Moving to Opportunity or Disadvantage?
An Analysis of Housing Choice Voucher and Rapid Rehousing Programs in Allegheny County

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EXECUTIVE SUMMARY

Decades of social science research show that place has a profound influence on child-to-adult outcomes and this finding has far-reaching implications for how affordable housing policy should be designed and implemented. Two housing programs in Allegheny County, Rapid Rehousing (RRH) and the Housing Choice Voucher Program (HCV, also known as Section 8), provide rental assistance to individuals and families in need of support to be stably housed. While the requirements of the programs differ, participants in both receive monetary assistance so that they can rent from private landlords and live in the community of their choice.

Participant choice is a perceived benefit of both programs. However, the reality is that where participants live and their ability to move is often limited by factors out of their control, such as fair market rent calculations, source of income discrimination, exclusionary zoning laws and participants' eviction/credit records, among other challenges. These factors either limit the available supply of affordable housing in general or limit the supply of rental housing available to voucher holders.

The following analysis and report explores the degree to which individuals and families in RRH and HCV programs moved to both highly/extremely disadvantaged census tracts and low/very low disadvantaged tracts. The analysis also considers whether certain populations using these housing programs — for example, families with children or Black households — were more likely to move to said tracts.

To conduct the analysis, we geocoded and mapped by census tract unique heads of household in the RRH and HCV programs (who moved into housing in 2017). The analysis also explored moving patterns for HCV households who moved into housing in 2010. Using data from the American Community Survey (2013–2017 five-year estimates), we combined four indicators to create a measure of community disadvantage: (1) population below the federal poverty line; (2) families headed by single females; (3) unemployed males; and (4) residents with less than a bachelor's degree. Census tracts were placed in one of five disadvantage levels, ranging from very low disadvantage to extreme disadvantage.

Extremely disadvantaged tracts had an average poverty rate of 47%, and highly disadvantaged tracts an average poverty rate of 31%, while moderately disadvantaged tracts had an average rate of 19%. Low disadvantage tracts had an average poverty rate of 10%, and very low disadvantage tracts had an average poverty rate of 5%.

Analysis found that the majority of HCV households and the near majority of RRH households moved to highly or extremely disadvantaged census tracts, even though only 18% of all census tracts in Allegheny County were classified as highly or extremely disadvantaged. Specifically, 54% of HCV households moved to highly or extremely disadvantaged tracts in 2017, as did 41% of RRH households. Only a small fraction of households in either program moved to low or very low disadvantage tracts (i.e., opportunity tracts). Seventeen percent of HCV households moved to low or very low disadvantage tracts and 25% of RRH households did, even though 64% of census tracts in Allegheny County were classified as low or very low disadvantage.

Race was the most statistically important factor impacting where households in each program tended to move, even when accounting for differences by gender and household structure. In fact, Black females with children were roughly twice as likely as White females with children to move to highly or extremely disadvantaged tracts in both programs.

Regardless of household type, moving patterns (i.e., which sort of tracts households tended to move to) persisted over time for households in the HCV program. Households in the HCV program who moved in 2010 tended to move to the exact same census tracts as households in the HCV program who moved in 2017. Given the breadth and depth of research that shows the causal link between a child's upbringing in areas of concentrated disadvantage and myriad negative outcomes in adulthood, the percentage of children residing in highly disadvantaged census tracts in Allegheny County is concerning. As such, this analysis and future discussions about subsidized rental programs' ability to promote choice for participants in where they live are vital for the well-being of the County's residents, especially those experiencing economic vulnerability and disadvantage.

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DEFINITIONS

Concentrated Disadvantage: Sociologists studying urban poverty typically define areas of concentrated disadvantage as census tracts or neighborhoods with high rates of the following indicators: welfare receipt, poverty, unemployment, female-headed households, density of children and low educational attainment.[1]

Fair Market Rent (FMR): Calculation used to determine rental voucher amounts (also known as the payment standard) for government-assisted housing programs. FMR levels are set yearly by the U.S. Department of Housing and Urban Development (HUD) and vary by metro region.

Housing Choice Voucher Program (HCV): Federally funded by HUD and administered by local housing authorities, HCV is a program that provides rental assistance to households based on income eligibility. Households pay a percentage of their gross adjusted income, with the local housing authority covering the difference between the household's income and the payment standard paid to the landlord. Voucher holders must find a landlord on the private market who will rent to them and must agree to and abide by terms set in the lease.[2] (See **Appendix A** for more details on HCV.)

Opportunity Census Tracts: Census tracts with low or very low levels of disadvantage. Per this analysis, low disadvantage tracts had poverty rates of 10% on average, and very low disadvantage tracts had rates of 5% on average. These measures align with those in the federally funded Moving to Opportunity (MTO) experiment; census tracts in MTO were defined as high opportunity if they had overall poverty rates of less than 10%.[3]

Rapid Rehousing Program (RRH): Federally funded program, administered by local providers, that gives financial assistance and targeted support services aimed at rapidly helping households experiencing homelessness achieve long-term housing stability.[4] Households receive individualized financial assistance that tapers over a maximum period of two years. As with the voucher program, private landlords must agree to rent to an RRH recipient, and a recipient must agree to and abide by terms of the lease. (See **Appendix A** for more details on RRH.)

Rent Reasonableness: Rent guideline meant to ensure that rents being paid are reasonable in relation to rents being charged for comparable units in the same market. However, sample sizes for the calculation only comprise a minimum of three comparable units in a local rental market. As such, estimates have a profoundly large margin of error if used to demonstrate comparable rents overall in a local rental market.

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[1] Sampson, R. J., Sharkey, P., & Raudenbush, S. W. January 22, 2008. "Durable effects of concentrated disadvantage on verbal ability among African-American children." *Proceedings of the National Academy of Sciences of the United States of America.*

[2] Housing Choice Vouchers Fact Sheet. n.d. On HUD.GOV. Retrieved from here.

[3] Raj Chetty, Nathaniel Hendren, & Lawrence Katz. 2015. "The Effects of Exposure to Better Neighborhoods on Children: New Evidence from the Moving to Opportunity Experiment." The National Bureau of Economic Research.

[4] Rapid Re-Housing Brief. July 2014. In *HUD Exchange*. Retrieved from here.

ACRONYMS

ACS: American Community Survey

AMI: Area Median Income

DHS: [Allegheny County] Department of Human Services

FMR: Fair Market Rent

HCV: Housing Choice Voucher

HUD: [U.S. Department of] Housing and Urban Development

MOE: Margin of Error

RRH: Rapid Rehousing

INTRODUCTION

This analysis and report explores the degree to which Allegheny County households in the Rapid Rehousing (RRH) and Housing Choice Voucher (HCV) rental subsidy programs move to highly or extremely disadvantaged census tracts and whether particular subgroups are more likely to move to disadvantaged tracts than others, as well as whether moving trends persist over time. Analysis of housing programs and the locations where participants live is particularly important for understanding the needs of children, whose development can be affected long-term by living in disadvantaged neighborhoods.

BACKGROUND

The HCV program serves about 30,000 Allegheny County residents per year, while RRH serves about 950.[5] While eligibility requirements and subsidy amounts vary by program, both RRH and HCV programs subsidize a portion of an eligible recipient's rent. The subsidy ceiling for both programs is based on the U.S. Department of Housing and Urban Development's (HUD) Fair Market Rent (FMR) formula or that set by rent reasonableness. Both programs use a market-driven approach to subsidized housing that requires the participation of private landlords who agree to rent to subsidy recipients. Both programs offer subsidy recipients the ability to decide where they want to live — at least in theory.

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[5] Based on active residents per program in Allegheny County from 2013 through 2017. Average pulled from the Allegheny County Analytics Quick Count tool. HCV includes only data for the Allegheny County Housing Authority and the Housing Authority of the City of Pittsburgh. Address data for RRH residents were only available as of 2013.

While program participants select the location of their rental, several factors often intersect to limit the choice that participants in these types of programs have:

- **The method by which FMR is calculated:** HUD annually estimates FMR for metropolitan areas. Because FMRs have historically been based on metro areas, they have not been necessarily representative of smaller markets at the neighborhood or census tract level. As such, the subsidy that renters receive may not be enough to cover units in more desirable areas both inside and outside of the city. See **Appendix A** for more information on how this method has changed in Allegheny County as of 2018.

- **Source of income discrimination:** Landlords are more likely to rent to non-voucher holders even when potential tenants have similar qualifications.[6] In some cities, it is illegal for landlords to refuse tenants because of their housing subsidy status (source of income), though these types of renters are not protected in Allegheny County. Given the demographic makeup of RRH and HCV participants, source of income discrimination may act as a proxy for racial discrimination.

- **Exclusionary zoning laws:** Minimum lot size requirements, single family residence per lot requirements, minimum square footage requirements and costly building codes have assured that the supply of affordable rental housing remains low. Likewise, large lot size requirements have been shown to drive up the cost of land, which further prices out the poor. A low supply of affordable housing leads to a lack of access for low-income renters, especially in high opportunity suburban areas. As such, exclusionary zoning has been linked to increases in concentrated poverty and residential segregation by race.[7] Discriminatory housing, lending and zoning polices cannot be separated from the historic and present-day racism that created and maintain these practices.

- **Eviction history:** Nationally, the steep rise in evictions has been attributed to decades of stagnant wages, rising housing and utility costs, and the continued decline of federal support for subsidized housing programs.[8] An eviction record dramatically affects a household's ability to obtain both public and private housing and evicted tenants tend to be pushed into poorer and higher crime areas. Both a cause and symptom of poverty, eviction contributes to the increasing patterns of residential segregation by race and income in areas of concentrated disadvantage.[9]

[6] Mary K. Cunningham, et al. 2018. "A Pilot Study of Landlord Acceptance of Housing Choice Vouchers." Urban Institute.

[7] Elliott A. Rigsby. June 23, 2016. "Understanding Exclusionary Zoning and Its Impact on Concentrated Poverty." The Century Foundation, here.

[8] Matthew Desmond. March 2015. "Unaffordable America: Poverty, Housing and Eviction." Institute for Research on Poverty: University of Wisconsin Madison, 1. Retrieved from here.

[9] Matthew Desmond, & Tracey Shollenberger. 2015. "Forced Displacement from Rental Housing: Prevalence and Neighborhood Consequences." *Demography*, 52: 1751–1752.

