Health Equity: Tenant-Based Housing Voucher Programs

Summary Evidence Table - Systematic Economic Review

This table outlines information from the studies included in the Community Guide economic review of Tenant-based Housing Voucher Programs to Promote Health Equity. It details study design and economic analysis, population and intervention characteristics, and economic outcomes considered in this review. Complete references for each study can be found in the Included Studies section of the review summary.

Abbreviations Used in This Document:

- Study design:
 - RCT: randomized controlled trial
- Measurement terms:
 - o DiD: difference in difference
 - Pct pt: percentage point
 - o QALY: quality adjusted life year

- Other terms:
 - o AFDC: Assistance for Families with Dependent Children
 - NA: not applicable
 - NR: not reported
 - o HUD: Department of Housing and Urban Development
 - o IRS: Internal Revenue Service
 - MTO: moving to opportunity
 - o PHA: Public Housing Authority
 - o ROI, return on investment
 - o SIPP: Survey of Income and Program Participation
 - o SNAP: Supplemental Nutrition Assistance Program
 - o TANF: Temporary Assistance for Needy Families

Notes:

Quality of economic estimates – Studies are assessed to be of good, fair, or limited quality. This valuation is based on two domains: Quality of Capture, and Quality of Measurement.

Race/ethnicity of the study population: The Community Guide only summarizes race/ethnicity for studies conducted in the United States.

Summary Economic Outcomes are Cost-Benefit, Cost per <u>QALY</u>, Cost per <u>DALY</u>

Study Information	Study and Population Characteristics Time Horizon	Program Intervention	Outcomes Data Source Methods	Cost-benefit, Cost- effectiveness, Net Cost, or ROI Outcome
Author (Year): Andersson et al. (2018)	Location: National, USA Eligibility:	Program Name: None Intervention:	Earnings increase at age 26 per year of housing voucher exposure: Female: \$457 Male: \$253	NR
Design: Longitudinal	Siblings 13-18 years of age in housing voucher assisted rental households in year	Housing vouchers for rental units	(Treated mean: \$9,716) Components Included:	
Economic	2000		Employment earning	
Outcomes: Earnings in adulthood for those exposed to program as children Funding Source: HUD, Census Bureau, John D and Catherine T McArthur Foundation, CGIAR Research Program Monetary Values: Reported in 2010 U.S. dollars	Sample Size: Intervention: 118,000 Control: 994,000 Characteristics: Mean Age: 15.3 years Females: 51.7% White: 20% Black: 47% Hispanic: 26% Single parent household: 77% Household income: \$10,667 Tenant monthly rent contribution: \$227 Time Horizon: Placement during 1997-2000 Follow-up 14 years	Comparison: Siblings 13-18 years of age in unassisted rental households	Data Source: Decennial Census, Longitudinal Employer-Household Dynamics; PIC, Public and Indian Housing Information Center Statistical Methods: Household fixed effects with instrumental variable. Measure Type: DiD Quality: Good	
Author (Year): Bergman et al. (2019) Design: Post only with	Location: King County, Washington, USA Eligibility: Households with children 15 years of age or younger	Program Name: Creating Moves to Opportunity (CMTO) J-PAL Opportunity- Insights	Effectiveness: Proportion moving to opportunity areas was 15% in control and 53% in intervention group Intervention cost:	NR
control	eligible for housing vouchers	Intervention: Enable housing voucher	Cost of CMTO services per voucher issued: \$2,661	
Economic Outcomes: Intervention cost	Sample Size: Intervention: 222 Control: 208	recipients to move to areas of greater opportunity. Provided	Financial assistance other than rent subsidy per voucher issued: \$1,043	

Study Information	Study and Population Characteristics Time Horizon	Program Intervention	Outcomes Data Source Methods	Cost-benefit, Cost- effectiveness, Net Cost, or ROI Outcome
Funding Source: Gates Foundation, Chan-Zuckerberg Initiative, Surgo Foundation, William T. Grant Foundation, Harvard University Monetary Values: Reported in 2018 U.S. dollars	Characteristics: Mean age of household head: 34 years Mean age child: 7 years Mean household annual income: \$19,806 Female head of household: 84% Urban: 100% Black: 49% Hispanic: 8% White: 26% Asian: 7% Time Horizon: Placement during 2018-2019 Follow-up NA	housing vouchers, financial assistance (e.g., security deposit), rental agreement counseling, education on areas of opportunity, landlord engagement, locator services. Comparison: Housing vouchers only	Program administration cost per voucher issued: \$1,500 Components Included: Services to enable moves to opportunity areas, non-rent financial assistance, administration cost Data Source: Program and PHA data Measure Type: Post only versus control Quality: Good	
Author (Year): Carlson et al. (2011) Design: Modeled Economic Outcomes: Cost-benefit Funding Source: John D and Catherine T McArthur Foundation Monetary Values: Reported in 2002 U.S. dollars	Location: Wisconsin, USA Eligibility: Temporary Assistance for Needy Families (TANF) recipients in the state of Wisconsin who are in private voucher assisted rental units. Sample Size: Monte Carlo simulations model Characteristics: NR Time Horizon: Data period 2001-2003 (3 years) including 1-year follow-up	Intervention: Housing vouchers for private market rentals Comparison: Households receiving TANF assistance and living in unassisted private rental units	Intervention cost: \$9,012 per household Components Included: Deadweight loss from tax financing, housing voucher program cost Data Source: Program and PHA data Measure Type: DiD Quality: Good Intervention benefit: \$10,882 per household Components Included: Labor income as adults for children previously exposed to housing	Cost-benefit ratio: 1.21:1 Notes: Possible double counting of some benefits

