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Encouraging Residential Moves to Opportunity Neighborhoods: An Experiment Testing Incentives Offered to Housing Voucher Recipients

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ABSTRACT

Substantial benefits can accrue from living in low-poverty neighborhoods, yet approximately 80% of the 2.2 million Housing Choice Voucher (HCV) recipients rent homes in moderate- or high-poverty census tracts. The Chicago Regional Housing Choice Initiative tested several ways to promote opportunity moves. It included the first experiment that tests whether two types of light-touch incentives induce opportunity moves for HCV recipients who had requested a moving voucher. Based on the 2,005 HCV recipients in the study, we found that neither the offer of a \$500 grant nor the offer of a \$500 grant coupled with free mobility counseling induced opportunity moves. The receipt of mobility counseling also did not boost opportunity moves. Regardless of the type of offer, 11%–12% of participants moved to opportunity neighborhoods. Despite requesting a moving voucher, half of the study participants remained in place, indicating significant barriers to moving. We offer potential reasons for the results and conclude with two recommended pilots to increase opportunity moves.

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1. Introduction

Recent research underscores the importance of neighborhood context for adults' and children's outcomes. One strand of this research identifies long-term benefits to adults and children of moving from high-poverty to lower poverty neighborhoods (Chetty & Hendren, 2015; Chetty, Hendren, & Katz, 2015; Ludwig et al., 2011). A second strand identifies the distressing rate at which African Americans, in particular, live generation to generation in high-poverty neighborhoods (Jargowsky, 2015; Sharkey, 2013).

In recognition of both of these facts, the Department of Housing and Urban Development (HUD) has pursued policy reforms to enhance the rate at which families with federally funded Housing Choice Vouchers (HCV)—48% of whom are led by African Americans—move to neighborhoods where there are lower concentrations of poor people and racial minorities. Throughout this article we refer to these upwardly mobile moves as opportunity moves. Despite recent efforts, it remains the case that about 80% of the 2.2 million HCV recipients rent homes in moderate- or high-poverty places (McClure, Schwartz, & Taghavi, 2015).

One of the HUD-funded reforms to promote opportunity moves is a pilot called Chicago Regional Housing Choice Initiative (CRHCI), which was an opportunity to expand the regional work of PHA in the Chicago, Illinois, area to test various strategies to facilitate opportunity moves. CRHCI implemented three types of interventions: (a) a regional waiting list for subsidized rental housing located in opportunity

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areas in the Chicago metro area; (b) a centralized entity providing portability assistance to HCV recipients; and (c) two types of relatively low-cost incentives for HCV recipients to move to opportunity areas in the Chicago metro area. This evaluation examines CRCHI's third component: an experiment to test two types of light-touch interventions as an alternative to more intensive and expensive mobility counseling that is thought to be effective at achieving opportunity moves but is harder to take to scale. From November 2012 to October 2014, seven public housing authorities (PHAs) in the Chicago metro region held mandatory in-person briefing sessions for HCV moving voucher requestors. The briefing sessions were randomly assigned by the researchers to one of three types of briefings: (a) business as usual, that covered the standard information about moving with a voucher; (b) a briefing that supplemented the standard information with the offer of a \$500 grant if households used their voucher to move to a home in an opportunity neighborhood; (c) a briefing that supplemented standard information with the offer of both a \$500 grant and free mobility counseling.

To our knowledge, there is no prior study that has rigorously tested whether residential mobility counseling—whether low- or high-intensity—in and of itself increases opportunity moves for regular housing voucher recipients. In fact, there is no experimental evidence that demonstrates that any type of incentive or encouragement (aside from the combination of restricted-use vouchers and mobility counseling such as were used in Moving to Opportunity [MTO]) is effective at boosting voluntary opportunity moves. This study addresses this gap, since we examine the effects of offering two types of light-touch incentives intended to cause voluntary opportunity moves among recipients of regular HCV.

1.1. Research Questions

In this evaluation, we pose and answer four research questions:

1. Did the offer of two types of incentives (\$500 grant; \$500 grant plus mobility counseling) induce voucher holders to move to opportunity neighborhoods?
2. Did the take-up of counseling induce voucher recipients to move to opportunity neighborhoods?
3. Did the offer of two types of incentives and the take-up of counseling induce voucher recipients to move to more advantaged neighborhoods, if not opportunity neighborhoods?
4. What is the profile of voucher recipients who move to opportunity neighborhoods?

1.2. Methods

To answer these questions, we implemented a field experiment. Between November 12, 2012, and October 31, 2014, RAND researchers issued automated emails to selected PHA staff at seven housing authorities asking the designated staff person to offer one of three types of moving briefings (the type was selected at random by RAND). Using names from the sign-in sheets from the randomized briefings merged with longitudinal records with families' residential addresses, we examined whether either incentive induced households to move to opportunity neighborhoods or higher quality neighborhoods. Methods are described in more detail in Study Context and Implementation and in the online supplementary Technical Appendix.

1.3. Limitations

There are three notable limitations of this study. The most important one was our inability to verify in all cases that PHA staff complied with the randomized emails dictating which type of briefing to offer. Although we sought to implement rules to ease and check compliance and a local subcontractor audited a sample of the briefings, we cannot be certain that staff offered what the sign-in sheets indicated they offered. We account for known discrepancies between the randomized and actual offered incentive. A related limitation is that we relied on briefing sign-in sheets to record study participants, and PHA

staff were not able to fill in missing data for those who did not sign in or to correct illegible names, resulting in the loss of total participants in the study. The third limitation is that the scope of the study did not include longer term data collection about families once they moved; instead, this study was designed to answer the first-order questions of whether offering two forms of light-touch incentives would induce opportunity moves.

1.4. Overview of the Article

In Section 2 Motivation and Prior Research we provide context for the study by describing prior research about the two types of incentives. In Section 3, we provide context for the study by explaining CRHCI overall, and how the study was administered. In Section 4, we explain the data and methods we employed, and we present results in Section 5. In Section 6 we offer a set of recommendations for future research about mobility counseling.

2. Study Motivation and Prior Research

In this section, we first describe the problem that motivated Chicago-area PHAs to pilot CRHCI. We then summarize prior research about the two incentives offered in this study. Since the term *mobility counseling* includes a bundle of services that have varied substantially in intensity and by locality, we devote most of this section to a detailed examination of the differences among major voluntary mobility programs for housing voucher recipients.

2.1. The Problem

Experimental and quasi-experimental research has established that moving from high-poverty to lower poverty neighborhoods has beneficial effects over the longer term, especially for children (for recent results see Chetty & Hendren, 2015; Chetty et al., 2015; Ludwig et al., 2011). Yet analyses of the largest tenant-based subsidy program in the United States—the HCV program¹—which theoretically allows low-income voucher recipients to make upwardly mobile residential moves reveals that such moves are relatively uncommon. The most recent national data about the voucher program indicate that 21% of voucher recipients rent homes located in low-poverty neighborhoods with 10% or less poverty (McClure et al., 2015). This is essentially the same proportion of voucher holders who lived in low-poverty census tracts a decade prior.

With these and similar results in mind, HUD and housing mobility advocates have sought policy levers to increase the rate at which HCV recipients move to low-poverty neighborhoods. For example, in 2015, HUD issued a major update to its Affirmatively Furthering Fair Housing Rule that significantly increases requirements for federal grantee jurisdictions like counties to identify barriers to fair housing in their jurisdiction as part of their comprehensive plan, which HUD reviews and approves. These more stringent stipulations could have the effect of increasing affordable housing in opportunity areas. The President's 2017 budget includes a new \$15 million mobility counseling pilot for 10 localities to test whether mobility counseling promotes opportunity moves. Other relevant policy changes include: piloting small area FMRs to capture finer grained housing market price differences that could increase the cap of the voucher for higher cost areas; streamlining portability procedures to make opportunity moves easier (Federal Register 5,453); and legal advocacy for source-of-income protection to prevent landlord discrimination against voucher recipients (PRRAC, 2015), which is correlated with voucher recipients' location in less racially segregated neighborhoods (Metzger, 2014). In addition, HUD (along with the Chicago Community Trust, The MacArthur Foundation, and Cook County Community Development Block Grant [CDBG] program) funded the Chicago-area pilot that is the subject of this study.

2.2. Barriers to Voucher Recipients Moving to Opportunity Neighborhoods

Researchers and practitioners have identified a long list of barriers that help to explain the relatively low rates at which HCV recipients move to opportunity neighborhoods. The most frequently mentioned ones include the following.

Low subsidy amount relative to prevailing market rents. The cap on the voucher subsidy is often too low for families to afford the rent in opportunity neighborhoods.² Although some PHAs have obtained permission from HUD to raise the cap through exception payment standards, it is generally in modest amounts and does not fully resolve the challenge that rents can vary significantly across a metro area. A metro-wide standard produces a voucher payment cap that does not make housing affordable in all locations within the region (Basolo & Nguyen, 2006; Edin, DeLuca, & Owens, 2012; McClure, 2006).

Lack of affordable rental housing in target areas. There is a limited supply of multifamily rental dwellings in low-poverty neighborhoods because of zoning stipulations (Pendall, 2000; Rothwell, 2012), and multifamily rentals tend to be more affordable than single-family ones are. However, the supply of affordable rentals³ in low-poverty census tracts exceeds the numbers of voucher recipients leasing homes in those places; McClure (2013) found that 26% of all affordable rental units in 276 metropolitan areas were located in low-poverty tracts, yet 19% of voucher households in those metro areas located in low-poverty tracts.

Time limits for the housing search. The vouchers that PHAs issue to tenants typically expire after 90 days, meaning the voucher recipients must locate a home, the housing authority must inspect it and approve it, and the tenant must enter into a lease with the landlord and the PHA must enter into a contract with the owner within that 90-day timeframe. Some PHAs have increased search time to 120 or even 180 days, but the combination of scarce housing combined with bureaucratic delays in processing vouchers can result in expired, unused vouchers for mobility moves (Pashup, Edin, Duncan, & Burke, 2005).

Landlord resistance to HCV. Documented discrimination by landlords against voucher recipients is widespread (Turner & Ross, 2005; Varady & Walker, 2003; Yinger, 1995). Landlord interviews have also identified a variety of other barriers, including up-front financial risk from longer lease-up times to fulfill HCV program requirements,⁴ unclear ways to gauge the financial soundness of a subsidized tenant, misunderstanding of the HCV program, costs of upgrading the unit to meet unit inspection requirements, and delays in rent payments from the housing authority (Greenlee, 2014; Pashup et al., 2005). By contrast, qualitative work has identified strategic practices by landlords in nonopportunity areas to recruit certain voucher recipients that are a captive market for hard-to-rent units (Rosen, 2014).

Administrative burden of porting. Moving from high-poverty to low-poverty neighborhoods can often require crossing a PHA jurisdictional line, which is possible to do with a housing voucher, but which triggers increased administrative burden for both the voucher recipient and the sending and receiving PHA (Edin et al., 2012).

Lack of public transportation for rental homes in opportunity neighborhoods. The lack of a car⁵ combined with lack of regular public transit service constrains voucher recipients' housing search and/or willingness to live in opportunity areas without public transit (Briggs, Comey, & Weismann, 2010; Dawkins, Jeon, & Pendall, 2015; Pendall et al., 2014; Rosenblatt & DeLuca, 2012). Voucher holders rank accessibility a top concern according to housing counselors (Varady & Walker, 2000, 2003).

