

# Public Housing Transformation and Resident Relocation: Comparing Destinations and Household Characteristics in Chicago

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## Abstract

*Nearly a decade after the start of the Chicago Housing Authority's (CHA's) Plan for Transformation, more than 16,000 households have been relocated into a variety of housing contexts, including new mixed-income developments, private rental housing subsidized with vouchers, scattered-site public housing units, and rehabilitated 100-percent public housing developments. Using administrative data from the CHA and a number of state agencies, we compare the characteristics of residents who ended up in the different housing contexts and examine differences in their current well-being. Counter to expectations, our analysis reveals no evidence of any sorting of higher functioning households into new mixed-income developments or into the private market with housing choice vouchers, or of more challenged households being left behind in traditional public housing developments. On the contrary, we find that the households that ended up taking vouchers were relatively more challenged (as suggested, for example, by patterns of employment, income, and welfare receipt) in 1999 than other subgroups and even have relatively more troubling indicators of well-being in 2008. Furthermore, although the households living in scattered-site housing in 2008 seem to be faring quite well, those in mixed-income developments are surprisingly indistinguishable across most indicators from the households living in traditional public housing developments.*

## Introduction

During the past two decades, scholarly interest in and policy responses to urban poverty have largely focused on concentration effects in very high-poverty neighborhoods. In these neighborhoods, the social problems linked to poverty have a cumulative negative effect on residents above and beyond their direct effects on individuals or households (Jargowsky, 1997; Massey and Denton, 1993; Wilson, 1996, 1987). Public housing, which has been relegated generally to very low-income, African-American neighborhoods, has increased substantially the concentration of poverty and the racial segregation in many urban areas (Massey and Kanaiaupuni, 1993).

Given these concentration effects, housing policies aimed at deconcentrating poverty in urban centers have taken one of two approaches. The first approach, dispersal policies, encourage public housing residents to move out of large public housing projects and, ideally, into higher income and less segregated neighborhoods. Residents may receive vouchers to use in the private market or move to public housing units scattered throughout the city (Goetz, 2003, 2000; Varady and Walker, 2003). In addition, federal housing policy has included efforts to allow for greater mobility of public housing residents; for example, by shifting from project-based to tenant-based subsidies, and by enabling residents to use vouchers across municipal boundaries (Goetz, 2000). By contrast, the second approach, place-based redevelopment policies, focus on demolishing large public housing projects and replacing them with mixed-income developments on the same site. The federal HOPE VI Program is an example of this approach (Cisneros and Engdahl, 2009; Popkin et al., 2004; Smith, 2006).

Policy-makers intend both strategies to counteract the effects of concentrated poverty by providing public housing residents with access to more resources and opportunities, including better schools, more responsive services, better access to the workforce, and opportunities to forge new social relationships with more affluent neighbors (Arthurson, 2002; Joseph, Chaskin, and Webber, 2007; Kearns and Mason, 2007; Kleit, 2001). Redevelopment policies have the additional goal of improving conditions in the surrounding neighborhood (Goetz, 2010, 2003; Popkin et al., 2004).

The Chicago Housing Authority's (CHA's) Plan for Transformation (the Transformation), which has affected almost 25,000 public housing households directly, represents the most ambitious effort in the United States to address the problems of concentrated urban poverty through both dispersal and redevelopment strategies.<sup>1</sup> At its completion, the Transformation will have demolished about 22,000 public housing units, rehabilitated more than 17,000 units, and constructed approximately 7,700 public housing replacement units in new, mixed-income developments that will also include more than 8,300 units of affordable and market-rate housing (CHA, 2008).

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<sup>1</sup> Chicago's Plan for Transformation includes two additional strategies that do not attempt to deconcentrate poverty. The first is renovating (primarily) low-rise family developments located away from the city center. These developments will comprise 20 percent, or 4,978, of the planned 25,000 replacement units. As of January 2011, the city had renovated 76 percent of these planned units. The second strategy involves renovating senior housing, and the CHA has made a concerted effort to provide seniors with the option of living in seniors-only developments with associated support services. Of the planned 25,000 replacement units, 38 percent, or 9,382, will be in senior housing developments. As of January 2011, CHA had renovated 99 percent of the senior units (CHA, 2011a).

The demolition and involuntary relocation at the heart of the Transformation have not been without controversy. As in other cities implementing similar changes, Chicago's low-income residents and their advocates have met the Transformation with resistance (for example, Goetz, 2000; Pattillo, 2007). Studies have raised questions about the expected benefits of relocation, including the assumption that cross-class interaction will foster social capital development or positive behavior change (Joseph, Chaskin, and Webber, 2007; Kleit, 2001; Lees, 2008). Moreover, some have claimed that such schemes are essentially revanchist efforts to appropriate low-income neighborhoods for the benefit of the affluent rather than to address the needs of low-income residents through system reform and neighborhood revitalization (Fraser and Kick, 2007; Lees, 2008; Smith, 1996; Smith and Stovall, 2008).

In any case, the Transformation has led to a massive relocation of more than 56,000 Chicago residents who were living in public housing as of October 1999, the month in which the Transformation was announced (CHA, 2000).<sup>2</sup> Most of these residents have since relocated to private rental housing subsidized with vouchers, newly rehabilitated traditional and scattered-site public housing units, and new mixed-income developments. In the process, many experienced multiple moves, relocating temporarily into vacant public housing units or accepting temporary housing vouchers before landing in their permanent housing choices.<sup>3</sup> Other residents secured unsubsidized housing in the private market, moved in with family or friends, or simply failed to fulfill the requirements to retain their subsidy.

In many cases, the relocation process has been quite lengthy and disruptive for residents. For example, residents living in highrise buildings slated for demolition relocated early on in the Transformation. Those choosing to return to the new mixed-income developments had to wait several years for developers to build the first units, and many of the planned units are still not complete. In other cases, most notably for residents of scattered-site public housing, the process has been shorter and possibly more stable. Although these residents had the same housing relocation options as other residents, rehabilitation has generally taken less time than the wait for new mixed-income and renovated traditional public housing units; some residents have been able to relocate within or near their building until a completed unit becomes available; and, as we shall see, the vast majority of these residents elected to remain in scattered-site housing.

Although a number of studies have examined the relocation process, the characteristics of the neighborhoods to which public housing residents relocate, and the effects of relocation on a range

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<sup>2</sup> This population, referred to in Transformation documents as the 10/1/99 population, includes leaseholders in CHA housing as of October 1, 1999, and other household members enumerated on the lease. Under the Relocation Rights Contract, a legal agreement established between the CHA and its residents at the Transformation's start, all lease-compliant households in the 10/1/99 population are guaranteed a right to return to a new or rehabilitated unit.

<sup>3</sup> The Relocation Rights Contract guarantees residents one of four permanent housing choices: a newly built unit in a mixed-income development, a permanent housing choice voucher, a rehabilitated scattered-site unit, or a rehabilitated unit in a traditional CHA development. After residents have signed a lease for one of these units, they receive a notice indicating that their right to return has been satisfied. The Relocation Rights Contract does not guarantee assistance with subsequent moves except in cases of changes to household composition (CHA, 2001).

of outcome measures, those studies generally did not compare residents based on the type of housing to which they relocate.<sup>4</sup> Comparing these groups is important for at least two reasons.

First, although the October 1999 CHA population consisted of predominantly extremely low-income, African-American, female-headed households with long public housing histories, they were diverse in numerous other ways, including household size, the age of household members, their involvement with other public systems, and their attachment to the labor market. Comparing residents based on the housing type to which they relocate can provide insight into the ways in which these differences may either constrain housing choices or shape preferences.

One might posit, for example, that residents who were faring better when the Transformation began would have been more likely to move to the new mixed-income developments, which have the most rigorous eligibility criteria (including work requirements, criminal background checks, and drug testing), or to the private market with housing choice vouchers (HCVs), which require the often difficult task of finding both a unit and a landlord willing to accept a voucher. Conversely, one might expect that the residents who stay in (or return to) traditional public housing would be those with the greatest challenges to becoming independent—such as chronic unemployment, disabilities, mental or physical health problems, or other systems involvement—or those with larger families, given the smaller unit sizes available in the mixed-income developments.<sup>5</sup>

Second, a better understanding of these differences will also shed light on some fundamental practice and policy questions: To what extent do housing options and their eligibility criteria match the preferences and characteristics of the relocating population? To what extent do differences in household characteristics reflect differences in the pathways to opportunity generated by the public housing transformation? And to what extent will households that have relocated to different types of housing require different types of ongoing supports and services?

Furthermore, although other studies have examined how residents are faring post-relocation, they have not compared those in different types of housing on indicators of well-being. Nor have they determined whether well-being improves the longer residents have been in the housing to which they relocated, or if these improvements vary by housing type. Given the massive investment of time and money—more than \$2 billion during the first 10 years—that has gone into creating Chicago's 10 major new mixed-income developments, and given the attention given to the selection criteria used to identify the residents most likely to succeed in these environments, it seems important to ask whether and to what extent the residents who have relocated to these developments are faring better than those in other subsidized housing options. For example, are the residents of mixed-income developments more likely to be employed or earning higher wages and less likely to be receiving public assistance? Similarly, are they less likely to be involved with the juvenile justice or child welfare systems?

