APPENDIX A. SEARCH STRATEGIES

Database: MEDLINE (via MEDLINE ALL, Ovid, 1946 to May 14, 2020)

Search date: 5/15/2020

Search Set	Search Strategy	Results
#1 *Housing Status Concepts*	exp Homeless Persons/ or (homeless or homelessness or "lack of housing" or squatter or squatters or "no fixed address" or roofless or "doubled up" or "doubled-up" or "rough sleep" or "rough sleeping" or "couch surfing" or "couch surf" or "couch surfer" or "couch surfers" or "supportive housing").ti,ab. or ((street or transient or transients) adj2 (population or person or persons or people or peoples or individual or individuals or adult or adults or youth or youths or men or man or women or woman or dweller or dwellers)).ti,ab. or ((temporary or unstable or unstableness or instability or insecurity or inequality or vulnerable or vulnerability or nonpermanent or non-permanent) adj2 (home or homes or house or houses or housing or accommodation or accommodations or apartment or apartments or shelter or shelters or sheltering or hostel or hostels or dwelling or dwellings)).ti,ab.	15,634
#2 *Primary Care Concepts*	exp Primary Health Care/ or Physicians, Family/ or Physicians, Primary Care/ or General Practitioners/ or Family Practice/ or Community Health Services/ or Community Health Nursing/ or exp Community Health Centers/ or Family Nursing/ or Mobile Health Units/ or Health Services Accessibility/ or "Delivery of Health Care"/ or "Delivery of Health Care, Integrated"/ or ("primary care" or "primary health care" or "primary healthcare" or "health visit" OR "health visits" OR "health visitation" OR "health visitations" OR "wellness visit" OR "wellness visits" OR "wellness visitation" OR "wellness visitations" OR "wellness exam" OR "wellness exams" OR "wellness examination" OR "wellness examinations" OR "annual exam" OR "annual exams" OR "annual examination" OR "annual examinations" or (general adj (practice or practise or practices or practises or practician or practitioner or practitioner)) or (family adj (practice or practise or medicine or physician or physicians or doctor or doctors)) or (collaborative adj2 (care or model or models or practice or practice)) or (community adj (health or healthcare or nurse or nurses or nursing or outreach)) or ((community or neighbo?rhood) adj ("health center" or "health centers" or "health centre" or "health centres" or healthcenter or healthcenters or healthcentre or healthcentres)) or ((nurse or nurses or nursing) adj (family or practitioner or practitioners or primary or advance or advanced or practice or practiced)) or ((mobile or fixed) adj ("outreach program" or "outreach programs")) or (mobile adj (hospital or hospitals or "health unit" or "health units" or "health van" or "health vans" or clinic or clinics)) or ((coordinate or coordinates or coordinated or coordinating or integrate or integrates or integrated or integrating or co-locate or co-locates or co-located or co-locating) adj3 ("health service" or "health services" or "health care" or healthcare)) or (("health service" or "health services") adj2 (accessibility or availability)) or ((healthcare or health care) adj2 (deliver or delivers or delivered or delivery)) or ("access to health care" or "access to healthcare") or (integrated adj delivery adj (system or systems)) or (("patient centered" or "patient-centered") adj2 ("medical home" or "medical homes")) or PCMH or (patient adj2 aligned adj2 ("care team" or "care teams" or "healthcare team" or "healthcare teams")) or PACT or HPACT).ti,ab.	590,937

Search Set	Search Strategy	Results
#3 *Veterans/ VA concepts*	exp Veterans/ or exp "United States Department of Veterans Affairs"/ or exp Veterans Health/ or exp Veterans Health Services/ or (veteran or veterans or "VA health" or "VA healthcare" or "VA clinic" OR "VA clinics" or "VA administration").ti,ab.	39,737
#4	2 or 3	625,193
#5	1 and 4	3,594
#6	5 not (case reports or editorial or letter or comment).pt.	3,371

EMBASE (via Elsevier)

Search date: 5/15/2020

Search Set	Search Strategy	Results
#1 *Housing Status Concepts*	'homelessness'/exp OR 'homeless person'/exp or (homeless or homelessness or 'lack of housing' or squatter or squatters or 'no fixed address' or roofless or 'doubled up' or 'doubled-up' or 'rough sleep' or 'rough sleeping' or 'couch surfing' or 'couch surf' or 'couch surfer' or 'couch surfers' or 'supportive housing'):ti,ab or ((street or transient or transients) NEAR/2 (population or person or persons or people or peoples or individual or individuals or adult or adults or youth or youths or men or man or women or woman or dweller or dwellers)):ti,ab or ((temporary or unstable or unstableness or instability or insecurity or inequality or vulnerable or vulnerability or nonpermanent or non-permanent) NEAR/2 (home or homes or house or houses or housing or accommodation or accommodations or apartment or apartments or shelter or shelters or sheltering or hostel or hostels or dwelling or dwellings)):ti,ab	19,446
#2 *Primary Care Concepts*	'primary health care'/exp OR 'general practitioner'/exp OR 'general practice'/exp OR 'community care'/de OR 'community health nursing'/exp OR 'community mental health center'/exp OR 'family nursing'/exp OR 'field hospital'/de OR 'health care access'/de OR 'health care delivery'/de OR 'integrated health care system'/exp or ('primary care' or 'primary health care' or 'primary healthcare' or 'health visit' OR 'health visits' OR 'health visitation' OR 'health visitations' OR 'wellness visit' OR 'wellness visits' OR 'wellness visitation' OR 'wellness visitations' OR 'wellness exam' OR 'wellness exams' OR 'wellness examination' OR 'wellness examinations' OR 'annual exam' OR 'annual exams' OR 'annual examination' OR 'annual examinations' or (general NEAR/1 (practice or practise or practices or practises or practician or practitioner or practitioner)) or (family NEAR/1 (practice or practise or medicine or physician or physicians or doctor or doctors)) or (collaborative NEAR/2 (care or model or models or practice or practice)) or (community NEAR/1 (health or healthcare or nurse or nurses or nursing or outreach)) or ((community or neighbo?rhood) NEAR/1 ('health center' or 'health centers' or 'health centre' or 'health centres' or healthcenter or healthcenters or healthcentre or healthcentres)) or ((nurse or nurses or nursing) NEAR/1 (family or practitioner or practitioners or primary or advance or advanced or practice or practiced)) or ((mobile or fixed) NEAR/1 ('outreach program' or 'outreach programs')) or (mobile NEAR/1 (hospital or hospitals or 'health unit' or 'health units' or 'health van' or 'health vans' or clinic or clinics)) or ((coordinate or coordinates or coordinated or coordinating or integrate or integrates or integrated or integrating or colocate or colocates or colocated or colocating) NEAR/3 ('health service' or	745,422

Search Set	Search Strategy	Results
	'health services' or 'health care' or healthcare)) or (('health service' or 'health services') NEAR/2 (accessibility or availability)) or ((healthcare or 'health care') NEAR/2 (deliver or delivers or delivered or delivery)) or ('access to health care' or 'access to healthcare') or (integrated NEAR/1 delivery NEAR/1 (system or systems)) or (('patient centered' or 'patient-centered') NEAR/2 ('medical home' or 'medical homes')) or PCMH or (patient NEAR/2 aligned NEAR/2 ('care team' or 'care teams' or 'healthcare team' or 'healthcare teams')) or PACT or HPACT):ti,ab	
#3 *Veterans/ VA concepts*	'veteran'/exp OR 'veterans health'/exp OR 'veterans health service'/exp or (veteran or veterans or 'VA health' or 'VA healthcare' or 'VA clinic' OR 'VA clinics' or 'VA administration'):ti,ab	50,259
#4	#2 OR #3	789,311
#5	#1 AND #4	4,561
#6	#5 NOT ('case report'/exp OR 'case study'/exp OR 'editorial'/exp OR [editorial]/lim OR 'letter'/exp OR [letter]/lim OR 'note'/exp OR [note]/lim OR [conference abstract]/lim OR 'conference abstract'/exp OR 'conference abstract'/it)	3,452

PsycINFO (via Ovid, 1806 to May Week 2 2020)

Search date: 5/15/2020

Search Set	Search Strategy	Results
#1 *Housing Status Concepts*	exp Homeless/ or (homeless or homelessness or "lack of housing" or squatter or squatters or "no fixed address" or roofless or "doubled up" or "doubled-up" or "rough sleep" or "rough sleeping" or "couch surfing" or "couch surf" or "couch surfer" or "couch surfers" or "supportive housing").ti,ab. or ((street or transient or transients) adj2 (population or person or persons or people or peoples or individual or individuals or adult or adults or youth or youths or men or man or women or woman or dweller or dwellers)).ti,ab. or ((temporary or unstable or unstableness or instability or insecurity or inequality or vulnerable or vulnerability or nonpermanent or non-permanent) adj2 (home or homes or house or houses or housing or accommodation or accommodations or apartment or apartments or shelter or shelters or sheltering or hostel or hostels or dwelling or dwellings)).ti,ab.	12,720
#2 *Primary Care Concepts*	exp Primary Health Care/ or Family Physicians/ or General Practitioners/ or Family Medicine/ or exp Community Mental Health Services/ or ("primary care" or "primary health care" or "primary healthcare" or "health visit" OR "health visits" OR "health visitation" OR "health visitations" OR "wellness visit" OR "wellness visits" OR "wellness visitation" OR "wellness visitations" OR "wellness exam" OR "wellness exams" OR "wellness examination" OR "wellness examinations" OR "annual exam" OR "annual exams" OR "annual examination" OR "annual examinations" or (general adj (practice or practise or practices or practises or practician or practitioner or practitioner)) or (family adj (practice or practise or medicine or physician or physicians or doctor or doctors)) or (collaborative adj2 (care or model or models or practice or practice)) or (community adj (health or healthcare or nurse or nurses or nursing or outreach)) or ((community or neighbo?rhood) adj ("health center" or "health centers" or "health centre" or "health centres" or healthcenter or healthcenters or healthcentre or healthcentres)) or ((nurse or nurses or nursing) adj	79,319

Search Set	Search Strategy	Results
	(family or practitioner or practitioners or primary or advance or advanced or practice or practiced)) or ((mobile or fixed) adj ("outreach program" or "outreach programs")) or (mobile adj (hospital or hospitals or "health unit" or "health units" or "health van" or "health vans" or clinic or clinics)) or ((coordinate or coordinates or coordinated or coordinating or integrate or integrates or integrated or integrating or co-locate or co-locates or co-located or co-locating) adj3 ("health service" or "health services" or "health care" or healthcare)) or (("health service" or "health services") adj2 (accessibility or availability)) or ((healthcare or health care) adj2 (deliver or delivers or delivered or delivery)) or ("access to health care" or "access to healthcare") or (integrated adj delivery adj (system or systems)) or (("patient centered" or "patient-centered") adj2 ("medical home" or "medical homes")) or PCMH or (patient adj2 aligned adj2 ("care team" or "care teams" or "healthcare team" or "healthcare teams")) or PACT or HPACT).ti,ab.	
#3 *Veterans/ VA concepts*	Military Veterans/ or (veteran or veterans or "VA health" or "VA healthcare" or "VA clinic" OR "VA clinics" or "VA administration").ti,ab.	22,513
#4	2 or 3	100,280
#5	1 and 4	1,346
#6	limit 5 to ("0100 journal" or "0110 peer-reviewed journal")	1,074

APPENDIX B. STUDY CHARACTERISTICS TABLES

ACCESS Studies: Federally Funded Demonstration Program

Intervention description: A federal demonstration program, Access to Community Care and Effective Strategies and Supports (ACCESS), conducted over 5 years ending in 1999, was designed to support system change through partnership development across federal, state, local, and private service agencies for people experiencing homelessness with serious mental illness and co-occurring substance disorders. A second goal of the program was to identify effective, replicable system integration strategies. Funding (average $5 million; approximately $250,000 per site) was provided at the state level to support provision of essential services to the target population, including assertive outreach, case management (100 patients per site per year), housing, mental health, and substance abuse treatment. Per communication with an author, while the intention was that primary care would be incorporated at each site; the extent to which that happened varied.

Study Design Number of Sites	Eligibility Criteria	Agencies Involved	Outcomes Examined
Calloway, 1998[42] 18 sites	Not reported	1,060 participating agencies: • 33% mental health programs • 25% homeless or housing programs • 10% substance abuse programs • 12% programs that provided primary care, dental care, testing for sexually transmitted diseases • 6% percent entitlement and social welfare programs • 14% other (*eg*, vocational or advocacy programs)	Service agency linkage (patient referrals)
Cheng, 2008[38] 18 sites	Secondary analysis of people in the full dataset who were experiencing homelessness (defined as receiving services at the homeless shelter) and had serious mental illness (based on the working clinical diagnoses of the admitting clinician for the community treatment teams) and not involved in ongoing community treatment.	The specific components of an integrated program varied based on the needs of each of the 9 individual sites	Alcohol use, drug use, social support, family relationships, victimization
Cocozza, 2000[41] 9 systems integration sites	Nine states were selected to participate in this demonstration project and then each state selected 2 sites that were similar in terms of #	Not reported	Not reported

Study Design Number of Sites	Eligibility Criteria	Agencies Involved	Outcomes Examined
	of individuals experiencing homelessness with MI, income, and available housing sites. Sites within states were randomized to receive the integrated systems intervention.		
Morrissey, 1997[44] 18 sites	Interagency networks had to provide 5 core ACCESS services including mental health, substance abuse, treatment, housing, entitlement and income, primary health care; could not provide direct/structural support only (*ie,* food, clothing); had to provide some direct patient services, no 1-2 person operations; identify 2 comparable sites	Agencies or services provided: mental health care, substance abuse treatment services, housing, entitlements and income support, primary health care	System accessibility, system coordination (Robert Wood Johnson Foundation program on chronic mental illness)
Rosenheck, 1997[43] 18 sites	1) experience of homelessness (patient had spent at least 7 of the past 14 nights in a shelter, outdoors, or in a public or abandoned building) 2) had a severe mental illness (psychiatric eligibility was determined with a 30-item screening algorithm) 3) were not involved in ongoing mental health treatment.	Mental health, general health, substance abuse, public support, housing assistance and support, dental care, and employment services	Receipt of medical services, receipt of mental health services, receipt of substance abuse services, receipt of dental services, receipt of long-term housing services, receipt of financial support, receipt of job assistance
Rosenheck, 2002[40] 18 sites Companion study: Morrissey, 2002[60] Rosenheck 1997[61]	Patients were eligible to receive case management services if they were experiencing homeless, suffered from severe mental illness, and were not involved in ongoing community treatment. Operational entry criteria for homelessness and mental illness have been described in detail elsewhere, along with validating data (companion study). Patients were considered to have experiences of homelessness if they had lived in an emergency shelter, outdoors, or in a public or abandoned building for 7 of the previous 14 days.	6 types of services: housing assistance or support from a housing agency, mental health services, substance abuse services, general health care, public income support (at least $100 a month), and vocational rehabilitation services	Mental health symptoms, alcohol problems, drug problems, use of psychiatric services in the past 30 days, service integration, identified case manager, independent housing in the past 30 days, quality of life, social support

Study Design Number of Sites	Eligibility Criteria	Agencies Involved	Outcomes Examined
Steadman, 2002[39] 18 sites	Previously funded ACCESS sites	Services included Assertive Community Treatment (ACT) teams, crisis response, mental health and substance abuse treatment, health care, housing and employment assistance, income support (not all services were provided by all sites)	Types of services offered