Quality of home versus quality of neighborhood. In interviews and focus groups, voucher recipients have often expressed preference for higher quality housing—that is, more rooms, more square footage—over smaller units in lower poverty places (Boyd, Edin, Clampet-Lundquist, & Duncan, 2010; Rosenblatt & DeLuca, 2012; Wood, 2011). Thus, the type of affordable rental housing that is available in opportunity areas (e.g., an older walk-up garden apartment) may not be as attractive to voucher recipients compared with a more recently rehabilitated rental unit in a lower cost nonopportunity area.

Reactive moves. Based on 140 interviews with voucher movers, researchers identified that approximately 70% of moves were for reactive, unpredicted reasons like plumbing failures, heat outages, the sale of the unit that then required the tenant to move out, failed housing inspection for current voucher

recipients, or job loss (DeLuca, Rosenblatt, Wood, [forthcoming](#); Schacter, 2004; Wood, 2011). Urgency inhibits opportunity moves, which mobility counselors say require training of families, exposure to new places, advance planning, and, often, longer search times (Darrah & DeLuca, 2014).

Limited information. Qualitative research indicates that, especially when performing a housing search in a time crunch, voucher recipients turn to relatives, friends, friends of friends, or local *for rent* signs to find alternate rental housing, which has the effect of limiting their choice set (Hartung & Henig, 1997). Another common information source is the list of rentals that PHAs have on hand, which are often composed of landlords in nonopportunity areas who have added themselves to a rental housing list (DeLuca, Rosenblatt, Wood, [forthcoming](#); Pashup et al., 2005; Varady & Walker, 2007).

Limited resources, including time. A series of personal factors such as limited funds to conduct and enact the search, paying for a security deposit, paying for movers, health problems, and the lack of time to do searches are additional barriers to opportunity moves (Briggs et al., 2010; Cunningham & Popkin, 1999; Marr, 2005; Pashup et al., 2005).

Familiarity, social ties, acceptance. All else being equal, many families prefer a comfort zone where relatives or important social institutions like church are close by and where the family will not be socially rejected for their race and class (Charles, 2005). Of course, proximity to family and friends can also be a draining tie that can push renters out of their current neighborhood (Briggs et al., 2010). But there is evidence that those with fewer social ties to the old neighborhood are more likely to make opportunity moves (Briggs et al., 2010; Shroder, 2003).

2.3. Two Potential Ways to Reduce Barriers: Mobility Counseling and Financial Incentives

2.3.1. Mobility Counseling

Given the focus of the CRCHI pilot, we limited our review to mobility programs that HCV clients voluntarily use and about which there is peer-reviewed, published research. We excluded from our review mobility services offered for mandatory relocations that occur when families are forcibly displaced from their homes because of either the demolition or the expiration of subsidized housing. As we describe below, voluntary mobility counseling programs fall on a spectrum of narrow to extensive services to clients. The mobility counseling offered in the Chicago experiment intentionally offered relatively fewer services so as to test a lower intensity and theoretically cheaper model, as detailed below.

Number of programs. Based on their 2015 scan, the Poverty and Race Research Action Council identified 15 voluntary mobility counseling programs currently operating in the United States, the largest of which are court-ordered desegregation remedies in Dallas, Texas, and Baltimore, Maryland, but the majority of which are smaller, locally funded programs. Although we are not aware of a comprehensive census of PHA mobility counseling programs, a 1997 scan identified 52 assisted mobility programs (Turner & Williams, 1997), indicating a decline in such programs for voucher recipients from the 1990s to today.

Features of mobility counseling. There is no uniform definition of mobility counseling, but it typically includes: (a) landlord outreach by organizations to identify landlords in opportunity areas who will accept voucher tenants; (b) counselors offering customized search assistance to tenants to support tenants' own search; and (c) modest transportation subsidies to clients to help them view units. As Tables 1 and 2 reveal, that generic definition masks meaningful distinctions among the largest and best-known mobility counseling programs.

Table 1 summarizes the program design features of the five current or former voluntary mobility programs for either public housing residents or voucher recipients about which there is peer-reviewed published research. It reveals that the opportunity-oriented mobility counseling programs operate within highly varied policy contexts, ranging from court-ordered remedies with specially funded vouchers to mobility programs that operate within the regular HCV voucher program.

Table 2 documents the substantial variation in the amount and intensity of counseling services offered through each mobility program. Programs range from a more counselor-led approach (as typified by the early years of the Gautreaux One program) to a more client-led approach (as typified by the

**Table 1.** The program features of voluntary housing mobility programs for Housing Choice Voucher clients.

Counseling features	Gautreaux One suburban moves (G1)	Moving to Opportunity (MTO)	Gautreaux Two (G2)	Housing Opportunity Program (HOP)	Baltimore Housing Mobility Program (BHMP)	Chicago Regional Housing Choice Initiative (CRHCI)
Years of operation	1976–1998	Families enrolled 1994–1998	2002–2005	1998–2010	2003–current	2012–2014
Definition of opportunity	≤30% African American	≤10% poverty	<23.49% poverty <30% African American	≤23.49% poverty	Until 2015, ≤10% poverty, ≤30% African American, ≤5% subsidized housing residents; after 2015, composite index	Generally, tracts rated 6–10 on a HUD-created index factoring in poverty, housing stability, job and transit access, school quality, and employment
Targeted vouchers that must be used in opportunity area	✓	✓	✓		✓	
Regional administration of vouchers	✓	✓	✓		✓	
Geographic area of operation	Chicago metro	Baltimore, Boston, Chicago, Los Angeles, New York	Chicago metro	Chicago	Baltimore metro	Chicago metro
Program administrator	Leadership Council	Eight different nonprofit organizations	Leadership Council, then Housing Choice Partners	CHAC Inc. (subsidiary of Quadel)	Metro Baltimore Quadel, then Baltimore Regional Housing Partnership	Housing Choice Partners
Nonprofit administrator administered vouchers	✓				✓	
Voucher payment standard as percentage of Fair Market Rent	120	100	100	110	Up to 130	90–140%*
Time limit for housing search	180 days	90 days	180 days to unlimited	90 days with extensions	180 days with extensions	90–180 days
Length of stay requirement	1 year minimum	1 year minimum	None	None	2 year minimum	None
Client eligibility restrictions	<ul style="list-style-type: none"> • CHA PH tenant or PH waiting list • No more than four children • No history of late rent payments • Pass house-keeping check 	<ul style="list-style-type: none"> • Current PH tenant in high poverty neighborhood within five cities • Must meet Section 8 program criteria • Must have children under 18 years old 	<ul style="list-style-type: none"> • CHA PH tenant or PH waiting list • Current on rent • No misdemeanor convictions in past 2 years • No damage to public housing home 	<ul style="list-style-type: none"> • In HCV program for at least 1 year • Live in nonopportunity tract 	<ul style="list-style-type: none"> • Current or former HABC family PH tenant, on PH or HCV waiting list, or resident of certain areas of Baltimore • City • To qualify for HCV, must have paid off utilities and PHA debts; and no live-in family member who committed a violent or drug-related crime in the last 5 years • Must have children under 18 years old 	<ul style="list-style-type: none"> • In HCV program for at least 1 year • Requested a moving voucher • Live in nonopportunity tract

(Continued)

Table 1. (Continued)

Counseling features	Gautreaux One suburban moves (G1)	Moving to Opportunity (MTO)	Gautreaux Two (G2)	Housing Opportunity Program (HOP)	Baltimore Housing Mobility Program (BHMP)	Chicago Regional Housing Choice Initiative (CRHCI)
Proportion of those who got at least some counseling who moved to opportunity area as defined by that particular mobility program	19% (325/1,700)	47% (855/1816) (33% rate in Chicago) ^a	36% (200/549)	21% (19% among CHA nonHOP participants)	35% (3,392/9,730)	32% (139/436)
Cost per lease-up in opportunity area (not adjusted for inflation) ^a	Not available	\$3,077	Not available	\$3,528	\$3,235	\$2,869

Note. ^aCost estimates are generally from the mobility counseling agencies and do not employ uniform cost categories.

CHA = Chicago Housing Authority. PH = public housing. HABC = Housing Authority of Baltimore City. Note that for MTO, the lease-up rate is for the entire experimental group, and approximately 1/3 did not complete counseling. In CRHCI, the payment standard varied from a low of 90–100% in Waukegan to a high of 111–125% for opportunity areas in Cook County (until Cook converted to Small Area Fair Market Rents, at which point it was 70–140% based on zip code).

Sources: G1: Rubinowitz & Rosenbaum, 2000; Polikoff, 2006; Christine Klepper email communication October 7, 2015. G1 lease up rate: Goering, Carnevale, & Teodoro, 1996; MTO: Feins et al., 1997; Sonbonmatsu et al., 2011; Jennifer O'Neil email communication October 8, 2015. MTO lease-up rate: Orr et al., 2003; MTO cost: Feins et al., 1997; G2: Pashup et al., 2005; Boyd et al., 2010; Christine Klepper email communication October 7, 2015. HOP: Cunningham & Popkin, 2002; Cunningham & Sawyer, 2005; Jennifer O'Neil email communication October 8, 2015. BHMP: Engdahl, 2009; Darrah & DeLuca, 2014; Rachel Brash email communication October 9, 2015. BHMP cost (excludes postmove support): Rinzler, Tegeler, Cunningham, & Pollack, 2015. CRHCI: Christine Klepper email communication October 7, 2015. CRHCI lease-up and cost: HCP.

**Table 2.** The services provided by voluntary housing mobility programs for Housing Choice Voucher clients.

Services provided	Gautreaux One suburban moves (G1)	Moving to Opportunity (MTO)	Gautreaux Two (G2)	Housing Opportunity Program (HOP)	Baltimore Housing Mobility Program (BHMP)	Chicago Regional Housing Choice Initiative (CRHCI)
<i>Identify supply of affordable rental housing</i>						
Aggressive landlord recruitment in opportunity areas	Low-interest loans for developers if accept G1 tenants; landlord outreach dropped in later years	Varied by city	No	Varied, but typically 1–2 landlord outreach staff	✓	No
<i>Counseling services</i>						
Individual needs assessment (health problems, drug abuse, family conflict)	✓	✓	✓	✓	✓	✓
Housekeeping home visits	✓	✓ (Not all cities)	No	No	✓	No
Counseling is mandatory to receive housing assistance	✓	No	Orientation session mandatory	No	✓	No
Group orientation session	✓	✓	✓	✓	✓	✓
Workshops (e.g., budgeting, housing search)	✓	Varied	✓	✓	Four mandatory workshops	No
Individual counseling sessions	✓	Weekly contact	✓	✓	✓	Weekly contact
Free credit reports	No	No	No	Optional	✓	Optional
Credit counseling	As needed	As needed	No	No	✓	No
Budgeting skills	No	As needed	No	✓	✓	✓
<i>Housing search assistance</i>						
Tours of potential neighborhoods	✓	✓	No	✓	✓	No
Families placed on waiting list for preidentified homes	✓	No	No	No	No	No
Counselor provides lists of available units (either from public sources like Trulia or from self-developed lists)	No	✓	✓	✓	✓	✓
Counselor shows units to client	✓	0.2 units/client in Chicago; up to 2.5 in LA	No	✓	✓	✓ (For approx. 1 in 12)
Counselor monitors that lease-ups are not concentrating in particular neighborhoods	✓	✓	No	✓	✓	No
Counselor ensures that lease-ups are not adjacent to vacant or abandoned homes	No	No	No	✓	✓	No
Program provides transportation to visit units	As needed	As needed	As needed	As needed	Routinely	As needed

