

Public Housing Transformation and Crime: Are Relocates More Likely To Be Offenders or Victims?

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Abstract

Our previous research about the effect of public housing transformation on crime patterns in the neighborhoods receiving households that moved with vouchers from public housing was based on modeling the relationships among the measurable factors in all neighborhoods. Our model indicated an increase in crime rates is associated with relocated voucher holders under certain conditions, but this finding does not give us any information about the nature of the effect. Critics of relocation are concerned that offenders are moving into the neighborhoods using vouchers, but voucher holders may also be more likely to be victims in their new neighborhoods. Developing sound policy on the basis of our research clearly requires a better understanding of why crime and relocation appear to be connected. This project conducted an intensive case study of crime in a few census tracts in a single year to find out if, in those neighborhoods, voucher holders relocated from public housing have a specific connection to arrests or incident reports and, if so, whether we can draw any conclusions about how relocates affect crime.

We found that, although definitively linking crime data to specific households is challenging and could not be accomplished with complete confidence, Chicago Housing Authority voucher relocates in our selected tracts were more likely to be linked to both arrests and incidents of violent and property crimes than the population in general. That is, although the strength of the connection varied from tract to tract, people associated with relocated households were more likely to be both a victim and an alleged perpetrator than the general population. This effect was more pronounced for violent crime than property crime. We also found that older voucher holders were more likely to be victims of crime than the general population, whereas juveniles and young adults were more likely to be alleged perpetrators. These findings support the conclusions of our earlier study, further emphasize the need for greater services and supports for relocated households, and can help inform policy directed at breaking the association between these households and neighborhood crime rates.

Introduction

During the past two decades, housing assistance in the United States has undergone a profound transformation. The overarching goal behind this effort was to mitigate the economic segregation that had emerged from a long history of building public housing in racially and economically segregated areas. To do so, the federal government sought to promote strategies that would help low-income families move to areas that could provide greater social and economic opportunity (Turner, Popkin, and Rawlings, 2009). Under the \$6 billion HOPE VI program, hundreds of distressed inner-city public housing developments were demolished. These units were either replaced with new mixed-income developments or “vouchered out,” a process whereby units previously available through public housing are replaced by those available with housing choice (Section 8) vouchers. As a result, tenant-based vouchers are now the most common subsidized housing delivery system in the country, with more than 2.1 million vouchers in use in 2009, a 100-percent increase since the mid-1980s (JCHS, 2011).

Much research has documented the negative consequences of concentrated poverty and disadvantage, including poor physical and mental health, exposure to crime and violence, lack of access to quality schools and public services, high rates of disconnection from the labor market, and dependence on public assistance (Galster, 2002; Hsieh and Pugh, 1993; Krivo and Peterson, 1996; Sampson, 2011; Turner, Popkin, and Rawlings, 2009). The costs for children are profound; children who grow up in segregated, high-poverty areas are at great risk for poor outcomes including low academic achievement, poor health, and involvement in risky behavior and delinquency (Case and Katz 1991; Krivo and Peterson 1996; Popkin, Leventhal, and Weissman, 2010). Thus, the impetus behind the shift to mobility and deconcentration strategies is that very low-income public housing residents will benefit both socially and economically from living in more diverse, higher opportunity neighborhoods (Joseph, Chaskin, and Webber, 2007). Evidence from two major studies of relocated residents—the five-site HOPE VI Panel Study and the Moving to Opportunity demonstration—shows that these efforts have helped former public housing residents move to better housing in safer neighborhoods, but that they have not affected employment or educational outcomes for adults or youth (Briggs, Popkin, and Goering, 2010; Popkin, Levy, and Buron, 2009).

Further, although many former residents are better off than they were in public housing, the shift to vouchers has brought new challenges. Learning to navigate the private market with a voucher is often difficult; voucher holders may encounter problems including lack of transportation to search for units, discriminatory or unscrupulous landlords, tenant screenings and credit checks, and a shortage of large units (Buron, Levy, and Gallagher, 2007). As a result of these barriers (along with resident preferences, social networks, and their own reluctance to move to unfamiliar areas), public housing residents often relocate to high-poverty areas, frequently settling in neighborhoods near their former housing developments (Oakley and Burchfield, 2009; Popkin and Cunningham, 2000).

Although voucher holders may feel safer in the new neighborhoods, these neighborhoods are generally still poor and racially segregated, and relocating does not appear to help residents overcome personal and structural barriers to better employment, earnings, health, or educational outcomes (Briggs, Popkin, and Goering, 2010; Popkin, Levy, and Buron, 2009; Popkin et al., 2013).

Although no clear evidence suggests that public housing demolition and relocation have actually caused negative effects for receiving communities, considerable public and political opposition to racial and economic integration through mobility programs has emerged, and the voucher program is frequently cited as the cause of increases in crime. In a multisite review, Abt Associates (Churchill, Holin, Khadduri and Turnham, 2001) found widespread community opposition to voucher holders. In some instances, they identified a specific catalyst. In Fairfax County, Virginia, residents expressed concern that an influx of immigrant populations was negatively affecting school performance metrics and increasing the number of special needs students in the school system. In a similar instance, in Montgomery County, Pennsylvania, initial opposition began when a superintendent cited the voucher program as the cause of high special education costs. Overall, residents expressed the view that the voucher program resulted in four types of negative outcomes.

- Increases in social disorder, crime levels, and drug trafficking.
- Greater stress on public services.
- Falling property prices and an increase in vacant or rental properties.
- An overall neighborhood decline that would lead to an even greater influx of low-income residents.

In 2008, a very controversial *Atlantic Monthly* article, “American Murder Mystery,” reignited the debate surrounding public housing demolition, tenant relocation, and crime. The article relied on a simplistic, pictorial analysis associating crime trends with the movement of housing choice voucher recipients, making the argument that HOPE VI relocation and the voucher program were responsible for increasing crime in previously safe, moderate-income Memphis communities (Rosin, 2008). Housing researchers responded forcefully, highlighting evidence on the benefits of the voucher program for low-income families and calling into question on methodological grounds the article’s claim that the arrival of voucher recipients caused crime to increase (Briggs and Dreier, 2008).

More rigorous research recently has investigated the link between voucher holders and crime. In a 12-year study of 10 major U.S. cities, the Furman Center for Real Estate and Urban Policy found no evidence that an increase of voucher holders in a community leads to increases in crime. In fact, they found the causal ordering to be reversed: voucher holders enter neighborhoods immediately after significant crime increases (Ellen, Lens, and O’Regan, 2012). Indeed, it is plausible that with increases in crime, housing rents decline, making them more economically accessible for voucher holders.¹

Public Housing Transformation in Chicago

Nowhere have these issues surrounding public housing relocation been more prominent than in Chicago, which has historically been the country’s housing policy bellwether. Since the Plan for Transformation began in 1999, the Chicago Housing Authority (CHA) has been striving to replace its highrise developments with new, mixed-income housing that reflects the current thinking on how to provide affordable housing without creating concentrations of poverty (Popkin et al., 2004).

¹ Some material in this report was published previously in *Cityscape* (Popkin et al., 2012b).

