

# Social Determinants of Health: Tenant-Based Housing Voucher Programs

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## **Community Preventive Services Task Force Finding and Rationale Statement Ratified July 2020**

### Table of Contents

Context.....	2
Intervention Definition .....	2
CPSTF Finding .....	3
Rationale .....	3
Basis of Finding .....	3
Applicability and Generalizability Considerations .....	4
Data Quality .....	4
Other Benefits and Harms .....	4
Economic Evidence .....	5
Considerations for Implementation.....	7
Evidence Gaps .....	8
References .....	8
Data Tables.....	11
Table 1. Effectiveness of Tenant-based Housing Voucher Programs .....	11
Table 2. Effectiveness of Tenant-based Housing Voucher Programs for Youth, Stratified by Gender (only treatment-of-the-treated [TOT] results reported; all results from Sanbonmatsu et al. 2011) .....	22
Table 3. Effectiveness of Tenant-based Housing Voucher Programs for Youth, Stratified by Age at Entrance to Voucher Programs (only treatment-of-the-treated [TOT] results reported; all results from Sanbonmatsu et al. 2011) .....	23
Disclaimer.....	24

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## CPSTF Finding and Rationale Statement

### Context

In the United States, extremely low-income renters, defined by the U.S. Department of Housing and Urban Development (HUD) as households earning less than 30% of the area median income, face a shortage of affordable and available rental homes (National Low-Income Housing Coalition 2020). Seventy-one percent (7.7 million) of the nation's 10.9 million extremely low-income renters spend more than half of their incomes on housing and utilities, leaving fewer resources for other necessities (National Low-Income Housing Coalition 2020).

Housing is an established social determinant of health (Fullilove 2010, Healthy People 2030). In the United States, lower housing quality is associated with higher rates of worsening health among adults over age 50 (Alley et al. 2009). Housing insecurity, which encompasses housing cost burden, overcrowding, and multiple moves, has been associated with poor health for very young children (Cutts et al. 2011).

Neighborhood characteristics also influence children's opportunities for academic and economic success. Areas considered to be "higher opportunity" are often characterized as having low poverty (defined as metropolitan areas where less than 10% of the population lives below the poverty line), and increased access to quality education and employment (FreddieMac Multifamily 2018), and less racial and ethnic segregation (Chetty 2016).

Federal programs, such as tenant-based housing voucher programs, can help households move to higher opportunity areas (Sard et al., 2018). HUD administers the [Housing Choice Voucher program](https://www.hud.gov/topics/housing_choice_voucher_program_section_8) [https://www.hud.gov/topics/housing\_choice\_voucher\_program\_section\_8]—a tenant-based voucher program designed to assist very low-income households. HUD conducted the *Moving to Opportunity* experiment, a ten-year randomized study, to assess the effectiveness of tenant-based voucher programs for households living with at least one child under the age of 18. The experiment provided pre-move counseling and required households to move to higher opportunity neighborhoods. Both the *Housing Choice Voucher* program and the *Moving to Opportunity* experiment are included in this review.

### Intervention Definition

Tenant-based housing voucher programs help households with very low-incomes afford safe and sanitary housing in the private market. Vouchers are tied to *households* rather than specific *housing units*, so that households can use vouchers to move to neighborhoods with greater opportunities. Tenant-based housing voucher programs pay a substantial portion of the rent, which leaves households with money to cover other needs.

Tenant-based housing voucher programs may vary in the following ways:

- Eligibility criteria (e.g., family income level)
- Rental process (e.g., time allowed to find and rent a property)
- Assistance (e.g., counseling in finding rentals)
- Relocation requirements (e.g., housing in low-poverty neighborhoods)
- Availability of short-term payments for initial expenses (e.g., rental deposits)

## CPSTF Finding (July 2020)

The Community Preventive Services Task Force (CPSTF) recommends tenant-based housing voucher programs based on sufficient evidence of effectiveness in improving health and health-related outcomes for adults. Health-related outcomes included housing quality and security, healthcare use, and neighborhood opportunities (e.g., lower poverty level, better schools). Children aged 12 years and younger whose households used vouchers showed improvements in education, employment, and income later in life.

Evidence showed that for tenant-based voucher users, living in lower poverty neighborhoods was associated with better health outcomes for adults and females aged 10-20 years. Males aged 10-20 years, however, experienced worse physical and mental health outcomes when their families moved to lower poverty neighborhoods. The CPSTF suggests additional research is needed to better understand and address the challenges faced by adolescent males.

CPSTF finds societal benefits exceed the cost of tenant-based housing voucher programs that serve families with young children who are living in public housing, provide pre-move counseling, and move families to neighborhoods with greater opportunities.

Tenant-based housing voucher programs give many participants access to better housing and neighborhood opportunities, both of which are considered social determinants of health. Because these programs are designed for low-income households, they are expected to advance health equity.

