Walking Away From The Wire: Housing Mobility and Neighborhood Opportunity in Baltimore

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Walking Away From The Wire: Housing Mobility and Neighborhood Opportunity in Baltimore

Stefanie DeLuca\textsuperscript{a} and Peter Rosenblatt\textsuperscript{b}

\textsuperscript{a}Department of Sociology, Johns Hopkins University, Baltimore, MD, USA; \textsuperscript{b}Department of Sociology, Loyola University Chicago, IL, USA

ABSTRACT

Families using the Housing Choice Voucher Program rarely experience large gains in neighborhood or school quality when compared with unassisted poor renters. Research on housing mobility programs has reached mixed conclusions about whether vouchers can improve neighborhood and school quality, especially in the long term. We revisit these findings using new data from the partial remedy to the Thompson v. HUD desegregation case in Baltimore, known as the Baltimore Housing Mobility Program (BHMP). Through targeted vouchers, intensive counseling and innovative policy features, the BHMP helped families move to low-poverty, nonsegregated neighborhoods with higher performing school districts. We examine residential outcomes for the first 1,800 families that moved through the program for a period of up to 9 years. We find that BHMP families moved to more integrated and affluent neighborhoods, in school districts with more qualified teachers and fewer poor students—and most families stayed in these neighborhoods beyond their initial lease-up period. Eventually, a small proportion of families moved to neighborhoods that are less white, but still significantly less poor and less segregated than their original communities. We interpret these findings in light of past mobility programs and discuss policy implications for the Housing Choice Voucher Program.

Over the past 30 years, research has begun to converge on a clear and compelling fact: exposure to high-poverty neighborhoods hinders intergenerational socioeconomic mobility and child development (Chetty, Hendren, Kline, & Saez, 2014; Massey & Denton, 1993; Sampson, 2012; Sharkey, 2013; Sharkey & Elwert, 2011; Wilson, 1987). Whereas black–white segregation has declined slowly over the past three decades, low-income black families experience levels of neighborhood poverty and violence largely unknown to other racial groups and social classes (Logan, 2011; Logan & Stults, 2011; Sampson, 2012). For young African Americans especially, living in disadvantaged neighborhoods increases the risk of school dropout, adolescent childbearing, and delinquent behavior (Brooks-Gunn, Duncan, & Aber, 1997; Harding, 2003; Sampson, Morenoff, & Gannon-Rowley, 2002). Achievement outcomes for children in poor segregated neighborhoods are diminished relative to those of their peers in more affluent places, as they have fewer experienced teachers and larger class sizes, and are more likely to be exposed to violence in their schools (Burdick-Will et al., 2011; Frankenberg & De Bray, 2011; Loeb & Reininger, 2004; Orfield & Lee, 2006).
One tool to interrupt intergenerational neighborhood poverty is housing policy that gives poor and minority families the opportunity to move away from disadvantaged and segregated neighborhoods, and affords their children a chance to attend the same schools as middle class children. The largest of these programs, the federal Housing Choice Voucher Program (HCVP), serves over 2.2 million families (Sard & Rice, 2014). Unlike supply-side hard-unit public housing, the HCVP provides rent subsidies that allow families to lease a private-market unit wherever they can find a landlord willing to accept the voucher. Typically, these subsidies pay the difference between 30% of the household’s monthly income and a fair market rent for the region, determined by the U.S. Department of Housing and Urban Development (HUD). Because housing vouchers are not tied to a specific location, the HCVP could theoretically reduce racial residential segregation and deconcentrate poverty by helping low-income families live in more diverse and affluent neighborhoods. In practice, however, the HCVP has struggled to realize this potential. Research shows that voucher holders remain more racially and economically segregated than other low-income renters are (Devine, Gray, Rubin, & Taghavi, 2003; Galvez, 2010; McClure, 2008, 2010; McClure, Schwartz, & Taghavi, 2015; Owens, 2012; Pendall, 2000), and their children rarely reach high-quality schools (Deng, 2007; Horn, Ellen, & Schwartz, 2014). There is little evidence that the HCVP has had any impact on the overall concentration of poverty in metropolitan areas (Owens, 2012).

Over the past 40 years, assisted housing mobility programs have provided another way to combat spatial inequalities. These programs build on the HCVP by combining the offer of a voucher for use in a specific geographically targeted area (such as a low-poverty census tract) with housing counseling and other housing search supports. Although assisted mobility programs have been implemented across the country (see Popkin et al., 2003), the most widely known are Chicago, Illinois’s Gautreaux program (and, more recently, Gautreaux Two) and the federal Moving to Opportunity demonstration (MTO). Although the initial Gautreaux program showed remarkable success in assisting families to make long-term moves to nonsegregated neighborhoods, even into the second generation (DeLuca & Rosenbaum, 2003; Keels, 2008), recent mobility programs have been criticized for their inability to promote durable moves to low-poverty areas (Kleit, Kang, & Payton Scally, 2016). For instance, despite large initial gains in neighborhood quality, many MTO experimental group families returned to higher poverty neighborhoods (Orr et al., 2003; Sanbonmatsu et al., 2011), and most families in the second Gautreaux program ended up in other poor and segregated areas after their initial program move (Boyd, Edin, Clampet-Lundquist, & Duncan, 2010).

In contrast to these findings, we present results from a recent mobility program in Baltimore, Maryland, that has helped more than 3,000 families experience significant improvements in their neighborhood and school contexts. We find that when combined with innovative counseling and programmatic supports, housing vouchers can help poor black families leave racially segregated, high-poverty environments and move to more racially mixed, low-poverty neighborhoods, with higher quality schools. Further, we find that these neighborhood and school changes are durable over time, persisting even after multiple moves. Whereas the program does not employ random assignment to voucher receipt, our findings appear robust when we compare Baltimore Housing Mobility Program (BHMP) results with several observational comparison groups, suggesting that it is unlikely that families would have ended up in these neighborhoods in the absence of the program. Finally, we describe features of the program that participant families found most helpful in allowing them to move to and stay in high-opportunity areas.

**Background Research**

**The Housing Choice Voucher Program**

By decoupling housing assistance from housing projects anchored in specific neighborhoods, Housing Choice Vouchers (HCV) theoretically provide the means for low-income families to move away from
disadvantaged areas.3 Yet most voucher holders live in moderate- to high-poverty neighborhoods. Although voucher users tend to live in lower poverty neighborhoods than those in hard-unit housing projects, they are no more likely to enter low-poverty communities than poor renters who do not receive housing assistance are (Devine et al., 2003; McClure, 2008, 2010; Metzger, 2014; Newman & Schnare, 1997). Racial differences among voucher holders are especially striking: black and Hispanic HCV users are significantly more likely than white voucher holders are to be living in poor neighborhoods (Julian & Daniel, 2009; McClure, 2008; Devine et al., 2003), especially when the unassisted households in these neighborhoods are mostly white (Pendall, 2000). Despite similar percentages of black and white voucher holders nationwide (Schwartz, 2010), black voucher holders live in fewer neighborhoods than white voucher holders, and those neighborhoods tend to have higher populations of other voucher users (Basolo & Nguyen, 2006; Galvez, 2010). Voucher households in the country’s largest 50 metropolitan statistical areas (MSAs) are more segregated, more spatially clustered, and more concentrated in poor tracts than a comparison group of low-income families (Metzger, 2014). By virtue of these locations, families with vouchers tend to live near poor-performing schools with lower academic proficiency rates, more free/reduced price-lunch students, and lower pupil-to-teacher ratios than do poor families in the general population (Deng, 2007; Horn et al., 2014).

There are several reasons why HCVP families have traditionally had trouble accessing low-poverty, nonsegregated neighborhoods with high-performing schools. Constraints such as racial discrimination and landlord steering can affect the ability of minority voucher holders to find housing in more advantaged communities (Rosen, 2014; Ross & Turner, 2005; Turner et al., 2013). With no national law prohibiting landlords from discriminating by source of income (SOI), most voucher holders face additional barriers to living in middle-class communities (Freeman, 2012). Residential zoning also reduces the availability of affordable housing in higher performing school districts, by limiting the construction of rental housing and contributing to housing cost gaps between high- and low-scoring elementary school zones (Rothwell, 2012). Lack of public transportation in some suburban areas also restricts housing options for low-income families that work in the city (Dawkins, Jeon, & Pendall, 2015; McClure, 2010; Turney, Clampet-Lundquist, Edin, Kling, & Duncan, 2006).

Some aspects of the voucher program itself also make it difficult for families to leverage their subsidies in higher opportunity neighborhoods. The amount of time voucher holders are given to search for housing (traditionally 60 days) can pose challenges for families trying to lease up in more distant, more affluent communities.4 Those lacking transportation or juggling difficult work schedules have trouble securing housing under current programmatic time limits, as waiting for callbacks from landlords or driving to units only to find them already leased can run down the clock quickly (DeLuca, Garboden, & Rosenblatt, 2013). Restrictions on portability (leasing across jurisdiction) can hamper the ability of HCV users to move to, or stay in, low-poverty areas because families must apply to multiple housing authorities if they want to port out, possibly facing different procedures and regulations at each (Greenlee, 2011). Finally, there are additional costs for voucher holders trying to move to more affluent areas, such as higher security deposits and rents that exceed payment standards for their originating housing authority (Rosenblatt & Cossyleon, 2015).

Whereas structural barriers and program-specific practices make it difficult for voucher families to lease up in more affluent communities, their own experiences with housing, neighborhoods, and schools also affect how voucher holders search for units and the information they have about more advantaged areas. The housing search is shaped by the tradeoffs that poor families face, such as those between neighborhood safety and housing size, or school quality and housing location (DeLuca & Rosenblatt, 2010; Fong, Harvey, Edin, & DeLuca, 2016; Wood, 2014). These tradeoffs are influenced by a lifetime of navigating almost exclusively high-poverty neighborhoods, and often serve to limit the range of neighborhoods families will consider for housing (Briggs, Popkin, & Goering, 2010; Darrah & DeLuca, 2014; Krysan & Bader, 2009). For example, Wood (2014) shows that assisted renters try to get more bang for their buck by using their vouchers in low-income neighborhoods to get larger housing units.
Assisted Mobility Programs

Assisted mobility programs, an alternative to the standard HCVP, have traditionally given poor families a wider range of housing options and provided support for moves out of disadvantaged neighborhoods. Moving under the auspices of assisted mobility programs is similar to that for regular vouchers, in that poor families choose to sign up for a subsidy, the subsidy covers most of their rent in a private-market unit, and heads of household must go through an application and screening process (e.g., criminal background check, credit check). However, these programs also differ from the HCVP in significant ways. First, some are the result of legal remedies or innovative housing programs supported by federal or local governments, so families may be deemed eligible on the basis of membership in a legal class or by taking part in a random assignment lottery. Second, mobility programs include demographic requirements for the neighborhoods families can move into, such as racial composition, poverty rate, or both. Third, families receive varying degrees of housing counseling and housing search assistance, including financial counseling, transportation to suburban communities, or connections to landlords willing to take vouchers in more affluent areas.