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<sup>4</sup> A recent exception is Buron and Popkin (2010), who found differences among relocated residents of one Chicago public housing development, Madden Park/Wells. Specifically, residents who moved into the private market (using housing choice vouchers or without assistance) tended to be younger, less likely to have been long-term public housing residents, and more likely to have had household incomes above \$20,000 than those who were living in either traditional public housing or mixed-income developments. In addition, those in mixed-income developments were more likely to have children than those in traditional public housing.

<sup>5</sup> For more information about this “hard-to-house” population, see Popkin et al. (2010a) and Theodos et al. (2010).

This article begins with a brief review of the literature on relocation. Specifically, we explore the extent to which relocation seems to be achieving the broader goal of deconcentrating poverty and discuss some of the evidence related to the effect of relocation on family well-being. Next, we outline some of the factors that condition resident mobility and housing choice under the Transformation. We then turn to an analysis of administrative data from public housing and several other state and local agencies to address three questions. First, to what extent did CHA households across different housing types differ from one another at the beginning of the Transformation with respect to demographic characteristics and indicators of well-being? Second, to what extent do they differ from one another nearly a decade after the Transformation began? And third, is there any evidence that family well-being improves the longer residents have been living in mixed-income developments? Finally, we offer some conclusions and suggest some implications of these findings for practice and policy.

## **Resident Relocation and Concentrated Poverty**

The results of recent research on the relocation of public housing residents have been mixed. In the case of Chicago families relocated from public housing to suburban communities under the original Gautreaux desegregation case ruling, the policy largely achieved its goals of desegregation and deconcentration. Most residents moved to (and continued to live in) significantly higher income and less racially segregated suburban neighborhoods with access to better infrastructure, services, and amenities (DeLuca, 2005; DeLuca and Rosenbaum, 2003; DeLuca et al., 2010; Keels, 2008; Keels et al., 2005). Similarly, recent research on public housing residents who received vouchers as part of the HOPE VI Program and the Transformation suggests that most moved to neighborhoods that were less poor and safer than the neighborhoods from which they came (Burton et al., 2002; CHA, 2011b; Kingsley, Johnson, and Pettit, 2003; Kleit and Galvez, 2011; Popkin, 2010; Popkin, Levy, and Burton, 2009).

In other cases, relocation has been less effective. For example, many residents who relocated to higher income neighborhoods with lower crime rates, better infrastructure, and more responsive services as part of the Moving to Opportunity (MTO) program eventually returned, often after several moves, to socially isolated, overwhelmingly African-American neighborhoods with high levels of poverty, high unemployment rates, and underperforming schools (Briggs, Popkin, and Goering, 2010; Orr et al., 2003). Similarly, families who relocated during the second round of Gautreaux often experienced subsequent moves to largely low-income, racially segregated neighborhoods (Boyd, 2008; Boyd et al., 2010).<sup>6</sup>

Evidence is also mixed regarding the effect of relocation on individual-level outcomes. Studies of the families affected by the original Gautreaux ruling found improvements in employment and educational attainment (Rubinowitz and Rosenbaum, 2000), but the economic benefits of moving to the suburbs were more tenuous than the initial research had suggested (DeLuca et al., 2010).

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<sup>6</sup> The overriding emphasis in the original Gautreaux ruling was racial desegregation. By contrast, Gautreaux Two sought to move residents to “opportunity areas” characterized by lower levels of both poverty and racial segregation, and the MTO program focused on moving families to low-poverty neighborhoods without explicit reference to race.

Similarly, residents who relocated as part of the MTO program reported better physical and mental health but no gains in employment or educational attainment and, despite a reduction in risky behavior among young women, delinquent behavior among young men increased (Briggs, Popkin, and Goering, 2010; Orr et al., 2003). Research has found improved mental health among HOPE VI voucher holders, but also significant economic hardship (Popkin, 2010) and no positive effects on employment or income (Clampet-Lundquist, 2004a; Curley, 2010; Goetz, 2003). A recent report by the CHA (2011b) found that residents relocated as part of the Transformation increased their rate of employment and average annual income over time, but the report did not look separately at outcomes for residents relocated to different housing types.

In addition, no evidence indicates that relocation under these programs improved social interaction or increased social capital (Clampet-Lundquist, 2010, 2004b; Cove et al., 2008; Greenbaum et al., 2008). Indeed, some scholars argue that any observed relocation benefits may have more to do with the institutional resources to which residents have access in their new neighborhoods than with exposure to higher income families (Curley, 2010; Fauth, Leventhal, and Brooks-Gunn, 2008; Jacob, 2004; Jacob and Ludwig, 2008).

## Factors Conditioning Relocation Destinations in Chicago

A primary stated goal of the Transformation was to end the social isolation of public housing residents and create opportunities for them to choose where to live. These opportunities, however, were substantially constrained by several factors. Some of these factors were of a structural nature. For example, although more than 16,000 households will ultimately be relocated, only about 7,000 of the units in the new mixed-income developments will be set aside for public housing residents. Furthermore, these units are less accommodating of larger families and families with older children because they tend to have smaller and fewer bedrooms than units in traditional public housing. Similarly, although there may have been an adequate HCV supply for relocating residents who wanted to move into private-market housing, the number of landlords willing to accept vouchers and the location of their rental units were limited (MPC, 1999). Changes in the housing market over time have also likely affected residents' ability to move with vouchers.

Another factor that conditioned residents' housing choices was the fact that different housing choices were subject to different eligibility criteria. The eligibility criteria for the mixed-income developments were the most stringent and included working 30 hours a week and having no unpaid rent or utilities and no recent criminal convictions. Each mixed-income development was also free to create additional site-specific criteria, such as having to pass a drug test. Although exemptions were available for those physically unable to work and those engaged with service providers to become eligible, residents may have been deterred by the vigilance with which private managers were monitoring compliance. By contrast, not only did the other housing options have fewer eligibility criteria, but the assessment and screening processes were, in general, more lenient.<sup>7</sup> Residents taking vouchers and those moving to scattered-site and traditional public housing

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<sup>7</sup> It is worth noting, however, that the CHA instituted a 20-hour-per-week work requirement in 2010 for all traditional public housing development residents, and plans exist to implement a work requirement for voucher holders, as well.

units were subject to criminal background checks by the CHA, which left any additional screening of scattered-site residents and voucher holders to individual property managers.

Yet a third set of factors that conditioned residents' options were the administrative realities and complexity of the relocation process. These factors included the scale of the Transformation, the fast pace of demolition, protracted delays in construction and rehabilitation, lawsuits brought against the CHA by resident advocates, changing policies and procedures, turnover in CHA staff (including the CEO), and the involvement of numerous actors with overlapping roles.<sup>8</sup> Depending on where residents were in the relocation process, they may have been working with relocation counselors on staff with the CHA; social service providers contracted to provide outreach, assessment, and preoccupancy services; private property managers who screened and selected residents for the new mixed-income developments and scattered-site and voucher housing; and CHA property management staff at the rehabbed traditional developments. The complexity of this process created a great deal of uncertainty and made getting up-to-date, accurate information particularly challenging. As a result, many residents who were already skeptical of commitments made by the CHA after decades of mismanagement were forced to make high-stakes decisions about where to live based on incomplete information and under time pressure (Joseph and Chaskin, in press).

One implication of these conditioning factors is that the relocation decisions residents made were not likely to be a pure reflection of their preferences. Although some residents had multiple options, were well informed about those options, and made a choice based mainly on their preferences, that was not often the case.

## **Data and Methods**

This article uses data from three sources. First, the CHA provided data files containing information about all leaseholders who had a right to return because they were living in CHA developments when the Transformation was launched in October 1999. In addition to providing CHA residential histories, these data included information about the demographic characteristics of all individual child and adult household members (for example, birthdate, gender, relationship to household head) as of November 2008, and about the current address and subsidized housing type of each household.

Second, we linked the individual-level CHA household member records through probabilistic matching to the integrated database (IDB) at Chapin Hall at the University of Chicago. The IDB contains administrative records from a variety of state and local agencies in Illinois, including the Illinois Department of Children and Family Services, the Illinois Department of Human Services, the Illinois Department of Employment Security (IDES), and the Cook County Juvenile Court. These data were used to measure labor force participation, Temporary Assistance for Needy Families (TANF) and food stamp receipt, child welfare services involvement (that is, child abuse or neglect investigation, foster care placement), and juvenile justice system involvement.

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<sup>8</sup> For more information about the resident relocation process in Chicago, see Joseph (2010); Levy and Gallagher (2006); Polikoff et al. (2009); Popkin (2010); and Williams, Fischer, and Russ (2003).

Third, we obtained additional household composition data from the U.S. Department of Housing and Urban Development's (HUD's) Multifamily Tenant Characteristics System (MTCS). HUD matched the 9,980 November 2008 CHA leaseholder records to 1999 CHA leaseholder records in the MTCS. HUD found matches for 8,484 (or 85 percent) of the 2008 leaseholder records. HUD then created and provided for analysis an extract containing individual-level records for all child and adult household members living with the leaseholder in 1999.