## Rationale

### Basis of Finding

The CPSTF finding is based on evidence from a systematic review of [7 studies in 20 publications](#) [<https://www.thecommunityguide.org/findings/health-equity-tenant-based-housing-voucher-programs#included-studies>] (search period 1999—July 2019) that evaluated tenant-based housing voucher programs (referred to as voucher programs for the rest of this document). This finding updates and replaces the 2001 recommendation for [tenant-based rental assistance programs](#) [<https://www.thecommunityguide.org/sites/default/files/Health-Equity-Tenant-Based-Rental-Assistance-Archive-508.pdf>].

Included studies evaluated intervention effectiveness for one or more of the following outcomes: housing quality, neighborhood opportunities, housing security, education, income, employment, physical and mental health, healthcare use, and risky behaviors. Studies reported outcomes for households that *were offered* vouchers (intent-to-treat [ITT] analysis) or households that *used* vouchers (treatment-of-the-treated [TOT] analysis). Comparison groups were households that were not offered housing assistance from voucher programs.

[Table 1](#) summarizes effect estimates from both ITT and TOT analyses. Households that used vouchers reported better housing conditions, better physical and mental health, and greater access to healthcare among adults than did comparisons. Studies that conducted ITT analyses produced similar findings, though effect estimates were lower.

[Table 2](#) reports results from TOT analyses by gender. Females aged 10-20 years reported greater physical and mental health and perceptions of neighborhood safety than did their female counterparts in comparison groups. The opposite was true for males in this same age group.

[Table 3](#) reports results from TOT analyses stratified by children's age at the time of voucher program entry. Children who were aged 12 years or younger when their families joined the program achieved greater academic success and had higher rates of employment and higher incomes during adulthood than did their counterparts in comparison groups. Children who were aged 13-18 years when their families started using vouchers experienced reductions in education, employment, and income when compared with their counterparts in comparison groups.

## Applicability and Generalizability Considerations

### *Settings*

Included studies evaluated programs in the United States and were distributed across the Western (3 studies), Midwestern (2 studies), Northeastern (3 studies), and Southern (2 studies) regions. Five studies evaluated programs in metropolitan areas; two studies did not report on urban or rural setting.

### *Population Characteristics*

Most participating households were headed by females (92%, 5 studies) and reported a median annual income of \$2,943 or \$12,826 (2 studies). Nearly half of the heads of household were fully or partially employed (43%, 5 studies) with a high school education or less (55%, 6 studies). Heads of household were mostly members of minority populations: Black or African American (median 44%, 4 studies), Hispanic or Latino (median 23%, 5 studies), White (median 20%, 5 studies), Asian (1.6% and 21%, 2 studies), American Indian or Alaska Native (0.4%, 1 study), or other (median 19%, 4 studies). Programs were effective across racial and ethnic groups examined (Black or African American, Hispanic or Latino, White).

### *Intervention Characteristics*

Voucher users in the *Moving to Opportunity* experiment received pre-move counseling and were required to move to lower poverty areas for the first year of the program; no such requirement existed for the *Housing Choice Voucher* program. *Moving to Opportunity* participants reported slightly better housing quality, lower neighborhood poverty, and fewer household members victimized in neighborhood when compared with *Housing Choice Voucher* participants. Voucher users experienced similar improvements in other outcomes.

## Data Quality

Study designs included individual randomized control trials (3 studies), prospective cohorts using data from databases (3 studies), and a cross-sectional comparison of *Housing Choice Voucher* program users to other low-income renters (1 study).

This body of evidence was dominated by two randomized control trials, one reporting on both the *Moving to Opportunity* experiment and *Housing Choice Voucher* program (Sanbonmatsu et al., 2011), and the other focusing on just the *Housing Choice Voucher* program (Mills 2006). These studies recruited large study samples, with 4,142 adults and 6,308 youths in the Sanbonmatsu et al. study, and 8,731 families in the Mills study. Both studies were of good quality of execution, reported on all outcomes summarized in this review, and performed extensive stratified analyses to examine intervention effectiveness for different population groups over time (10-15 year follow up in the Sanbonmatsu et al. study, and 5 year follow up in the Mills study).

## Other Benefits and Harms

No additional benefits were reported in the included studies or broader literature.

One qualitative analysis of the *Moving to Opportunity* experiment found that male youth in the intervention reported more harassment from the police than their counterparts in the control group (73% vs 58%; Clampet-Lundquist et al. 2011). Males in the intervention group, as compared with the control group, also reported more monitoring by neighbors and difficulty maintaining relationships with father figures because of distancing after the move (Clampet-Lundquist et al. 2011).

## Economic Evidence

CPSTF finds societal benefits exceed the cost of tenant-based housing voucher programs that serve families with young children who are living in public housing, provide pre-move counseling, and move families to neighborhoods with greater opportunities. The review found mixed evidence for cost-benefit when housing voucher programs were used alone.

The economic review included 27 studies from the United States (search period 1980 through November 7, 2020). Included studies provided evidence for housing voucher programs used with additional services (12 studies), housing voucher programs used alone (21 studies), or both (6 studies). Programs that included additional services will be referred to as *Moving to Opportunity* (MTO)-type housing voucher programs. These programs provided pre-move counseling and required households to move to neighborhoods with lower poverty and higher opportunity. HUD conducted the MTO experiment in Baltimore, Boston, Chicago, Los Angeles, and New York City in the mid to late 1990s.