The first assisted mobility intervention, Chicago’s Gautreaux program, was the result of a class action lawsuit, which culminated in a housing desegregation case argued before the Supreme Court in the late 1960s (Polikoff, 2006). Between 1976 and 1998, Gautreaux helped over 7,000 poor African American public housing families (and those on the waiting list for public housing) move to private-sector rental housing, either in mostly white suburbs or within revitalizing city neighborhoods in Chicago (Rubinowitz & Rosenbaum, 2000). Participants were living in high-poverty, racially segregated communities—many exceeding 40% poor and 80% African American—when they enrolled in the program. Through counselors who placed them directly into units they found after recruiting suburban landlords, families leased up in neighborhoods that were radically different—on average 17% poor and 28% black (for those who moved to the suburbs, the rates were 5% poor and 10% black; DeLuca & Rosenbaum, 2003).

Not only was Gautreaux successful in helping families move to safer, more integrated neighborhoods, but most of them were still in similar communities 15 to 20 years later. Over time, Gautreaux mothers continued to reside in low-poverty neighborhoods with a fairly even balance of black and nonblack residents (the average Gautreaux mover was living in a neighborhood that was 48% black; DeLuca, Duncan, Mendenhall, & Keels, 2010). Early research showed that children of suburban movers were also more likely to complete high school and attend college than those placed in the city (Kaufman & Rosenbaum, 1992). Even more striking, the children of Gautreaux families that had moved to less segregated communities were also more likely to live in such areas as adults (Keels, 2008).

Intended to be a more rigorous test of the Gautreaux findings, the federal MTO program, legislated and funded in the 1990s, was designed as a random assignment experiment in five cities (see Briggs et al., 2010 for more on the design and implementation of MTO). Families assigned to the experimental group were offered vouchers and housing counseling to relocate to low-poverty areas; although they searched for housing largely on their own, they were required to lease up in a census tract that was no more than 10% poor. After random assignment, experimental compliers were living in much lower poverty communities—their new neighborhoods had average poverty rates of 11%, compared with 40% or higher in the original projects (Orr et al., 2003). Ten to 15 years later, experimental group families resided in areas that were 27% poor on average (21% for compliers)—lower than the control group average of 31%, but no longer the kind of low-poverty neighborhoods to which many had initially moved (Sanbonmatsu et al., 2011).

MTO set no racially defined criterion for placement neighborhoods, and MTO families both began and ended up in neighborhoods with high minority concentrations. Ten to 15 years into the program, experimental group families were in neighborhoods that were 80% minority on average (77% for compliers; Sanbonmatsu et al., 2011). At the interim evaluation, 80% of the experimental group (70% of compliers) were also living in the same school district as they were at baseline (Orr et al., 2003). As a result, there was little increase in either school quality or the socioeconomic diversity of the peers MTO children went to school with (Sanbonmatsu et al., 2006). Children started in schools that were ranked
at the 15th percentile statewide on average, and ended up in schools that were ranked at the 19th percentile; both before and after moving, the majority of students were attending school with more than 80% minority peers (Sanbonmatsu et al., 2006; DeLuca & Rosenblatt, 2010).

While the MTO interim impacts evaluation was underway, a second round of the Gautreaux program was implemented in 2001 (Pashup, Eden, & Burke, 2005). Called Gautreaux Two, the program offered residents of Chicago public housing the chance to sign up for a voucher that could be used in a neighborhood that was no more than 23.49% poor and 30% black. Unlike the initial Gautreaux program, where families moved into specific units located for them by housing counselors (who recruited landlords), Gautreaux Two participants searched for housing on their own. Of the 549 families that were eligible and attended at least one orientation session, 200 (36%) had successfully leased up 18 months later (Pashup et al., 2005). Researchers following a random sample of Gautreaux Two participants found that roughly half made a second move by 2005, and 81% of these moves were to areas that were more segregated and/or poorer than the placement neighborhoods (Boyd et al., 2010).

In sum, the evidence is mixed on whether mobility programs can help families escape neighborhood poverty for good. The first Gautreaux program showed positive long-term results, whereas MTO and Gautreaux Two resulted in higher rates of return to higher poverty neighborhoods. This evidence has led some to argue that mobility programs can neither adequately address urban inequalities nor radically improve on the track record of the HCVP (cf. Clark, 2008; Imbroscio, 2008; Goetz, 2007). However, we have since learned much about why, even if families have the chance to enter low-poverty communities through assisted mobility programs, they have trouble staying there.

In the years following their initial moves with MTO and the Gautreaux programs, families moved on from their first units, either because of unexpected events, such as housing-quality failures and problems with landlords, or because of life-course changes, such as an increase in family size (Boyd et al., 2010; Briggs, Comey, & Weismann, 2010; Rosenblatt & DeLuca, 2012). With subsequent moves, families had to negotiate the rental market again on their own, and found that in more affluent neighborhoods, the security deposits were prohibitively expensive, there were few apartments large enough to accommodate their families, and landlords often refused to accept their vouchers (Edin et al., 2012).

Taking a lesson from this work, the most recent and largest assisted housing mobility intervention in the country, the BHMP addresses a number of these obstacles. The program employs regional administration, higher payment standards, landlord outreach, security deposit assistance, and intensive counseling before, during, and after households move. In this article, we examine whether these improvements on previous mobility programs matter, presenting results from the first 1,800 families to relocate in the Baltimore program. We explore three research questions: First, how did neighborhoods and schools change after families first moved with the BHMP, and how durable were these changes over time? Second, how do these outcomes compare with those we might have expected in the absence of the program? Third, which features of the BHMP influenced whether families moved to high-opportunity neighborhoods and increased their likelihood of remaining there?

**The Baltimore Housing Mobility Program**

The BHMP is an assisted housing voucher program that resulted from the court-ordered remedy in a class action desegregation lawsuit. In 1995, a class of African American public housing residents sued HUD and the Housing Authority of Baltimore City (HABC) for failure to provide equal access to integrated, nonpoor neighborhoods across the metropolitan region (Thompson v. HUD, #95–309-D. MD). A partial settlement was issued by the court in 1996, which ruled HUD (but not HABC) liable for failing to take a regional approach to public housing, and called for the provision of housing vouchers to members of the plaintiff class. Those eligible for inclusion in the plaintiff class include former and current residents of family public housing, anyone on the waiting list for public housing, and anyone on the waiting list for Section 8/HCVP assistance through August 2002. Special priority was also given to families displaced by the demolition of public housing projects.
The court consent decree required that vouchers must be used to lease up in census tracts that are low poverty and nonsegregated. Families must find housing in census tracts where less than 10% of households are below the poverty line, where no more than 30% of the residents are African American, and where fewer than 5% of households receive housing assistance. Recipients were required to live in low-poverty, racially integrated tracts for at least a year, after which they were allowed to keep the voucher and use it in any area where they could find a landlord willing to rent to them.6

Between 2003 and 2014, Metropolitan Baltimore Quadel (MBQ), a private contractor, administered the BHMP.7 Potential program movers underwent a process to verify their class eligibility (membership in the plaintiff class), as well as background and credit checks (similar to what would be required for a regular voucher). After this, participants were required to attend a series of workshop and counseling sessions to prepare for moves to low-poverty nonsegregated neighborhoods, including sessions focused on housing search, negotiating with landlords, and keeping a budget. Through additional individualized counseling plans, participants were required to show progress toward saving for security deposits and clearing outstanding debts, and demonstrate that they have a steady stream of income (from either employment or public assistance) to pay for their portion of rent. Counselors also explained which areas were eligible for voucher use, discussed the benefits of these new communities in terms of safety, school quality, and local amenities, and ran tours of suburban neighborhoods. Although families could search on their own, the BHMP had staff dedicated to landlord recruitment, and provided families with listings of available units. Upon successful completion of the workshops (and meeting goals set by their counselors), program participants received vouchers to lease up in a unit of their choosing in census tracts that met the program criteria. Counselors did a series of home visits over the 18 months following initial lease-up, and, starting in 2008, they counseled program participants who were considering moving after their original BHMP lease-up, to help them remain in high-opportunity neighborhoods.8

The BHMP also included additional innovative policy features to facilitate moves to more advantaged communities. Unlike the traditional voucher program, the BHMP is regionally administered, which means that families can use the voucher to move between Baltimore City and the surrounding counties without having to negotiate the transfer of the voucher from one public housing agency to another. In other words, the BHMP voucher is fully portable within the broader central Maryland region, and participants can use it in Baltimore City, Baltimore County, Howard County, Carroll County, Harford County, Anne Arundel County, and Queen Anne’s County. The program has also utilized a higher payment standard (allowing rent up to 120% of the fair market rent) that helps offset the costs of renting in high-opportunity areas. Through the assistance of a local foundation, the program has also provided security deposit assistance to supplement what the families are required to save on their own.

Data and Methods

Our analyses focus on the neighborhood and school-district changes that families in the BHMP experienced after relocating with their vouchers. Through our agreement with MBQ, we received administrative records on all families that had moved with the program from November 2002 through January 2012. By then, there were 1,822 individual families that had gone through the workshops and counseling and successfully leased up in a high-opportunity neighborhood, finding a landlord who would accept the voucher, and a unit that met HUD Housing Quality Standards. Of these 1,822, 51 were missing at least some demographic data or had an address that we were unable to geocode, leaving a final analytic sample of 1,771 movers.9

The administrative records kept by MBQ included basic information about the individual heads of household such as their date of birth, gender, racial and ethnic background, and number of children, and whether they were current public housing residents, displaced from public housing because of demolition, or on the housing subsidy wait list when they signed up for the program. The records also contained third-party verified income at the time of preliminary application, and information on the source of income—allowing us to identify whether families were receiving employment wages, Supplemental Security Income (SSI), or Temporary Assistance for Needy Families (TANF). Finally, the
administrative data included the address where families were living when they signed up for the program, as well as any subsequent address to which they moved with a voucher. We use these data to compare three locations for the families in our sample: the origin neighborhood where families were living when they signed up for the program \textit{(baseline)}, the initial address to which they moved with the housing voucher \textit{(initial move)}, and the address at which they were living when MBQ last had contact with them \textit{(current)}. We refer to this third location as a family’s \textit{current} address, because for the majority of families (86.4\%) it was where they were living at the time of our data collection in 2012.\textsuperscript{10} In some cases the current address was the same as the initial move address, but in most cases it was a family’s second or third address since they had first leased up with their voucher.