Study Information	Study and Population Characteristics Time Horizon	Program Intervention	Outcomes Data Source Methods	Cost-benefit, Cost- effectiveness, Net Cost, or ROI Outcome
			vouchers. Also reduced crime, increased consumption of housing services, adult labor earnings, property values, other assistance programs Data Source: Unemployment insurance data for wages, administrative data for other assistance Statistical Methods: Monte Carlo simulations Measure Type: Pre to Post Quality: Good	
Author (Year): Carlson et al. (2012) Design: Longitudinal Economic Outcomes: Adult employment earnings Funding Source: John D. and Catherine T. McArthur Foundation Monetary Values: Reported in 2003		Intervention: Housing vouchers for private market rentals Comparison: TANF or SNAP recipients living in unassisted private rentals	Adult employment earnings: Reduced \$647 in year 1 (Baseline mean for control group \$5,392) Reductions dissipated over 5 years. Components Included: Adult labor earnings Data Source: Administrative data from unemployment insurance for wages Statistical Methods: Regression with propensity matched control Measure Type: DiD Ouality:	NR
Reported in 2003 U.S. dollars	Age: 31-59 years 40% to 45%		Quality: Good	

Study Information	Study and Population Characteristics Time Horizon	Program Intervention	Outcomes Data Source Methods	Cost-benefit, Cost- effectiveness, Net Cost, or ROI Outcome
	Age > 59 years: 9% to 14% White: 58% to 61% Black: 27% to 29% Hispanic: 3% to 4% Rural: 28% to 31% No high school diploma: 33% to 36% Time Horizon: Data period 2001-2006 Maximum follow-up 6 years			
Author (Year): Chetty et al. (2016) Design: Longitudinal Economic Outcomes: Employment earnings in adulthood for those exposed to program as children Funding Source: National Science Foundation, Harvard University, Laura and John Arnold Foundation Monetary Values: Reported in 2012 U.S. dollars	or more of residents below the federal poverty line. Sample Size: Adults in Intervention 1 and Intervention 2: 4,215 Intervention 1: Children exposed at age < 13 years: 1,427 Children exposed at age 13 to 18 years: 686	Intervention: Intervention 1: Housing voucher Intervention 2: Housing voucher plus opportunity move counseling; participants required to move to area with less than 10% poverty Comparison: Households in public housing	Intervention 1: Adult employment earnings: Increased \$249 (Baseline mean for control group \$14,381) Employment earnings of children exposed at age < 13 years Increased \$1,109 (Baseline mean for control group \$11,270) Employment earnings of children exposed at age 13 to 18 years Reduced \$1,133 (Baseline mean for control group \$15,881) Intervention 2: Adult employment earnings: Reduced \$354 (Baseline mean for control group \$14,381) Employment earnings of children exposed at age < 13 years Increased \$1,624 (Baseline mean for control group \$11,270) Employment earnings of children exposed at age 13 to 18 years	Authors calculated that the program cost was less than tax revenues from increased employment earnings.

Study Information	Study and Population Characteristics Time Horizon	Program Intervention	Outcomes Data Source Methods	Cost-benefit, Cost- effectiveness, Net Cost, or ROI Outcome
	Control Children exposed at age < 13 years: 1,613 Children exposed at age 13 to 18 years: 686 Characteristics: Intervention 1 (Intervention 2) Household head completed high school: 34.7% (30.1%) Household head employed: 21.6% (24.8%) Household head African American: 65.5% (66.5%) Household head Hispanic: 28.9% (29.1%) Time Horizon: Placement during 1994-1998 Follow-up 10 years		Reduced \$966 (Baseline mean for control group \$15,881) Components Included: Adult labor earnings, earnings of children as adults Data Source: Administrative program data and IRS earnings data Statistical Methods: Regression weighted for sampling and with dummies for treatment. Sensitivity analysis using baseline covariates. Measure Type: DiD Quality: Good	
Author (Year): Chyn et al. (2018) Design: Longitudinal Economic Outcomes: Employment earnings in adulthood for those exposed to program as children	Location: Chicago, IL, USA Eligibility: Households with children of age 7 to 18 years who are living in public housing Sample Size: Intervention: Adults: 4,331 Children: 5,250 Control: NR Characteristics: Mean Age: 11.7 years Females: 41.1% Urban: 100%	Intervention: Housing vouchers offered to households affected by demolitions of public housing projects. All moving expenses paid by program. Comparison: Households in public housing not affected by demolitions.	Employment earnings of adults: Increased \$404 (Baseline mean for control group \$6,281) Children's employment earnings in adulthood: Increased for females \$806 (control group \$4,417) Increased for males \$417 (Baseline mean for control group \$2,947) Components Included: Employment earnings Quality: Good	Calculations by authors indicate the additional cost of paying for moving expenses were less than tax revenues from increased employment earnings.