The analytic framework for the economic review postulated an intervention cost to implement the program and economic benefits from a range of effects that could include: increased consumption of housing and non-housing goods; increased earnings from employment; reduced use of healthcare and social services or assistance programs; and increased or no effect on property values in destination neighborhoods to which voucher recipients moved. Many studies only reported benefits from single outcomes or as non-numeric qualitative estimates, however, and it was not feasible to add the reported benefits across studies for a total benefit estimate in dollars.

The economic review team considered the following components drivers of intervention cost: rent subsidy, administrative cost, additional services provided (e.g., pre-move counseling), moving assistance, and assistance with deposit. In addition, the following components were considered drivers of healthcare cost: inpatient stays, outpatient visits, and emergency department visits. The following components were considered drivers of intervention benefit: increased housing consumption, increased earnings from employment, reduced healthcare cost, and reduced use of other assistance programs (e.g., Temporary Assistance for Needy Families, Supplemental Nutrition Assistance Program).

The economic review team assessed the quality of estimates based on the inclusion of drivers and the appropriateness of methods used to compute them. Of the nine estimates of intervention cost, four were of good quality and five were of fair quality. The most frequent limitations were absence of covariates to control for unit characteristics and location, and poor quality of study records for intervention cost. Of the 36 estimates of economic benefits (considered separately), 23 were of good quality and 13 were of fair quality. The most frequent limitations were estimates reported as qualitative rather than numeric outcomes, self-reported estimates, and lack of a control group. Of the four cost-benefit estimates, three were of good quality and one was of fair quality; the one cost-effectiveness estimate was of fair quality. The most frequent limitation was poor maintenance of subsidy and administrative cost records within studies.

### *Intervention cost*

MTO-type housing voucher programs (compared with public housing)

- Taxpayer cost reduced by \$8 to \$52 for every \$100 of program spending per year by offering vouchers for rental units in the private market instead of offering rental units in public housing (6 studies)

Housing voucher program used alone (compared with no housing assistance)

- Taxpayer cost per household per year increased: \$3,145; \$7,697; \$14,927 (3 studies)

### *Intervention benefits*

MTO-type housing voucher programs (compared with public housing)

- Total economic benefits increased as a result of the following:
  - Self-reported improved quality of housing and neighborhood amenities (1 study)
  - No change in consumption of non-housing goods (1 study)
  - Increased earnings per person per year in adulthood for those exposed to the program as young children: \$1,905 (1 study)
  - Reduced healthcare cost per person per year: \$111 for adults and \$157 for children (1 study)
  - Reduced use of other assistance programs: \$118 per household per year (1 study)
- Total economic benefits decreased as a result of the following:
  - Reduced earnings of adults per person per year: \$426; \$415 (2 studies)
  - Reduced earnings per person per year in adulthood for those exposed to the program as older children: \$1,328 (1 study)

On balance, total economic benefits for MTO-type housing voucher programs increased from employment income, consumption of housing, and reduced use of other assistance programs.

Housing voucher programs used alone (compared with public housing, no housing assistance, or no comparison group)

- Total economic benefits increased as a result of the following:
  - Increased housing consumption per household: \$276; \$2,148; \$6,852; 31% (4 studies)
  - Self-reported improved quality of housing (1 study)
  - Increased consumption of non-housing goods per household per year: \$936; \$3,109; 50% (3 studies)
  - Increased earnings per person per year for adults: \$305 (1 study)
  - Increased earnings per person year in adulthood for those exposed to the program as children: \$416; \$1,300; \$717 (3 studies)
  - Reduced healthcare cost per person per year: no change; \$346; \$210 for adults and \$183 for children (3 studies)
  - Reduced use of other assistance programs \$137 per household per year (1 study)
- Total economic benefits decreased or were mixed as a result of the following:
  - Reduced earnings of adults per person per year: \$5,093; \$2,922; \$179; \$292; \$899; \$1,543 (6 studies)
  - Mixed effects on property values in destination neighborhoods (2 studies)
  - Increased use of other assistance programs: \$141 and \$1,318 per household per year; percentage point participation rate 1.3, 5.0 (4 studies)

It was unclear whether there was an increase or decrease for the sum of economic benefits for the housing voucher programs used alone because the direction of change is mixed for employment, use of other assistance programs, and neighborhood property values.

### *Cost-effectiveness*

MTO-type housing voucher programs (compared with public housing)

- The lifetime net cost was a reduction of \$7,448 per person and quality adjusted life year gained was 0.23 per person due to averted obesity and diabetes, indicating cost-savings with positive health benefit (1 study)

Housing voucher programs used alone

- None of the included studies reported this information.