Non-ACCESS Studies

Study Country Design VA (Companion Article)	Intervention description	Total N Mean Age (SD) Sex % Race %	Homeless Definition	SMI Inclusion Criteria[a]	% of Population with SMI Diagnosis	Funding
Baker, 2018[32] USA Program evaluation	St. Paul's center of New York, Inc. was an independent community mental health center for adults experiencing homelessness with mental illness who were not actively using substances. Linkage to primary care was via a "robust referral system at major health care institutions."	n=212 Age: Not reported Female: Not reported Race: Not reported	"Currently homeless or at risk for homelessness"	Designed for patients with SMI	Not reported	National Institute of Nursing Research

Corrigan, 2017[33] USA Randomized controlled trial (Corrigan, 2017[29])	Community-based participatory research informed peer navigator program compared to treatment as usual for African-Americans with SMI who were experiencing homelessness. Peer navigators worked with goals including linking them with health care providers.	n=67 Age: 52.9 (8.1) Female: 39% Black: 100%	Public Health Service Act: an individual without permanent housing who may live on the streets; stay in a shelter, mission, single room occupancy facilities, abandoned building or vehicle; or in any other unstable or non-permanent situation	Designed for patients with SMI 75% SMI; broad criteria	Major depression: 85.1% Bipolar disorder: 22.4% PTSD: 6.0% Schizophrenia: 9.0%	National Institute on Minority Health and Health Disparities Grant
Kelly, 2018[31] USA Randomized controlled trial (Kelly, 2017[51])	A randomized pilot study designed to assess the feasibility of adapting an existing peer navigator intervention to work with a mentally ill population experiencing homelessness around the use of a collaborative electronic personal health record.	n=20 Age: 50.60 (10.09) Female: 50% White: 35% Biracial: 30% Black: 20%, Hispanic (comparison arm only): 33%	Currently experiencing homelessness or with a history of experiences of homelessness, supervised housing, or temporary shelters (45%); lived on the street (35%)	Designed for patients with SMI	Schizophrenia: 5% Mood disorder: 45% PTSD: 5%	Friends of the UCLA Semel Institute for Neuroscience and Human Behavior; also a CTSI grant
McGuire, 2009[37] USA Controlled before-after study VA-based	This “integrated care” intervention offered through a demonstration primary care clinic integrates homeless, primary care, and mental health services for veterans with experiences of homelessness and SMI or substance abuse offered in VA. The demonstration clinic co-locates primary care, MH care, and homeless services in a Mental Health Outpatient Treatment Center.	n=260 Age: 45.8 (7.0) Male: 99% Black: 50%	Veterans were considered to have experienced homelessness if they had spent the night prior to study enrollment in an outdoor location, in an emergency homeless shelter, in a hotel or motel, in a jail or prison, in a homeless residential care program that they had entered within the prior 30 days, or if they were temporarily doubled up with a friend or family member	75% SMI; broad definition	Schizophrenia: 13%, Bipolar disorder: 20% Depression: 42% PTSD: 17%	VA New Clinical Program Initiative
Patterson, 2012[47] Canada Cohort study	An interagency collaboration, British Columbia’s Homeless Intervention Project (HIP), provided coordinated housing	n=536 Age: Not reported	“Chronic homelessness” for longer than one year	Designed for patients with SMI	Schizophrenia: 18% Affective psychosis: 29%	British Columbia Ministry of

	and support services to adults with serious mental illness and who are chronically experiencing homelessness. The project brought a "variety of health, social and housing resources from diverse government and non-profit agencies" under a single administrative organization and service providers from multiple agencies were co-located.	Male: Not reported Black: Not reported				Social Development
Rivas-Vasquez, 2009[36] USA Retrospective cohort	This study assesses the effectiveness of a post-booking jail diversion program that ensured access to psychiatric and primary health care for a homeless program for population with experience of homelessness and mental illness. Individuals in "relationship-based care" program were compared to individuals diverted to usual care (other programs otherwise non-specified in the community).	n=229 Age: 43.0 (11.4) Male: 89% Hispanic: 50% Black: 24% White: 17% Other: 7%	Situational housing, defined as experiencing homelessness for less than 1 year or less than 4 episodes of homelessness during a 3-year period: 40% Chronic homelessness, defined as continuously experiencing homelessness for more than 1 year or 4 or more episodes of experiencing homelessness during a 3-year period: 61%	75% SMI; broad criteria	Schizophrenia: 61% Bipolar disorder: 8% Depressive disorder: 13%	Not reported
Rosenheck, 1993[45] USA Cohort study VA-based	The VA Homeless Chronically Mentally Ill (HCMI) program was designed to support access of Veterans with housing insecurity and chronic mental illness with medical and psychiatric services through 4 key services: outreach, advocacy and linkage, facilitation of access to VA and non-VA services, residential	n=1748 Age: 41.4 (1.2) Male: 98% White: 55%	Not reported	Designed for patients with SMI	Not reported	Not reported

	treatment for up to 6 months, and continuing case management.					
Solomon, 1988[48] USA Program evaluation	This demonstration project is based on an adjunctive program to an existing Health Care for the Homeless project which delivered primary health care services, service linkage, and improved access to population specific public benefits and programs. The adjunctive mental health program was intended to establish drop-in centers and provide outreach, assessment, and case management services for participants and educational, training programs and crisis back-up for non-mental health providers caring for this population.	Total: Not reported Age: Not reported Male: Not reported Black: Not reported	Not reported	Designed for patients with SMI	Not reported	Ohio Department of Mental Health and National Institute of Mental Health
Stanhope, 2014[30] USA Qualitative study	This study explored the experience of patients with axis I diagnoses of SMI and housing insecurity participating in a Housing-First program based chronic disease self-management program from the Stanford Chronic Disease Self-management program (CDSMP). The program involved the integration of an embedded primary care physician affiliated with a local academic medical center.	n=15 Age: Not reported Male: 100% Race: Not reported	Federal definition of chronic homelessness, transitional housing (100%)	Designed for patients with SMI	Not reported	Not reported
Stergiopoulos, 2012[49] Canada	This manuscript describes the evaluation of a Housing First Ethno-Racial Intensive Case	Total: 204 Age: 38.6 (12.1) Female: 34%	United Nations definition of absolute homelessness, defined as people who lack	Designed for patients with SMI	Bipolar disorder: 7%	Health Canada and Mental Health

Program evaluation[c]	Management program which was part of Canada's At Home/Chez Soi Research Demonstration Project across 5 Canadian Cities. The program involved housing support and diverse programming including services such as art therapy, computer training, and yoga.	Black: 53% Asian: 22% Mixed race: 11% Middle Eastern: 7% Latin American: 5%	a regular, fixed, physical shelter	Met broad 75% SMI criteria	Psychotic disorder: 36% Depression: 40% PTSD: 24%	Commission of Canada
Stergiopoulos, 2015[34] Canada Controlled before-after study	This study compared outcomes of 2 shelter-based collaborative mental health care models for men experiencing homelessness and mental illness. One model was an integrated multidisciplinary collaborative care model (IMCC) and the second was a less resource intensive shifted outpatient collaborative care model (SOCC).	n=140 Age: 42.1 (10.7) Male: 100% White: 56%	Defined as nights spent on streets or in shelters in past 12 months: ≤30 days 53 (38%) 31-90 days 28 (20%) >90 days 57 (42%)	Designed for patients with SMI	Mood disorders: 59% Schizophrenia or schizoaffective disorders: 49%	Canadian Institutes of Health Research; Partnerships for Health System Improvement; Ontario Career Scientist Award; Public Health Agency of Canada Applied Public Health Chair
Stergiopoulos, 2018[28] Canada Pre-post cohort (Stergiopoulos, 2017[62])	This study evaluates a brief (4-6 month) interdisciplinary intervention (Coordinated Access to Care for the Homeless or CATCH program) for adults experiencing homelessness who lack access to appropriate community supports following discharge from the hospital. CATCH is described as a "one-stop" program that includes primary and psychiatric care, peer support and case management	n=391 Age: 40.5 (12.0) Male: 74% White: 58%	All participants met criteria for current homelessness: living on the street, in crisis or emergency shelters or couch surfing	75% SMI; broad criteria	Psychotic disorder: 25% Major depressive disorder[b] or bipolar disorder: 77%	Canadian Institutes for Health Research

	for individuals discharged from the hospital.					
Weinstein, 2013[46] USA Cross-sectional	This program evaluation describes a Housing First Program affiliated with an academic medical center with a subgroup of patients who opted to receive "fully integrated care by the on-site primary care physician and team psychiatrist." A stated focus of the integrated care program was to screen and monitor chronic disease.	n=123 Age: 49.65 (9.36) Male: 62.6% Black: 72%	Federal definition of chronic homelessness	Designed for patients with SMI	Schizophrenia: 50.4% Mood disorders: 35.0%	Heath Resources and Service Administration Faculty Development in Primary Care Award
Weinstein, 2013[35] USA Program evaluation	This paper describes a preliminary evaluation of a program which created a new partnership between an academic family and community medicine department and a Housing First agency (*ie*, Pathways to Housing-PA) with an overarching goal of addressing multiple levels of health care needs for the target population. The program specifically embedded a primary care physician into the Housing First agency's Assertive Community Treatment team to provide on-site "primary care and population-based health monitoring and services".	n=Not reported Age: 51 Male: 68% Black: 71%	People with "chronic homelessness"	Designed for patients with SMI	Schizophrenia: 42% Mood disorder: 37%	Department of Health and Human Services; Health Resources and Services Administration

[a] Narrower definition of SMI includes schizophrenia, bipolar disorder, and other psychotic disorders. Broad definition of SMI additionally includes major depressive disorder and posttraumatic stress disorder.
[b] Author confirmed that mood disorder meant major depressive disorder in this study.
[c] Study design was a program evaluation of an RCT.
Abbreviations: HCMI=homeless, chronically mentally ill; PTSD=posttraumatic stress disorder; SMI=serious mental illness

APPENDIX C. INTERVENTION STRATEGIES TABLE

Study Country	Setting	Source of Participants (*eg*, Hospital, Criminal Justice)	Elements of Primary Care Integration	Core Disciplines Involved	#: Patient-level Intervention strategies	#: Clinic-level Intervention Strategies	#: System-level Intervention Strategies
492, Baker, 2018[32] USA	Mental health clinic	NR	Enhanced referral	Psychiatrist; Nursing;	6: Flexible appts; service navigation; interdisciplinary assessment; health education; crisis intervention; counseling/family therapy	2: Specific employee training; Medication review/ management;	1: Shared electronic health record
Corrigan, 2017[33] USA	Not Reported	Clinics, homeless shelters	Standard referral	Not reported	3: MI/goal setting; trauma informed care; harm reduction	2: Specific training for employees; peer navigators	Not reported
Kelly, 2018[31] USA	Mental health clinic	Multidisciplinary program (housing, MH, case management)	Standard referral	Behavioral health; Psychiatrist	6: Health education; MI/goal setting; CBT; interdisciplinary assessment; service navigation; access to computers/ technology	3: Specific employee training; Peer support/ community health workers; Medication review/ management;	2: Shared electronic health record; Proactive monitoring system
McGuire, 2009[37] USA	Primary care clinic	Housing program (homeless drop-in)	Interdisciplinary care planning; Co-location	Behavioral health; Psychiatrist; Nursing; Primary Care Provider;	6: interdisciplinary assessment, service navigation, financial income, appoint prioritization, no waiting times, flexible schedule	1: Specific employee training	Not reported
Patterson, 2012[47] Canada	Not reported	Not reported	Standard performance metrics;	Behavioral health; Psychiatrist;	2: Support for housing; income	Not reported	Not reported

Study Country	Setting	Source of Participants (*eg*, Hospital, Criminal Justice)	Elements of Primary Care Integration	Core Disciplines Involved	#: Patient-level Intervention strategies	#: Clinic-level Intervention Strategies	#: System-level Intervention Strategies
			Interagency collaborative body	Nursing; Primary Care Provider			
Rivas-Vasquez, 2009[36] USA	Interdisciplinary clinic, Citrus Health Network community health center	Criminal justice	Interdisciplinary care planning; Co-location	Behavioral health; Primary Care Provider	9: Health education; MI/goal-setting; stigma reduction; Justice system in-reach; Interdisciplinary intake; Service navigation; Transitions of care coordination; Transportation support; Housings support	2: Specific employee training; Peer support/ community health workers;	Not reported
Rosenheck, 1993[45] USA	Interdisciplinary clinic, HCMI clinics staff by 2 social workers and nurses	Community (street, soup kitchens); housing (shelters)	Enhanced referral	Nursing	2: Service navigation; Housing support	Not reported	Not reported
Solomon, 1988[48] USA	Housing services	Health clinic	Enhanced referral	Psychiatrist; Nursing; Primary Care Provider	2: Crisis intervention; Empathic/stigma reduction	2: Specific employee training; Peer support/ community health workers	Not reported
Stanhope, 2014[30] USA	Housing services, community setting	Housing program	Interdisciplinary care planning	Primary Care Provider	5: Health education; MI/goal setting; service navigation; financial housing support; no sobriety requirement	1: Peer support/ community health workers	Not reported

Study Country	Setting	Source of Participants (*eg*, Hospital, Criminal Justice)	Elements of Primary Care Integration	Core Disciplines Involved	#: Patient-level Intervention strategies	#: Clinic-level Intervention Strategies	#: System-level Intervention Strategies
Stergiopoulos, 2018 [28] Canada	Primary care clinic, mental health clinic	Hospitals discharging patients; homeless shelter sends recently discharged	Co-location, Enhanced referral	Not reported	5: Supportive therapy; assertive outreach; interdisciplinary assessment; service navigation	1: Peer support	Not reported
Stergiopoulos, 2015[34] Canada	Housing services	Housing program (shelter)	Interdisciplinary care planning; Co-location; Standard referral	Psychiatrist; Primary Care Provider	4: Health education; Service navigation; Housing support; Low barrier to care (on-site at shelter)	1: Specific employee training	1: Shared electronic health record
Stergiopoulos, 2012[49] Canada	Interdisciplinary clinic	Shelters, drop-in centers, outreach teams, mental health teams, inpatient programs, criminal justice programs	Standard referral	Psychiatrist	8: health education, crisis intervention, MI/goal setting, stigma, harm reduction, interdisciplinary assessment, service navigation, financial housing	1: Specific employee training	Not reported
Weinstein, 2013[35] USA	Primary care clinic, mental health clinic, Interdisciplinary clinic, housing services	NR	Co-location	Psychiatrist; Nursing; Primary Care Provider	6: Health education; Assertive outreach; Interdisciplinary needs assessment; Service navigation; Housing support; Flexible appointment scheduling	2: Peer support/ community health workers; Medication review/ management	1: Proactive monitoring system
Weinstein, 2013[46] USA	Interdisciplinary clinic, housing services	NR	Interdisciplinary care planning; Co-location;	Psychiatrist; Nursing; Primary Care Provider	4: Assertive outreach; Service navigation; Housing support; No	Not reported	2: Shared electronic health record;

Study Country	Setting	Source of Participants (*eg*, Hospital, Criminal Justice)	Elements of Primary Care Integration	Core Disciplines Involved	#: Patient-level Intervention strategies	#: Clinic-level Intervention Strategies	#: System-level Intervention Strategies
			Enhanced referral		sobriety/treatment requirements		Standard performance metrics