Chicago’s experience offers important lessons for understanding the broader effect of public housing revitalization around the nation. The city has undertaken the greatest citywide transformation of public housing in the United States. Only a handful of cities—Atlanta, San Francisco, and Washington, D.C.—have plans for citywide redevelopment, and none of these plans is on as large a scale as the CHA’s Plan for Transformation. In only 10 years, Chicago has gone from being the national symbol of the failures of federal public housing to a leader in relocation services, tracking, and mixed-income housing development (Popkin, 2010; Popkin et al., 2013).

By 2011, the CHA had either built or rehabilitated more than 80 percent of the 25,000 planned units. As exhibit 1 shows, approximately one-fourth of the 16,500 families who were residing in family housing or scattered sites in 1999 have moved to the private market with vouchers (CHA, 2011). The rest of the families are in rehabilitated public housing or mixed-income developments.

Research from two longitudinal studies of relocatees, the Chicago Panel Study and the Chicago Family Case Management Demonstration, shows that these residents are living in less poor, safer neighborhoods than where they began (Popkin et al., 2013). Our analysis of the CHA’s full relocation database confirms this finding. As exhibit 2 shows, however, the realities of rental markets, discrimination, voucher program rules, and residents’ own preferences have meant that, by far, most CHA relocatees have moved to neighborhoods on the city’s South and West Sides that, although less distressed than the communities from which they moved, are still predominantly poor and racially segregated.

Although considerable research has explored how CHA’s Plan for Transformation has affected its residents, until recently less work has focused on how the influx of new voucher holders has affected receiving communities. According to one study, approximately one-half of the gangs operating in CHA developments successfully penetrated private-market communities after relocation, either by taking over existing gangs or by establishing partnerships (Venkatesh et al., 2004). Ample anecdotal evidence suggests that community residents are concerned. In the mid-1990s, a group of residents opposed the siting of subsidized housing in the North Kenwood-Oakland neighborhood on the grounds that it would be an economic detriment to the community and would further racial segregation (Pattillo, 2007). In a more recent anecdote, an article in the *New York Times* highlighted the widely held perception that tearing down projects resulted in an influx of public housing residents

Exhibit 1

Disposition of Households in 2010 That Were in Public Housing at the Start of the Plan for Transformation

Disposition	Number	Percent
Vouchers	4,097	24.3
Mixed-income developments	1,896	11.3
Rehabilitated public housing	3,395	20.2
Evicted from CHA	1,488	8.8
Deceased	1,221	7.2
Number unassisted*	4,707	28.0
Total	16,846	100.0

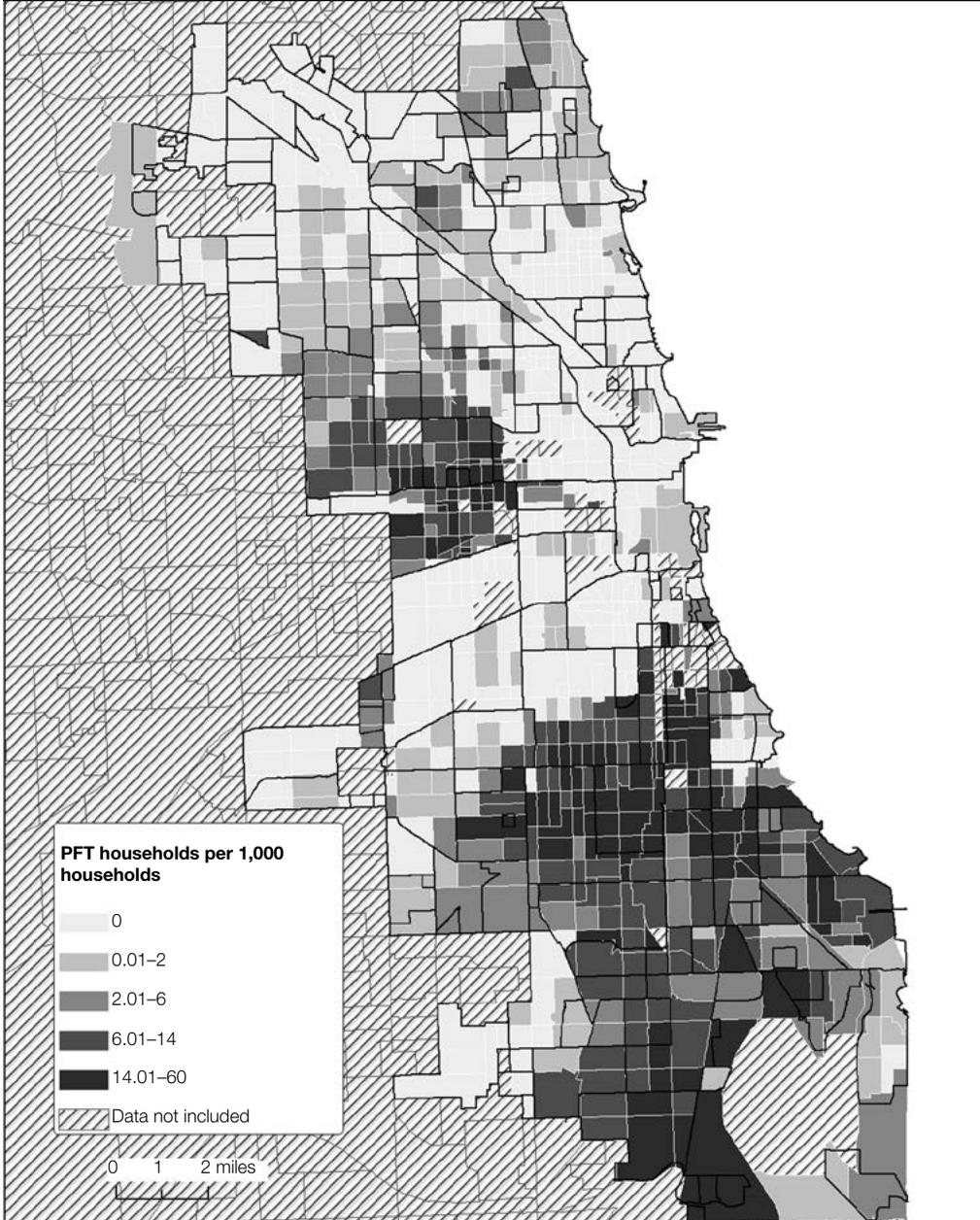
CHA = Chicago Housing Authority.

* Of the unassisted households, 1,307 left after making a permanent housing choice and satisfying their right of return.

Source: CHA, 2011

Exhibit 2

Distribution of Plan for Transformation Relocatee Households, by Census Tract, in Chicago, in 2008



PFT = Plan for Transformation.

Source: Urban Institute analysis of U.S. Department of Housing and Urban Development Form 50058 data provided by the Chicago Housing Authority

who brought crime with them to the South Side neighborhood of Chatham. This article also stresses, however, that neighborhood perceptions are not necessarily accurate—Chatham has been in decline for many years (Dumke, 2011).