#### *Cost-benefit*

MTO-type housing voucher programs (compared with public housing)

- Cost savings for taxpayers was \$9,215 per household and the societal economic benefit was \$69,601 per household over the lifetime, indicating societal cost-savings (1 study)

Housing voucher programs used alone had mixed results (compared with no housing assistance)

- The societal cost was \$9,012 per household and societal benefit was \$10,882 per household over a period of 1 year, indicating benefit exceeded cost (1 study)
- Cost to taxpayer per household and societal benefits per household: \$27,376 and \$24,912 over 8 years; \$10,660 and \$6,958 over 1 year, indicating cost exceeded benefit (2 studies)

#### **Considerations for Implementation**

The following considerations for implementation are drawn from studies included in the evidence review, the broader literature, and expert opinion, as noted below.

Qualified households face several barriers to receiving and using vouchers. Only 25% of the households who qualify for voucher programs receive housing vouchers because the number of vouchers available in the federal program is limited (HUD 2020). When households receive a voucher, they have a limited amount of time to find a house that passes HUD certification and has a landlord who accepts payment by vouchers (Tighe et al. 2017). Some live in “tight” housing market areas with a limited supply of affordable rental properties (Dastrup et al. 2018). Exclusionary zoning policies that prohibit multi-family dwellings may also limit a household’s ability to locate affordable housing (Rothwell and Massey 2009).

Programs could reduce barriers faced by voucher recipients by giving households more time (i.e., more than 60 days) to search for and arrange housing, offering intensive pre-move counseling, providing short-term financial assistance to cover initial moving expenses, and recruiting landlords to participate in the program. In a housing voucher experiment in Seattle (Bergman et al. 2020), the public housing authority offered such services to voucher users to help them lease units in high opportunity neighborhoods. Services included assistance with housing search, provision of financial assistance to cover security deposits and application fees, and engagement with landlords to encourage them to lease to voucher holders. In addition, landlords who leased to voucher holders were offered insurance to cover damages exceeding the housing deposit. With this supplementary program, substantially more voucher users moved to, and stayed in, high opportunity neighborhoods.

Certain policies can facilitate the use of vouchers. State and local source of income laws or ordinances could address market constraints by prohibiting discrimination against renters based on the source of their income. This would include federal benefits such as vouchers, potentially reducing landlord refusal to accept the vouchers.

Small Area Fair Market Rents, introduced by HUD in 2012 (Dastrup et al. 2018), established voucher amounts at the neighborhood rather than metropolitan rental level, allowing vouchers to pay more in high-rent neighborhoods and less in low-rent neighborhoods. This policy increased the number of available rental units in high-opportunity neighborhoods

(Dastrup et al. 2018). Compared with voucher users in areas without this policy, households in areas with Small Area Fair Market Rents were more likely to move to higher-rent and higher-opportunity areas. This effect was particularly strong for households with children (Bell et al. 2018; Dastrup et al. 2018).

Young males deal with considerable harassment and disruption of relationships when moving to a new high opportunity neighborhood (Clampet-Lundquist et al. 2011). These challenges, along with feeling less safe in their neighborhoods than their female counterparts, suggest male youth face barriers to living in their new communities (Clampet-Lundquist et al. 2011). The CPSTF suggests research is needed to identify effective individual, community, and societal-level interventions to support male youth in new environments.

### Evidence Gaps

The CPSTF identified several areas that have limited information. Additional research and evaluation could help answer the following questions and fill remaining gaps in the evidence base.

- How would the following policies influence the effectiveness of tenant-based housing voucher programs?
  - Source of income laws
  - Small Area Fair Market Rent laws
  - Inclusive zoning policies
- How would the following program factors influence the effectiveness of tenant-based housing voucher programs?
  - Allowing more time for a housing search
  - Recruitment and education of landlords to the voucher programs
  - Assistance for voucher users to move to high opportunity areas (e.g. pre-move counseling)
  - Short-term payments to cover initial move expenses
- Young males whose families used vouchers reported worse physical and mental health outcomes than did their counterparts in comparison groups. What is needed to better address the underlying causes of these outcomes? What additional services might be offered to support young men in housing voucher programs?
- What is the program cost for public housing?
- What is the program cost for tenant-based housing voucher programs?
- What is the cost-effectiveness of these programs based on improvements in mental health and wellbeing?
- How do programs affect the economic condition of neighborhoods participants move out of?

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Data Tables

Table 1. Effectiveness of Tenant-based Housing Voucher Programs

Outcomes	Population Group	Intention-to-treat (ITT) Favorability	Treatment-of-the-treated (TOT) Favorability
Housing quality: percent of adults rating housing condition as excellent or good, voucher vs. comparison group	Adult	Overall 1 study with 2 study arms 3.1 and 5.3 pct pts  <i>Moving to Opportunity (MTO)</i> 1 study 5.3 pct pts  <i>Housing Choice Voucher (HCV)</i> 1 study 3.1 pct pts  Favors the intervention	Overall 2 studies with 3 study arms Median: 7.9 pct pts Range: 5 to 10.9 pct pts  <i>Moving to Opportunity (MTO)</i> 1 study 10.9 pct pts  <i>Housing Choice Voucher (HCV)</i> 2 studies 5 and 7.9 pct pts  Favors the intervention
Neighborhood opportunity: percent of household in census tracts below federal poverty line, voucher vs. comparison group	Household	Overall 1 study with 2 study arms -3.5 and -2.5 pct pts  MTO 1 study -3.5 pct pts  HCV 1 study -2.5 pct pts  Favors the intervention	Overall 3 studies with 4 study arms Median: -5.2 pct pts Range: -10.2 to -2.4 pct pts  MTO 1 study -10.2 pct pts  HCV 3 studies Median: -2.5 pct pts Range: -7.8 to -2.4 pct pts  Favors the intervention

