. The results of the query can be viewed as a web-based report or viewed and saved as a comma-delimited file available for downloading and further statistical analysis.<sup>4</sup> In addition, the entire database (at several summary levels) and the data documentation can be downloaded from the website.

The following examples illustrate the kinds of results available from Picture 2000. This article focuses on two tenant characteristics—age (elderly or not) and income—and one neighborhood characteristic—poverty rate. These examples are not meant to analyze fully the data in Picture; they merely illustrate the kinds of questions that Picture data easily answer. We hope these examples stimulate interest in the dataset as a tool for policy analysis.

At the national level, as of December 2000, of the 4.88 million HUD-subsidized units available, 87 percent are occupied. Exhibit 1 shows some of the characteristics to be found in the data. For example, one tenant characteristic is being classified as elderly (62 years or older). Nationwide, 31 percent of HUD-assisted housing programs consist of elderly households; however, more than 80 percent of Mod Rehab and HCVP consist of nonelderly households. Elderly households represent 59 percent of Section 8 New Construction/Substantial Rehabilitation and 36 percent of the category All other multifamily assisted. The category New Construction/Substantial Rehabilitation includes the program assisted through Section 202/8, and the All other multifamily assisted category includes households assisted through the program Section 202/PRAC.

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<sup>3</sup> The weights are the number of occupied units for Multifamily Assisted Housing and Public Housing and for the Housing Choice Voucher Program (HCVP) at the public housing agency and state levels. The weight for the HCVP at the city and metropolitan statistical area levels is the number of reported households.

<sup>4</sup> Instructions for downloading and using the comma-delimited file are provided as a link on the Picture 2000 web page: [www.huduser.org/picture2000/index.html](http://www.huduser.org/picture2000/index.html).

**Exhibit 1**

**A Picture of Subsidized Households: 2000, National Summary Data**

Program	Number of Subsidized Units Available*	Percent Occupied	Number Reported	Percent Reported	Percent Elderly (62 or Older)	Spending per Month** (\$)	Income Categories (percent)					Percent Extremely Low Income
							Less Than \$5,000	\$5,000 to \$9,999	\$10,000 to \$14,999	\$15,000 to \$19,999	\$20,000 or More	
U.S. total, all HUD programs	4,881,081	87	3,903,506	92	31	421	17	45	21	10	7	70
Public Housing	1,282,099	89	1,056,174	93	32	426	21	45	18	8	8	69
Housing Choice Voucher Program	1,817,360	82	1,497,040	100	17	427	16	43	21	11	9	73
Moderate Rehabilitation	111,392	65	57,367	79	16	449	32	44	13	6	4	82
New Construction/Substantial Rehabilitation	877,830	84	724,129	98	59	497	11	52	25	9	4	69
Section 236	440,329	96	276,799	66	35	263	16	39	23	13	9	63
All other multifamily assisted	352,337	98	291,997	85	36	324	20	43	20	9	8	70

\* Number of units under contract for federal subsidy and available for occupancy.

\*\* Average spending per unit per month.

Picture also enables researchers to easily determine other important tenant characteristics. For example, exhibit 1 shows that 70 percent of the households reported in all HUD-subsidized programs are extremely low-income households. At least 55 percent of these households have an annual household income of less than \$10,000.

The smallest geography that Picture provides is the census tract summary. At this geography level, the number of units available and occupied are coded as "not applicable." The unit-based programs such as Multifamily Assisted Housing and Public Housing can provide unit information at the census tract level.<sup>5</sup>

Before presenting some examples of analysis at the census tract level, we need to note a few data limitations. First, if the number of tenants reported for a particular program in a single tract is less than 11 households, all the household characteristics are suppressed (coded as "-4"). This action is taken to protect the identities of HUD's clients when information is released to the public.

Second, some of our data records do not provide sufficient address information to determine the census tract with complete confidence. The geocoding process results in a small percentage of records without a specific census tract. For those records, we provide state and county but no census tract information. At the census tract summary level, the Picture 2000 database has more than 69,000 records while 66,304 census tracts are in the nation. The extra records represent those summaries of households with no identifiable census tract. These records are included to maintain the overall total for each program.

The census tract summaries lend themselves to illuminating analyses. The following examples illustrate working with these census tract summaries. These types of analyses were done by Devine et al. (2002).