Our primary analysis focuses on those CHA residents who were living in one of four types of subsidized housing in November 2008: new mixed-income developments, private-market housing subsidized with an HCV, scattered-site public housing units, or traditional public housing developments. We used several analytical methods to compare households living in each of these subsidized housing types. First, we plotted their current addresses on a map of Chicago to show household dispersal patterns for different housing types, and examined some characteristics of the areas to which they relocated using the most recent 5-year estimates from the American Community Survey. Second, we compared their demographic characteristics (for example, household composition) and years in CHA housing. Third, we ran bivariate analyses to compare how they were faring on various indicators of well-being, including labor force attachment, TANF and food stamp receipt, and child welfare and juvenile court involvement, in both 1999 and 2008. Fourth, we ran multivariate models to test whether household composition (for example, older children) can explain any differences in the 2008 indicators by housing type.<sup>9</sup>

Finally, we reran those multivariate models, limiting the analysis to residents of mixed-income developments and controlling for the number of months since they had relocated. The rationale for this analysis was twofold. First, by the end of 2008, only 36 percent of CHA units in mixed-income developments and 52 percent of units in traditional public housing developments were complete, meaning that some proportion of the residents in voucher, scattered-site, and traditional public housing were only living in these environments temporarily while awaiting their right to return to new or rehabilitated units. Given limitations in data availability, residents of the mixed-income developments were the only residents for whom we could be certain had been permanently relocated to new units. Second, as noted above, what happens to those residents is of great interest to policymakers because of the large investment made in the mixed-income developments.

## **Findings**

The following sections describe the location, household composition, and well-being of families in CHA housing at the start of the Transformation and nearly 10 years later. Our primary analysis excludes approximately 6,600 households that were no longer living in CHA-subsidized housing at the end of 2008. Household composition data are not available for this group and we know little

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<sup>9</sup> Because state and local agencies use administrative data for accountability and monitoring purposes, the agencies routinely collect only information relevant to those functions. This fact limits the range of individual and family characteristics that researchers can measure and control for in their analyses. As a result, the multivariate models that we estimated contained only a few of the many individual and family-level factors that could potentially affect labor market outcomes, program participation, and systems involvement.

about why they left or where they were living at the time. Since 2008, CHA has gathered more information on this population, which we explore separately in the sections that follow.

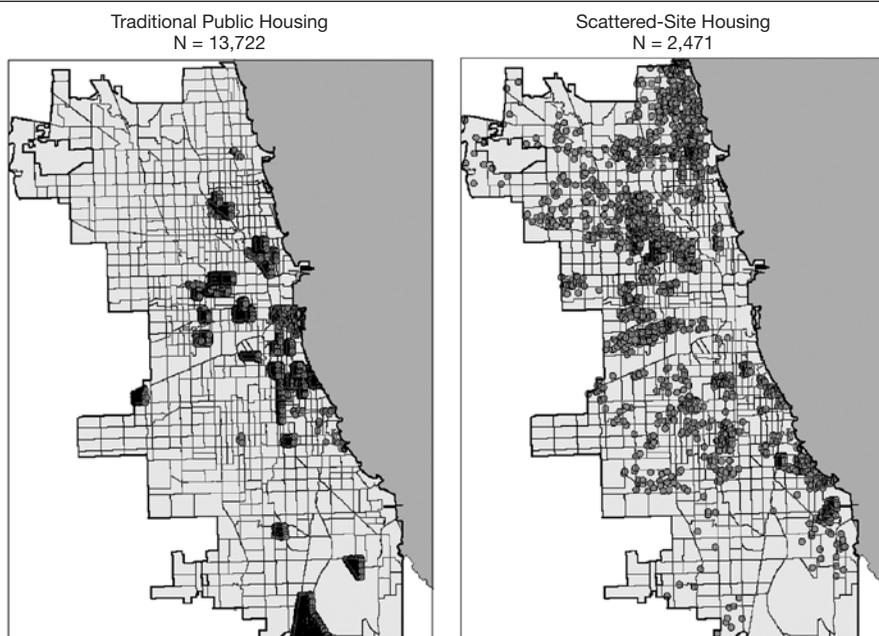
## Residential Location in 2008

By the end of 2008, 9,980 nonsenior households were living in one of the four CHA-subsidized housing types: 13 percent (1,278) were living in one of the new mixed-income developments; 40 percent (3,978) were using a voucher in the private market; 16 percent (1,571) were in scattered-site public housing; and 32 percent (3,153) were living in one of the remaining traditional public housing developments.

Exhibits 1 and 2 provide a visual depiction of the dispersal of households across the city of Chicago since the Transformation launched in 1999. Although families have dispersed throughout the city, a clear predominance of moves to the traditionally African-American neighborhoods on the city's south and west sides is evident; other areas, including the northwest, near north, and far southeast, did not receive many relocatees. Looking separately at the dispersion by housing type, it appears that voucher holders are primarily on the south side, and to some extent on the west side, of the city.<sup>10</sup> As a result of the Gautreaux ruling, scattered-site units have been located intentionally

### Exhibit 1

#### Geographic Dispersal Across Chicago in 1999 by Subsidized Housing Type\*



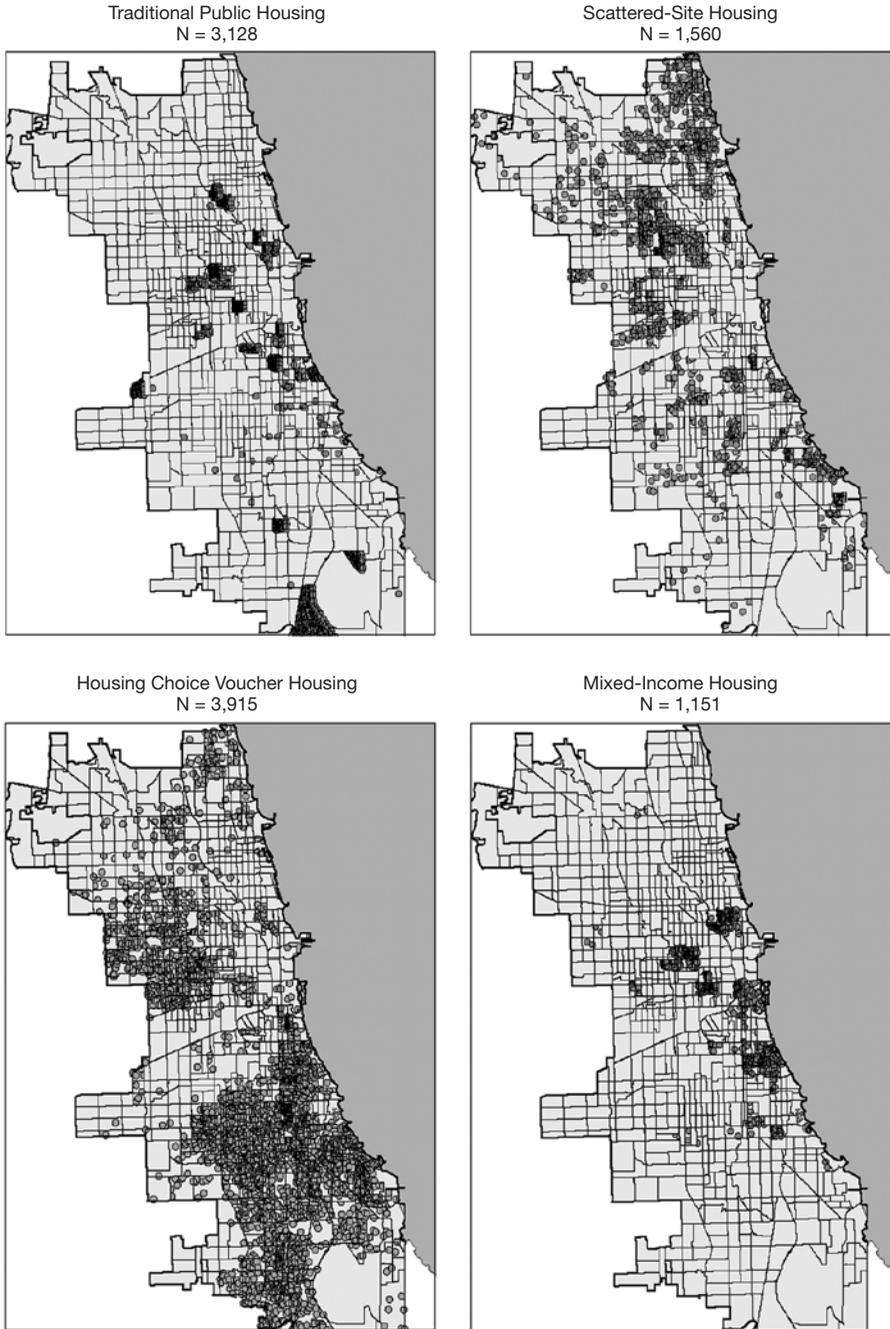
\* One dot = one household.

