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Tenant-Based Housing Voucher Programs: A Community Guide Systematic Review

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ABSTRACT

Context: Unaffordable or insecure housing is associated with poor health in children and adults. Tenant-based housing voucher programs (voucher programs) limit rent to 30% or less of household income to help households with low income obtain safe and affordable housing.

Objective: To determine the effectiveness of voucher programs in improving housing, health, and other health-related outcomes for households with low income.

Design: Community Guide systematic review methods were used to assess intervention effectiveness and threats to validity. An updated systematic search based on a previous Community Guide review was conducted for literature published from 1999 to July 2019 using electronic databases. Reference lists of included studies were also searched.

Eligibility Criteria: Studies were included if they assessed voucher programs in the United States, had concurrent comparison populations, assessed outcomes of interest, were written in English, and published in peer-reviewed journals or government reports.

Main Outcome Measures: Housing quality and stability, neighborhood opportunity (safety and poverty), education, income, employment, physical and mental health, health care use, and risky health behavior.

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Results: Seven studies met inclusion criteria. Compared with low-income households not offered vouchers, voucher-using households reported increased housing quality (7.9 percentage points [pct pts]), decreased housing insecurity or homelessness (−22.4 pct pts), and decreased neighborhood poverty (−5.2 pct pts).
Adults in voucher-using households had improved health care access and physical and mental health. Female youth experienced better physical and mental health but not male youth. Children who entered the voucher programs under 13 years of age had improved educational attainment, employment, and income in their adulthood; children's gains in these outcomes were inversely related to their age at program entry.
Conclusion: Voucher programs improved health and several health-related outcomes for voucher-using households, particularly young children. Research is still needed to better understand household's experiences and contextual factors that influence achievement of desired outcomes.

KEY WORDS: low-income housing, mobility, tenant-based voucher programs

Housing is an established social determinant of health and health equity.[1,2] Lack of affordable and secure housing is associated with poor child health and nutrition[3,4] and poor adult health.[5]The United States faces a shortage of affordable rental homes for populations with extremely low-incomes.[6] In 2020, nearly 11.0 million US households had extremely low-incomes, defined by the US Department of Housing and Urban Development (HUD) as income 30% or less of the Area Median Income (AMI).[7] For these households, there were potentially 7.4 million affordable housing units, but some of these units may have been occupied by households with higher income.[6] For households with very low income—those with incomes 50% or less of the AMI—only 58% had access to affordable units in the private market and public rental assistance programs combined.[6] There were 7.7 million renter households that did not receive government housing assistance and paid more than one-half of their income as rent (the standard is for households to not spend more than 30% of income toward housing expenses),[6] lived in severely inadequate conditions, or both.[6] A disproportionate number of these households are headed by a person of color.[6]

Tenant-based housing voucher programs (hereafter referred to as "voucher programs") are part of the effort to improve housing affordability for households with low income.[8,9] These programs provide households with low income an opportunity to improve their housing condition by paying a substantial portion of their rent and an opportunity to spend less on housing,[9] potentially allowing households to conserve income for other purposes. Tenant-based vouchers are tied to the voucher user. This allows households with vouchers to take the voucher with them to rent housing in the private market, acquire better housing, and reside in neighborhoods defined as high opportunity because they have low poverty rates (metropolitan areas where <10% of the populations lives below the poverty line)[10] and increased access to quality education and employment[10] and less racial and ethnic segregation.[11]

The Housing Choice Voucher (HCV) program, sometimes referred to as Section 8, is the US Department of Housing and Urban Development's (HUD's) largest housing assistance program.[9] HCV provides assistance for about 2.3 million households, with 75% of newly issued vouchers going to households with extremely low incomes.[12] This number is only a quarter of the US households that meet program eligibility criteria.[12] To qualify for voucher programs, households' income may not exceed 50% of the median income for the county or metropolitan area in which the households choose to live.[13,14] After households apply and qualify for voucher programs, they are usually placed on a wait-list.[14] Based on funding availability, some of the qualified households are offered the vouchers, allowing them to search for housing. These households need to locate rental properties that can pass HUD certification and with landlords who are willing to accept the vouchers within a designated time frame—usually 60 to 90 days.[14] In 2012, HUD required the rents charged to voucher program participants be reasonable, based on the fair market rents for the local area so that voucher holders may have a larger pool of potential rental units in neighborhoods with more opportunities.[15] Once these requirements are satisfied, households can use the voucher to pay between 30% of their adjusted monthly income up to an established limited,[14] potentially reducing housing expenditures and increasing net income.