As in most American cities, crime has dropped considerably in Chicago in the new millennium. Between 1999 and 2008, violent crime declined 20 percent and property crime declined 27 percent. Indeed, crime during this period declined even in the community areas² that have received the most relocatees: Auburn, Chatham, and South Shore. Skogan's (2007) analysis of Chicago's crime decline posited that the citywide crime drop is because of a combination of law enforcement and community policing factors, not the Plan for Transformation, although he did note that crime declined drastically in areas where public housing was demolished. Skogan did not explore, however, the degree to which the crime rates were higher—or lower—in certain neighborhoods than they would have been if no entrants had arrived from public housing.

These ambiguities reveal the complexity of properly addressing the extent to which relocatees cause an increase in crime when they move into new neighborhoods. A number of neighborhood characteristics—the layout of streets, alleys, and buildings; access to mass transit; and the presence and design of public spaces and facilities, for example—likely affect both the number of relocatees who will move to a community and the crime rate. Further, although it is possible that relocatees increase crime, it is even more likely that a neighborhood where crime rates are already rising will be characterized by falling property values and rents, higher vacancy rates, and, as a result, intensified efforts by landlords to recruit voucher holders to fill their units. In short, the question remains, which came first: the crime or the voucher holders?

Our previous research explored the relationship between crime and relocation from public housing using advanced modeling techniques, finding that a connection in fact exists between relocated public housing residents and crime rates under certain conditions (Popkin et al., 2012a). We found that relocatees were associated with higher than expected crime rates when the number of relocatee households exceeded two per thousand households in the neighborhood, and the effect increased at greater concentrations. This research expands on that work, through a more detailed examination of arrest and incident reports in selected tracts in Chicago, to better understand the nature of that connection. We link crime report data to voucher addresses and compare the rates at which members of voucher households are victimized or are alleged perpetrators with the rates for the population of the neighborhood; the differences provide indications of why increased concentrations of voucher households are associated with changes in crime rates.

Selected Tract Analysis

Although our previous model contributes significantly to understanding whether and how relocatees from public housing affect crime rates in receiving communities, it does not attempt to understand the dynamics of this relationship; that is, why these neighborhoods with greater concentrations of relocated households experience higher crime rates. This article extends our previous work by

² Chicago's community areas are multitract neighborhood designations used by the city government for planning purposes. The city has 77 community areas and more than 800 census tracts.

examining selected tracts in four of Chicago’s community areas. In each census tract, we use 2008 police data to connect specific individuals associated with voucher households to reported victims of crime incidents and to arrests to improve our understanding of the nature of the association between crime rates and Plan for Transformation relocates in these neighborhoods. Our research does not attempt to establish that crime rates are higher than expected for relocatee households but is intended to uncover the details of the linkages between crime and relocates to help explain the effect on crime rates found in our model. Although we do not conduct a causal analysis of the patterns of this association, and therefore do not draw conclusions generalizable citywide, the details of these specific cases provide important context for our previous research.

Selected Tracts

Because matching addresses from multiple sources of administrative data is a labor-intensive process, we concentrated on a few tracts in a single year (2008), the final year of the period studied in our previous research. By 2008, many former public housing residents had relocated with vouchers, and therefore we are more likely to find concentrations of relocated voucher holders at the higher levels our previous research found were associated with increased crime. For this deeper exploration, we selected 12 tracts in four Chicago neighborhoods—Englewood, Lawndale, West Garfield Park, and West Ridge. We chose these neighborhoods because they were among the most common destinations for relocates and are dispersed across the city: Englewood is on the South Side, Lawndale and West Garfield Park are on the West Side but separated by Interstate 290, and West Ridge is a relatively more affluent community on the North Side. To ensure that we examined a wide variety of receiving neighborhoods, we chose tracts that met different thresholds based on the number of relocated voucher households per 1,000 households in 2008. We set the thresholds to correspond with those used in Popkin et al. (2012b, excluding tracts with no relocated voucher households—0.01 to 2, 2.01 to 6, 6.01 to 14, and 14.01 or more relocated voucher households per thousand—as shown in exhibit 3 (see the map in exhibit 4 for reference).

Exhibit 3

Thresholds by Tract: Relocated Households per 1,000, in 2008

Community Area	Tract 1	Tract 2	Tract 3
West Ridge	0.01–2	2.01–6	6.01–14
West Garfield Park	2.01–6	6.01–14	14.01 +
Lawndale	2.01–6	6.01–14	14.01 +
Englewood	6.01–14	6.01–14	14.01 +

Source: Urban Institute analysis of 2000 and 2010 censuses and 2008 Chicago Police Department administrative data

Whereas the selected tracts in three of the four neighborhoods—Englewood, Lawndale, and West Garfield Park—were similar in crime rates and many demographic characteristics, the selected tracts in West Ridge differed significantly. Compared with both the city and tracts in the other community areas in this study, these communities tended to have fewer relocates and voucher holders in general, lower poverty rates, and lower crime rates, as shown in exhibit 5. Selected tracts in Englewood, Lawndale, and West Garfield Park had more public housing relocates and voucher holders in general, higher poverty rates, and moderate to high crime rates during our period of analysis.

Exhibit 4

Map of Selected Census Tracts



Exhibit 5

Aggregated Statistics for Selected Tracts, in 2008 (unless otherwise noted)

	Community Area				
	West Ridge	West Garfield Park	Lawn-dale	Engle-wood	Chicago
Total households	9,110	1,667	2,411	1,610	1,025,220
Percent renter households	48	76	68	56	55
Poverty rate (households) (2005–09)	15	53	37	39	18
Relocated households per 1,000 households	3	11	11	19	4
All other voucher households per 1,000 households	22	65	51	83	27
Median violent crime rate per 1,000 people	1	9	9	9	3
Median property crime rate per 1,000 people	7	21	15	19	12

Source: Urban Institute analysis of 2000 and 2010 censuses, 2005–09 American Community Survey, and 2008 Chicago Police Department administrative data

Characteristics of Relocated Households

Overall, in 2008, 471 people lived in 131 relocated households in the 12 tracts selected for this study, an average household size of 3.6 people per household. Of those households, nearly all were headed by a female and most—about 53 percent—were headed by one adult. Relocated voucher households with one adult tended to have more children (2.1) per household than relocated households with two adults (1.6 children per household), although voucher households with two adults tended to have more people (3.6) per household overall than those with only one adult (3.1 people per household). Only 28 percent of households contained exactly two adult members, and most of these households consisted of one older adult (the voucher holder) and one young adult. The population residing in relocated households consisted mostly of children and young adults, with very few older adults present (exhibit 6).