Source: Chicago Housing Authority

<sup>10</sup> Only 43 of the nearly 4,000 households using vouchers in 2008 were living outside the city limits. Of these households, 12 were living out of state and the rest were located primarily in the counties surrounding the Chicago metropolitan area.

**Exhibit 2**

**Geographic Dispersal Across Chicago in 2008 by Subsidized Housing Type\***



\* One dot = one household.

Source: Chicago Housing Authority

in opportunity areas, including many throughout the more affluent north side. Smaller numbers of residents are now living in the mixed-income developments that have replaced the large highrise buildings that housed most CHA residents in 1999, many surrounding the downtown business district, while a substantial number of residents remain in traditional public housing developments located throughout the city.

Exhibit 3 indicates that high rates of racial segregation and poverty characterized many of the neighborhoods in which these households were living in 2008, although some differences by subsidized housing type existed. The average proportion of African Americans in scattered-site housing census tracts was only 37 percent, compared with 71 percent for mixed-income household tracts and 79 percent for traditional public housing development tracts. With an average tract population that was 85 percent African American, HCV holders were actually now more racially segregated than those in traditional public housing developments. Voucher holders and residents of mixed-income developments had moved to census tracts with considerably lower poverty rates, both 29 percent on average, than traditional public housing development tracts, which averaged 40 percent, although not as low as scattered-site tracts, which averaged 24 percent. Tracts with traditional public housing developments and voucher holders also had higher unemployment rates, 23 and 19 percent, respectively, and lower average household incomes, \$25,528 and \$31,407 annually, respectively, compared with tracts with mixed-income and scattered-site housing.

### Exhibit 3

**Geographic Dispersal Across Chicago in 2008: Census Tract Characteristics by 2008 Subsidized Housing Type**

	<b>Total (N = 9,754+)</b>	<b>Mixed-Income Housing (N = 1,151)</b>	<b>HCV Housing (N = 3,915)</b>	<b>Scattered-Site Housing (N = 1,560)</b>	<b>Traditional Public Housing (N = 3,128)</b>
Percent African American	73.65	71.02	84.93	37.23	78.73
Percent households with children in poverty	31.81	29.16	29.11	23.68	40.44
Percent labor force unemployed	18.85	17.14	19.42	11.87	22.33
Median annual household income	\$32,332	\$42,297	\$31,407	\$40,740	\$25,528

*HCV = housing choice voucher.*

*Note: Because of incomplete address information, we were not able to link all 9,980 households to their appropriate census tracts. Sources: American Community Survey 2005–2009 5-year estimates; Chicago Housing Authority*

### Household Composition

Exhibit 4 shows that the families who remained in subsidized housing in November 2008 were predominantly female-headed households. The average family size was three people and the household head was, on average, 48 years old in 2008. More than 56 percent of the households had children at that time. Very few of these families had very young children (under 5 years old), whereas almost two-thirds had at least one child between the ages of 11 and 17. On average, these families had lived in CHA housing for nearly 7 years when the Transformation began.

**Exhibit 4****2008 Household Characteristics by 2008 Subsidized Housing Type, Chicago**

	<b>Total</b> <b>(N = 9,980)</b>	<b>Mixed-Income Housing</b> <b>(N = 1,278)</b>	<b>HCV Housing</b> <b>(N = 3,978)</b>	<b>Scattered-Site Housing</b> <b>(N = 1,571)</b>	<b>Traditional Public Housing (PH)</b> <b>(N = 3,153)</b>
Household head is female	88.9	89.3	93.9	87.4	83.3
Age of household head					
Less than 40 years old	32.6	29.7	46.9	20.1	22.1
40–59 years old	49.2	49.6	43.9	57.7	51.7
60 years old or older	18.1	20.7	9.2	22.3	26.3
Mean age of household head in years <sup>a</sup>	48.1	49.6	43.8	50.6	51.8
Number of household members					
One	24.8	26.0	15.2	22.9	37.4
Two or three	40.4	50.2	36.4	49.0	37.4
Four or more	34.8	23.9	48.5	28.2	25.3
Mean number of household members <sup>b</sup>	3.0	2.7	3.6	2.8	2.6
Number of children					
Zero	43.5	47.7	31.8	47.9	54.2
One or two	37.1	40.2	40.6	38.3	31.0
Three or more	19.4	12.1	27.6	13.8	14.8
Mean number of children <sup>c</sup>	1.3	1.0	1.7	1.1	1.0
Any child 0 to 4 years old <sup>d</sup>	8.8	8.0	4.7	13.4	12.0
Any child 5 to 10 years old <sup>e</sup>	25.1	19.6	32.2	21.3	20.2
Any child 11 to 14 years old <sup>f</sup>	31.7	28.7	43.7	21.9	22.6
Any child 15 to 17 years old <sup>g</sup>	30.6	26.2	40.1	26.4	22.6
Mean number of years in CHA housing before the Plan for Transformation <sup>h</sup>	6.9	7.3	6.2	7.3	7.4

CHA = Chicago Housing Authority. HCV = housing choice voucher.

Note: Significant differences when adjusted for multiple comparisons using Bonferroni correction (see notes a through h).

<sup>a</sup> HCV significantly different from traditional PH, scattered site, and mixed income; traditional PH significantly different from scattered site and mixed income.

<sup>b</sup> HCV significantly different from scattered site, mixed income, and traditional PH; scattered site significantly different from mixed income and traditional PH.

<sup>c</sup> HCV significantly different from scattered site, mixed income, and traditional PH.

<sup>d</sup> Scattered site significantly different from mixed income and HCV; traditional PH significant different from mixed income and HCV; mixed income significantly different from HCV.

<sup>e</sup> HCV significantly different from scattered site, traditional PH, and mixed income.

<sup>f</sup> HCV significantly different from mixed income, traditional PH, and scattered site; mixed income significantly different from traditional PH and scattered site.

<sup>g</sup> HCV significantly different from scattered site, mixed income, and traditional PH.

<sup>h</sup> HCV significantly different from traditional PH, mixed income, and scattered site.

Where significant differences by subsidized housing type are apparent, they are generally between those who were living with HCVs in 2008 and those who were living in one or more of the other three subsidized housing groups. On average, HCV households were the largest, their household heads were the youngest, and they had lived in public housing for the shortest period of time before the Transformation. These households were also the least likely to include very young children in 2008.

Very few statistically significant differences in household composition emerged between households in mixed-income developments and those in traditional public housing developments in 2008. This finding is surprising given that the mixed-income developments tend to be smaller and possibly less child-friendly (because of the thinness of the walls and the stringent monitoring of noise and behavior) than the traditional public housing developments.

Exhibit 5 shows the household composition of these families at the start of the Transformation in 1999. As in 2008, the households that would use vouchers included more children and had younger household heads when compared with the other groups. In addition, nearly all of the future HCV households (more than 99 percent) included at least one child under the age of 11 in 1999.

## Exhibit 5

### 1999 Household Characteristics by 2008 Subsidized Housing Type, Chicago

	Total (N = 8,484)	Mixed-Income Housing (N = 1,117)	HCV Housing (N = 3,468)	Scattered-Site Housing (N = 1,280)	Traditional Public Housing (PH) (N = 2,619)
Household head is female	89.8	89.5	98.4	88.7	85.6
Age of household head					
Less than 40 years old	56.9	51.5	71.9	46.9	44.5
40–59 years old	22.8	25.0	17.9	43.0	41.2
60 years old or older	20.3	23.4	10.3	10.1	14.3
Mean age of household head in years <sup>a</sup>	39.6	41.0	34.9	42.6	43.6
Number of household members					
One	18.3	22.1	14.0	9.2	26.9
Two or three	42.8	49.7	39.3	46.6	42.7
Four or more	38.9	28.2	46.7	44.2	30.4
Mean number of household members <sup>b</sup>	3.2	2.8	3.5	3.4	2.8
Number of children					
Zero	27.8	32.7	19.1	22.2	40.0
One or two	40.5	46.4	39.2	45.9	37.2
Three or more	31.7	21.0	41.7	31.9	22.9
Mean number of children <sup>c</sup>	1.8	1.5	2.3	1.9	1.4
Any child 0 to 4 years old <sup>d</sup>	31.9	27.7	42.7	24.9	23.0
Any child 5 to 10 years old <sup>e</sup>	46.1	38.4	56.8	45.9	35.2
Any child 11 to 14 years old <sup>f</sup>	27.9	24.4	27.9	37.3	25.0
Any child 15 to 17 years old <sup>g</sup>	19.4	17.8	17.4	29.1	17.5

HCV = housing choice voucher.

Note: Significant results when adjusted for multiple comparisons using Bonferroni correction (see notes a through g).

<sup>a</sup> HCV significantly different from traditional PH, scattered site, and mixed income; mixed income significantly different from traditional PH and scattered site.

<sup>b</sup> HCV significantly different from mixed income and traditional PH; scattered site significantly different from mixed-income and traditional PH.

<sup>c</sup> HCV significantly different from scattered site, mixed income, and traditional PH; scattered site significantly different from mixed income and traditional PH.

<sup>d</sup> HCV significantly different from mixed income, scattered site, and traditional PH.