A previous Community Guide review of voucher programs[16] concluded that tenant-based housing voucher programs were effective in reducing victimization of household members and improving neighborhood safety. Effectiveness of tenant-based housing voucher programs on other outcomes could not be determined because of lack of evidence. Since the previous Community Guide review, more studies were published that analyze longer-term follow-up

data from the HUD HCV program.[17] HUD also funded Moving to Opportunity[18] (MTO), an experiment that randomly assigned households with children from public housing or project-based Section 8 housing to 3 different groups: (i) a treatment group that received an HCV that, in the first year, was limited to use in Census tracts with a poverty rate under 10% and could be used without location limits thereafter; (ii) a second treatment group that received a comparable HUD housing voucher with no location poverty limits; and (iii) a control group that received no voucher but could remain in public housing or project-based Section 8–assisted housing. The experiment provided an opportunity for this review to evaluate evidence regarding outcomes and longer follow-up beyond what was available in the earlier Community Guide review.

Methods

The Guide to Community Preventive Services ("Community Guide") methods were used for this review.[19] This review follows the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) (see Supplemental Digital Content checklist, available at http://links.lww.com/JPHMP/B30). A systematic search used citation databases (1999-July 2019), such as PubMed, EMBASE, PsycINFO, and ERIC, with terms such as "housing assistance or voucher" or "Section 8." Publications also were identified from study article references and review team recommendations. The search strategy is available on The Community Guide Web site at https://www.thecommunityguide.org/findings/health-equity-tenant-based-housing-voucher-programs.

Studies were included if they assessed voucher programs implemented in the United States, reported outcomes of interest (described later), had a concurrent control group, were written in English, and were published in peer-reviewed journals or government reports.

Two reviewers independently screened search results and abstracted qualifying studies; disagreements were reconciled by consensus. Studies were assessed for design and threats to validity: inadequate description of the intervention, population, and sampling frame; biased measurement; inappropriate analytic methods; high or differential attrition; and inadequate control for confounding or biasing factors. Study quality of execution was categorized as good (0-1 limitation), fair (2-4), or limited (>4). Studies of limited quality of execution were excluded from analysis.[19,20]

Outcomes of interest included housing quality, neighborhood opportunity (eg, safety, employment level, income, poverty level), housing stability, education, individual income, individual employment status, physical and mental health, health care use, risky health behavior, and crime. Absolute or relative change or difference was calculated for each outcome when appropriate. Medians were calculated with 3 or more data points, and interquartile intervals (IQIs) were calculated with 5 or more data points.

Studies reported outcomes for households that were *offered* vouchers (intent-to-treat [ITT] analysis) or households that actually *used* vouchers (treatment-of-the-treated [TOT] analysis). TOT results are reported in detail in this article. ITT results can be found here. Results from the HCV and MTO groups were analyzed and reported together; differences between programs were noted when appropriate.

Results

Search yield

The search yielded 10 072 citations. Full-text screening was conducted for 89 publications from the search and 12 from reference lists of publications or team recommendations; 7 studies[17,18,21-25] in 27 publications met inclusion criteria and are included in the review (Figure). Three studies[17,18,21] reported outcomes from additional publications; Fenelon in 3,[26-28] Mills in one,[29] and Sanbonmatsu in 16[12,13,30-45] linked articles. Summary evidence tables for all included studies can be found at https://www.thecommunityguide.org/sites/default/files/assets/SET-HE-housing-vouchers-508.pdf.

Quality of execution assessment

Studies were randomized controlled trials,[17,18,22] prospective cohorts,[21,23,24] or cross-sectional,[25] with fair or good quality of execution.

Study, intervention, and participant characteristics

All included studies evaluated HUD-implemented HCV programs in the United States, with one study comparing HUD HCV with the MTO experimental group.[18] All studies evaluated programs that were implemented in urban centers. The MTO program required households move to low poverty areas and included premove counseling and assistance in finding housing in addition to providing an HUD HCV program.[18]

Participants were from households with low income that qualified for HCV or MTO programs. The MTO program recruited households with