Exhibit 6

Voucher Household Characteristics for Selected Tracts, in 2008

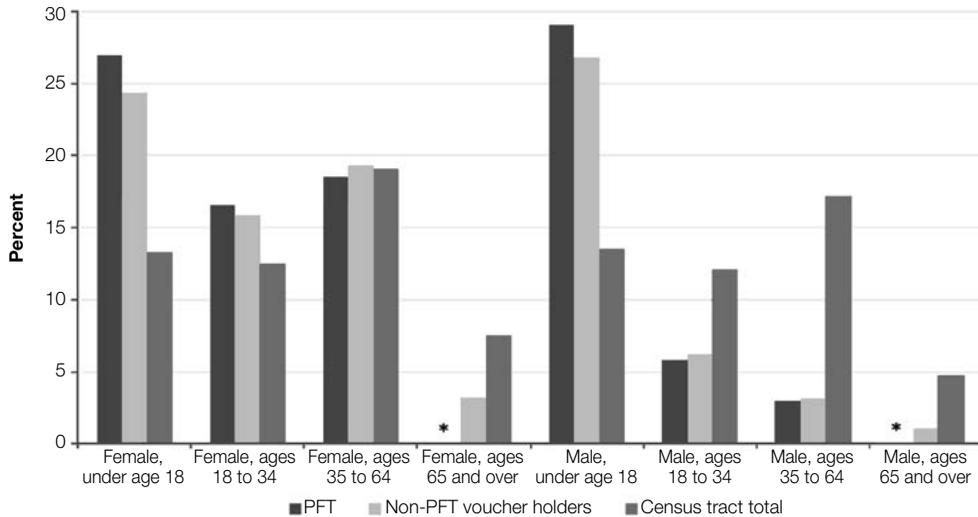
	Percent of Population in Voucher Households
Children ages 9 and younger	18
Children ages 10 to 17	34
Young adults ages 18 to 34	25
Older adults ages 35 to 64	21
Seniors ages 65 and older	< 2

Source: Urban Institute analysis of U.S. Department of Housing Urban Development Form 50058 data provided by the Chicago Housing Authority

The population in relocated households was similar demographically to that of other voucher holders who relocated to the same census tracts but was very different from the general population. People in relocated households and other voucher holders were much more likely than the general population to be children and less likely to be older adults, with a fairly even distribution between males and females (exhibit 7). Although the population in both sets of voucher households contained a greater proportion of young females and about the same proportion of middle-aged females, they were dramatically less likely to contain young and middle-aged men. Although we cannot display data by race because of small cell sizes, the heads of households of both sets of voucher households were substantially more likely to be African American than the general population.

Exhibit 7

Population by Gender and Age for 12 Selected Census Tracts, in 2008



PFT = Plan for Transformation.

* Data for people in PFT voucher households suppressed for this category because of small cell sizes.

Source: Urban Institute analysis of data from the Chicago Police Department, the Chicago Housing Authority, and the U.S. Census Bureau

Methods

For this analysis, we use 2008 Chicago Police Department (CPD) administrative data, made available to us by the CPD for this research, which provides reported crimes and arrests made by CPD officers;³ 2008 U.S. Department of Housing and Urban Development Form 50058 administrative records from the CHA, which provide information for voucher holders; and 2000 and 2010 decennial census data and 2005–09 5-year American Community Survey data, which provide population data and general descriptive statistics (see the appendix for more information). We do not look at relocated households that did not use vouchers, nor do we look at voucher households other than those relocated from public housing under the Plan for Transformation.

Working with these data, we matched the addresses of relocated voucher holders to incident reports and arrest records for the period in 2008 during which they lived in 1 of the 12 selected tracts. We defined people appearing in incident reports as targets of crime, indicating victimization, and we considered arrestees to be alleged perpetrators of crimes. We divided the total arrests and incident reports associated with relocated voucher households by the total population in those voucher households, and compared the resulting rates with the number of crimes per person in the tract to determine whether people associated with voucher households are more or less likely than the

³ Although we examined all crimes regardless of classification, our analysis here refers chiefly to part 1 violent and property crimes. Part 1 violent crime includes aggravated assault, forcible rape, murder, and robbery, and part 1 property crime includes arson, burglary, larceny, and motor vehicle theft.

general population to be alleged perpetrators and victims. Because we have no comprehensive list of the addresses of non-voucher holders, our comparison group is all households in the tract, including the relocated voucher holder householders (a very slight proportion of the total).

Matching Rules

Matching incidents and arrests to households was challenging because most of the CPD crime and CHA voucher data do not contain apartment numbers, and most voucher holders, by far, live in multifamily buildings. Although the voucher database includes full names and ages, it excludes anyone who is not officially listed on the lease. That is, it is possible that a person involved in a crime lived in a voucher unit, but because they are not listed we would not be able to connect the crime with the correct household. To quantify this uncertainty, we created decision rules for connecting households, which we divided into three groups—exact matches, probable matches, and nonmatches. We first matched crimes to relocated households on the basis of street address before incorporating unit-level information. Because the crime rate for the general population (including voucher holders) is produced by calculating the total number of crimes per person in a given tract, no similar matching process is required.

Exact matches occur if the apartment number exists for both the matched crime and the relocated voucher holder record and the numbers match, if the address is a single-family unit, or if the first and last names in the crime record exactly match the first and last names of a member of the relocated household. Nonmatches occur if the apartment number exists for both the matched crime and the relocated voucher holder record and the numbers do not match or if the crime record can be exactly matched to a nonrelocated voucher holder record by the exact match process.

A probable match estimates the probability of each address match. We assign a probability of 100 percent if the matched crime and the voucher holder record are an exact match or if the matched address is a multifamily building with five or fewer units and the last name of the crime record matches the last name of a member of the relocated household. We assign a probability of 0 percent to nonmatches. We assign the remaining cases a probability, ranging from 0 to 100 percent, to matched crime and relocated voucher household records, calculated as the inverse of the total number of units at the matched address. In the few cases for which information on the total number of units at an address is not available, the probable match is calculated as the inverse of the median number of units (two) in voucher-holder buildings in the 12 selected tracts. We also estimate a maximum match figure, which represents the total number of matched crime and relocated voucher holder records. See the appendix for a more detailed discussion of the matching process.

Of all the part 1 violent and property crimes committed in the 12 selected tracts in 2008, we were able to classify 7 arrest records and 25 reported incidents as exact matches to residents of relocated households. After filtering out nonmatches, exact matches from other voucher holders, and going through the process of assigning match probabilities to inexact matches, we estimate that approximately 15.6 arrest records and 34.7 reported incidents match residents of relocated households. If all address-level matches that we could not identify as exact matches were treated as matches, relocated households would match 24 arrest records and 65 incident reports. Relocated voucher households represented a minimal share of part 1 crimes in the 12 selected tracts in 2008—587 arrests and 2,095 incidents involved a person living in these neighborhoods (exhibit 8).

Exhibit 8

Match Statistics for Part 1 Crimes, by Category

Report	Exact	Probable	Maximum	General Population
Arrests	7	15.6	24	587
Incidents	25	34.7	65	2,095

Source: Urban Institute analysis of 2008 Chicago Police Department administrative data and Chicago Housing Authority data

Because we do not attempt to match incident and arrest locations to non-voucher holder addresses, we use rates for the general population for comparison. People in relocated voucher households represented approximately 1 percent of the general population in the 12 selected tracts in 2008.

Defining Terms

In the following section, we define people associated with relocated households as definitely more likely to be alleged perpetrators or victims when the rate of exact matches of arrest or incident addresses to voucher addresses exceeds the rate of arrests or incidents for the general population. We define them as definitely less likely to be alleged perpetrators or victims when the rate for the maximum possible number of address matches is less than the rate for the general population. We define people associated with relocated households as probably more likely to be alleged perpetrators or victims when the rate of probable address matches exceeds the rate for the general population and as probably less likely to be alleged perpetrators or victims when the rate of probable address matches is less than the rate for the general population. Because of the uncertainty associated with the matching process, people associated with relocated households may be the voucher holder, someone who lives in the household, or someone listing the household as their place of residence on arrest or report of a crime incident to the police.