(Continued)

Table 2. (Continued)

Services provided	Gautreaux One suburban moves (G1)	Moving to Opportunity (MTO) Gautreaux Two (G2)	Housing Opportunity Program (HOP)	Baltimore Housing Mobility Program (BHMP)	Chicago Regional Housing Choice Initiative (CRHCI)
Counselor contacts landlords about units on behalf of clients	✓	3/4 in LA and NYC; less than 1/2 in Boston, Baltimore, and Chicago	✓	✓	No
Counselor accompanies voucher recipient on unit visits	More often in the beginning	25% in Chicago; up to 79% in Baltimore	✓	✓	✓ (For approx. 1 in 12)
Counselors inspect potential homes separate from Housing Quality Standards (HQS) inspection	✓	No	During some, but not all, years	BHMP staff do inspections	No
Expedited HQS inspections	✓	No	✓	✓	No
Counselor assists with arranging inspections and lease approvals	✓	Special leasing officers in each PHA	✓	✓	As needed
Counselor negotiates directly with landlords	✓	✓	✓	✓	Initial guidance to landlords about leasing process and answered Qs about rent determination
Moving-cost assistance	No	No	Loan later converted to \$500 grant	✓	\$500 grant
<i>Postmove support</i>					
Counselors conduct postmove calls	✓	No	✓	✓	✓
Counselor conducts postmove home visits	✓	✓	✓	✓	✓
Assistance to purchase car	No	No	No	✓	No
Landlord mediation	No	No	✓	✓	No
Referrals to social service agencies	✓	No	✓	✓	No

Note. CHA = Chicago Housing Authority. PH = public housing. HABC = Housing Authority of Baltimore City.

Geographic locations: Chicago, IL; Baltimore, MD; Boston, MA; Los Angeles, CA; New York, NY.

Sources: G1: Rubinowitz & Rosenbaum, 2000; Polikoff, 2006; Christine Klepper email communication October 7, 2015. MTO: Feins et al., 1997; Sonbonmatsu et al., 2011; Jennifer O'Neil email communication October 8, 2015. G2: Pashup et al., 2005; Boyd et al., 2010; Christine Klepper email communication October 7, 2015. HOP: Cunningham & Popkin, 2002; Cunningham & Sawyer, 2005; Jennifer O'Neil email communication October 8, 2015. BHMP: Engdahl, 2009; Darrah & DeLuca, 2014; Rachel Brash email communication October 9, 2015. CRHCI: Christine Klepper email communication October 7, 2015.

counseling program in this study and its most similar counterpart, the Housing Opportunity Program or HOP).

Taken together, the two tables comport with the general points that Cunningham et al. make in their 2010 scan of mobility assistance programs: these programs set the bar for opportunity neighborhoods at different levels; carry different counselor caseloads and stipulate different counselor qualifications; lack funding for long-term implementation; generally do not collect outcomes data or cost data in a comparable way; and have varied landlord outreach mechanisms.

The five programs included in Tables 1 and 2 are arranged left to right by the start date for the mobility counseling program. The first is Gautreaux One, which was a court-ordered desegregation remedy for families living in or on the waiting list for Chicago Housing Authority public housing (see Rubinowitz & Rosenbaum, 2000). MTO, by contrast, was a randomized controlled trial that offered restricted-use vouchers to a randomly selected group of public housing recipients in five cities who lived in tracts where 40% or more of the neighborhood population lived in poverty (see Sonbonmatsu et al., 2011). Gautreaux Two was a continuation of the Chicago court-ordered remedy, but was a second iteration of mobility counseling with distinct features from the first (see Pashup et al., 2005). HOP was funded by the Chicago Housing Authority and is the other program listed in Table 1 besides CRCHI that involved regular rather than special-purpose housing vouchers (see Cunningham & Popkin, 2002). Finally, the Baltimore Housing Mobility Project is a court-ordered desegregation remedy for Baltimore City public housing tenants and it, too, involves special-purpose housing vouchers (see Darrah & DeLuca, 2014). As a reference for the reader, the final column indicates the features of the mobility program examined in this study, which we describe in more detail in Section 3.

Based on their extensive analysis of the eight nonprofit counseling agencies that worked in MTO, Feins, McInnis, and Popkin (1997, pp. A-112) identified the following five characteristics as “vital” for opportunity moves:

- motivating families to move to low-poverty places;
- informing families about suitable neighborhoods;
- locating units on behalf of clients;
- helping clients search effectively on their own; and
- intervening with landlords and PHA to ensure a lease-up occurs.

Taken together, the five characteristics indicate a fairly intensive counselor-led search process involving tours to expose clients to new neighborhoods, encouraging clients to keep up morale for opportunity moves, and, in some cases, providing services that a real estate agent would typically provide to find specific homes on behalf of clients (as opposed to generic lists of available rentals), and then acting in an advocate role on behalf of tenants by interacting with landlords and PHA during the lease-up phase. MTO counseling agencies also indicated as essential the postmove check-ins to help families integrate into their receiving neighborhoods for those needing the most intensive services, which has been confirmed in other research examining the longevity of postmove residency in the opportunity area (Boyd et al., 2010). The mobility counseling offered through CRCHI included the first two of the five characteristics and, more limitedly, the third and fourth characteristics. We describe CRCHI counseling in detail in Section 3 and discuss its potential implications in Section 5.

Profile of mobility movers. Prior research indicates that although the clients these mobility programs serve are quite disadvantaged, those who make opportunity moves are relatively more advantaged than those who do not. As shown in Table A1 of the supplementary Technical Appendix, opportunity movers tend to have smaller families (MTO, Gautreaux Two), younger heads of household, higher incomes (Cunningham & Sawyer, 2005), a car (or at least a license), and fewer health problems (Gautreaux Two); are more likely to be white than black (Gautreaux Two) and more likely to be black than Hispanic (MTO); and are less likely to have a disabled family member (Pashup et al., 2005; Shroder, 2003). As expected, greater vacancy rates in the local housing market are also positively associated with opportunity moves (Shroder, 2003). In MTO, which collected significant amounts of primary data at baseline, those in the

experimental group who successfully leased up were more likely to be dissatisfied with their current neighborhood, and expressed greater comfort with the idea of their child enrolling in a nearly all-white school and with moving a greater distance from the original neighborhood (Shroder, 2003).

Relationship between counseling and opportunity moves. MTO offers the closest approximation of the effect of counseling on opportunity moves in that it compares a randomly selected group of families who were offered a regular voucher with no locational constraint or counseling with a second randomly selected group of families who were offered both a restricted voucher (i.e., a voucher that could only be applied in tracts with equal to or less than 10% poverty) and optional, free mobility counseling.⁶ Shroder (2003) found that the geographic restriction on the voucher for the second group lowered lease-up rates by 14 percentage points, but that the intensity of counseling services counteracted and almost neutralized the penalty of the special housing voucher's geographic restriction. In other words, the intensity of counseling was positively correlated with opportunity moves. Qualitative analyses of the MTO counseling also found positive correlation between the intensity of counseling and the search (number of units identified by client, number of units identified by counselor, completion of counseling) and opportunity moves (Feins et al., 1997).

Additional studies of mobility counseling for voucher recipients examine the correlation between the intensity and type of counseling received, and generally find that it is positively associated with an increase in the rate of opportunity moves. For example, McClure (2006) identified the intensive mobility counseling from Gautreaux One as essential to achieving the remarkably durable opportunity moves; a majority of the families who had moved to low-poverty, white neighborhoods were still there 15 years later or more (DeLuca, Duncan, Mendenhall, & Keels, 2010; Keels, Duncan, DeLuca, Mendenhall, & Rosenbaum, 2005).

When taken together, these positive findings, although not causal, provide some indication that the more intensive the counseling, the greater the rate of opportunity moves. Further, qualitative research has identified several weaknesses about low-intensity counseling. Focus groups of mobility counseling participants indicate that voucher recipients can feel overwhelmed by information during the orientation session of counseling and then find it hard to access counselors during the housing search (Pashup et al., 2005; Popkin & Cunningham, 1999; Popkin, Galster, Temkin, Levy, & Richer, 2000). Examining Gautreaux Two, researchers noted that in having to conduct their own housing search and to call each time to learn if a home was in or not in an opportunity area, the mobility counseling placed a "considerable burden on even the ablest participants" (Pashup et al., 2005, p. 386). In the absence of tours or counselor-led identification of units, clients' lack of familiarity with the opportunity areas to which they could move also inhibited their search (Pashup et al., 2005).

The positive correlation between the intensity of counseling and the successful use of a voucher to lease a rental home in an opportunity neighborhood does not necessarily mean that counseling *caused* those moves, since families who self-select into intensive counseling may be more motivated and thus likely to move to opportunity areas. Further, the cost of intensive counseling—especially when factoring in longer term postmove counseling, which was not included in Table 1—can be prohibitive for already limited PHA budgets. Lowering the cost to PHAs of opportunity moves was one of the primary motivations for the CRHCl pilot and for HUD's investment in lower intensity offerings like a \$500 grant or a limited amount of counseling.

2.3.2. Security Deposit or Cash Assistance

Number of programs. To our knowledge, nine localities offer some kind of security deposit assistance as part of an HCV mobility strategy as of 2015: Baltimore, Maryland; Buffalo, New York; Chicago, Illinois; Connecticut; Dallas, Texas; Joliet, Illinois; King County, Washington; and Philadelphia, Pennsylvania (PRRAC, 2015; Rosenblatt & Cossyleon, 2015). However, we suspect this count is low, as a 2010 scan of 11 mobility counseling programs included other cities like Yonkers, New York; San Diego, California; Atlanta, Georgia; Boston, Massachusetts; Las Vegas, Nevada; and Pittsburgh, Pennsylvania, and reported that most of these cities offered heightened financial assistance for security deposits or moving costs for opportunity moves (Cunningham, Scott, Narducci, Hall, & Stanczyk, 2010).

Relationship between assistance and opportunity moves. Research about the effect of grants or low-interest loans for security deposits on mobility moves is virtually nonexistent. We were able to locate one study (Rosenblatt & Cossyleon, 2015) that examined security deposit assistance as relates to opportunity moves in Milwaukee, Wisconsin. The Milwaukee County Security Deposit Assistance program offered \$1,000 grants to HCV movers who leased an apartment in designated suburban localities. As of December 2014, a total of 179 HCV recipients had signed up to receive more information about the assistance, and 18 of them had successfully rented and leased the home (18 of 179 = 10%). The conclusion of that study was that the deposit incentive needs to be combined with other HCV policy changes to meaningfully boost opportunity moves.

2.4. Study Context and Implementation

In this section we describe the CRHCI. We then explain the incentives and how they were offered and administered. We refer readers to the supplementary Technical Appendix for a detailed explanation of each type of moving briefing, staff training, auditing of briefings, administration of the \$500 grant, and mobility counseling elements.

2.4.1. Overview of CRHCI

The CRHCI was a pilot that involved a year-long planning process and then ran from October 2011 to October 2014. The pilot had the following three components:

Component 1: Operate a regional project-based voucher program that aims to increase the supply of affordable housing in opportunity areas and form a regional waiting list to more efficiently lease developments.

