Health Equity: Permanent Supportive Housing with Housing First (Housing First Programs)

Summary Evidence Table

This table outlines information from the studies included in the Community Guide systematic review of Housing First Programs to Promote Health Equity. It details study quality, population and intervention characteristics, and study 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:

- ACT: Assertive Community Treatment
- ED: emergency department
- ER: emergency room
- HF: housing first
- HHS: Health and Human Services
- HS: high school
- HUD: Housing and Urban Development
- HUD-VASH: Housing and Urban Development-Veterans Affairs Supported Housing
- ICM: Intensive Case Management
- Pct pts: percentage points
- PTSD: post traumatic syndrome disorder
- QOL: quality of life
- TF: treatment first
- VA: Veterans Affairs

Outcomes Reported for This Review:
- Housing stability
- Physical health
- Mental health
- Substance abuse
- Wellness: QOL; community integration
- Health Care Utilization
- ED
- Hospital
- Substance treatment

Outcomes Reported for Studies Recruiting People Living with HIV:
- Housing stability and homelessness
- Specific health outcomes
- mortality
- physical health
- mental health

Notes:

- **Suitability of design** includes three categories: greatest, moderate, or least suitable design. Read more >>

- **Quality of Execution** – Studies are assessed to have good, fair, or limited quality of execution. Read more >>

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

Study	Intervention Characteristics	Population Characteristics	Results

Author Year: Appel et al. 2012
 	
Study Design: Pre-post with comparison group
 	
Design Suitability: Greatest
 	
Quality of Execution: Good
	Location: New York City, New York, US
	
	Urbanicity: urban
	
	Date Intervention Implemented: January 2006
	Grant of 25 apartments in 2003; placement started in Mar 2005; enrollment completed by 2006
	
	Intervention Details:
	Program description: *Keeping Home Project* addressed residential and service needs of persons who were homeless, dually diagnosed patients with recent criminal justice involvement
	
	Requirement for staying in housing: none
	
	Scattered or grouped housing: scattered housing
	
	Control arm: dually diagnosed persons with criminal justice status entered a methadone treatment program during 2005-2006 as a person who was homeless
	
	Services Provided:
	Assertive community treatment: services such as
		Eligibility Criteria: recruited from jail near their release, hospitals, drop-in centers, and other local sites
		
		Homelessness: need to be homeless
		
		Mental health: diagnosed as seriously and persistently mentally ill with a primary Axis I diagnosis
		
		Substance use: enrolled in community-based methadone treatment program
		
		Disabling condition(s): not specified
		
		Unit of recruitment: individual
		
		Sample Size: 61
		Intervention: 31
		Control: 30
		
		Attrition: NR
		
		Demographics:
		Mean age: 42.9
		Gender: 73.8% male
		Race/Ethnicity: 59.0% Hispanic; 24.6% white; 14.8% African American; 1.6% unknown
		Education: 52.5% < HS; 26.2% HS or some college; 14.8% college grad; 6.6% missing
		Substance abuse: 100%
			Outcome Measure:
			Housing stability: sustained housing at assessment
			    For intervention group: staying in HF apartment
			    For control: living in a private residence/ single-room occupancy setting
			
			Healthcare use: retention in methadone treatment program
			
			Intervention Duration: 36 months
			
			Results:
			Housing stability
			
			    Baseline 36m Follow-up
			Intervention 0% 67.7%
			Comparison 0% 3.7%
			Relative difference: (67.7%-3.7%)/3.7% = 1729.7%
			
			Healthcare use
			
			Baseline: 83.9% (26/31) of intervention group in treatment, as mentioned on page 4 of 9; comparison group needs to be in a treatment group to be included
			    Baseline 36m Follow-up Change
			Intervention 83.9% 33.3% -50.6pct pts
			Comparison 100% 20.0% -80.0pct pts
			Absolute difference: 29.4pct pts

Study	Intervention Characteristics	Population Characteristics	Results
	psychiatric, nursing, vocational, social, and peer Methadone treatment program: community-based program	Mental health: 100% diagnosed; 32.2% major depression; 29.0% bipolar; 19.3% schizophrenia; 12.9% other; 6.4% missing Physical Health: 66.8% has physical health problem Shelter use (residence at admission): 67.7% on streets; 16.1% shelter; 9.7% hospital; 6.4% jail or other institution	

Author Year: Brown et al. 2016
 	
Study Design: Pre-post with comparison group
 	
Design Suitability: Greatest
 	
Quality of Execution: Fair
	Location: Seattle, Washington, US
	
	Urbanicity: urban
	
	Date Intervention Implemented: NR
	
	Intervention Details: Program description: a 75-unit, single site HF program
	
	Requirement for staying in housing: none
	
	Scattered or grouped housing: single site
	
	Control arm: selected from a pool of individuals in the King County Mental Health, Chemical Abuse and Dependency Services Division admin database, never received services from the HF program, homeless at baseline
		Eligibility Criteria: Homelessness: 4 homeless episodes in past 3-years or 365 consecutive days of homelessness
		
		Mental health: chronic medical or psychiatric illness
		
		Substance use: not specified
		
		Disabling condition(s): not specified
		
		Unit of recruitment: individual
		
		Sample Size: 182
		
		Attrition: N/A
		
		Demographics:
		Mean age: 42.8
		Gender: 73.6% male
		Race/Ethnicity: 56% White, 24.8% African American, 6.6% Asian American, 12.7% other
		Employment: NR
			Outcome Measure:
			Housing stability: days of homelessness: mean days of homelessness
			
			Healthcare use: number of days of psychiatric hospitalization
			
			Intervention Duration: 12 months
			
			Results:
			Days of homelessness
			
			                      Baseline 12m Follow-up Change
			Intervention 182.3 21.8 -160.5
			Comparison 220.4 275.9 55.5
			Absolute difference: -216 days
			
			Days of psychiatric hospitalization
			
			                      Baseline 12m Follow-up Change
			Intervention 11.9 6.7 -5.2
			Comparison 7.2 12.2 5
			Absolute difference: -10.2 days

Study	Intervention Characteristics	Population Characteristics	Results
	Services Provided: Mental health services and substance abuse treatment provided on site; staff provides assertive engagement to residents to encourage participation in other services	Income: NR Education: NR Insurance: NR Substance abuse: 75.8% Mental health: 70.9% with psychotic disorder diagnosis Physical health: NR Shelter use: 53.8% chronic homeless	
Author Year: Buchanan et al. 2009 **Study Design**: RCT **Design Suitability**: Greatest **Quality of Execution**: Good	**Location**: Chicago, Illinois, US **Urbanicity**: urban **Date Intervention Implemented**: October 2003 through May 2006 **Intervention Details**: Program description: Chicago Housing for Health Partnership, a housing and case management program for persons experiencing homelessness and living with HIV Requirement for staying in housing: NR Scattered or grouped housing: scattered Control arm: patients in the usual care group received the discharge planning usually provided to individuals who were homeless during a hospital	**Eligibility Criteria**: individuals living with HIV who are homeless Homelessness: no source of housing Mental health: not specified Substance use: not specified Disabling condition(s): seropositive for HIV Unit of recruitment: individual **Sample Size**: 106 **Attrition**: 10.3% Intervention: 12.9% Control: 7.8% **Demographics**: Mean age: 44 Gender: 77.3% male Race/Ethnicity: 3.7% Hispanic, 2.8% White, 87.7% African American, 4.7% other Employment: NR Income: NR	**Outcome Measure**: Housing stability: being housed for the study population Mortality: observed mortality rate among study population throughout the intervention and had intact immunity (CD4 cell count>200 and viral load<100000 at the time of their laboratory assessment) Physical health outcomes: • CD4 cell count • Percent with detectable viral load **Follow-up Time**: 12 months **Results**: Housing stability: only for intervention group at follow-up 35/54 (65%) reached permanent supportive housing Mortality Intervention (47-26)/47 = 45% Control (47-16)/47 = 66% Relative difference: -32% CD4 cell count: the difference between the 2 groups was not statistically significant Percent with detectable viral load Intervention: 64% Control: 81%

Study	Intervention Characteristics	Population Characteristics	Results
	stay; all usual care participants were eligible to receive case management through an existing Ryan White program in the hospital-affiliated HIV/AIDS clinic **Services Provided**: Case management: case manager provided referrals for interim housing and hospital discharge and a wide range of support to clients Discharge planning: referrals to overnight shelters or to interim housing providers	Education: 13.2% >8 grade, 36.8% some HS, 31.1% HS, 18.0% beyond HS Insurance: NR Substance abuse: n/a Mental health: NR Physical health: NR Shelter use: 8.4%	Relative difference: (64%-81%)/81% = -21%
Author Year: Cherner et al. 2017 **Study Design**: Pre-post with comparison group **Design Suitability**: Greatest **Quality of Execution**: Fair	**Location**: Ottawa, Canada **Urbanicity**: urban **Date Intervention Implemented**: clients admitted to program by end of October 2012 **Intervention Details**: HF program as a partnership between a community mental health agency and a program for persons who use drugs Requirement for staying in housing: pay maximum of 30% of income toward rent	**Eligibility Criteria**: 18 years of age; those with the highest need were admitted first (criteria include female or transgender, mental health, substance use) Homelessness: homeless at baseline Mental health: persons having a mental illness categorized as having high need Substance use: persons with past substance use treatment, daily or binge drug use or alcohol use	**Outcome Measure**: Housing stability: percent time housed in own place in previous 6 months; housing included own apartment, rooming house, supportive housing, group home, board and care, and living with family or friends longer than 6 months Physical health: reported on a scale from 0 (poor health) to 100 (better health) Mental health: reported on a scale from 0 (poor health) to 100 (better health) Substance use: • Alcohol use problems on a scale from 0 (no problems) to 40 (more problems) • Drug use problems on a scale from 0 (no problems) to 10 (severe) Quality of life: QOL in terms of family relations, finances, daily activities/ leisure, living situations, social relationships, and