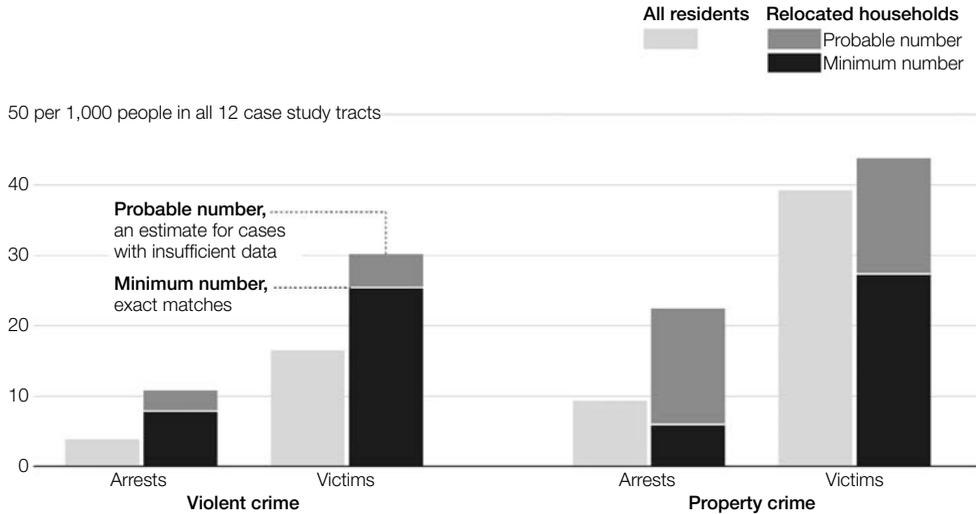
Results

Overall, in the 12 case study tracts, people associated with relocated households in 2008 were more likely than the general population (all people in the 12 case study tracts) to be both victims and alleged perpetrators of violent crimes, and they were probably (but not definitely) more likely to be both victims and alleged perpetrators of property crimes. People associated with voucher households specifically were probably about 2.5 times more likely to be arrested for violent crimes and 1.8 times more likely to be victims of a violent crime (exhibit 9). These same people were probably about 2.4 times more likely to be arrested for property crimes and 1.1 times more likely to be victims of a property crime.

Our models in the original research tested whether the association with crime rates varied according to household composition, but we found only weak connections. Our findings provide some support for the hypothesis that an existing connection is obscured by a dividing line in the voucher-holder population between older victims and younger perpetrators (although obviously youth and young adults are victimized, as well). We found that some of the difference in the rate of arrests for violent crimes can likely be attributed to juveniles ages 10 to 17. Juveniles were the

Exhibit 9

Relocated Households: Alleged Perpetrators and Victims in 2008



Notes: Relocated households were definitely more likely than the general population to be both victims and alleged perpetrators of violent crimes. The same trend appears to be true for property crimes, but the evidence is not conclusive. Urban Institute researchers matched Chicago Housing Authority data to Chicago Police Department data. In some cases, apartment-level address data were unavailable, creating significant uncertainty.

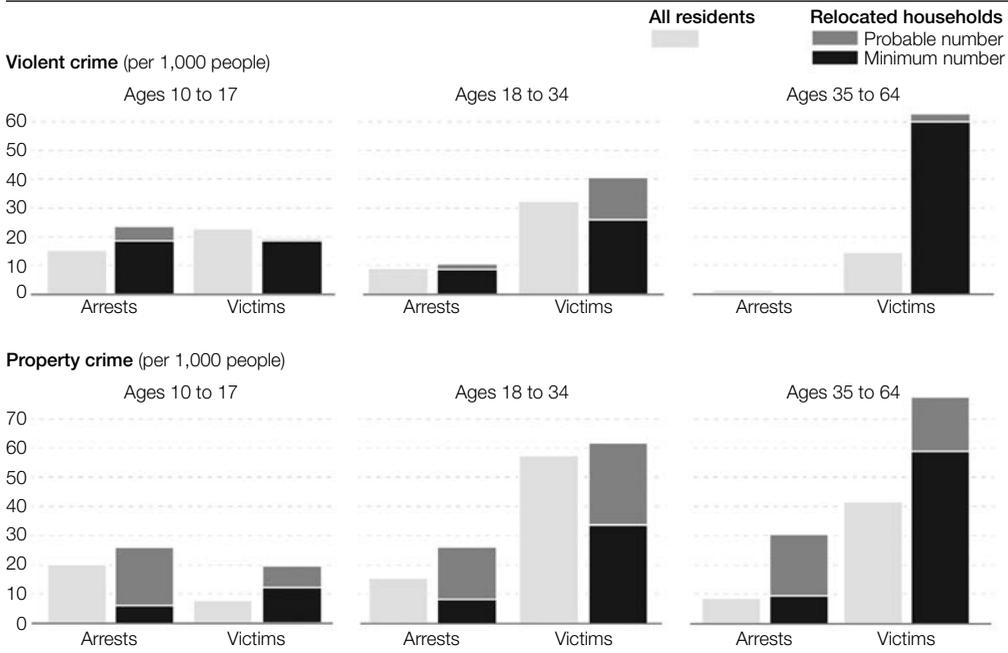
Source: Urban Institute analysis of data from the Chicago Police Department, the Chicago Housing Authority, and the U.S. Census Bureau

only age group associated with relocated households definitely more likely than their cohort in the general population to be alleged perpetrators of violent crimes. This age group also made up a disproportionately substantial share of the population in relocated households (34 percent) compared with juveniles in the general population (14 percent) in the selected tracts. When we separate the young adult age group into younger (ages 18 to 24) and older (ages 25 to 34) cohorts, we find, surprisingly, that the younger cohort was probably less likely to be alleged perpetrators and victims of violent crime, whereas the older cohort was definitely more likely to be alleged perpetrators and probably more likely to be victims of violent crimes when compared with their cohorts in the general population. We can likely attribute some of the difference in victimization rates for violent crime to middle-aged adults (ages 35 to 64) associated with relocated households—the only group definitely more likely than their cohort in the general population to be victims—who were about four times more likely to be victims of violent crimes than their cohort in the general population. Older adults made up approximately 21 percent of the population in relocated households compared with 43 percent of the general population of the 12 selected tracts.

The difference in arrest and victimization rates for property crimes seems to have been spread more evenly throughout the age distribution (exhibit 10). Juveniles (ages 10 to 17), young adults (ages 18 to 34), and older adults (ages 35 to 64) associated with relocated households were all either probably or definitely more likely to be both victims and alleged perpetrators of property crimes. Breaking the young adult age group associated with voucher households into younger (ages 18 to 24) and older (ages 25 to 34) cohorts, we find that both were probably more likely to

Exhibit 10

Victims and Arrestees by Age Demographic in 2008



Note: Because only seven people ages 65 and older were living in relocated households, this cohort is not included.
 Source: Urban Institute analysis of data from the Chicago Police Department, the Chicago Housing Authority, and the U.S. Census Bureau

be alleged perpetrators of property crimes. The younger cohort, however, was probably less likely to be victims of property crimes, whereas the older cohort was probably more likely to be victims of property crimes.