Study Information	Study and Population Characteristics Time Horizon	Program Intervention	Outcomes Data Source Methods	Cost-benefit, Cost- effectiveness, Net Cost, or ROI Outcome
Funding Source: National Institute of Child Health Monetary Values: Reported in 2012 U.S. dollars	Adult employed: 17.3% Adult annual earnings: \$5,791 Time Horizon: Placements occurred 1995-2000 14 years of follow-up		Increased participation rate for TANF/AFDC, Medicaid, SNAP by 1.3 percentage points (Baseline mean for control group 63%) Quality: Good Data Source: Administrative data from state and federal housing programs, unemployment insurance for wages, and social assistance programs Statistical Methods: Instrumental variable regression Measure Type: DiD	
Author (Year): Finkel et al. (1999) Design: Cross-sectional Economic Outcomes: Cost of public provision of housing units compared to private market rental cost Funding Source: HUD Monetary Values: Reported in 1995 U.S. dollars	Location: National, USA Eligibility: Households eligible for section 8 housing assistance Sample Size: Older properties: 5,943 Newer properties: 4,076 Characteristics: Elderly: 33% White: 58% Black: 37% Hispanic: 11% Annual income less than \$15,000: 80-90% Time Horizon: Data for 1995	Intervention: Provision of Section 8 new construction and major rehabilitation Comparison: Cost of private market rental	Among all section 8 assisted rental units, 67% of units had a cost of provision that was 20% greater than comparable cost of a private rental unit Components Included: Capital and maintenance cost of section 8 housing units, administration cost Quality: Fair Data Source: HUD and PHA construction and administrative data Statistical Methods: Capital cost accounting methods Measure Type: Capital and maintenance cost	NR

Study Information	Study and Population Characteristics Time Horizon	Program Intervention	Outcomes Data Source Methods	Cost-benefit, Cost- effectiveness, Net Cost, or ROI Outcome
Author (Year): Galster et al. (1999) Design: Panel data Economic Outcomes: Property values Funding Source: HUD Monetary Values: Reported in 1993 U.S. dollars	Location: Baltimore County, MD, USA Eligibility: NA Sample Size: Property sales: 43,361 Housing voucher households: 11,000 Characteristics: NR Time Horizon: Data covering 1991-1997	Intervention: Household tenants receive housing vouchers Comparison: Areas with fewer tenants receiving housing vouchers	Property values increased for high and appreciating value neighborhoods at baseline with mostly White households. Property values decreased for medium to low and declining value neighborhoods at baseline with ≥20% Black households. Components Included: Property values Quality: Good Data Source: Sales and property tax data, HUD data Statistical Methods: Panel regression of log of sales price of single-family homes with neighborhood fixed effects by proximity to housing voucher tenants Measure Type: Regression coefficient	NR
Author (Year): Hendren et al. (2020) Design: Modeled Economic Outcomes: Marginal Value of Public Funds – Modified cost- benefit from government fiscal	Location Intervention 1: Baltimore, MD; Boston, MA; Chicago, IL; Los Angeles, CA; New York, NY, USA Intervention 2: Atlanta, GA; Augusta, GA; Fresno, CA; Houston, TX; Los Angeles, CA; Spokane, WA, USA Intervention 3: Chicago, IL, USA	Intervention 1: Housing voucher, opportunity move counseling, required move to area with less than 10% poverty – Moving to Opportunity (MTO) Intervention 2: HUD Welfare to Work Program Intervention 3:	Intervention 1: Cost: -\$9,215 Benefit: \$69,601 Components of Cost: Program cost, other assistance programs, tax impact Components of Benefit: Labor earnings of adults, labor earnings during adulthood of children exposed to program Quality: Fair	Marginal Value of Public Funds (MVPF)~ Benefit/Cost Intervention 1: Tax system cost saving Quality: Fair Intervention 2: MVPF=0.91-0.93 Quality: Good
perspective				Intervention 3:

Study Information	Study and Population Characteristics Time Horizon	Program Intervention	Outcomes Data Source Methods	Cost-benefit, Cost- effectiveness, Net Cost, or ROI Outcome
Funding Source: National Science Foundation, Sloan Foundation, Chan Zuckerberg Initiative, Bill and Melinda Gates Foundation Monetary Values: Reported in U.S. dollars. Index year not reported.	Intervention 1: Residents of public housing Intervention 2: TANF or TANF-eligible (7% in public housing) Intervention 3: Chicago residents on waitlist for housing vouchers Sample Size: Modeled Characteristics: Modeled Time Horizon: Intervention 1: Placement during 1994-1998 15 years follow-up Intervention 2: Placement during 2000-2001 3.5 years follow-up Intervention 3: Placement during 1997-2003 14 years follow-up	Chicago Voucher Lottery - Housing Vouchers distributed by lottery Comparison 1: Residents of public housing not receiving MTO Comparison 2: Residents mostly in private unassisted rentals or living with friends or relatives Comparison 3: Residents in private unassisted rentals	Intervention 2: Cost: \$27,376 Benefit: \$24,912 Components of Cost: Program cost, other assistance programs, tax impact Components of Benefit: Labor earnings of adults, child education benefits, labor earnings during adulthood of children exposed to program, consumption of housing and other assistance programs Quality: Good Intervention 3: Cost: \$10,660 Benefit: \$6,958 Components of Cost: Program cost, other assistance programs, tax impact Components of Benefit: Labor earnings of adults, child education benefits, labor earnings during adulthood of children exposed to program, consumption of housing and other assistance programs Quality: Good Data Source: Program data and published evaluations Statistical Methods: Public accounting and economic models	MVPF=0.65-0.82 Quality: Good

Study Information	Study and Population Characteristics Time Horizon	Program Intervention	Outcomes Data Source Methods	Cost-benefit, Cost- effectiveness, Net Cost, or ROI Outcome
			Measure Type: Modeled	
Author (Year): ICF-ORC Macro (2012); ORC-Macro (2001) Design: Cross-sectional Economic Outcomes: Cost of provision of housing vouchers for rental units Funding Source: HUD Monetary Values: Reported in 2000 U.S. dollars	Location: National, USA Eligibility: Representative sample of households eligible and receiving section 8 housing assistance Sample Size: Households: 2,403 Characteristics: NR Time Horizon: Data for 2000	Intervention: Housing vouchers Comparison: Cost of private market rental without assistance	(Cost of provision of rental units through housing vouchers) / (Fair market rent for comparable unit) ≤1.0 for 71% of units ≥1.25 for 13% of units Components Included: Value of housing vouchers, administrative cost, private market rental cost Quality: Fair Data Source: HUD files reviews for subsidies paid out, tenant interviews, income verifications Statistical Methods: Accounting methods Measure Type: Accounting	NR
Author (Year): Jacob et al. (2012); Jacob et al. (2015) Design: Longitudinal Economic Outcomes: Program cost, housing consumption, non-housing consumption, adult	Location: Chicago, IL, USA Eligibility: Households in Chicago on wait list for housing vouchers Sample Size: Households: 4,787 Children in households: 18,347 Characteristics: Mean age of heads of household: 31.6 years	Intervention: Chicago Voucher Lottery – Housing Vouchers distributed randomly by lottery Comparison: Households in private rentals with no housing assistance	Cost of providing housing vouchers per household per year: \$12,562 Components Included: Housing voucher subsidies Quality: Fair Data Source: PHA administrative data Statistical Methods: Accounting	NR

Study Information	Study and Population Characteristics Time Horizon	Program Intervention	Outcomes Data Source Methods	Cost-benefit, Cost- effectiveness, Net Cost, or ROI Outcome
employment earnings, healthcare cost Funding Source: Centers for Disease Control and Prevention, University of Chicago, Russell Sage Foundation, Joyce, McArthur and McCormick Foundation, Northwestern University, Smith Richardson Foundation, HUD, Robert Wood Johnson Foundation Monetary Values: Reported in 2013 U.S. dollars	Female heads of household: 96% Black: 94.4% Hispanic: 3.2% White: 2.2% Other: 0.2% Urban: 100% Mean annual household earnings: \$2,008 Monthly rent: \$778 Time Horizon: Placements occurred during 1997-2003 Follow-up to 2011		Measure Type: Post only Incremental benefit of housing consumption per household per year: \$6,849, 73% increase Components Included: Incremental housing cost Quality: Good Data Source: PHA administrative data, private market rent for similar unit Statistical Methods: Panel regression with instrumental variables Measure Type: DiD Incremental benefit of non-housing consumption per household per year: \$5,653, 29% increment Components Included: Incremental non-housing consumption Quality: Good Source and Valuation: PHA data Statistical Methods: Panel regression with instrumental variables	

Study Information	Study and Population Characteristics Time Horizon	Program Intervention	Outcomes Data Source Methods	Cost-benefit, Cost- effectiveness, Net Cost, or ROI Outcome
			Measure Type: DiD Adult earnings per year: Reduced \$1,316(Baseline mean for control group \$13,160) Effect persists. Components Included: Employment earnings Quality: Good Data Source: PHA data, human services agencies administrative data, unemployment insurance data, wages Statistical Methods: Panel regression with instrumental variables Measure Type: DiD No effect on healthcare cost	
Author (Year): Lee et al. (1999) Design: Interrupted time series Economic Outcomes: Property values	Location: Philadelphia, PA, USA Eligibility: Neighborhoods with households using housing vouchers Sample Size: Property Sales: 18,062	Intervention: Housing vouchers Comparison: Comparable neighborhoods without households using housing vouchers	Change in property values for single family homes due to housing voucher households in neighborhood: Small and negative effect, but significant (coefficient -0.005) Components Included: Property value Quality: Fair	NR
Funding Source: HUD	Characteristics (Neighborhood): Black: 30.2%		Data Source: HUD program data, property tax data	