Most important, the census tract data in Picture enables analysts to map the location of assisted housing in their community.<sup>6</sup> Maps often present a clearer message about the programs than can be derived from tabular data. One such example is shown in exhibit 2. The map, developed by Seth Marcus in the Program Monitoring and Research Division, shows the location of various forms of assisted housing in Baltimore, Maryland. In this case, the census tract summaries of HCVP tenants are shown in relation to the locations for public housing and project-based assistance projects. The presence of several clusters of housing assistance is readily apparent in the map.

In addition to being mappable, census tract summary data can also provide useful tabular analyses. Using the census tract summaries for all HUD programs combined, it is possible to analyze, for example, the distribution of assisted households by location and by neighborhood poverty concentration. Exhibit 3 shows that about one-third of HCVP households in metropolitan areas reside in neighborhoods with 10- to 19-percent poverty, while 48 percent of HCVP households live

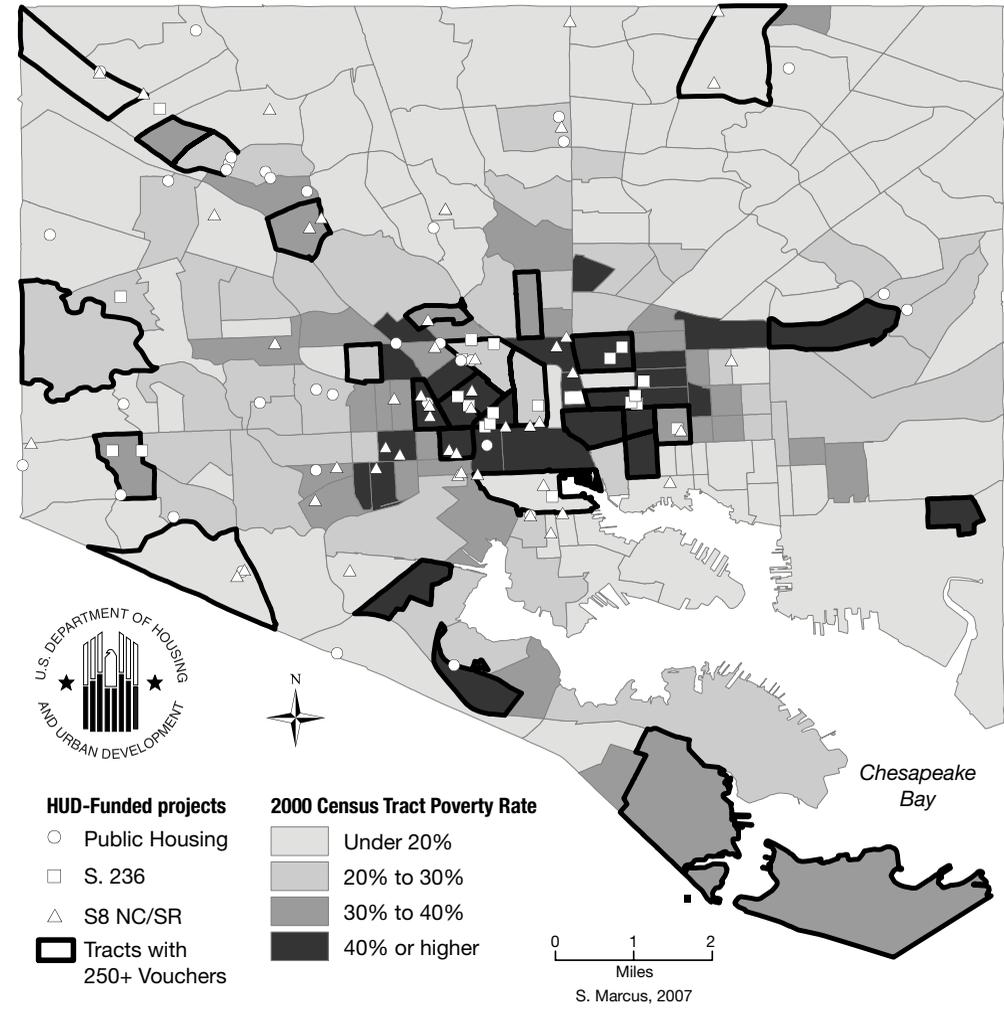
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<sup>5</sup> The Housing Choice Voucher Program (HCVP) and Moderate Rehabilitation (Mod Rehab) do not lend themselves to calculating units available and occupied at the census tract level. For HCVP and Mod Rehab, the lowest level of geography for these variables is the public housing agency.