<sup>e</sup> HCV significantly different from scattered site, mixed income, and traditional PH; scattered site significantly different from mixed income and traditional PH.

<sup>f</sup> Scattered site significantly different from HCV, traditional PH, and mixed income.

<sup>g</sup> Scattered site significantly different from mixed income, traditional PH, and HCV.

After analyzing household composition data from 1999 and 2008, it appears that household size, age of children, and number of years in public housing may have influenced the relocation outcomes of HCV households. Perhaps larger families or families with relatively younger children at the time were able to find more adequately sized units in the private market, or perhaps they wanted to avoid the stricter rules and monitoring associated with some of the other housing options. Families with older children, on the other hand, may have had difficulty finding a private property owner willing to rent to them. In addition, given that households that took vouchers had lived, on average, for fewer years in public housing, they may have been more open to moving into the private market and less attracted to a development setting.

## **Employment and Earnings**

We looked at three measures of labor force attachment in both 1999 and 2008. First, we counted a household as employed in a given year if at least one household member reported wages in any quarter of that year. Second, we calculated total household earnings from employment by summing all the wages that household members reported across the four quarters.<sup>11</sup> Third, number of quarters worked was simply the total number of quarters in which any household member reported wages.<sup>12</sup>

Exhibit 6 shows that, although employment rates and earnings were exceedingly low for all households in 1999, considerable variation existed among families who would ultimately end up in different subsidized housing types. Almost 45 percent of households that would have an HCV in 2008 had some earnings from employment in 1999 compared with only 23 percent of households that would be in traditional public housing developments, 24 percent of households that would be in scattered-site units, and 33 percent of households that would move into mixed-income developments.

Future HCV and mixed-income households had higher earnings in 1999 compared with those households that would be living in scattered-site and traditional public housing, when averaged across all households. Among just those households with any earnings in 1999, however, the future HCV households earned significantly less than households that would be in all other subsidized housing types in 2008. Workers who would be in HCV households earned an average of \$8,906 in 1999, whereas workers who would be in other subsidized housing types earned between \$10,894 and \$12,395. Workers who would be in HCV households also had earnings in significantly fewer quarters than workers who would be in scattered-site housing or mixed-income developments. This finding suggests that although residents of households that would have vouchers in 2008 were more likely to work at all in 1999, these earners worked with less regularity and for lower total earnings.

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<sup>11</sup> Approximately 170 records showed quarterly wages greater than \$25,000, including 15 records with quarterly wages in excess of \$50,000. When we consulted with the CHA about these outliers, the CHA told us that income limits exist to qualify for public housing, but that no income limit exists for current residents. The CHA also confirmed that a handful of households had current annual incomes of approximately \$100,000. Because removing outliers would have required us to select some arbitrary value, we opted to retain all of the records in our analysis.

<sup>12</sup> Employment and earnings records from the IDES are limited to those businesses that register for unemployment insurance. To the extent that residents are working for small firms not registered with IDES or in the informal economy, we could be underestimating employment and earnings.

## Exhibit 6

### Household Employment and Earnings in 1999 and 2008 by 2008 Subsidized Housing Type, Chicago

	Total	Mixed-Income Housing	HCV Housing	Scattered-Site Housing	Traditional Public Housing (PH)
Percent of households with any earnings					
	N = 9,980	N = 1,278	N = 3,978	N = 1,571	N = 3,153
1999 <sup>a</sup>	33.3	33.4	44.6	24.8	23.3
2008 <sup>b</sup>	47.5	44.6	45.0	58.9	46.1
Mean earnings (all households)					
1999 <sup>c</sup>	\$3,381	\$3,982	\$3,964	\$3,077	\$2,542
2008 <sup>d</sup>	\$9,286	\$8,746	\$8,489	\$12,543	\$8,889
Mean earnings (earners only)					
1999 <sup>e</sup>	N = 3,327 \$10,141	N = 427 \$11,914	N = 1,774 \$8,906	N = 390 \$12,395	N = 736 \$10,894
2008 <sup>f</sup>	N = 4,739 \$19,559	N = 570 \$19,624	N = 1,790 \$18,903	N = 925 \$21,303	N = 1,454 \$19,231
Mean quarters with earnings (earners only)					
1999 <sup>g</sup>	3.0	3.1	2.9	3.2	3.0
2008 <sup>h</sup>	3.4	3.5	3.4	3.5	3.3

HCV = housing choice voucher.

Note: Significant results when adjusted for multiple comparisons using Bonferroni correction (see notes a through h).

<sup>a</sup> HCV significantly different from mixed income, scattered site, and traditional PH; mixed income significantly different from scattered site and traditional PH.

<sup>b</sup> Scattered site significantly different from traditional PH, HCV, and mixed income.

<sup>c</sup> Mixed income significantly different from scattered site and traditional PH; HCV significantly different from scattered site and traditional PH.

<sup>d</sup> Scattered site significantly different from traditional PH, mixed income, and HCV.

<sup>e</sup> HCV significantly different from scattered site, mixed income, and traditional PH.

<sup>f</sup> HCV significantly different from scattered site.

<sup>g</sup> HCV significantly different from scattered site and mixed income.

<sup>h</sup> Scattered site significantly different from HCV and traditional PH; mixed income significantly different from traditional PH.

By 2008, the employment picture looked very different. Scattered-site households were now significantly more likely to have earnings from employment (59 percent) than households in any other type of subsidized housing (45 to 46 percent). In addition, HCV households were the only households in which the percentage with any earnings had not increased since 1999. It is also noteworthy that, despite the 30-hour work requirement imposed on residents of mixed-income developments, the proportion of mixed-income households with earners was similar to the proportion of households with earners in traditional public housing developments.<sup>13</sup> Scattered-site households earned significantly more than all other housing types in 2008, when earnings are

<sup>13</sup> Read changes in employment and earnings between 1999 and 2008 with caution. Chapin Hall's IDB includes quarterly wage records for the years 1995 through 2006 that the IDES provided to Chapin Hall and linked to the CHA data using probabilistic matching. We used those data to measure employment and earnings among the CHA residents in 1999. By contrast, we measured employment and earnings in 2008 using quarterly wage records that the CHA had obtained directly from the IDES.

averaged across all households. Among working households, however, average earnings and number of quarters worked were not significantly different among households in scattered-site, mixed-income, and traditional public housing, although HCV households had lower earnings and earnings in fewer quarters.

In the following section, we explore whether household characteristics drive these findings by controlling for these characteristics in multivariate models. At this point, however, two storylines begin to emerge from these labor market data. The first is about the relative vulnerability of HCV households. Households that were using vouchers in 2008 stood out from the other households in 1999, with the highest employment rates but with low and irregular earnings among earners. By 2008, their employment rates had stagnated while those of other households had climbed. One interpretation of this finding is that it reflects some kind of selection process. That is, households with poorer prospects for employment are opting for (or ending up in) HCV housing. Alternatively, living in HCV housing may, for some reason, have a negative effect on employment.

The second emerging storyline is about the lack of strong evidence that households that ended up in mixed-income developments were somehow advantaged. Although they were more likely to have earnings from employment in 1999 than households that ended up in traditional public housing or scattered-site developments, those who worked did not earn significantly more or have earnings in significantly more quarters in 1999. Also striking is that, by 2008, a majority of these mixed-income households had no earnings from employment, and those that did have earnings did not earn more or work with more regularity than their counterparts in other subsidized housing types, despite screening policies and lease requirements regarding work in mixed-income developments.

### **TANF and Food Stamp Receipt**

We measured welfare receipt in 1999 and 2008 using four indicators.<sup>14</sup> Limiting our analysis to TANF-eligible households (that is, those containing at least one minor child in the relevant year), we counted households as TANF recipients in a given year if they received a TANF cash grant in at least one month that year.<sup>15</sup> For TANF recipient households, we computed the number of months in which they received a cash grant. Similarly, we counted households as food stamp recipients in a given year if they received food stamp benefits in at least one month that year, and we computed the number of months in which food stamp recipient households received food stamp benefits.

Exhibit 7 shows that, consistent with national trends, TANF receipt dropped drastically among households in all types of subsidized housing. In 1999, 68 percent of CHA households received TANF; in 2008, that percentage dropped to only 17 percent. By contrast, during a period when the United States Department of Agriculture was involved in a national outreach campaign to increase

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<sup>14</sup> Although one could view receiving public assistance benefits as indicating a lack of self-sufficiency, one could also see it as evidence of a household's ability to access needed resources.

<sup>15</sup> Because we did not have complete 1999 household composition data, we had to use 2008 data to determine the presence of minor children in the household in 1999. This method misses any children who moved out of the household before 2008 and might incorrectly count children present in 2008 who moved into the household after 1999.