Study Information	Study and Population Characteristics Time Horizon	Program Intervention	Outcomes Data Source Methods	Cost-benefit, Cost- effectiveness, Net Cost, or ROI Outcome
Monetary Values: Reported in 1990 U.S. dollars	Hispanic: 6.7% Percent unemployed: 10.5% Percent poverty: 18.4% Median income: \$26,129 Mean property sale price: \$47,626		Statistical Methods: Regression Measure Type: DiD	
	Time Horizon: Placements during 1989 to 1991			
Author (Year): Leger et al. (1990) Design: Interrupted time series Economic Outcomes: Cost of provision of housing vouchers for rental units, housing consumption Funding Source: HUD Monetary Values: Reported in U.S. dollars. Index year not reported.	Location: National, USA Eligibility: Households eligible for housing vouchers Sample Size: Households: 7,500 Characteristics: Black: 45.3% Hispanic: 14.8% White: 37.6% Other: 2.2% Ratio of income to poverty income: 0.80 Percent of income from earnings: 21.7% Mean income: \$6,257 Time Horizon: Placements during mid to late 1980s. Follow-up not reported	Intervention: Housing vouchers Comparison: Unassisted private rentals	Cost of providing housing vouchers per household per year: Other housing assistance: \$326 Rent Subsidy: \$3,720 Components Included: Housing voucher subsidy, administration Quality: Good Data Source: PHA data Statistical Methods: Accounting methods Gross rent with housing vouchers compared to fair market rent for comparable unit in private market: Results indicate gross rent and fair market rent are similar in magnitude Components Included: Housing voucher subsidy, administration, private market rents Quality: Fair	NR
			Data Source:	

Study Information	Study and Population Characteristics Time Horizon	Program Intervention	Outcomes Data Source Methods	Cost-benefit, Cost- effectiveness, Net Cost, or ROI Outcome
			PHA data, private rental market data Statistical Methods: Regression methods Consumption of housing services: Increase \$179 per month (63%) from baseline of \$284 Components Included: Gross rent Quality: Good Data Source: PHA and HUD data Measure Type: Pre to post	
Author (Year): Liebman et al. (2004) Design: Longitudinal Economic Outcomes: Adult employment earnings; use of other assistance programs Funding Source: HUD, National Institute of Mental Health, National Institute of Child Health and	Location: Baltimore, MD; Chicago, IL; Los Angeles, CA; New York City, NY, USA Eligibility: Public housing residents Sample Size: Households in housing voucher program: 2,411 Households in housing voucher program with move to opportunities counseling and assistance: 2,910 Characteristics: Housing Vouchers Mean Age: 40.1 years Females: 98% Urban: 100%	Interventions: Housing voucher program. Housing voucher program with move to opportunities counseling and assistance and requirement to move to areas with less than 10% poverty (MTO). Comparison: Matched households in unassisted rental units.	Adult employment earnings per year for households in the housing voucher program: Increased in year 1 by \$41 (Baseline mean for control group \$8,899) and in year 5 by \$370 (Baseline mean for control group \$7,313) Adult employment earnings per year for households in the housing voucher program with move to opportunities services: Reduced in year 1 by \$287 (Baseline mean for control group \$9,062) and increased in year 5 by \$128 (Baseline mean for control group \$7,475) Components included for employment earnings: Employment earnings	NR

Study Information	Study and Population Characteristics Time Horizon	Program Intervention	Outcomes Data Source Methods	Cost-benefit, Cost- effectiveness, Net Cost, or ROI Outcome
Development, National Science Foundation, Russell Sage Foundation, Robert Wood Johnson Foundation, Smith Richardson Foundation, MacArthur Foundation, W.T. Grant Foundation, Princeton University, National Bureau of Economic Research Monetary Values: Reported in 2000 U.S. dollars	High school diploma: 41% Housing Vouchers with Move to opportunities Mean Age: 39.7 years Females: 99% Urban: 100% Black: 67% Hispanic: 29% Teen parent: 25% High school diploma: 41% Time Horizon: Placements occurred 1994-		Quality: Good Data Source: HUD administrative data Statistical Methods: Regression with propensity matched control Measure Type: DiD Use of other assistance programs per year for households on housing voucher program: Decreased in year 1 by \$92 (Baseline mean for control group \$1,493) and increased in year 5 by \$7 (Baseline mean for control group \$1,242) Use of other assistance programs per year for households on housing voucher program with move to opportunities services: Decreased in year 1 by \$44 (Baseline mean for control group \$1,653) and in year 5 by \$116 (Baseline mean for control group \$1,500) Components Included in use of other assistance programs: TANF Quality: Fair Data Source: HUD administrative data TANF program data Statistical Methods:	