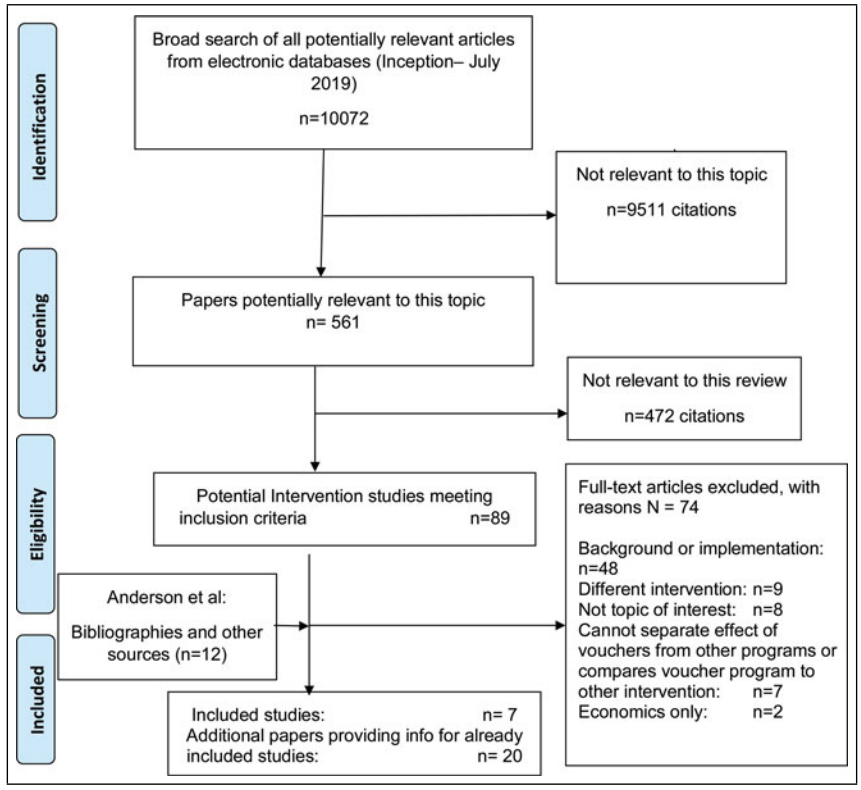

FIGURE PRISMA Flowchart
This figure is available in color online (www.JPHMP.com).

children in high poverty areas living in public housing or in project-based Section 8–assisted housing.[18] Included studies reported on head of household characteristics. Heads of household were mostly female (median 92%),[18,21,22,24,25] with a median age of 32 years.[17,18,21,22] Most participants were Black or African American (median 44%)[17,18,21,23] or Hispanic or Latino (median 23%).[17,18,21,22,25] Nearly half of the heads of household were employed full- or part-time (median 43%),[17,18,21,22,24] and most had a high school education or less (median 55%).[17,18,21-24] The control group included households that did not receive housing assistance.[17,18,21-25]

Effect on participants' access to determinants of health

Compared with households in the control group, more households that used vouchers rated their housing condition as excellent or good[17,18] (median increase of 7.9 pct pts; IQI: 5-10.9 pct pts) (Table 1) and reported less crowding.[17] Fewer voucher-using households reported housing insecurity or experienced homelessness than the control group.[17] Voucher-using households lived in neighborhoods with less poverty compared with control group households[17,18,25] (median decrease of −5.2 pct pts; IQI: −10.2 to –2.4 pct pts) (Table 1). There was no difference in the percentage of household members who were victims of crime in the voucher and comparison populations,[17,18] but more adults from voucher-using households reported feeling safe during the day or at night than adults from control group households[18] (Table 1). MTO participants reported slightly better housing quality, lower neighborhood poverty, and fewer household members victimized in their neighborhood than HCV participants (data not shown).

Adults in voucher-using households experienced a slight increase in employment (median increase of 1.9 pct pts; range: −12.4 to 6.8 pct pts) and annual individual earnings (median increase 4.5%; range: −8.0% to 22.6%) when compared with adults in control group households.[17,18] Compared with control group households, fewer voucher-using households were at or below federal poverty line or had difficulty securing food at follow-up.[16,17] (see Supplemental Digital Content Appendix Table 1, available at http://links.lww.com/JPHMP/B17).