Outcomes	Population Group	Intention-to-treat (ITT) Favorability	Treatment-of-the-treated (TOT) Favorability
Neighborhood opportunity: percent of household members victimized in neighborhood, voucher vs. comparison group	Household	<p>Overall 1 study with 2 study arms -2.2 and 2.5 pct pts</p> <p>MTO 1 study -2.2 pct pts</p> <p>HCV 1 study 2.5 pct pts</p> <p>No effect</p>	<p>Overall 2 studies with 3 study arms Median: 0 pct pts Range: -4.6 to 4 pct pts</p> <p>MTO 1 study -4.6 pct pts</p> <p>HCV 2 studies 0 and 4 pct pts</p> <p>No effect</p>
Neighborhood opportunity: percent of adults feeling safe during the day or at night, voucher vs. comparison group	Adult	<p>Overall 1 study with 2 study arms; 4 effect estimates Median: 4.4 pct pts Range: 3.6 to 7.3 pct pts</p> <p>MTO 1 study 3.6 pct pts (day) and 4.3 pct pts (night)</p> <p>HCV 1 study 4.5 pct pts (day) and 7.3 pct pts (night)</p> <p>Favors the intervention</p>	<p>Overall 1 study with 2 study arms; 4 effect estimates Median: 8.1 pct pts Range: 7.2 to 11.7 pct pts</p> <p>MTO 1 study 7.4 pct pts (day) and 8.8 pct pts (night)</p> <p>HCV 1 study 7.2 pct pts (day) and 11.7 pct pts (night)</p> <p>Favors the intervention</p>
Housing Security: % housing insecure	Household	No studies	<p>HCV 1 study -35.5 pct pts</p> <p>Favors the intervention</p>

Outcomes	Population Group	Intention-to-treat (ITT) Favorability	Treatment-of-the-treated (TOT) Favorability
Housing Security: % homeless	Household	No studies	HCV 1 study -9.2 pct pts  Favors the intervention
Education: percent of youth with high school diploma or GED, voucher vs. comparison group	Youth, 19-20 years of age at assessment	Overall 1 study with 2 study arms -7.3 and -5.6 pct pts  MTO 1 study -7.3 pct pts  HCV 1 study -5.6 pct pts  Does not favor the intervention	Overall 2 studies with 3 study arms Median: -9.2 pct pts Range: -14.1 to 0 pct pts  MTO 1 study -14.1 pct pts  HCV 2 studies -9.2 and 0 pct pts  Does not favor the intervention
Education: proportion of youth attending college, voucher vs. comparison group	Youth, 19-20 years of age at assessment	Overall 1 study with 2 study arms -2.1 and -1.4 pct pts  MTO 1 study -1.4 pct pts  HCV 1 study -2.1 pct pts  Does not favor the intervention	Overall 2 studies with 3 study arms Median: -2.9 pct pts Range: -3.3 to 0 pct pts  MTO 1 study -2.9 pct pts  HCV 2 studies -3.3 and 0 pct pts  Does not favor the intervention

Outcomes	Population Group	Intention-to-treat (ITT) Favorability	Treatment-of-the-treated (TOT) Favorability
Income: annual individual earnings, voucher vs. comparison group	Adult	<p>Overall 1 study with 2 study arms -5% and 2.7%</p> <p>MTO 1 study 2.7%</p> <p>HCV 1 study -5%</p> <p>No effect</p>	<p>Overall 3 studies with 4 study arms Median: 4.5% Range: -8% to 22.6%</p> <p>MTO 1 study 5.5%</p> <p>HCV 3 studies Median: 3.4% Range: -8% to 22.6%</p> <p>Favors the intervention</p>
Income: proportion of households at or below poverty line, voucher vs. comparison group	Household	<p>Overall 1 study with 2 study arms -3.2% and 3.6%</p> <p>MTO 1 study -3.2%</p> <p>HCV 1 study 3.6%</p> <p>No effect</p>	<p>Overall 2 studies with 3 study arms Median: -6.7 pct pts Range: -16.5 to 5.9 pct pts</p> <p>MTO 1 study -6.7%</p> <p>HCV 2 studies -16.5% and 5.9%</p> <p>Favors the intervention</p>