Abbreviations: MI= Motivational interviewing; CBT= Cognitive behavioral therapy

APPENDIX D. SUMMARY OF OUTCOME MEASURES

General Outcome Measure	Specific Outcome Measure	Follow-up Range	Study
Patient Level			
Mental and physical health			
Mental health, general[a]	SF 36; Diagnostic Interview Schedule; Psychiatric Epidemiology Research Interview; Psychiatric Problem Index; TCU Health Form; Recovery assessment Scale; Colorado Symptom Index, modified; Brief Psychiatric Rating Scale	Baseline to 18 months	ACCESS[40] Non-ACCESS[28,33,34,37,45]
Substance use[a]	Addiction Severity Index; self-report	Baseline to 18 months	ACCESS[38,40] Non-ACCESS[28,34,37,45]
Physical health, general[a]	SF-36	Baseline to 18 months	Non-ACCESS [28,37]
Physical health, specific	Number of chronic conditions, specific conditions diagnosed	Not reported	Non-ACCESS[46]
Pain	SF-12	Baseline to 6 months	Non-ACCESS[31]
Community functioning, community integration, and quality of life			
Quality of life	Lehman QoLI-20; single summary question	Baseline to 12 months	ACCESS[40] Non-ACCESS[28,33]
Victimization	Sum of items about frequency of physical victimization in last 2 months (Lehman quality of life)	Baseline to 18 months	ACCESS[38]
Criminal justice involvement	Number of incarcerations among “regularly followed clients”; post-diversion arrest rate; criminal justice status (parole or probation); number of offenses	12 months to 2 years	Non-ACCESS[32,36,37,47]
Community functioning	Multnomah Community Ability Scale	Baseline to 12 months	Non-ACCESS[34]
Health care self-management	Adapted Mental Health Confidence Scale	Baseline to 6 months	Non-ACCESS[31]
Housing	Residential Time Line Follow-Back Calendar; self-reported # days on street/in shelter; self-reported # of moves in past 12 months; self-reported lifetime duration of experiences of homelessness; achievement of independent housing domiciliary days	Baseline to 12 months	ACCESS[40] Non-ACCESS[28,33,34,45]
Social support[a]	Four unspecified questions about friends or professionals encouraging medical services in last 12 months;	Baseline to 18 months	ACCESS[38] Non-ACCESS[37]

General Outcome Measure	Specific Outcome Measure	Follow-up Range	Study
	# people from 9 different categories (*eg*, parent, sibling, coworker, friend) with whom the subject felt close; National Vietnam Veterans' Readjustment Study Scale		
Care utilization			
Hospitalizations	Self-report; days psychiatric inpatient stay; days medical-surgical inpatient stay	Baseline to 12 months, "*years"*	Non-ACCESS[28,32,34,45,47]
Health and social service utilization[b]	Health care and Health care utilization scale; "health and social service use" in last 60 days; Receipt of "public support payments and housing subsidies"; having a primary case manager	Baseline to 12 months	ACCESS[40] Non-ACCESS[31]
Emergency department visit	Self-report; EHR based	3 to 18 months	Non-ACCESS[28,34,37]
Primary care visits	Self-report # in last 30 days; EHR-based data collection	Baseline to 18 months	Non-ACCESS[34,37]
Psychiatric visits (outpatient)	Number per individual	12 months	Non-ACCESS[37,45]
Outpatient visits (other)	Number of medical-surgical visits per individual; # health-related appointments (scheduled/achieved)	12 months	Non-ACCESS[33,45]
Primary care access	Number of days to primary care visit following enrollment	Not applicable	Non-ACCESS[37]
Intervention engagement	Time spent in program (days); total # clinical contacts; attendance record service contact logs	12 months	Non-ACCESS[36,48]
Receipt of financial support	Shelter payments; total social assistance	12 months	Non-ACCESS[47]
Patient-level service integration	# of domains (*ie*, housing support, mental health, substance abuse, general health care, public income support, vocational rehab) in which services were received	Baseline to 12 months	ACCESS[40]
Health Care costs	Site-specific cost per service received; $ for outpatient medical services per individual per year	6 to 12 months	Non-ACCESS[45,47]
Insurance coverage	Receipt insurance coverage	12 months	Non-ACCESS[33]
Receipt of health screenings	Self-report; summary prevention services ratio based from EHR	Baseline to 12 months	Non-ACCESS[31,37]

General Outcome Measure	Specific Outcome Measure	Follow-up Range	Study
Patient experience and quality of care			
Quality of care	National Association of State Mental Health Program Directors indicators; Healthcare Effectiveness Data Information Set		Non-ACCESS[46]
Participant perspective on program	Participant perspectives on program model		Non-ACCESS[49]
Patient-provider alliance	Working Alliance Inventory-Participant	6 weeks to 6 months	Non-ACCESS[28,31]
PCP relationship	Engagement with the Health Care Provider Scale	Baseline to 6 months	Non-ACCESS[31]
Unmet needs or barriers to care			
Competing needs	5-item scale		Non-ACCESS[37]
Barriers and facilitators to addressing health needs	Semi-structured interviews	Not applicable	Non-ACCESS[30]
Perceived need	Patient-perceived need, provider assessment of patient need and differences between the two	Baseline	ACCESS[43]
Clinic Level			
Volume of care provided			
Collaborative personal health record utilization	Count of log-ins	6 months	Non-ACCESS[31]
Psychiatric evaluations by program	Visits attended	2 years	Non-ACCESS[32]
Preventive services	Percentage of patient population receiving preventive services	Not reported	Non-ACCESS[35]
Quality of clinical care provided			
Program performance	Local Public Health System Performance Assessment Instrument	Not applicable	Non-ACCESS[35]
Primary care medical home alignment	Overlap between intervention components and primary care medical home elements	Not applicable	Non-ACCESS[35]
Fidelity to care model	Measure of fidelity to assertive community treatment model; Fidelity evaluation via qualitative data collection (*eg*, observations, interviews)	12 months to 3 years	ACCESS[40] Non-ACCESS[49]
Peer support	Assessment of functioning of consumer case worker	Not applicable	Non-ACCESS[48]

General Outcome Measure	Specific Outcome Measure	Follow-up Range	Study
Program implementation			
Barriers and facilitators of program implementation	Barriers and facilitators of program implementation	Not applicable	Non-ACCESS[49]
Agency Integration	Agencies integration within existing system	Baseline	ACCESS[44]
Provider/staff experience			
Provider perspective on program	Provider perspectives on program model	Not applicable	Non-ACCESS[49]
Employee training evaluation	Employee training evaluation; post-training attitude assessment	Not applicable	Non-ACCESS[48]
System Level			
Cross-agency collaboration			
Integration strategies	Systems integration strategies selected; novel systems integration strategies introduced; changes in strategies over time; implementation status of strategies	5 years	ACCESS (Steadman, 2002[39] Cocozza, 2000[41] Rosenheck, 2002[40])
Service Linkage	Reported patient referrals between service providers at each site within a multi-site program; Questions about referrals of patients, fund transfers, information sharing (5-point Likert scale); Integration across a system	2 years	ACCESS[42,44]
Service maintenance			
Service continuation	Number of core services continued post-funding by interagency site	5 years	ACCESS[39]
Perceived service provision			
Perceived accessibility of services for persons with experiences of homelessness and SMI	Robert Wood Johnson Foundation Program on Chronic Mental Illness	Not applicable	ACCESS[44]
Perceived coordination of services for persons with experiences of homelessness and SMI	Robert Wood Johnson Foundation Program on Chronic Mental Illness	Not applicable	ACCESS[44]

[a] Measure used in a VA study
[b] Could include emergency room or urgent care providers
Abbreviations: TCU=Texas Christian University; EHR=Electronic health record

APPENDIX E. REPORTED FINDINGS BY INCLUDED STUDY

Study	Study Design Number of Patients Length of Follow Up	Number of Intervention Strategies	Primary Care Integration Approach Core Disciplines	Relevant Author-Reported Key Findings
Baker, 2018[32]	• Program evaluation • n=212 • Subgroup of patients followed for 6+ months	Patient: 6 Clinic: 2 System: 1	• Enhanced referral • Psychiatry, psychiatric/mental health nurse practitioners	Main finding from abstract: "All clients were housed and none incarcerated. From 2008 to 2010, only 3% of clients were hospitalized, compared to 7.5% of adults with SMI [population estimate]."
Corrigan, 2017[33]	• Randomized controlled trial • n=67 • 12 months	Patient: 4 Clinic: 2 System: 0	• Standard referral • Peer support	Main finding from abstract: "Findings from group by trial ANOVAs of omnibus measures of the four constructs [physical and mental health, recovery, and quality of life] showed significant impact over the one year for participants in PNP compared to control described by small to moderate effect sizes. These differences emerged even though both groups showed significant improvements in reduced homelessness and insurance coverage."
Kelly, 2018[31]	• Randomized controlled trial • study • n=20 • 6 months	Patient: 6 Clinic: 3 System: 2	• Standard referral • Peer health navigator, psychiatry, behavioral health, case management, housing support	Main finding from abstract: "Health navigator contacts and use of personal health records were associated with improvements in health care and self-management."
McGuire 2009[37]	• Single site controlled before-after study • n=260 • 18 months	Patient: 6 Clinic: 1 System: 0	• Co-located, interdisciplinary care planning • Case manager, behavioral health, psychiatrist, nursing, primary care, housing services	Main finding from abstract: "… the integrated care group was more rapidly enrolled in primary care, received more prevention services and primary care visits, and fewer emergency department visits, and was not different in inpatient utilization or in physical health status …The demonstration clinic improved access to primary care services and reduced emergency services but did not improve perceived physical health status."
Patterson, 2012[47]	• Cohort • n=536 • At least 6 months	Patient: 2 Clinic: 0 System: 1	• Co-located, enhanced referral • Behavioral health, psychiatrist, nursing, primary care	Main finding from abstract: Pre-post enrollment period comparisons "indicated significant improvements in health and social service involvement and reductions in offending."

Study	Study Design Number of Patients Length of Follow Up	Number of Intervention Strategies	Primary Care Integration Approach Core Disciplines	Relevant Author-Reported Key Findings
Rivas-Vazquez, 2009[36]	• Cohort • n=229 • Not reported	Patient: 9 Clinic: 2 System: 0	• Co-located, interdisciplinary care planning • Case manager, behavioral health provider, primary care	Main finding from abstract: "A highly significant reduction in arrest rates for individuals diverted to the relationship-based care program was observed. However, the arrest rate for the control group remained nearly identical before and after diversion. For the relationship-based care group, pre-diversion arrest rates, duration of participation in the program, and number of psychiatric contacts accounted for a significant portion of the recidivism variance."
Rosenheck, 1993[45]	• Cohort • n=1748 • 12 months	Patient: 2 Clinic: 0 System: 0	• Enhanced referral • Behavioral health, nursing	Main finding from abstract: "Although utilization of inpatient services did not increase after veterans' initial contact with the program, use of domiciliary and outpatient services increased substantially. Total annual costs to the VA also increased by 35%.... Both clinical need and participation in the program were associated with increased use of health services and increased cost."
Stanhope, 2014[30]	• Qualitative study • n=15 • Not applicable	Patient: 4 Clinic: 1 System: 0	• Integrative care planning • Primary care	All thematic findings as reported by authors <u>Consumer identified barriers to addressing health needs:</u> *Internal Barriers*: • "Postponement: Being in denial about their health was driven both by a minimization of their symptoms and a fear of what they might find if they sought care." (p 659) • "Depends on my mood: The role that mental health symptoms played in people's ability to reach out for help and take steps to improve their health was profound." (p 659) *External Barriers*: • "Now that I have a place to stay. I can start dealing with me: Participants described addressing their health needs in the context of transitioning to housing"

Study	Study Design Number of Patients Length of Follow Up	Number of Intervention Strategies	Primary Care Integration Approach Core Disciplines	Relevant Author-Reported Key Findings
				• "The system: Many participants expressed a deep distrust of the health care system which emerged both from direct experiences of discrimination due to their mental health problems and being homeless and also a general skepticism surrounding an insurance based system." (p 660) Overcoming Barriers: • "Getting out of our own heads: The most significant part of the self-management group was the peer support process that emerged from their weekly sessions." (p 661) • "Trusting my own voice: With increased knowledge and encouragement from the group, the participants felt more able to take control of their health, which often meant grappling with the internal and external barriers they had encountered."
Solomon, 1988[48]	• Program evaluation • Not applicable • Not applicable	Patient: 2 Clinic: 2 System: 0	• Enhanced referral • Behavioral health, psychiatry, nursing, primary care, case manager	Conclusion as reported by author: "A mental health project such as this needs to be flexible in its efforts to serve homeless persons who are generally suspicious of others and resistant to using traditional mental health services. Thought needs to be given to developing a non-stigmatizing identity for such a program." (p 13)
Stergiopoulos, 2012[49] Stergiopoulos, 2017[62]	• Qualitative program evaluation • n=204 • Not applicable	Patient: 8 Clinic: 1 System: 0	• Standard referral • Psychiatry, case manager	Main finding from abstract: "The target population had complex health and social needs. The [intervention] enjoyed a high degree of fidelity…. Program providers reported congruence of these philosophies of practice, and program participants valued the program and its components."
Stergiopoulos, 2018[28]	• Cohort study • n=391	Patient: 5 Clinic: 1	• Co-located, enhanced referral • Not reported	Main finding from abstract: "Participants had statistically significant improvements in mental and

Study	Study Design Number of Patients Length of Follow Up	Number of Intervention Strategies	Primary Care Integration Approach Core Disciplines	Relevant Author-Reported Key Findings
	• 6 months	System: 0		physical health status and reductions in mental health symptoms, substance misuse and the number of hospital admissions. Strength of working alliance…. associated with reduced health care use and mental health symptoms."
Stergiopoulos, 2015[34]	• Controlled before-after study • n=140 • 12 months	Agency A Patient: 4 Clinic: 1 System: 1 Agency B Patient: 4 Clinic: 1 System: 1	Agency A (Integrated multidisciplinary collaborative care model) • Co-located, interdisciplinary care planning • Psychiatry, primary care, case manager, shelter staff Agency B (shifted outpatient collaborative care model) • Standard referral • Psychiatry, case manager, shelter staff	Main finding from abstract: "We observed improvements in both programs over time on measures of community functioning, residential stability, hospitalizations, emergency department visits and community physician visits, with no significant differences between groups over time"
Weinstein, 2013[35]	• Program evaluation • n=Not reported • Not reported	Patient: 6 Clinic: 2 System: 1	• Co-located, enhanced referral • Licensed clinical social worker, psychiatrist, nursing, primary care, peer specialist	Main finding from abstract: "Preliminary program evaluation results suggest that this partnership is evolving to function as an integrated person-centered health home and an effective local public health monitoring system"
Weinstein, 2013[46]	• Cross-sectional • n=123 • Not reported	Patient: 4 Clinic: 0 System: 2	• Co-location, interdisciplinary care planning, enhanced referral, • Psychiatrist, nursing, primary care	Main finding from abstract: "Participants had high rates of comorbid chronic disease and risk behavior…The integrated care program subgroup had relatively high rates of documentation of some health care quality indicators: 62% with BMI, 73% with BP, 77% with tobacco use history, 87% with substance use history."
ACCESS: Multi-site federal demonstration project; nonrandomized cohort; strategies employed and approaches to primary care integration varied across sites				