Component 2: Create a portability procedure that could make portability easier for HCV clients.

Component 3: Test two types of light-touch incentives to induce HCV voucher recipients to move to opportunity neighborhoods.

CRHCI was implemented by a combination of seven PHA that are all in the Chicago metro area,⁷ the Metropolitan Planning Council (a regional policy and planning advocacy organization in Chicago) and Housing Choice Partners (HCP), a fair housing and mobility counseling organization. HUD provided \$1 million in funding for the pilot, and HCP raised \$397,433 additional funds to cover additional implementation costs.⁸

2.4.2. Definition of Opportunity Areas

With some exceptions that are explained in the supplementary Technical Appendix, CRHCI partners defined as opportunity any census tract in their region that had a rating of 6–10 on a HUD composite index that equally weighted six indexes about poverty, housing stability, job access, labor market engagement, school performance, and transit access. Tracts with a rank of 1 to 5 qualified as nonopportunity or traditional neighborhoods. Figure 1 shows a map of tracts rated 6–10 on the opportunity index scale.

Table 3 shows that the resulting demographic profiles of the opportunity neighborhoods had lower rates of poverty and non-White residents than the thresholds applied in any of the other major HCV mobility programs (see Table 1). Specifically, CRHCI used a definition that resulted in an average poverty rate of opportunity tracts of 6%, and 4% of the population was African American. By comparison, Chicago's HOP program defined as opportunity any census tract with less than 23% poverty.

2.4.3. The Process for Offering the Incentives

Unlike some of the mobility counseling programs we describe in Section 2 such as MTO, CRHCI focused exclusively on HCV participants who have been part of the HCV program for at least 1 year and were interested in moving to a different rental home with a voucher.⁹ After the client contacted the PHA to request moving papers, the PHA staff then scheduled the client to attend an in-person moving briefing held at the PHA's office. PHA staff typically informed the HCV client about the standing schedule of moving briefings (e.g., that they occur every Wednesday) and advised the client to attend the next

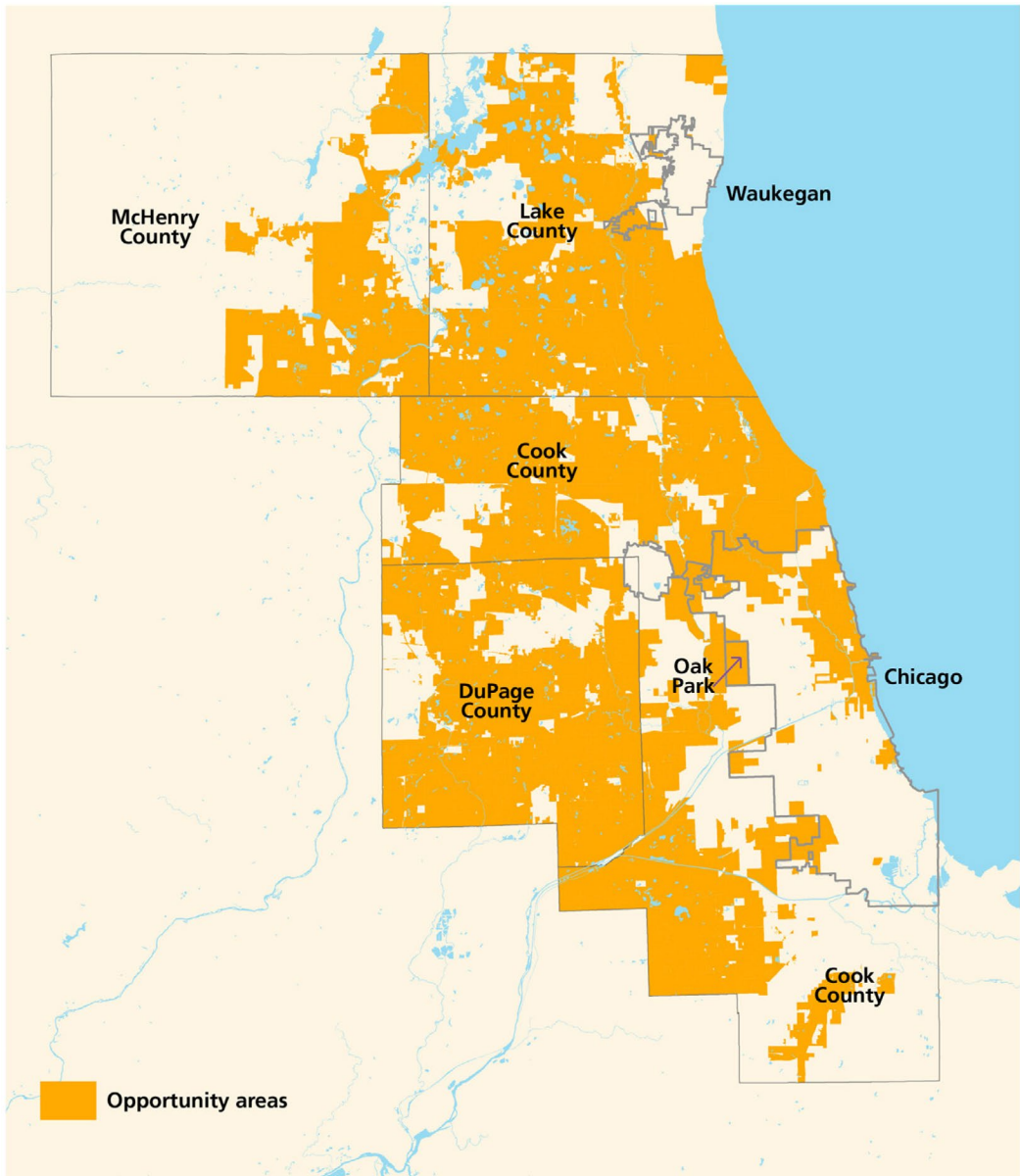


Figure 1. Map of opportunity areas. Source: HUD fair housing and equity assessment data. Source: Metropolitan Planning Commission, unpublished. Chicago, IL.

scheduled briefing. Depending on the size of the PHA's voucher program, these briefings may have occurred multiple times per week with large groups of people at each briefing, or in the smallest PHA the briefings could be one-on-one and performed on demand by PHA staff.

The head of household or actual voucher holder must attend this briefing. Attending the moving briefing was a precondition for the HCV recipient to receive a moving voucher. In other words, it was not possible for a HCV recipient to move from one apartment to another with a single voucher; the move triggered the expiration of one voucher and the issuance of a new one.

Table 3. Descriptive characteristics of opportunity tracts.

Place	Total number of census tracts	Tracts that are opportunity (%)	Opportunity tracts (%)				Rentals that are vacant
			Poverty	African American	White	Non-White Hispanic	
City of Chicago	809	40	8.7	5.9	56.1	28.8	5.4
Cook County	498	60	4.8	2.9	73.2	13.2	5.0
DuPage County	214	89	4.2	4.1	73.3	10.2	5.5
Lake County	124	78	3.7	2.2	78.8	9.7	4.9
McHenry County	52	71	5.1	1.1	83.9	10.9	5.3
Town of Oak Park	14	64	4.0	14.5	71.3	6.0	7.3
City of Waukegan	30	10	4.4	4.6	75.8	11.0	0.0
Total	1,741	55	5.9	4.1	68.4	17.3	5.2

Note. There were 862 tracts originally identified as opportunity tracts using 2000 Census boundaries. By 2010, the original tracts had split into 959 tracts per 2010 Census boundaries. All 959 are included here. Tracts are only counted once in the table—e.g., a Chicago tract that is also in Cook County is only shown for Chicago.

Source: 2013 5-year estimate American Community Survey tract-level data. 2014, Washington, DC: U.S. Census Bureau.

2.4.4. Moving Briefings

The moving briefing was the linchpin of this research study. It was the place where voucher recipients received their moving papers and a moving voucher. It was also the date at which the clock started on the housing search time limit; the voucher recipient must find a rental home for lease within as few as 90 days or, depending on PHA discretion, as many as 180 days in the case of some PHAs in the study.

RAND research staff emailed participating PHA staff who hosted the moving briefings with directions to offer one of three types of briefings (the type was selected at random). The auto email was delivered around 4 pm CST and referred to the type of briefing that was to be offered the next day. An example of the email is included in the supplementary Technical Appendix. Depending on the emailed directions, the PHA staff then offered to those HCV movers who happened to attend the moving briefing that day: (a) the business-as-usual moving briefing, (b) a moving briefing where a \$500 grant was offered, or (c) a moving briefing where a \$500 grant plus free mobility counseling was offered. See the supplementary Technical Appendix for detailed descriptions of each briefing type.

Business-as-usual moving briefing. The standard moving briefing typically consisted of the following subjects: (a) how the HCV program works; (b) family and owner responsibilities; (c) where the family can lease a unit, including information about portability. The briefing could take as little as 30 min or as much as 3 hours. Regardless of the length of the briefing, the session involved significant amounts of paperwork and documentation that the HCV participants were required to complete and/or receive under HUD regulations.

Moving briefing in which offer of a \$500 grant is made. The second type of briefing covered all the same information as the business-as-usual briefing with three additional elements of information: (a) an explanation of what opportunity areas are and the benefits of living in them; (b) tips about the housing search process, including the offer that “up to a \$500 grant will be available for moves to opportunity areas” and that the grants can be used for security deposits, moving expenses, utility deposits, or furniture; and (c) a folder with the referral form, opportunity maps, copies of the PowerPoint presentation, and a flyer about the \$500 offer. Attendees were encouraged to “sign up today” by completing a one-page referral form and to check addresses with HCP before signing a lease, along with a 1-800 number to call for HCP.

Moving briefing in which offer of a \$500 grant and mobility counseling is made. The third type of briefing was similar to the \$500 grant-only briefing created by HCP, except there was less housing search information provided since the participant would have a HCP family advisor to assist in the housing search. The briefing included talking points for the PHA staff person and a flyer about key components of mobility counseling with reference to a Family Advisor to help with the search. Attendees were also encouraged to “sign up today” by completing a one-page referral form and to talk with their family advisor at HCP before signing a lease.

2.4.5. *Mobility Counseling*

If a client indicated interest in counseling during the briefing session where counseling was offered, the PHA staff person then faxed to HCP the completed one-page client referral form. Upon receipt of the fax, the HCP family advisor then verified that the household's current residential address listed on the form was not in an opportunity area and thus that the family was eligible for counseling and the \$500 grant if they moved to an opportunity area. If the client was not eligible, HCP mailed them a letter to notify them of the fact. If the family lived in a nonopportunity area, the HCP family advisor then sent a welcome letter advising them about an upcoming orientation and letting them know that their family advisor would call the head of household to schedule them for a 2-hour orientation session, which is the mandatory first step in the counseling process.

The orientation session included an overview of opportunity areas, including the benefits and why a participant should consider such a move, where opportunity areas are located, how to search in these areas, and what to do if discrimination by landlords occurred. Other topics in the session included landlord interviewing techniques, explanation of leases, fair housing rights, an overview of landlord/tenant rights and responsibilities, financial management, and home maintenance. Each participant received a workbook to take home that covered these topics. The orientations were typically led by an HCP counselor and were the first step in helping a household move to an opportunity area.