- **Programmatic constraints:** Paperwork and lengthy inspection timelines can inhibit landlord participation in RRH and HCV programs, which can limit neighborhood choice. On this matter, source of income discrimination may not exclusively act as a proxy for racial discrimination by some landlords. Instead, households with rental subsidies may be perceived as an undue burden to landlords unfamiliar with the benefits of the program. Likewise, while RRH providers offer basic housing search assistance to their clients, staffing constraints can limit the ability of caseworkers to expand landlord networks in high opportunity areas. Currently, HCV providers in Allegheny County offer no personalized housing search assistance to voucher recipients.[10]

- **Self-selection:** Existing family and social networks, familiar settings and a connection to religious and social intuitions can affect where families choose to live. Residential preferences are rooted in the ecological and social contexts in which individuals were raised, in addition to structural factors that limit the housing options of those in subsidized housing.[11]

Research shows that place matters. The importance of quality rental units in high opportunity areas for housing program participants is evident in research. Studies show that childhood development in high poverty neighborhoods is connected to myriad negative socioeconomic, cognitive/developmental and mental/physical health–based outcomes in adulthood. For example, a recent study of the Moving to Opportunity experiment found that children age 12 and under were the most likely to benefit in the long run when moving from high to low poverty areas, experiencing higher income and college attendance rates as adults than comparable children who remained in high poverty areas.[12]

Additional research has found that generations of exposure to areas of concentrated poverty has cumulative effects on children's cognitive capabilities as measured by cognitive assessments. Studies show that the cognitive effect of being raised in a high poverty neighborhood over two consecutive generations is equivalent to missing two to four years of schooling.[13] Likewise, children in public housing who attend low poverty schools significantly outperform their peers in public housing who attend high poverty schools.[14]

Research shows that Black children are overwhelmingly exposed to areas of concentrated disadvantage and this exposure leads to reductions in later verbal ability.[15] In Pittsburgh's most disadvantaged neighborhoods, tax delinquency and measures of physical abandonment have been linked to adverse birth outcomes.[16] Although the homicide rate in the U.S was at an all-time low in 2014 and has dropped by more than half in many urban centers since the 1990s,[17] concentrated poverty still tends to have a moderate to strong relationship with disproportionately

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[10] Author of this report presented findings to several RRH and HCV providers in Allegheny County. Various representatives at these agencies brought up internal programmatic issues that can limit neighborhood choice for HCV and RRH participants.

[11] Jennifer Darrah & Stefanie Deluca. 2014. "Living Here Has Changed My Whole Perspective: How Escaping Inner-City Poverty Shapes Housing and Neighborhood Choice." *Journal of Policy Analysis and Management*, 33.

[12] Raj Chetty, Nathaniel Hendren, & Lawrence Katz. 2015. "The Effects of Exposure to Better Neighborhoods on Children: New Evidence from the Moving to Opportunity Experiment." The National Bureau of Economic Research. Retrieved from here.

[13] Patrick Sharkey. 2013. *Stuck in Place*. Chicago, IL: The University of Chicago Press, p.130

[14] Heather Schwartz. 2010. "Housing Policy is School Policy: Economically Integrating Housing Promotes Academic Success in Montgomery County, Maryland." The Century Foundation, 6–7. Retrieved from here.

[15] Robert J. Sampson, Patrick Sharkey, & Stephen W. Raudenbush, 2008: 845.

[16] Anita Zuberi, Waverly Duck, Bob Gradeck, & Richard Hopkinson. 2015. "Neighborhoods, Race, and Health: Examining the Relationship between Neighborhood Distress and Birth Outcomes in Pittsburgh." *Journal of Urban Affairs*, 38(4), 546–563.

[17] Patrick Sharkey. 2018. *Uneasy Peace: The Great Crime Decline* (pp. 180–185), New York, NY: W.W Norton and Company, Inc.

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high rates of fatal and non-fatal gun violence[18,19,20] and neighborhood violence leads to a significant reduction in the ability of Black children to perform well on IQ tests, all else being equal.[21]

Researchers have also found that areas of concentrated poverty are durable over long stretches of time, which makes the negative effects associated with them that much more concerning.[22,23] In Allegheny County, there was a strong relationship between census tract poverty in 2010 and in 2017 (R = 0.82, p < .01).[24] Another analysis found a very strong relationship between poverty level in 1990 and in 2017 for City of Pittsburgh neighborhoods; there was a strong connection between Black communities and lasting concentrated poverty in Pittsburgh. Despite economic change at the national, state and local level over a 27-year period, the economic status of most City of Pittsburgh neighborhoods has not changed.[25]

Federal, state and local governments played a significant role in segregating neighborhoods by race from the 1930s until the late 1960s using explicitly racist housing and lending practices.[26] And local governments have used exclusionary land use practices to insulate property values and inhibit minority access to public goods since the early 20th century, which has resulted in segregation within and between cities by race and class.[27] To address segregation caused by government-sponsored housing discrimination, the 1968 Fair Housing Act (FHA) mandated that the federal government "affirmatively further fair housing" (AFFH) to actively desegregate areas of racial and economic segregation.

A number of recent studies show that non-White households still face discrimination in sales and rental markets for homes and in home mortgage lending, and are shown fewer apartments and homes than equally qualified Whites, despite the passage of the FHA.[28] And national studies show that roughly two-thirds of Black children lived in areas of concentrated poverty in the decades before and decades after the passage of the FHA. Only 1% of White children lived in areas of concentrated poverty over the same observed time periods.[29] A logical extension of AFFH is that government housing programs ought not further segregate existing areas of racial and economic segregation. However, this analysis found that the RRH and HCV programs in Allegheny County are associated with the geographic concentration of disadvantage and poverty.

[18] Robert J. Sampson. 2012. *Great American City: Chicago and The Enduring Neighborhood Effect*. Chicago, The University of Chicago Press, pp. 110–114.

[19] Thomas Abt. 2019. *Bleeding Out: The Devastating Consequences of Urban Violence*. New York, NY: Hachette Book Group, Inc. pp. 18–24.

[20] Nicholas Cotter. November 2019. "Black Communities Are Disproportionately Hurt by Gun Violence. We Can't Ignore Them." Public Source. Retrieved from here.

[21] Patrick Sharkey. 2010, June 29. "The Acute Effect of Local Homicides on Children's Cognitive Performance." *Proceedings of the National Academy of Sciences of the United States of America*. Retrieved from here.

[22] Robert J. Sampson, 2012: 105.

[23] Joe Cortright. 2014, September 12. "Lost in Place." City Reports. Retrieved from here.

[24] Census tracts with populations of less than 100 were excluded. As such, 388 of the 402 census tracts were used. The persistence of individuals living below the federal poverty line was examined for 388 census tracts in Allegheny County via 2006 to 2010 ACS estimates and 2013 to 2017 ACS estimates using a simple linear regression.

[25] Nicholas Cotter. 2019, June 27. "Disparities between Pittsburgh Neighborhoods Persist. This Project Tries to Understand Why." Public Source. Retrieved from here.

[26] Richard Rothstein. 2018. *The Color of Law*. NYC: Liveright Publishing Corp.

[27] Jessica Trounstine. 2018. *Segregation by Design: Local Politics and Inequality in American Cities*. Cambridge: Cambridge University Press.

METHODOLOGY

We geocoded and mapped the addresses of unique heads of household in the RRH and HCV programs in Allegheny County — with move-in dates during 2017 — against levels of disadvantage by census tract using American Community Survey (ACS) five-year estimates for the years 2013 through 2017. The analysis also examined moving patterns for households in the HCV program with a move-in date of 2010. RRH providers were not required to report address data for participants in 2010, so moving patterns were not analyzed for 2010. In 2017, 2,451 HCV households and 309 RRH households moved to housing, but 22 HCV households and 14 RRH households could not be matched in the geocoding process; as such, 2,429 HCV households and 295 RRH households were used in the geospatial analysis. Census tracts with populations of less than 100 residents or those with ACS sample sizes of less than 100 on all measures were excluded from the analysis, so 388 of the 402 census tracts in Allegheny County were used.

Households in each program include single adults and adults with and without children. We pulled household data from the Allegheny County Data Warehouse and the Homeless Management Information System, both of which contain address and demographic data from RRH and HCV providers as well as from the HUD Exchange. Regarding HCV, only data from the Housing Authority of the City of Pittsburgh and the Allegheny County Housing Authority was used. DHS does not have access to data from the McKeesport Housing Authority. Some households in the HCV program had multiple entries for the same year wherein one entry listed zero dependents but another listed at least one dependent. In these cases, HCV households were categorized as having children if they had at least one entry listing dependents during the observed time periods.

Because university students can skew unemployment and poverty levels, student-heavy census tracts in the following City of Pittsburgh neighborhoods used rates for those aged 25 and up: Bloomfield, The Bluff, Central Oakland, Downtown, North Oakland, Southside Flats, South Oakland, Squirrel Hill South, Squirrel Hill North, Terrace Village and West Oakland. Tracts were designated as having a comparatively large population of students if they resided in City of Pittsburgh neighborhoods with a college or university or if they are known student-heavy areas.

Only heads of household that identified as Black or White were geospatially analyzed; a very small number of heads of household identified as a racial group other than Black or White (16 in HCV and 20 in RRH). As such, these populations were far too small to meaningfully analyze.

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[28] Exposing Housing Discrimination. n.d. Urban Institute. Retrieved from here.

[29] Patrick Sharkey. 2013: 27. Sharkey defined areas of concentrated poverty as neighborhoods with at least 20% of their population below the Federal Poverty Line.

As mentioned, recent research shows that children are the most likely to benefit in the long term from moves to low disadvantage areas. As such, we designed a community disadvantage index for this analysis to include those community-level variables that are causally linked to adverse outcomes for children. To construct a measure of community disadvantage, we first consulted DHS's 2014 community need index.[30] The need index is composed of the following variables: percent of households without a vehicle; percent of vacant houses; percent of unemployed men; percent of youth ages 16–19 without a high school diploma and not enrolled in school; percent of single female–headed households; percent of households below 200% of the federal poverty line; and percent of households below 100% of the federal poverty line.

We included three of these variables in our community disadvantage index: percent of the population below 100% of the federal poverty line, single motherhood and male unemployment. Each of these has been widely shown to causally influence child to adult outcomes. While measures of physical abandonment have been linked to adverse birth outcomes and crime, ACS vacancy estimates only capture point-in-time estimates of all vacancy, making it impossible to parse out what is true long-term vacancy versus short-term vacancy due to market turnover. Similarly, while access to a vehicle is an important component of measuring need, especially so within communities with inadequate transit options, access to vehicles in and of itself is not a predictor of adverse childhood outcomes. As for the educational measure used in the community need index, high school completion is a widely used measure of community disadvantage. However, recent research stresses the importance of exposure to individuals with a bachelor's degree or more, as will be discussed. As such, percent of those without access to a bachelor's degree replaced the percent of those who failed to complete or enroll in high school.

The community disadvantage index is not intended to replace the community need index. Rather, the disadvantage index is a more pertinent measure for research questions relevant to this report. Thus, level of disadvantage was calculated by standardizing the following four indicators of disadvantage by census tract and combining them into a single index using a weighted average. Indicators of disadvantage were weighted from highest to lowest in this order:

1. Percentage of population below 100% of the federal poverty line*

2. Percentage of families headed by single females

3. Percentage of males ages 20 to 64 unemployed or unattached to the labor force*

4. Percentage of those aged 25 and up without at least a bachelor's degree

For census tracts with known student-heavy populations, poverty rates were adjusted by using the percentage of the population below the poverty line and the percentage for those ages 25 and up. Male unemployment rates were adjusted by using the percentage of men ages 25 to 64 who were unemployed or unattached to the labor force.