Study	Study Design Number of Patients Length of Follow Up	Number of Intervention Strategies	Primary Care Integration Approach Core Disciplines	Relevant Author-Reported Key Findings
Calloway, 1998[42]	Main finding from abstract: "In 1994 and 1996, of the 20,801 pairs of potential service linkages, about a third were in place while the remaining two-thirds were absent. Overall, linkages showed a slight but significant increase between 1994 and 1996. More than half of the linkages changed in type, indicating a fluid service system"			
Cheng, 2008[38]	Main finding from abstract "After 18 months of follow up, women had significantly better outcomes in terms of family relationships (est. mean score increased 0.100), victimization (score decreased 0.164), and social support (score increased 0.363) than did men (all, p<0001). Being accompanied by children was significantly associated with less change in drug use among women compared to men (p<0.01)"			
Cocozza, 2000[41]	Lessons suggested by data as reported by authors: "It is possible to systematically monitor and measure the strategies used by localities in their efforts to better integrate service delivery systems." "Some strategies have a higher probability of successful implementation than others." "There are patterns in the selection of system integration strategies across sites" "when supported, communities can develop and implement a variety of strategies for integrating services" (p 405-406)			
Morrissey, 1997[44]	Main finding from abstract "Services at baseline for homeless mentally ill persons at the program sites were rates as relatively inaccessible, and the coordination of services between agencies was rates as even more problematic….On average, at baseline agencies that had received an ACCESS grant were better connected to their local service network than were other agencies"			
Rosenheck, 1997[43]	Main finding from abstract: "The greatest differences between clients' and providers perceptions of service needs were in dental and medical services, which were more frequently identified as needs by clients, and in substance abuse and mental health services which were more frequently identified by providers. Clients' and providers assessments of need were significantly, but not strongly, correlated with each other, and both were correlated with use of MH and substance use services""			
Rosenheck, 2002[40]	Main finding from abstract: "…clients at the experimental sites showed no greater improvement on measures of MH or housing…across four cohorts than those at the comparison sites. More extensive implementation of system integration strategies was unrelated to these outcomes…clients of sites that became more integrated…had progressively better housing outcomes."			
Steadman, 2002[39]	Conclusion as reported by author: "Fully 17 or the 18 ACCESS sites were continuing to provide services to homeless persons with SMI and co-occurring substance abuse by using parts or all of the ACCESS model" (p 491)			

APPENDIX F. EXCLUDED STUDIES TABLE

	Exclusion Reason			
Study	**Not OECD**	**Not population**	**Not intervention**	**Not design**
Anonymous, 2005[1]		X		
Barrow, 2019[2]		X		
Basu, 2012[3]		X		
Behl-Chadha, 2017[4]		X		
Beiser, 2019[5]			X	
Bennett, 1995[6]		X		
Biederman, 2019[7]		X		
Blue-Howells, 2008[8]		X		
Boardman, 2006[9]		X		
Booth, 2019[10]				X
Bottomley, 2001[11]		X		
Bowker, 2013[12]		X		
Bracken, 1999[13]		X		
Brown, 2013[14]		X		
Brown, 2018[15]		X		
Brush, 1999[16]				X
Buck, 2011[17]		X		
Caban-Aleman, 2020[18]		X		
Canham, 2019[19]		X		
Carriere, 2008[20]		X		
Carter, 1994[21]		X		
Center for Substance Abuse, 4734[22]				X
Chan, 2019[23]		X		
Chhabra, 2020[24]			X	
Child, 1998[25]		X		
Christensen, 2004[26]			X	
Chrystal, 2015[27]			X	
Ciaranello, 2006[28]		X		
Clark, 2003[29]			X	
Clark, 1999[30]				X
Community Psychiatry Program, 1989[31]				X
Conovkr, 1997[32]		X		
Culhane, 2002[33]			X	
Currie, 2018[34]		X		
Darbyshire, 2006[35]		X		
Dates, 2009[36]			X	
Davis, 2012[37]				X

	Exclusion Reason			
Study	**Not OECD**	**Not population**	**Not intervention**	**Not design**
Deas-Nesmith, 1992[38]				X
Dennis, 2000[39]				X
Desai, 2005[40]		X		
Dickey, 2000[41]				X
Dickins, 2019[42]		X		
Doering, 2002[43]			X	
Dorney-Smith, 2011[44]		X		
Douglass, 2018[45]		X		
Elissen, 2013[46]		X		
Ellison, 2016[47]			X	
Essendorfer, 2007[48]			X	
Fernandez, 1985[49]				X
Ferreira, 2016[50]	X			
Flores, 1998[51]			X	
Fournier, 1993[52]		X		
Fraino, 2015[53]		X		
Gabrielian, 2017[54]		X		
Gabrielian, 2016[55]		X		
Gabrielian, 2014[56]		X		
Gatewood, 2011[57]		X		
Gelberg, 1996[58]		X		
Gordon, 2007[59]		X		
Gundlapalli, 2017[60]		X		
Gundlapalli, 2005[61]		X		
Gunner, 2019[62]			X	
Hatton, 2001[63]		X		
Henwood, 2013[64]			X	
Henwood, 2011[65]				X
Hoist, 2008[66]				X
Howe, 2009[67]		X		
Jego, 2018[68]			X	
Jego, 2016[69]		X		
Johnson, 2017[70]		X		
Jones, 2017[71]			X	
Jones, 2018[72]		X		
Kaduszkiewicz, 2017[73]			X	
Kalton, 2016[74]		X		
Kaplan-Weisman, 2019[75]		X		
Keogh, 2015[76]		X		
Kerman, 2016[77]			X	
Kertesz, 2013[78]		X		

	Exclusion Reason			
Study	**Not OECD**	**Not population**	**Not intervention**	**Not design**
Kertesz, 2009[79]		X		
Kessell, 2006[80]		X		
Kirkland-Kyhn, 2020[81]				X
Koh, 2016[82]				X
Koon, 2010[83]		X		
Kuehn, 2019[84]				X
Lam, 1999[85]			X	
Lamanna, 2018[86]		X		
Lashley, 2019[87]		X		
Lee, 2013[88]		X		
Levy, 2004[89]				X
Liu, 2020[90]		X		
Luchenski, 2018[91]		X		
Madrid, 2008[92]		X		
Marshall, 1995[93]			X	
McGuire, 2007[94]			X	
McGuire, 2004[95]			X	
McGuire, 2002[96]		X		
McInnes, 2014[97]		X		
Mehta, 2017[98]		X		
Mercuel, 2013[99]			X	
Mishan, 2017[100]		X		
Montgomery, 2008[101]			X	
Moore, 2017[102]		X		
Moore, 2019[103]		X		
Morrissey, 2002[104]			X	
Morse, 1997[105]			X	
Mowbray, 1992[106]		X		
Myers, 2018[107]		X		
Nakashima, 2004[108]		X		
Nakonezny, 2005[109]		X		
Ng, 2004[110]		X		
No authorship, 1986[111]				X
O'Toole, 2013[112]		X		
O'Toole, 2010[113]		X		
O'Toole, 2016[114]		X		
O'Toole, 2015[115]		X		
O'Toole, 2018[116]		X		
O'Toole, 2011[117]		X		
Parker, 2019[118]			X	
Paudyal, 2018[119]		X		

	Exclusion Reason			
Study	**Not OECD**	**Not population**	**Not intervention**	**Not design**
Pauly, 2018[120]		X		
Pfeil, 2004[121]		X		
Pickett, 2015[122]		X		
Podymow, 2006[123]		X		
Pollio, 2000[124]			X	
Purkey, 2019[125]			X	
Putnam, 1985[126]				X
Raines, 2019[127]				X
Resnik, 2017[128]		X		
Rogers, 1993[129]				X
Rosenbaum, 2017[130]			X	
Rosenheck, 1995[131]		X		
Rosenheck, 1997[132]			X	
Rosenheck, 1998[133]			X	
Rothbard, 2004[134]			X	
Rowe, 2016[135]		X		
Salize, 2013[136]		X		
Sarango, 2017[137]		X		
Sestito, 2017[138]		X		
Shepherd, 1998[139]		X		
Shortt, 2008[140]		X		
Simmons, 2017[141]				X
Smelson, 2018[142]			X	
Snyder, 2002[143]		X		
Stein, 2000[144]		X		
Stergiopoulos, 2015[145]			X	
Strange, 2018[146]		X		
Sumalinog, 2017[147]				X
Summerside, 2013[148]		X		
Swabri, 2019[149]		X		
Timms, 2016[150]			X	
Tollett, 1995[151]		X		
Trabert, 2016[152]				X
Tsai, 2019[153]		X		
Tyner, 2014[154]				X
Upshur, 2017[155]			X	
Vargas, 2018[156]	X			
Vazquez Souza, 2011[157]			X	
Vickery, 2020[158]		X		
Weinreb, 2007[159]		X		
Wenger, 2007[160]				X

	Exclusion Reason			
Study	**Not OECD**	**Not population**	**Not intervention**	**Not design**
Wijk, 2019[161]	X			
Wilkins, 2015[162]				X
Worley, 1990[163]		X		
Wright, 2016[164]		X		
Wright, 2004[165]		X		
Zerger, 2009[166]		X		
Zlotnick, 2013[167]		X		

Excluded Studies Reference List

1. Anonymous. Discharge planning advisor. Innovative program helps homeless, frees up beds. *Hosp Case Manag.* 2005;13(10):155-157.
2. Barrow V, Medcalf P. The introduction of a homeless healthcare team in hospital improves staff knowledge and attitudes towards homeless patients. *Clin Med (Northfield Il).* 2019;19(4):294-298.
3. Basu A, Kee R, Buchanan D, Sadowski LS. Comparative cost analysis of housing and case management program for chronically ill homeless adults compared to usual care. *Health Serv Res.* 2012;47(1 Pt 2):523-543.
4. Behl-Chadha B, Savageau JA, Bharel M, Gagnon M, Lei PP, Hillerns C. Comparison of Patient Experience between a Practice for Homeless Patients and Other Practices Engaged in a Patient-Centered Medical Home Initiative. *J Health Care Poor Underserved.* 2017;28(3):1151-1164.
5. Beiser ME, Smith K, Ingemi M, Mulligan E, Baggett TP. Hepatitis C treatment outcomes among homeless-experienced individuals at a community health centre in Boston. *International Journal of Drug Policy.* 2019;72:129-137.
6. Bennett JB, Scholler-Jaquish A. The winner's group: a self-help group for homeless chemically dependent persons. *J Psychosoc Nurs Ment Health Serv.* 1995;33(4):14-19.
7. Biederman DJ, Gamble J, Wilson S, Douglas C, Feigal J. Health care utilization following a homeless medical respite pilot program. *Public Health Nurs.* 2019;36(3):296-302.
8. Blue-Howells J, McGuire J, Nakashima J. Co-location of health care services for homeless veterans: a case study of innovation in program implementation. *Soc Work Health Care.* 2008;47(3):219-231.
9. Boardman JB. Health access and integration for adults with serious and persistent mental illness. *Families, Systems and Health.* 2006;24(1):3-18.
10. Booth A, Preston L, Baxter S, Wong R, Chambers D, Turner J. *NIHR Journals Library. Health Services and Delivery Research.* 2019;9:9.
11. Bottomley JM. Health care and homeless older adults. *Topics in Geriatric Rehabilitation.* 2001;17(1):1-21.
12. Bowker D, Weg B, Hansen E. Nontraditional clinical sites: working with those who are homeless. *Nurse Educ.* 2013;38(4):139-140.
13. Bracken P, Cohen B. Home treatment in Bradford. *Psychiatric Bulletin.* 1999;23(6):349-352.

14. Brown CA, Hickey JS, Buck DS. Shaping the Jail Inreach Project: program evaluation as a quality improvement measure to inform programmatic decision making and improve outcomes. *J Health Care Poor Underserved.* 2013;24(2):435-443.
15. Brown M, Rowe M, Cunningham A, Ponce AN. Evaluation of a Comprehensive SAMHSA Service Program for Individuals Experiencing Chronic Homelessness. *The journal of behavioral health services & research.* 2018;45(4):605-613.
16. Brush BL, McGee EM. The Expanded Care for Healthy Outcomes (ECHO) Project: addressing the spiritual care needs of homeless men in recovery. *Clin Excell Nurse Pract.* 1999;3(2):116-122.
17. Buck DS, Brown CA, Hickey JS. The Jail Inreach Project: linking homeless inmates who have mental illness with community health services. *Psychiatr Serv.* 2011;62(2):120-122.
18. Caban-Aleman C, Iobst S, Luna AM, Foster A. Addressing the Poverty Barrier in Collaborative Care for Adults Experiencing Homelessness: A Case-Based Report. *Community Ment Health J.* 2020;56(4):652-661.
19. Canham SL, Davidson S, Custodio K, et al. Health supports needed for homeless persons transitioning from hospitals. *Health & Social Care in the Community.* 2019;27(3):531-545.
20. Carriere GL. Linking women to health and wellness: Street Outreach takes a population health approach. *International Journal of Drug Policy.* 2008;19(3):205-210.
21. Carter KF, Green RD, Green L, Dufour LT. Health needs of homeless clients accessing nursing care at a free clinic. *J Community Health Nurs.* 1994;11(3):139-147.
22. Center for Substance Abuse T. *Substance Abuse and Mental Health Services Administration.* 4734.
23. Chan B, Hulen E, Edwards S, Mitchell M, Nicolaidis C, Saha S. "It's Like Riding Out the Chaos": Caring for Socially Complex Patients in an Ambulatory Intensive Care Unit (A-ICU). *Ann Fam Med.* 2019;17(6):495-501.
24. Chhabra M, Spector E, Demuynck S, Wiest D, Buckley L, Shea JA. Assessing the relationship between housing and health among medically complex, chronically homeless individuals experiencing frequent hospital use in the United States. *Health & Social Care in the Community.* 2020;28(1):91-99.
25. Child J, Bierer M, Eagle K. Unexpected factors predict control of hypertension in a hospital-based homeless clinic. *Mt Sinai J Med.* 1998;65(4):304-307.
26. Christensen RC, Cournos F. Community psychiatry education through homeless outreach. *Psychiatr Serv.* 2004;55(8):942.
27. Chrystal JG, Glover DL, Young AS, et al. Experience of primary care among homeless individuals with mental health conditions. *PLoS ONE [Electronic Resource].* 2015;10(2):e0117395.
28. Ciaranello AL, Molitor F, Leamon M, et al. Providing health care services to the formerly homeless: a quasi-experimental evaluation. *J Health Care Poor Underserved.* 2006;17(2):441-461.
29. Clark C, Rich AR. Outcomes of homeless adults with mental illness in a housing program and in case management only. *Psychiatr Serv.* 2003;54(1):78-83.
30. Clark C, Teague GB, Henry RM. Preventing homelessness in Florida. *Alcoholism Treatment Quarterly.* 1999;17(1-2):73-91.
31. Integrating training and research with clinical services in a community setting. *Hosp Community Psychiatry.* 1989;40(11):1175-1179.