After the orientation, households were then assigned to one of three HCP family advisors who worked with the participant one on one to secure housing in an opportunity area. Each family advisor covered a geographic area. The family advisor used the intake form that clients filled out at the orientation session to discuss and determine the household's needs, background, and desires for their upcoming move. It was the advisor's role to identify barriers that were likely to affect the family's ability to successfully lease in an opportunity neighborhood and to help remove those barriers.

After a conversation with the family to identify opportunity areas of interest to the family, the family advisor would then provide listings (usually by reading them over the phone) for units in or near the neighborhoods in which the clients expressed interest. Although HCP did not engage in new landlord recruitment as a part of CRHCI, HCP had developed relationships with landlords over the years as part of its other ongoing counseling initiatives, and some of those landlords continue to call HCP to list units. To develop the rental listings, the family advisor augmented listings from landlord-offered units with public listings from the Multiple Listing Service (MLS), Illinois Social Serve, Zillow, HotPads, Trulia, and PHA listings.

Seventy-two percent of counseled households that HCP recorded as moving to opportunity areas had at least one contact with a family advisor in which they were provided rental listings. The client was then responsible to set up the appointment to view the home, though in most cases HCP had already introduced the landlord to the program and therefore the landlord knew HCV recipients would call.

In a minority of cases—approximately 1 in 12 counseled families who HCP recorded as moving to opportunity areas—the family advisor showed apartments to the families. HCP also provided transportation as needed on a case-by-case basis, but many of their clients did not need transportation assistance. In most cases, counseling occurred by phone or email rather than office visits, especially considering there were three family advisors who each covered large geographical areas. During the search process, the client and family advisor were typically in contact at least once a week, and sometimes more frequently.

Once a counseled client moved to an opportunity area, HCP administered the \$500 upon receipt of a copy of the signed lease. Thirty days later, HCP then called with a wellness check with about 2 out of 10 clients to see how the transition was going and make referrals as needed to area social service supports. Ninety days after the move, HCP conducted a home visit with about 7 out of 10 counseled clients who made an opportunity move to see how the transition went, to check on any tenant or landlord issues, to discuss budgeting information with the family, and to check on the adults' employment status. Because of budget and staff limitations, HCP determined that the 90-day home visit was more important than the 30-day visit, so that participants had time to settle in.

Whereas there is no standard definition of counseling intensity, the counseling offered to families via CRHCI was of lower intensity than other counseling in mobility studies like MTO and Gautreaux One (see Table 2). In other words, the counseling offered in CRHCI was to support a client-led rather than counselor-led housing search.

3. Data and Methods

In this section we describe our sources of data, how HCV recipients were recruited into the study, the study sample, and PHA compliance with the randomization schedule for the HCV mover briefings. We also describe the outcome measures and our methods for analyzing the data. See the supplementary Technical Appendix for further detail on sources of data, randomization and compliance with randomization, and the analytic methodology.

3.1. Data Sources

The critical, originating data for this study are the PHA briefing sign-in sheets from November 2012 to October 2014, since sign-in sheets indicate the type of moving briefing received by the household and comprise the study sample (see Section 3 for details on the briefings). With data about the individuals who signed in on the sign-in sheets, HUD then used social security numbers or, when social security numbers (SSNs) were missing or incomplete, last name, first name, and date of birth to locate the relevant households within the Public and Indian Housing Information Center (PIC) data system. The PIC data¹⁰ were our source for longitudinal data that indicate households' residential addresses, date of moves, and households' characteristics over time. After HUD released de-identified longitudinal household data, we geocoded addresses to determine whether they were in opportunity census tracts and merged in census and school quality data to develop a neighborhood profile. Table A2 in the supplementary Technical Appendix shows the complete list of data sources.

3.2. Recruitment

The recruitment of HCV participants who had requested a moving voucher started on November 19, 2012, and ended on October 31, 2014, for all six housing authorities except for the Chicago Housing Authority, which is discussed in the next paragraph. Households who had attended the grant-only or the grant-plus-counseling briefings were able to claim a \$500 grant upon moving to an opportunity neighborhood or to receive counseling through January 31, 2015.

The Chicago Housing Authority was a special case and did not start randomization until April 3, 2013. The Chicago Housing Authority did not consent to offer business-as-usual briefings because it was already offering free mobility counseling to all HCV participants and did not wish to remove that offer entirely to create a control group. It was the only PHA that only randomized moving briefing attenders into the \$500 grant offer group or the counseling plus \$500 group (and not the business-as-usual group). Consequently, we exclude the Chicago Housing Authority clients from the causal analyses presented below.

3.3. Sample

Households were eligible to participate in the study if they had had an HCV for at least 1 year, requested a moving voucher from one of the seven participating PHAs, and lived in a nonopportunity census tract at the time of attending a moving briefing. Table 4 summarizes the loss in sample at each step of the data compilation process.

After dropping households who were not eligible for the study because they already lived in an opportunity neighborhood at the time of the briefing, we were left with a sample of 3,065 households. One thousand and sixty of these households held a voucher from the Chicago Housing Authority at the

Table 4. Sample size loss.

Research step	Number of households
Households who attended moving briefings for which RAND sent randomized briefing assignments	4,746
Households at the randomized briefings who opted out of the study	204
Households on sign-in sheets from moving briefings who consented to be in the study ^a	4,542
Number of unique households from sign-in sheets with either: (a) nine-digit social security number or (b) last name, first name, and date of birth	3,806
Number of unique households located in HUD PIC data	3,333
Number of unique households located in HUD PIC data and eligible for study analysis ^b	3,065
Analytic sample with CHA included	3,065
Analytic sample excluding CHA	2,005

Note. Table A2 of the supplementary Technical Appendix documents the loss of data from HCP records to HUD PIC data. HUD = U.S. Department of Housing and Urban Development; PIC = Public and Indian Housing Information Center; CHA = Chicago Housing Authority.

^aThis count includes duplicates if households attended more than one briefing and includes households living in opportunity areas and thus not eligible for the study.

^bEligible if the household did not exit the HCV program immediately after the briefing and either: (a) lived in nonopportunity neighborhood at time of attending the moving briefing, or (b) was porting in from outside of CRHCI boundaries.

time of the random assignment, and are excluded from a majority of analyses because Chicago did not offer the business-as-usual version of the moving briefing.¹¹ To these data we then merged in information from HCP to identify which households had obtained counseling or an incentive for moving to an opportunity neighborhood. Although there was data loss at several stages of merging different sources, because the data loss is not related to the outcome measure or the randomized group assignment, we do not believe that our results suffer from selection bias caused by sample loss.¹²

3.4. Compliance With Randomization

PHA staff did not always offer the randomized type of briefing. Compliance with the randomization varied by PHA (shown in Figure A1 of the supplementary Technical Appendix), and several PHAs systematically under-offered the business as usual briefings.¹³ In short, 70% of households that were randomized to receive a business as usual briefing did obtain that type of briefing, 88% of households randomized to receive the grant-only briefing did, and 96% of households randomized to receive the grant-plus-counseling briefing did. Given the differential nonrandom compliance by PHA, we conduct sensitivity analyses in which we drop the least compliant PHAs (Waukegan and DuPage).¹⁴ Our preferred specification, and the one we use to derive the results reported here, examines opportunity moves according to the intended, randomized briefing rather than the briefing actually obtained.

3.5. Measures

3.5.1. Outcomes

The analysis focuses on one primary and three secondary outcomes. The primary outcome of interest is an indicator for whether the household moved to an opportunity neighborhood after attending a randomized moving briefing. Using information about the date of the randomized briefing and the census tract where the household lived before and after the briefing, we defined this indicator to equal 1 if the household ever moved to an opportunity neighborhood after the briefing date and before December 31, 2014. If a household moved to an address outside the CRHCI boundary, we deemed the move nonopportunity regardless of the characteristics of the receiving neighborhood.

We also examined three secondary outcomes to gain a more nuanced understanding of whether households moved to more advantaged neighborhoods compared with the yes/no opportunity neighborhood designation.¹⁵ First, we examined whether families offered the two types of incentives were more likely to move to advantaged neighborhoods per the Neighborhood Advantage Score (Pendall & Hedman, 2015). The second outcome was an elementary school quality index that we created. Last,

we examined the percentage of neighbors who have income below the federal poverty level in the receiving neighborhood.

3.5.2. *Covariates*

To more precisely estimate the effect of offering the two types of incentives and the effect of taking up counseling on moves, we specified a regression model to control for any differences in household characteristics across the three groups. We controlled for head of household demographic characteristics, such as age, gender, ethnicity, disability status; an indicator for whether the household received wages, or received public assistance; and continuous measures of their current and permanent household income¹⁶ at baseline. We coded missing values of all covariates with an indicator. We also controlled for baseline neighborhood characteristics, such as percentage of households within the baseline census tract who are African American, percentage of households who were Hispanic, percentage of households with at least a bachelor's degree, percentage of households below the federal poverty level, rental vacancy rates, median home value, the quality of the zoned elementary school, and the median household income in the tract.

Table A4 in the supplementary Technical Appendix presents the summary statistics of the analysis sample overall, and by participating PHA. All of the summarized covariates were measured at baseline, before study participants attended randomized briefings. As the last column in that table shows, the heads of household in the study sample were primarily low-income African American females who received federal assistance in the form of Temporary Assistance for Needy Families (TANF) or Supplemental Security Income (SSI) and had a permanent income below \$12,000. Of these families in the study, 71% had school age children, which is defined as one or more children age 5–18. Those that had school-age children had an average of two. On average, they came from neighborhoods where approximately half of the residents were African American heads of household, 23% of neighbors lived in poverty, and the average household income was \$39,919.

These aggregate statistics mask substantial differences across households from the urban PHAs (Chicago and Cook), and those in the more suburban PHAs (DuPage, Lake County, McHenry, and Oak Park). For example, suburban neighborhoods had higher median house values and a lower fraction of neighbors living in poverty, whereas urban neighborhoods had a higher fraction of households where the head had a disability.

3.6. *Analytic Methodology*

Our analysis methodology is one used by similar studies employing an encouragement design and builds on residential mobility studies such as MTO. This study, however, only examines the short-term outcome of whether either of the two incentives offered induced HCV recipients to move to opportunity neighborhoods. Using standard specifications of intent-to-treat and treatment-on-the-treated effects, we developed regression-adjusted estimates of the difference in opportunity moves between the attendees at the business-as-usual briefings and the briefings where the two types of incentives were offered. The supplementary Technical Appendix describes these specifications in detail.

4. *Results*

In this section we organize the results by research question. After presenting the results for each, we then discuss the implications at the end of this section. Unless otherwise noted, we exclude Chicago Housing Authority study participants from the presented results since that housing authority did not offer the business-as-usual type of moving briefing.

4.1. Did the Offer of Two Types of Incentives Induce Voucher Recipients to Move to Opportunity Neighborhoods?

We first examined whether the offer of the \$500 grant, or the offer of the \$500 grant coupled with counseling, induced households to move at higher rates to opportunity neighborhoods than the business-as-usual group. Figure 2 presents the fraction of households who stayed in place, who moved to nonopportunity neighborhoods (*moved to non-ON* in Figure 2) and who moved to opportunity neighborhoods (*moved to ON* in Figure 2), according to the type of moving briefing. The left-hand bar chart displays moves broken down by the randomized moving briefings (per RAND emails), and the right-hand bar chart displays moves according to the moving briefing actually offered (per the briefing sign-in sheets).¹⁷ The results on the left can be causally interpreted; the results on the right show that, even when ignoring noncompliance with randomization, the opportunity move rates were largely the same across the three groups.