For youth 18 years or younger at random assignment, educational attainment was assessed when they reached 19 to 20 years of age.[17,18] Compared with

TABLE 1
Effectiveness of Tenant-Based Housing Vouchers on Housing Quality and Neighborhood Opportunity, Treatment-of-Treated Analysis

Outcome	Population	Number of Studies	Absolute or Relative Difference	Favorability
Proportion rating housing condition as excellent or good	Adults	2 studies,[17,18] 3 study arms	Median: 7.9 pct pts Range: 5-10.9 pct pts	Favors intervention
Proportion housing insecure or homeless	Household	1 study,[17] 2 study arms	Median: −22.4 pct pts −35.5 and −9.2 pct pts	Favors intervention
Neighborhood poverty rate	Household	3 studies,[17,18,25] 4 study arms	Median: −5.2 pct points Range: −10.2 to −2.4 pct pts	Favors intervention
Proportion victimized in neighborhood	Household	2 studies,[17,18] 3 study arms	Median: 0 pct pts Range: −4.6 to 4 pct pts	No change observed
Proportion feeling safe during the day or at night	Adult	1 study[18] with 2 study arms; 4 effect estimates	Median: 8.1 pct pts Range: 7.2-11.7 pct pts	Favors intervention

Abbreviation: pct pts, percentage points.

youth in the control group, fewer youth in voucher-using households had high school diploma or GED or attended college[17,18] (see Supplemental Digital Content Appendix Table 1, available at http://links.lww.com/JPHMP/B17).

When further stratified by age, children assigned to MTO or HUD HCV before they turned 13 years of age were more likely to be employed in adulthood by 3.9 and 2.1 pct pts and have higher annual adult personal incomes by 30.8% (MTO) and 10.3% (HCV), compared with their counterparts in the control group[12] (Table 2). Children assigned to HUD HCV had improved outcomes in adulthood when compared with their counterparts in the control group, but the improvements were smaller in magnitude than those in the MTO group[12] (Table 2).

Children assigned to MTO or HUD HCV when they were between the ages of 13 and 18 years, however, had lower educational attainment with lower annual personal income and lower employment rate than their counterparts in the control group[12] (Table 2).

Health care access and use

Compared with adults in control group households, fewer adults in voucher-using households were uninsured (median decrease of 4.2 pct pts; range: −5.6 to −2.8 pct pts),[17,18,21] had no usual source of care (decrease of 3.6 pct pts),[20] or had unmet medical or dental care due to cost (decrease of 3.7 pct pts; range: −6.2 to 2-2.3 pct pts)[17,18,21] (see Supplemental Digital Content Appendix Table 2, available at http://links.lww.com/JPHMP/B17). A linked study[26] reported reduced asthma-related emergency department (ED) visits among children with an asthma

TABLE 2
Effectiveness of Tenant-Based Housing Voucher Programs for Youth, Stratified by Age at Entrance to Voucher Programs (Only Treatment-of-the-Treated Results Reported; All Results From Sanbonmatsu et al[18])

Outcome	Population	MTO vs Comparison	HCV vs Comparison Program
Education: Proportion of participants attending college	Children <13 y at program entry	5.2 pct pts Favors intervention	1.5 pct pts Favors intervention
	Adolescents 13-18 y at program entry	−10.2 pct pts Does not favor intervention	−5.5 pct pts Does not favor intervention
Income: Individual earnings at adulthood	Children <13 y at program entry	30.8% Favors intervention	10.3% Favors intervention
	Adolescents 13-18 y at program entry	−15.3% Does not favor intervention	−12.9% Does not favor intervention
Employment: Proportion of participants employed at adulthood	Children <13 y at program entry	3.9 pct pts Favors intervention	2.1 pct pts Favors intervention
	Adolescents 13-18 y at program entry	−5.5 pct pts Does not favor intervention	−2.4 pct pts Does not favor intervention

Abbreviations: HCV, Housing Choice Voucher; MTO, Moving to Opportunity; pct pts, percentage points.

diagnosis or with asthma attacks (see Supplemental Digital Content Appendix Table 2, available at http://links.lww.com/JPHMP/B17). Compared with adults in control group households, fewer adults using HUD HCV used EDs for routine care but more adults in the MTO program used ED for routine care[18] (data not shown).

Effects on physical and mental health

More adults in voucher-using households rated their health as good or excellent than those in the control group[17,18,21] (see Supplemental Digital Content Appendix Table 3, available at http://links.lww.com/JPHMP/B17). Compared with adults in the control group, fewer adults assigned to MTO or HUD HCV reported having asthma or wheezing attack in the past year, having a body mass index above 30, having diabetes or being treated for diabetes during past year, or having mobility issues that limited their ability to carry out daily tasks (10 effect estimates: median decrease of 4.0 pct pts; IQI: −7.4 to −2.3 pct pts)[18] (see Supplemental Digital Content Appendix Table 3, available at http://links.lww.com/JPHMP/B17).