## Exhibit 7

### TANF and Food Stamp Receipt in 1999 and 2008 by 2008 Subsidized Housing Type, Chicago

	Total	Mixed-Income Housing	HCV Housing	Scattered-Site Housing	Traditional Public Housing (PH)
Percent of households receiving TANF*					
1999 <sup>a</sup>	N = 7,621 67.5	N = 913 63.9	N = 3,321 79.8	N = 1,287 55.6	N = 2,100 57.1
2008	N = 5,643 16.7	N = 668 15.7	N = 2,719 16.7	N = 819 17.1	N = 1,437 16.8
Mean months of TANF receipt (if any TANF)					
1999 <sup>b</sup>	10.2	9.6	10.4	9.9	10.2
2008 <sup>c</sup>	8.8	8.9	8.4	9.0	9.4
Mean earnings (earners only)					
1999 <sup>d</sup>	N = 9,980 75.1	N = 1,278 72.2	N = 3,978 85.1	N = 1,571 67.9	N = 3,153 67.3
2008 <sup>e</sup>	74.0	68.8	83.5	65.4	68.3
Mean months of food stamp receipt (if any food stamps)					
1999 <sup>f</sup>	10.1	9.7	10.3	10.1	10.0
2008 <sup>g</sup>	10.7	10.5	10.9	10.4	10.6

HCV = housing choice voucher. TANF = Temporary Assistance for Needy Families.

\* Households with at least one child less than 18 years old.

Note: Significant results when adjusted for multiple comparisons using Bonferroni correction (see notes a through g).

<sup>a</sup> HCV significantly different from mixed income, traditional PH, and scattered site; mixed income significantly different from traditional PH and scattered site.

<sup>b</sup> HCV significantly different from scattered site and mixed income; traditional PH significantly different from mixed income.

<sup>c</sup> HCV significantly different from traditional PH.

<sup>d</sup> HCV significantly different from mixed income, scattered site, and traditional PH.

<sup>e</sup> HCV significantly different from mixed income, traditional PH, and scattered site.

<sup>f</sup> Mixed income significantly different from HCV, scattered site, and traditional PH; traditional PH significantly different from HCV.

<sup>g</sup> HCV significantly different from traditional PH, scattered site, and mixed income.

food stamp receipt among eligible households, receipt of food stamps remained stable. In 1999, 75 percent of CHA households received food stamps and, in 2008, 74 percent received food stamps.

Exhibit 7 also shows the variation in TANF and food stamp receipt by subsidized housing type. Of households that were using HCVs in 2008, 80 percent received TANF in 1999 compared with 57 percent of households that would be living in traditional public housing developments, 64 percent of those that would relocate to mixed-income developments, and 56 percent of those that would be in scattered-site units. Somewhat surprisingly, the proportion of households receiving TANF in 1999 was significantly higher among those that would move into mixed-income developments as compared with those that would be living in scattered-site or traditional public housing developments.

By 2008, the rates of TANF receipt were not significantly different among housing types. Again, the lack of difference between households in mixed-income developments and those in other types of subsidized housing is somewhat unexpected. Although statistically significant differences

appeared in months of TANF receipt among housing types in both 1999 and 2008, the magnitude of those differences is relatively small.

Food stamp receipt was also significantly higher in both years among households that would be using vouchers than among those that would be in other subsidized housing types in 2008. Of the future HCV households, 85 percent received food stamps in 1999 compared with only 67 percent of the households that would be in traditional public housing developments, 68 percent of the households that would be in scattered-site housing, and 72 percent of the households that would move into mixed-income developments. These differences were still evident in 2008, and the non-HCV households were not statistically distinguishable from one another in terms of food stamp receipt. As with months of TANF receipt, the statistically significant differences in months of food stamp receipt among housing types were relatively small.

To summarize, this analysis of benefit receipt is consistent with the picture that emerged from our analysis of labor market participation. Households that were using HCVs in 2008 were relatively more likely to have received food stamps and TANF benefits than other households, both at the outset of the Transformation and nearly 10 years later. In addition—and again contrary to what we might have expected—households in mixed-income developments did not have significantly lower rates of TANF or food stamp receipt in 2008 than households in other subsidized housing types, with the exception of HCV households.

## **Child Welfare and Juvenile Justice System Involvement**

Exhibit 8 shows the percentage of CHA households that had any involvement with the child welfare system (that is, child maltreatment investigation or foster care placement) or juvenile justice system in 1999 or 2008. Because families would only be involved in those systems if they had at least one minor, we limited our analysis of child welfare system involvement to households with at least one child under age 18 and our analysis of juvenile justice system involvement to families with a child between the ages of 11 and 17 in the relevant year.

Of these households, 4 percent had any involvement with the child welfare system in 1999. Even fewer had any juvenile justice system involvement that year. Although both percentages remained relatively low in 2008, there had been little change in child welfare system involvement and an increase in involvement with the juvenile justice system.<sup>16</sup> This increase likely reflects the fact that many of the children in these households had entered adolescence and hence were of the age when delinquency is more likely to occur.

Households that would have vouchers in 2008 were more likely to be involved with the child welfare system in 1999 than households that would be in traditional public housing or mixed-income developments. No statistically significant differences in child welfare system involvement were apparent across subsidized housing types in 2008. Similarly, households that would have vouchers

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<sup>16</sup> To put the CHA figures in context, the FY 2006 Cook County child abuse and neglect report rate was 23.6 per 1,000 children, and the indicated report rate (cases in which evidence of abuse or neglect was found) was 5.3 per 1,000 children (Illinois Department of Children and Family Services, 2006). In 2000, the Cook County delinquency petition rate for youth ages 10 to 16 was 2,041 per 100,000 (Illinois Criminal Justice Information Authority, 2003).

## Exhibit 8

### Child Welfare and Juvenile Justice System Involvement in 1999 and 2008 by 2008 Subsidized Housing Type, Chicago

	Total	Mixed-Income Housing	HCV Housing	Scattered-Site Housing	Traditional Public Housing (PH)
Percent of households with any child welfare system involvement*					
1999 <sup>a</sup>	N = 7,627 4.4	N = 913 2.9	N = 3,321 5.7	N = 1,287 3.7	N = 2,106 3.5
2008	N = 5,649 4.9	N = 668 3.1	N = 2,719 5.6	N = 819 5.6	N = 1,443 4.0
Percent of households with any juvenile justice system involvement*					
1999 <sup>b</sup>	N = 4,713 2.5	N = 545 2.2	N = 1,750 4.6	N = 974 0.6	N = 1,444 1.3
2008	N = 4,672 7.0	N = 566 5.5	N = 2,390 8.5	N = 616 4.9	N = 1,100 6.0

HCV = housing choice voucher.

\* Households with at least one child less than 18 years old; includes being investigated for child abuse or neglect or having a child in foster care.

<sup>a</sup> Households with at least one child between 11 and 17 years old.

Note: Significant results when adjusted for multiple comparisons using Bonferroni correction (see notes a and b).

<sup>a</sup> HCV significantly different from traditional PH and mixed income.

<sup>b</sup> HCV significantly different from traditional PH and scattered site.

in 2008 were also more likely to be involved with the juvenile justice system in 1999 than households that would be in traditional public housing or scattered-site developments, but no differences were evident in 2008.

These results suggest that households in different subsidized housing types have fairly similar levels of child welfare and juvenile justice involvement, with the exception of the HCV households, which were more likely to be involved with the child welfare and juvenile justice systems in 1999. Once again, households that would move to mixed-income developments were statistically indistinguishable from others.

## The Relevance of Family Composition and Residential History

An important question to consider is whether any of the differences that we observe among families in different subsidized housing types may be present simply because of differences in household composition, rather than other factors. To explore this possibility, we estimated a series of multivariate models predicting the various indicators examined in 2008. Specifically, the dependent variables were: any earnings in 2008; total earnings in 2008; any TANF receipt in 2008; any food stamp receipt in 2008; any child welfare services involvement in 2008; and any juvenile justice

system involvement in 2008.<sup>17</sup> Each model included three dummy variables to control for the four types of subsidized housing. Because HCV households emerged from our bivariate analyses as the most consistently different group, we chose this group to be the excluded category and thus the group to which the others are compared. The covariates in our models controlled for household characteristics in 2008, including the number of children in the household, the number of adults in the household, the presence of very young children, the age of the household head, whether the household was female-headed, and the number of years the family had lived in CHA housing before the Transformation began. Because our primary concern is whether the differences we observed among families in different types of subsidized housing might be explained by differences in household composition, we focus on the parameter estimates for the three dummy variables.

Exhibit 9 shows that, controlling for family composition and length of time in CHA housing, HCV households were less likely to have earnings from employment and earned significantly less in 2008 than households in other types of subsidized housing. HCV households were more likely to

**Exhibit 9**

**Results From Multivariate Models Predicting Well-Being Indicators in 2008, HCV Households as Excluded Category,<sup>a</sup> Chicago**

	<b>Employment (N = 9,971)</b>	<b>Earnings (N = 9,971)</b>	<b>TANF Receipt (N = 5,630)</b>	<b>Food Stamp Receipt (N = 9,971)</b>	<b>Child Welfare Involvement (N = 5,636)</b>	<b>Juvenile Justice Involvement (N = 4,669)</b>
Mixed-income housing	1.494*	6,594.215*	0.916	0.617*	0.691	0.856
Scattered-site housing	2.707*	13,859.030*	0.910	0.489*	1.217	0.740
Traditional public housing	1.797*	8,214.926*	0.863	0.652*	0.754	0.812
Age of household head	0.959*	- 546.077*	1.023*	0.986*	1.001	0.993
Household head is female	1.330*	2,008.829*	1.776*	1.215*	1.234	2.471*
Number of household children	0.955*	- 708.664*	1.090*	1.517*	1.487*	1.325*
Any child 0 to 4 years old	1.508*	1,766.696	1.669*	1.737*	0.936	0.715
Number of household adults	1.935*	9,508.845*	1.200*	1.399*	0.902	1.260*
Mean number of years in CHA housing before the Plan for Transformation	1.057*	495.812*	1.043	0.996	1.041	1.160*

CHA = Chicago Housing Authority. HCV = housing choice voucher. TANF = Temporary Assistance for Needy Families.