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[30] Megan Good, Kathryn Collins, & Erin Dalton. August 2014." Suburban Poverty: Assessing Community Need Outside the Central City." Allegheny County Department of Human Services. Retrieved from here.

These variables and their weighted order were predicated on research measuring those census tract-level variables most associated with negative long-term outcomes for children raised in disadvantaged communities, as previously mentioned. Concentrated poverty is one of the most widely used measures of community disadvantage by both sociologists and economists, and recent research shows the additional importance of percentage of single mothers and college educated adults at the census tract level in shaping significantly better child to adult outcomes for low-income children of all races, when comparing childhood outcomes within a given race by the neighborhoods in which they grew up.[31,32] William Julius Wilson has repeatedly shown how neighborhoods with high rates of male unemployment socially isolate residents from employment networks and mainstream norms, which affect occupational attainment and income.[33]

To classify tracts, Allegheny County census tracts were sorted into one of five levels of disadvantage using the Jenks Natural Breaks method in Arc GIS Pro.[45] Urban researchers typically define low poverty census tracts as those with 10% or less of their population living below the Federal Poverty Line (FPL) and high poverty tracts as those with poverty rates of 30% or more; the average poverty rate of low and very low disadvantage tracts in Allegheny County fell at or below the low poverty benchmark, and highly and extremely disadvantaged tracts fell above the high poverty benchmark.[35] **Table 1** displays each of the five levels of disadvantage and the average and median indicators in each category. Our community disadvantage index has a strong relationship with the outcome-based method used by the Opportunity Atlas (R = .7, p < .01),[36] which further validates our measure.

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[31] Raj Chetty, Nathaniel Hendren, Maggie Jones, & Sonya R. Porter. June 2019. "Race and Economic Opportunity in the United States." The Equality of Opportunity Project (now Opportunity Insights). Retrieved here.

[32] Raj Chetty, John Friedman, & Nathaniel Hendren. October 2018. "The Opportunity Atlas: Mapping the Childhood Roots of Social Mobility." Opportunity Insights. Retrieved from here.

[33] William Julius Wilson. 2012. *The Truly Disadvantaged: The Inner City, the Underclass and Public Policy.* Chicago, IL: University of Chicago Press. Also see *When Work Disappears*.

[34] The Jenks Natural Breaks method minimizes variance within classes and maximizes variance between classes. Meaning, census

tracts were sorted into one of five distinct class intervals using an algorithm in Arc GIS Pro; census tracts with systematically similar weighted z-scores of disadvantage were grouped in the same class interval and each class interval was systematically different from one another. Five classes (or levels) were chosen to emulate the number of classes used in well-known indexes like the Kirwan Institute's Child Opportunity Index.

[35] The federally funded Moving to Opportunity experiment defined low poverty areas as census tracts with less than 10% of their population below 100% of the Federal Poverty Line (FPL). Researchers like William J Wilson, Robert Sampson and Patrick Sharkey have typically defined high poverty areas as those with at least 30% of their population below 100% of the FPL.

[36] Harvard's Opportunity Insights mapped a variety of child to adult outcomes for nearly every census tract in the U.S. using anonymized tax data for 20.5 million children born during the 1978–1983 birth cohort. Using a simple linear regression, we examined the relationship between average household income rank (for children born to parents at the 25th percentile of income distribution during 1978–1983) and the community disadvantage index for census tracts in Allegheny County. The outcome-based method used in the Opportunity Atlas strongly predicted our community disadvantage index.

TABLE 1: Mean and Median by Indicator and Level of Disadvantage

LEVEL OF DISADVANTAGE	AVERAGE POVERTY	MEDIAN POVERTY	AVERAGE SINGLE MOMS	MEDIAN SINGLE MOMS	AVERAGE W/O BACHELOR'S OR MORE	MEDIAN W/O BACHELOR'S OR MORE	AVERAGE MALE UNEMPLOYMENT	MEDIAN MALE UNEMPLOYMENT
Very Low	5%	4%	5%	4%	46%	46%	13%	12%
Low	10%	9%	9%	9%	64%	68%	19%	18%
Moderate	19%	18%	19%	19%	73%	77%	24%	24%
High	31%	31%	33%	32%	82%	84%	36%	36%
Extreme	47%	47%	49%	46%	88%	90%	59%	58%

Table 2 displays the levels of disadvantage by suburban and urban census tracts. Most census tracts in Allegheny County were classified as low or very low disadvantage (referenced as opportunity tracts in this report). Census tracts outside of the City of Pittsburgh (suburban tracts) had a higher share of opportunity tracts than those within the City of Pittsburgh (73% to 46%, respectively).

TABLE 2: Level of Disadvantage for Allegheny County Census Tracts

LEVEL OF DISADVANTAGE	# OF TOTAL CENSUS TRACTS	% OF TOTAL CENSUS TRACTS	# SUBURBAN	% SUBURBAN	# PITTSBURGH	% PITTSBURGH
Very Low	133	34%	109	41%	24	20%
Low	116	30%	84	32%	32	26%
Moderate	70	18%	40	15%	30	24%
High	49	13%	26	10%	23	19%
Extreme	20	5%	6	2%	14	11%

While level of disadvantage was calculated based on ACS multiyear estimates for 2017, a simple linear regression showed that the relationship between the combined standardized indicators by census tract in Allegheny County in 2010 (2006–2010 ACS estimates) had a very strong relationship with combined standardized indicators per 2013–2017 ACS estimates (R = 0.87, $p < 0.01$). As such, and much like poverty alone, measures of concentrated disadvantage at the census tract level tend to remain durable over time. A simple linear regression was also used to examine the relationship of moving patterns in the HCV program over time; the number of HCV households that moved to a given census tract in 2017 was the dependent variable in the regression, and the number of household moves to a given census tract in 2010 was the independent variable.

Limitations

This analysis focuses on the census tracts that households in the RRH and HCV programs are moving *to* without providing information on where they were moving *from*. However, there is some preliminary evidence that households in the voucher program who make a move from one HCV-subsidized unit to another are staying in tracts that have similar levels of disadvantage. Migration in and out of given census tracts will be the subject of future analysis.

American Community Survey (ACS) data are estimates that tend to have a sizeable margin of error (MOE) due to smaller than ideal sample sizes; as such, MOE may impact results. Additionally, concentrated disadvantage was calculated by standardizing and combining four separate indicators by census tract via ACS estimates.

Because indicators were standardized by census tract, each census tract's level of concentrated disadvantage is a measure of how far its given combined disadvantage score falls from the mean. Lastly, while a regression analysis showed that concentrated disadvantage between 2010 estimates and 2017 estimates had a strong relationship over time, 2017 multiyear ACS estimates are less accurate for those census tracts that have rapidly changed in recent years. Given these limitations, some census tracts may appear more or less disadvantaged than they actually are.

Additionally, due to various data duplication issues, some small percentage of households may have had multiple client profiles that list the same house address. Multiple addresses for the same client may slightly skew results.

ANALYSIS

Demographics of Rental Subsidy Participants

A little over 300 households moved into housing in 2017 through the RRH program. The majority of heads of household were female and Black. Roughly two-fifths of all RRH households have children, and nearly all households with children were headed by a female. Most heads of household were in the HUD-defined age group of 25–54.

Roughly 2,500 households moved into housing in 2017 through the HCV program. HCV households were overwhelmingly female-headed and Black. More than three-fifths of all households have children, and nearly all households with children were headed by a female parent. Most households were in the HUD-defined age group of 25–54.

TABLE 3: **RRH and HCV Heads of Household (move-in date during 2017)**

		RRH (N=309)		HCV (N=2,451)	
		#	**%**	**#**	**%**
BY GENDER	Male-headed households	125	40%	364	15%
	Female-headed households	**184**	**60%**	**2,087**	**85%**
BY RACE	**Black-headed households**	**186**	**61%**	**1,955**	**80%**
	White-headed households	103	33%	480	19%
	Race other than Black or White, multiple race or other	20	6%	16	1%
BY HOUSEHOLD TYPE	Household with adult(s) and child(ren)	124	40%	1,578	64%
	Adult-only household	185	60%	873	36%
	Female-headed households with children	115		1,493	
	Of those female-headed households, % that have children		**64%**		**72%**
	Of all households with children, % that are female-headed		93%		95%
	Male-headed households with children	8		85	
	Of those male-headed households, % that have children		6%		23%
	Of all households with children, % that are male-headed		7%		5%
	Black-headed households with children	78		1,315	
	Of those Black-headed households, % that have children		42%		67%
	Of all households with children, % that are Black-headed		63%		84%
	White-headed households with children	33		250	
	Of those White-headed households, % that have children		32%		52%
	Of all households with children, % that are White-headed		27%		16%
BY AGE	18–24 headed households	48	15%	126	5%
	25–54 headed households	**206**	**67%**	**1,758**	**72%**
	55+ headed households	55	18%	566	23%

HCV Households by Level of Disadvantage (move-in date 2017)

Fifty-four percent of households in the HCV program moved to highly or extremely disadvantaged census tracts in Allegheny County in 2017 (**Figure 1**). Only 17% moved to opportunity tracts (those with low or very low disadvantage).