We use the current address to measure the durability of neighborhood quality improvement. Under program rules, families had to sign a 1-year initial lease in a low-poverty (<10\%), nonsegregated (< 30\% black) neighborhood with fewer than 5\% of the households receiving housing subsidies. Because families that made their initial move within 1 year of our data collection date were expected to stay in a low-poverty, nonsegregated neighborhood, we limit our current neighborhood analysis to families that had at least 1 year of residence at their initial move address \textit{(n = 1561)}. Because they met the requirement of leasing up for 1 year, these families had the opportunity to stay at their initial location or move to any neighborhood.

Using ArcGIS \textsuperscript{11}we geocoded 98.4\% of the baseline addresses, 100\% of the initial move addresses, and 99.9\% of the current addresses. We used the 2005–2009 American Community Survey (ACS) 5-year estimates to profile neighborhood characteristics for each of these locations, focusing on poverty rate, racial composition, socioeconomic status, and employment in the neighborhoods \textit{(U.S. Census Bureau, 2009)}. We also used data on local elementary school characteristics compiled from the Maryland State Department of Education by the Kirwan Institute for the Study of Race and Ethnicity at Ohio State University. Elementary schools were used because they have smaller catchment areas and capture more geographic variation in school quality across the central Maryland region than middle or high schools. School data were compiled at the elementary catchment level and transferred to the corresponding census tracts within the catchment area using ArcGIS.\textsuperscript{11} These data include the percentage of students testing as proficient in math and reading, the percentage of students eligible for free and reduced price lunches, and the percentage of classes taught by highly qualified teachers at the public elementary school serving each family’s neighborhood.\textsuperscript{12} The school data come from 2004, which was the modal move year for families in our sample. We chose the 2005–2009 ACS rather than more recent years because it gives the closest approximation of baseline and initial move neighborhood characteristics for the time period when most families were moving.\textsuperscript{13}

Much of our analysis is descriptive—our primary intention is to share the results of this recent and innovative housing program with the housing policy community. As with any attempt to assess the impact of a policy intervention, there are questions about the degree to which the outcomes can be attributed to individual characteristics or to program effects. One of the most widely accepted ways to address these questions is with a random assignment experiment, but in the absence of such a design, we present several observational comparisons, and describe the relative strengths of each comparison and the assumptions required to conclude that the relationship between neighborhood outcomes and the BHMP is causal.

The first of these comparisons is between the neighborhood and zone school characteristics for BHMP participants and those for families in the HCV program in Baltimore City, the Baltimore suburbs, and the Baltimore metropolitan area as a whole. Data on HCV users come from the US Department of Housing and Urban Development’s Picture of Subsidized Households.\textsuperscript{14} The second comparison uses complete residential histories compiled from in-depth interviews with a stratified random sample of 88 BHMP mover families (described in more detail below). These move histories allow us to compare \textit{pretest} and \textit{posttest} neighborhood characteristics for families for multiple moves both before and after they received a BHMP voucher. Although we cannot make definitive causal claims about the effectiveness of the mobility program, together these comparisons explore the extent to which our findings can be reasonably attributed to the intervention of the mobility program, rather than primarily to characteristics of the participant families.
Finally, we supplement our quantitative analyses with observations and interviews from the qualitative study to explore why the program had such large gains in neighborhood and school quality (relative to the HCVP and other mobility programs). The qualitative study was launched in 2012 to understand the experiences of the families in the BHMP, with a specific focus on their transitions to new neighborhoods and children's school changes. We also gathered extensive life and residential history data, as well as information on family members, employment, children's academic and social life, and their experience with the BHMP (see Darrah & DeLuca, 2014, for more details on sample and study). We conducted 88 qualitative interviews (a response rate of 82%) with a sample of BHMP mover families drawn from the same administrative data that we use in this article. The sample was selected randomly from within strata that identified the county of first program move (Baltimore City, Baltimore County, Harford County, Howard County, Carroll County) and the timing of the move (recent moves from 2008 to 2012 vs. early movers from 2003 to 2007). Only families with at least one child between the ages of 10 and 18 were selected for the qualitative study. As intended, this sampling design yielded heterogeneity in the longer term residential trajectories of these families—trajectories that we reconstructed using interview and administrative data for Figure 1.

Results

Who Moves?

Table 1 provides a demographic profile of the families that had moved through the BHMP by January 2012, and compares them with families in the HCVP in Baltimore City and the Baltimore metropolitan area for the same year. Like the voucher population in both the city and the metropolitan region, most BHMP households were headed by African American women. BHMP households were more likely to be headed by single mothers (81.6%, compared with 44% of HCV households), and BHMP families had an average of 1.9 children. Fewer household heads in the BHMP were elderly (over age 62) than in the HCVP, and a slightly higher percentage of BHMP household heads were under 24 years old (5%, compared with 2% of the region’s HCVP households). A greater percentage of households in the BHMP

![Figure 1. Poverty rate and percentage black in pre- and post-Baltimore Housing Mobility Program-move neighborhoods. BHMP = Baltimore Housing Mobility Program. Source: Data come from a stratified random sample of 88 households, sampled from the full group of BHMP participants. In-depth interviews were used to document complete residential histories, and were supplemented by records kept by Metropolitan Baltimore Quadel. Addresses were geocoded and matched to the 2005–2009 American Community Survey 5-Year Estimates (U.S. Census Bureau, 2009).](image-url)
derived the majority of their income from employment (40%, compared with only 25% of HCVP households in Baltimore City and 26% in the metropolitan region). This might explain why BHMP families had a slightly higher average household income than families in the HCVP had, although all of these figures lag far below the Baltimore City median household income, which was $39,241 in the 2012 ACS.

Because the BHMP stemmed from a court-ordered consent decree, participants had to be deemed part of the plaintiff class represented by the lawsuit. This meant that they were either current or former residents of public housing, or on the wait list for traditional public housing or housing vouchers. The bottom portion of Table 1 shows that close to one third of BHMP movers were current or displaced public housing residents, whereas the other two thirds were on the wait list for housing assistance.

One way of assessing the effectiveness of any voucher program is to look at the take-up rate—that is, of the individuals who receive a voucher, how many sign a lease with a landlord? Once class eligibility was determined, interested household heads were required to attend an initial briefing and then assigned to a housing counselor who would help them prepare to move. By the end of 2011, just over 2,600 households were issued a voucher, and 78% (2,038) leased up. Despite the requirement that families rent housing in high-opportunity neighborhoods, this lease-up rate is higher than the comparable rate for families in the MTO experimental group, which was 58% in Baltimore and 48% across all five cities (Shroder, 2001). The BHMP lease-up rate is also higher than the comparable national average for the HCV program, which was 69% in 2000 (Finkel & Buron, 2001).

### Where Do Families Go?

Most families were living in very disadvantaged and segregated neighborhoods when they signed up for the BHMP. Table 2 shows that these areas were 30.3% poor on average, with an unemployment rate that was more than twice as high (at 16.2%) as the Baltimore metropolitan average of 7.5%. These communities had very low rates of college graduates, and high proportions of female-headed households. Median household incomes in the baseline neighborhoods averaged $30,863—almost $9,000 less than the citywide figure. BHMP families came from neighborhoods that were 80.5% African American on average, with the majority of families living in neighborhoods that were more than 90% black (see Table 3).
### Table 2. Characteristics of baseline and initial move neighborhood for Baltimore Housing Mobility Program movers.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Baseline neighborhood</th>
<th>Initial move neighborhood</th>
<th>( p )</th>
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<tbody>
<tr>
<td><strong>Neighborhood</strong></td>
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<tr>
<td>White (%)</td>
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<td>Black (%)</td>
<td>80.5</td>
<td>25.2</td>
<td>&lt; .001</td>
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<td>Below poverty (%)</td>
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<td>&lt; .001</td>
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<td>Female-headed households (%)</td>
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<td>High school diploma (%)</td>
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<td>College degree (%)</td>
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<td>Median household income</td>
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<td>(2012 $)</td>
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<tr>
<td>Unemployment rate (%)</td>
<td>16.2</td>
<td>6.1</td>
<td>&lt; .001</td>
</tr>
<tr>
<td><strong>Local (zone) school</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students proficient or better in math (%)</td>
<td>45.4</td>
<td>71.7</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Students proficient or better in reading (%)</td>
<td>54.9</td>
<td>77.6</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Classes taught by highly qualified teachers (%)</td>
<td>37.7</td>
<td>78.8</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Free- and reduced price-eligible students (%)</td>
<td>81.2</td>
<td>28.5</td>
<td>&lt; .001</td>
</tr>
<tr>
<td><strong>N</strong></td>
<td>1,771</td>
<td>1,771</td>
<td></td>
</tr>
</tbody>
</table>

Note. SD = standard deviation.

Math and reading scores are based on student performance on the 3rd and 5th grade Maryland State School assessments.

\( ^{p} \) Values from paired t-test of baseline and initial move neighborhood means.

N includes all families with both baseline and initial move address geocoded (98.4% of families).

Source: Data on BHMP households come from administrative records of Metropolitan Baltimore Quadel, geocoded to census tracts.

Neighborhood data come from the 2005–2009 American Community Survey (U.S. Census Bureau, 2009). School data were compiled and matched to census tracts by the Kirwan Institute for the Study of Race and Ethnicity at Ohio State University.

### Table 3. Poverty rate and racial composition for Baltimore Housing Mobility Program movers, baseline and initial move neighborhood.

<table>
<thead>
<tr>
<th>Percentage below poverty</th>
<th>Baseline neighborhood</th>
<th>Initial move neighborhood</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 10%</td>
<td>10.6%</td>
<td>73.2%</td>
</tr>
<tr>
<td>10–20%</td>
<td>17.8%</td>
<td>20.6%</td>
</tr>
<tr>
<td>20–30%</td>
<td>28.6%</td>
<td>6.2%</td>
</tr>
<tr>
<td>30–40%</td>
<td>21.7%</td>
<td>0.1%</td>
</tr>
<tr>
<td>More than 40%</td>
<td>21.2%</td>
<td>0.1%</td>
</tr>
<tr>
<td><strong>N</strong></td>
<td>1,771</td>
<td>1,771</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Percentage African American</th>
<th>Baseline neighborhood</th>
<th>Initial move neighborhood</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 10%</td>
<td>1.5%</td>
<td>18.0%</td>
</tr>
<tr>
<td>10–20%</td>
<td>2.5%</td>
<td>28.8%</td>
</tr>
<tr>
<td>20–30%</td>
<td>2.3%</td>
<td>19.3%</td>
</tr>
<tr>
<td>30–50%</td>
<td>6.6%</td>
<td>27.4%</td>
</tr>
<tr>
<td>50–70%</td>
<td>15.5%</td>
<td>2.8%</td>
</tr>
<tr>
<td>70–90%</td>
<td>11.2%</td>
<td>3.5%</td>
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<tr>
<td>More than 90%</td>
<td>60.4%</td>
<td>0.2%</td>
</tr>
<tr>
<td><strong>N</strong></td>
<td>1,771</td>
<td>1,771</td>
</tr>
</tbody>
</table>

Note. N includes all families with both baseline and initial move address geocoded (98.4% of families).