In general, some of the difference in crime rates between those living in relocated households and the general population can be attributed to a disproportionately substantial share of people living in the selected tracts in West Ridge (60 percent), which has lower rates of both violent and property crime for the population as a whole compared with the other three community areas. Only 25 percent of people in relocated voucher households live in the selected tracts in West Ridge. Thus, the relatively high rates in the other three community areas, which are home to most people living in relocated households, inflate the average for those people associated with relocated voucher households, whereas the relatively low rates in West Ridge deflate the average for the general population.

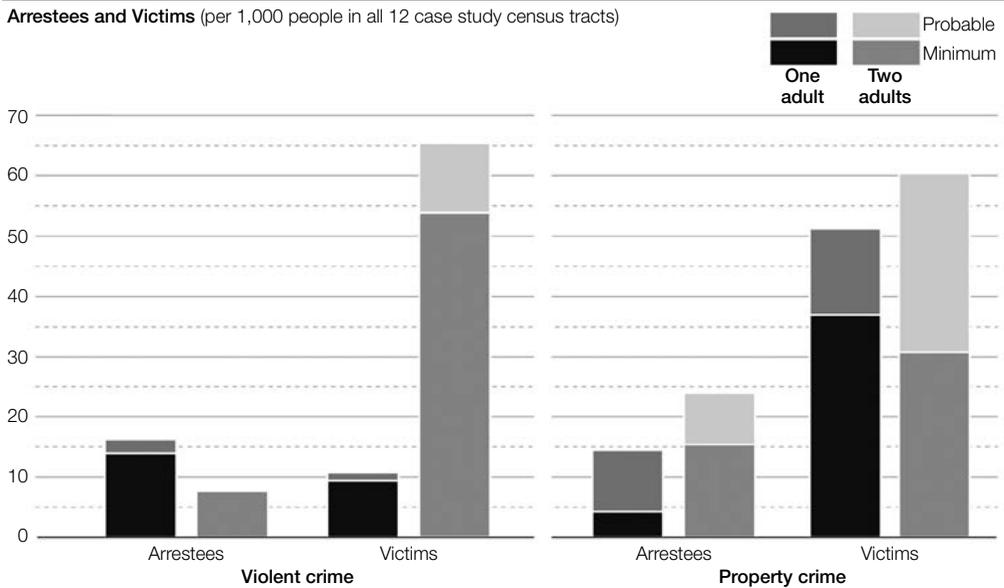
Our results are less reliable for elderly adults, who make up less than 2 percent of the population in relocated voucher households analyzed for this study. What little evidence we have indicates that older adults associated with relocated households are about as likely as elderly adults in the general population to be alleged perpetrators of violent crimes (the rate is nearly zero in all cases) and were definitely less likely to be victims of violent crimes. Older adults associated with relocated households were also definitely less likely to be alleged perpetrators of property crimes and definitely more likely to be victims of property crimes.

We also explored the difference in rates for one-adult versus two-adult households. A difference might mean that the supervision of juveniles suffered in one-adult households or that one-adult households were more likely to be victimized. We found that, compared with people associated with relocated two-adult households, people associated with relocated one-adult households were definitely less likely to be victims of violent crimes and definitely more likely to be alleged perpetrators of violent crimes (exhibit 11). People associated with relocated one-adult voucher households were also probably less likely to be victims and alleged perpetrators of property crimes. About 53 percent of relocated voucher households were headed by one adult, and only 28 percent had two adults present (the remaining households had more than two adults). The difference between the arrest rate for property crime and the arrest rate for violent crime seems to rule out that the primary underlying dynamic is unsupervised youth. Because we are analyzing a small population, we are unable to break down the data further to test explanations. For instance, the high violent crime victimization rate for two-adult households might be driven by a greater proportion of elderly households in that group or might simply be a result of having more adults to be subject to victimization. Such specific subpopulations unfortunately create a situation in which a single household can have a major effect on rates.

Because of the relatively few crimes that can be associated with voucher households when looking at specific community areas, we do not provide a breakout of our results by neighborhood.

Exhibit 11

Arrestees and Victims Associated With One- and Two-Adult Relocated Households in 2008



Source: Urban Institute analysis of data from the Chicago Police Department, the Chicago Housing Authority, and the U.S. Census Bureau

Conclusions and Policy Implications

Our previous efforts to determine the effects of public housing transformation on crime in Chicago and Atlanta found that crime rates in certain receiving neighborhoods, where the number of relocated voucher households exceeded a certain threshold density, decreased less than they would have if the relocated voucher holders had not moved to these neighborhoods. One key question the study could not answer was why even a relatively few relocated households in a given neighborhood would be associated with relatively higher crime rates in that neighborhood.

Our intensive case study of 12 selected tracts in Chicago in 2008 shows that voucher holders were definitely more likely to be both victims and perpetrators of violent crimes than the general population in these tracts, and they were probably more likely to be both victims and perpetrators of property crimes. These findings paint a more complex picture than typical media accounts portray—the image of relocatees inevitably bringing crime to their destination neighborhoods. Although some of the differences in crime rates can be attributed to distributional differences in the relative share of the population in certain tracts living in relocated voucher households, other demographic and household factors may help explain what drives this difference in crime rates.

Juveniles and young adults—those ages 10 to 34—associated with relocated voucher households tended to be more likely to be alleged perpetrators of violent crimes than the general population, whereas middle-aged adults associated with relocated voucher households were much more likely to be victims of violent crimes. All age groups associated with relocated households appeared to be more likely to be both victims and alleged perpetrators of property crimes. People associated with relocated one-adult households were more likely to be alleged perpetrators and less likely to be victims of violent crimes than people associated with relocated two-adult households. In addition, people associated with relocated one-adult households seemed to be slightly less likely to be both alleged perpetrators and victims of property crimes than people associated with relocated two-adult households.

This research raises additional questions, most notably why juveniles and young adults associated with relocatees tend to be more likely to commit violent crimes and why middle-aged adults are more likely to be the victims in their new neighborhoods. As noted in our previous study, ethnographic research would help us to better understand how voucher households affect neighborhood dynamics.

Our findings also reveal that the effect on crime rates cannot be considered solely a function of the increased concentration of voucher holders in the destination neighborhoods. The composition of the households is clearly a relevant and important factor in the distinction between victims and perpetrators, with pronounced policy implications. Further, Chicago neighborhoods with comparative increases in crime after the distribution of the former housing development tenants may not have experienced detriments in the overall socioeconomic status and criminality of the neighborhood but instead may have seen an alteration in the routine activity of community members that led to an increased opportunity for criminal events.

Although the basic demographic characteristics of relocatee households differ from those of the general population, they are not substantially different from those of other voucher households.

If the association of relocatee households with higher crime rates found in the model in our previous work were directly related to these characteristics, we would have expected to see a comparable association for all voucher households, which was not the case (Popkin et al., 2012b). Our current research shows that elements of this association may be related to higher rates of victimization and arrests in certain types of relocatee households. This finding can help inform policy directed at breaking the connection between relocatee households and higher than expected crime rates in their new neighborhoods.