FIGURE 1: **Housing Choice Voucher Households (move-in date 2017) by Level of Disadvantage at the Census Tract Level**
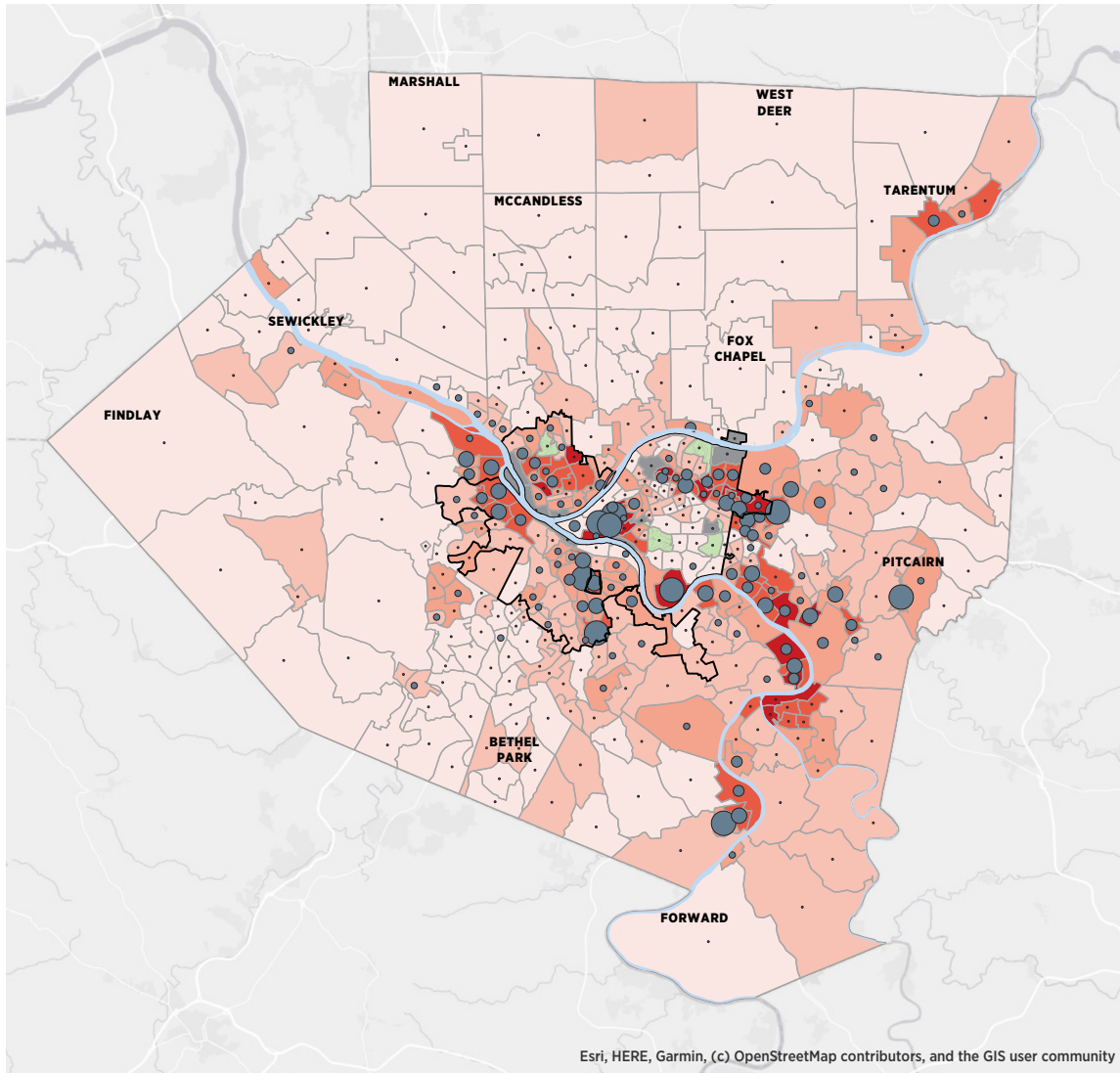
Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community

Level of Disadvantage

- Very Low Disadvantage
- Low Disadvantage
- Moderate Disadvantage
- High Disadvantage
- Extreme Disadvantage

HCV Households (move-in date 2017)

- 0 to 4
- 5 to 12
- 13 to 24
- 25 to 42
- 43 to 61

- Allegheny County Major Rivers
- City of Pittsburgh Parks
- City of Pittsburgh Boundary
- Population or ACS Sample Population < 100

When examining the HCV program by race and gender, Black-headed households and female-headed households more frequently moved to highly or extremely disadvantaged census tracts as compared to White- or male-headed households. Sixty percent of Black-headed households moved to highly or extremely disadvantaged census tracts, whereas 29% of White-headed households did. Black-headed households were three times less likely to move to opportunity tracts (those with low or very low disadvantage). Black and female-headed households with children were twice as likely to move to highly or extremely disadvantaged tracts and nearly three times less likely to move to opportunity tracts, as compared to White and female-headed households with children (**Table 4)**.
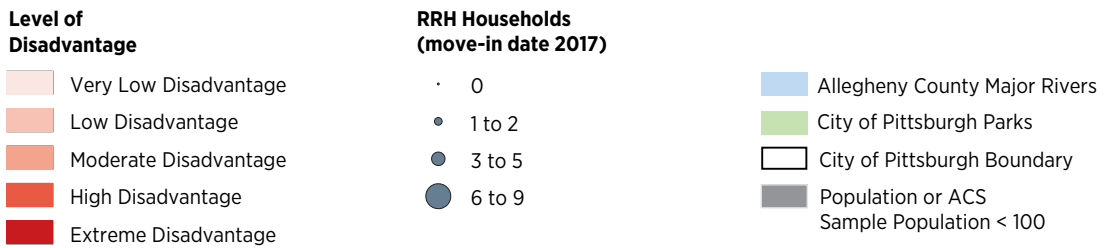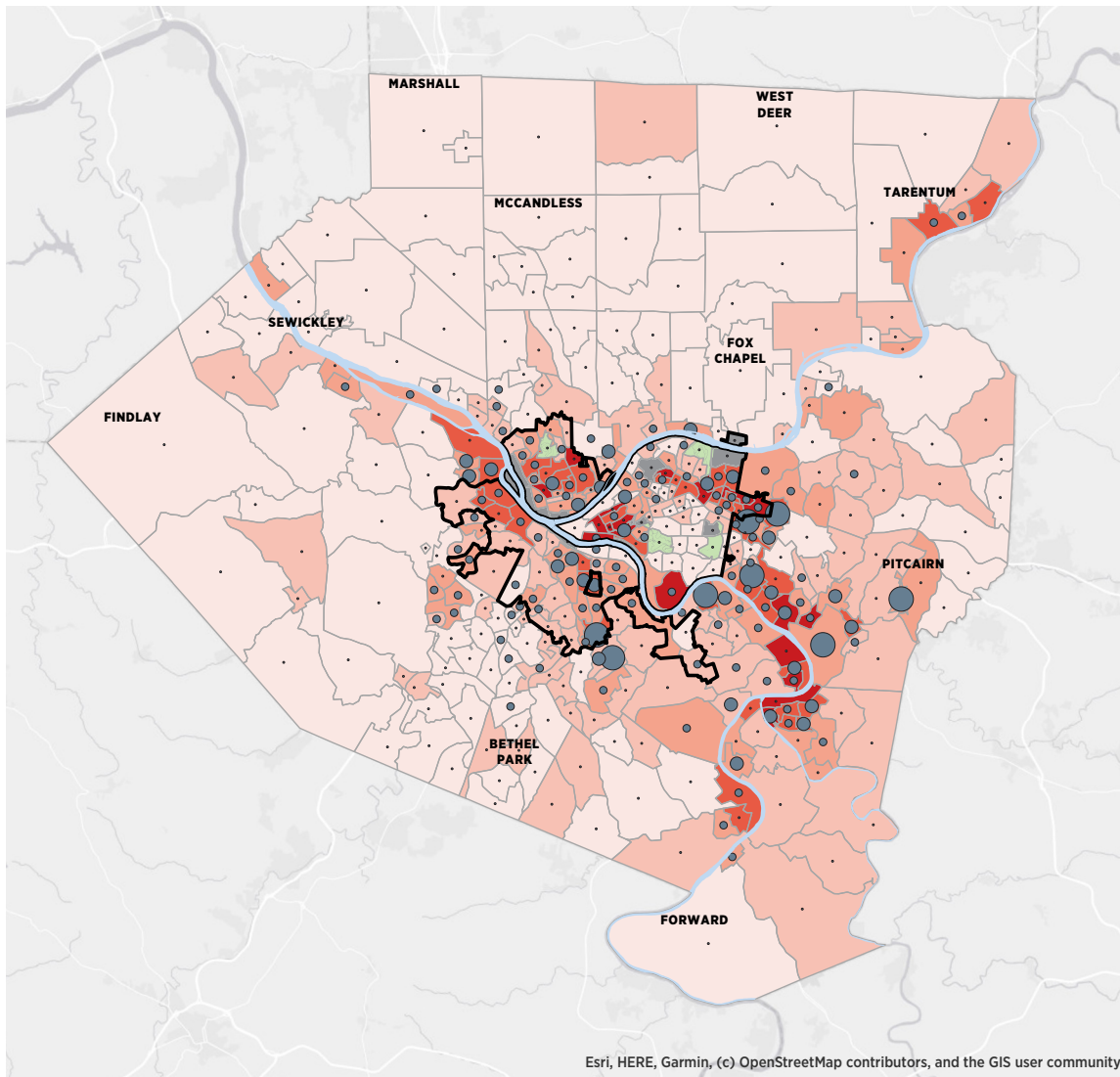
TABLE 4: **Household Groupings in the HCV (move-in date 2017) by Level of Disadvantage at the Census Tract Level**

HCV HOUSEHOLD GROUPINGS (N=2,429)	% IN HIGH OR EXTREME	% IN MODERATE	% IN LOW OR VERY LOW
All households	**54%**	**29%**	**17%**
Black-headed households	**60%**	**28%**	**12%**
White-headed households	**29%**	**35%**	**36%**
Female-headed households	55%	29%	16%
Male-headed households	45%	29%	26%
Households with children	55%	31%	14%
Households without children	51%	27%	22%
Female-headed households with children	56%	30%	14%
Male-headed households with children	45%	36%	19%
Black-headed households with children	60%	29%	11%
White-headed households with children	30%	40%	30%
Black AND female-headed households with children	**60%**	**29%**	**11%**
White AND female-headed households with children	**31%**	**39%**	**30%**
Heads of households ages 18 to 24	54%	33%	13%
Heads of households ages 25 to 54	53%	31%	16%
Heads of households ages 55 and Up	55%	23%	22%

RRH Households by Level of Disadvantage (move-in date 2017)

Forty percent of households in the RRH program moved to highly or extremely disadvantaged census tracts in Allegheny County in 2017 (Figure 2). Only 25% moved to opportunity tracts (those with low or very low disadvantage).

FIGURE 2: **Rapid Rehousing Households (move-in date 2017) by Level of Disadvantage at the Census Tract Level**

Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community

Level of Disadvantage

- Very Low Disadvantage
- Low Disadvantage
- Moderate Disadvantage
- High Disadvantage
- Extreme Disadvantage

RRH Households (move-in date 2017)

- 0
- 1 to 2
- 3 to 5
- 6 to 9

- Allegheny County Major Rivers
- City of Pittsburgh Parks
- City of Pittsburgh Boundary
- Population or ACS Sample Population < 100

When examining the RRH program by race and gender, Black-headed households were more than twice as likely as White-headed households to move to highly or extremely disadvantaged tracts and nearly three times less likely to move to areas of opportunity (low or very low disadvantage tracts) (see **Table 5**). Female-headed households were more likely to move to highly or extremely disadvantaged census tracts and less likely to move to opportunity census tracts as compared to male-headed households. Black and female-headed households with children in RRH were among the most concentrated of any analyzed subgroup in highly or extremely disadvantaged tracts; 61% of said households moved to highly or extremely disadvantaged tracts, and only 4% moved to opportunity tracts. There were too few male-headed households with children to meaningfully analyze. Unlike the HCV program, households became more concentrated in highly or extremely disadvantaged tracts as HUD defined age groups got older (by 8–9 percentage points).