Outcomes	Population Group	Intention-to-treat (ITT) Favorability	Treatment-of-the-treated (TOT) Favorability
Income: proportion of household with difficulties securing enough food, voucher vs. comparison group	Household	Overall 1 study with 2 study arms -6.7 and -3.5 pct pts  MTO 1 study -3.5 pct pts  HCV 1 study -6.7 pct pts  Favors the intervention	Overall 2 studies with 3 study arms Median: -7.2 pct pts Range: -10.6 to -0.4 pct pts  MTO 1 study -7.2 pct pts  HCV 2 studies -10.6 and -0.4 pct pts  Favors the intervention
Employment: proportion of adults employed, voucher vs. comparison group	Adult	Overall 1 study with 2 study arms -7.7 and -0.7 pct pts  MTO 1 study -0.7 pct pts  HCV 1 study -7.7 pct pts  Does not favor the intervention	Overall 3 studies with 4 study arms Median: 1.9 pct pts Range: -12.4 to 6.8 pct pts  MTO 1 study -1.4 pct pts  HCV 3 studies Median: 5.1 pct pts Range: -12.4 to 6.8 pct pts  Inconsistent

Outcomes	Population Group	Intention-to-treat (ITT) Favorability	Treatment-of-the-treated (TOT) Favorability
Physical health: proportion of adults rated self-health as good or excellent, voucher vs. comparison group	Adult	<p>Overall 1 study with 2 study arms -0.5 and 0.2 pct pts</p> <p>MTO 1 study 0.2 pct pts</p> <p>HCV 1 study -0.5 pct pts</p> <p>Does not favor the intervention</p>	<p>Overall 3 studies with 4 study arms Median: 0.7 pct pts Range: -0.9 to 9 pct pts</p> <p>MTO 1 study 0.4 pct pts</p> <p>HCV 3 studies Median: 1 pct pts Range: -0.9 to 9 pct pts</p> <p>Favors the intervention</p>
Physical health: proportion of adults reporting one of five conditions (asthma, obesity, diabetes, high blood pressure, mobility limitation), voucher vs. comparison group	Adult	<p>Overall 1 study with 2 study arms; 10 effect estimates Median: -2.1 pct pts Interquartile interval (IQI): -3.2 to -1.1 pct pts</p> <p>MTO 1 study with 5 effect estimates Median: -1.8 pct pts IQI: -3.6 to -0.3 pct pts</p> <p>HCV 1 study with 5 effect estimates Median: -2.3 pct pts IQI: -4.4 to -1.1 pct pts</p> <p>Favors the intervention</p>	<p>Overall 1 study with 2 study arms; 10 effect estimates Median: -4.0 pct pts Interquartile interval (IQI): -7.4 to -2.3 pct pts</p> <p>MTO 1 study with 5 effect estimates Median: -3.8 pct pts IQI: -7.5 to -0.5 pct pts</p> <p>HCV 1 study with 5 effect estimates Median: -4.1 pct pts IQI: -8.2 to -2.8 pct pts</p> <p>Favors the intervention</p>

Outcomes	Population Group	Intention-to-treat (ITT) Favorability	Treatment-of-the-treated (TOT) Favorability
Mental health: emotional difficulty, voucher vs. comparison group	Youth, 18 years of age or less at assessment	No studies	HCV 1 study No difference in children’s emotional difficulty or socioemotional problems  No effect
Mental health: anxiety, depression, or psychological distress, voucher vs. comparison group	Adult	Overall 1 study with 2 study arms -0.11 and -0.10  MTO 1 study -0.11 in psychological distress measured in z-score  HCV 1 study -0.10 in psychological distress measured in z-score  Favors the intervention	Overall 4 study with 5 study arms Various measures for psychological distress and mental health  MTO 1 study -0.22 in psychological distress measured in z-score  HCV 4 studies Mothers who received Section 8 housing were less likely to have poor mental health (adjusted OR 0.40; 95% CI: 0.16–0.97); -6.5 pct pts and 0.6 pct pts for proportion reporting distress; -0.16 in psychological distress measured in z-score  Favors the intervention

Outcomes	Population Group	Intention-to-treat (ITT) Favorability	Treatment-of-the-treated (TOT) Favorability
<p>Mental health: proportion of adults with one of five conditions (major depression, mood disorder, anxiety disorder, panic attacks, post-traumatic stress disorder [PTSD]), voucher vs. comparison group</p>	<p>Adult</p>	<p>Overall 1 study with 2 study arms; 10 effect estimates Median: -2.1 pct pts IQI: -3.3 to -0.1 pct pts</p> <p>MTO 1 study with 5 effect estimates Median: -1.2 pct pts IQI: -3.0 to 0.1 pct pts</p> <p>HCV 1 study with 5 effect estimates Median: -2.2 pct pts IQI: -4.2 to -0.8 pct pts</p> <p>Favors the intervention</p>	<p>Overall 1 study with 2 study arms; 10 effect estimates Median: -3.4 pct pts IQI: -6.0 to -0.2 pct pts</p> <p>MTO 1 study with 5 effect estimates Median: -2.4 pct pts IQI: -6.2 to 0.2 pct pts</p> <p>HCV 1 study with 5 effect estimates Median: -3.5 pct pts IQI: -6.8 to -1.4 pct pts</p> <p>Favors the intervention</p>
<p>Healthcare use: proportion of youth with asthma-related emergency department (ED) use in past 12 months, voucher vs. comparison group</p>	<p>Youth, 18 years of age or less at assessment</p>	<p>No studies</p>	<p>HCV 1 study -1.6 pct pts</p> <p>Favors the intervention</p>
<p>Healthcare use: proportion of adults using ED for routine care, voucher vs. comparison group</p>	<p>Adult</p>	<p>Overall 1 study with 2 study arms -1.1 and 1.5 pct pts</p> <p>MTO 1 study 1.5 pct pts</p> <p>HCV 1 study -1.1 pct pts</p> <p>No effect</p>	<p>Overall 1 study with 2 study arms -1.8 and 3.1 pct pts</p> <p>MTO 1 study 3.1 pct pts</p> <p>HCV 1 study -1.8 pct pts</p> <p>No effect</p>