Compared with adults in the control group, adults assigned to the MTO program or HUD HCV were less worried, tense, or anxious for more than 1 month during the past 12 months,[17] had lower psychological distress index scores, and lower rates of major depression, mood disorder, or panic attacks (10 effect estimates: median decrease of 3.4 pct pts; IQI: −60 to −0.2 pct pts)[18] (see Supplemental Digital Content Appendix Table 2, available at http://links.lww.com/JPHMP/B17). Mothers using housing vouchers were less likely to have poor mental health than mothers without vouchers[22] (see Supplemental Digital Content Appendix Table 2, available at http://links.lww.com/JPHMP/B17).

Youth in voucher-using households, when compared with youth in control group households, had a similar likelihood of socioemotional and emotional difficulties[27] (see Supplemental Digital Content Appendix Table 2, available at http://links.lww.com/JPHMP/B17). When stratified by sex, young females in voucher-using families had better physical and mental health than their counterparts in the control group, while young males in voucher-using families had worse physical and mental health than their counterparts in the control group[18] (Table 3).

Effects on risky behavior and crime

Leech[24] reported that fewer adolescents in voucher-using households had heavy alcohol or marijuana use within past 6 months than their counterparts in control households (see Supplemental Digital Content Appendix Table 4, available at http://links.lww.com/JPHMP/B17). Other studies[17,18] reported mixed outcomes for risky health behaviors (see Supplemental Digital Content Appendix Table 4, available at http://links.lww.com/JPHMP/B17).

HUD HCV and MTO produced similar decreases in drug distribution crimes. Compared with youth in control households, fewer youth in households that used HUD HCV committed crime,[24] had fewer arrests overall,[17] or had violent or drug distribution crimes.[18] Youth in the MTO program had increased numbers of arrests for violent crimes when compared with youth in the control group[18] (data not shown).

TABLE 3
Effectiveness of Tenant-Based Housing Voucher Programs for Youth, Stratified by Gender (Only Treatment-of-the-Treated Results Reported; All Results From Sanbonmatsu et al[18])

Outcome	Results for Male Youth, Age 10-20 y at Assessment	Results for Female Youth, Age 10-20 y at Assessment
Physical health: Proportion of youth rated self-health as good or excellent	Average: 0.1 pct pts No effect	Average: 0.9 pct pts Favors intervention
Physical health: Proportion of youth with one of 3 conditions (asthma, obesity, accidents and injuries)	6 effect estimates Median: 3.1 pct pts IQI: −0.2 to 6.1 pct pts Does not favor intervention	6 effect estimates Median: −3.5 pct pts IQI: −4.9 to −2.8 pct pts Favors intervention
Mental health: Proportion of youth with one of 6 conditions (major depression, mood disorder, anxiety disorder, behavior issues, panic attacks, posttraumatic stress disorder)	12 effect estimates Median: 1.4 pct pts IQI: 0.2-4.6 pct pts Does not favor intervention	12 effect estimates Median: −3.8 pct pts IQI: −6.7 to 0.2 pct pts Favors intervention

Abbreviations: IQI, interquartile interval; pct pts, percentage points.

Discussion

This review updates the previous Community Guide review on voucher programs[16] and finds that tenant-based voucher programs are effective in improving health and health-related outcomes, including housing quality and security, health care use, and neighborhood opportunities (eg, lower poverty level, better schools) for adults. Children younger than 13 years whose households used vouchers showed improvements in educational attainment, employment, and personal income in adulthood. In addition, voucher use to move to lower poverty neighborhoods was associated with better mental and physical health for adults and female youth but not for male youth.