Study Information	Study and Population Characteristics Time Horizon	Program Intervention	Outcomes Data Source Methods	Cost-benefit, Cost- effectiveness, Net Cost, or ROI Outcome
			Regression with propensity matched control	
Author (Year): Mayo et al. (1980); Olsen (2009) Design: Cross-sectional	Location: Phoenix, AZ, Pittsburgh, PA, USA Eligibility: Intervention 1: Eligible for housing vouchers Intervention 2: Eligible for	Intervention: Intervention 1: Housing vouchers Intervention 2: Public housing Comparison:	Intervention 1: (Cost of provision of rental units through housing vouchers) / (Fair market rent for comparable unit): 1.09 to 1.15 Intervention 2:	NR
Economic Outcomes: Cost of provision of housing vouchers for rental units;	public housing Sample Size: Intervention 1 (Control) Pittsburgh	Cost of private market rental without assistance	(Cost of provision of public housing unit) / (Fair market rent for comparable unit): 1.64 to 1.91	
cost of providing public housing units Funding Source:	83 (92) Phoenix 68 (95) Intervention 2 (Control)		Value of housing vouchers, administrative cost, private market rental cost, cost of providing public housing unit	
HUD Monetary Values:	Pittsburgh 241 (286) Phoenix		Quality: Good	
Reported in 1975 U.S. dollars	225 (234) Characteristics:		Data Source: HUD data, private rental market data	
	NR Time Horizon: Data from 1975		Statistical Methods: Regression Measure Type:	
	Data Holli 1975		Accounting	
Author (Year): Mills et al. (2006) Design:	Location: Atlanta, GA; Augusta, GA; Fresno, CA; Houston, TX; Los Angeles, CA; Spokane, WA, USA	Intervention: Housing vouchers with welfare to work program	Quality of housing consumption: 44% reduction in overcrowding; 8% increase in units rated as good or excellent; 7% reduction in units with at	NR
Pre to post Economic	Eligibility: Households eligible for	Comparison: Unassisted rental households	least 2 problems Components Included:	
Outcomes:	housing vouchers		Housing quality	Day 16 of 2

Housing Consumption, non-housing sumption, adults and children: 8,573 Consumption of non-housing goods and services: Increased 50% Sayears: 68.3%; 35-54 years 30.3%; ≥55 years 1.1% Households with children: 100% Adult females: 91.8% Black: 49.8% Monetary Values: Reported in 2001 U.S. dollars Other: 9.2% Employed: 44.5% Housing: Physical Protection of the protection	Study Information	Study and Population Characteristics Time Horizon	Program Intervention	Outcomes Data Source Methods	Cost-benefit, Cost- effectiveness, Net Cost, or ROI Outcome
Regression with adjustments for baseline and participant/location covariates with cross-overs. Measure Type: DiD	consumption, non-housing consumption, adult employment earnings, use of other assistance programs Funding Source: HUD Monetary Values: Reported in 2001	Adults and children: 8,573 Characteristics: Age of head of household < 35 years: 68.3%; 35-54 years 30.3%; ≥55 years 1.1% Households with children: 100% Adult females: 91.8% Black: 49.8% Hispanic: 21.4% White: 19.6% Other: 9.2% Employed: 44.5% Housing: Private rental 56.3%; public housing 7.0%; living with others 25.8%; other 10.9% Time Horizon: Placements occurred during 2000-2001		Consumption of non-housing goods and services: Increased 50% Quality: Fair Data Source: Tenant surveys Statistical Methods: Regression with adjustments for baseline and participant/location covariates with cross-overs. Measure Type: Pre to post Earnings per person per year: Reduced \$124 (Baseline mean for control group \$2,651) in first 6 months Effect dissipated over 3 years Components Included: Employment earnings Quality: Good Data Source: HUD data, unemployment insurance administrative data Statistical Methods: Regression with adjustments for baseline and participant/location covariates with cross-overs. Measure Type:	

Study Information	Study and Population Characteristics Time Horizon	Program Intervention	Outcomes Data Source Methods	Cost-benefit, Cost- effectiveness, Net Cost, or ROI Outcome
Author (Year): Olsen et al. (1983)	Location: New York City, NY, USA	Intervention: Public housing	Use of other assistance programs per household per year: Increased by \$95 (Control mean \$1,814) in first 6 months Effect persisted over 3 years Components Included: TANF benefits, SNAP benefits Quality: Good Data Source: TANF and SNAP administrative data Statistical Methods: Regression Measure Type: DiD (Cost of provision of public housing unit) / (Fair market rent for	NR
Design: Cross-sectional	Eligibility: Eligible for public housing	Comparison: Cost of private market	comparable unit): 1.10 to 1.15	
Economic Outcomes: Cost of providing public housing units	Sample Size: Families in public housing 142,000 in 1965 144,000 in 1968	rental without assistance	Components Included: Cost of provision excluding administrative cost Quality: Fair	
Funding Source: University of Virginia, University of Wisconsin	Characteristics (Families in public housing): Mean age of household head 46-48 years Black heads of household: 39-41%		Data Source: HUD data, private rental market data Statistical Methods: Regression	
Monetary Values: Reported in U.S. dollars. Index year	Female heads of household: 24-30%		Measure Type: Post only	
not reported.	Time Horizon:			