Outcomes	Population Group	Intention-to-treat (ITT) Favorability	Treatment-of-the-treated (TOT) Favorability
Healthcare use: proportion of adults uninsured, voucher vs. comparison group	Adult	<p>Overall 1 study with 2 study arms -3.5 and -1.9 pct pts</p> <p>MTO 1 study -1.9 pct pts</p> <p>HCV 1 study -3.5 pct pts</p> <p>Favors the intervention</p>	<p>Overall 3 studies with 4 study arms Median: -4.2 pct pts Range: -5.6 to -2.8 pct pts</p> <p>MTO 1 study -3.9 pct pts</p> <p>HCV 3 studies Median: -4.4 pct pts Range: -5.6 to -2.8 pct pts</p> <p>Favors the intervention</p>
Healthcare use: proportion of adults with unmet medical needs, voucher vs. comparison group	Adult	<p>Overall 1 study with 2 study arms -2.6 and -0.2 pct pts</p> <p>MTO 1 study -0.2 pct pts</p> <p>HCV 1 study -2.6 pct pts</p> <p>Favors the intervention</p>	<p>Overall 3 studies with 4 study arms Median: -4.1 pct pts Range: -6.1 to -0.5 pct pts</p> <p>MTO 1 study -0.5 pct pts</p> <p>HCV 3 studies with 4 study arms Median: -4.2 pct pts Range: -6.1 to -3 pct pts</p> <p>Favors the intervention</p>

Outcomes	Population Group	Intention-to-treat (ITT) Favorability	Treatment-of-the-treated (TOT) Favorability
Risky behavior: proportion of youth ever had alcohol, voucher vs. comparison group	Youth 13-20 years of age at assessment	<p>Overall 1 study with 2 study arms -3.2 and -1.7 pct pts</p> <p>MTO 1 study -3.2 pct pts</p> <p>HCV 1 study -1.7 pct pts</p> <p>Favors the intervention</p>	<p>Overall 1 study with 2 study arms -6.7 and -2.6 pct pts</p> <p>MTO 1 study -6.7 pct pts</p> <p>HCV 1 study -2.6 pct pts</p> <p>Favors the intervention</p>
Risky behavior: number of youths with heavy alcohol or marijuana use, voucher vs. comparison group	Youth 13-20 years of age at assessment	No studies	<p>HCV 1 study -22%</p> <p>Favors the intervention</p>
Risky behavior: number of youths with drug use, voucher vs. comparison group	Youth 13-20 years of age at assessment	No studies	<p>HCV 1 study -31%</p> <p>Favors the intervention</p>
Risky behavior: proportion of youth currently smoking, voucher vs. comparison group	Youth 13-20 years of age at assessment	<p>Overall 1 study with 2 study arms 4.2 and 4.3 pct pts</p> <p>MTO 1 study 4.2 pct pts</p> <p>HCV 1 study 4.3 pct pts</p> <p>Does not favor the intervention</p>	<p>Overall 1 study with 2 study arms 6.4 and 8.8 pct pts</p> <p>MTO 1 study 8.8 pct pts</p> <p>HCV 1 study 6.4 pct pts</p> <p>Does not favor the intervention</p>

Outcomes	Population Group	Intention-to-treat (ITT) Favorability	Treatment-of-the-treated (TOT) Favorability
<p>%Risky behavior: proportion of youth engaging in one or more risk behaviors, voucher vs. comparison group</p>	<p>Youth 13-20 years of age at assessment</p>	<p>Overall 1 study with 2 study arms -0.1 and 0.7 pct pts</p> <p>MTO 1 study -0.1 pct pts</p> <p>HCV 1 study 0.7 pct pts</p> <p>No effect</p>	<p>Overall 2 studies with 2 study arms Median: -0.2 pct pts Range: -0.9 to 1 pct pts</p> <p>MTO 1 study -0.2pct pts</p> <p>HCV 1 study with 2 effect estimates -0.9 and 1 pct pts</p> <p>No effect</p>
<p>Crime: number of youth committed crimes or arrested for violent crime or drug distribution, voucher vs. comparison group</p>	<p>Youth 12 or older at time of assessment</p>	<p>Overall 1 study with 2 study arms; 4 effect estimates Median: -3.0% Range: -27% to 15%</p> <p>MTO 1 study Arrests for violent crime: 15% Arrests for drug distribution: -27%,</p> <p>HCV Arrests for violent crime: -19% 1 study Arrests for drug distribution: -15%</p> <p>Inconsistent</p>	<p>Overall 3 studies with 4 study arms; 6 effect estimates Median: -36.0% IQI: -55.4% to -10.3%</p> <p>MTO 1 study Arrests for violent crime: 28% Arrests for drug distribution: -57%,</p> <p>HCV 3 studies with 4 effect estimates Median: -36.0% Range: -54.9% to -23%</p> <p>Favors the intervention</p>