TABLE 5: **Household Groupings in RRH (move-in date 2017) by Level of Disadvantage at the Census Tract Level**

RRH HOUSEHOLD GROUPINGS (N=295)	% IN HIGH OR EXTREME	% IN MODERATE	% IN LOW OR VERY LOW
All households	41%	34%	25%
Black-headed households	50%	35%	15%
White-headed households	23%	35%	42%
Female-headed households	48%	34%	18%
Male-headed households	30%	36%	34%
Households with children	48%	37%	15%
Households without children	35%	33%	32%
Female-headed households with children	50%	37%	13%
Male-headed households with children	N/A	N/A	N/A
Black-headed households with children	61%	35%	4%
White-headed households with children	24%	42%	34%
Black AND female-headed households with children	60%	36%	4%
White AND female-headed households with children	28%	40%	32%
Heads of households ages 18 to 24	51%	30%	19%
Heads of households ages 25 to 54	40%	35%	25%
Head of households ages 55 and Up	32%	38%	30%

Insights from Both Programs

Whereas analyses of both programs show that the majority or near-majority of households moved to highly or extremely disadvantaged tracts, households in the HCV program were even more concentrated in these areas than those in RRH (54 to 41%, respectively). Perhaps this disparity among households by program is due to the fact that 80% of heads of household in the HCV program are Black, versus 60% of heads of household in RRH, or because HCV providers do not offer basic housing search assistance or security deposit assistance to voucher holders (unlike RRH providers who tend to offer these services).

While moving patterns overall were largely concentrated in highly or extremely disadvantaged tracts, the steep racial disparities in moving patterns in both programs cannot be ignored. As shown in **Figure 3**, Black and female households with children were twice as likely as White and female households with children to move to highly or extremely disadvantaged tracts in both programs. Race appears to be the most statistically important variable regarding where households in the RRH and HCV programs end up, as of 2017 and over time (as will be discussed).

FIGURE 3: **Head of Household Race and Gender by Level of Concentrated Disadvantage, RRH and HCV Participants**
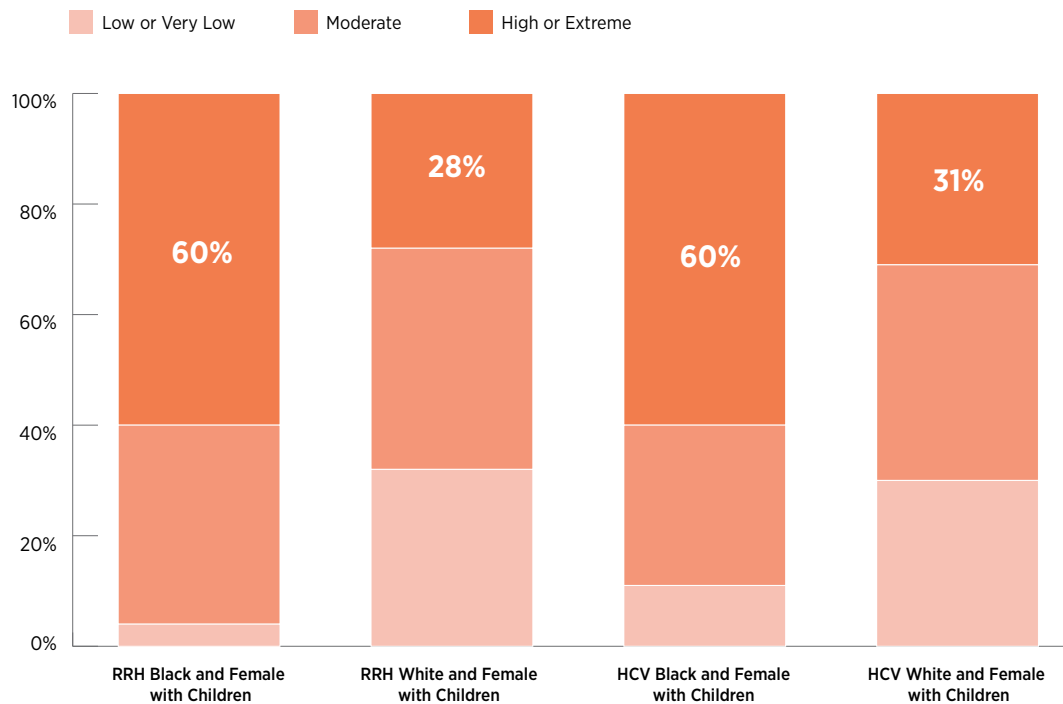
This observed racial disparity is likely related to systemic factors. Historic discrimination in the housing and lending markets, as well as economic restructuring and deindustrialization (which had a disparate impact on Black people),[37] account for the comparatively large percentage of Black individuals who are renters,[38] not home owners; historic racial discrimination and its lasting effects have led many Black families toward the housing rental market while many White families have been set on a path of home ownership (even when accounting for income).

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[37] William Julius Wilson. 2012: pp. 251–252.

[38] Anthony Cilluffo, A.W. Geiger, & Richard Fey. July 2017. "More U.S. Households Are Renting Than at Any Point in 50 Years." Pew Research Center. Retrieved from here.

Despite the passage of the 1968 Fair Housing Act, examples of racial discrimination have been found at scale as recently as the housing boom in the early 2000s; middle- and upper-income Black people were far more likely than low-income White people to be given subprime mortgages. One study found that at the height of the housing boom in 2006, Black and Latino families were nearly three times as likely as White families to be denied a mortgage. When they were approved, Black and Latino families were nearly two and a half times more likely as White families to be given a subprime mortgage.[39]

Research also shows that low-income Black households are more likely than low-income white households to be exposed to negative systemic factors that harm credit or increase the likelihood of an eviction history.[40] As such, these factors affect the ability of impacted Black households to pass a landlord background check. Likewise, source of income discrimination, a leading factor in whether landlords agree to rent to voucher holders,[41] may act as a proxy for racial discrimination.

Given these aforementioned factors, it is important to note that there was not a single census tract in Allegheny County per 2017 ACS estimates that was at least 51% Black that qualified as either low or very low disadvantage per the methodology used in this analysis. The closest contender was a census tract in Penn Hills whose population was 49% Black as of 2017 and that qualified as having low disadvantage.[42]

Subsidized Housing Distribution in City of Pittsburgh versus Suburban Census Tracts

Subsidized households were more widely distributed throughout City of Pittsburgh census tracts than in suburban tracts, even though the distribution of all households who moved to tracts inside the city was roughly the same as those who moved to tracts outside the city; 48% of all households in RRH and HCV programs moved to tracts within the city and the other 52% moved to tracts outside of the city.

- 62% of suburban census tracts had at least one household in either program that moved in in 2017 versus 83% of tracts in the City of Pittsburgh.

- 28% of suburban tracts had at least five households in either program that moved in in 2017 compared to 54% of City of Pittsburgh tracts.

- 6% of suburban tracts had at least 25 households in either program that moved in in 2017 versus 12% of City of Pittsburgh tracts.

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[39] Emily Badger. August 16, 2013. "The Dramatic Racial Bias of Subprime Lending During the Housing Boom." CityLab. Retrieved from here.

[40] Matthew Desmond, March 2014. "Poor Black Women Are Evicted at Alarming Rates, Setting Off a Chain of Hardship." MacArthur Foundation, 1-2. Retrieved from here.

[41] Mary K. Cunningham, et al. 2018.

[42] Analysis used 5-year 2017 ACS estimates for racial composition per census tract via census table B03002. Allegheny County census tract number 5235.01 is in Penn Hills and had a majority Black population (but did not hold a simple majority of having a Black population that was estimated to be at least 51% of the total population); this majority Black census tract qualified as having low disadvantage.

This comparatively smaller distribution of subsidized households in suburbs could be due to residential preference and less access to public transit in outer-ring suburbs on average, but it may also reflect payment standard calculations and exclusionary zoning practices. Twice as many census tracts in suburbs were categorized as low or very low disadvantage (as compared to those in the City of Pittsburgh), and the average median gross rent in low or very low disadvantage tracts in Allegheny County is comparatively more expensive than the average gross rent for high or extreme disadvantage tracts.[43]

While single-family zoning is the norm regarding the majority of land use in most U.S cities,[44] exclusionary zoning is a particular problem in outer-ring suburbs, which tend to be largely made up of low-density, single-family homes, and myriad zoning laws effectively prevent the construction of apartments and affordable housing.[45] The smaller distribution of households throughout suburban census tracts versus City of Pittsburgh tracts may also be impacted by the fact that there are twice as many tracts outside of the City of Pittsburgh than in it.

By a great magnitude, the Pittsburgh neighborhood of Terrace Village had the highest concentration of households in subsidized housing (RRH and HCV households) who moved there in 2017, as a percentage of the estimated household population for 2017. Terrace Village was initially built entirely as public housing and now encompasses a mixed-income and market-rate design, with a considerable number of units dedicated to subsidized housing. Of the top 20 tracts, 18 were categorized as moderately to extremely disadvantaged, and only two were considered moderately disadvantaged (Pitcairn and Clairton).

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[43] The average median gross rent of census tracts categorized as high or extreme disadvantage was $658 (median was $705) and the average median gross rent of tracts categorized as low or very low disadvantage was $978 (median was $891). Analysis used 5-year 2017 ACS estimates for median gross rent via census table B25064.

[44] Emily Badger & Quoctrung Bui. June 18, 2019. "Cities Start to Question an American Ideal: A House with a Yard on Every Lot." *New York Times*.

[45] Elliott A. Rigsby, 2016.

TABLE 6: **Census Tracts with Highest Percentage of Households in Subsidized Housing (ranked from 1 to 20)**

CENSUS TRACT	MUNICIPALITY	CITY OF PITTSBURGH NEIGHBORHOOD(S)	HCV HOUSEHOLDS (MOVE-IN DATE 2017)	RRH HOUSEHOLDS (MOVE-IN DATE 2017)	SUBSIDIZED HOUSEHOLDS WHO MOVED-IN IN 2017 AS % OF TOTAL ESTIMATED HOUSEHOLDS FOR 2017	LEVEL OF DISADVANTAGE
511	Pittsburgh	Terrace Village	46	0	56.10%	Extreme
1304	Pittsburgh	Homewood South	31	0	7.21%	High
5612	Wilkinsburg	N/A	26	6	6.43%	High
1303	Pittsburgh	Homewood South	38	1	6.30%	High
1204	Pittsburgh	Larimer	18	3	5.79%	Extreme
501	Pittsburgh	Middle Hill	54	2	5.62%	High
4929	Clairton	N/A	50	1	5.58%	Moderate
305	Pittsburgh	Crawford-Roberts	52	0	4.74%	Extreme
3001	Pittsburgh	Knoxville	61	4	4.70%	High
5138	Braddock	N/A	30	1	4.45%	High
5220	Pitcairn	N/A	60	6	4.41%	Moderate
5100	East Pittsburgh	N/A	34	1	4.39%	Extreme
4868	Duquesne	N/A	26	5	4.30%	High
5611	Wilkinsburg	N/A	15	1	4.07%	High
2904	Pittsburgh	Carrick	61	8	3.70%	High
4810	Mount Oliver	N/A	42	3	3.60%	High
5625	Pittsburgh	Esplen/Sheraden	37	1	3.45%	High
5128	North Braddock	N/A	18	3	3.44%	Extreme
103	Pittsburgh	Bluff (Uptown)	9	1	3.44%	Extreme
1208	Pittsburgh	Larimer	8	0	3.40%	Extreme

County-Wide Distribution of Households Living in Areas of High or Extreme Disadvantage

Black-headed households with move-in dates of 2017 in both the RRH and HCV programs were far more concentrated in tracts of high or extreme disadvantage as compared to County households above the poverty line; Black RRH households were five times as likely to reside in said tracts, and HCV households were six times as likely.