\*  $p < 0.05$ .

<sup>a</sup> Estimated odds ratios from logistic regression models are reported for employment, TANF receipt, food stamp receipt, child welfare system involvement, and juvenile justice system involvement; estimates from the Tobit regression model are reported for earnings.

<sup>17</sup> We used logistic regression models to determine estimates for employment, TANF and food stamp receipt, and child welfare and juvenile justice system involvement. Because of the large number of households with zero earnings, we used Tobit models to estimate earnings for exhibits 9 and 10. Results from Tobit models cannot be interpreted in the same way as regression coefficients, so we focus only on the significance and direction of these results in discussing our findings.

have received food stamps in 2008 than each of the other household types, but, after controlling for all of the covariates in our model, no statistically significant differences existed in TANF receipt or child welfare and juvenile justice system involvement. These findings are largely consonant with those suggested by our previous analyses.

Thus, even after controlling for differences in household composition, it appears that (based on the well-being indicators we were able to measure) households using vouchers in 2008 faced greater challenges than those who ended up in other types of subsidized housing. In 2008, these HCV households were less likely to be employed, earned less on average, and were more likely to receive public assistance in the form of food stamps.

### **The Relevance of Time Spent in Mixed-Income Development After Relocation**

One of the storylines emerging thus far from our analysis is that, despite the Transformation's significant investment of resources in mixed-income development and the strict screening guidelines and ongoing monitoring of CHA residents now living in them, these households do not appear to be faring significantly better than CHA residents who end up in other subsidized housing, at least along the lines that these administrative data analyses enable us to explore. This parity among housing types is true even on measures of labor force attachment, which is an element of the screening criteria.

These findings are likely to disappoint mixed-income development proponents, given that mixed-income developments are intended to promote benefits such as enhanced social capital, greater access to information and opportunity (including for employment), and the encouragement of particular kinds of mainstream behavior (such as working, going to school, and obeying the law) through the influence of higher levels of social control and the presence of middle-class role models.<sup>18</sup> One possible explanation for our findings running counter to expectations is that any positive effects on these indicators will take time to emerge. Residents must settle into the new environments, be exposed to their higher income neighbors, and have access to the opportunities and resources those neighbors—and the new investments in the broader neighborhood environment—provide. Without controlling for length of time in the development, our results might obscure these effects. To test this possibility, we examined the association between our indicators of well-being and length of residence in a mixed-income development by estimating a set of regression models similar to the ones described above but limited to households that had relocated to mixed-income developments as of January 1, 2008.

Exhibit 10 shows no significant association between length of residence in a mixed-income development and TANF receipt, food stamp receipt, or juvenile justice involvement. Length of time in a mixed-income development was actually negatively related to employment and earnings. This finding needs to be read with caution, however, particularly given the broader context of the major national recession, beginning in 2007, in which these data were collected. With this caveat in mind, at this stage of the Transformation, our analyses do not support the claim that residence

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<sup>18</sup> These assumptions are, of course, not without problems. See, for example, Joseph, Chaskin, and Webber (2007) for a more detailed review.

**Exhibit 10**

**Results From Multivariate Models Predicting Well-Being Indicators in 2008 for Mixed-Income Households,<sup>a</sup> Chicago**

	<b>Employment (N = 925)</b>	<b>Earnings (N = 925)</b>	<b>TANF Receipt (N = 481)</b>	<b>Food Stamp Receipt (N = 925)</b>	<b>Juvenile Justice Involvement (N = 397)</b>
Months in mixed-income development	0.991*	- 88.875*	0.994	0.999	0.988
Age of household head	0.947*	- 680.016*	1.036*	1.003	0.996
Household head is female	1.244	4,968.169	1.186	1.181	0.612
Number of household children	0.905	- 1,119.710	0.951	1.372*	1.339
Any child 0 to 4 years old	1.218	- 1,479.370	2.084*	1.751	0.285
Number of household adults	1.775*	9,970.203*	0.847	1.437*	1.221
Mean number of years in CHA before the Plan for Transformation	1.042	- 131.215	1.001	0.896*	1.123

CHA = Chicago Housing Authority. TANF = Temporary Assistance for Needy Families.

\*  $p < 0.05$

<sup>a</sup> Estimated odds ratios from logistic regression models are reported for employment, TANF receipt, food stamp receipt, and juvenile justice system involvement; estimates from Tobit regression model are reported for earnings.

in a mixed-income development benefits relocated households on the indicators that we have been able to measure here. We reached this conclusion, notwithstanding current research on mixed-income developments that suggests some benefits, such as safer and healthier environments, less stress related to concerns about safety, greater satisfaction with homes and built environment, and (for some) changes in aspirations (for example, Joseph and Chaskin, 2010; Kearns and Mason, 2007; Tach, 2009).

**Households Missing in 2008**

Our analysis has focused on the relocated households that remained in CHA-subsidized housing in November 2008. A significant number of households that had a right to return (6,623 households, or 40 percent), however, were unaccounted for at this time. Recent information that CHA provided sheds some light on what has happened to these missing households: 1,050 are deceased, 1,231 have been evicted from CHA housing, 581 have chosen to leave on their own after moving to a new or rehabilitated unit, 14 have moved into senior housing, and 712 indicated that they were living in unsubsidized private market housing while awaiting their right to return to CHA housing.<sup>19</sup> The remaining 3,035 households were still unaccounted for as of July 2010 and had not responded to contact attempts or public notices from CHA indicating that they could lose their right to return.<sup>20</sup>

Two groups of particular interest are those that were evicted from CHA housing and those that chose to leave voluntarily after having their right to return satisfied by placement in a new or

<sup>19</sup> As of July 2010, 273 of the households living unsubsidized in the private market awaiting their right to return in 2008 had returned to some type of CHA-subsidized housing.

<sup>20</sup> Nationally, the average length of stay in public housing is 4.7 years (Turner and Kingsley, 2008), making some turnover unremarkable. Given the emphasis on residents' legal right to return and expectations for high demand, particularly for the mixed-income units, however, the large number of residents who have not returned is surprising.

rehabilitated unit. One might expect that evicted households are among the most disadvantaged of the relocated families, whereas those who exited voluntarily could have experienced gains that led them to move up and out of subsidized housing.

Analysis of available data shows that, in some important ways, the evicted households look similar to the HCV households—the group that appeared most vulnerable of those who remained in subsidized housing. As with the HCV households, evicted households were significantly larger than those who ended up in mixed-income, scattered-site, and traditional public housing developments.<sup>21</sup> They had also spent fewer years in public housing at the time the Transformation began. In 1999, only about one-fourth of these households were employed. Much like the households that would be using vouchers in 2008, those who did work earned less and had earnings in fewer quarters in 1999 than households that would be in mixed-income, scattered-site, or traditional public housing developments. Their rates of child welfare and juvenile justice system involvement were also significantly higher than all other groups, including the HCV households, at the start of the Transformation. By 2008, very few of the evicted households appeared to be employed (fewer than 8 percent), and they were employed in the fewest number of quarters. They were no more likely to receive TANF or food stamps, however, than any group that remained in subsidized housing.<sup>22</sup>

Households that exited CHA housing voluntarily after permanent placement were also larger and had spent fewer years in public housing as of 1999 than households that were in mixed-income, scattered-site, and traditional public housing developments in 2008. At the start of the Transformation, approximately 35 percent of these households were employed, and they earned more than the households that would be using vouchers. They were no more likely to receive TANF or food stamps or to be involved in the child welfare or juvenile justice systems than the other subsidized housing groups in 1999. By 2008, these households were earning significantly more (by more than \$10,000 annually) than all other groups and were working in more quarters than employed HCV and traditional public housing households. Their TANF and food stamp receipt rates declined between 1999 and 2008 to much lower relative rates, and they remained no more likely than other households to be involved in the child welfare or juvenile justice systems.

It appears, then, that households evicted from CHA housing during the course of the Transformation did show some signs of greater vulnerability in 1999, including low rates of (and unstable) employment, low earnings, and a greater likelihood to be involved in the child welfare and juvenile justice systems. By 2008, after these families had lost their housing subsidies, they were even more likely to be unemployed, yet were also less likely to be receiving TANF and food stamp benefits, suggesting that these households may be having great difficulty accessing needed support.

On the other hand, households that exited CHA housing voluntarily looked relatively similar at the start of the Transformation to their counterparts who remained in subsidized housing. Nearly a decade later, these households had experienced large gains in earnings, which may have facilitated their exit from public housing.