Tenant-based housing voucher programs are well positioned to reach millions and move households with low income to neighborhoods with more opportunities including better schools, lower segregation, and lower poverty.[9,46] Still, findings from the current review and the broader literature show that the majority of voucher-assisted households with children do not live in neighborhoods with more opportunities.[18,47,48] While this may be a personal preference for some,[47] studies outside the current review suggest that structural barriers may limit neighborhood options for voucher recipients. One barrier is that landlords in low poverty neighborhoods may chose not to rent to voucher holders.[49-51] Evidence suggests that households had greater success in securing rental properties in jurisdictions with source of income laws that prohibit landlords from refusing tenants based on how they pay rent.[49-52] In addition, programs could be established to help landlords better understand voucher programs and provide incentives to encourage them to hold the rental properties while required activities such as inspections and application review and approval take place.[51,53] Another potential barrier is that often rent in low poverty neighborhoods is high and exceeds maximum rent limits that HUD will subsidize after tenants pay 30% of their adjusted income for housing.[16] Small Area Fair Market Rent policies establish voucher rent allowances corresponding to local rents rather than for the broad regional AMI, allowing for higher voucher rent limits and facilitating the move of voucher tenants to neighborhoods with more opportunities.[16] Households with HCV have limited time and resources to locate suitable housing;[53] extending this duration could allow households more time to adequately search through the housing market.[51,53] Households may benefit from short-term financial assistance for initial expenses, such as rental deposits and moving expenses.[53] Other potential structural barriers to voucher use are housing market "tightness," in which there is a limited supply of affordable rental property[16] and exclusionary zoning policies that limit access by means of regulations such as the prohibition of multiple-family dwellings.[54] Qualitative evidence[31] outside of this review shows that MTO families that did move to areas with more opportunities often chose to remain in their original schools or enroll their children in schools that were close to relatives who might provide after-school care,[31] suggesting that families may need customized supportive services to use opportunities such as better schools in their new neighborhoods.[53]

This review was limited to studying the HUD HCV program and the MTO experiment. HCV and MTO produced similar changes in most outcomes. MTO participants reported slightly better housing quality, lower neighborhood poverty, and fewer household members victimized in their neighborhood than HCV participants. Voucher users in both programs experienced similar improvements in other outcomes. Gains from moving to lower poverty areas were inversely related to children's age at move, suggesting extra years in low poverty neighborhoods during childhood could be beneficial.[11] This may also be a function of the timing of the transition—that it is harder to change schools and neighborhood when children are older. It is important to address the negative mental and physical health outcomes of voucher programs for male youth in both programs.[18] Evidence from qualitative interviews with families participating in MTO suggests that differences in the way male and female youth socialize with peers may influence how they adapt to life after a move.[55] For example, males were more likely to encounter harassment in their new neighborhood and disruption of relationships with male adult role models,[55] which may cause them to feel less comfortable in their new neighborhoods. Another concern was the lack of positive effects on income, employment, and education outcomes for older children. One explanation is that these outcomes may be associated more with barriers that are beyond the reach of voucher programs alone to modify.[18,45] Understanding of the underlying reasons for the lack of benefits for older youth, particularly males, and identification of effective individual-, community-, and societal-level interventions to support them may help improve the results for this population group.

Although 2 randomized controlled trials dominated the review,[17,18] they were of good quality of execution, reported on all outcomes summarized in this review, and included extensive stratified analyses to examine intervention effectiveness for populations with low and very low incomes across large study samples over time.

Implications for Policy and Practice

- Providing HCV to households with low and extremely low income improves their housing stability as well as enables them to move to lower poverty neighborhoods if they choose.
- Benefits for children and adolescents are based predominately on the MTO experiment, which focused on families with very low incomes originally living in public housing. More research is needed to evaluate HCV mobility and effectiveness for children, especially young males, in the greater voucher user community.
- As of 2020, the HCV program provides housing vouchers to 25% of low-income families meeting eligibility criteria.[12] The Congressional Budget Office estimated that if federal spending on housing vouchers increased by $290 billion from 2016 to 2025, an additional 4.5 million households with income below 30% of AMI would benefit. If the funding was increased by $410 billion for the same time period, 8 million households with income below 50% of AMI would benefit.[58] This is an important step toward reducing poverty and racial inequities.

Finally, this review was conducted in 2019 and does not reflect effects of the COVID-19 pandemic on extremely low-income renters and racial and ethnic minority groups. Members from both groups were significantly impacted by COVID-19 in terms of lost wages, high unemployment, and increased rates of eviction,[6] as well as high rates of infection and death associated with COVID-19.[56]

Findings from this systematic review indicate that tenant-based housing voucher programs improve health and several health-related outcomes among voucher-using households, particularly young children. Voucher programs give households access to better housing and neighborhood opportunities, both of which are social determinants of health, and greater access to them is expected to advance health equity.[1,2] And since they are mostly utilized by households headed by a person of color, they have the potential to reduce health disparities.[57] Research is needed to better understand how household members experience housing voucher programs and contextual factors that hinder or facilitate achievement of desired health, education, and economic outcomes.

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