Relocation Effects on Relocates and Receiving Communities

Although we found clear evidence that relocatee voucher households were associated with both incidents and arrests at rates higher than that of the general population, supporting our conclusions from the model, we cannot yet be certain why. Several established theories in criminological research may provide some explanation, however.

As high-crime public housing developments are torn down and residents relocate, movers may simply shift their (or their close associates') criminal behavior to a new neighborhood. Evidence of this type of spatial crime displacement across multiple U.S. cities is mixed (Kleinhans and Varady, 2011; Suresh and Vito, 2009; Van Zandt and Mhatre, 2009), although the most rigorous research suggests that this phenomenon is not occurring as a result of HOPE VI demolition (Cahill, Lowry, and Downey, 2011; Hartley, 2010; Santiago, Galster, and Pettit, 2003).

Mobility could disrupt relocatees' social networks and erode their social capital (Hagedorn and Rauch, 2007; Sampson, Raudenbush, and Earls, 1997). Moves could also affect youths' behavior in ways that cause them to engage more in crime; evidence suggests that frequent moves have negative consequences for youth, including poor educational attainment, risky sexual behaviors, and drug use (Coleman, 1988; Hagan, Macmillan, and Wheaton, 1996; Pribesh and Downey, 1999). Most significant to this discussion, youth who move frequently have an increased likelihood of committing violent crimes (Haynie and South, 2005), and research in Chicago found that youth who move out of their neighborhoods but remain in Chicago have an increased likelihood of being victimized, as well (Sharkey and Sampson, 2010). Whether transplanted youth are perpetrators or targets, crime would increase because more victims were in the neighborhood.

The relocation and movement of displaced public housing residents throughout the city alter the routine activities of the former public housing residents and receiving communities. The "routine activity approach" defines that most criminal acts require the convergence of likely offenders, suitable targets, and the absence of capable guardians. This theory emphasizes collaborative conditions that create the opportunity for criminal events and that the routine activities of individuals and communities function as a spatial-time schedule for potential convergences on criminal events (Birkbeck and LaFree, 1993; Cohen and Felson, 1979; Smith, 1984). The dispersion of activities away from households and increases in active lifestyles increase the opportunity for criminal events and victimization, as the movement away from one's household increases lack of guardianship in daily schedules (Cohen and Felson, 1979). As relocatees adjust their routine activities to account for the spatial relationship of their new housing to school, work, family, and so on, the opportunity to converge on the three essential elements of criminal activities will change accordingly.

Just as the spatial arrangement of the city's neighborhoods will affect crime rates, the physical characteristics and spatial arrangement of the community members' households will affect victimization rates. The characteristics of the relocatees' new housing and the technology and organization of the housing in the receiving communities affect the suitability of households as property crime targets and the capacity of people with criminal inclinations to overcome their targets (Cohen and Felson, 1979). New neighborhoods may offer security or guardianship measures that are more difficult for criminals to overcome. This factor can lead to increased or decreased guardianship, accordingly reducing or increasing the opportunity for victimization suitability, and it can also lead to increased difficulty for relocated potential offenders to commit property crimes successfully, increasing the rate of reported property crimes for those relocated offenders who are unfamiliar with the new security measures.

The perceived changes relocatees bring to receiving communities mostly affect social cohesion and community activities. In particular, because many public housing developments were notoriously dangerous, communities fear that the receipt of relocated public housing residents will increase crime and reduce property values (Cahill, Lowry, and Downey, 2011; Belden, Shashaty, and Zipperer, 2004). As more former public housing residents move into new neighborhoods, those neighborhoods experience an increasing awareness of the public housing residents and the expected increase in criminal behaviors. This perceived fear will have a greater effect on the communities' behavioral reactions to crime than the communities' objective risks to crime, increasing the receiving communities' evasive behaviors and decreasing exposure to crime for those households (Cohen and Felson, 1979; Smith, 1984). Fear of crime and the resulting change to evasive community behaviors increases the social anxiety and isolation in that community, thus decreasing the collective efficacy of the community. In this case, if new entrants disrupt the social cohesion and social control of a neighborhood, that neighborhood may be less able to police itself, effectively reducing the risks of committing crime and skewing a potential offender's—whether a new relocatee's or a current resident's—"risk-reward calculus" (Lim and Galster, 2009). Further, research from the Moving to Opportunity demonstration suggests that rising neighborhood racial segregation may lead to an increase in violent crime as a result of increased drug market activity, which is more likely in racially segregated areas (Ludwig and Kling, 2006).

On the other hand, the relocated households may experience relatively less fear of crime than they experienced in their old neighborhoods, increasing their time spent away from the home and active lifestyles, and in turn increasing their potential exposure to crime as both motivated offenders and suitable targets.

Although a number of reasons explain why crime might rise in receiving communities, the precise magnitude and direction of the effects may be related to the preexisting levels of crime in the receiving community, the distance travelled by the relocated voucher holders, and the age of the voucher holders. Research in New Orleans found that former prisoners who moved to locations outside New Orleans were 15 percentage points less likely to reoffend within a year of release than prisoners moving to locations within New Orleans (11 and 26 percent were reoffenders, respectively) (Kirk, 2009). To the extent that prisoners released from Illinois prisons tended to concentrate in a few disadvantaged neighborhoods where many voucher holders lived (La Vigne et al., 2003), and given that most prisoners return to live with friends and family on release (Fontaine and Biess, 2012),

moving from public housing may actually decrease crime rates among those connected to voucher households by separating criminals from their previous neighborhoods, depending on the distance of the move. Also, given that offending rates and association with criminal peers decline with age (Kirk, 2009), an influx of older voucher holders into a community may actually cause crime rates to fall. The direction of the effects in both cases may depend on the receiving communities' premove offending rates and the offending rates of incoming voucher households.

Policy Implications

Bearing in mind that our analysis was confined to a few neighborhoods that may not be representative, we nonetheless recommend that policymakers take several actions to mitigate the observed effects.

- Provide comprehensive supportive services for relocated households before and after relocation, with particular emphasis on households with teens.
- Use mobility counseling to ensure that residents make informed choices about their housing and neighborhood options and are educated on all possible housing and neighborhood options.
- Plan coordination with local law enforcement to ensure that patrol officers and narcotics and gang units are aware of the neighborhoods receiving relocated households and take action in preventing any violence that might result.

Research has already shown that former public housing residents have been subject to enormous stresses and face special challenges. The evidence in this article that the association with crime found in our previous study is not a result simply of members of relocated households bringing crime into the neighborhood, but of being the victims of crime, reinforces the need for intensive and continuing support tailored to the particular needs of these voucher holders in their new communities. As we pointed out in our previous brief, the benefits of this approach would accrue not only to the households in need but also to their neighborhoods, as well.