HCV: HUD Housing Choice Voucher program

IQI: Interquartile interval

MTO: Moving to Opportunity experiment

Pct pts: Percentage points

**Table 2. Effectiveness of Tenant-based Housing Voucher Programs for Youth, Stratified by Gender (only treatment-of-the-treated [TOT] results reported; all results from Sanbonmatsu et al. 2011)**

Outcome	Results for Male Youth	Results for Female Youth
Neighborhood opportunity: proportion of youth feeling safe during the day or at night, voucher vs. comparison group	Median: -3.1 pct pts Range: -6.2 to 4.3 pct pts  Does not favor the intervention	Median: 9.7 pct pts Range: 3 to 10.5 pct pts  Favors the intervention
Education: proportion of youth with high school diploma or GED, voucher vs. comparison group	Average: -10.2 pct pts  Does not favor the intervention	Average: -12.9 pct pts  Does not favor the intervention
Education: proportion of youths attending college, voucher vs. comparison group	Average: -4.9 pct pts  Does not favor the intervention	Average: -1.1 pct pts  Does not favor the intervention
Employment: proportion of youths employed, voucher vs. comparison group	Average: -6.2 pct pts  Does not favor the intervention	Average: -8.5 pct pts  Does not favor the intervention
Physical health: proportion of youths rated self-health as good or excellent, voucher vs. comparison group	Average: 0.1 pct pts  No effect	Average: 0.9 pct pts  Favors the intervention
Physical health: proportion of youths with one of three conditions (asthma, obesity, accidents and injuries), voucher vs. comparison group	Median: 3.1 pct pts Interquartile interval (IQI): -0.2 to 6.1 pct pts  Does not favor the intervention	Median: -3.5 pct pts Interquartile interval (IQI): -4.9 to -2.8 pct pts  Favors the intervention

Outcome	Results for Male Youth	Results for Female Youth
Mental health: proportion of youth with one of six conditions (major depression, mood disorder, anxiety disorder, behavior issues, panic attacks, PTSD), voucher vs. comparison group	Median: 1.4 pct pts IQI: 0.2 to 4.6 pct pts  Does not favor the intervention	Median: -3.8 pct pts IQI: -6.7 to 0.2 pct pts  Favors the intervention
Risky behavior: proportion of youths with behavior issues, voucher vs. comparison group	Median: 3.1 pct pts Range: 0.4 to 3.8 pct pts  Does not favor the intervention	Median: 0 pct pts Range: -1.1 to 1.3 pct pts  No effect
Risky behavior: proportion of youths using alcohol or smoking, voucher vs. comparison group	Median: 4.7 pct pts Range: -0.6 to 13.4 pct pts  Does not favor the intervention	Median: -1.2 pct pts Range: -12.4 to 4.4  Favors the intervention
Crime: number of arrests for violent crimes or drug distribution, voucher vs. comparison group	Median: -21% Range: -75% to 27%  Favors the intervention	Median: -26% Range: -57% to 28%  Favors the intervention

IQI: Interquartile interval

Pct pts: Percentage points

**Table 3. Effectiveness of Tenant-based Housing Voucher Programs for Youth, Stratified by Age at Entrance to Voucher Programs (only treatment-of-the-treated [TOT] results reported; all results from Sanbonmatsu et al. 2011)**

Outcome	Results for Children 13-18 Years of Age When Entering Program	Results for Children <13 Years of Age When Entering Program
Education: proportion of participants attending college, voucher vs. comparison group	-7.9 pct pts  Does not favor the intervention	3.4 pct pts  Favors the intervention

Outcome	Results for Children 13-18 Years of Age When Entering Program	Results for Children <13 Years of Age When Entering Program
Employment: proportion of participants employed, voucher vs. comparison group	-4.0 pct pts Does not favor the intervention	3.0 pct pts Favors the intervention
Income: individual earnings, voucher vs. comparison group	1% No effect	20.6% Favors the intervention

Pct pts: percentage points

### Disclaimer

The findings and conclusions on this page are those of the Community Preventive Services Task Force and do not necessarily represent those of CDC. Task Force evidence-based recommendations are not mandates for compliance or spending. Instead, they provide information and options for decision makers and stakeholders to consider when determining which programs, services, and policies best meet the needs, preferences, available resources, and constraints of their constituents.

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