Study	Intervention Characteristics	Population Characteristics	Results

	Scattered or grouped housing: scattered
	
	Control arm: treatment as usual; all social and health services available in community other than the HF program; services scattered across city for people who are experiencing homelessness or in a shelter
	
	Services Provided:
	Primary care at community health center
	
	Access to opioid and substance use treatment
		categorized as having high needs
		
		Disabling condition(s): persons with mental or physical conditions that impact their daily functioning categorized as having high need
		
		Unit of recruitment: individual
		
		Sample Size: 178
		Intervention: 89
		Control: 89
		
		Attrition: 24.8%
		Intervention: 12.4%
		Control: 37.1%
		
		Demographics:
		Mean age: 40.1
		Gender: 51.7% male
		Race/Ethnicity: NR
		Income: NR
		Education: NR
		Insurance: NR
		Substance abuse: 15.2% with harmful level of alcohol use, 16.3% with problematic drug use severe
		Mental health: 24.7% depression, 15.7% PTSD, 11.2% generalized anxiety disorder, 15.2% bipolar disorder, 10.1% schizophrenia/ schizoaffective
		Physical health: mean number of chronic health conditions, 6
			personal safety; standardized to range from 1 (terrible) to 7 (delighted)
			
			Follow-up Time: 24 months
			
			Results:
			Housing stability
			
			                       Baseline 24m follow-up
			Intervention: 34% 86.8%
			Control: 20.7% 62.0%
			Relative difference: (86.8%/34%)/ (62%/20.7%)-1 = -14.9%
			
			Physical health
			
			                       Baseline 24m follow-up
			Intervention: 41.1 43.5
			Control: 42.6 43.6
			Relative difference: (43.5/41.1)/ (43.6/42.6)-1 = 3.3%
			
			Mental health
			
			                       Baseline 24m follow-up
			Intervention: 37.9 38.5
			Control: 35.1 44.5
			Relative difference: (38.5/37.9)/ (44.5/35.1)-1 = -20.0%
			
			Alcohol use problems
			
			                       Baseline 24m follow-up
			Intervention: 15.4 12.98
			Control: 15.4 9.5
			Relative difference: (12.98/15.4)/ (9.5/15.4)-1 = 35.9%
			
			Drug use problems
			
			                       Baseline 24m follow-up
			Intervention: 54.3 47.5
			Control: 62.1 33.5
			Relative difference: (47.5/54.3)/ (3.5/62.1)-1 = 62.2%

Study	Intervention Characteristics	Population Characteristics	Results
		Shelter use: 46.7% of time in emergency shelter in previous 6 months	Quality of life score, total Baseline 24m follow-up Intervention: 66.5 72.9 Control: 62.98 80.2 Relative difference: (72.9/66.5)/ (80.2/62.98)-1 = -13.8%

Author Year: Clark et al. 2003
 	
Study Design: Pre-post with comparison group
 	
Design Suitability: Greatest
 	
Quality of Execution: Fair
	Location: Pinellas County and Tampa, Florida, US
	
	Urbanicity: urban
	
	Date Intervention Implemented: participants for this study entered programs from December 97 to April 99
	
	Intervention Details: Program description: Two programs served as intervention group
	
	Boley Centers for Behavioral Healthcare in Pinellas County, Florida, provided housing and housing services to individuals with serious mental illness experiencing homelessness
	
	Project Return in Tampa, Florida, comprehensive housing services to persons who are homeless and have severe mental illness
	
	Requirement for staying in housing: NR
		Eligibility Criteria: participants were individuals entering the two intervention programs or the control program from December 1997 to April 1999
		
		Homelessness: were homeless or at immediate risk of homelessness
		
		Mental health: had diagnosis of serious mental illness
		
		Substance use: not specified
		
		Disabling condition(s): not specified
		
		Unit of recruitment: individual
		
		Sample Size: 152
		Intervention: 83
		Control: 69
		
		Attrition: 42%
		Intervention: 24%
		Control: 64%
		
		Demographics:
		Mean age: 38.6
		Gender: 51.5% male
		Race/Ethnicity: 77% White, 19.7% Black, 3.3% Hispanic
			Outcome Measure:
			Housing stability: proportion of time in stable housing, stratified by level of participant's impairment by substance use and psychiatric condition
			
			Follow-up Time: 12 months
			
			Results:
			Housing stability, low impairment
			
			                       Baseline 24m follow-up
			Intervention: 45% 78%
			Control: 17% 78%
			Relative difference: (78%/45%)/ (78%/17%)-1 = -62.2%
			
			Housing stability, medium impairment
			
			                       Baseline 24m follow-up
			Intervention: 30% 61%
			Control: 35% 55%
			Relative difference: (61%/30%)/ (55%/5%) -1 = 29.4%
			
			Housing stability, high impairment
			
			                       Baseline 24m follow-up
			Intervention: 29% 88%
			Control: 28% 56%
			Relative difference: (88%/29%)/ (56%/28%)-1 = 51.7%

Study	Intervention Characteristics	Population Characteristics	Results
	Scattered or grouped housing: both Control arm: Suncoast Center for Community Mental Health, a large community mental health center in Pinellas County, FL for homeless population, providing case management only **Services Provided**: Housing support services, Florida Assertive Community Treatment, and priority access to everything from medication management to vocational services	Employment: NR Income: average monthly income of $405.7 Education: 28.9% less than HS education Insurance: NR Substance abuse: NR Mental health: NR Physical health: NR Shelter use: 69.1% homeless more than once	
Author Year: Crisanti et al. 2017 **Study Design**: Pre-post with comparison group **Design Suitability**: Greatest **Quality of Execution**: Fair	**Location**: Santa Fe, New Mexico, US **Urbanicity**: urban **Date Intervention Implemented**: May 2011 to October 2015 **Intervention Details**: Program name: Healthy Homes program using HF approach to provide wrap-around services to persons experiencing homelessness who also had a mental illness and or a co-occurring substance use disorder	**Eligibility Criteria**: individuals meeting the following criteria Homelessness: homeless (homeless status determined based on where participants reported living most of time in 30 days before baseline interview) or at risk of homelessness Mental health: must have mental illness according to DSM-IV Substance use: substance use disorder co-occurring with mental illness	**Outcome Measure**: Housing stability: individual stably housed during housing program; results not used in overall analysis due to data limiting to intervention group only Physical health: • Self-reported as having good or excellent overall health • Bothersome symptoms: self-reported by participants to the statement "My symptoms are not bothering me"; individuals responding "strongly disagree, disagree, or undecided" are categorized as experiencing bothersome symptoms; those who responded "agree or strongly agree" categorized as not experiencing bothersome symptoms Mental health: psychological distress measured by K6, a screening tool to identify people with mental illness in as few questions as possible **Follow-up Time**: 12 months

Study	Intervention Characteristics	Population Characteristics	Results
	Requirement for staying in housing: NR Scattered or grouped housing: both Control arm: treatment as usual, with no further detail provided **Services Provided**: Individual or group therapy: clinicians provided individual or group therapy based on need Case management: peer support workers were required to spend at least 50% of their working schedule providing direct services to clients	Disabling condition(s): not specified Unit of recruitment: Individual **Sample Size**: 237 **Attrition**: NR **Demographics**: Age: 64.1% 18-44, 35.9% 45-66 Gender: 40.9% male Race/Ethnicity: 46.8% Hispanic, 30.4% White, 4.6% African American, 0.9% Asian, 8.9% American Indian, 8.9% multiple races Employment: 87.3% unemployed Income: NR Education: 29.1% <HS, 28.7% HS/GED, 36.7% some college or vocational school, 5.5% ≥ college degree Insurance: NR Substance abuse: 62.0% use substances, 13.9% opioids, 7.6% polysubstance Mental health: 40.7% bipolar or major depressive Physical health: NR Shelter use: NR	**Results**: Housing stability: for intervention group, 61.2% (145) of participants received housing Self-reported physical health: after controlling for demographic, psychosocial, and clinical variables, housing was significantly associated with good to excellent overall health at the 6-month reassessment (OR = 3.11, 95%CI 1.12, 8.66); the positive relationship remained at 12 months Bothersome symptoms: housing was associated with presence of bothersome symptoms at the 6- and 12-month reassessments Mental health: housing was associated with lower psychological distress at the 6-month reassessment and associated with higher psychological distress at the 12-month reassessment
Author Year: Gabrielian et al. 2016 **Study Design**:	**Location**: Los Angeles, California, US **Urbanicity**: urban	**Eligibility Criteria**: U.S. veterans with at least one VA Greater Los Angeles outpatient visit between October 1, 2010 and September 30, 2011; meet	**Outcome Measure**: Health care utilization: • Hospitalization: percent of admitted patients with one or more preventable hospitalizations • Percent of medical/surgical admissions that are preventable hospitalizations