When comparing HCV and RRH households — which are based on income eligibility and homelessness (respectively) — to households below the poverty line in Allegheny County, Black households in the HCV program were twice as likely to live in highly or extremely disadvantaged census tracts, and Black households in RRH were roughly 1.7 times more likely, regarding those with move-in dates of 2017. White-headed households in the HCV program were about as likely as poor households to live in said tracts. White households in RRH were less likely to live in said tracts as compared to poor households in Allegheny County, regarding those with move-in dates of 2017.

The intersection of race and income appears to significantly influence who is more likely to move to highly or extremely disadvantaged tracts, but race appears to be an even more significant factor when comparing the moving patterns of Black versus White households with similar incomes (**Figure 4**). For example, given that the HCV program serves only those with incomes slightly above the federal poverty line and below, program eligibility ensures that households of different races in the HCV program have similar incomes. And yet, Black HCV households are still twice as likely as White HCV households to move to highly or extremely disadvantaged tracts.

FIGURE 4: Percentage of Households Living in Highly or Extremely Disadvantaged Tracts in Allegheny County, by Type[46]

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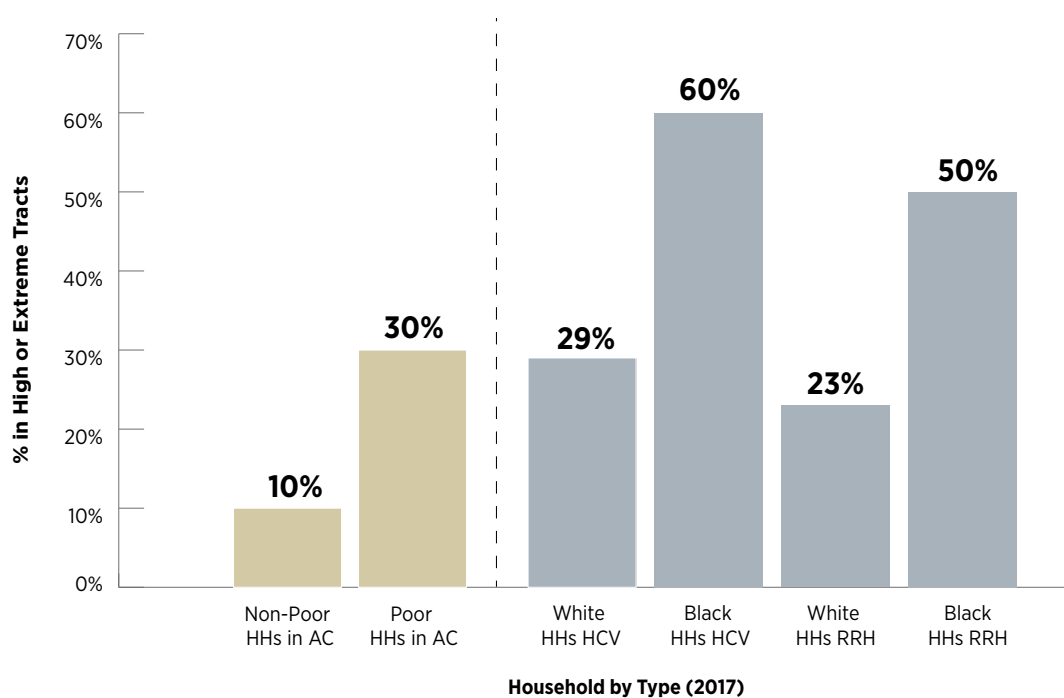
[46] Population by subgroup in RRH and HCV was compared to overall estimated household residency in highly or extremely disadvantaged tracts in Allegheny County. Analysis used household level population estimates and poverty measures (below 100% of FPL) via 2017 American Community Survey five-year estimates.

Moving Patterns Among HCV Households Over Time

We examined moving patterns for HCV households in 2010, and results were compared to 2017 findings. For both 2010 and 2017, roughly a quarter of all active HCV residents moved into rental housing. In 2010, 49% of all HCV households moved to highly or extremely disadvantaged census tracts; 55% of Black HCV households and 24% of White HCV households moved to said tracts. These percentages are close to what was observed in 2017, when 54% of all HCV households moved to highly or extremely disadvantaged tracts, compared to 60% of Black HCV households and 29% of White HCV households.

While moving patterns were slightly more concentrated in highly or extremely disadvantaged tracts in 2017, overall moving patterns, and moving patterns by race, tended to persist over time. As mentioned in the Background section of this report, analyses show that both census tract-level poverty and disadvantage persist over long stretches of time, with few exceptions.

A regression analysis (**Figure 5**) shows that whether measured by number of households who moved in the HCV program or percentage of total HCV households who moved, the relationship between household moves to a given census tract in 2010 and in 2017 is strong (R = 0.74, p < .01). Except for some outliers, there is a strong linear relationship between the number of households that moved to a given census tract in 2010 and in 2017. That is, households not only tend to move to the same sort of census tracts over time, but they tend to move to the exact same census tracts over time, with a few outliers receiving far fewer or more households over the seven-year period.

FIGURE 5: **Persistence of Household Moves via HCV in 2010 and 2017**
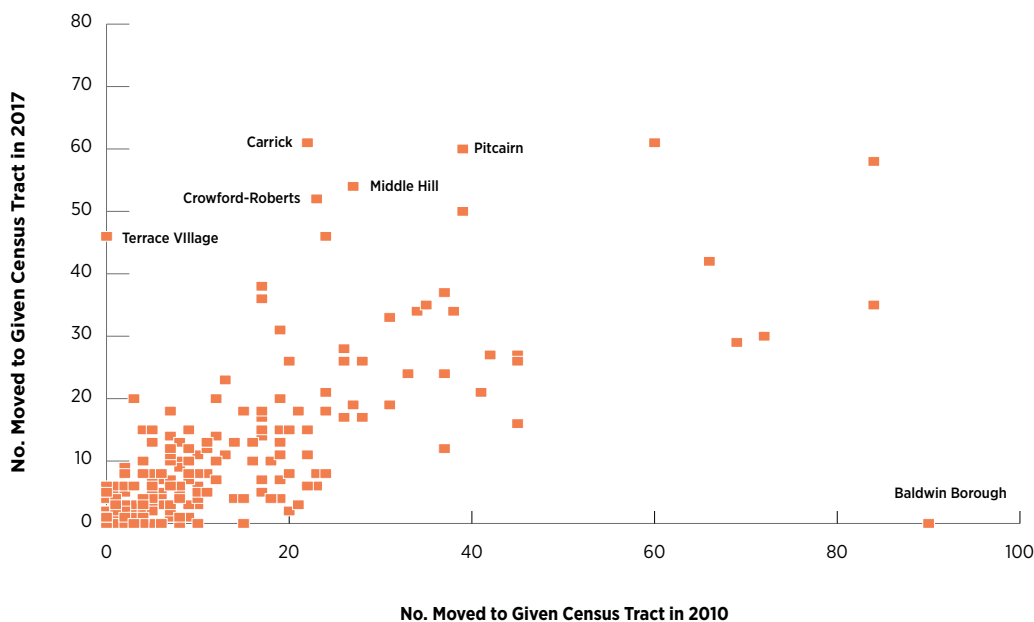
DISCUSSION AND NEXT STEPS

This analysis found that the RRH and HCV programs in Allegheny County are associated with the geographic concentration of disadvantage and poverty, a finding that is particularly concerning given the breadth of research on the negative child-to-adult outcomes associated with concentrated poverty and disadvantage. It should be noted that place-based revitalization efforts that invest in areas of concentrated disadvantage, and the people who reside there, go hand-in-hand with increasing residential mobility for subsidy recipients.[47] To deconcentrate areas of concentrated disadvantage and poverty, and to improve the outcomes of children who reside there, both mobility and place-based strategies are important. The focus of this analysis is on the former, given the nature of RRH and HCV programs.

Many factors — income discrimination and institutional racism, the shortcomings of metro-based payment standards, programmatic shortcomings, exclusionary zoning and eviction/negative credit history — have shaped the concentration of households in disadvantaged census tracts. Thus, it will be difficult to address through these subsidized housing programs alone. Given the high degree of disparity between moving patterns of Black- versus White-headed households in both programs, the issue of racial discrimination, and systemic factors that uniquely affect Black households, cannot be ignored as factors that inhibit the mobility of Black-headed households to census tracts of opportunity.

Despite structural constraints that often fall outside the purview of DHS and RRH/HCV providers, each can take steps to provide improved residential mobility for RRH and HCV participants. While HCV and RRH providers can not directly address source of income discrimination or exclusionary zoning laws, for example, providers do have the opportunity to work with households to consider available rental units in high opportunity areas, provide search assistance, reduce barriers to acquiring a rental unit and recruit landlords in high opportunity areas.

A very recent study by Opportunity Insights of Harvard found that a Seattle- and King County–based mobility counseling program is not only feasible but quite effective in changing mobility patterns for HCV households in the program. Like this analysis, researchers found that the majority of HCV households in King County tended to move and live in the most disadvantaged census tracts prior to the team's mobility counseling intervention. Using a randomized study design, researchers found that households with children under the age of 15 that received mobility counseling were 40% more likely to move to high opportunity tracts than those that did not receive mobility counseling, all else being equal.[48]

The mobility program was highly customized to each individual client and did not force households to move to areas of opportunity like other mobility models. Instead, the program focused on search assistance and credit repair, increased landlord engagement in high opportunity areas, and short-term financial assistance for renters.