32. Conovkr S, Berkman A, Gheith A, et al. Methods for successful follow-up of elusive urban populations: An ethnographic approach with homeless men. *Bulletin of the New York Academy of Medicine: Journal of Urban Health.* 1997;74(1):90-108.
33. Culhane D, Metraux S, Hadley T. Public service reductions associated with placement of homeless persons with severe mental illness in supportive housing. *Housing Policy Debate.* 2002(13):107– 163.
34. Currie LB, Patterson ML, Moniruzzaman A, McCandless LC, Somers JM. Continuity of Care among People Experiencing Homelessness and Mental Illness: Does Community Follow-up Reduce Rehospitalization? *Health Serv Res.* 2018;53(5):3400-3415.
35. Darbyshire P, Muir-Cochrane E, Fereday J, Jureidini J, Drummond A. Engagement with health and social care services: perceptions of homeless young people with mental health problems. *Health & Social Care in the Community.* 2006;14(6):553-562.
36. Dates B, Young MS, Bennett-Clark F, et al. Assertive community treatment fidelity in programs serving persons who are homeless with co-occurring mental and addictive disorders. *J Dual Diagn.* 2009;5(3-4):264-286.
37. Davis C. Health care for homeless people: the role of emergency nurses. *Emerg Nurse.* 2012;20(2):24-27; quiz 29.
38. Deas-Nesmith D, McLeod-Bryant S. Psychiatric deinstitutionalization and its cultural insensitivity: consequences and recommendations for the future. *J Natl Med Assoc.* 1992;84(12):1036-1040.
39. Dennis DL, Steadman HJ, Cocozza JJ. The impact of federal systems integration initiatives on services for mentally ill homeless persons. *Mental Health Services Research.* 2000;2(3):165-174.
40. Desai MM, Rosenheck RA. Unmet need for medical care among homeless adults with serious mental illness. *Gen Hosp Psychiatry.* 2005;27(6):418-425.
41. Dickey B. Review of programs for persons who are homeless and mentally ill. *Harv Rev Psychiatry.* 2000;8(5):242-250.
42. Dickins K, Buchholz SW, Ingram D, et al. "Now that you've got that coverage": Promoting use of a regular source of primary care among homeless persons. *J Am Assoc Nurse Pract.* 2019;13:13.
43. Doering TJ, Hermes E, Konitzer M, Fischer GC, Steuernagel B. [Health situation of homeless in a health care home in Hannover]. *Gesundheitswesen.* 2002;64(6):375-382.
44. Dorney-Smith S. Nurse-led homeless intermediate care: an economic evaluation. *Br J Nurs.* 2011;20(18):1193-1197.
45. Douglass KM, Polcari A, Najjar N, Kronenfeld J, Deshpande AR. Health Care for the Homeless Transgender Community: Psychiatric Services and Transition Care at a Student-Run Clinic. *J Health Care Poor Underserved.* 2018;29(3):940-948.
46. Elissen AM, Van Raak AJ, Derckx EW, Vrijhoef HJ. Improving homeless persons' utilisation of primary care: Lessons to be learned from an outreach programme in The Netherlands. *International Journal of Social Welfare.* 2013;22(1):80-89.
47. Ellison ML, Schutt RK, Glickman ME, et al. Patterns and predictors of engagement in peer support among homeless veterans with mental health conditions and substance use histories. *Psychiatric Rehabilitation Journal.* 2016;39(3):266-273.
48. Essendorfer L. [Structures of professional nursing in the care of homeless persons: orienting to living conditions]. *Pflege Z.* 2007;60(12):666-669.
49. Fernandez J. On planning a service for the homeless mentally ill in Dublin. *International Journal of Family Psychiatry.* 1985;6(2):149-163.

50. Ferreira CP, Rozendo CA, Melo GB. [A Street Clinic in a state capital in Northeast Brazil from the perspective of homeless people]. *Cad Saude Publica.* 2016;32(8):e00070515.
51. Flores EJ. The Honolulu VA Hoptel: an option for the mentally ill homeless veteran. *Continuum (Chicago).* 1998;18(6):13-17.
52. Fournier AM, Perez-Stable A, Greer PJ, Jr. Lessons from a clinic for the homeless. The Camillus Health Concern. *JAMA.* 1993;270(22):2721-2724.
53. Fraino JA. Mobile Nurse Practitioner: A Pilot Program to Address Service Gaps Experienced by Homeless Individuals. *J Psychosoc Nurs Ment Health Serv.* 2015;53(7):38-43.
54. Gabrielian S, Chen JC, Minhaj BP, et al. Feasibility and Acceptability of a Colocated Homeless-Tailored Primary Care Clinic and Emergency Department. *J Prim Care Community Health.* 2017;8(4):338-344.
55. Gabrielian S, Yuan AH, Andersen RM, Gelberg L. Diagnoses Treated in Ambulatory Care Among Homeless-Experienced Veterans: Does Supported Housing Matter? *J Prim Care Community Health.* 2016;7(4):281-287.
56. Gabrielian S, Yuan AH, Andersen RM, Rubenstein LV, Gelberg L. VA health service utilization for homeless and low-income Veterans: a spotlight on the VA Supportive Housing (VASH) program in greater Los Angeles. *Med Care.* 2014;52(5):454-461.
57. Gatewood SB, Moczygemba LR, Alexander AJ, et al. Development and Implementation of an Academic-Community Partnership to Enhance Care among Homeless Persons. *Inov Pharm.* 2011;2(1):1-7.
58. Gelberg L, Doblin BH, Leake BD. Ambulatory health services provided to low-income and homeless adult patients in a major community health center. *J Gen Intern Med.* 1996;11(3):156-162.
59. Gordon AJ, Montlack ML, Freyder P, et al. The Allegheny initiative for mental health integration for the homeless: integrating heterogeneous health services for homeless persons. *Am J Public Health.* 2007;97(3):401-405.
60. Gundlapalli AV, Redd A, Bolton D, et al. Patient-aligned Care Team Engagement to Connect Veterans Experiencing Homelessness With Appropriate Health Care. *Med Care.* 2017;55 Suppl 9 Suppl 2:S104-S110.
61. Gundlapalli A, Hanks M, Stevens SM, et al. It takes a village: a multidisciplinary model for the acute illness aftercare of individuals experiencing homelessness. *J Health Care Poor Underserved.* 2005;16(2):257-272.
62. Gunner E, Chandan SK, Marwick S, et al. Provision and accessibility of primary healthcare services for people who are homeless: a qualitative study of patient perspectives in the UK. *Br J Gen Pract.* 2019;69(685):e526-e536.
63. Hatton DC. Homeless women's access to health services: a study of social networks and managed care in the US. *Women Health.* 2001;33(3-4):149-162.
64. Henwood BF, Shinn M, Tsemberis S, Padgett DK. Examining provider perspectives within housing first and traditional programs. *American Journal of Psychiatric Rehabilitation.* 2013;16(4):262-274.
65. Henwood BF, Weinstein LC, Tsemberis S. Creating a medical home for homeless persons with serious mental illness. *Psychiatr Serv.* 2011;62(5):561-562.
66. Hoist H, Walsh C. A reflection on Victoria's Statewide Homelessness Assessment and Referral Framework as a quality improvement initiative. *Australian Journal of Primary Health.* 2008;14(2):64-67.

67. Howe EC, Buck DS, Withers J. Delivering health care on the streets: challenges and opportunities for quality management. *Qual Manag Health Care.* 2009;18(4):239-246.
68. Jego M, Abcaya J, Stefan DE, Calvet-Montredon C, Gentile S. Improving Health Care Management in Primary Care for Homeless People: A Literature Review. *International Journal of Environmental Research & Public Health [Electronic Resource].* 2018;15(2):10.
69. Jego M, Grassineau D, Balique H, et al. Improving access and continuity of care for homeless people: how could general practitioners effectively contribute? Results from a mixed study. *BMJ Open.* 2016;6(11):e013610.
70. Johnson EE, Borgia M, Rose J, O'Toole TP. No wrong door: Can clinical care facilitate veteran engagement in housing services? *Psychol Serv.* 2017;14(2):167-173.
71. Jones AL, Hausmann LRM, Haas GL, et al. A national evaluation of homeless and nonhomeless veterans' experiences with primary care. *Psychol Serv.* 2017;14(2):174-183.
72. Jones AL, Thomas R, Hedayati DO, Saba SK, Conley J, Gordon AJ. Patient predictors and utilization of health services within a medical home for homeless persons. *Substance Abuse.* 2018;39(3):354-360.
73. Kaduszkiewicz H, Bochon B, van den Bussche H, Hansmann-Wiest J, van der Leeden C. The Medical Treatment of Homeless People. *Deutsches Arzteblatt International.* 2017;114(40):673-679.
74. Kalton A, Falconer E, Docherty J, Alevras D, Brann D, Johnson K. Multi-Agent-Based Simulation of a Complex Ecosystem of Mental Health Care. *J Med Syst.* 2016;40(2):1-8.
75. Kaplan-Weisman L, Sansone S, Walter E, Crump C. Feasibility of Advance Care Planning in Primary Care for Homeless Adults. *J Aging Health.* 2019:898264319862420.
76. Keogh C, O'Brien KK, Hoban A, O'Carroll A, Fahey T. Health and use of health services of people who are homeless and at risk of homelessness who receive free primary health care in Dublin. *BMC Health Serv Res.* 2015;15:58.
77. Kerman N, Sylvestre J, Polillo A. The study of service use among homeless persons with mental illness: a methodological review. *Health Services and Outcomes Research Methodology.* 2016;16(1-2):41-57.
78. Kertesz SG, Holt CL, Steward JL, et al. Comparing homeless persons' care experiences in tailored versus nontailored primary care programs. *Am J Public Health.* 2013;103 Suppl 2:S331-339.
79. Kertesz SG, Posner MA, O'Connell JJ, et al. Post-hospital medical respite care and hospital readmission of homeless persons. *Journal of Prevention & Intervention in the Community.* 2009;37(2):129-142.
80. Kessell ER, Bhatia R, Bamberger JD, Kushel MB. Public health care utilization in a cohort of homeless adult applicants to a supportive housing program. *J Urban Health.* 2006;83(5):860-873.
81. Kirkland-Kyhn H. The nurse practitioner role in treating the homeless and rough-sleeper population. *J Am Assoc Nurse Pract.* 2020;32(4):287-289.
82. Koh HK, O'Connell JJ. Improving Health Care for Homeless People. *JAMA.* 2016;316(24):2586-2587.
83. Koon AD, Kantayya VS, Choucair B. Homelessness and health care: considerations for evaluation, management, and support within the primary care domain. *Dis Mon.* 2010;56(12):719-733.
84. Kuehn BM. Hospitals Turn to Housing to Help Homeless Patients. *JAMA.* 2019;321(9):822-824.

85. Lam JA, Rosenheck R. Social support and service use among homeless persons with serious mental illness. *Int J Soc Psychiatry.* 1999;45(1):13-28.
86. Lamanna D, Stergiopoulos V, Durbin J, O'Campo P, Poremski D, Tepper J. Promoting continuity of care for homeless adults with unmet health needs: The role of brief interventions. *Health & Social Care in the Community.* 2018;26(1):56-64.
87. Lashley M. An on-site health home for homeless men in addiction recovery. *Public Health Nurs.* 2019;36(2):184-191.
88. Lee SJ, Crowther E, Keating C, Kulkarni J. What is needed to deliver collaborative care to address comorbidity more effectively for adults with a severe mental illness? *Aust N Z J Psychiatry.* 2013;47(4):333-346.
89. Levy BD, O'Connell JJ. Health care for homeless persons. *N Engl J Med.* 2004;350(23):2329-2332.
90. Liu CY, Chai SJ, Watt JP. Communicable disease among people experiencing homelessness in California. *Epidemiol Infect.* 2020;148:e85.
91. Luchenski S, Maguire N, Aldridge RW, et al. What works in inclusion health: overview of effective interventions for marginalised and excluded populations. *Lancet.* 2018;391(10117):266-280.
92. Madrid PA, Sinclair H, Bankston AQ, et al. Building integrated mental health and medical programs for vulnerable populations post-disaster: connecting children and families to a medical home. *Prehosp Disaster Med.* 2008;23(4):314-321.
93. Marshall M, Lockwood A, Gath D. Social services case-management for long-term mental disorders: a randomised controlled trial. *Lancet.* 1995;345(8947):409-412.
94. McGuire J. Closing a front door to homelessness among veterans. *J Prim Prev.* 2007;28(3-4):389-400.
95. McGuire JF, Rosenheck RA. Criminal History as a Prognostic Indicator in the Treatment of Homeless People with Severe Mental Illness. *Psychiatr Serv.* 2004;55(1):42-48.
96. McGuire J, Rosenheck R, Burnette C. Expanding service delivery: does it improve relationships among agencies serving homeless people with mental illness? *Adm Policy Ment Health.* 2002;29(3):243-256.
97. McInnes DK, Petrakis BA, Gifford AL, et al. Retaining homeless veterans in outpatient care: a pilot study of mobile phone text message appointment reminders. *Am J Public Health.* 2014;104 Suppl 4:S588-594.
98. Mehta P, Brown A, Chung B, et al. Community partners in care: 6-month outcomes of two quality improvement depression care interventions in male participants. *Ethn Dis.* 2017;27(3):223-232.
99. Mercuel A. [Homelessness: psychological and behavioral issues]. *Bulletin de l Academie Nationale de Medecine.* 2013;197(2):271-276.
100. Mishan LI, Dragatsi D. Student-Run Clinics: A Novel Approach to Integrated Care, Teaching and Recruitment. *Community Ment Health J.* 2017;53(4):460-463.
101. Montgomery P, Forchuk C, Duncan C, Rose D, Bailey PH, Veluri R. Supported housing programs for persons with serious mental illness in rural northern communities: a mixed method evaluation. *BMC Health Serv Res.* 2008;8:156.
102. Moore DT, Rosenheck RA. Comprehensive services delivery and emergency department use among chronically homeless adults. *Psychol Serv.* 2017;14(2):184-192.
103. Moore M, Conrick KM, Reddy A, Allen A, Jaffe C. From Their Perspective: The Connection between Life Stressors and Health Care Service Use Patterns of Homeless Frequent Users of the Emergency Department. *Health Soc Work.* 2019;44(2):113-122.

104. Morrissey JP, Calloway MO, Thakur N, et al. Integration of service systems for homeless persons with serious mental illness through the ACCESS program. Access to Community Care and Effective Services and Supports. *Psychiatr Serv.* 2002;53(8):949-957.
105. Morse GA, Calsyn RJ, Klinkenberg WD, et al. An experimental comparison of three types of case management for homeless mentally ill persons. *Psychiatr Serv.* 1997;48(4):497-503.
106. Mowbray CT, Cohen E, Harris S, Trosch S, Johnson S, Duncan B. Serving the homeless mentally ill: Mental health linkage. *J Community Psychol.* 1992;20(3):215-227.
107. Myers R. Fully-integrated medical home for people with severe and persistent mental illness: A description and outcome analysis of a medicare advantage chronic special needs program. *Mental Illness.* 2018;10(2):48-52.
108. Nakashima J, McGuire J, Berman S, Daniels W. Developing programs for homeless veterans: understanding driving forces in implementation. *Soc Work Health Care.* 2004;40(2):1-12.
109. Nakonezny PA, Ojeda M. Health services utilization between older and younger homeless adults. *Gerontologist.* 2005;45(2):249-254.
110. Ng AT, McQuistion HL. Outreach to the Homeless: Craft, Science, and Future Implications. *J Psychiatr Pract.* 2004;10(2):95-105.
111. No authorship i. Gold award: A network of services for the homeless chronic mentally ill: Skid Row Mental Health Service, Los Angeles County Department of Mental Health. *Hosp Community Psychiatry.* 1986;37(11):1148-1151.
112. O'Toole TP, Bourgault C, Johnson EE, et al. New to care: demands on a health system when homeless veterans are enrolled in a medical home model. *Am J Public Health.* 2013;103 Suppl 2:S374-379.
113. O'Toole TP, Buckel L, Bourgault C, et al. Applying the chronic care model to homeless veterans: effect of a population approach to primary care on utilization and clinical outcomes. *Am J Public Health.* 2010;100(12):2493-2499.
114. O'Toole TP, Johnson EE, Aiello R, Kane V, Pape L. Tailoring Care to Vulnerable Populations by Incorporating Social Determinants of Health: the Veterans Health Administration's "Homeless Patient Aligned Care Team" Program. *Prev Chronic Dis.* 2016;13:E44.
115. O'Toole TP, Johnson EE, Borgia ML, Rose J. Tailoring Outreach Efforts to Increase Primary Care Use Among Homeless Veterans: Results of a Randomized Controlled Trial. *J Gen Intern Med.* 2015;30(7):886-898.
116. O'Toole TP, Johnson EE, Borgia M, et al. Population-Tailored Care for Homeless Veterans and Acute Care Use, Cost, and Satisfaction: A Prospective Quasi-Experimental Trial. *Prev Chronic Dis.* 2018;15:E23.
117. O'Toole TP, Pirraglia PA, Dosa D, et al. Building care systems to improve access for high-risk and vulnerable veteran populations. *J Gen Intern Med.* 2011;26 Suppl 2:683-688.
118. Parker S, Dark F, Newman E, Hanley D, McKinlay W, Meurk C. Consumers' understanding and expectations of a community-based recovery-oriented mental health rehabilitation unit: A pragmatic grounded theory analysis. *Epidemiology and Psychiatric Sciences.* 2019;28(4):408-417.
119. Paudyal V, Saunders K. Homeless reduction act in England: impact on health services. *Lancet.* 2018;392(10143):195-197.