Source: Data on BHMP households come from administrative records of Metropolitan Baltimore Quadel, geocoded and matched to census tract data from the 2005–2009 American Community Survey (U.S. Census Bureau, 2009).

Table 2 also profiles the elementary school zoned for the neighborhood in which families were living at baseline and initial move. At baseline, families were living in neighborhoods where local schools struggled to meet proficiency levels in math and reading, with fewer than half of the students meeting these levels in math (45.4%) and just over half in reading (54.9%). These achievement scores were
more than a standard deviation below the central Maryland average. Local schools in families’ baseline neighborhoods also had a low proportion of classes taught by *highly qualified* teachers, defined as those with at least a bachelor’s degree and professional certificate in the subject area they are teaching. Fewer than 40% of classes at the local elementary school in families’ baseline neighborhoods were taught by teachers who met this definition; this figure was well below the metropolitan average of 67.6%. More than eight in 10 students in local baseline schools were receiving free or reduced price lunches, a common measure of school poverty. The average elementary school student whose parents participated in the BHMP program thus lived not only in a very poor neighborhood, but in a neighborhood served by a very high-poverty, low-performing school.

The initial BHMP move resulted in a radical change in neighborhood context and school opportunity for most families. Neighborhood and local school mean characteristics were all significantly different between baseline and initial move (see Table 2). Moves averaged 10.7 miles (11.7 miles for families that moved outside the city), bringing many participants from the high-poverty, segregated east and west sides of Baltimore to a range of suburban communities scattered across the metropolitan area.21 Twelve percent of families moved within the city, mostly to majority-white neighborhoods in the northeast. Some moved to nearby suburbs in Baltimore County whereas others moved further afield to places in Harford, Howard, or Carroll counties. As a result of these moves, families left neighborhoods that were more than 80% African American for those that were only 25.2% black, on average (see Table 2). Families that moved also saw a large change in the socioeconomic status of their neighbors, as the average neighborhood poverty rate declined from 30.3% to 8.4%, the percentage of unemployed residents dropped from 16.2% to 6.1%, and the median household income in the average neighborhood more than doubled from $30,863 to $68,440 (in 2012 dollars). After the BHMP move, the proportion of people in their neighborhoods with a college degree nearly tripled to 36.5%.

The characteristics of the local elementary schools also changed dramatically. Achievement levels in math and reading increased by more than 20 percentage points from the baseline local schools to the schools serving the neighborhoods where BHMP families moved. The percentage of classes taught by *highly qualified* teachers more than doubled (from 37.7% to 78.8%), whereas the average poverty rate of the neighborhood elementary schools dropped from 81.2% to 28.5%.

Overall, initial-move neighborhoods for BHMP families are more similar to those seen in Gautreaux than in MTO. Like BHMP families, Gautreaux participants went to much less segregated neighborhoods than did MTO experimental movers—Gautreaux families were placed in neighborhoods that were 28% African American on average (10% black for suburban movers), compared with 57.8% among MTO experimental group movers in Baltimore (DeLuca, Duncan, Mendenhall, & Keels, 2010, p. 12; DeLuca & Rosenbaum, 2003, p. 323; DeLuca & Rosenblatt, 2010, p. 1458). Initial placement neighborhoods in Gautreaux were 17% poor on average (5.3% poor for suburban movers), compared with 11.2% among MTO experimental group movers in Baltimore (DeLuca et al., 2010, p. 12; DeLuca & Rosenblatt, 2010, p. 1458; Rosenbaum & Zuberi, 2010, p. 33).22 Improvements in school quality for BHMP families were also a closer approximation of those seen in Gautreaux than those in MTO. Eighty-eight percent of Gautreaux movers went to above-average schools (with test scores above the 50th percentile), compared with only 10% of MTO experimental movers across all five cities (Rosenbaum & Zuberi, 2010). In Baltimore, MTO experimental-group families went to neighborhoods where the average school scored in the 27th percentile in reading and the 25th in math on average (DeLuca & Rosenblatt, 2010, p. 1461), a dramatic contrast with the above-average achievement levels in local schools seen in Table 2.23

Although the average changes in neighborhood characteristics before and after the BHMP move are large, they mask considerable variation. Table 3 compares the distribution of poverty rate and racial composition between baseline and initial move neighborhood.24 Whereas most families that moved were living in the poor and racially segregated neighborhoods on the city’s east and west sides at baseline, roughly 10% were living in neighborhoods that were less than 10% poor when they applied to the program (see Table 3). For the most part, these households were living in the suburbs surrounding Baltimore City, like Columbia in Howard County or Woodlawn and Randallstown in western Baltimore.
County. Some of these households were doubled up with other family members while they were on the wait list for housing assistance (Darrah & DeLuca, 2014; Talbert, 2014).

There are dramatic increases in the percentage of families living in low-poverty and nonsegregated neighborhoods following the BHMP move. When they applied, four in 10 families were living in neighborhoods that were more than 30% poor; after moving, only two families in total (0.2%) were living in these kinds of neighborhoods. At baseline, most families were living in segregated neighborhoods that research shows are consistently separated from educational and employment opportunities (Briggs 2005); following the BHMP move, fewer than 4% of families were living in neighborhoods that were more than 70% African American.

**Did BHMP Families Stay in Low-Poverty, Nonsegregated Neighborhoods?**

As of January 2012, nearly half (47%) of BHMP participants in our sample had moved away from their initial-move address.25 However, these moves were generally not back to high-poverty inner-city areas. In fact, only slightly more than one fifth (21.2%) of families moved to Baltimore City when their initial lease ended.26 To examine the longer term outcomes of the program, we look at the kinds of neighborhoods where families were currently living at the time of our last data collection, as well as the characteristics of the local elementary schools serving those neighborhoods. We include in this analysis the most recent address of everyone who moved with the program and who had lived at their initial address long enough to meet the program requirement of a 1-year lease, whether they stayed in their initial BHMP-move unit or made a subsequent move since starting the program.

Table 4 describes how the current neighborhood compares with the baseline and initial move neighborhoods for all 1,561 of these families.27 On average, the current neighborhood is significantly different from the baseline neighborhood, and also from the initial-move neighborhood. Despite some subsequent moves, all of the neighborhood and school means are closer in magnitude to those of the initial neighborhood than those of the baseline neighborhood. For example, the mean poverty rate in the current neighborhood is 10.4% compared with 30.3% at baseline and 8.5% at initial move for the same group of families. Other neighborhood indicators show a similar pattern, such as median household income, which at $63,915 in the current neighborhood was more similar to the initial-move average of $68,274 than the baseline neighborhood average of $30,730; a similar pattern emerges for neighborhood unemployment rate (7.3%, compared with 6.1% at initial move neighborhood, and 16.3% at baseline). The percentage of black neighbors goes up between initial move and current neighborhood (from 25% to 37%)—reflecting a move toward more racially mixed neighborhoods—but still much lower than baseline neighborhoods, which were 81% black on average.

Mean local school achievement scores at the current neighborhood location are well above the averages for BHMP participants’ baseline neighborhoods. For instance, on average 73.3% of students at the current neighborhood school are proficient in reading, a slight decline from 77.3% at the initial move neighborhood, but far higher than the 54.8% at the baseline neighborhood school). Similarly, school poverty rates in the local school are 39% in the current neighborhood, compared with 29% in the initial-move neighborhood and 81.4% at baseline.28

How do these findings compare with neighborhood outcomes in Gautreaux and MTO? Families in the BHMP current neighborhood sample had been in the program an average of 4 years since receiving their voucher. This makes the analysis comparable with the timing of MTO interim evaluation, which surveyed families 4–7 years following their initial MTO moves. At that point, two thirds of the experimental mover group families had made a subsequent move (Orr et al., 2003). These moves were generally made to areas that were poorer and more segregated than initial-move neighborhoods; on average, experimental movers were living in neighborhoods that were 20% poor (with only one quarter still in low-poverty census tracts) and 75% minority (with only 16% in areas that were less than 40% minority; Orr et al., 2003, pp. 34–37).29 The most complete account of Gautreaux neighborhood outcomes come from an even longer follow-up period. An average of 15 years following their initial
placement, Gautreaux families were living in neighborhoods that were 16% poor and 48% black on average (DeLuca & Rosenbaum, 2003). Two thirds of Gautreaux families that were placed in the suburbs continued to live there 15 years later (2003). Although we cannot know how future moves may impact BHMP families’ neighborhood outcomes, our findings thus far are more in line with those seen in Gautreaux than in MTO.

Can These Improvements Be Attributed to the BHMP?

The results demonstrate that BHMP participants experienced large changes in neighborhood affluence, racial composition, and school quality, and that these changes appear to be durable over time. Yet, as with any policy intervention, questions remain about the degree to which these changes can be attributed to the individual characteristics of program participants or the program itself. Could families that moved have been more likely to relocate to or stay in majority white, low-poverty neighborhoods in the absence of the program? Without a randomized controlled trial, we explored this question by taking advantage of a set of observational comparison groups external to our participant data, and also by constructing a pretest/posttest move history for a subset of BHMP participants (Shadish, Cook, & Campbell, 2002).

Our external comparison group is comprised of families using conventional housing vouchers (the status quo policy) in the Baltimore metropolitan region. Table 5 compares BHMP families with HCVP families in three different geographic areas.30 The first two columns of the table show the average neighborhood and local school characteristics for BHMP families at their initial-move and current addresses. The next column profiles the neighborhood and local school context for the average HCVP household in Baltimore City, whereas the fourth column widens the comparison to include all voucher users in

---

**Table 4.** Current neighborhood, compared with baseline and initial move for Baltimore Housing Mobility Program movers with at least 1 year residence in program.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Baseline neighborhood</th>
<th>Initial move neighborhood</th>
<th>Current neighborhood</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>p&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>Neighborhood</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White (%)</td>
<td>16.8</td>
<td>22.7</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Black (%)</td>
<td>80.7</td>
<td>24.6</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Below poverty (%)</td>
<td>30.3</td>
<td>17.0</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Female-headed households (%)</td>
<td>65.3</td>
<td>22.3</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>High school diploma (%)</td>
<td>70.4</td>
<td>11.4</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>College degree (%)</td>
<td>13.0</td>
<td>12.1</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Median household income (2012 $)</td>
<td>30,739</td>
<td>14,845</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Unemployment rate (%)</td>
<td>16.3</td>
<td>9.9</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Local (zone) school</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students proficient or better in math (%)</td>
<td>45.2</td>
<td>14.1</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Students proficient or better in reading (%)</td>
<td>54.8</td>
<td>11.4</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Classes taught by highly qualified teachers (%)</td>
<td>37.5</td>
<td>16.9</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Free- and reduced price-eligible students (%)</td>
<td>81.4</td>
<td>15.8</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

Note. SD = standard deviation.