Looking at the left-hand bar chart, 12.2% of the group randomized to receive the control briefing moved to opportunity neighborhoods, 11.4% of the group randomized to receive the offer of only a \$500 grant moved to opportunity neighborhoods, and 12.1% of the group randomized to receive the offer of a \$500 grant plus counseling moved to opportunity neighborhoods. These percentages are similar to the right-hand bar chart, where opportunity moves are broken down by type of briefing attended. As shown in Table A5 of the supplementary Technical Appendix, the differences in opportunity move rates between the control group and the two treatment groups are not statistically significant.¹⁸ In summary, the offer alone did not induce opportunity moves.

The rates of opportunity moves differed substantially across the PHAs, with far higher opportunity move rates within the most advantaged suburban PHAs and the fewest in the most disadvantaged PHAs (Chicago, Cook County, Waukegan). Figure 3 displays the opportunity move rates by randomized group within each PHA. Note that in this figure we also included the Chicago Housing Authority, which did not offer business as usual moving briefings (and is thus excluded from the opportunity move rates shown in Figure 2). None of the differences in the fraction of households making opportunity moves between control and grant only or control and grant plus counseling groups shown in Figure 3 are statistically

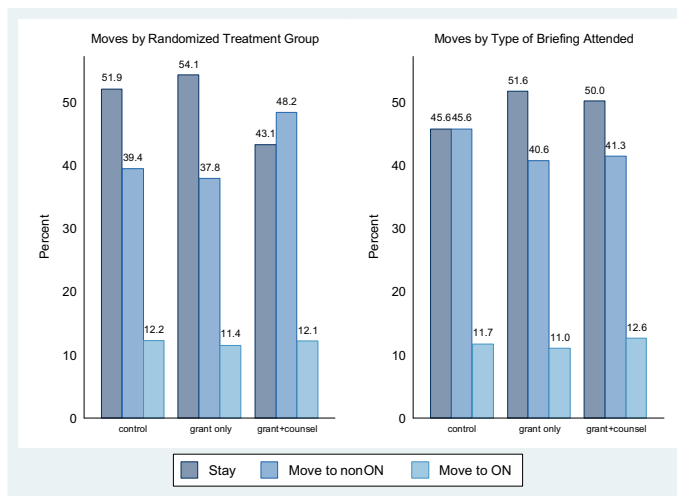


Figure 2. Opportunity moves by treatment group assignment and by briefing attended.

Note. Figure excludes households from CHA. In the left graphic (moves by randomized treatment group), the control group consisted of 1,955 households, 804 households who were supposed to be offered the grant only, and 610 households who were supposed to be offered grant plus counseling. In the right pane which ignores PHA noncompliance with the random offer and only examines what PHA offered as indicated by the color of the briefing sign-in sheet, the control group included 2,005 households, 791 who were offered the grant only, and 802 who were offered a grant plus counseling. The darkest gray bars called “Stay” represent households who stayed in place despite obtaining a moving voucher. The middle gray bars called “Move to non-ON” represent households who moved to nonopportunity neighborhoods. The lightest gray bars called “Move to ON” represent households who moved to opportunity neighborhoods.

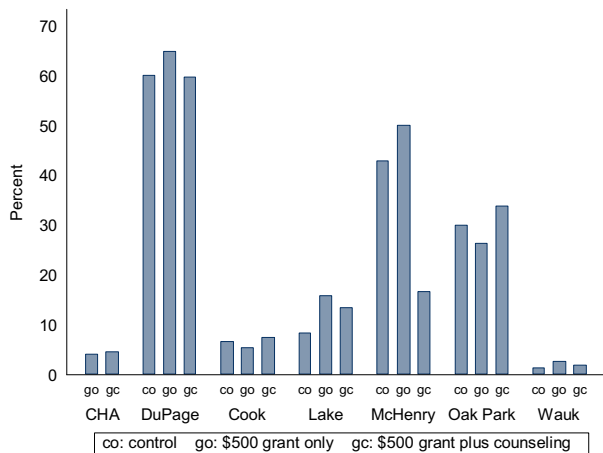


Figure 3. Opportunity moves by randomized treatment group and public housing authority.

Note. Number of households in the analysis by public housing authority (including control, \$500 grant only, \$500 grant plus counseling) are as follows: Chicago Housing Authority: 1,060 households. DuPage: 154 households. Cook County: 763 households. Lake County: 154 households. McHenry: 32 households. Oak Park: 146 households. Waukegan: 756 households.

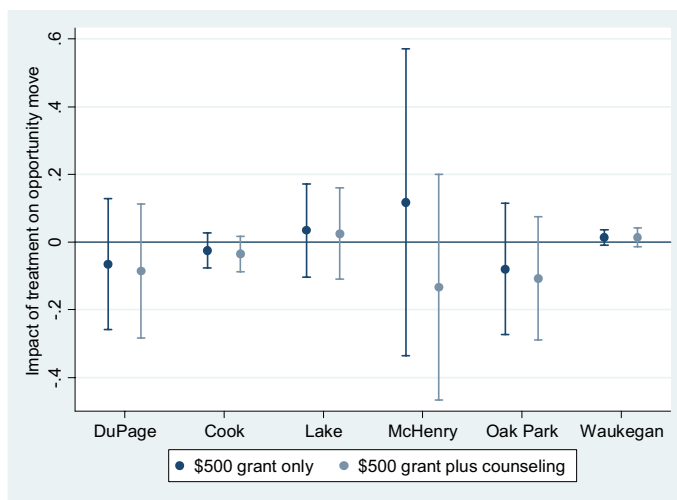


Figure 4. Opportunity move treatment effect estimates by public housing authority.

significant at the 5% significance level. Some notable trends are that DuPage had the largest fraction of households overall move to opportunity neighborhoods, regardless of the type of briefing offered. As shown in Table 3, 89% of DuPage census tracts were opportunity tracts (the highest proportion of the seven PHAs) and virtually all opportunity moves in DuPage were made by households that had ported into the PHA. McHenry had the next highest opportunity move rate, but this reflects only 32 households (see figure notes for number of households per PHA) and, like DuPage, the county also has majority opportunity tracts.

Figure 4 presents the impact estimates of the two types of incentives within each PHA to examine whether the offer of the grant or grant plus counseling had a statistically significant impact on opportunity moves in any of the PHAs. The dots in the figure represent the coefficient estimates, and the whiskers show the confidence interval around the estimate. The confidence intervals crossing zero in each instance indicate that none of the impact estimates is statistically significant in either the positive or negative direction. Chicago is excluded from Figure 4 since they did not offer the control group briefing, which is the basis of the comparisons in the figure.

We then examined whether the following four subgroups of households were more likely to move to opportunity neighborhoods: (a) households who ported into the PHA either from outside the CRHCI jurisdiction or across the participating PHAs; (b) households where the head is African American; (c) households that have at least one child under the age of 18; and (d) households where the head is over 65 years of age. Similar to what is shown in Figure 2, we found no statistically significant effects of either type of offer on any of the subgroups (results shown in Table A6 of the supplementary Technical Appendix). The impact estimates were generally small, positive and larger for the grant-plus-counseling group than the \$500 grant-only group, but not statistically significant.

To test the robustness of our results to alternative specifications, we ran four additional checks. None of them altered the findings. First, we examined whether households from DuPage drove the results since study participants from DuPage had the highest rate by far of opportunity moves. Second, we examined whether households who attended the briefing after September 1, 2014, and who may not have had sufficient time to have updated residential records within HUD PIC data were driving the results. Third, we examined an alternative definition of the randomized treatment by grouping households who attended multiple briefings according to the most intensive treatment they received (instead of the first treatment they received). Fourth, we dropped the two PHAs (Waukegan and DuPage) whose moving briefings were least compliant with randomization.

4.2. Did the Take-Up of Counseling Induce Voucher Recipients to Move to Opportunity Neighborhoods?

We next turned to analyzing whether those who took up at least some counseling among those offered the \$500 grant and counseling were more likely to move to opportunity neighborhoods using the three alternative definitions for counseling: whether the household at least attended the initial counseling session that was the mandatory first step in counseling; the number of contact attempts HCP recorded per client (including calls, mailed letters, and in-person meetings); and a yes/no indicator for whether HCP provided the client with rental listings. The coefficients are presented in Table A7 of the supplementary Technical Appendix, and they are all negative and not statistically different from zero, indicating that the counseling services as defined did not cause more households to move to an opportunity neighborhood.¹⁹ We also examined counseling receipt among the same four subgroups discussed above (results not shown), and also did not find any statistically significant coefficients on the take-up of counseling.

4.3. Did the Offer of Two Types of Incentives and the Take-Up of Counseling Induce Voucher Recipient Requesters to Move to More Advantaged Neighborhoods?

Although we did not find any effect of the offer of either incentive on the rate with which HCV recipients moved to an opportunity neighborhood, we were also interested in whether households in the two treatment groups were induced to move to higher quality neighborhoods using more granular data than the yes/no opportunity neighborhood designation. We examined three definitions of neighborhood quality: the neighborhood advantage score, the index of school quality, and the percentage of neighbors with incomes below the federal poverty line. In results shown in Table A8 of the supplementary Technical Appendix, we found that neither offered incentive induced households to move to a higher quality neighborhood.²⁰ Similarly, the take-up of counseling did not induce households to move to the higher quality neighborhoods, as shown in Table A9 of the supplementary Technical Appendix.

We reiterate that neither the offer nor the receipt of counseling in and of itself caused opportunity moves or moves to more advantaged neighborhoods when comparing the treatment with the business-as-usual control group. However, those who selected into counseling moved to more economically advantaged neighborhoods than other opportunity movers did. Among the opportunity movers, those who received counseling moved to neighborhoods with lower rates of poverty (6.55% vs. 8.24% among opportunity movers who moved on their own without any offer; difference statistically significant at

Table 5. Characteristics of households by type of move.

Household characteristics	Opportunity movers	Stayers and non-opportunity movers	Statistical significance of difference
Port-in (%)	47.16	12.83	34.34*
Head of household: white (%)	18.09	10.20	7.88*
Head of household: black (%)	83.69	90.80	-7.11*
% with income from wages	60.28	54.22	6.06***
% with income from TANF	63.48	56.95	6.52**
% with income from SSI	27.66	34.17	-6.51**
No. children in household	1.57	1.81	-0.24**

Note. Chicago Housing Authority residents are included in this table. TANF = Temporary Assistance for Needy Families; SSI = Supplemental Security Income.

* $p < .001$; ** $p < 0.01$; *** $p < 0.05$.

5% level) and higher median household income (\$72,899 among counseled opportunity movers vs. \$64,523 among opportunity movers who moved on their own; difference statistically significant at the 1% level). These results are shown in Table A10 of the supplementary Technical Appendix. Counseled opportunity movers also made the greatest distance moves—22.3 miles on average—compared with 17.8 miles for opportunity movers who got the \$500 grant only and 15.8 miles for opportunity movers who went on their own. The differences in distance of move are not statistically significant and are therefore only suggestive. Otherwise, opportunity movers of all types—that is, moved on their own, got counseled, got \$500 only—located in very similar neighborhoods on average in terms of the neighborhood advantage score, percentage of neighbors who are African American, and elementary school quality index.