120. Pauly JB, Moore TA, Shishko I. Integrating a mental health clinical pharmacy specialist into the Homeless Patient Aligned Care Teams. *The Mental Health Clinician.* 2018;8(4):169-174.
121. Pfeil M, Howe A. Ensuring primary care reaches the 'hard to reach'. *Qual Prim Care.* 2004;12(3):185-190.
122. Pickett SA, Luther S, Stellon E, Batia K. Making integrated care a reality: Lessons learned from Heartland Health Outreach's integration implementation. *American Journal of Psychiatric Rehabilitation.* 2015;18(1):87-104.
123. Podymow T, Turnbull J, Tadic V, Muckle W. Shelter-based convalescence for homeless adults. *Can J Public Health.* 2006;97(5):379-383.
124. Pollio DE, Spitznagel EL, North CS, Thompson S, Foster DA. Service use over time and achievement of stable housing in a mentally ill homeless population. *Psychiatr Serv.* 2000;51(12):1536-1543.
125. Purkey E, MacKenzie M. Experience of healthcare among the homeless and vulnerably housed a qualitative study: opportunities for equity-oriented health care. *International Journal for Equity in Health.* 2019;18(1):101.
126. Putnam JF, Cohen NL, Sullivan AM. Innovative outreach services for the homeless mentally ill. *Int J Ment Health.* 1985;14(4):4+112-124.
127. Raines A, O'Connor T. City Health Conference: Improving Access to Primary Care Among the Homeless Population of Southall. *Br J Gen Pract.* 2019;69(685):394.
128. Resnik L, Ekerholm S, Johnson EE, Ellison ML, O'Toole TP. Which Homeless Veterans Benefit From a Peer Mentor and How? *J Clin Psychol.* 2017;73(9):1027-1047.
129. Rogers MM, Schwartz J. Healthcare for the homeless. A public health agency, a business, and a Catholic provider open a clinic. *Health Prog.* 1993;74(10):58-60.
130. Rosenbaum N, Tinney DM, Tohen M. Collaboration to reduce tragedy and improve outcomes: Law enforcement, psychiatry, and people living with mental illness. *Am J Psychiatry.* 2017;174(6):513-517.
131. Rosenheck R, Frisman L, Gallup P. Effectiveness and cost of specific treatment elements in a program for homeless mentally ill veterans. *Psychiatr Serv.* 1995;46(11):1131-1139.
132. Rosenheck R, Lam JA. Client and site characteristics as barriers to service use by homeless persons with serious mental illness. *Psychiatr Serv.* 1997;48(3):387-390.
133. Rosenheck R, Morrissey J, Lam J, et al. Service system integration, access to services, and housing outcomes in a program for homeless persons with severe mental illness. *Am J Public Health.* 1998;88(11):1610-1615.
134. Rothbard AB, Min SY, Kuno E, Wong YL. Long-term effectiveness of the ACCESS program in linking community mental health services to homeless persons with serious mental illness. *J Behav Health Serv Res.* 2004;31(4):441-449.
135. Rowe M, Styron T, David DH. Mental Health Outreach to Persons Who are Homeless: Implications for Practice from a Statewide Study. *Community Ment Health J.* 2016;52(1):56-65.
136. Salize HJ, Werner A, Jacke CO. Service provision for mentally disordered homeless people. *Current Opinion in Psychiatry.* 2013;26(4):355-361.
137. Sarango M, de Groot A, Hirschi M, Umeh CA, Rajabiun S. The Role of Patient Navigators in Building a Medical Home for Multiply Diagnosed HIV-Positive Homeless Populations. *J Public Health Manag Pract.* 2017;23(3):276-282.

138. Sestito SF, Rodriguez KL, Saba SK, Conley JW, Mitchell MA, Gordon AJ. Homeless veterans' experiences with substance use, recovery, and treatment through photo elicitation. *Substance Abuse.* 2017;38(4):422-431.
139. Shepherd M, Gunnell D, Maxwell B, Mumford D. Development and evaluation of an inner city mental health team. *Soc Psychiatry Psychiatr Epidemiol.* 1998;33(3):129-135.
140. Shortt SE, Hwang S, Stuart H, Bedore M, Zurba N, Darling M. Delivering primary care to homeless persons: a policy analysis approach to evaluating the options. *Healthcare Policy = Politiques de sante.* 2008;4(1):108-122.
141. Simmons MM, Gabrielian S, Byrne T, et al. A Hybrid III stepped wedge cluster randomized trial testing an implementation strategy to facilitate the use of an evidence-based practice in VA Homeless Primary Care Treatment Programs. *Implementation Science.* 2017;12(1):46.
142. Smelson DA, Chinman M, Hannah G, Byrne T, McCarthy S. An evidence-based co-occurring disorder intervention in VA homeless programs: outcomes from a hybrid III trial. *BMC Health Serv Res.* 2018;18(1):332.
143. Snyder MD, Weyer ME. Facilitating a collaborative partnership with a homeless shelter. *J Nurs Educ.* 2002;41(12):547-549.
144. Stein JA, Andersen RM, Koegel P, Gelberg L. Predicting health services utilization among homeless adults: a prospective analysis. *J Health Care Poor Underserved.* 2000;11(2):212-230.
145. Stergiopoulos V, Hwang S, Gozdzik A, al. e. At Home/Chez soi Investigators. Effect of scattered-site housing using rent supplements and intensive case management on housing stability among homeless adults with mental illness: a randomized trial. *JAMA - Journal of the American Medical Association.* 2015:905-915.
146. Strange C, Fisher C, Arnold-Reed D, Brett T, Ping-Delfos WCS. A general practice street health service: Patient and allied service provider perspectives. *Australian Journal Of General Practice.* 2018;47(1-2):44-49.
147. Sumalinog R, Harrington K, Dosani N, Hwang SW. Advance care planning, palliative care, and end-of-life care interventions for homeless people: A systematic review. *Palliat Med.* 2017;31(2):109-119.
148. Summerside K. Making it matter: improving the health of young homeless people. *Mental Health Today.* 2013:18-19.
149. Swabri J, Uzor C, Laird E, O'Carroll A. Health status of the homeless in Dublin: does the mobile health clinic improve access to primary healthcare for its users? *Ir J Med Sci.* 2019;188(2):545-554.
150. Timms P, Perry J. Sectioning on the street - futility or utility? *Bjpsych Bulletin.* 2016;40(6):302-305.
151. Tollett JH, Thomas SP. A theory-based nursing intervention to instill hope in homeless veterans. *Advances in Nursing Science.* 1995;18(2):76-90.
152. Trabert G. [Medical Care for Homeless People - Individual Right and a Social Duty for an Inclusive Society]. *Gesundheitswesen.* 2016;78(2):107-112.
153. Tsai J, Gelberg L, Rosenheck RA. Changes in Physical Health After Supported Housing: Results from the Collaborative Initiative to End Chronic Homelessness. *J Gen Intern Med.* 2019;34(9):1703-1708.
154. Tyner AP. Happenings spotlight: student nurses step into action to support local VA initiative serving homeless veterans. *Imprint.* 2014;61(3):23-24.

155. Upshur CC, Jenkins D, Weinreb L, Gelberg L, Orvek EA. Prevalence and predictors of substance use disorders among homeless women seeking primary care: An 11 site survey. *Am J Addict.* 2017;26(7):680-688.
156. Vargas ER, Macerata I. [Contributions of Street Outreach teams to primary health care and managementContribuciones de los equipos de Consultorio en la Calle para el cuidado y la gestion de la atencion basica]. *Pan American Journal of Public Health.* 2018;42:e170.
157. Vazquez Souza MI. The mental health unit for the homeless mentally ill. *Estudos de Psicologia.* 2011;16(3):353-362.
158. Vickery KD, Shippee ND, Menk J, et al. Integrated, Accountable Care For Medicaid Expansion Enrollees: A Comparative Evaluation of Hennepin Health. *Med Care Res Rev.* 2020;77(1):46-59.
159. Weinreb L, Nicholson J, Williams V, Anthes F. Integrating behavioral health services for homeless mothers and children in primary care. *Am J Orthopsychiatry.* 2007;77(1):142-152.
160. Wenger LD, Leadbetter J, Guzman L, Kral A. The making of a resource center for homeless people in San Francisco's Mission District: a community collaboration. *Health Soc Work.* 2007;32(4):309-314.
161. Wijk LBV, Mangia EF. [Psychosocial care and healthcare for the homeless population: an integrative review]. *Ciencia & Saude Coletiva.* 2019;24(9):3357-3368.
162. Wilkins C. Connecting permanent supportive housing to health care delivery and payment systems: Opportunities and challenges. *American Journal of Psychiatric Rehabilitation.* 2015;18(1):65-86.
163. Worley NK, Drago L, Hadley T. Improving the physical health-mental health interface for the chronically mentally ill: Could nurse case managers make a difference? *Arch Psychiatr Nurs.* 1990;4(2):108-113.
164. Wright BJ, Vartanian KB, Li HF, Royal N, Matson JK. Formerly Homeless People Had Lower Overall Health Care Expenditures After Moving Into Supportive Housing. *Health Aff (Millwood).* 2016;35(1):20-27.
165. Wright NM, Tompkins CN, Oldham NS, Kay DJ. Homelessness and health: what can be done in general practice? *J R Soc Med.* 2004;97(4):170-173.
166. Zerger S, Doblin B, Thompson L. Medical respite care for homeless people: a growing national phenomenon. *J Health Care Poor Underserved.* 2009;20(1):36-41.
167. Zlotnick C, Zerger S, Wolfe PB. Health care for the homeless: what we have learned in the past 30 years and what's next. *Am J Public Health.* 2013;103 Suppl 2:S199-205.

APPENDIX G. INTERVENTION COMPLEXITY: ICAT SYSTEMATIC REVIEW DETERMINATIONS

1. Baker, 2018[32]

Brief Study Description		
This manuscript describes a program evaluation of St. Paul's center of New York, Inc. which was an independent community mental health center from 2003-2012 run by psychiatric/mental health nurse practitioners caring for adults experiencing homelessness and mental illness who were not actively using substances. Program was funded by non-profit grants. It was staffed by 5 full-time NPs and a full-time office manager with back-up from an off-site psychiatrist and psychiatric clinical nurse specialist. Linkage to primary care was via a "robust referral system at major health care institutions". Primary outcome = Not clearly stated, but outcomes included number of patients housed, hospitalization rate, incarceration rate Setting = New York City, U.S.		
Core Dimension	Judgment	Support for Judgment
1. Active components included in the intervention, in relation to comparison	More than one component and delivered as a bundle	Program activities described to include multiple simultaneous and coordinated intervention components including, assessment and referral for comorbid illnesses related to chronic mental illness, individual supportive therapy, regular contact and follow up for medical screenings and referrals to primary care as needed.
2. Behavior or actions of interventions recipients to which intervention is directed	Multi-target	Program behaviors not explicitly described but can be expected to include patient level behaviors including medication adherence, engagement with therapy, attending appointments among others.
3. Organizational levels targeted by the intervention	Multi-level	Program activities describe patient level (individual treatment), staff level (continuing education, training of new psychiatric nurse practitioners), and system level work (working with state assembly on relevant policy issues)
4. The degree of tailoring intended or flexibility permitted across individuals in applying or implementing the intervention	Highly/tailored	Program offerings are stable across patients, but specific care delivered by intervention is tailored to individual patient needs
5. The level of skill required by those delivering the intervention in order to meet the intervention objectives.	Basic skills	Program noted to be founded on principle that psychiatric/mental health NPs "can deliver high-quality services in an efficient manner and provide a model for systemic change in caring for homeless and disenfranchised mentally ill people". No specific training described.
6. The level of skill required for targeted behavior when entering the study by those receiving the	Basic skills	Patients receiving care within this program do not need specific training or skills to receive care.

intervention, in order to meet the intervention objectives		
7. The degree of interaction between intervention components, including the independence/interdependence of intervention components	Moderate interaction	In this program, there is some interaction between professionals delivering care but no clear evidence that one would impact another.
8. The degree to which the effects of the intervention are dependent on the context or setting in which it is implemented	Moderately context dependent	Programs ability to refer patients to needed services is dependent on local availability. As program is set in a large metropolitan city in the U.S., the same resources may not be available in other locations.
9. The degree to which the effects of the intervention are changed by recipient or provider factors.	Highly-dependent on individual-level factors	The effect of this program would be expected to vary depending on the individual patient's severity of mental health symptoms and readiness to engagement with care provision.
10. The nature of the causal pathway between the intervention and the outcome it is intended to effect.	Pathway variable, long	Causal pathway not clearly described but is expected to require multiple steps and behaviors for patients to remain successful housed, outside the hospital and criminal justice system.

2. Corrigan, 2017[29,33]

Brief Study Description		
A 12-month, randomized controlled trial (n=67) comparing a community-based participatory research informed peer navigator program to treatment as usual for African-Americans with SMI who were experiencing homelessness. Peer navigators worked with individuals through providing patient-centered support to achieve patient identified health goals including linking them with health care providers with the overarching objective of improving psychiatric and physical health leading to improved recovery and quality of life. Usual care was treatment through the Together for Health System which was a coordinated care system including a network of more than 30 physical and mental health providers. Primary outcome = not specified; outcome measures include physical and mental health status, recovery, quality of life, and scheduled/achieved appointments Setting = Chicago, IL, USA		
Core Dimension	Judgment	Support for Judgment
1. Active components included in the intervention, in relation to comparison	More than one component	Peer navigators work with patient guided by 6 fundamental approaches (eg, proactive, broad focused, active listener, shared decision-making, and problem focused). Activities guided by patient identified goals which suggested multiple aspects of support delivered together.
2. Behavior or actions of interventions recipients to which intervention is directed	Multi-target	Because peer navigator support is directed by the patient, there is the potential for multi-targeted behaviors.
3. Organizational levels targeted by the intervention	Single	Intervention focused on patients alone.

4. The degree of tailoring intended or flexibility permitted across individuals in applying or implementing the intervention	Highly tailored/flexible	Peer navigator accommodates needs and goals of individual patient.
5. The level of skill required by those delivering the intervention in order to meet the intervention objectives.	High level skills	Peers are individuals with a history of experiences of homelessness and in recovery from SMI. Training includes seven 3-hour days initially, three 3-hour didactics during transition, one afternoon per week for 6 weeks for 3-hour didactic during start-up, and one afternoon per month every other month of in-service once started.
6. The level of skill required for targeted behavior when entering the study by those receiving the intervention, in order to meet the intervention objectives	Basic skills	No specific skills required of patient receiving services.
7. The degree of interaction between intervention components, including the independence/interdependence of intervention components	High level interaction	All components delivered by the peer navigator and would depend on peer navigators experience with the individual patient needs.
8. The degree to which the effects of the intervention are dependent on the context or setting in which it is implemented	Highly context dependent	Effects of navigation would depend on local resources available for individual patients.
9. The degree to which the effects of the intervention are changed by recipient or provider factors.	Highly dependent on individual-level factors	Effect of navigation would depend, in part, on the physical and mental health status, circumstantial social situations, and other needs of the individual patient. In addition, effectiveness of the navigation would also depend on the navigator themselves and the connection between peers.
10. The nature of the causal pathway between the intervention and the outcome it is intended to effect.	Pathway linear, long	While not explicitly described, it is expected that there would be multiple steps involved between peer navigation and outcomes of interest.