Math and reading scores are based on student performance on the 3rd and 5th grade Maryland State School assessments. *p values from paired t-test of baseline–current neighborhood and initial move–current neighborhood means.

N includes all families with at least 1 year of residence at their initial move address.

Source: Data on BHMP households come from administrative records of Metropolitan Baltimore Quadel, geocoded to census tracts. Neighborhood data come from the 2005–2009 American Community Survey (U.S. Census Bureau, 2009). School data were compiled and matched to census tracts by the Kirwan Institute for the Study of Race and Ethnicity at Ohio State University.
the Baltimore metropolitan area, comprising the six counties surrounding and including Baltimore City. The final column in the table focuses the comparison on only HCVP families in the Baltimore suburbs.

Each of the three HCV profiles shows a different (although imperfect) comparison for BHMP outcomes. The Baltimore City HCVP is likely the closest comparison group because most BHMP participants were living in Baltimore City when they signed up for the program, and two thirds had been on the wait list for housing vouchers administered by the Housing Authority of Baltimore City. In theory, the table shows the neighborhood outcomes for the main policy alternative for families in Baltimore City who wanted to move with a voucher. Baltimore City HCV recipients were living in segregated neighborhoods with an average poverty rate of 24.5% and a school poverty rate of 83.3%, a very different environment than the majority-white, low-poverty neighborhoods BHMP families were living in at both their initial and current neighborhoods.

The Baltimore metropolitan area comparison encompasses all of the counties where BHMP families were permitted to move with their vouchers, and allows us to compare BHMP neighborhood outcomes with those for voucher recipients in programs with the same geographic coverage (administered by the Housing Authority of Baltimore City and the suburban Public Housing Authorities). The average neighborhood for HCVP families in the metropolitan region was 17.7% poor, compared with 8.4% for BHMP families at initial move and 10.4% in their current neighborhood. Schools serving the average HCV family in the metropolitan region lagged behind those in the neighborhoods of BHMP families in academic performance and teacher quality, and had higher school poverty rates (60.4% for HCV neighborhoods compared with 28.5% for BHMP initial move and 39% for current BHMP neighborhood).

The final column in Table 5 provides an estimate of the main policy alternative for those BHMP families that were living in the suburbs at the time they signed up for the program. The table shows that suburban HCVP households on the whole are in more affluent, less segregated neighborhoods than are voucher users in Baltimore City or in the entire metropolitan region, but that these neighborhoods are not quite as affluent as BHMP neighborhoods, particularly at the initial move.

Although we do not know exactly how similar or different the individuals who currently have an HCV are from those who enrolled in the BHMP, we know that many BHMP applicants are likely to have

Table 5. Comparison of Baltimore Housing Mobility Program (BHMP) initial move and current neighborhood with Housing Choice Voucher Program (HCVP) neighborhoods.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>BHMP initial move</th>
<th>BHMP current</th>
<th>Baltimore HCVP</th>
<th>Baltimore Metro HCVP</th>
<th>Suburban HCVP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neighborhood White (%)</td>
<td>67.0</td>
<td>56.2</td>
<td>18.3</td>
<td>39.8</td>
<td>59.5</td>
</tr>
<tr>
<td>Black (%)</td>
<td>25.2</td>
<td>37.1</td>
<td>79.3</td>
<td>55.9</td>
<td>34.5</td>
</tr>
<tr>
<td>Below poverty (%)</td>
<td>8.4</td>
<td>10.4</td>
<td>24.5</td>
<td>17.7</td>
<td>11.5</td>
</tr>
<tr>
<td>Female-headed households (%)</td>
<td>26.4</td>
<td>32.2</td>
<td>61.2</td>
<td>46.8</td>
<td>33.7</td>
</tr>
<tr>
<td>High school diploma (%)</td>
<td>87.9</td>
<td>86.0</td>
<td>73.0</td>
<td>79.8</td>
<td>86.0</td>
</tr>
<tr>
<td>College degree (%)</td>
<td>36.5</td>
<td>33.3</td>
<td>15.7</td>
<td>21.7</td>
<td>27.1</td>
</tr>
<tr>
<td>Median household income (2012 $)</td>
<td>68,440</td>
<td>63,915</td>
<td>34,191</td>
<td>46,661</td>
<td>58,037</td>
</tr>
<tr>
<td>Unemployment rate (%)</td>
<td>6.1</td>
<td>7.3</td>
<td>13.9</td>
<td>10.3</td>
<td>7.1</td>
</tr>
<tr>
<td>Local (zone) school</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students proficient or better in math (%)</td>
<td>71.7</td>
<td>66.4</td>
<td>46.1</td>
<td>56.6</td>
<td>66.2</td>
</tr>
<tr>
<td>Students proficient or better in reading (%)</td>
<td>77.6</td>
<td>73.3</td>
<td>54.5</td>
<td>63.8</td>
<td>72.3</td>
</tr>
<tr>
<td>Classes taught by highly qualified teachers (%)</td>
<td>78.8</td>
<td>70.8</td>
<td>37.0</td>
<td>58.3</td>
<td>77.8</td>
</tr>
<tr>
<td>Free- and reduced price-eligible students (%)</td>
<td>28.5</td>
<td>39.0</td>
<td>83.3</td>
<td>60.4</td>
<td>39.5</td>
</tr>
<tr>
<td>N</td>
<td>1,771</td>
<td>1,561</td>
<td>8,632</td>
<td>18,093</td>
<td>9,461</td>
</tr>
</tbody>
</table>

Source: Data on BHMP households come from administrative records of Metropolitan Baltimore Quadel. Data on HCVP households; Picture of Subsidized Households (U.S. Department of Housing and Urban Development, 2004). Both data sets were matched to census tracts. Neighborhood data come from the 2005–2009 American Community Survey (U.S. Census Bureau, 2009). School data were compiled and matched to census tracts by the Kirwan Institute for the Study of Race and Ethnicity at Ohio State University.
been potential HCVP applicants because BHMP was the only housing assistance available for application during the period of our study. In Baltimore City, the housing voucher wait list was closed for over a decade, from October 2003 until October 2014. We also know that the more likely comparison group for the BHMP families are those voucher holders in Baltimore City, rather than the suburbs, since it is quite rare for families to port out of their originating jurisdiction (Greenlee, 2011). So, in some ways, the suburban Maryland voucher holder comparisons provide a more conservative test of the BHMP, as—unlike the majority of BHMP families—these households were likely to have already been living in the suburbs when they signed up for vouchers from suburban Public Housing Authorities (PHAs). That said, it is still possible that HCVP applicants and participants might have had different motivations for getting a voucher than BHMP families, who had to be willing to move to low-poverty, nonsegregated neighborhoods and work on their credit. Therefore, we cannot say for sure whether these motivations or the programmatic differences between the BHMP and the HCV program contributed to the different neighborhood and local school characteristics seen in Table 5.

Our second comparison comes from in-depth interviews we did with a stratified random sample of 88 BHMP mover families. In these interviews, we gathered complete address histories for heads of household, recording every place they had lived since they first moved out of their childhood home. Combining this with the detailed address history kept by MBQ on post-BHMP moves allows us to construct a move trajectory analysis for these families that includes many years before and after their initial BHMP move, providing data similar to an interrupted time series design.

Figure 1 displays the average poverty rate and percentage black residents for these 88 mover families in the years before and after their initial BHMP move. The left side of the graph shows that, on average, families were living in neighborhoods that were almost 30% poor with more than 70% African American residents in the 9 years preceding their moves with the BHMP (negative numbers on the x-axis represent years before the initial BHMP move). This pattern of durable residence in high-poverty and segregated neighborhoods persists despite multiple moves made by families during these years. However, once the BHMP move takes place (at year 0 on the x-axis), the neighborhood poverty rate and percentage of black neighbors drop dramatically. The lower poverty rate persists for the next 8 years, as does the percentage of black neighbors, although the latter increases over time, reflecting some moves to more racially mixed areas (see also Table 4). This graph suggests that the BHMP has shifted the residential trajectories of these families, not just at the initial move but for several years afterward.

Would the BHMP families whose neighborhood changes we profile have ended up in these places without the assistance of the BHMP? Comparison group analyses support this conclusion, but without a randomized controlled trial, we cannot be certain. Yet there are additional points that suggest the program made an independent difference. First, decades of observational studies show that black families (even middle-class black families) struggle to reach low-poverty or nonsegregated neighborhoods, even after increases in income and education, and after receipt of housing assistance (Alba, Logan, & Stults, 2000; Massey & Denton, 1987; Massey & Mullan, 1984; Patillo-McCoy, 1999; South & Crowder, 1997; South, Crowder, & Chavez, 2005). We would have to believe that BHMP families (residents of public housing or on the wait list for assistance), who spent virtually their entire lives living in poor, segregated neighborhoods, were somehow more prone to enter affluent neighborhoods, or for some reason faced weaker constraints in the housing market, than observational research shows is the case even for middle-class black families.

Second, our constructed comparisons show that BHMP families on the whole went to neighborhoods that were more affluent and had higher quality schools than families in the region’s HCVP. We cannot be certain that had BHMP families gone through the HCV, they would not have ended up in the same kinds of neighborhoods that they did. However, we know that HCV users do not receive nearly the same extensive pre- and postmove counseling as BHMP participants do. Instead of a voucher that is targeted for use in high-opportunity neighborhoods, HCV holders receive a voucher to use anywhere where they can find a landlord who will accept it; this targeted voucher ensures that BHMP families experience radically different neighborhoods than traditional HCVP families do, which might affect their access to resources and shape residential preferences in ways that alter their long-term move
patterns (see Darrah & DeLuca, 2014). The BHMP was also regionally administered, which made it easier for families to move from Baltimore City to the surrounding suburbs. All HCVP recipients have the option to port out, or move from one PHA jurisdiction to another, although in practice administrative burdens, lack of funding for receiving PHA, and difficulty navigating the process before the voucher search time runs out severely limit families’ ability to exercise this option (DeLuca et al., 2013; Greenlee, 2011). These factors may help explain the different neighborhood outcomes between BHMP and HCVP participants (see Table 5).