Study	Intervention Characteristics	Population Characteristics	Results

Prospective cohort
 	
Design Suitability: Greatest
 	
Quality of Execution: Good
 	
Linked Publications: Gabrielian 2014
	Date Intervention Implemented: NR; participants were identified from a January 2011 roster
	
	Intervention Details: Program description: HUD-VASH program, a multi-site program that provides housing vouchers to qualifying veterans; program also helped with identifying and moving into housing, and supportive services
	
	Requirement for staying in housing: NR
	
	Scattered or grouped housing: scattered housing
	
	Control arm: treatment as usual; access to standard VA care available in their communities but not housing
	
	Services Provided: Case management, referred veterans to primary and mental health care and supportive services within and outside the VA system
		HUD-specific income requirements for a Housing Choice voucher, have an identified need and willingness for case management
		
		Homelessness: homeless or on the verge of homelessness
		
		Mental health: not specified
		
		Substance use: not specified
		
		Disabling condition(s): not specified
		
		Unit of recruitment: individual
		
		Sample Size: 3757
		Intervention: 1997
		Control: 1760
		
		Attrition: NR
		
		Demographics
		Mean age: 53.6
		Gender: 92.9% male
		Race/Ethnicity: 9.8% Hispanic, 29.2% white, 52.2% African American, 7.2% other
		Employment: NR
		Income: NR
		Education: NR
		Insurance: NR
		Substance abuse: NR
		Mental health: NR
		Physical health: NR
			• Percent mental health admissions that are preventable hospitalizations
			• Percent with multiple mental health admissions that are preventable hospitalizations
			• ED use: number of ED visits among patients visited ED
			• Percent of ED visitors who are frequent users (4 or more ED or urgent care visits)
			
			Follow-up Time: NR (data from longitudinal database)
			
			Results:
			Hospitalization
			
			               Baseline Follow-up
			Intervention NR 23.3%
			Comparison NR 25.0%
			Relative difference: (23.3%-25.0%)/25.0% = -6.8%
			
			Percent of medical or surgical admissions that are preventable hospitalizations
			
			               Baseline Follow-up
			Intervention NR 18.5%
			Comparison NR 21.5%
			Relative difference: (18.5%-21.5%)/21.5% = -14.0%
			
			Percent mental health admissions that are preventable hospitalizations
			
			               Baseline Follow-up
			Intervention NR 3.5%
			Comparison NR 3.5%
			Relative difference: (3.5%-3.5%)/3.5% = 0%
			
			Percent with multiple mental health admissions that are preventable hospitalizations
			
			               Baseline Follow-up
			Intervention NR 0.6%
			Comparison NR 1.1%
			Relative difference: (0.6%-1.1%)/1.1% = -45.5%

Study	Intervention Characteristics	Population Characteristics	Results

			ED use
			
			                Baseline Follow-up
			Intervention NR 1.8
			Comparison NR 1.5
			Relative difference: (1.8-1.5)/1.5 = 20%
			
			Percent of ED visitors who are frequent users
			
			                Baseline Follow-up
			Intervention NR 7.3%
			Comparison NR 5.7%
			Relative difference: (7.3%-5.7%)/5.7% = 28.1%

Author Year: Gilmer et al., 2009
 	
Study Design: Pre-post with comparison group
 	
Design Suitability: Greatest
 	
Quality of Execution: Fair
	Location: San Diego, California, US
	
	Urbanicity: urban
	
	Date Intervention Implemented: July 2002 to June 2005
	
	Intervention Details: Program description: Reaching Out and Engaging to Achieve Consumer Health (REACH); provided multiple housing options, assertive community treatment, and outpatient services to persons experiencing homelessness
	
	Requirement for staying in housing: clients need to meet with a case manager every two weeks
		Eligibility Criteria: clients recruited from homeless shelters, homeless outreach team, and community-based mental health programs
		
		Homelessness: clients recruited from homeless shelters
		
		Mental health: program intended for clients with serious mental health issues
		
		Substance use: not specified
		
		Disabling condition(s): not specified
		
		Unit of recruitment: individual
		
		Sample Size: 338
		Intervention: 177
		Control: 161
		
		Attrition: NR
			Outcome Measure:
			Mental health:
			• Costs for case management
			• Costs for outpatient care
			• Costs for inpatient or emergency department use
			
			Crime and violence: cost to criminal justice system
			
			Follow-up Time: 24 months
			
			Results:
			Mental health cost:
			Case management
			
			               Baseline 24m Follow-up Change
			Intervention 412 7,423 7,011
			Control 429 1,038 609
			Absolute difference: $6,402
			
			Outpatient care
			
			               Baseline 24m Follow-up Change
			Intervention 1,917 5,430 3,513
			Control 1,662 4,488 2,826
			Absolute difference: $687

Study	Intervention Characteristics	Population Characteristics	Results

	Scattered or grouped housing: scattered
	
	Control arm: a comparison group of clients who were homeless and had serious mental illness, similar to those of REACH clients, and initiating regular services at the same time as REACH clients
	
	Services Provided:
	Case management: assertive community treatment team; no further detail provided
	
	Outpatient services: details not provided
	
	Inpatient and emergency: details not provided
		Demographics:
		Mean age: 41.5
		Gender: 48% male
		Race/Ethnicity: 11.0% Hispanic, 58.6% white, 24.0% African American, 7.0% other
		Employment: NR
		Income: NR
		Education: NR
		Insurance: NR
		Substance abuse: NR
		Mental health: 53% schizophrenia, 18% bipolar disorder, 20% major depressive disorder, 4% other psychotic disorder, 5% other disorder
		Shelter use: NR
			Inpatient care and ED use
			
			                 Baseline 24m Follow-up Change
			Intervention 12,291 7,249 -5,042
			Control 12,696 13,756 1,060
			Absolute difference: -$6,102
			
			Crime and violence
			
			                 Baseline 24m Follow-up Change
			Intervention 713 139 -574
			Control 431 428 -3
			Absolute difference: -$571

Author Year: Goering et al., 2014 **Study Design**: RCT **Design Suitability**: Greatest **Quality of Execution**: Fair	**Location**: Vancouver, Winnipeg, Toronto, Montreal, and Moncton, Canada **Urbanicity**: urban **Date Intervention Implemented**: NR; study period June 2009 to October 2013 **Intervention Details**: Program description: based on Pathways HF Model	**Eligibility Criteria**: clients aged 18 or older (≥19 in Vancouver); not receiving ACT or ICM prior to enrolling in program; Canadian citizen, landed immigrant, or refugee claimant Homelessness: either absolutely homeless or precariously housed (such as lived in a rooming house, single-room occupancy unit, or hotel or motel room and had two episodes or more of homelessness in the past year)	**Outcome Measure**: Housing stability: percent in stable housing Mental health: • Mental health symptoms: assessed using the Colorado Symptom Index • Suicide attempts: proportion of study participants with suicide attempts Community functioning: number of positive life events Quality of life: score obtained through quality of life interview; a 20-item scale designed for use with people with severe mental illness **Follow-up Time**: 24 months

Study	Intervention Characteristics	Population Characteristics	Results
Linked Studies: Adair et al., 2017; Aquin et al., 2017; Aubry et al., 2015a, b, 16, Bourque et al., 2015; Cheung et al., 2015; Chung et al., 2018; Currie et al., 2018; Kirst et al., 2015; Kozloff et al., 2016; Macnaughton et al., 2016; Nelson et al., 2015; O'Campo et al., 2016; Parpouchi et al., 2016; Patterson et al., 2013a, b, Poremski et al., 2016; Rezansoff et al., 2017; Russolilo et al., 2014; Somers et al., 2013, 2015, 2017; Stergiopoulos et al., 2015a, b, 16, Urbanoski et al., 2017	Requirement for staying in housing: meet with ACT staff once a week; contribute 30% of income towards rent Scattered or grouped housing: Vancouver, both; Toronto, scattered; Winnipeg, Montreal, Moncton, NR Control arm: treatment as usual; persons who were homeless with access to the existing programs available in their communities **Services Provided**: ACT: multidisciplinary team members directly provide clinical and support services; members include psychiatrist and nurse, offering around-the-clock on-call services; teams meet daily and include at least one peer specialist ICM: less intensive compared to ACT; individual case managers broker necessary services to those available in the community; 7 day per week, 12 hours per day coverage; centralized assignment and monthly case conferences	Mental health: currently diagnosed with a mental disorder Substance use: not specified Disabling condition(s): not specified Unit of recruitment: individual **Sample Size**: 2221 Intervention: 1236 Control: 985 **Attrition**: 15.0% Intervention: 10.9% Control: 20.2% **Demographics**: Mean age: 40.9 Gender: 67.9% male Race/Ethnicity: 49.2% White, 24.8% Aboriginal, 26.3% Other Employment: NR Income, monthly: 29.4% $0—399.99; 33.3% $400.00—799.99, 37.2% $800+ Education: 55.9% no high school diploma Insurance: NR Substance abuse: 67.4% Mental health: 56.5% mood disorder, 29.0% PTSD, 23.0% panic disorder, 49.3% psychotic disorder Physical health: NR Shelter use: NR	**Results**: Housing stability |	Baseline	24m follow-up | Intervention: 10% / 73% Comparison: 10% / 32% Relative difference: (73%/10%)/ (32%/10%)-1 = 128% Mental health symptoms: -2.5% (calculated from z score) Suicide attempts: OR 1.11; 11% Community functioning |	Baseline	24m follow-up | Intervention: NR / 72 Comparison: NR / 22 Relative difference: 1.2% Quality of life |	Baseline	24m follow-up | Intervention: 72.0 / 89.0 Comparison: 72.0 / 84.5 Relative difference: (89/72)/ (84.5/72)-1 = 5.3%