4.4. What Is the Profile of Voucher Recipients Who Move to Opportunity Neighborhoods?

Next, to inform PHAs and mobility counselors to identify the client base most likely to make an opportunity move and to compare our results with prior studies of counseling, we pooled the study participants regardless of the type of moving briefing they attended and simply examined the demographic profile of those who did and did not move to opportunity neighborhoods. These results thus do not make any causal claims about the influences or traits that impel opportunity moves.

Table 5 displays those characteristics of households that are statistically significantly different across the type of move made (the full set of comparisons we made are shown in Table A11 of the supplementary Technical Appendix). Similar to what other studies have found (see Table A1 of the supplementary Technical Appendix), opportunity movers were much more likely to be porting in (47% vs. 13%), were more likely to have a white head of household (18% vs. 10%), were more likely to have somewhat smaller families (average of 1.6 children rather than 1.8 children), and were more likely to be employed (60 vs. 54%).

4.5. Discussion

In summary, neither of the light-touch incentives boosted moves to opportunity areas. Neither the offer of a \$500 grant alone nor the offer of a \$500 grant in combination with free mobility counseling induced opportunity moves for the study participants as a whole or among subgroups. The receipt of mobility counseling also did not cause opportunity moves. Between 11% and 12% of study participants who attended any of three types of moving briefings subsequently moved to opportunity neighborhoods. These two types of low-intensity incentives, as offered to this particular population of voucher recipients, did not have their intended effects.

Those who ported into a jurisdiction were significantly more likely to be opportunity movers, suggesting that HCV recipients who declare an intention to port are good candidates for promoting opportunity moves. Those who moved to opportunity neighborhoods also tended to have income from wages, to live in smaller families, and to come from more moderate-poverty neighborhoods in the first place. Those who selected into counseling and subsequently moved to opportunity areas tended to move

to more economically prosperous neighborhoods as compared with other opportunity movers from the grant-only or business as usual groups.

Putting these results into context is challenging since CRHCI was a pilot program with a number of unique features that limit its generalizability. This study examined families already in the voucher program who requested a moving voucher and who lived in nonopportunity neighborhoods at the time of that request. CRHCI households typically came from neighborhoods with much less poverty than, for example, MTO, and this could have reduced their motivation to make opportunity moves. An average of 22% of CRHCI participants' neighbors lived below the poverty line, compared with neighborhood poverty rates of 40% and higher within MTO.

The most similar program to CRHCI we identified is HOP, which also operated within the confines of the regular HCV program (and not court-ordered desegregation cases with specially allocated vouchers with different rules), was located in Chicago, and applied similar household eligibility criteria. The critical differences between the two were that CRHCI involved seven PHA whereas HOP involved one; HOP was a long-running program whereas CRHCI was new; and CRHCI applied a more stringent definition for opportunity neighborhoods, which could help to explain the lower average opportunity move rate in CRHCI (between 11% and 12%) versus HOP (between 19% and 21%). Nevertheless, both programs yielded minimal differences in the rates of opportunity moves between the counseled and the noncounseled. For HOP, 21% of those counseled moved to opportunity, whereas 19% of noncounseled also did so.

The relatively low-opportunity move rates in both CRHCI and HOP combined with the fact that Chicago had the lowest rate among the five MTO cities' opportunity moves suggests that the Chicago metro area has a particularly formidable set of barriers to opportunity moves. It is a highly racially and economically segregated metropolis in a state that does not have source-of-income protection (although the City of Chicago has since 1990 and Cook County has since 2013, along with a limited number of suburbs). This means that Illinois landlords outside of areas with the source-of-income protection may legally reject voucher applicants for the stated reason of having a voucher.²¹ Also, during the CRHCI study, rental vacancy rates were lower on average than the national rate (as of 2013, there was 5.2% rental vacancy in CRHCI opportunity areas, 6.3% in CRHCI area as a whole, and 7.3% nationally). Indeed, approximately half of the participants in the study wound up not moving at all despite requesting and obtaining a moving voucher.

Whereas we cannot isolate the contribution of each barrier, the cause of the relatively low rates of opportunity moves was likely the combined influence of the following 12 factors. We call these out to inform the design of future housing mobility programs. The first two relate to the housing market context in which CRHCI operated, whereas the third through eleventh barriers stem from the design and implementation of the CRHCI mobility policy. The final barrier is common to mobility counseling programs.

Barrier 1: Lack of affordable rental housing. The voucher payment standards, which ranged from 90% to 140% of the FMR, may still have been too low relative to the rental prices in the metro area during 2012–2014. There was also a relatively tight rental market. Smaller families were more likely to make opportunity moves, which comports with prior research about the challenge of finding three- and four-bedroom affordable rental homes within opportunity areas.

Barrier 2: A starting point of moderate poverty. Unlike Gautreaux and MTO where participants came from very high-poverty neighborhoods, the typical CRHCI participant lived originally in a census tract where 22% of neighbors lived in poverty. Although we found that those in our study sample who lived in relatively lower poverty neighborhoods were more likely to make opportunity moves, we qualify this point by underlining that only 13% of the study sample started in neighborhoods where poverty was 40% or greater. Living in moderate-poverty neighborhoods may have reduced the incentive to make an opportunity move.

Barrier 3: Stringent definition of opportunity. The CRHCI definition of opportunity neighborhoods set a high standard for opportunity moves. Although a little over half of all tracts in the region were deemed opportunity, the average opportunity tract had a poverty rate of 6%, and 4% of the population was African American. The fairly high threshold meant a relatively small proportion of HCV families made opportunity moves.

Barrier 4: No landlord recruitment. Neither HCP nor the PHA conducted any new landlord recruitment or outreach as a part of CRHCI. In addition, landlord discrimination and racial segregation are serious barriers for the predominantly African American HCV population in this study.

Barrier 5: Late timing of offer. The offer of the two incentives likely occurred too late in the housing search process. By the time a tenant requests moving papers (which turns on the time-limited search clock and, in this study, the randomized offer), many tenants will have already identified where they want to move. The offers might have had greater impact if they occurred well before voucher recipients had come forward to request a moving voucher.

Barrier 6: Low intensity of counseling. Limited resources inhibited the extent of counseling, which was primarily a client-driven search process and did not include a real estate specialist, counselor-led outreach to book housing viewings, van tours, or extensive transportation as other mobility programs have offered.

Barrier 7: Offer lost in the shuffle. The moving briefing is already information-heavy, and the offers of the incentives may have been too brief, or brought up too late during the briefing, and simply may not have stood out sufficiently or appeared simple and easy enough to be attractive.

Barrier 8: Incentive insufficiently attractive. The offer of \$500 may have been too small relative to the size of security deposits in the Chicago metro area (e.g., a two-bedroom FMR in Fiscal Year (FY) 2013 in Cook County was \$966). Also, the offer of \$500 was not in the form of cash to the mover, but rather a reimbursement paid to the landlord, the moving company, or furniture company, and was contingent on submitting proof of moving. This may have reduced its appeal as an incentive.

Barrier 9: Cumbersome look-up process. To learn whether a rental listing was in an opportunity neighborhood, clients had to call up HCP about each listing instead of typing an address into an interactive, online feature. This requirement to call the counselor about each listing was a design feature criticized within Gautreaux Two.

Barrier 10: New program. The counseling program was new and thus lacked the time to build word-of-mouth buy-in among clientele.

Barrier 11: Underresourced. CRHCI stretched too few dollars across a large set of activities, and it occurred in a context of limited PHA resources because of sequestration, staff turnover, and receivership. There were three components in CRHCI (this study examines only the third component), and each posed start-up costs and implementation challenges to coordinate across seven PHA.

Barrier 12: Poorly measured dosage indicator for counseling. HCP did not track the number of hours of counseling or direct active contacts (by phone or in person), which may have been a better metric of dosage than the three measures used in this study based on the data that were available (i.e., client attended at least the mandatory orientation session; tally of any type of contact or contact attempt from HCP to client; yes/no indicator of whether HCP provided rental listings to a client).

Even though CRHCI is unique, it still carries lessons for other HCV mobility efforts. The simplest reason is that CRHCI, unlike court-ordered remedies with special-purpose vouchers, operated within the confines of the HCV program and thus offers relevant lessons for other programs that are likely to confront many of the same constraints. We drew on the lessons learned above to develop recommendations for future HCV mobility pilots and research that we make in the last section.

Finally, we wish to note that the body of research about mobility counseling is seriously hampered by the lack of standardized measures (and a lack of published results) about the take-up rate among *all* those originally offered counseling, the drop-off along the way among counseled clients including those who stay in place, and the ultimate number of opportunity moves. Future research that both accounts for attrition among the counseled and tracks expenditures by mobility counseling activity would greatly aid practitioners' ability to pilot alternatives.

5. Recommendations

We conclude with two recommendations to test ways to boost the rate of HCV opportunity moves. We restrict our recommendations to mobility-based policies since that was the focus of the experiment.

Having said that, the limited supply of affordable rental housing in opportunity areas would be a significant barrier to making upwardly mobile residential moves if the numbers of HCV opportunity movers were to increase substantially. Consequently, place-based policy responses to build, acquire, or preserve affordable rental housing in opportunity areas (whether they be inclusionary zoning, preservation initiatives, or locating Section 8 place-based units in opportunity tracts) play a necessary, complementary role to people-based policies like mobility counseling or cash incentives paid to individuals.

To develop our mobility-related recommendations, we drew on the lessons learned from CRHCI, our literature review, and the input of housing mobility counselor experts (Christine Klepper and Jennifer O'Neil) and CRHCI's partners and advisors.

5.1. Research a Second-Generation Mobility Counseling Program That Operates Within the Traditional HCV System

The field lacks rigorous evidence about the effect of mobility counseling relative to no counseling within the standard HCV program. The majority of research available derives from special cases like court-ordered desegregation remedies and from MTO. For the sake of results that generalize to a much larger set of PHA with tenant-based HCV programs, we recommend a proof-of-concept study that examines a well-resourced, large, established mobility counseling program for HCV recipients to better understand the outreach, counseling, and ongoing resources needed to support households in choosing housing regionally in opportunity areas.

The program might be contracted out or run in-house by PHA staff. Ideally, the program could operate across multiple PHAs so long as the counseling program was administered in a comparable way in each PHAs. The structure of the counseling would include best practices such as counseling being offered to only a subset of high-priority families already in the HCV program. The eligibility criterion could be based on research about those most likely to benefit—such as families who declare an intention to port to another jurisdiction, families with children age 0–13, wage earners, or families living in high-crime areas.

Regardless of eligibility criteria, counseling should be offered well before the lease is due to expire, given the lesson learned in CRHCI and the need for precounseling services for at least some clients. Also, the counseling program should have been in operation for at least a year before the impact evaluation begins, to work out initial implementation kinks and to build word-of-mouth reputation among users.

When offered, there should be a differentiation of counseling that starts with initial needs assessment, after which counselors would place families into provisional categories such as: not interested, minimal services needed (e.g., wage-earning adults), and high-intensity services needed (e.g., unemployed). Those who are actively uninterested could simply be invited to come back if interested at a later time. In low-intensity counseling, counselors serve as cheerleaders for opportunity, starting with a van or possibly video tour of opportunity areas, and then the provision of minimal support for client-led housing searches, and fairly minimal postmove support such as via text messaging and periodic phone calling. In high-intensity counseling, counselors take a longer term approach that starts with precounseling case management to work on budgeting, credit repair, and expanded employment. Later, counselors shift into housing search assistance with a more directed approach in which counselors identify possible units for clients, arrange tours, negotiate with landlords, assist with final move-in preparation, and then offer postmove support to reduce the potential isolation of the relocatee or to negotiate with landlords.