Finally, our exploration of detailed move histories for a sample of BHMP families shows the dramatic shift that occurs in their neighborhood trajectories after the initial move with a BHMP voucher. The initial move trajectories of these families correspond to what observational research tells us about the residential mobility of low-income African American families—we can see from Figure 1 that over the near-decade prior to moving with the voucher, these families stayed in or moved almost exclusively among high-poverty and racially segregated neighborhoods. Yet when they received their BHMP voucher, neighborhood poverty levels dropped dramatically, and for the subsequent years they were living on average in neighborhoods that were not as segregated and had much lower poverty rates.

**Which Aspects of the BHMP Helped Families Move to and Stay in Higher Opportunity Neighborhoods?**

As we note above, there were a number of policy innovations and program supports that distinguished the BHMP from the HCVP, including regional administration, higher payment standards, intensive counseling, and security deposit assistance—all of which likely played a role in enabling successful moves to higher opportunity neighborhoods. Without a research design that compares families that received only one (or some combination of) the program elements, we cannot be certain which components were the most effective. However, our fieldwork with BHMP families provides some insights into the process, as parents described their experiences with the BHMP, including aspects of the program they felt were most important for helping them find housing in opportunity neighborhoods.

From families’ accounts, we identified the most salient parts of the program. First, there are the factors that encouraged families to go through the program and helped them enter high-opportunity neighborhoods in the first place: emotionally supportive counseling, housing search assistance, and landlord recruitment. Second, there are mechanisms that kept families in these neighborhoods for the longer term. Although second moves to higher opportunity neighborhoods were also facilitated by the counseling and administration of the program, our interviews show it was the sheer experience of being there—especially seeing their children in safe places and attending much better schools—that helped convince parents to stick it out even after the required lease-up period. 35

Most families we interviewed told us that their initial experience with the BHMP was a pleasant surprise, one which was seen as very different from the regular HCVP. As Mila, 36 a 28-year-old mother of two boys, put it simply, “BHMP had more to offer than Section 8.” Whereas some parents were hesitant about the initial move to the county, most told us that once they got there, they appreciated the change. Hope, 35, reflected,

> I just was a diamond in the rough, a nice angel that knew that I could live better and knew that I wanted more and just was waiting for someone to help me…. Everybody down [at BHMP was] wonderful people…. If you ask a question they’ll help you. If you come down there, they’ll talk to you—everybody is always smiling and helping.

Thirty-two year old Candace told us, “The whole program is set up…[to] put you somewhere so you can have a fair shot just like everybody else.”

As we note below, although financial assistance and services to help locate housing were key, parents also emphasized the significance of feeling supported. Parents appreciated the respect they received from counselors, the open lines of communication, and the resources the program gave them in addition to housing. Tasha, a 33-year-old mother of four boys, said,
I just take my hat off to MBQ just because they don’t put you somewhere and just leave you stranded, leave you vulnerable, not letting you know what’s going on with your neighborhood and your surroundings and the schools. They let you know everything you pretty much need to know before they even put you in the house.

Michelle, 33, recalled a time when her counselor came for a postmove visit and wanted to talk about her future: “They come and out and they sit down and ask you do you think about going back to school and stuff like that.” AJ said that the workshops and the housing search tours made her feel important: “They made it very convenient for us. They even fed us lunch…. We were treated like VIPs.”

Instrumentally, there were two other factors that loomed large in the process for families as they began to navigate moving. First was the help they received for housing search assistance. The BHMP provided a range of services to help families find housing, from individual rides to bus tours done with other clients. Many mothers emphasized how crucial it was to have this help, especially for those without a car; it was also the first time that many had seen housing in the farther-flung suburban neighborhoods. Mary, a 40-year-old mother of two teenagers, laughed when she recalled how much easier it was to search for a home with her counselor: “She was like…we’ll just hop in my car and we’ll take a drive.” Maxine, 39, explained, The process was cool…. They even had it to where they would take you out on day trips to go look at certain houses and stuff like that…. [For the house I’m in]….she told me and I got in contact with the landlord. So the landlord let me come out and see the house or whatever. And I told her I liked it and I would like to move in. She gave me a chance. She let me move in. I mean MBQ helped me out a lot. Because like I said, at the time I didn’t even have a vehicle.

The second most commonly reported form of assistance was help with finding landlords to accept the voucher and negotiating with them about rent and repairs. Many participants told us about landlord trouble they had in the past, and the demoralizing experience of being rejected over and over again when inquiring about or applying for rental units. As a result, many mothers told us they had to “take what I could get” when it came to finding a place to live. But their experience with the BHMP differed markedly. Monique, 33, felt relief because the program provided actual listings where the landlords would already accept the voucher: when you get your voucher, they ask you what area are you planning on moving to and all that and they’ll give you either between two to three listings that they know accept the voucher and so one of their listings that they gave me was with these people here [her current landlord].

Renee described additional support she received when repairs were needed: “If it is something wrong with my housing situation and the landlord can’t come fix it, I call BHMP. They will have an inspector come out and inspect it.”

Although supportive counseling and assistance with search and landlords were vital to the lease-up process, we found that what kept families in higher opportunity neighborhoods in the long run had at least as much to do with their first-hand experience living in safer, more diverse neighborhoods, and watching their children attend better resourced schools. The interviews suggest that the program profoundly affected not only their short-run experiences after moving, but also their long-term residential preferences and decision-making during subsequent moves (see also Darrah & DeLuca, 2014). Direct and durable exposure to opportunity-rich neighborhoods raised parents’ expectations for what neighborhoods, homes, and schools could offer their children. Participants described how their new neighborhood experiences led them to more seriously consider criteria such as school quality and neighborhood amenities when thinking about where to live, even when facing difficult tradeoffs.

T, a mother of two, admitted that at times she found it hard to stay in the county with so many of her family members in the city. However, she stayed because she was swayed by the school quality, explaining, “it’s something to adjust to but when you think about the schools and the neighborhoods and the people, it’s really not that hard of a decision.” Kizzy, a mother of three, remarked that a dramatic change in her son’s school is what convinced her to stay in the county: “we moved out here and he changed…. The school he goes to, there ain’t no kids in the hallway cussing and all that, they don’t play that. Once you come in there with bad attitude, they on top of that. They got counselor people to help you out.” She admitted, “I wanna stay in the county. I want my kids to stay in county schools.”
Lisa, who moved her family to Columbia, Maryland, told us that the schools were precisely what kept her from repeat moves and a return to the city:

I’ve been here for six years and I absolutely love it…when we were living with my mother in the city, they weren’t doing well in school. My oldest was held back…. When we came here, my son became an honor roll student; the one that got held back…. The schools are so much more advanced than in the city.

Dion, a mother of three, summed it up:

If I had my choice I wouldn’t move from this home until AJ is basically out of school. This is the house that I want them to grow in so when they think of their childhood this is the house I want them to remember. This is the neighborhood I want them to remember.

Discussion

Our analyses of the mobility patterns of BHMP families yield several important findings. First, combining housing vouchers with supportive counseling and policy supports can help low-income black families move to more integrated and affluent neighborhoods, in higher performing school districts. Second, most families will stay in these neighborhoods well beyond the requirements of the program and despite subsequent moves. Third, although, over time, some families moved to neighborhoods that were less white, these areas were still significantly less segregated and less poor than their baseline communities, with schools that had lower poverty rates and higher academic performance than those serving their baseline neighborhoods. Fourth, compared with similar families in the region’s HCV program, BHMP movers live in neighborhoods that are less segregated and less poor, and near lower poverty, higher performing schools.

However, whereas our analyses lend support to the conclusion that the BHMP helped families escape poor neighborhoods in the long run, questions remain about the population the results apply to more generally and the potential causes of the variation we observed. Certainly, families that go through the required steps to receive their voucher and relocate to the suburbs are different from those who sign up but never get this far along in the program. Therefore, our conclusions may not apply to all poor families, or even all poor black families in disadvantaged urban areas. Instead, because the BHMP families applied to the program, passed typical voucher program background checks, attended workshops and saved a modest sum of money, they are more like families that sign up for (and lease up through) voucher programs than those who do not. Baltimore city’s HCVP wait lists were closed as of 2003, meaning the BHMP was the only available source of rental assistance to low-income families at the time of our study. As a result, the program probably reached families that might not have signed up for BHMP were it not for their desperate housing need—perhaps even those who were uninterested in living in the suburbs, and who would not have tried to port out of the city. Fieldwork confirms that many of the successful movers were not necessarily predisposed to move to suburban counties: over 70% had no experience living in the suburbs, and some admitted to considerable hesitation during the early stages of the counseling process (Darrah & DeLuca, 2014).

Our analyses show that most BHMP families remained in lower poverty neighborhoods, and did not move back to the kind of high-poverty, racially segregated areas that they many were living in when they signed up for the program. Interviews with a subsample of BHMP families reveal how exposure to affluent neighborhoods with high-quality schools impacted the way household heads thought about future moves. We speculate that the years that families spent living in safer, more affluent communities, and watching their children attend higher quality schools, supplied the concrete motivation to secure and keep housing in these kinds of neighborhoods.

Whereas the majority of BHMP families remain in more affluent, less segregated areas even after subsequent moves, we find that some return to less-white neighborhoods. Why? Some critics might argue that the return to more segregated neighborhoods indicates a preference to return to communities with more same-race neighbors (Clark, 2006; Thernstrom & Thernstrom, 1997). Although it is possible that families wanted to live near more same-race neighbors, the significance of these concerns must
be considered alongside several other factors. Discussions with counselors and staff working with the BHMP program, as well as fieldwork with families, show that the primary reasons for second moves include issues with landlords, changing family size, proximity to work, and transportation difficulties. Some of these reasons are consistent with recent research showing that voucher users in general live farther from areas of job growth than do residents of traditional public housing, although they face less competition for low-skilled jobs in these locations than public housing residents do (Lens, 2014). Transportation can also influence which neighborhoods low-income families like those in the BHMP are able to access or stay in; research on MTO shows that having access to a vehicle increased the likelihood that a household would move to a lower poverty neighborhood (Dawkins et al., 2015). Still another large issue that prompts some BHMP families to return to the city is a mismatch in the location of childcare relative to their suburban neighborhoods. Low-income parents juggling work often rely on family members for childcare, and in the case of the BHMP families these caregivers often live in the city, adding hours of additional driving back and forth (Stack, 1974; Stack & Burton, 1994; Talbert, 2014). Although we cannot rule out racial preferences as an explanation for subsequent mobility, we do not have evidence that this is the primary driving factor.

Although we do not provide unambiguous proof that assisted housing mobility programs change the residential trajectory of low-income black families, we can certainly conclude that removing some of the barriers to upward residential mobility and providing counseling services can significantly change the neighborhood contexts that these families experience in the short and long term. From our comparison group analysis, we can also conclude that it is unlikely that these families would have made moves to these more integrated communities in the absence of program assistance.