Study	Intervention Characteristics	Population Characteristics	Results
		Lifetime duration of homelessness in months: 28.8% <12 months, 25.9% 12—36 months, 45.2% >36 months	

Author Year: Hanratty 2011
 	
Study Design: Retrospective cohort
 	
Design Suitability: Moderate
 	
Quality of Execution: Fair
	Location: Minneapolis, Minnesota, US
	
	Urbanicity: urban
	
	Date Intervention Implemented: January 2006
	
	Intervention Details: Program description: Heading Home Hennepin's HF program provides subsidies for housing in scattered site apartments persons experiencing long-term homelessness
	
	Requirement for staying in housing: none
	
	Scattered or grouped housing: scattered
	
	Control arm: people staying in public shelters
	
	Services Provided: Case management services: help individuals locate and maintain stable housing; collaborations with nonprofit organizations to provide program outreach,
		Eligibility Criteria: Homelessness: people experiencing homelessness one continuous year or at least 4 times in past 3 years
		
		Mental health: not specified
		
		Substance use: not specified
		
		Disabling condition(s): individuals with a condition that limits their ability to work for at least one month
		
		Unit of recruitment: individual
		
		Sample Size: 528
		Intervention: 264
		Control: 264
		
		Attrition: NR
		
		Demographics
		Mean age: 46.2
		Gender: 77.4% male
		Race/Ethnicity: NR
		Education: NR
		Substance abuse: NR
		Mental health: NR
		Physical Health: NR
		Other: 100% with a work-limiting disabling condition
			Outcome Measure:
			Homelessness: proportion of clients spending any night in a public shelter
			
			Crime: proportion with any arrests
			
			Follow-up Time: 18 months
			
			Results:
			Homelessness
			
			             Baseline 18m follow-up
			Intervention 93.6% 33.3%
			Comparison 93.6% 80.1%
			Relative difference: (33.3%/93.6%)/ (80.1%/93.6%)-1 = -89.7%
			
			Crime
			
			             Baseline 18m follow-up
			Intervention 41.5% 32%
			Comparison 40.8% 37.4%
			Relative difference: (32%/41.5%)/ (37.4%/40.8%)-1 = -15.9%

Study	Intervention Characteristics	Population Characteristics	Results
	enrollment, and case management services		

Author Year: Kennedy et al., 2018
 	
Study Design: RCT
 	
Design Suitability: Greatest
 	
Quality of Execution: Fair
	Location: Los Angeles, California, US
	
	Urbanicity: urban
	
	Date Intervention Implemented: May 2015 to August 2016, residents recruited
	
	Intervention Details:
	Program description: Skid Row Housing Trust (SRHT) Single Room Occupancy Corporation (SRO), with services offered to persons who were homeless and had alcohol use issues
	
	Requirement for staying in housing: meeting with case managers regularly for up to 60-90 days
	
	Scattered or grouped housing: grouped
	
	Control arm: participants receive usual case management support
	
	Services Provided:
	Case management: provide case management and coordination to clients
		Eligibility Criteria: persons who were homeless and had alcohol use issues
		
		Homelessness: homeless at baseline, must be housed within 1 month of recruitment
		
		Mental health: not specified
		
		Substance use: screened positive for past-year harmful alcohol use or drug use Alcohol use assessed by using Alcohol Use Disorders Identification Test (AUDITC), considered harmful use if score >4 for men and >3 for women
		Drug use assessed by Drug abuse Screen Test with score >2
		
		Disabling condition(s): not specified
		
		Unit of recruitment: individual
		
		Sample Size: 41
		Intervention: 21
		Control: 20
		
		Attrition: 16.3%
		Intervention: 16.%
		Control: 16%
		
		Demographics:
		Mean age: 48
			Outcome Measure:
			Substance use: self-reported, alcohol or drug abstinence self-efficacy; assessed using a 5-item tool with scale score ranging from 1 to 5, higher score indicate higher efficacy to abstain
			
			Substance use within past 4 weeks:
			• Total number of drinks
			• Total days binge drank
			• Total days marijuana use
			• Total days use other drugs
			
			Follow-up Time: 3 months
			
			Results:
			Alcohol or drug abstinence self-efficacy
			
			                    Baseline 3m follow-up
			Intervention 3.24 ± 0.99 3.33 ± 1.03
			Control 2.97 ± 1.19 2.95 ± 1.26
			Adjusted difference reported: -38%
			
			Total number of drinks
			
			                    Baseline 3m follow-up
			Intervention 19.58 ± 32.05 11.27 ± 20.77
			Control 33.60 ± 69.16 36.05 ± 85.80
			Adjusted difference reported: -31%
			
			Total days binge drank
			
			                    Baseline 3m follow-up
			Intervention 1.62 ± 4.76 0.49 ± 1.78
			Control 1.66 ± 6.04 2.34 ± 6.90
			Adjusted difference reported: -21%
			
			Total days marijuana use

Study	Intervention Characteristics	Population Characteristics	Results
		Gender: Male 80%, Female 20% Race/Ethnicity: Hispanic 15%; white 12%; Black 56%; Other 17% Employment: NR Income: mean income $471 Education: <HS 29%; HS 39%; Any college 32% Insurance: N/A Substance abuse: 4.32 Mental health: N/A Physical health: N/A Shelter use: N/A	<table><tr><td></td><td>Baseline</td><td>3m follow-up</td></tr><tr><td>Intervention</td><td>8.36 ± 11.10</td><td>4.29 ± 11.16</td></tr><tr><td>Control</td><td>3.55 ± 7.08</td><td>9.08 ± 9.76</td></tr></table>Adjusted difference: -47% Total days using other drugs <table><tr><td></td><td>Baseline</td><td>3m follow-up</td></tr><tr><td>Intervention</td><td>14.03 ± 14.24</td><td>8.8 ± 15.51</td></tr><tr><td>Control</td><td>10.08 ± 10.80</td><td>10.90 ± 12.86</td></tr></table>Adjusted difference: -80%
Author Year: Kessell et al., 2006 **Study Design**: Retrospective cohort **Design Suitability**: Moderate **Quality of Execution**: Fair	**Location**: San Francisco, California, US **Urbanicity**: urban **Date Intervention Implemented**: January 1, 1997 to July 1, 2001 **Intervention Details**: Program description: San Francisco Department of Public Health (SFDPH) supportive housing Requirement for staying in housing: none Scattered or grouped housing: three supportive housing buildings used Control arm: usual care; people eligible for the housing program but did not receive housing due to	**Eligibility Criteria**: Homelessness: individuals who are chronically homeless Mental health: dual or triply diagnosed with medical illness, substance use, and mental illness Substance use: dual or triply diagnosed with medical illness, substance use, and mental illness Disabling condition(s): not specified Unit of recruitment: individual **Sample Size**: 249 **Attrition**: 6.4% Intervention: 7.0% Control: 5.9% **Demographics**:	**Outcome Measure**: Healthcare use: ambulatory non-emergency care, ambulance and emergency department use, inpatient hospitalizations, mental health and substance abuse services **Follow-up Time**: 24 months **Results**: Healthcare use: Intervention and usual care groups did not differ in their use of the following services: ambulatory non-emergency care, ambulance and emergency department use, inpatient hospitalizations, mental health and substance abuse services

Study	Intervention Characteristics	Population Characteristics	Results
	space limitations; they can receive housing from other sources during the study period **Services Provided**: Ambulatory (non-emergency care): ambulatory generalist care and visits to a primary care provider Emergency services: ambulance and emergency department use (medical-surgical emergency department)	Mean age: 51 Gender: 73% male Race/Ethnicity: 43% Black, 35% White, 10% Latino, 4% Asian, 5% other, 3% unknown Employment: NR Income: NR Education: NR Insurance: NR Substance abuse: NR Mental health: NR Physical health: NR Shelter use: NR	

Author Year: Larimer et al., 2009
 	
Study Design: Pre-post with comparison group
 	
Design Suitability: Greatest
 	
Quality of Execution: Fair
	Location: Seattle, Washington, US
	
	Urbanicity: urban
	
	Date Intervention Implemented: recruitment occurred between November 2005 and March 2007
	