The program should also place priority on landlord recruitment. Ideally, the counseling program would take an evidence-based approach to identify where affordable rental housing is located within opportunity areas, how many of those landlords are participating in HCV already, the profile of those landlords (size, ownership type), and the profile of the rental housing; and then would use real estate brokers or in-house trained PHA staff who are well versed in the HCV program to recruit and manage relationships with HCV landlords. The counseling program could also be linked to properties with project-based subsidies.

To keep it simple and understandable (as well as to reduce up-front planning time and cost), we recommend that the local program either identify zip codes as opportunity areas or else use a premade index, rather than create a new index from scratch. If the list of opportunity census tracts or zip codes is long, the program should make the index easier to understand and lower families' housing search transactional costs (as well as landlords') by creating an online tool in which users can enter an address and immediately learn whether it is in an opportunity area.

To test the efficacy of such a program, it is critical that the evaluation of the counseling program is designed up front—well before any client intake during the study period—including prespecification of the cost and counseling data categories researchers will collect, and the frequency of that collection. The primary objective is to design a study that can isolate the effect of high-intensity versus low-intensity versus no counseling. Efforts should be made in the design to limit crossover by, say, clients in the treatment group sharing the counseling information or resources with the control group. Data collection in the study should also be done in a way to allow researchers to distinguish the cost of the categories of counseling activity such as precounseling, landlord recruitment, housing search, postmove assistance, and the differentiated strands of counseling (low vs. high intensity).

5.2. Pilot New Landlord Outreach Methods and Landlord Induction Processes for the HCV Program

We hypothesize that a lack of affordable rental housing in CRHCI opportunity areas was a chief barrier that suppressed opportunity moves. Further, CRHCI did not involve any landlord outreach and limited mobility counseling services to match clients to specific, available rentals in opportunity areas (as opposed to providing clients with current rental listings in a target geographic area). All else being equal, the quality of landlord outreach predicts lease-up rates (Finkel & Buron, 2001), but PHA generally lack the staff time and capacity to sustain landlord outreach (Greenlee, 2011). However, the experience of long-running counseling programs serve as a caution about landlord recruitment; both Gautreaux One and MTO started with strong landlord outreach that decreased over time because counselors deemed it not that successful in yielding new, participating landlords.

Here, we offer a series of potential small pilots with the goal of developing processes that could then be formally tested in a research study at a larger scale. Given the exploratory nature of the pilots, we recommend formative rather than impact evaluations. Simple statistics could be collected to gauge the level of effort and cost relative to the numbers of affordable rentals identified in opportunity areas to determine which ideas merit further expansion.

Market analysis 1. After defining opportunity neighborhoods, solicit market analyses to identify affordable rental housing within opportunity neighborhoods and further identify owners of affordable rental housing to develop a profile of relevant landlords (small to large, housing typology, owner type). Then, analyze the profile of HCV participating landlords—their size, location, property type—and compare the market profile of opportunity-area landlords to understand which types of landlords are opting in and out of HCV.

Market analysis 2. Depending on the type of landlord(s) that are most desired to participate, develop a focus group of currently participating HCV landlords in the target neighborhoods to solicit their perceptions and understanding of HCV, barriers to entry, and what possible modifications to procedure could appeal to more landlords in opportunity areas to participate (e.g., the order in which the landlord-tenant lease is signed and landlord-PHA Housing Assistance Payments (HAP) contract is signed or expedited HQS inspections in opportunity areas).

Differentiated marketing materials. Develop targeted materials and programmatic tweaks for recruiting various types of landlords who own affordable rental housing and then conduct focus groups with those categories of landlords. Develop and test various marketing strategies to notify landlords in opportunity areas.

Change the default. Test the effects of PHAs providing to HCV voucher recipients: (a) a list and/or texting of available rental homes to clients where the homes located in opportunity areas are ranked

first and nonopportunity ranked second, compared with (b) a business-as-usual unsorted list of available affordable rental housing.

Learn from other programs. Survey other relocation programs such as those intended for homeless individuals to learn what strategies counselors have found effective to recruit landlords, and the level of effort required for those strategies.

Incentives to landlords rather than tenants. Test an incentive paid to landlords of affordable rental housing located in opportunity neighborhoods for signing leases with HCV voucher holders. Examples are a simple \$1,000 cash transfer, or offering a holding fee as a way to pay landlords for their lost rent while waiting for the several weeks it can take a PHA to complete the HQS inspection.

Use permit data. Utilizing municipal data, reach out to all multifamily rental property owners in a given municipality to identify the supply of opportunity area-located affordable rental housing. Offer owners the incentive of near-guaranteed demand for their rentals through the HCV or Place-Based Voucher programs.

Engage municipal leaders in opportunity areas. As a means of reaching landlords, engage municipal directors to bolster their local Affirmatively Furthering Fair Housing plans and to create a better database of rental housing providers in their jurisdiction.

Postmove landlord support. Test and market postmove landlord support offered to opportunity area owners (such as via mobility counselors) to help resolve tenant–landlord disputes.

In conclusion, the potential benefits of upwardly mobile residential moves compel housing practitioners to continue testing policies to ease voucher-based opportunity moves. Given the local variation among housing markets, it is unlikely that any one policy will work in all contexts. Based on the lessons learned from the Chicago experiment as well as prior research, we have suggested several pilots to test across a variety of housing markets with the goal of developing adaptable policies to promote mobility.

Notes

1. The HCV program is a federally funded program costing approximately \$19 billion per year that provides housing subsidies to approximately 2.2 million low-income households in the United States. The voucher defrays costs to a low-income participant to rent a home in the private market. Tenant-based rental assistance, which has evolved over time into the HCV program, started in 1974, and voucher recipients contribute 30% of their income after certain adjustment to the combination of rent and utilities. The federal government pays the balance of the rent, up to a price cap that is set by state and local agencies based on HUD-determined metropolitan or county fair market rent (FMR), which is usually at the 40th percentile of recently rented nonluxury units. There are exceptions, such as in Chicago where the price cap is set at the 50th percentile. At least 75% of new families admitted each year to an agency's HCV program must have income at or below 30% of the area median income, which is approximately the federal poverty line. Program rules also stipulate that the rental home that the voucher recipient selects must pass a physical inspection to meet housing quality standards (HQS).
2. HUD publishes and annually updates metropolitan-wide FMR and county FMR in nonmetropolitan areas, which are usually set at the 40th percentile of recently rented nonluxury units. Housing agencies administering the HCV program may cap the value of HCV subsidy at 90%–110% of the FMR, or else obtain HUD approval to set the cap higher or lower. Starting in FY 2013, HUD has tested via a demonstration program setting capped voucher subsidy levels by small area FMR, which has the effect of increasing subsidy in higher cost zip codes and lowering them in low-cost ones (Kahn & Newton, 2013). HUD has since published hypothetical small area FMR levels by zip code to allow PHA to adjust their FMR levels if the PHA so wishes for its tenant-based vouchers, so long as the adjusted rate remains within 90% to 110% of the metro-wide FMR. See Fischer (2015) for more detail on the small area FMR.
3. Affordable rentals means ones with rents less than the FMR value that HUD publishes.
4. Once a moving voucher recipient has identified a rental unit she wishes to rent, she must complete a request for lease approval form which the landlord must sign to indicate his/her willingness to participate in the program. Once the PHA receives the signed form, the PHA schedules an inspection of the unit, which may or may not trigger reinspections if shortcomings are identified for remedy. Once the unit has passed inspection, the PHA issues a contract to the voucher holder, who must get it signed by the landlord and then resubmit it to the PHA. Then once that is submitted, families can move in. Also, the Housing Assistance Payment contract between the PHA and landlord must be processed before landlords begin to receive the subsidized portion of the rent.
5. As a yardstick for car ownership rates among voucher recipients, in MTO, 37% of the participants owned cars (MTO participants were living in urban public housing), whereas 65% of Welfare to Work participants owned cars (Pendall et al., 2014).

6. Two other salient distinctions between MTO and CRHCI is that CRHCI eligibility was not restricted to families with children, and that CRHCI examines a group of HCV recipients living in nonopportunity areas who requested a moving voucher as compared with MTO which targeted residents living in public housing in high-poverty neighborhoods.
7. The seven housing authorities are: Chicago Housing Authority, DuPage Housing Authority, Housing Authority of Cook County, Lake County Housing Authority, McHenry County Housing Authority, Oak Park Housing Authority, and Waukegan Housing Authority.
8. The Chicago Community Trust contributed \$200,000 to HCP for implementation, and the Cook County CDBG program supplemented counseling costs at \$187,953. Separately, The John D. and Catherine T. MacArthur Foundation also funded RAND to lead an independent evaluation of the third component of CRHCI. Included in the RAND evaluation budget are funds for the Metropolitan Planning Council to audit briefings and collect data and for HCP to collect counseling data.
9. In the HCV program, households can request to move after living in their current apartment for 12 months as long as they have not violated their lease and are in good standing with their PHA's HCV program. HCV participants start the moving process by requesting moving papers from the PHA that administers their voucher and then notifying their landlord that they intend to move. HCV clients can request moving papers up to 60 days before lease expiration in the current apartment.
10. PHA submit electronically to the PIC System at least annual updates for households in Public and Indian Housing assisted programs, of which HCV is one.
11. We do include Chicago Housing Authority households in analyses testing whether the \$500 grant incentive had different effects on opportunity moves than the \$500 grant and counseling.
12. In particular, the primary source of data loss—missing personally identifiable information from sign-in sheets—is not correlated with the outcomes of interest described below or the randomly assigned briefing type.
13. See more details about compliance in the supplementary Technical Appendix.
14. We also conduct the analyses ignoring noncompliance altogether by only considering the type of offers made to households per the sign-in sheets to test possible statistical significance of offers made. However, these analyses should not be interpreted as causal given that noncompliance does not appear to be random.
15. See the supplementary Technical Appendix for a detailed description of the secondary outcome measures.
16. To estimate permanent income, we averaged household-level income for all time points prior to the randomized briefing that was present in the HUD longitudinal data. On average, we had four prebriefing time points for a given household to derive an average income that we called permanent income.
17. As described in Section 4, briefings administered did not always match the type of moving briefing that was randomized for that day.
18. We also tested whether the offer of the \$500 grant or the offer of the \$500 grant coupled with counseling induced households to move at all or to move to a nonopportunity neighborhood, and found that the differences in move rates between the control group and the two treatment groups are not statistically significant.
19. These regressions were estimated with two-stage least squares, and the coefficient on the instrument in the first stage regression is statistically significant.
20. In fact, the coefficient on grant-only for the neighborhood advantage score is negative and statistically significant at the 5% level. It is unclear how to interpret the negative coefficient, because the score is a composite of multiple indicators, and an overall negative score could imply improvements in some component scores, which were outweighed by lower scores on other components. Also, correcting for multiple-hypothesis testing for the three secondary outcomes makes this coefficient statistically not significantly different from zero.
21. A journalistic investigation of all Chicago and Cook County Craigslist rental listings in June 2015 found that anti-Section 8 bias remains, despite the source-of-income laws making such statements illegal (Yousef, 2015).

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