3. Kelly, 2018[31]

Brief Study Description		
A randomized pilot study designed to assess the feasibility of adapting an existing peer navigator intervention to work with a mentally ill population with experiences of homelessness around the use of a collaborative electronic personal health record. Primary outcome = feasibility appears to be the primary outcome, other measures include intervention engagement quality measures (*eg,* working alliance inventory short form), health service utilization, primary care provider relationship, health screening, pain, health care self-management, # log-ins into collaborative electronic personal health record. Setting = Los Angeles, CA		
Core Dimension	Judgment	Support for Judgment

1. Active components included in the intervention, in relation to comparison	Multi-component	Participants received coaching and instruction from health navigators around use of a collaborative electronic health record.
2. Behavior or actions of interventions recipients to which intervention is directed	Single target	Participant behavior targeted was use of the collaborative electronic health record with and without the health navigator.
3. Organizational levels targeted by the intervention	Single category	Participants were the only target of the intervention.
4. The degree of tailoring intended or flexibility permitted across individuals or sites in applying or implementing the intervention	Inflexible	All participants were expected to use the collaborative electronic health record.
5. The level of skill required by those delivering the intervention in order to meet the intervention objectives.	High level skills	Health navigators had previously completed a 4-day manualized training, biweekly group supervision, and coaching around first consumer interaction. Previous training culminated in certification as health navigator. Navigators also completed 1-4 additional training sessions with the study principal investigator around tablet use and the electronic medical record.
6. The level of skill required for targeted behavior when entering the study by those receiving the intervention, in order to meet the intervention objectives	Intermediate level skills	Individuals participating in study were required to have used the internet in the prior year “to ensure that they had some familiarity with technology”.
7. The degree of interaction between intervention components, including the independence/interdependence of intervention components	Independent	Intervention has only one component.
8. The degree to which the effects of the intervention are dependent on the context or setting in which it is implemented	Highly context dependent	Intervention requires access to a unique collaborative electronic health record system which leverages existing technology to make it patient accessible and which is not universally available.
9. The degree to which the effects of the intervention are changed by recipient or provider factors.	Moderately dependent on individual level factors	A participant’s ability to engage with collaborative health record is likely dependent on their current symptom status of their serious mental illness and other comorbidities.
10. The nature of the causal pathway between the intervention and the outcome it is intended to effect.	Unable to assess	Insufficient information provided.

4. McGuire, 2009[37]

Brief Study Description		
This is a pre-post study of an intervention ("integrated care") offered through a demonstration primary care clinic that integrates homeless, primary care, and mental health services for homeless veterans with SMI or substance abuse offered in VA. The demonstration clinic co-locates primary care, MH care, and homeless services in a Mental Health Outpatient Treatment Center (MHOTC funded by VA Central Office). Veterans with usual care primary care services (received before demonstration clinic opened) are compared to those who received care in the demonstration clinic (post-integration group) Primary outcome = use of emergency services, physical health status, use of primary care services Setting = LA VA		
Core Dimension	Judgment	Support for Judgment
1. Active components included in the intervention, in relation to comparison	More than one component and provided as a bundle	Veterans were evaluated in a screening clinic and referred to all needed services within the MHOTC building. Goal was for Veteran to have a primary care visit on the same day as the screening visit. Team used weekly case conferences, building operation meetings, SOPs, and policies to facilitate interclinic coordination and communication.
2. Behavior or actions of interventions recipients to which intervention is directed	Multi-target	Intervention sought to address mental health, primary health, housing needs and other support (*ie*, transportation) needs.
3. Organizational levels targeted by the intervention	Multi-level	Intervention targets mentally ill Veterans with experiences of homelessness and how these services are offered within the LA VA system in an integrated way. While primary care model was similar, services were co-located and additional standard operating procedures were put in place to facilitate communication between MH, primary care, and homeless service teams.
4. The degree of tailoring intended or flexibility permitted across individuals in applying or implementing the intervention	Highly tailored/flexible	Model of care is stable across patients, but specific care delivered by intervention is tailored to individual patient needs
5. The level of skill required by those delivering the intervention in order to meet the intervention objectives.	Intermediate level skills	Primary care providers received training on Healthcare for the Homeless including infectious disease screening and treatment, chronic pain, and hypertension management.
6. The level of skill required for targeted behavior when entering the study by those receiving the intervention, in order to meet the intervention objectives	Basic skills	Patients receiving care within this model do not need specific training or skills to receive care.
7. The degree of interaction between intervention components, including the	High level of interaction	This model of care is designed to be highly interactive and service needs are determined through an initial

independence/interdependence of intervention components		comprehensive assessment and immediate referral to primary care. Case managers are involved and teams meet regularly to discuss cases.
8. The degree to which the effects of the intervention are dependent on the context or setting in which it is implemented	Moderately context dependent	The approach could be generalized across VAs particularly if VA central office provided funded for other similar clinics. All VAs offer homeless services and have provide similar levels of primary and mental health care and VA has been a pioneer in thinking about integrated care.
9. The degree to which the effects of the intervention are changed by recipient or provider factors.	Highly dependent on individual-level factors	The effect of this care model would be expected to vary depending on the individual patient's severity of mental health symptoms and readiness to engage with care provision.
10. The nature of the causal pathway between the intervention and the outcome it is intended to effect.	Pathway linear, long	One of the outcomes is improved access to primary care which could be achieved through the immediate primary care visit that is scheduled on the same day as the screening. However, other outcomes, including use of ED services and improved health would likely require additional primary care and MH visits and housing support to achieve though the immediate link with primary care makes that link more straight forward.

5. Patterson, 2012[47]

Brief Study Description		
An interagency collaboration, British Columbia's Homeless Intervention Project (HIP), provided coordinated housing and support services to adults with serious mental illness and who chronically experience homelessness. The project brought a "variety of health, social and housing resources from diverse government and non-profit agencies" under a single administrative organization and service providers from multiple agencies were co-located. This analysis collected data from the HIP program at 3 provincial ministries. Primary outcome = primary goals of program stated as increasing use of primary care, decreasing the number of hospitalizations and length of stay, decreasing justice system involvement, and increasing the use of income assistance. Setting = British Columbia, Canada		
Core Dimension	Judgment	Support for Judgment
1. Active components included in the intervention, in relation to comparison	More than one component	Multiple agencies involved in project; however, limited detail is provided with which to determine *if* components are delivered as a bundle.
2. Behavior or actions of interventions recipients to which intervention is directed	Multi-target	Behaviors/actions of this project are directed at the agency and clinician levels. Though not explicitly described, since the provision of care to the target population is expected to be complex, the behaviors targeted in

		delivering such care are expected to be multi-targeted.
3. Organizational levels targeted by the intervention	Multi-level	Project appears to impact agencies and individual clinicians that deliver care to this population.
4. The degree of tailoring intended or flexibility permitted across individuals or sites in applying or implementing the intervention	Moderately tailored/flexible	Project noted to include a "common monitoring framework to ensure fidelity and standardization of activities across sites."
5. The level of skill required by those delivering the intervention in order to meet the intervention objectives.	Unable to assess	Insufficient information provided.
6. The level of skill required for targeted behavior when entering the study by those receiving the intervention, in order to meet the intervention objectives	Intermediate skills	Skills of clinicians and agencies appear to be standard for given profession.
7. The degree of interaction between intervention components, including the independence/interdependence of intervention components	Unable to assess	Insufficient information provided.
8. The degree to which the effects of the intervention are dependent on the context or setting in which it is implemented	Moderately context dependent	While this intervention was implemented at multiple sites within British Columbia, there is little information provided about differences across sites. However, it can be expected that while this intervention would depend on locally available personnel and resource availability and the specific health policy and financial resources found in British Columbia.
9. The degree to which the effects of the intervention are changed by recipient or provider factors.	Moderately dependent on individual level factors	Differences in resources and personnel across agencies could be expected to impact effect of interagency collaboration.
10. The nature of the causal pathway between the intervention and the outcome it is intended to effect.	Unable to assess	Insufficient information provided.

6. Rivas-Vazquez, 2009[36]

Brief Study Description
This study uses a non-randomized control pre/post comparison to assess the effectiveness of a post-booking jail diversion program that ensured access to psychiatric and primary health care for a homeless program for a population experiencing homelessness with mental illness. Individuals in "relationship-based care" program were compared to individuals diverted to usual care (other programs otherwise non-specified in the community). Primary outcome = rate of arrests after admission to program

Setting = South Florida		
Core Dimension	Judgment	Support for Judgment
1. Active components included in the intervention, in relation to comparison	More than one component and provided as a bundle	Intervention included outreach team, comprehensive assessment, advocate at hearing, and primary and psychiatric care and housing support. Also provided with health education and other support as needed.
2. Behavior or actions of interventions recipients to which intervention is directed	Multi-target	Intervention sought to address material, health, and legal needs in order to reduce criminal recidivism.
3. Organizational levels targeted by the intervention	Multi-level	Intervention targets populations who experience homelessness and mental illness in need of a jail diversion program. Sought to turn CHC services into jail diversion program, trained outreach team.
4. The degree of tailoring intended or flexibility permitted across individuals in applying or implementing the intervention	Highly tailored/flexible	Model of care is stable across patients, but specific care delivered by intervention is tailored to individual patient needs
5. The level of skill required by those delivering the intervention in order to meet the intervention objectives.	High level skills	Paper did not talk much about steps taken to ensure coordinated care within CHC, but there was a specialized outreach team and inclusion of legal support.
6. The level of skill required for targeted behavior when entering the study by those receiving the intervention, in order to meet the intervention objectives	Basic skills	Patients receiving care within this model do not need specific training or skills to receive care.
7. The degree of interaction between intervention components, including the independence/interdependence of intervention components	High level of interaction	This model of care is designed to be highly interactive along a continuum from release from jail to integration in the community. A trained outreach team engages individuals who will be released from jail, they conduct a comprehensive assessment and services from various sectors come together to meet the patient's health, legal, case management, housing, and other support needs.
8. The degree to which the effects of the intervention are dependent on the context or setting in which it is implemented	Highly context dependent	The underlying approach could be generalized, but in this case, the CHC received external funding to implement this intervention and there were clear champions within the judicial system that facilitated the environment within which this intervention could occur.
9. The degree to which the effects of the intervention are changed by recipient or provider factors.	Highly dependent on individual-level factors	The effect of this care model would be expected to vary depending on the individual patient's severity of mental health symptoms and readiness to engagement with care provision.

10. The nature of the causal pathway between the intervention and the outcome it is intended to effect.	Pathway variable, long	While no clear causal pathway is outlined or theory provided to understand potential causal pathway, the intervention involves so many factors that it is likely that the intervention could operate through multiple pathways and interactions between services and the patients' mental health function and willingness to engage.

7. Rosenheck, 1993[45]

Brief Study Description		
A VA-based program started in 1987 called the VA Homeless Chronically Mentally Ill (HCMI) designed to support access of Veterans with housing insecurity and chronic mental illness with medical and psychiatric services through four key services: outreach, advocacy and linkage, facilitation of access to VA and non-VA services, residential treatment for up to 6 months, and continuing case management. Sites are each staffed by two clinicians (mostly social workers and nurses). Primary outcome = utilization and cost of VA health services Setting = nine program sites within the larger national Veterans Affairs Health Care System program; n=1,748 patients		
Core Dimension	Judgment	Support for Judgment
1. Active components included in the intervention, in relation to comparison	More than one component and delivered as a bundle	Limited description, however, four key services outlined would require multiple components to be delivered together
2. Behavior or actions of interventions recipients to which intervention is directed	Multi-target	Limited description, however, would anticipate that patients would need to exhibit multiple behaviors to engage with each of the four key services.
3. Organizational levels targeted by the intervention	Single category	This intervention is directed at the patient recipients.
4. The degree of tailoring intended or flexibility permitted across individuals in applying or implementing the intervention	Highly tailored	The extent to which each patient receives the key services would be tailored to their need.
5. The level of skill required by those delivering the intervention in order to meet the intervention objectives.	Basic skills	No evidence that administrators of the program would need additional training.
6. The level of skill required for targeted behavior when entering the study by those receiving the intervention, in order to meet the intervention objectives	Basic skills	No evidence that recipients of the program would need additional training beyond standard professional training though primarily delivered by master's level social workers and nurses.
7. The degree of interaction between intervention components, including the independence/interdependence of intervention components	High level interaction	Integration of multiple key services are expected to require a high level of complex interdependence.

8. The degree to which the effects of the intervention are dependent on the context or setting in which it is implemented	Moderately context dependent	Specific program offerings likely somewhat variable across 43 VA sites, however, functioning within a national health care system.
9. The degree to which the effects of the intervention are changed by recipient or provider factors.	Highly dependent on individual level factors	A participant's ability to engage with the care offered is likely dependent on their current symptom status of their serious mental illness and other comorbidities.
10. The nature of the causal pathway between the intervention and the outcome it is intended to effect.	Pathway variable, long	While not specifically articulated, the causal pathway is expected to be complex with multiple steps required for an individual patient to engage with programmatic offerings to have improved health, and stable housing.

8. Solomon, 1988[48]

Brief Study Description
This program evaluation of a demonstration project is based on an adjunctive program to an existing Health Care for the Homeless project which delivered primary health care services, service linkage, and improved access to population specific public benefits and programs. The adjunctive mental health program was intended to establish drop-in centers and provide outreach, assessment, and case management services for participants and educational, training programs and crisis back-up for non-mental health providers caring for this population. n=NR Primary outcome=not identified; included both process and summative evaluation Setting=Cleveland, OH

Core Dimension	Judgment	Support for Judgment
1. Active components included in the intervention, in relation to comparison	More than one component and delivered as a bundle	Multiple components delivered as bundles to patients and non-mental health staff.
2. Behavior or actions of interventions recipients to which intervention is directed	Multi-target	Limited description, however engaging in care with both medical and mental health care would require multiple behaviors; in addition, caring for patients with both serious mental illness and a history of housing insecurity would require multiple actions.
3. Organizational levels targeted by the intervention	Multi-category	Program is directed at both patient participants and non-mental health providers.
4. The degree of tailoring intended or flexibility permitted across individuals in applying or implementing the intervention	Highly tailored	Limited description, however, the extent to which each patient receives the key services is assumed to be tailored to individual need; similarly, educational training likely was designed to meet the needs of providers across settings (*eg,* shelters vs meal-site).
5. The level of skill required by those delivering the intervention in order to meet the intervention objectives.	Intermediate level skills	Some skills around collaboration and integration in a specialized clinical team are expected, as well as expertise to provide educational training.

6. The level of skill required for targeted behavior when entering the study by those receiving the intervention, in order to meet the intervention objectives	Intermediate skills	No specific skills required for patient participants; however, providers would be required to have their basic professional training.
7. The degree of interaction between intervention components, including the independence/interdependence of intervention components	High level interaction	It is expected that the various intervention components provided to patients are internally interdependent and interact with the training provided to non-mental health providers.
8. The degree to which the effects of the intervention are dependent on the context or setting in which it is implemented	Highly context dependent	The described program was initiated as an adjunct to an existing program to provide health care for individuals experiencing homelessness.
9. The degree to which the effects of the intervention are changed by recipient or provider factors.	Highly dependent on individual level factors	A patient participant's ability to engage with integrated care is likely dependent on their current symptom status of their serious mental illness and other comorbidities. Provider factors are expected to be less dependent on individual factors.
10. The nature of the causal pathway between the intervention and the outcome it is intended to effect.	Pathway variable, long	While not specifically articulated, the causal pathway is expected to be complex with multiple steps required for an individual patient to engage with programmatic offerings to have improved health, and stable housing.