	Intervention Details:
	Program description: single site HF program in Seattle
	
	Requirement for staying in housing: none
	Scattered or grouped housing: grouped
	
	Control arm: people who also qualify to be housed in the program, but were put
		Eligibility Criteria: targeted adults who were homeless with severe alcohol problems who use local crisis services at the highest levels
		
		Homelessness: chronically homeless
		
		Mental health: not specified
		
		Substance use: individuals who incurred highest total costs in 2004 for use of alcohol-related hospital emergency services, sobering center, and King County jail
		
		Disabling condition(s): not specified
		
		Unit of recruitment: Individual
			Outcome Measure:
			Healthcare use:
			• Medicaid cost
			• Hospital cost
			• Emergency medical services cost
			• Total cost
			
			Follow-up Time: 6 months
			
			Results:
			Healthcare cost:
			Medicaid cost
			
			                Baseline 6m follow-up
			Intervention 612 204
			Control 345 107
			Absolute difference: -$170
			
			Hospital cost, Harborview Medical Center
			
			                Baseline 6m follow-up
			Intervention 139 0
			Control 743 0

Study	Intervention Characteristics	Population Characteristics	Results

	on wait-list due to limited number of rooms
	
	Services Provided:
	Case Management: engage residents about substance use and life goals
	Meals: provide food
	Healthcare services: no detailed description
		Sample Size: 134
		
		Attrition: 21.6%
		Intervention: 20%
		Control: 25.6%
		
		Demographics:
		Mean age: 48
		Gender: 94% male
		Race/Ethnicity: 6% Hispanic, 39% Black, 28% American Indian, 1% Asian, 2% Native Hawaiian or Pacific Islander, 10% multiracial, 4% other
		Employment: NR
		Income: NR
		Education: 33% < HS or GED, 11% with GED, 19% HS grad, 8% some vocational school, 5% college grad, 2% some graduate education or higher
		Insurance: NR
		Substance abuse: 100% alcohol use
		Mental health: NR
		Physical health: NR
		Shelter use: most common place to spend the night in past three years, 84% in the open, 84% sobering center, 75% hospital, 65% in shelter, 64% motel or hotel
			Absolute difference: $604
			
			Emergency medical services
			
			                       Baseline 6m follow-up
			Intervention 505 512
			Control 553 438
			Absolute difference: $122
			
			Total cost
			
			                       Baseline 6m follow-up
			Intervention 4066 1492
			Control 3318 1932
			Absolute difference: -$1188

Author Year: Mares et al., 2011 **Study Design**:	**Location**: 5 US sites nationwide • Los Angeles, California • Chattanooga, Tennessee • Martinez/Contra Costa County, California	**Eligibility Criteria**: adults who were chronically homeless; recruited by local program staff	**Outcome Measure**: Housing stability: • Number of days housed ○ For intervention group: day staying in HF apartment

Study	Intervention Characteristics	Population Characteristics	Results

Pre-post with comparison group
 	
Design Suitability: Greatest
 	
Quality of Execution: Fair
	• New York, New York
	• Portland, Oregon
	
	Urbanicity: urban
	
	Date Intervention Implemented:
	participants recruited Jan 2004—April 2006
	
	Intervention Details:
	Program description: Collaborative Initiative to Help End Chronic Homelessness (CICH); national demonstration program funded by HUD, HHS, and VA, designed based on previous HF models
	
	Each site set up its program using the same principles
	
	Requirement for staying in housing: none
	
	Scattered or grouped housing: both
	
	Control arm: usual care; no details provided
	
	Services Provided:
	Modified ACT included comprehensive primary health, mental health, and substance abuse treatment services linked to housing
		Homelessness: chronically homeless
		
		Mental health: not specified
		
		Substance use: not specified
		
		Disabling condition(s): not specified
		
		Unit of recruitment: individual
		
		Sample Size: 385
		Intervention: 281
		Control: 104
		
		Attrition: 35.1%
		Intervention: 31.3%
		Control: 45.2%
		
		Demographics:
		Mean age: 45.7
		Gender: 76.0% male
		Race/Ethnicity: 59.5% racial or ethnic minority
		Education: mean 11.7 years of education
		Substance abuse: 76.4% has substance abuse problem, 52.2% alcohol problem, 57.9% drug problem
		Mental health: 69.9% have mental health problem, 16.1% schizophrenia, 27.5% depression, 14.0% bipolar depression, 6.2% PTSD
		Shelter use: NR
		Homelessness: mean of 7.7 years
			○ For control: days living in a private residence/ single-room occupancy setting, could include couch surfing
			• Homelessness: number of days homeless
			
			Physical health: SF-12 scale scores
			
			Mental health: SF-12 scale scores
			
			Substance use, assessed using items from addition severity index
			• Proportion with substance use problems
			• Proportion with alcohol use problems
			
			Wellness, community integration: community integration score
			
			Follow-up Time: 24 months
			
			Results:
			Number days housed
			
			               Baseline 24m follow-up
			Intervention 14.8 76.5
			Control 17.4 58.5
			Absolute difference: 20.6 days
			
			Number days homeless
			
			               Baseline 24m follow-up
			Intervention 60 4.6
			Control 57 23.3
			Absolute difference: -21.7 days
			
			Physical health status
			
			                   24m follow-up
			Intervention 43.3
			Control 43.4
			Relative difference: (43.3-43.4)/43.4 = -0.2%
			
			Mental health status score

Study	Intervention Characteristics	Population Characteristics	Results

			24m follow-up
			Intervention 40.4
			Control 41
			Relative difference: (40.4-41)/41 = -1.5%
			
			Proportion with substance abuse problem
			
			     Baseline 24m follow-up
			Intervention 74% 74%
			Control 81% 82%
			Relative difference: (74%/74%)/ (82%/81%)-1 = -1.2%
			
			Proportion with alcohol abuse problem
			
			     Baseline 24m follow-up
			Intervention 51% 50%
			Control 56% 61%
			Relative difference: (50%/51%)/ (61%/56%)-1 = -10%
			
			Community integration
			
			     24m follow-up
			Intervention 7.2
			Control 7.1
			Relative difference: (7.2-7.1)/7.1 = 1.4%

Author Year: Montgomery et al., 2013 **Study Design**: Prospective cohort **Design Suitability**: Greatest **Quality of Execution**:	**Location**: major metropolitan areas in the United States **Urbanicity**: urban **Date Intervention Implemented**: intervention started in 2009 **Intervention Details**: Program description: HUD-VASH program; multi-site program for veterans based on HF model, providing	**Eligibility Criteria**: veterans experiencing homelessness Homelessness: required Mental health: with serious mental illness Substance use: not specified Disabling condition(s): not specified Unit of recruitment: individual	**Outcome Measure**: Housing stability: proportion of participants retained in housing Healthcare use: • Number of visits to urgent care • Number of inpatient days for mental health treatment **Follow-up Time**: 12 months **Results**: Housing stability 12m follow-up Intervention 98%

Study	Intervention Characteristics	Population Characteristics	Results

Fair	housing and consumer driven case management
	
	Requirement for staying in housing: none reported
	
	Scattered or grouped housing: scattered
	
	Control arm: veterans experiencing homelessness and receiving regular services from VA
	
	Services Provided:
	ACT team that included social workers, vocational trainers, medical, mental health or psychiatry staff
		Sample Size: 177
		Intervention: 107
		Control: 70
		
		Attrition:
		Overall: 7%
		Intervention: 2%
		Control: 14%
		
		Demographics:
		Mean age: 53.1
		Gender: 85.9% male
		Race/Ethnicity: 3.4% Hispanic, 6.8% whit, 88.1% African American, 1.7% other
		Employment: 21.5% employed
		Income: NR
		Education: NR
		Insurance: NR
		Substance abuse: 49.7% with major psychological issue or substance use
		Mental health: see above
		Physical health: NR
		Shelter use: NR
			Control 86%
			Relative difference: (98%-86%)/86% = 14%
			
			Number of visits to urgent care
			
			            12m follow-up
			Intervention -66%
			Control -18%
			Absolute difference: -48pct pts
			
			Number of inpatient days for mental health treatment
			
			            12m follow-up
			Intervention -39%
			Control -98%
			Absolute difference: 59pct pts

Author Year: Padgett et al., 2011 **Study Design**: Pre-post with comparison group **Design Suitability**: Greatest	**Location**: New York City, New York, US **Urbanicity**: urban **Date Intervention Implemented**: program has been in place; data collection from 2005-2007 **Intervention Details**: Program description: HF program for persons who	**Eligibility Criteria**: new enrollees of programs in the intervention and control arms Homelessness: homeless adults Mental health: DSM-IV Axis I diagnosed Substance use: history of substance abuse	**Outcome Measure**: Substance use: any illicit drug use and or frequent and heavy alcohol use Wellness: size of social network Healthcare use: substance abuse treatment, admission to detoxification and rehab facilities **Follow-up Time**: 12 months **Results**:

Study	Intervention Characteristics	Population Characteristics	Results
Quality of Execution: Fair **Linked Studies:** Henwood 2015	were homeless with dual diagnosis Requirement for staying in housing: none described Scattered or grouped housing: scattered *Control arm:* TF programs; two sites provided temporary congregate shelter and services for 6 to 12 months until a less-structured placement could be secured; one day program serving dually diagnosed adults who were homeless with temporary housing placement **Services Provided**: ACT mentioned but no details provided	Disabling condition(s): not specified Unit of recruitment: individual **Sample Size**: 75 Intervention: 27 Control: 48 **Attrition**: 9.6% **Demographics**: Mean age: 41.3 Gender: 68% male Race/Ethnicity: 17.3% Hispanic, 16% white, 52% African American, 14.7% other Employment: NR Income: 33.3% low income family, 36.1% working class family, 23.6% middle or upper class, 6.9% unknown Education: 53.3% <HS, 10.7% HS diploma, 13.3% HS equivalent certificate, 17.3% some college, 5.3% associate degree or other Insurance: NR Substance abuse: NR Mental health: 28.6% schizophrenia, 31.4% bipolar disorder, 18.6% schizoaffective, 20% major depression, 1.4% other Physical health: NR Shelter use: NR	Substance use: intervention vs. control, OR of 0.29, controlling for gender, age, race, and baseline substance use Size of social network: HF participants: 12.67 people in their networks TF participants: 8.13 people in their networks HF participants had statistically significantly larger network, suggesting that HF participants did not experience more social isolation than TF participants Substance use treatment: intervention vs. control, OR of 0.1, controlling for gender, age, race, and baseline substance use
Author Year: Pankratz et al. 2017	**Location**: Waterloo region, Ontario, Canada	**Eligibility Criteria**: clients need to 16 or older and scored high on vulnerability	**Outcome Measure**: Housing stability: number of days housed

Study	Intervention Characteristics	Population Characteristics	Results
Study Design: Pre-post with nonequivalent comparison group **Design Suitability**: Greatest **Quality of Execution**: Fair	**Urbanicity**: urban **Date Intervention Implemented**: rent assistance implemented in 2014 **Intervention Details**: Program description: Housing Assistance with Support (HAWS); rent assistance provides participants with up to $350 for rent (amount is flexible and dependent on participant income, cost of rent, and specific housing needs) Requirement for staying in housing: none reported Scattered or grouped housing: scattered Control arm: participants receiving services but no housing assistance **Services Provided**: Home support services provided through Support to End Persistent Homelessness (STEP) included street outreach, housing liaison support, intensive support, peer support, and informal circle of friend support	scale, connected to STEP home worker and living in Waterloo region Homelessness: persons experiencing homelessness Mental health: not specified Substance use: not specified Disabling condition(s): scored high on vulnerability scale Unit of recruitment: individual **Sample Size**: 60 Intervention: 28 Control: 32 **Attrition**: 15% Intervention: 22% Control: 7% **Demographics**: Mean age: NR Gender: 66.7% male Race/Ethnicity: 10% Aboriginal, 65% Canadian, 1.7% Jamaican, 15% European Employment: 8.3% employed or volunteer work, 90% unemployed or retired Income: mean monthly income of 675.33 Education: mean of 10.9 years of education completed Insurance: NR Substance abuse: NR	Wellness: QOL score **Follow-up Time**: 6 months **Results**: Number of days housed <table><tr><td></td><td>Baseline</td><td>6m follow-up</td></tr><tr><td>Intervention</td><td>20</td><td>146</td></tr><tr><td>Control</td><td>70</td><td>43</td></tr></table>Absolute difference: 153 days QOL score <table><tr><td></td><td>Baseline</td><td>6m follow-up</td></tr><tr><td>Intervention</td><td>69.3</td><td>92.8</td></tr><tr><td>Control</td><td>74.1</td><td>81.0</td></tr></table>Relative difference: (92.8/69.3)/ (81.0/74.1)-1 = 22.5%

Study	Intervention Characteristics	Population Characteristics	Results
		Mental health: 81.7% diagnosed with mental health condition or substance dependence issue Physical health: NR Shelter use: NR	
Author Year: Rosenheck et al., 2003 **Study Design**: RCT **Design Suitability**: Greatest **Quality of Execution**: Fair **Linked Studies:** Cheng et al., 2007, O'Connell et al., 2008, 2009, 2012, 2017	**Location**: VA medical centers in San Francisco, San Diego, California; New Orleans, Louisiana; Cleveland, Ohio, US **Urbanicity**: urban **Date Intervention Implemented**: recruitment from June 1992 to December 1995 **Intervention Details**: Program description: HUD-VASH program; a multisite housing program for veterans that included housing vouchers, assistance with identifying and moving into housing, and supportive services Requirement for staying in housing: none reported Scattered or grouped housing: both Control arm: control group received standard VA care **Services Provided**:	**Eligibility Criteria**: veterans identified at initial outreach assessment Homelessness: homeless for one month or longer at the time of assessment Mental health: diagnosed with a major psychiatric disorder Substance use: diagnosed with alcohol or drug use disorder Disabling condition(s): not specified Unit of recruitment: individual **Sample Size**: 370 Intervention: 182 Control: 188 **Attrition**: 44.5% Intervention: 30.2% Control: 63.3% **Demographics**: Mean age: 42 Gender: 95.9% male Race/Ethnicity: 64% African American	**Outcome Measure**: Housing stability: • Number of days housed • Number of days homeless Mental health: • Psychiatric index score assessed using Addiction Severity Index • Psychological distress score assessed using Brief Symptom Index Substance abuse: days drank to intoxication Wellness: overall QOL score **Follow-up Time**: 36 months **Results**: Number of days housed Intervention 59.4 Control 47.6 Absolute difference: 11.8 days Number of days homeless Intervention 13.1 Control 20.5 Absolute difference: -7.4 days Psychiatric index score Intervention 0.25 Control 0.24

Study	Intervention Characteristics	Population Characteristics	Results
	Case management: provided by experienced social workers and nurses, with access to community-based services, crisis assistance, substance use and employment counseling; social workers also facilitated linkage with other VA services	Employment: 18.9% employed Income: mean income of $717 Education: NR Insurance: NR Substance abuse: NR Mental health: NR Physical health: NR Shelter use: 17.5 days homeless within past 90 days	Relative difference: (0.25-0.24)/0.24= 4.2% Psychological distress score Intervention 1.2 Control 1.16 Relative difference: (1.2-1.16)/1.16 = 3.4% Days intoxicated Intervention 1.46 Control 1.71 Absolute difference: -0.25 days QOL Intervention 4.31 Control 4.18 Relative difference: (4.31-4.18)/4.18 = 3.1%
Author Year: Schwarcz et al., 2009 **Study Design**: Prospective Cohort **Design Suitability**: Greatest **Quality of Execution**: Good	**Location**: San Francisco, California, US **Urbanicity**: urban **Date Intervention Implemented**: program ongoing since 1992; participants in program from 1996 to 2006, ranging from 0 to 120 months by the time of analysis **Intervention Details**: Program description: Direct Access Housing (DAH); program provided housing to people directly from shelters, living on street or institutions	**Eligibility Criteria**: all adult and adolescent (aged ≥13 years) San Francisco residents who were diagnosed with AIDS from January 1, 1996 through December 31, 2006 and reported to the San Francisco Department of Public Health (SFDPH) by November 30, 2007 Homelessness: housing status collected at diagnosis; considered to be homeless if the medical record noted that patient was homeless or if the address recorded was a known homeless shelter, a health care clinic, or a free	**Outcome Measure**: Mortality: survival rate **Follow-up Time**: NR **Results**: Obtaining supportive housing was independently associated with an 80% reduction in mortality Adjusted relative hazard: 0.20 95% confidence limits: 0.05, 0.81

Study	Intervention Characteristics	Population Characteristics	Results
	Requirement for staying in housing: must pay rent on a sliding scale of 30% to 50% of participants income Scattered or grouped housing: scattered Control arm: controls were people experiencing homelessness living with HIV/AIDS without housing services **Services Provided**: Medical services: care provided by an on-site, full-time nurse, a part-time, mid-level clinician (e.g. nurse practitioner), and at designated health care facilities located near the DAH residences Case management: no details provided	postal address not connected to a residence Mental health: not specified Substance use: not specified Disabling condition(s): not specified Unit of recruitment: individual **Sample Size**:676 Int (received housing): 70 Control (no housing): 606 **Attrition**: N/A **Demographics**: Age: 13.3% 13-29, 39.3% 30-39, 35.4% 40-49, 12.0% 50+ Gender: 76.9% male, 15.1% female, 8% transgender Race/Ethnicity: 16.1% Hispanic, 47% white, 39.2% Black, 4% Asian Pacific Islander, Native American, other Employment: NR Income: NR Education: NR Insurance: 34.2% public, 1.2% private, 62.6% not insured, 2.1% unknown Substance abuse: 73.4% injection drug user Mental health: NR Physical health: NR Shelter use: NR	