Support services and mobility counseling for households displaced from public housing will provide those households with a comprehensive understanding of their available options when searching for housing that accepts vouchers. Relocates who are more aware of receiving communities throughout Chicago will make more educated decisions regarding the selection of their new communities and housing. Given all their housing choices, relocates are more likely to choose communities that are closer to work, school, families, and so on. This choice will decrease the transportation of those households and time spent away from the house, thus decreasing the opportunities to become motivated offenders or suitable targets throughout daily, routine activities. Relocates will also be more likely to choose the neighborhoods and housing that provide the greatest security. When left to their own devices, relocates could more commonly choose the first or cheapest housing they find, which could have less security, be closer to or on the major roads in the neighborhood, be first-floor apartments, and so on—all characteristics that create a lack of security about the property and increase the chances of criminal opportunities. Offering services that educate relocates on all their housing options will increase the chances that relocated households choose the housing that is in an optimal area and provides optimal security for their household. Further, as

the relocatees are more satisfied with their housing and neighborhoods, they are less likely to move in the future, stabilizing the social network and guardianship of the relocatees and decreasing the negative consequences of moves on juveniles.

Disseminating the availability of all housing options to households displaced from public housing will also naturally disperse the relocatees throughout the city. Relocatees aware of all options are more likely to make decisions that are best for themselves and their families. Because not all locations, communities, houses, and so on are ideal for all relocatees, the relocatees will naturally choose housing options dispersed throughout the city. The distribution of the relocatees will decrease the number of relocated households entering each receiving community so that the receiving communities are not as aware of the influx of relocatees into their neighborhood and do not have an increased fear of perceived increases in criminal events. The indistinctness of these relocatees will minimize changes in the routine activities of receiving communities, thus minimizing changes in criminal opportunities and the likelihood of the relocatees becoming suitable targets relative to the whole community.

Appendix. Record-Matching Procedures

Detailed Procedures

Most of the crime and voucher data do not contain apartment numbers, and most voucher holders, by far, live in multifamily buildings. Although the voucher data provide full names and ages, to the extent that people may stay at a voucher household but not be reported in the voucher data, we would not be able to connect the crime with the correct household.

We created decision rules for connecting households, which we organized into three groups—exact matches, probable matches, and nonmatches. For all addresses where we matched crimes on street address alone (before incorporating unit number information), we applied the following rules.

Exact matches

- If the apartment number exists for both sides of a crime-and-address pair and it is a match, then the crime-and-address pair is an exact match.
- If the address reported is a single-family unit, as reported by the Cook County Assessor's Office, then the crime-and-address pair is an exact match.
- If the first and last names in the crime file exactly match the first and last names of anyone living in the voucher household, the crime-and-address pair is an exact match.

Nonmatches

- If the apartment number exists for both sides of a crime-and-address pair and it is not a match, then the crime-and-address pair is a nonmatch.
- If the crime can be matched exactly, using the preceding rules, to someone in the database of all voucher holders who are not relocated voucher holders, then the crime-and-address pair is a nonmatch.

Probable matches

- If a crime-and-address pair is an exact match according to the preceding rules, it is a 100-percent probable match.
- If a crime-and-address pair is a nonmatch according to the preceding rules, it is a 0-percent probable match.
- If a crime-and-address pair is matched on last name but not first name, and the unit is in a multifamily building with five or fewer units, it is a 100-percent probable match.
- If a crime-and-address pair does not meet any of the three preceding criteria, it is assigned a probable match score between 0 and 100 percent calculated by the inverse of the number of apartments at the address at which the unit is located (that is, a unit with four apartments would receive a 25-percent probable match score). The data for number of apartments are from U.S. Postal Service postal drops as of 2012, purchased from MelissaData, and is thus subject to some error (crimes from 2008 with addresses from 2012).
- In a few cases in which no data on the number of apartments in a building were available, the median number of apartments (two) at addresses of relocated households in the 12 tracts was used.

As should be understood from the preceding description, the probable match group is an estimate of the match rate for a tract. For all those cases for which we did not have enough information for an exact match in our pool of potential matches, we constructed the estimate by assessing the probability of a match, not by defining each case in this group as a match or nonmatch. In all tracts, for all types of crime, some number of arrests and incidents cannot be linked with certainty to voucher households. When comparing the rate at which voucher holder households are associated with crimes, either incidents or arrests, with the rate for all households in the tract, we can base our interpretation on several scenarios.

- The rate for definitely matched voucher holders is higher than it is for all households. In this case, we can report that voucher holders are definitely more likely to be victims or alleged perpetrators.
- The rate for definitely matched voucher holders is lower, and the highest rate based on probable matches is also lower. In this case, we know that that the arrest or incident rate is lower for voucher holders than the general population.
- The rate for definitely matched voucher holders is lower, and the “most likely a match” rate is higher. In this case, we will report that voucher households are probably, but not definitely, more likely to be connected to arrests or incidents than the general population. Whereas the “most likely a match” rate is usually not much higher than the definite match rate, the rate for all potential matches is often much higher.
- The rate for definitely matched voucher holders is lower, and the “most likely a match” rate is also lower, but the highest possible rate is higher. We can report that the arrest or victimization rate is probably lower for voucher holders than the general population. We can’t be certain, however.

Strengths of Our Approach

We are able to analyze the associations with crime both for the group for which we are certain of the match and for the larger group for which the association is probable. Because we have followed conservative rules for this estimate, we are confident that the probable match estimate is a reasonable representation of the actual association.

We are examining neighborhoods with relatively high levels of relocated households, which reduces the risk of spurious or coincidental associations. When possible, we look at data in the aggregate across neighborhoods and broken out by neighborhood, type of crime, and household characteristics.

Shortcomings of Our Approach

We have a particular issue with having street addresses that match but being unable to match apartment numbers. This issue creates a range of addresses that may or may not be matches with our voucher holder sample. We are able to do some matching on resident names, but it is possible that people not on the voucher record are living in the voucher holder's residence. In those cases, it would be appropriate to consider the crime as associated with relocation.

Our comparison is against the population of a tract in general, so the analysis is only as strong as the extent to which the full tract population is comparable with the relocated voucher holders. Voucher holders may have victimization rates similar to those of other households in the same type of housing, but if that housing is a minimal part of the stock in a given tract, our analysis will not be fine grained enough to detect the similarity.

Although we are able to match some names, we are primarily matching the address of the incident or arrestee with the address of the voucher holder. Therefore, we are identifying whether specific voucher households, not the voucher holders, are connected to incidents or arrests. This approach is complementary to our model, which detected an effect based on the movement of voucher households, but it still leaves us with some questions on the role of official and unofficial household members. We try to address the issue in the results section by looking at characteristics of arrestees and victims, particularly age, and voucher household characteristics.

Acknowledgments

The authors thank George Galster and Wesley Skogan for their valuable contributions to the methodology and report. At the Urban Institute, the authors are grateful for the graphic design contributed by Timothy Meko. They acknowledge the John D. and Catherine T. MacArthur Foundation and Chicago Housing Authority (CHA) for their generous support of this work. Finally, the authors acknowledge the CHA for its collaboration, transparency, and commitment to evidence-driven policymaking, and they acknowledge the Chicago Police Department (CPD) for support and data access. The findings and conclusions presented are those of the authors and do not necessarily reflect the opinions of their funders; the CHA; the CPD; or the Urban Institute, its trustees, or its funders.

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