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<sup>21</sup> Demographic data reflect household composition at the time the household left CHA-subsidized housing.

<sup>22</sup> The administrative databases we used were limited to the state of Illinois. To the extent that households that were evicted or voluntarily exited left the state, we could be underestimating employment, earnings, benefit receipt, and services involvement.

## Discussion

The Plan for Transformation was launched in Chicago in October 1999 with the stated goal of de-concentrating poverty in public housing. After 10 years into what has become a 15-year initiative, the Transformation has accomplished much. The highrise towers, so emblematic of public housing failure in Chicago, are gone. Developers have constructed, or are in the process of constructing, 10 major new mixed-income developments that are home to thousands of residents with dramatically different social and economic backgrounds. Thousands of residents have relocated into these new mixed-income developments and into rehabilitated traditional and scattered-site public housing units and private market units subsidized with vouchers.

Our analyses, although limited by the administrative data currently available, reveal much about the residents who have relocated, the types of subsidized housing into which they have moved, and their current well-being in a number of domains. Some of these findings have important implications for relocation practice and policy.

Our geographic analysis, which we intended simply to provide a visual representation of the dispersal that has occurred as a result of relocation, raises questions about the extent to which residents have been able to relocate to less racially segregated communities of opportunity. Although some residents used HCVs to relocate to more affluent and integrated neighborhoods, the overall pattern appears to be one of relocation within high-poverty and predominantly African-American neighborhoods, consistent with the patterns found in studies of relocation efforts in other U.S. cities. This finding deserves more attention using more sophisticated spatial analysis methods.

Regarding the question of whether patterns of relocation indicate systematic creaming of more high-functioning households into mixed-income developments and relegating households with multiple barriers into traditional public housing or voucher-subsidized housing in the private market, our findings are quite revealing. Contrary to our expectations, the households that were using HCVs in the private market 10 years into the Transformation were, if anything, faring worse in 1999 than those that ended up in other types of subsidized housing, at least according to the indicators that we used. Even more unexpectedly, the households that relocated to mixed-income developments were not significantly better off in 1999 than the households living in traditional public housing in 2008. Although households that would move to mixed-income developments were more likely to have earnings from employment in 1999 than households that would be in scattered-site and traditional public housing developments, their earnings and employment stability among workers were comparable, and their TANF receipt rate was higher. Also contrary to expectations, the households that were living in traditional public housing in 2008 were not faring particularly poorly in 1999 compared with the other groups.

Turning to how relocated households were faring in 2008 compared with 1999, we observed substantial changes across subsidized housing types on a number of our indicators of well-being. Both the percentage of households with earnings from employment and the total earnings among workers increased. Although food stamp receipt remained steady, the percentage of households receiving TANF dropped dramatically. Consistent with what one would expect, given that children aged during this period, juvenile justice system involvement increased. Although the HCV

households continued to stand out as faring worse than other households in 2008, households in the new mixed-income developments were, by contrast, surprisingly indistinguishable across most of these indicators from the households living in traditional public housing and scattered-site developments.

We can venture several possible explanations for our findings. The fact that households using vouchers in 2008 seem to be faring less well than those in other subsidized housing types may reflect a systematic sorting. Residents with greater challenges may have preferred to keep their vouchers out of a desire to avoid the increased assessment, monitoring, and screening in the new era of Chicago public housing. Administrative priorities on the part of the CHA could also have driven this circumstance. For example, the CHA may have wanted to move families out of the old developments as quickly as possible to facilitate building demolition, particularly if those families had multiple problems. Once in the private market, these families may have had more difficulty meeting the screening requirements to return to new or revitalized housing, and they may have become disconnected from the formal and informal support networks on which they had depended before relocation. Although households that elected to take temporary vouchers had access to some services through CHA, the providers were typically located near the former developments, far from many of the neighborhoods in which voucher holders were living in 2008, likely making them more difficult to access.

Several factors could account for the lack of significant differences between the households that relocated to mixed-income developments and those that were living in scattered-site and traditional public housing developments in 2008. According to CHA, almost 30 percent of households in mixed-income developments have an exemption from the work requirements because of a disability or some other reason. In addition, households that failed to meet one of the screening criteria, including the work requirement, could be deemed eligible for up to 1 year of occupancy if they were actively engaged with a service provider. After this year has passed, it is up to the discretion of individual property managers to decide whether noncompliant families can remain in the developments. It is also possible that a longer timeframe is needed to detect the benefits of relocating to mixed-income developments, particularly given the severity of the recent recession.

Residents living in scattered-site housing in 2008 might be faring particularly well for several reasons. First, as we alluded to previously, 90 percent of these households were already living in scattered-site housing in 1999, meaning that many had already managed to move out of (or avoid) the severely distressed traditional public housing developments before 1999. When it came time to rehabilitate the scattered-site units, residents already living in those units received first priority in returning, and the timeline for completion was significantly shorter than at the mixed-income and traditional public housing developments. As a result, many of the scattered-site households had a less disruptive relocation experience than the thousands of other CHA households that often experienced multiple moves over several years. In addition, the scattered-site households are the one group of which a substantial number are living in the more affluent and racially integrated north side of the city, where there may be better amenities and greater opportunities (such as better schools and access to employment). This finding would seem to indicate that the scattered-site program, which was developed as a means of deconcentrating public housing, has been relatively successful on this front.

Why residents living in traditional public housing in 2008 seem to be doing better than expected on our indicators of well-being is more puzzling. One reason may be in part because of the significant improvements to the physical environments and neighborhood safety in these developments post-renovation (Buron and Popkin, 2010; Popkin and Price, 2010). Another may be that, although residents of traditional public housing in 2008 may have moved temporarily because of renovation, 84 percent had been in the same development in 1999, and were perhaps able to retain more of their previous social support networks. How these hypotheses may relate to outcomes such as employment and income, however, is less than clear.

Thus our analysis complicates the picture of what the Plan for Transformation has wrought. Although poverty among families in subsidized housing is, without question, less concentrated than it was before 1999, most of these households remain in higher poverty, predominantly African-American neighborhoods on the city's south and west sides. The lack of clear differences in well-being between households living in mixed-income developments and households living in other subsidized housing types, both in 1999 and 2008, can be framed in two different ways. On the one hand, it does not appear that the assessment and screening processes associated with the Transformation led to a systematic sorting of less challenged households into the new mixed-income developments. On the other hand, given the tremendous investment of resources in mixed-income housing—more than \$2 billion of the approximately \$3.2 billion invested in the first 10 years of the Transformation—it is concerning that the families in mixed-income developments do not appear to be faring better over time.

Regarding the group of residents who were no longer living in CHA-subsidized housing in 2008, the picture is mixed. A group larger than the number of households now living in mixed-income developments was evicted and lost their eligibility for subsidized housing. These households faced even more challenges in 2008 than those who were using vouchers. Of positive note, a smaller group of households, which has voluntarily moved out of subsidized housing after exercising their right to return by moving into a new or rehabilitated public housing unit, showed significant gains in earnings between 1999 and 2008.

## **Conclusion**

These findings have several implications for policy and practice. First, post-occupancy support for households relocated to mixed-income developments appears critical. The CHA originally planned to end social services to households after they had moved into a mixed-income development, and, more recently, the contracts to service providers have been for 1 year of post-occupancy support. Our findings suggest that these households may need longer term support if they are to benefit from their new environments. The implication for ongoing and future mixed-income efforts, such as the federal government's recently launched Choice Neighborhoods initiative, is that far more intensive employment and other social service supports will likely be required to meaningfully affect individual-level employment trajectories.

Second, voucher holders appear to be especially vulnerable and in need of policy intervention. Households using vouchers in 2008, a group more than three times larger than the group living in mixed-income developments, have been dispersed across the city, many into neighborhoods that do not appear to be communities of opportunity. The demographic characteristics of these households in 2008 (younger heads, more and older children), combined with their lower rates of labor force participation and higher rates of systems involvement suggest that they are more disadvantaged than the other groups. The Transformation, however, has paid relatively little attention to the support service needs of HCV households. Our results suggest that these households could benefit from outreach, assessment, and supportive services tailored to their specific circumstances. Despite the difficulties of providing intensive services to a widely dispersed voucher population, a recent demonstration project in Chicago found that doing so at relatively little additional cost may be feasible (Popkin et al., 2010b).

Similarly, it may be worth rethinking the relative emphasis on and potential benefits of scattered-site public housing as a strategy for deconcentrating poverty. The CHA recently began using project-based vouchers as a means of reaching the Transformation's goal of 25,000 public housing units. As with scattered-site public housing, project-based vouchers have the potential to deconcentrate poverty, but without the expense of building new developments. Moreover, unlike portable vouchers, which require public housing residents to find available units and negotiate with private landlords with help from a housing counselor, project-based vouchers shift those responsibilities to the CHA.

The goal of the Transformation was to integrate public housing families into the social and economic mainstream. Achieving this goal will require both more extensive efforts on the part of the CHA and much greater involvement on the part of community-based social service organizations in neighborhoods throughout the city than had been anticipated in the original Plan.

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