Study	Intervention Characteristics	Population Characteristics	Results
Author Year: Shinn et al., 2015 **Study Design**: RCT **Design Suitability**: Greatest **Quality of Execution**: Fair	**Location**: New York City, New York, US **Urbanicity**: urban and suburban **Date Intervention Implemented**: NR **Intervention Details**: Program description: Family Critical Time Intervention (FCTI) targeting families experiencing homelessness with mental health problems Requirement for staying in housing: none reported Scattered or grouped housing: both Control arm: families receiving regular services but no housing assistance; regular services included caseworkers during and after shelter stays, access to subsidized housing after meeting standards for housing readiness **Services Provided**: Case management: provide active linkages to other services and resources including establishing community integration, skill	**Eligibility Criteria**: mothers at risk for recurrent homelessness and caring for at least one child aged 1.5 to 16 years; spoke English or Spanish Homelessness: at risk for recurrent homelessness Mental health: diagnosed with mental illness or substance use Substance use: diagnosed with substance use or mental illness Disabling condition(s): not specified Unit of recruitment: family **Sample Size**: 200 Intervention: 97 Control: 103 **Attrition**: 27.5% **Demographics of mother**: Mean age: 30.8 Gender: 1000% female Race/Ethnicity: 26% Hispanic, 25% white, 65% African American, 1% Asian, 10% American Indian/ Alaskan Native Education: NR Substance abuse: NR Mental health: NR Physical Health: NR	**Outcome Measure**: Housing stability: proportion housed; proportion of time spent in permanent housing for each observation period based on Residential Timeline Follow-back Calendar Mental health: • Depressive symptoms: youth 6-10 completed Children's Depression Inventory Community Integration: mothers of children ages 6-10 reported on frequency of their child's involvement in school, neighborhood, and religious institutions in the previous 3 months on a 17-item index; children 11-16 reported for themselves **Follow-up Time**: 24 months (additional data points at 3, 9, and 15 months) **Results**: Proportion housed Baseline 24m follow-up Intervention 0% 86% Control 0% 73% Relative difference: (86%-73%)/73% = 17.8% Depressive symptoms: self-reported by children; no difference between intervention and control groups; however, both groups had significant improvements over time. Community integration: no difference between intervention and control groups for children 6-10 or children 11-16; however, the 11-16 group saw improvements over time for the intervention and control group

Study	Intervention Characteristics	Population Characteristics	Results
	attainment, restoration of functional ability	Shelter use: all had been in the homeless shelter system	

Author Year: Srebnik et al., 2013
 	
Study Design: Pre-post with comparison group
 	
Design Suitability: Greatest
 	
Quality of Execution: Fair
	Location: Seattle, Washington, US
	
	Urbanicity: urban
	
	Date Intervention Implemented: June 2006 to November 2011
	
	Intervention Details: Program description: Begin at Home program set aside 20 units at a newly renovated downtown building for people with long-term homelessness coupled with chronic medical conditions, chemical dependency, or both
	
	Requirement for staying in housing: none reported
	
	Scattered or grouped housing: grouped
	
	Control arm: comparison group was recruited using same selection criteria as intervention group from January – July 2008, received usual care and an incentive of $10 Starbucks gift card
	
	Services Provided:
		Eligibility Criteria: aged 18 or older and meet the federal definition of chronic homelessness; be referred either from Seattle—King County Public Health's REACH homeless outreach team or from medical respite with incurred inpatient paid claims of at least $10000 within the prior year
		
		Homelessness: chronically homeless, with 12 consecutive months of homelessness or 4 homeless episodes in prior 3 year
		
		Mental health: not specified
		
		Substance use: with 60 or more sobering sleep-off center visits within the prior year
		
		Disabling condition(s): with significant disabling physical or psychiatric conditions
		
		Unit of recruitment: individual
		
		Sample Size: 60
		Intervention: 29
		Control: 31
		
		Attrition: NR
		
		Demographics:
			Outcome Measure:
			Health care use:
			• Number of ED contacts
			• Number of admissions
			• Percent of participants with ED contacts
			• Percent of participants with inpatient admissions
			
			Crime:
			• Jail use: proportion of participants with jail bookings
			
			Follow-up Time: 12 months
			
			Results:
			Number of ED contacts
			
			          Baseline 12m follow-up
			Intervention 234 60
			Control 369 272
			Absolute difference: -77 visits
			
			Number of admissions
			
			          Baseline 12m follow-up
			Intervention 68 18
			Control 50 26
			Absolute difference: -26 visits
			
			Percent with ED contacts
			
			          Baseline 12m follow-up
			Intervention 97% 55%
			Control 100% 81%
			Relative difference: (5%/97%)/ (81%/100%)-1 = -29%
			
			Percent with inpatient admissions
			
			          Baseline 12m follow-up

Study	Intervention Characteristics	Population Characteristics	Results
	Onsite care through a comprehensive team providing integrated medical, psychiatric, and chemical dependency services that were voluntary, intensive, and easily accessible; also helped participants with applying for food assistance and obtaining income	Mean age: NR Gender: NR Race/Ethnicity: NR Employment: NR Income: NR Education: NR Insurance: NR Substance abuse: NR Mental health: NR Physical health: NR Shelter use: NR	Intervention 97% 35% Control 94% 55% Relative difference: (35%/97%)/ (55%/94%)-1 = -36% Jail use Baseline 12m follow-up Intervention 24% 38% Control 26% 32% Relative difference: (38%/24%)/ (32%/6%)-1 = 26%
Author Year: Stefancic et al., 2007 **Study Design**: RCT **Design Suitability**: Greatest **Quality of Execution**: Fair	**Location**: New York City, New York, US **Urbanicity**: urban **Date Intervention Implemented**: participants recruited in early 2001 **Intervention Details**: Program description: County Department of Social Services (DSS) contracted two organizations to provide HF services to consumers with psychiatric conditions and often substance abuse disorders; each program expected to house 60 people; two organizations are Pathways and a newly formed Consortium of treatment and housing agencies from within the county	**Eligibility Criteria**: individuals 18 or older, chronic shelter users, referred by county with the longest histories of shelter use and with the most frequent interruptions in stay Homelessness: chronic shelter users Mental health: Axis I diagnosis of mental illness Substance use: individuals could be dual diagnosed with a substance use disorder Disabling condition(s): excluded if diagnosed primarily with a developmental disability Unit of recruitment: individual **Sample Size**: 260 Program 1, Pathways: 105 Program 2, Consortium: 104	**Outcome Measure**: Housing stability: percent in permanent housing **Follow-up Time**: 20 months **Results**: Housing stability Pathways (long term implementer of HF): 91.9% Control: 33.3% Relative difference: (91.9%-33.3%)/33.3% = 176% Consortium (new implementer of HF): 88.5% Control: 33.3% Relative difference: (88.5%-33.3%)/33.3% = 165.8%

Study	Intervention Characteristics	Population Characteristics	Results
	Requirement for staying in housing: contributing 30% of income towards rent; tenants only risk eviction for same reasons as other building tenants including nonpayment of rent, creating unacceptable disturbances to neighbors, or violations of a standard lease Scattered or grouped housing: scattered Control arm: treatment as usual; chronic shelter users with psychiatric conditions remained in shelter system **Services Provided**: ACT: services provided in a client's natural environment, recovery-oriented practice Assistance with issues including housing, health care, mediation, employment, family relations, and recreational opportunities Periodic apartment visits to ensure tenants' safety and wellbeing	Control: 51 **Attrition**: N/A **Demographics**: Mean age: NR Gender: 74.2% male Race/Ethnicity: 28.1% White, 56.5% African American, 1.2% other, 10.8% Hispanic Employment: NR Income: NR Education: NR Insurance: NR Substance abuse: 40.4% alcohol dependence, 13.5% alcohol dependence in remission, 3.1% unspecified alcohol use, 41.1% drug dependence, 13.5% drug dependence in remission, 3.5% unspecified drug use Mental health: 41.9% schizophrenia, 12.7% major depressive disorder, 18.8% bipolar disorder, 5.8% schizoaffective disorder, 13.8% other, 6.9% info unavailable Physical health: NR Shelter use: NR	
Author Year: Tsemberis 1999	**Location**: New York City, New York, US **Urbanicity**: urban	**Eligibility Criteria**: priorities given to the most vulnerable people, including those living outside shelters, women,	**Outcome Measure**: Housing stability: proportion of clients living in permanent housing during the study period

Study	Intervention Characteristics	Population Characteristics	Results
Study Design: Pre-post with comparison **Design Suitability**: Greatest **Quality of Execution**: Fair	**Date Intervention Implemented**: program was established in early 1990s **Intervention Details**: Program description: Pathways program for persons who are homeless in NYC; does not rent more than 10% of the units in any one apartment building Requirement for staying in housing: 3 requirements strongly recommended but not required; agree to visit with their service coordinator at least 2 times a month; pay 30% of their income for rent; participate in a money-management program Scattered or grouped housing: scattered Control arm: TF programs where clients need to be housing ready before assigned housing **Services Provided**: ACT: services to increase clients' self-sufficiency, meet their basic needs, enhance social skills, increase employment opportunities, enhance QOL	people over age of 65, or with physical health problems Homelessness: individuals must be homeless Mental health: with psychiatric condition Substance use: co-occurring psychiatric condition and substance use disorder Disabling condition(s): people with physical health problems given priority Unit of recruitment: individual **Sample Size**: 3950 Intervention: 139 Control: 3811 **Attrition**: N/A **Demographics**: Mean age: 39.9 for intervention group Gender: 66.3% male Race/Ethnicity: NR Employment: NR Income: NR Education: NR Insurance: NR Substance abuse: 49.5% with co-occurring substance use disorder Mental health: 48% schizophrenia, 38.6% mood disorders, 7.2% other	**Follow-up Time**: 30 months **Results**: Housing stability Intervention: 84.2% Control: 59.6% Relative difference: (84.2%-59.6%)/59.6% = 41.3%