Although we do not report individual-level family and child outcomes in this article, the kinds of neighborhood and school changes experienced by BHMP families could lead to significant benefits for children's educational attainment and economic mobility in the long term. Recently, scholars have found that the long-term effects of MTO were much larger than previously considered—children in the experimental group (who moved before age 13) experienced large gains in college attendance, income, and marriage rates compared with their peers in the control group (Chetty, Hendren, & Katz, 2016). Other longitudinal research with children and families in Baltimore's MTO site show large intergenerational gains in educational attainment (DeLuca, Clampet-Lundquist, & Edin, 2016). As we discussed earlier, the neighborhoods and schools experienced by children in the BHMP far surpass those experienced by children in the MTO program; thus, we might expect larger educational and economic gains as these children reach adulthood. Recent research using data from an inclusionary housing program also finds that low-income students who spend time in lower poverty schools perform better on achievement tests than their peers in higher poverty schools do—enough to cut the gap between them and their nonpoor classmates in half (Schwartz, 2010). These findings, as well as the stark differences between the school environments at baseline and current neighborhoods, demonstrate that housing policy is deeply connected to schooling; we show that the BHMP has been able to shape educational opportunities for children despite not directly incorporating educational goals into the program's design.

**Policy Implications**

Our findings, showing that it is possible to assist low-income minority families in making large improvements in neighborhood and school district conditions in both the short and long term, depart significantly from those of previous research, which demonstrates patterns of repeat mobility between poor segregated neighborhoods (Sampson, 2012; Sharkey, 2012), even for families in the HCVP (Horn et al., 2014; Jacob, 2004; McClure, 2008), and those who moved under other mobility programs (Boyd et al., 2010; Clark, 2008). Critics have suggested that efforts to increase neighborhood and school quality through assisted housing mobility have failed, and will fail, in part because policies cannot overcome the inevitability of same-race residential preferences (e.g., Clark, 2008; Imbroscio, 2011). However, our findings suggest an alternative explanation: some previous voucher and mobility programs might not have provided adequate counseling and policy supports (cf. Rosenbaum & Zuberi, 2010).
We suggest that the BHMP was effective in shaping longer term neighborhood residence in part because it offered access to place-based opportunity that far exceeds that of other recent mobility programs. BHMP participants leased up in very low-poverty census tracts (< 10% poor, a higher standard when compared with Gautreaux II, which set a poverty limit of 23.49%). In addition, the BHMP also used race and subsidized housing assistance to define high-opportunity neighborhoods, in contrast with the poverty-only criterion that the MTO program used. The inclusion of the racial criterion is essential, given that predominantly African American neighborhoods have historically been more susceptible to economic decline than other areas, and because the schools in nonsegregated neighborhoods are higher quality, on average (Clampet-Lundquist & Massey, 2008; Massey & Denton, 1993). Using a lower poverty threshold than Gautreaux II and including the racial criterion that MTO lacked meant that BHMP families were unlikely to move to neighborhoods surrounded by other low-opportunity tracts (Pashup et al., 2005; Rosenblatt & DeLuca, 2012). As Briggs and Turner (2006) have noted, one policy implication is that it matters how opportunity neighborhoods are defined.

Yet without strong counseling support, mobility programs may have limited effectiveness. BHMP families received comprehensive services through workshops and one-on-one counseling sessions. These workshops included an in-depth orientation briefing, as well as sessions on credit repair, eating healthy on a budget, basic home maintenance, and navigating housing searches in the private market. The counseling process highlighted the benefits of high-opportunity neighborhoods—especially schools—and also libraries, recreational centers, and grocery stores. Counseling sessions also introduced criteria with which to evaluate city versus county living, and equip families with information they need to be successful in the private rental market, such as home repairs and working with landlords. MBQ regularly offered housing tours of opportunity neighborhoods, where voucher holders could see local amenities like grocery stores, hospitals, or schools firsthand, as well as meet with landlords. In 2008, BHMP began offering second move counseling for families that were planning to make additional moves and wished to stay in higher opportunity neighborhoods. These changes were supported by local and national housing advocates who have been involved in tracking BHMP performance and responding actively to new research in the field since the program’s inception.

Our analyses suggest that the counseling provided in the BHMP was crucial for giving families access to, and longer term duration in, high-opportunity neighborhoods. The supportive counseling BHMP made available before, during, and after a move stood out when compared with both MTO and Gautreaux II (Boyd, 2008; Boyd et al., 2010; Briggs et al., 2010). For example, Boyd et al. (2010) describe the relatively weak implementation of counseling in the Gautreaux II program, which might explain the low lease-up rate of 36% and the higher rate of second moves out of opportunity neighborhoods. Counseling in MTO varied between cities, with counseling agencies replaced partway through the demonstration in Chicago and in Los Angeles, California (Feins, McInnis, & Popkin, 1997). The nonprofit groups in charge of counseling in each of the cities disagreed about what kinds of services would be required to implement successful moves to low-poverty neighborhoods, and neither HUD nor Congress had budgeted for these resources, leaving the agencies in each of the sites to raise matching funds necessary to do the job (Briggs et al., 2010).

A review of counseling in MTO suggests that the BHMP features at least two services that were not made widely available to MTO families: systematic efforts to inform families about school opportunities in potential move areas, and second move counseling for those facing a move from their initial location. Our findings, as well as evaluations of MTO, such as recent research showing that locational restrictions reduce take-up rates whereas counseling increases them (Galiani, Murphy, & Pantano, 2015), suggest that investment in both pre- and postmove counseling leads to positive returns in both lease-up rates and longer term residence in opportunity neighborhoods (Briggs & Turner, 2006; Feins et al., 1997; O’Neil, 2008).

Although the kinds of neighborhoods families moved to and the level and quality of counseling they received were likely to have played a large role in their tenure in more affluent neighborhoods and school zones, the Baltimore program also included additional administrative features that helped families use their vouchers in low-poverty neighborhoods. In addition to being regionally administered,
removing the need for families to *port out* to move to surrounding counties, the BHMP included higher payment standards for the vouchers. Although a voucher covers housing costs at or below the 40th percentile of area median rent, many of the more expensive middle-class neighborhoods in a metropolitan area will still be out of reach for assisted households. To facilitate moves to such neighborhoods, the BHMP provides payments up to 120% of area fair market rent, giving families more options, especially in the suburban neighborhoods with the best schools. Although families were required to save money toward security deposits, they also received additional assistance to cover the higher costs in more expensive neighborhoods.

Finally, as was the case with the original Gautreaux program, the landlord outreach conducted by the counselors and staff at the BHMP was essential to the success of families' initial lease-ups, and probably also their long-term duration in low-poverty neighborhoods. It can be difficult for families to navigate a rental market where landlords can legally refuse to rent to them because of their vouchers, and where the landlords with the highest incentive to take voucher holders are those in neighborhoods with the highest poverty rates (because the voucher payment is set at the metropolitan level, it typically pays more than these apartments would fetch among unassisted renters; Rosen, 2014). The efforts of the BHMP staff to educate landlords about the benefits of renting to families with housing assistance (such as guaranteed rent), alongside continued counseling even after a family moved into a landlord's unit, offered the compelling support some landlords needed to open their apartments to BHMP families.

Notes

1. HUD's fair market rents differ by metropolitan area and are set each year at the 40th (or in some cases the 50th) percentile of gross rent for all units occupied by those who have moved in the past 15 months (U.S. Department of Housing and Urban Development Office of Policy Development and Research, 2007).
2. As of 2016, the program has helped over 3,000 families relocate; in this article, we focus on the results for the first 1,800 movers.
3. It should be noted that these vouchers are not available to all those demonstrating need. Because of funding limitations, only 1 in 4 eligible families nationwide receives federally funded housing assistance (Rice & Sard, 2009).
4. For details on search times, see HUD's *Housing Choice Voucher Program Guidebook*, chapter 8 (U.S. Department of Housing and Urban Development, 2001).
5. It is important to note that MTO families did experience significantly lower poverty neighborhoods than controls did. Over the duration of the study, experimental group families lived, on average, in neighborhoods that were 9% lower poverty than controls did (18% lower for compliers; Sanbonmatsu et al., 2011). Put differently, over the course of 10–12 years after the start of the study, the median number of months spent in low-poverty neighborhoods for the three MTO groups was 0 months for control group families, 9 months for the Section 8-only group (24 months for Section 8 compliers), and 36 months for the experimental group (87 months for experimental compliers; Edin, DeLuca, & Owens, 2012). These results might have seemed disappointing to some, but they are still striking (Ludwig, 2012).
6. Since the time of our data collection for this article, program rules have changed, and families are now required to lease up for 2 years in an opportunity neighborhood.
7. Since 2014, the program has been administered by the Baltimore Regional Housing Partnership.
8. For more on the counseling process, see the Baltimore Regional Housing Partnership website [http://www.brhp.org/counseling_program](http://www.brhp.org/counseling_program).
9. Technically, 2,038 families leased up with the program in the first 10 years. However, we removed from the analysis 216 families that, in the first few years of the program, were forced to move from a handful of suburban apartment complexes because the owners of these complexes stopped participating in the program. Although many families made additional moves away from their initial lease-up address, the experience of these 216 families is not representative of the rest of the sample because they were not given the option of staying in their first unit through the program. This leaves us with 1,822 families that are the focus of our analysis.
10. The remaining 13.6%, or 247 families, had stopped participating in the program at some earlier point. This could happen for a variety of reasons, ranging from eviction to voluntary withdrawal from the program because a family's income became too high to qualify for the voucher. In these cases, we use a family's most recent voucher address as their current address.
11. This was done by analysts at the Kirwan Institute. See *Remedial Phase Expert Report of John Powell in Thompson v. HUD Appendix B*, August 19, 2005.
12. In these analyses, we only look at the characteristics of the schools zoned for the neighborhoods in which BHMP families lived at different times, not whether their children attended these schools, or whether their achievement scores improved. Ongoing research is focusing on these questions (DeLuca, Rhodes, & Garboden, 2016). The term...
highly qualified comes from a definition included in the Federal No Child Left Behind Act, and refers to teachers who have earned a bachelor's degree from an accredited institution of higher education and have a valid standard professional certificate in the subject area they are teaching.

13. In separate analyses, we used 2000 U.S. Census Bureau data and found that they closely match the neighborhood characteristics reported here.

14. These data are aggregated to the census tract level.

15. From June to November 2012, we conducted semi-structured, in-depth qualitative interviews and observations with the household heads in these 88 families. Interviews lasted, on average, 2 hr and ranged from 90 min to 4 hr; almost all interviews were conducted at the respondents' current place of residence, except for five interviews done in public venues such as McDonald’s, when respondents preferred to talk outside the home. Respondents were offered a $50 stipend for participating. Interviews were recorded and transcribed, and transcripts were coded with MAXQDA. An additional 22 nonmover families were also interviewed during this time period to compare similar families who applied for the program, but had not yet moved.