Study Information	Study and Population Characteristics Time Horizon	Program Intervention	Outcomes Data Source Methods	Cost-benefit, Cost- effectiveness, Net Cost, or ROI Outcome
	Placement during 1965-1968			
Author (Year): Pfeiffer et al. (2018) Design: Cross-sectional Economic Outcomes: Healthcare cost Funding Source: None Monetary Values: Reported in 2004 U.S. dollars	Location: National, USA Eligibility: Households eligible for housing vouchers Sample Size: Households: 679 Matched controls Characteristics (Census demographics): Mean age: 45 years Medicare or Medicaid: 72% White: 35% Latino: 21% African American: 39% Other race: 6% Female heads of household: 73% Monthly income: \$1,045 Time Horizon: Placement during 2001-2008 NA	Intervention: Housing vouchers Comparison: Households with no housing assistance	Out-of-pocket healthcare cost per year: Reduced by \$256 Components Included: Inpatient, Emergency Department Quality: Fair Data Source: SIPP data Statistical Methods: Regression with matched controls Measure Type: Post only	NR
Author (Year): Pollack et al. (2019) Design: Longitudinal with control	Location: Baltimore, MD; Boston, MA; Chicago, IL; Los Angeles, CA; New York City, NY, USA Eligibility: Households eligible for housing vouchers	Intervention: Housing voucher, opportunity move counseling, required move to area with less than 10% poverty – Moving to Opportunity (MTO)	Change in healthcare cost per person per year: Housing Vouchers with Opportunity Move (MTO) Reduced by \$95 for adults Reduced by \$134 for children	NR
Economic Outcomes: Healthcare cost Funding Source: HUD, Johns	Sample Size: Housing Vouchers with Opportunity Move (MTO): 1,590 adults 3,589 children	Housing vouchers only Comparison: Households in public housing	Housing Vouchers Reduced by \$179 for adults Reduced by \$156 for children Components Included: Inpatient	

Study Information	Study and Population Characteristics Time Horizon	Program Intervention	Outcomes Data Source Methods	Cost-benefit, Cost- effectiveness, Net Cost, or ROI Outcome
Hopkins University, Robert Wood Johnson Foundation, National Institute of Child Health and Human Development Monetary Values: Reported in 2015 U.S. dollars	Housing Vouchers: 1,216 adults 2,658 children Characteristics: Adults (Children) Median age: 32 years (8 years) African American: 63% (66%) White: 8% (6%) Other: 29% (28%) Hispanic: 32% (30%) Female: 98% (50%) High School Diploma: 37% (NA) Employed: 26% (NA) Time Horizon: Placement during 1994-1998 Follow-up 15 years		Quality: Fair Data Source: State Hospital Discharge Data, Medicaid data Statistical Methods: 2-part regression Measure Type: DiD	
Author (Year): Reeder et al. (1985) Design: Cross-sectional Economic Outcomes: Consumption of housing services Funding Source: HUD, U.S. Department of Agriculture Monetary Values:	Location: National, USA Eligibility: Eligible for housing vouchers Sample Size: Households: 1,233 Characteristics: NR Time Horizon: Data for 1976	Intervention: Housing vouchers Comparison: None	Change in household housing consumption per month Increased \$23 (16% based on baseline gross rent of \$144) Components Included: Gross rent Quality: Good Data Source: Bureau of Labor Statistics, Urban Institute, Annual Housing Survey, HUD data Statistical Methods:	NR

Study Information	Study and Population Characteristics Time Horizon	Program Intervention	Outcomes Data Source Methods	Cost-benefit, Cost- effectiveness, Net Cost, or ROI Outcome
Reported in 1976 U.S. dollars			Regression methods and indifference maps Measure Type: Pre to post	
Author (Year): Sanbonmatsu et al. (2011) Design: Longitudinal Economic Outcomes: Program cost, fiscal cost savings, consumption of housing services, use of other assistance programs Funding Source: HUD Monetary Values: Reported in 2009 U.S. dollars	Angeles, CA; New York City, NY, USA Eligibility: Households in public housing eligible for housing vouchers	Intervention: Housing voucher, opportunity move counseling, required move to area with less than 10% poverty – Moving to Opportunity (MTO) Comparison: Households in public housing	Program cost per household per year: \$800 Components Included: Incremental rent subsidy, counseling Quality: Fair Data Source: Trial and PHA data Statistical Methods: Accounting Measure Type: DiD Adult earnings per year: Reduced \$323 Children earnings in adulthood per year: Female increased \$336 Male decreased \$1,839 Components Included: Earnings from employment Quality: Fair Data Source: Trial and PHA data, Unemployment Insurance data	NR

Study Information	Study and Population Characteristics Time Horizon	Program Intervention	Outcomes Data Source Methods	Cost-benefit, Cost- effectiveness, Net Cost, or ROI Outcome
			Statistical Methods: Regression	
			Measure Type: DiD	
			Housing consumption: Small improvement in quality of housing and neighborhood characteristics	
			Components Included: Housing and neighborhood quality	
			Quality: Fair	
			Data Source: Self-reported from household surveys	
			Statistical Methods: Regression	
			Measure Type: DiD	
			Utilization of other assistance programs Small and mixed effects	
			Components Included: Use of other assistance programs	
			Quality: Fair	
			Data Source: Trial and survey data	
			Statistical Methods: Regression	
			Measure Type:	