<sup>6</sup> The Picture 2000 website, [www.huduser.org/picture2000/index.html](http://www.huduser.org/picture2000/index.html), contains additional details about downloading and using the geographic information in Picture 2000.

**Exhibit 2**

**Poverty Rate and Location of Subsidized Housing in Baltimore, Maryland**



in similar poverty neighborhoods in nonmetropolitan areas. In the metropolitan suburban areas, about 40 percent live in neighborhoods with less than 10-percent poverty. In central cities, higher proportions of households live in areas of high poverty compared with households in the suburbs and nonmetropolitan areas.

Exhibit 4 presents the distribution of households headed by elderly tenants in the HCVP. The number of households headed by elderly tenants was calculated based on the percent and number of reported households. Those census tracts with fewer than 11 reported households were considered zero elderly households. About 2 percent of households headed by elderly tenants were lost using this process. For the HCVP, the proportion of households headed by elderly tenants and living in

### Exhibit 3

Distribution of HCVP Households by Location and Neighborhood Poverty Rate, Picture 2000

Poverty Rate	Metropolitan									
	Total		Total Metropolitan		Central City		Suburb		Non-metropolitan	
	Number	%	Number	%	Number	%	Number	%	Number	%
All tracts	1,397,717	100	1,189,650	100	725,722	100	463,967	100	208,028	100
0-9%	301,449	21.6	264,885	22.3	80,380	11.1	184,534	39.8	36,535	17.6
10-19%	489,217	35	389,309	32.7	212,901	29.3	176,418	38	99,898	48
20-29%	325,749	23.3	278,399	23.4	209,912	28.9	68,487	14.8	47,350	22.8
30-39%	177,809	12.7	160,353	13.5	135,315	18.6	25,038	5.4	17,456	8.4
40% or more	103,493	7.4	96,704	8.1	87,214	12	9,490	2	6,789	3.3

HCVP = Housing Choice Voucher Program.

### Exhibit 4

Distribution of HCVP Households Headed by Elderly Tenants by Location and Neighborhood Poverty Rate, Picture 2000

Poverty Rate	Total Elderly		Central City		Suburb		Nonmetropolitan	
	Number	%	Number	%	Number	%	Number	%
All tracts	216,859	100	108,291	100	77,803	100	30,765	100
0-9%	50,042	23.1	12,937	11.9	31,649	40.7	5,456	17.7
10-19%	81,438	37.6	34,313	31.7	31,078	39.9	16,047	52.2
20-29%	47,917	22.1	30,440	28.1	11,159	14.3	6,319	20.5
30-39%	23,903	11	18,753	17.3	2,884	3.7	2,266	7.4
40% or more	13,558	6.3	11,847	10.9	1,033	1.3	678	2.2

HCVP = Housing Choice Voucher Program.

high-poverty areas of central cities is at least double the proportion of those who live in nonmetropolitan areas and suburbs of similar poverty concentration. Only 17 percent of HCVP households in the Section 8 program are headed by elderly tenants.

Exhibit 5 provides the neighborhood poverty rate distribution for nonelderly HCVP tenants. The results are quite similar, with a slightly greater percentage of households headed by nonelderly tenants living in the highest poverty census tracts.

The data for HCVP reported households provided at the census tract level can be aggregated to MSA, city, state, and national levels but not to the PHA level. Picture does not provide the PHA code with the HCVP census tract summary because a few tracts with tenants are from more than one PHA. For Public Housing, project-level summaries are provided, enabling researchers to aggregate information to the PHA level.

A similar analysis can be done for all HUD programs combined because this summary is available at the census tract level. Exhibits 6, 7, and 8 present the same analysis as in the previous tables

**Exhibit 5**

Distribution of HCVP Households Headed by Nonelderly Tenants by Location and Neighborhood Poverty Rate, Picture 2000

Poverty Rate	Total Nonelderly		Central City		Suburb		Nonmetropolitan	
	Number	%	Number	%	Number	%	Number	%
All tracts	1,184,929	100	618,598	100	388,128	100	178,204	100
0-9%	253,759	21.4	67,975	11	154,362	39.8	31,422	17.6
10-19%	408,925	34.5	178,907	28.9	145,720	37.5	84,299	47.3
20-29%	278,145	23.5	179,606	29	57,396	14.8	41,142	23.1
30-39%	154,032	13	116,644	18.9	22,175	5.7	15,214	8.5
40% or more	90,068	7.6	75,466	12.2	8,475	2.2	6,127	3.4

HCVP = Housing Choice Voucher Program.