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[47] The Obama-era Choice Neighborhoods Initiative is one such place-based intervention that is a promising strategy to tackle concentrated disadvantage in neighborhoods. https://www.hud.gov/cn

[48] Peter Bergman, Raj Chetty, Stefanie Deluca, Nathaniel Hendren, Lawrence Katz, & Christopher Palmer. 2019. "Creating Moves to Opportunity: Experimental Evidence on Barriers to Neighborhood Choice." https://opportunityinsights.org/wp-content/uploads/2019/08/cmto_paper.pdf

Even more important, gains were seen across racial, ethnic and diverse income groups, and 68% of those in the treatment group were satisfied with their new neighborhood versus only 33% of those in the control. However, White households in the treatment group had the biggest effect size and Black households had the lowest. The study argued that residential mobility patterns for those in the voucher program had less to do with residential preference and more to do with barriers that prevent households from living in opportunity areas.[49]

The team also found that increases in the payment standard accounted for only a 20% increase in moves to opportunity. The team suggests that while an increase in the payment standards are likely a prerequisite for living in most higher opportunity areas, they are not the whole story; mobility counseling, landlord engagement and landlord education are also needed. Likewise, Seattle and King County have source of income protections for voucher holders, which may be another structural prerequisite to maximize the effects of a mobility counseling intervention.[50] One study of Baltimore's mobility counseling program found that pre- and post-mobility counseling helped households in the voucher program move to low poverty neighborhoods, and it also helped most participants stay in those neighborhoods over time. Research found that mobility counseling and long-term exposure to low poverty neighborhoods tended to change the neighborhood, schooling and housing preferences of low-income households participating in the mobility program.[51]

Based on this analysis, and the analysis of relevant peer-reviewed research, the following are actions that DHS and RRH/HCV providers have already taken or will take to address current patterns of geographic concentration found among households with children in both RRH and HCV:

- The Housing Authority of the City of Pittsburgh (HACP), the Allegheny County Housing Authority (ACHA), the Pittsburgh Foundation and the Allegheny County Department of Human Services (DHS) partnered to design a regional mobility counseling program dubbed the Allegheny County Mobility Counseling Program (ACMCP). With few exceptions, the program is designed to closely mirror Seattle and King County's mobility counseling program. ACMCP aims to reduce those housing search, geographic and programmatic barriers

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[49] Peter Bergman, et al, 2019: 3–7

[50] Peter Bergman, et al, 2019: 6

[51] Jennifer Darrah & Stefanie Deluca, 2014.

that can prevent families in the HCV program from moving to higher opportunity areas; ACMCP aims to do this through highly individualized housing search assistance, increased engagement and recruitment with landlords in high opportunity areas, advocating on behalf of those with poor credit or eviction history and by offering short-term financial assistance for voucher families participating in the program, in addition to post-move support.

- The program was designed with input on best practices from Opportunity Insights of Harvard and through conversations with other regional mobility counseling programs throughout the country, in addition to input from all partner agencies.

- Partner agencies are committed to obtaining the funding needed to implement and evaluate the program, a reflection of their commitment to expanding geographic choice for families in the HCV program. HACP and ACHA have also shown their commitment to geographic choice in their switch to small area fair market rents (see Appendix A).

- DHS and a to-be-determined research partner(s) will evaluate the effectiveness of ACMCP for a sample of eligible voucher families using a randomized controlled trial study design and through qualitative methods that examine the experiences of families and landlords involved with the program.

  - The experiences of HCV families who participate in ACMCP will inform best practices on ensuring that families are connected with needed services in new communities, feel welcomed in their new communities and are receiving the support to remain in these communities long-term so that families may benefit from their move to a high opportunity area.

  - The evaluation will particularly consider whether ACMCP is effective in better allowing Black families to move to high opportunity areas and will closely examine the experiences of Black families once they move to high opportunity areas.

- DHS housing navigators (who work with RRH providers) should work to recruit landlords in low disadvantage/high opportunity areas with access to public transit, with a particular emphasis on recruiting landlords with units able to support families with children. Navigators educate landlords on the benefits of program involvement and connect them with other programs that reduce perceived risk of involvement.

- DHS hopes that reports such as this spark discussion with organizations and municipalities throughout Allegheny County on how to better enable families in subsidized housing to move to areas of opportunity. These conversations could focus on the adoption of non-exclusionary zoning practices that better allow the construction of rental units in opportunity areas and source of income protections for voucher holders (pending approval from the courts).

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APPENDIX A

APPENDIX A: HCV AND RRH PROGRAM DETAILS

Housing Choice Voucher Program

Eligibility: Generally, a family's income must not exceed 50% of area median income (AMI) for the county or metro area to be eligible and housing authorities are required by law to provide 75% of their vouchers to families with gross adjusted incomes less than 30% of AMI or families who do not exceed the federal poverty line, whichever is higher.[52] Demand for vouchers often exceeds supply, and housing authorities can create preferences regarding who receives priority on their waitlist, such as families who have been involuntarily displaced or who pay more than 50% of their income on rent.

Payment standard: This method of payment is calculated based on the 40th percentile asking rent for defined metro areas with a soft price ceiling regarding how much a household can receive in rental subsidy assistance. Providers also consider "rent reasonableness" in smaller markets and grant a maximum subsidy based on whichever calculation is lower (Fair Market Rent [FMR] or rent reasonableness). Local housing authorities that participate in HUD's Moving to Work program can calculate the payment standard based on a small area (SA-FMR) of their choosing; calculating the payment standard at the census tract or neighborhood level as opposed to the metro or ZIP code area.

HUD directed public housing authorities (PHA) to switch to a small area fair market rent calculation in 2018. The SA-FMRs are to be based on ZIP codes instead of metro areas, at least for PHAs that are not designated as Moving to Work. The Allegheny County Housing Authority (ACHA) switched to the ZIP code-based SA-FMR in 2018 and applies a five-tier payment standard. As of September 2019, the Housing Authority of the City of Pittsburgh (HACP) switched to an alternative SA-FMR payment standard method that provides an automatic higher subsidy amount in several pre-selected City of Pittsburgh neighborhoods in addition to a ZIP code-based method for neighborhoods that haven't been preselected. [53] As a Moving to Work housing authority, HACP is allowed to create an alternative SA-FMR and submit for HUD approval, while ACHA is locked into the ZIP code-based method (as a PHA that is not designated as Moving to Work).

Subsidy: A household with a voucher pays 30% of its gross adjusted income toward rent, and the local housing authority covers the difference between the tenant's income and payment standard. If an apartment rent is higher than the subsidy ceiling set by FMR, the voucher holder can pay the difference up to 40% of their gross adjusted income, or housing authorities can provide additional subsidy above the payment standard.

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[52] Housing Choice Voucher Fact Sheet.

[53] Kate Giammarise. August 19, 2019. "Housing Authority Aims to Give Low-Income City Residents Access to More Neighborhoods." *Pittsburgh Post-Gazette*. Retrieved from here.

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APPENDIX A

Rapid Rehousing Program

Eligibility: Participants are individuals experiencing "street homelessness" (i.e., staying in locations not meant for habitation) or residing in shelters.

Payment standard: Based on the 40th percentile asking rent for the Pittsburgh metro area (also known as FMR). Providers also consider what is known as "rent reasonableness," which is based on the asking rent of similar units in a given small market area. Providers grant a subsidy capped at whatever calculation is higher for the RRH Program (FMR or rent reasonableness).

Subsidy: RRH provides financial assistance (including first month's rent and security deposit assistance) and a rental subsidy that gradually tapers over a maximum of two years. The maximum amount of subsidy that can be allocated to any one RRH recipient is calculated by the payment standard. However, unlike HCV, which has a standardized amount that voucher holders pay toward their rent, the amount that an RRH recipient pays toward rent is decided on a case-by-case basis.
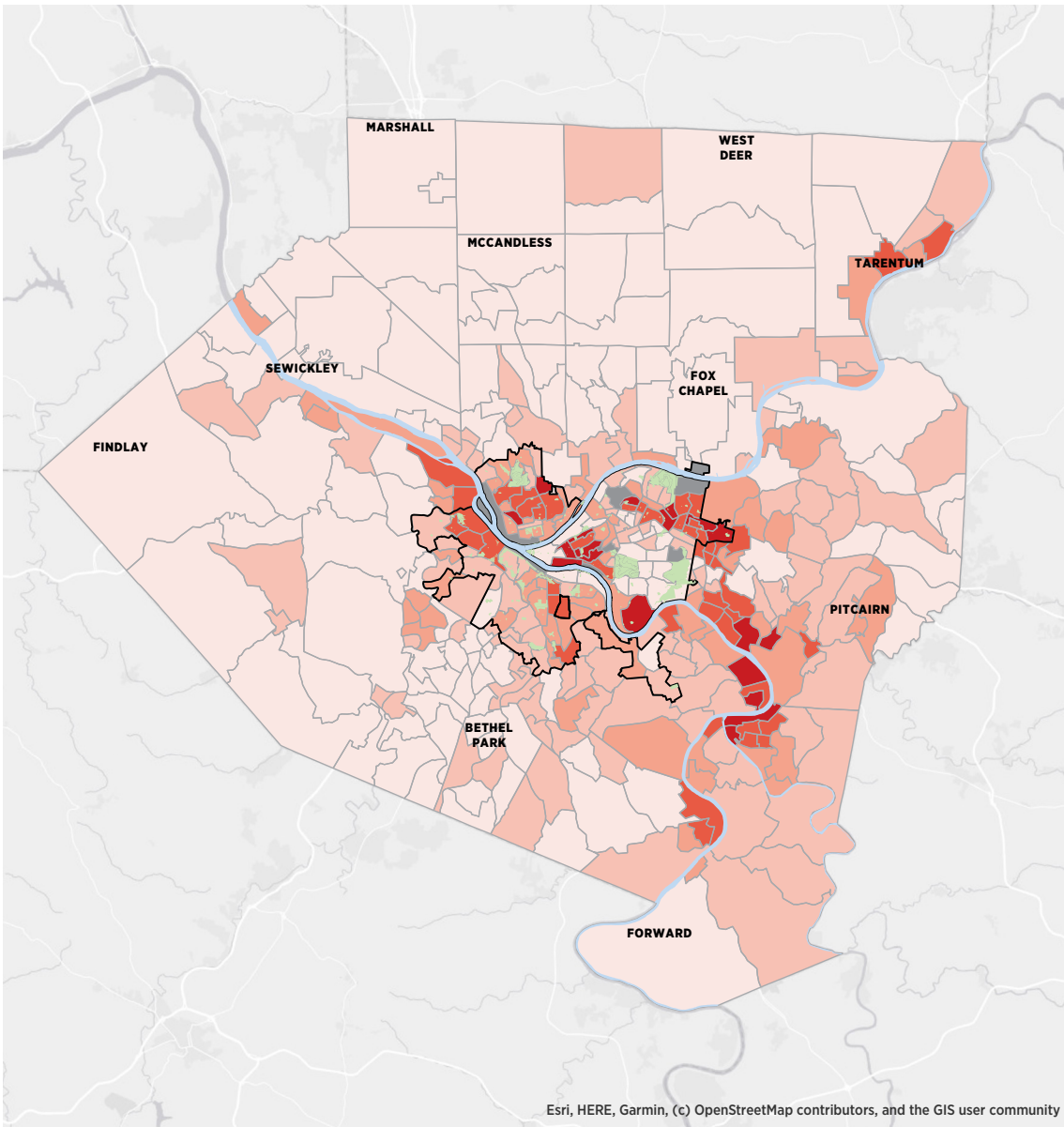
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APPENDIX B