Study Information	Study and Population Characteristics Time Horizon	Program Intervention	Outcomes Data Source Methods	Cost-benefit, Cost- effectiveness, Net Cost, or ROI Outcome
			DiD	
Author (Year): Schwartz et al. (2016) Design: Pre to post Economic Outcomes: Program cost Funding Source: John D. and Catherine T. McArthur Foundation, HUD Monetary Values: Reported in U.S. dollars. Index year not reported.	Location: Chicago, IL, USA Eligibility: Households eligible for housing vouchers and not living in higher opportunity tracts Sample Size: Households in study: 3,065 Households who moved to opportunity area: 436 Characteristics: Opportunity movers and stayers or non-opportunity movers Mean Age: NR Females: NR Urban: 100% African American: 83.4% to 90.8% White: 10% to 18% Income percent from wages: 54.2% to 60.3% Time Horizon: Placements occurred during 2011-2014 NR	Intervention: Housing vouchers with opportunity move counseling and cash incentives Comparison: None	Cost of program per household that was successfully placed: \$2,869 Components Included: Counseling cost and \$500 cash incentive Quality: Good Data Source: Study records Statistical Methods: Accounting Measure Type: Accounting	NR
Author (Year): Susin et al. (2005) Design: Longitudinal	Location: National, USA Eligibility: Households eligible for housing vouchers	Intervention: Housing voucher program Comparison:	Adult employment earnings per year: Reduced by \$1,968 (Baseline mean for control group \$19,128)	NR

Study Information	Study and Population Characteristics Time Horizon	Program Intervention	Outcomes Data Source Methods	Cost-benefit, Cost- effectiveness, Net Cost, or ROI Outcome
Economic Outcomes: Adult employment earnings; use of other assistance programs Funding Source: None Monetary Values: Reported in 2000 U.S. dollars	Time Horizon Sample Size: Households in vouchers group: 249 Characteristics: Mean age: 34.2 years Single parent female household: 69.9% Urban: 100% African American: 30.5%	Households in unassisted rental units		
			Other assistance program use Quality: Good Data Source: HUD administrative data, SIPP, TANF, SNAP Statistical Methods: Regression with propensity matched control	
Author (Year): Wallace et al.	Location: National, USA Eligibility:	Intervention: Provision of housing vouchers	Ratio of cost of providing rental unit through housing vouchers to cost of unit in private market:	NR

Study Information	Study and Population Characteristics Time Horizon	Program Intervention	Outcomes Data Source Methods	Cost-benefit, Cost- effectiveness, Net Cost, or ROI Outcome
(1981); Olsen (2009) Design: Cross-sectional Economic Outcomes: Cost of public provision of housing units compared to private market rental cost Funding Source: None Monetary Values: Reported in 1975 U.S. dollars.	Households eligible for section 8 housing assistance Sample Size: Households: 299 Characteristics: Mean Age: 13.9 y Females: 46.6% Urban: 100% Percent with symptoms at baseline: 30.8% Days with symptoms per 2 weeks for those with symptoms: 3.05 Time Horizon: Data from 1975 for housing vouchers Data from 1979 for section 8 new construction or rehabilitation	Provision of Section 8 new construction and major rehabilitation Comparison: Cost of private market rental	Ratio of cost of providing section 8 new construction or major rehabilitation to cost of unit in private market: 1.44 - 1.78 Quality: Good Change in housing consumption: 31% increase (Baseline monthly rent \$208) Quality: Good Components Included: Gross rent and administrative cost Data Source: HUD administrative data Statistical Methods: Accounting methods	
			Measure Type: Pre to post	
Author (Year): Zafari et al. (2020) Design: Modeled Economic Outcomes: Cost per QALY gained	Location: Baltimore, MD; Boston, MA; Chicago, IL; Los Angeles, CA; New York City, NY, USA Eligibility: Households in public housing eligible for housing vouchers Sample Size: Modeled Characteristics:	Intervention: Housing voucher, opportunity move counseling, required move to area with less than 10% poverty (MTO) Comparison: Households in public housing	Lifetime QALY gained per person 0.23 Components Included: QALY Quality: Fair Lifetime Net Cost: -\$7,488 Components Included:	Lifetime Net cost: -\$7,488 Net cost per QALY gained < \$50,000 in 99% of simulations

Study Information	Study and Population Characteristics Time Horizon	Program Intervention	Outcomes Data Source Methods	Cost-benefit, Cost- effectiveness, Net Cost, or ROI Outcome
Funding Source: Columbia University Monetary Values: Reported in 2016 U.S. dollars	Time Horizon: Placement during 1994-1998 Lifetime		Intervention cost, healthcare cost, worksite productivity Quality: Fair Data Source: Intervention data, modeled outcomes Statistical Methods: Markov model for cost per QALY gained over lifetime. Reduced body weight observed in MTO experiment extrapolated to health states of obesity and diabetes. Measure Type: DiD	