**Exhibit 6**

Distribution of All HUD-Assisted Households by Location and Neighborhood Poverty Rate, Picture 2000

Poverty Rate	Metropolitan									
	Total		Total Metropolitan		Central City		Suburb		Non-metropolitan	
	Number	%	Number	%	Number	%	Number	%	Number	%
All tracts	3,693,445	100	3,081,981	100	2,037,708	100	1,044,316	100	611,464	100
0-9%	691,259	18.7	595,010	19.3	188,357	9.2	406,686	38.9	96,249	15.7
10-19%	1,128,900	30.6	848,092	27.5	467,583	22.9	380,519	36.4	280,808	45.9
20-29%	812,047	22	664,593	21.6	512,076	25.1	152,517	14.6	147,454	24.1
30-39%	528,378	14.3	471,493	15.3	405,297	19.9	66,196	6.3	56,885	9.3
40% or more	532,861	14.4	502,793	16.3	464,395	22.8	38,398	3.7	30,068	4.9

**Exhibit 7**

Distribution of All HUD-Assisted Households Headed by Elderly Tenants by Location and Neighborhood Poverty Rate, Picture 2000

Poverty Rate	Total		Central City		Suburb		Nonmetropolitan	
	Number	%	Number	%	Number	%	Number	%
All tracts	1,154,164	100	598,611	100	363,653	100	191,900	100
0-9%	275,018	23.8	66,694	11.1	169,564	46.6	38,760	20.2
10-19%	369,713	32	148,773	24.9	127,875	35.2	93,065	48.5
20-29%	236,770	20.5	153,619	25.7	43,465	12	39,686	20.7
30-39%	141,655	12.3	113,155	18.9	14,706	4	13,794	7.2
40% or more	131,008	11.4	116,371	19.4	8,043	2.2	6,594	3.4

## Exhibit 8

Distribution of All HUD-Assisted Households Headed by Nonelderly Tenants by Location and Neighborhood Poverty Rate, Picture 2000

Poverty Rate	Total		Central City		Suburb		Nonmetropolitan	
	Number	%	Number	%	Number	%	Number	%
All tracts	2,542,477	100	1,439,980	100	682,302	100	420,195	100
0-9%	418,250	16.5	122,117	8.5	238,404	34.9	57,730	13.7
10-19%	760,024	29.9	319,048	22.2	252,931	37.1	188,044	44.8
20-29%	575,484	22.6	358,551	24.9	109,099	16	107,833	25.7
30-39%	386,794	15.2	292,190	20.3	51,501	7.5	43,104	10.3
40% or more	401,925	15.8	348,074	24.2	30,367	4.5	23,483	5.6

but for tenants in all HUD-assisted programs. These exhibits show that the overall poverty rates tend to be slightly higher for all programs combined than for the HCVP alone. This article is not intended to explain why this would be the case but simply to illustrate how a researcher might use Picture to gather basic information about the tenants. Further analysis of which particular program participants are more likely to live in high-poverty tracts is left to the reader.

## Conclusion

Picture 2000 provides researchers and policy analysts with ready access to information about the size of assisted housing programs and the characteristics of tenants at a variety of levels. This article is intended to stimulate interest in using this tool for research and policy analysis. We have shown just a few simple examples of how researchers might use Picture. We hope you find these examples useful. Many additional data elements are available for download using the web-based query tool in Picture. We hope you will explore the data set and find it valuable. A new edition of Picture, using data for 2004, is being prepared for release in early 2008. Soon after the release of Picture 2004, we will begin working on Picture 2006 to bring the data set reasonably up to date. After those two editions are completed, we intend to solicit suggestions from users on how we can improve the Picture series. In the meantime, readers may e-mail questions or comments to [helpdesk@huduser.org](mailto:helpdesk@huduser.org).

## Acknowledgments

I thank my colleagues, David E. Chase and Seth Marcus, for comments on the draft and assistance with creating the map, respectively.

## Author

Lydia B. Taghavi is a social science analyst in the Program Monitoring and Research Division, Office of Policy Development and Research, U.S. Department of Housing and Urban Development.

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