Study	Intervention Characteristics	Population Characteristics	Results
	Service coordinators assist tenants in selecting their apartments, match the tenant's choice of neighborhood or special accommodations to the degree possible	psychotic disorders, 7.2% other disorders Physical health: NR Shelter use: NR	
Author Year: Tsemberis et al., 2000 **Study Design**: Pre-post with comparison group **Design Suitability**: Greatest **Quality of Execution**: Good	**Location**: New York City, New York, US **Urbanicity**: urban **Date Intervention Implemented**: program started in early 1990s; clients from January 1, 1993 to September 30, 1997 **Intervention Details**: Program description: Pathways program Requirement for staying in housing: encourage participants to seek appointment with healthcare professionals, and participate in money management Scattered or grouped housing: scattered Control arm: NYC TF program **Services Provided**: ACT: services to increase clients' self-sufficiency,	**Eligibility Criteria**: clients housed by Pathways; clients recruited through outreach team, drop-in centers, shelters, and reception centers Homelessness: homeless individuals who live on the streets Mental health: with severe psychiatric conditions Substance use: concurrent addiction disorders Disabling conditions(s): not specified Unit of recruitment: individual **Sample Size**: 1841 Intervention: 241 Control: 1600 **Attrition**: 47.6% Intervention: 12% Control: 53% **Demographics**: Mean age: 41.4 Gender: 72% male	**Outcome Measure**: Housing stability: housing retention **Follow-up Time**: 60 months **Results**: Housing stability Intervention: 88% Control: 47% Relative difference: (88%-47%)/47% = 87.2%

Study	Intervention Characteristics	Population Characteristics	Results
	meet their basic needs, enhance social skills, increase employment opportunities, enhance QOL	Race/Ethnicity: 18% Hispanic, 21.3% White, 55% African American, 2% other Employment: NR Income: NR Education: NR Insurance: NR Substance abuse: 50% with substance abuse problems Mental health: 40% schizophrenia, 44% mood disorders, 8% other psychosis, 8% other Physical health: NR Shelter use: NR	
Author Year: Tsemberis et al., 2004 **Study Design**: RCT **Design Suitability**: Greatest **Quality of Execution**: Fair **Linked Studies:** Fisher2008, Greenwood 2005, Gulcur 2003, 2007, Padgett 2006	**Location**: New York City, New York, US **Urbanicity**: urban **Date Intervention Implemented**: program started in early 1990s; data collected between December 1997 and January 2001 **Intervention Details**: Program description: Pathways program Requirement for staying in housing: encourage participants to seek appointment with healthcare professionals, and participate in money management	**Eligibility Criteria**: clients of Pathways program Homelessness: spent 15 of the past 30 days on the street or in other public places, exhibited a history of homelessness over the past 6 months Mental health: Axis I diagnosis of severe mental illness Substance use: not specified Disabling conditions(s): not specified Unit of recruitment: individual **Sample Size**: 225 Intervention: 99 Control: 126	**Outcome Measure**: Housing stability: • Percent time housed: proportion of time spent living in one's own place • Percent homeless: proportion of time spent as homeless Substance use: • Percent heavy drug use (used more than 4 days in past 6 months) • Percent heavy alcohol use (used more than 28 days in past 6 months) Mental health: psychiatric symptoms **Follow-up Time**: Housing stability: 24 months Substance use: 48 months Mental health: 36 months **Results**: Percent time housed Baseline 24m follow-up Intervention 9% 80%

Study	Intervention Characteristics	Population Characteristics	Results

	Scattered or grouped housing: scattered
	
	Control arm: NYC TF program
	
	Services Provided:
	ACT: services to increase clients' self-sufficiency, meet their basic needs, enhance social skills, increase employment opportunities, enhance QOL
		Attrition: 22%
		
		Demographics:
		Mean age: 42
		Gender: 77% male
		Race/Ethnicity: 14% Hispanic, 31% White, 48% African American, 8% other
		Employment: 10.7% employed
		Income: NR
		Education: 10% 8th grade or less, 32% some HS, 17% finished HS, 8% GED, 2% vocational, trade, or business school, 24% some college, 5% college degree, 2% graduate
		Insurance: NR
		Substance abuse: 40% alcohol use in past 6 months
		Mental health: 58% schizophrenia, 16% major depression, 15% bipolar, 6% other, 5% unknown
		Physical health: NR
		Shelter use: 51% lived on street, subways, parks, abandoned building, or drop-in centers, 6% in shelter, 36% in psychiatric hospital
			Control 5% 34%
			Relative difference: (80%/9%)/ (30.7%/5%)-1 = 30.7%
			
			Percent time homeless
			
			             Baseline 24m follow-up
			Intervention 54% 3%
			Control 50% 24%
			Relative difference: (3%-54%)/ (24%/50%)-1 = -88.4%
			
			Percent heavy drug use
			
			             Baseline 48m follow-up
			Intervention 22.3% 20.8%
			Control 18.9% 15.9%
			Relative difference: (20.8%/22.3%)/ (5.9%/18.9%)-1 = 10.9%
			
			Percent heavy alcohol use
			
			             Baseline 48m follow-up
			Intervention 16.3% 14.2%
			Control 15.3% 8.5%
			Relative difference: (14.2%/16.3%)/ (8.5%/15.3%)-1 = 56.8%
			
			Mental health: participants experienced a decrease in psychiatric symptoms over the follow-up period; but no difference between intervention and control groups

Author Year: Wolitski et al., 2010 **Study Design**: RCT	**Location**: Baltimore, Maryland, Chicago, Illinois, Los Angeles, California, US **Urbanicity**: urban	**Eligibility Criteria**: 18 years or older, persons living with HIV who were experiencing homelessness or at risk for homelessness, with income <50% of area median income, could complete	**Outcome Measure**: Physical health: • Physical health summary score using SF-36 questionnaire • Percent with detectable viral load • Percent of participants with any opportunistic infection Mental health: summary score using SF-36 questionnaire

Study	Intervention Characteristics	Population Characteristics	Results
Design Suitability: Greatest **Quality of Execution**: Good	**Date Intervention Implemented**: baseline assessments conducted from July 2004- May 2005 **Intervention Details**: Housing Opportunities for People with AIDS (HOPWA) funded program providing long-term rental assistance, assistance varied depending on Fair Market Rent determined by HUD Requirement for staying in housing: pay 30% of household adjusted income Scattered or grouped housing: scattered Control arm: usual care; customary and usual services from the housing agencies and received referrals to case management **Services Provided**: Supportive services and case management: referrals to other supportive services (e.g. health, mental health, drug, alcohol abuse treatment and counseling, nutritional services, home care) Drop-in center offering meals and outreach services	materials in English or Spanish Homelessness: persons who were homeless and living in shelters or in places not fit for human habitation, normally homeless but in institutions Mental health: not specified Substance use: not specified Disabling conditions(s): seropositive for HIV Unit of recruitment: individual **Sample Size**: 630 Intervention: 315 Control: 315 **Attrition**: 15.3% Intervention: 13.0% Control: 17.8% **Demographics**: Age: 48.3% between 40-49 years of age Gender: NR Sexual orientation: 70% men having sex with men Race/Ethnicity: 78.4% Black, 21.6% other Employment: 82.2% unemployed Income: NR Education: 35.5% <HS diploma, 28.9% HS diploma or GED, 35.6% >HS or GED Insurance: NR	Risky behavior: • Percent of participants traded sex in past three months • Percent with any unprotected sex with negative/unknown status partner in past three months Healthcare use: percent of participants with one or more ER visits in past 6 months **Follow-up Time**: 18 months **Results**: Physical health summary score Intervention: 44.0% Control: 41.5% Relative difference: (44%-41.5%)41.5% = 6.0% Detectable viral load Intervention: 61.4% Control: 79.1% Relative difference: (61.4%-79.1%)/71.9% = -22.4% Percent with any opportunistic infection Intervention: 16.1% Control: 23.6% Relative difference: (16.1%-23.6%)/23.6% = -31.8% Mental health summary score Intervention: 43.5 Control: 38.5 Relative difference: (43.5-38.5)/38.5 = 13.0% Percent traded sex Intervention: 4.6% Control: 5.6%

Study	Intervention Characteristics	Population Characteristics	Results
	Medical and dental clinic providing free services Mental health and community support services organization that provided onsite support to assist tenants with mental illness to transition into the housing program as well as providing ongoing help with living skills, counseling, and advocacy	Substance abuse: 41.2% used 1 or more drugs; 24.1% used 2 or more drugs; 51.8% alcohol abuse Mental health: NR Physical health: 39.1% diagnosed to be HIV seropositive Shelter use: NR	Relative difference: (4.6%-5.6%)/5.6% = -17.9% Percent with unprotected sex Intervention: 13.1% Control: 16.1% Relative difference: (13.1%-16.1%)/16.1% = -18.6% Percent with one or more ER visit in past 6 months Intervention: 28.9% Control: 48.6% Relative difference: (28.9%-48.6%)/48.6% = -40.5%