16. Among the movers we interviewed, 63 families moved with the program to a suburban county and then stayed at the same address, moved to another address in the same county, or moved to another suburban county; 19 families moved to a suburban county with the program and returned to the city; and six families were boomerang cases that moved to the suburbs, went back to the city, and left again for the county (often to return to better schools).

17. HCVP demographics in Table 1 are aggregated to the city or metropolitan Core Based Statistical Area (CBSA) level. These data do not contain counts of children or the average age of household heads.

18. Nearly 30,000 people applied for the program through the end of 2011, and 16,000 people were deemed eligible to participate as part of the class represented by the initial lawsuit. Of these eligible households, approximately 5,000 went beyond the application process to an initial briefing, began the counseling process, and were still active in the program. The remaining families had stopped participating for a range of reasons, such as missing meetings with the counselor, failing a background check, or having incomplete information in their file. MBQ considered many of these families to be inactive rather than completely disqualified from the program, as they can return to counseling at any time. Of the 5,000 active families, 2,609 had received vouchers and 2,038 leased up. The remaining families were still active in the process of counseling, or searching for housing with their vouchers. Rather than terminate clients, MBQ counted families active in the program as long as they were in contact with their counselors, actively improving their credit, attending budget or voucher workshops, or searching for housing. Calculating a rate of take-up for all active eligible families is complicated by the way the program is implemented. In part, this is because families were accepted into the program on a rolling basis each day, and as long as they remained active, they were technically part of the program. However, the data we were able to acquire from MBQ did not allow us to further differentiate these families according to which activities they had completed and how close they were to receiving a voucher or leasing up. Undoubtedly, family characteristics such as employment status, having a car, and motivation contributed to the likelihood that a family would get far enough along to receive a voucher. In analyses not shown, we compared the 2,038 families that leased up with a BHMP voucher with the 571 who were issued a voucher but had not leased up as of our data collection. We found that voucher users were more likely to have larger families (with three or more children), but found no significant differences in age, gender, race, or ethnicity between the two groups. Whereas household-level factors are likely to predict voucher receipt, other outside forces, such as monthly fluctuations in the resources available to families from the program, could also explain these differences. Our visits to the administrative offices and interviews we conducted with the director and staff suggest that variations in counselor quality, number, and turnover affected how quickly households became move ready. Therefore, for the purposes of this article, we consider take-up to be the proportion of families that received a voucher and leased up in an allowable census tract.

19. It is important to clarify that plaintiff class eligibility is not the same as voucher eligibility. To compare take-up rates between the BHMP and other voucher programs we would compare the percentage of voucher-eligible families that leased up. Because BHMP premove readiness criteria are a close, but not exact, match with HCVP eligibility, we cannot say for certain what the appropriate denominator for this calculation would be. The only members of the class-eligible group of 16,000 families that we know for sure were eligible for vouchers were the 2,609 issued a voucher.

20. All figures are from the 2005/09 American Community Survey. Regionally there were minor changes in census variables between 2000 and 2005/09—the black population of the Baltimore metropolitan region increased from 30% to 33% of the total population, while the poverty rate remained the same at 12% (although the suburban poverty rate increased from 6.1% to 7.1%). We repeated all neighborhood demographic analyses using the 2000 Census, and found no major differences with the findings reported here.

21. This average masks considerable differences, depending on suburban destination: 8.2 miles and 10.2 miles, for families moving to the adjacent Baltimore County and Anne Arundel Counties, respectively; 13.3 miles for Howard County movers; 18.9 miles for those moving to Harford County, and 23.2 for the few families that moved to Carroll County.

22. Across all five cities, MTO experimental-group movers went to neighborhoods with an estimated poverty rate of 10.8% at the time of the move (Orr et al., 2003, p. 30). Forty-four percent of MTO experimental-group movers went to areas with increasing poverty rates during the 1990s (Orr et al., 2003, p. 31).
23. In central Maryland, the average proficiency rates in 2004 were 71.8% in reading and 65.5% in math.

24. Some families moved to neighborhoods that were higher poverty or had a higher percentage of African American residents than the BHMP target criteria of no more than 10% poor and 30% African American. This is due to a range of factors, from early placement using the 1990 census to determine allowable areas, to in-place population changes between the earlier censuses and the 2005/09 American Community Survey.

25. On average, subsequent moves took place almost 2 years after the initial lease expired—22 months after the 1-year lease-up period ended, or 34 months after families first signed a lease. Some families did move out right away; the minimum time to move after 1 year of residence at the initial-move address was less than 1 month, and the maximum was 86 months to subsequent move. Because the program was ongoing during our data collection, some families had less time than others to make a subsequent move simply because they signed up for the program in later years. To address this problem, we used survival analysis to estimate how the relative risk of making a subsequent move changed over time. We found that there was a 2% increase in the rate of moves each month following the expiration of a participant’s initial lease, with a 25% chance of making a subsequent move at 13 months after the initial lease was up (25 months after initial program move), and a 50% chance after 34 months (46 months after initial move). Overall, we do not see a trend of rapid moves away from the initial address.

26. This figure refers to 21.2% of all families that had at least 1 year of residence at their initial unit, including families that stayed in place after their initial lease expired.

27. Current neighborhood is observed an average of 18.9 months following the initial lease (standard deviation 25.3 months). The time between initial and current neighborhood ranges from 0 months (for families that had not left their initial address at the time of our data collection) to 100 months.

28. We also looked at neighborhood outcomes for the subset of 741 subsequent movers who relocated from their initial address. The majority of subsequent mover families were living in the suburbs at the time of our data collection. Subsequent mover neighborhoods were 12.9% poor, with schools that were 52.3% poor on average. Whereas these subsequent mover neighborhoods as a whole are not as well off as the neighborhoods of families that stayed at their initial address, they are much better off than the baseline neighborhoods that families had initially been living in, which had average poverty rates of 30% in the neighborhood and 81% in the school. More than half of subsequent movers went to a low-poverty neighborhood that matched the target poverty rate of 10% or lower from their initial voucher move. One third of families that made a subsequent move from their initial BHMP address ended up in neighborhoods that were less than 30% black, with fewer than one fifth (18%) having moved back to the highly segregated (more than 90% black) neighborhoods that were most common when families signed up for the program. Mapping subsequent move locations revealed a few common destinations. These included Columbia, a stably integrated planned community; western Baltimore County, which in recent decades has become home to more African American families; and northeast Baltimore City, which has also seen an increase in the black population over the past couple of decades. These areas all had low neighborhood poverty rates but were not predominantly white. Overall, our analysis of subsequent moves shows that whereas some families moved to more segregated areas over time, these areas tended not to be the same kinds of high-poverty places where many were living when they signed up for the program.

29. Ten to 15 years after random assignment, MTO experimental group movers (compliers) across all five cities were living in neighborhoods that were 21% poor and 77% minority on average (Sanbonmatsu et al., 2011, p. 20).

30. It is possible that the HUD Picture of Subsidized Household data we use here includes BHMP voucher users, since families in the BHMP were receiving federal housing vouchers. To address this potential overlap, we conducted an alternative analysis by subtracting the number of BHMP voucher users in each census tract from the HUD data, and compared the findings with those shown in Table 5. We found very little difference between our alternative analysis and the results shown here: the average difference between the measures shown in Table 5 and our revised HCV calculations ranged from 0.2% in Baltimore city to 1.03% in the suburban counties. Because we are not sure whether BHMP families overlap with the HUD data, we left the HUD data unaltered in Table 5. We believe that this results in a more conservative comparison, as wrongly removing BHMP families from HUD data would likely bias the general HCV location estimates toward higher poverty, more segregated measures.

31. The housing authorities that administer vouchers in the central Maryland region are the Anne Arundel County Housing Commission, the Annapolis Housing Authority, the Baltimore County Housing Office, Carroll County Housing and Community Development, the Harford County Housing Agency, the Howard County Housing Commission, and the Queen Anne’s County Housing Authority.

32. We do not know the extent to which HCVP households represented in the last column of Table 5 signed up for vouchers while already living in the suburbs, or how many ported out from Baltimore city to the suburbs (as most BHMP families did).

33. For voucher holders in the state of Illinois, Greenlee (2011) shows that of the 130,697 voucher holders served between 2000 and 2007, only 9,155 made portability moves (7%).

34. We are indebted to Philip Garboden and Stephen Wong for the data analysis that allowed us to create this figure.

35. Participants also mentioned several other factors from the BHMP that they found helpful, including: the prospect of homeownership through the program, credit repair, security deposit assistance, and information about obtaining
a driver’s license and a vehicle. Parents also talked at length about the advantages of living in safer neighborhoods with higher quality schools, as detailed in Darrah and DeLuca (2014).

36. Names used in the article are pseudonyms chosen by respondents.

37. The results in Baltimore may not generalize to all cities, as some metropolitan areas have tighter or looser rental markets, more or less effective public transportation, and different levels of racial and economic segregation. However, when compared with other housing programs implemented in Baltimore, such as HCVP or the MTO Program, the results suggest the approach taken by BHMP is more effective at helping low-income African American families reach higher opportunity neighborhoods and schools. Additional research is needed to examine whether such housing mobility practices would be effective elsewhere.

38. As part of our fieldwork, all research team members attended orientation briefings, and many of us attended these additional workshops.

39. These two features of BHMP counseling services evolved during the course of the program. The lack of educational impacts and the small changes in school quality shown in the interim MTO evaluation prompted BHMP administrators to train counselors to help families locate areas with high-performing schools. Second move counseling was instituted after a series of forced relocations where landlords in a few apartment complexes stopped accepting the MBQ voucher (Barbara Samuels, personal communication November 12, 2016).

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Disclosure Statement

No potential conflict of interest was reported by the authors.

Notes on Contributors

Stefanie DeLuca is an associate professor of sociology at Johns Hopkins University. She earned her PhD in human development and social policy at Northwestern University. She conducts research involving sociological considerations of education and housing policy issues. She has carried out mixed-method studies that incorporate qualitative research into experimental or quasi experimental designs. She recently published Coming of Age in the Other America (with Susan Clampt-Lundquist and Kathryn Edin, Russell Sage Foundation, 2016), and “Living Here Changed My Whole Perspective: How Escaping Inner City Poverty Shapes Neighborhood and Housing Choice” (with Jennifer Darrah) in the Journal of Policy Analysis and Management.

Peter Rosenblatt is an assistant professor of sociology at Loyola University Chicago. His research focuses on housing policy and urban inequality, and has resulted in publications for both academic and policy audiences. He has an article on “Investors and the Geography of the Subprime Housing Crisis” (with Steven J. Sacco) forthcoming in Housing Policy Debate and recently completed a study of how low-income voucher holders respond to a suburban Security Deposit Assistance Program in Milwaukee County.

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