APPENDIX B: COMMUNITY DISADVANTAGE INDICATORS AND SOURCES

DESCRIPTION	YEAR AS IT APPEARS IN THE REPORT	SOURCE	CENSUS TABLE
Percentage of individuals below 100% of federal poverty line (aged 25 and up for student-heavy tracts)	2017	2013–2017 ACS 5-Year Estimates	S1701
Percentage of families with related children under 18 headed by single females	2017	2013–2017 ACS 5-Year Estimates	B11004
Percentage of males 20 to 64 who are unemployed or unattached to the labor force (aged 25 and up for student-heavy tracts)	2017	2013–2017 ACS 5-Year Estimates	B23001
Percentage of population 25 and over who do not have a bachelor's degree or more	2017	2013–2017 ACS 5-Year Estimates	S1501
Number of households	2017	2013–2017 ACS 5-Year Estimates	S1101
Number of households below 100% of federal poverty line	2017	2013–2017 ACS 5-Year Estimates	B17017

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APPENDIX C

APPENDIX C: ALLEGHENY COUNTY CENSUS TRACTS BY LEVEL OF DISADVANTAGE

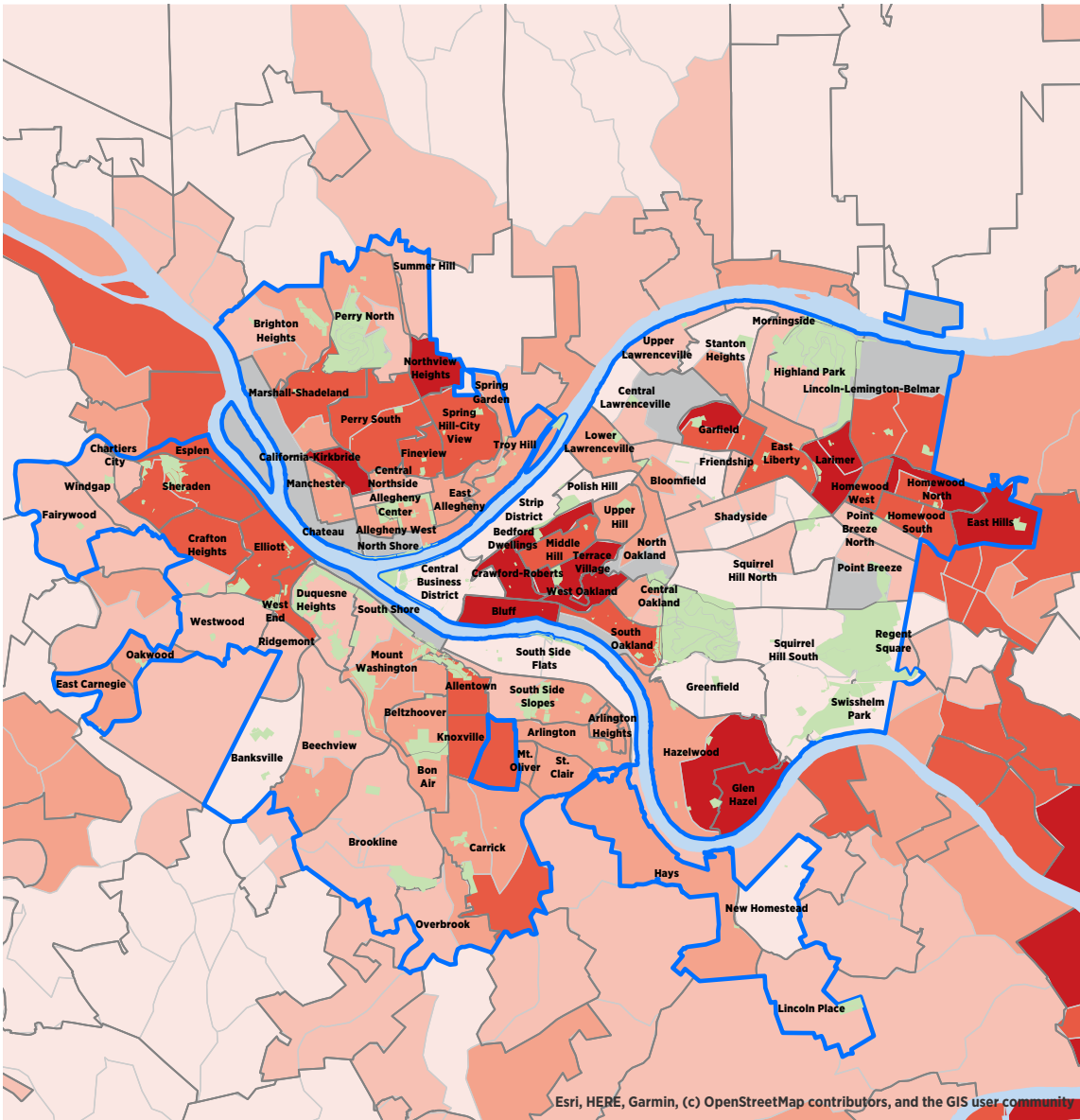Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community

Level of Disadvantage

- Very Low Disadvantage
- Low Disadvantage
- Moderate Disadvantage
- High Disadvantage
- Extreme Disadvantage

- Population or ACS Sample Population < 100
- Allegheny County Major Rivers
- City of Pittsburgh Parks
- City of Pittsburgh Boundary

Source: 2013-2017 ACS 5-Year Estimates

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APPENDIX D

APPENDIX D: ALLEGHENY COUNTY CENSUS TRACTS BY DISADVANTAGE WITH MUNICIPAL BORDERS AND LABELS
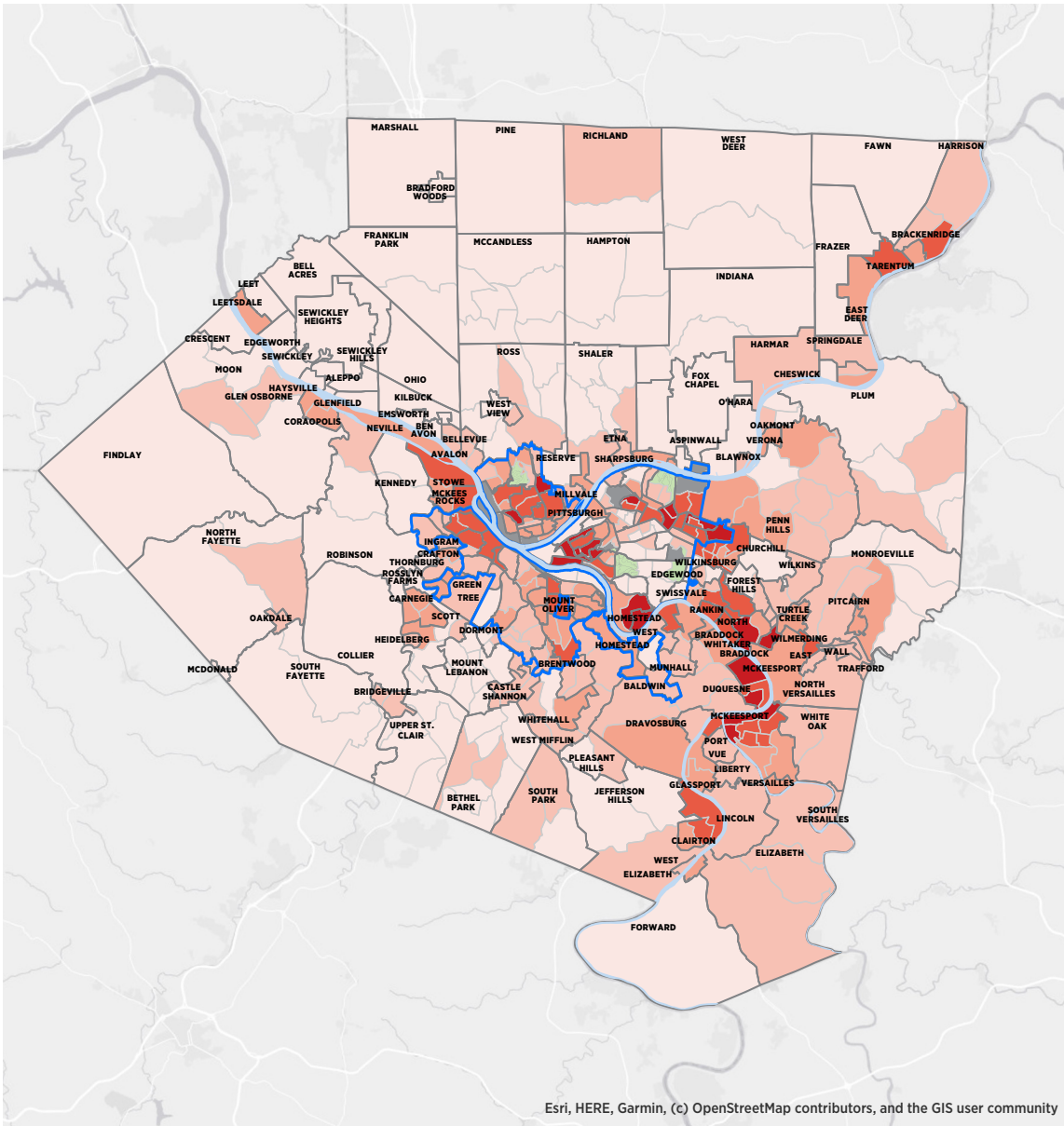
Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community

Level of Disadvantage

- Very Low Disadvantage
- Low Disadvantage
- Moderate Disadvantage
- High Disadvantage
- Extreme Disadvantage

- Population or ACS Sample Population < 100
- City of Pittsburgh Neighborhoods
- Municipal Boundaries
- Allegheny County Major Rivers
- City of Pittsburgh Parks
- City of Pittsburgh Boundary

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APPENDIX E

APPENDIX E: ALLEGHENY COUNTY CENSUS TRACTS BY DISADVANTAGE WITH CITY OF PITTSBURGH NEIGHBORHOODS AND LABELS

Level of Disadvantage

- Very Low Disadvantage
- Low Disadvantage
- Moderate Disadvantage
- High Disadvantage
- Extreme Disadvantage

- Population or ACS Sample Population < 100
- City of Pittsburgh Neighborhoods
- Municipal Boundaries
- Allegheny County Rivers
- City of Pittsburgh Parks
- City of Pittsburgh Boundary