9. Stanhope, 2014[30]

Brief Study Description		
This is a qualitative study exploring the experience of patients with axis I diagnoses of SMI and housing insecurity participating in a Housing-First program based chronic disease self-management program from the Stanford Chronic Disease Self-management program (CDSMP). The program involved the integration of an embedded primary care physician affiliated with a local academic medical center. Primary outcome = "barriers and facilitators to addressing health care needs of people enrolled in a chronic disease self-management program within a supported housing program" Setting = US (city not reported)		
Core Dimension	Judgment	Support for Judgment
1. Active components included in the intervention, in relation to comparison	More than one component and delivered as a bundle	Minimal information available, however, participants received integrated primary care and an established multi-component chronic disease self-management program in conjunction with other supports inherent in the interdisciplinary housing first program.
2. Behavior or actions of interventions recipients to which intervention is directed	Multi-target	Behaviors expected of program participants are not explicitly described but can be expected to include patient level behaviors including medication adherence, engagement with therapy, self-management behaviors which are almost always multi-

		faceted, and attending appointments among others.
3. Organizational levels targeted by the intervention	Single category	This intervention is directed at the patient recipients.
4. The degree of tailoring intended or flexibility permitted across individuals in applying or implementing the intervention	Highly tailored/flexible	While program components are universally available to participants who opt into the chronic self-management program, the combination and intensity of individual components will be uniquely customized to the needs of the individual participant.
5. The level of skill required by those delivering the intervention in order to meet the intervention objectives.	High skill level	Individuals (peer educators/facilitators) delivering the chronic self-management program were brought in specifically to deliver the 6-week program as they had previously conducted the program at a similar location.
6. The level of skill required for targeted behavior when entering the study by those receiving the intervention, in order to meet the intervention objectives	Basic skills	No special experience required for participants of the program.
7. The degree of interaction between intervention components, including the independence/interdependence of intervention components	High level interaction	It can be expected that acquisition of self-management skills would have a synergistic effect on primary care provision in an interdisciplinary context.
8. The degree to which the effects of the intervention are dependent on the context or setting in which it is implemented	Highly context dependent	Ability to recreate the interdisciplinary team would require access to similar personnel through local academic medical centers. In addition, conducting the described program would require local expertise for delivery.
9. The degree to which the effects of the intervention are changed by recipient or provider factors.	Moderately dependent on individual level factors	A participant's ability to engage with the care offered is likely dependent on their current symptom status of their serious mental illness and other comorbidities.
10. The nature of the causal pathway between the intervention and the outcome it is intended to effect.	Pathway variable, long	While not specifically articulated, the causal pathway is expected to be complex with multiple steps required for an individual participant and that one participant's path towards improved health, disease self-management, and stable housing could look different from another participant.

10. Stergiopoulos, 2012[49]

Brief Study Description
This manuscript describes the evaluation of a novel Housing First Ethno-Racial Intensive Case Management program which was funded as part of the Mental health Commission of Canada's At Home/Chez Soi Research Demonstration Project across 5 Canadian Cities (Moncton, Montreal, Toronto, Winnipeg, and Vancouver). The program involved housing support and diverse programming including services such as art therapy, computer training and yoga.

n=204 (intervention=102; control=102)

Primary outcome=not stated as such but included recruitment, fidelity, program provider and participants perspectives, implementation challenges and facilitators

Setting=Toronto, Canada

Core Dimension	Judgment	Support for Judgment
1. Active components included in the intervention, in relation to comparison	More than one component and delivered as a bundle	Multiple components of care including case management and other support services delivered together to patients.
2. Behavior or actions of interventions recipients to which intervention is directed	Multi-target	Limited description, however engaging in care with both medical and mental health care would require multiple behaviors.
3. Organizational levels targeted by the intervention	Single category	Services provided by program are directed at patient participants.
4. The degree of tailoring intended or flexibility permitted across individuals in applying or implementing the intervention	Highly tailored	Limited description, however, the extent to which each patient receives the key services is assumed to be tailored to individual need.
5. The level of skill required by those delivering the intervention in order to meet the intervention objectives.	High level skills	To achieve stated goals of focus on anti-racism and anti-oppression care delivery, the program partnered with a skilled and experienced agency to lead and implement the service model (*ie*, Across Boundaries).
6. The level of skill required for targeted behavior when entering the study by those receiving the intervention, in order to meet the intervention objectives	Intermediate skills	Patient participants were not required to have specific skills per se, however, had to agree to weekly face-to-face meetings with their case manager and a limit was placed on proportion of income used for rent.
7. The degree of interaction between intervention components, including the independence/interdependence of intervention components	High level interaction	Given that care is integrated, it is expected that components of program are interdependent.
8. The degree to which the effects of the intervention are dependent on the context or setting in which it is implemented	Moderately context dependent	Larger program of which this was a component took place in multiple cities across Canada, though this one was only in Toronto and appears to rely on local expertise and is tailored to a specific multi-racial/cultural population.
9. The degree to which the effects of the intervention are changed by recipient or provider factors.	Highly dependent on individual level factors	A patient participant's ability to engage with integrated care is likely dependent on their current symptom status of their serious mental illness and other comorbidities.
10. The nature of the causal pathway between the intervention and the outcome it is intended to effect.	Pathway variable, long	While not specifically articulated, the causal pathway is expected to be complex with multiple steps required for an individual patient to engage with programmatic offerings to have improved health, and stable housing.

11. Stergiopoulos, 2015[34]

Brief Study Description		
A quasi-experimental study comparing outcomes of two shelter-based collaborative mental health care models for men experiencing homelessness and mental illness. One model was an integrated multidisciplinary collaborative care model (IMCC) and the second was a less resource intensive shifted outpatient collaborative care model (SOCC). IMCC is a 780-bed shelter that partners with local teaching hospital to provide onsite psychiatrist or mental health worker 4 half days per week as an integrated member of primary care team. SOCC is a 480-bed shelter has a psychiatric consultant who is not administratively linked to primary care but who provides outpatient treatment one half day per week in shelter. SOCC does not provide on-site primary care, but patients are referred to neighboring primary care clinics. Primary outcome = patient's level of community functioning 12 months after study enrollment Setting = Toronto, Ontario		
Core Dimension	Judgment	Support for Judgment
1. Active components included in the intervention, in relation to comparison	IMCC: more than one component and delivered as a bundle SOCC: more than one component	IMCC: This model of care offers interdisciplinary stepped care with intentional communication among professionals of diverse backgrounds with an emphasis on coordinated care and integrated shelter-based care and case management. A common electronic medical record is used. SOCC: In this model of care, primary care and nursing is not offered on site and communication is limited to the psychiatrist and "select shelter staff." There is no integration between primary care and mental health and primary care is accessed via referral to near-by primary care clinics.
2. Behavior or actions of interventions recipients to which intervention is directed	IMCC: Multi-target SOCC: Multi-target	IMCC: Intervention (model of care) is delivered to men with mental health disorders and who are experiencing homelessness. While not explicitly described, patients are interacting with staff members of multiple disciplines (medicine, housing services, mental health) which will be addressing separate patient-level behaviors SOCC: same as above
3. Organizational levels targeted by the intervention	IMCC: Single category SOCC: Single category	IMCC: Intervention (model of care) targets men experiencing homelessness with mental illness who are accessing shelter. SOCC: Intervention (model of care) targets men experiencing homelessness with mental illness who are accessing shelter.

4. The degree of tailoring intended or flexibility permitted across individuals in applying or implementing the intervention	IMCC: Highly tailored/flexible SOCC: Highly tailored/flexible	IMCC: Model of care is stable across patients, but specific care delivered by intervention is tailored to individual patient needs. Flexible entry into program and accessing needed services. SOCC: same as above
5. The level of skill required by those delivering the intervention in order to meet the intervention objectives.	IMCC: Intermediate level skills SOCC: Basic skills	IMCC: In addition to professional training, members of integrated model must demonstrate purposeful, integrated collaboration. SOCC: In this model, professionals are delivering care in manner standard to their professional training.
6. The level of skill required for targeted behavior when entering the study by those receiving the intervention, in order to meet the intervention objectives	IMCC: Basic skills SOCC: Basic skills	IMCC: Patients receiving care within this model do not need specific training or skills to receive care. SOCC: same as above
7. The degree of interaction between intervention components, including the independence/interdependence of intervention components	IMCC: High level of interaction SOCC: Moderate interaction	IMCC: As this model of care is designed to be integrative and collaborative, the actions of each team member impact the actions of others; successful care delivery of individual team members can be expected to increase the likelihood of successful care delivered by others. SOCC: In this model of care, there is some interaction between professionals delivering care but no clear evidence that one would impact another.
8. The degree to which the effects of the intervention are dependent on the context or setting in which it is implemented	IMCC: Moderately context dependent SOCC: Highly context dependent	IMCC: Care delivered by this model of care is largely internally contained and thus less dependent on availability of clinical resources outside the specific shelter. However, healthcare policies and structures may differ significantly outside of Canada which would impact implementation. SOCC: As care delivered by this alternate model depends on referrals to neighboring clinics to provide core services (*ie*, primary care), implementation of this program would be highly dependent on the context. Geographic context principles apply to this model as well.
9. The degree to which the effects of the intervention are changed by recipient or provider factors.	IMCC: Highly-dependent on individual-level factors SOCC: Highly-dependent on individual-level factors	IMCC: The effect of this care model would be expected to vary depending on the individual patient's severity of mental health symptoms and readiness to engagement with care provision. SOCC: same as above

10. The nature of the causal pathway between the intervention and the outcome it is intended to effect.	IMCC: Pathway variable, long SOCC: Pathway variable, long	IMCC: While no clear causal pathway is outlined, the course from entry into care to primary outcome (*ie*, level of community functioning at 12 month) is expected to be variable with multiple steps required. SOCC: same as above

12. Stergiopoulos, 2018[28]

Brief Study Description		
This manuscript and its associated protocol paper (Stergiopoulos et al, 2017) describe a pre-post mixed method study to evaluate a brief (4-6 month) interdisciplinary intervention (Coordinated Access to Care for the Homeless or CATCH program) for adults experiencing homelessness who lack access to appropriate community supports following discharge from the hospital. CATCH is described as a "one-stop" program that includes primary and psychiatric care, peer support and case management for individuals discharged from the hospital. The program features a weekly "low barriers" clinic staffed with a nurse, a primary care physician and two psychiatrists. Clinic staff work "seamlessly" with case managers on multidisciplinary assessments and comprehensive plans. Other features include outreach, crisis intervention, assistance with material supports, and interagency partnerships with local hospitals. Primary outcome = change in participant health status from baseline to 6 months as evaluated by the physical and mental health component scores of the Short-Form 36 (SFS-36) Setting = Toronto, Canada		
Core Dimension	Judgment	Support for Judgment
1. Active components included in the intervention, in relation to comparison	More than one component and delivered as a bundle	Intervention activities include multiple simultaneous and coordinated intervention components including, assertive outreach, crisis intervention, assistance with material supports, and primary and mental health care provision.
2. Behavior or actions of interventions recipients to which intervention is directed	Multi-target	Behaviors targeted by the intervention are not explicitly described but can be expected to include patient level behaviors including medication adherence, engagement with therapy and medical care, and executive tasks such as applying for financial and housing resources.
3. Organizational levels targeted by the intervention	Single category	Intervention is directed at adults experiencing homelessness with unmet physical or mental needs as identified by clinicians and unmet support needs as identified by patient.
4. The degree of tailoring intended or flexibility permitted across individuals in applying or implementing the intervention	Highly/tailored	Intervention offerings are stable across patients, but specific care delivered by intervention is tailored to individual patient needs.
5. The level of skill required by those delivering the intervention in order to meet the intervention objectives.	Intermediate level skills	Training of intervention staff not explicitly described but could expect some skill needed to achieve level of described multidisciplinary coordination.

6. The level of skill required for targeted behavior when entering the study by those receiving the intervention, in order to meet the intervention objectives	Basic skills	Participants receiving care within this program do not need specific training or skills to receive care.
7. The degree of interaction between intervention components, including the independence/interdependence of intervention components	High level interaction	The design of this intervention is described as interdisciplinary and includes multiple opportunities for care delivery interaction in a manner that is expected to be synergistic.
8. The degree to which the effects of the intervention are dependent on the context or setting in which it is implemented	Moderately context dependent	It can be expected that while this intervention as described is largely self-contained, the ability to implement it would depend on locally available personnel and resource availability and the limitations of health policy and financial resources.
9. The degree to which the effects of the intervention are changed by recipient or provider factors.	Highly-dependent on individual-level factors	The effect of this intervention would be expected to vary depending on the individual patient's severity of mental health symptoms and readiness to engagement with care provision.
10. The nature of the causal pathway between the intervention and the outcome it is intended to effect.	Pathway variable, long	Causal pathway not clearly described but is expected to require multiple steps and behaviors for patients to achieve better physical and mental health status.

13. Weinstein, 2013[46]

Brief Study Description		
This program evaluation describes a Housing First Program started in 2008 and affiliated with an academic medical center with a subgroup of patients who opted to receive "fully integrated care by the on-site primary care physician and team psychiatrist". Primary care was available 2 half-days per week. All program participants received on-site psychiatry and nursing care. A stated focus of the integrated care program was to screen and monitor chronic disease. n=123 participants; 43 integrated care subgroup Primary outcome=healthcare quality indicators from National Association of State Mental health Program Directors (NASMHPD) and Healthcare Effectiveness Data Information Set (HEDIS) Setting=Philadelphia, PA		
Core Dimension	Judgment	Support for Judgment
1. Active components included in the intervention, in relation to comparison	More than one component and delivered as a bundle	Limited description, however, fully integrated care from at least three disciplines (medicine, psychiatry, nursing) implies multiple components administered together.
2. Behavior or actions of interventions recipients to which intervention is directed	Multi-target	Limited description, however engaging in care with both chronic disease and mental health care would require multiple behaviors
3. Organizational levels targeted by the intervention	Single category	Services of program are provided to patients.

4. The degree of tailoring intended or flexibility permitted across individuals in applying or implementing the intervention	Highly tailored	Limited description, however, the extent to which each patient receives the key services is assumed to be tailored to individual need.
5. The level of skill required by those delivering the intervention in order to meet the intervention objectives.	Intermediate level skills	Limited description, however, some skills around collaboration and integration in a specialized clinical team are expected.
6. The level of skill required for targeted behavior when entering the study by those receiving the intervention, in order to meet the intervention objectives	Basic skills	No special skills are noted for patients receiving care through this program.
7. The degree of interaction between intervention components, including the independence/interdependence of intervention components	High level interaction	Given that care is integrated, it is expected that components of program are interdependent.
8. The degree to which the effects of the intervention are dependent on the context or setting in which it is implemented	Moderately context dependent	It is expected that program offerings and available collaborations could vary by location (*eg,* access to academic affiliate).
9. The degree to which the effects of the intervention are changed by recipient or provider factors.	Highly dependent on individual level factors	A participant's ability to engage with integrated care is likely dependent on their current symptom status of their serious mental illness and other comorbidities.
10. The nature of the causal pathway between the intervention and the outcome it is intended to effect.	Pathway variable, long	While not specifically articulated, the causal pathway is expected to be complex with multiple steps required for an individual patient to engage with programmatic offerings to have improved health, and stable housing.

14. Weinstein, 2013[35]

Brief Study Description		
This paper describes a preliminary formative evaluation of a program which created a new partnership between an academic family and community medicine department and a Housing First agency (*ie,* Pathways to Housing-PA) with an overarching goal of addressing multiple levels of health care needs for the target population. The program specifically embedded a primary care physician into the Housing First agency's Assertive Community Treatment team to provide on-site "primary care and population-based health monitoring and services." Primary outcome = the overlap between program components and primary care medical home elements Setting = Philadelphia, PA, US		
Core Dimension	Judgment	Support for Judgment
1. Active components included in the intervention, in relation to comparison	More than one component and delivered as a bundle	Participants receive "fully integrated" primary and behavioral health care as a part of the program, in addition to care

		transitions and other supports inherent in the interdisciplinary housing first program.
2. Behavior or actions of interventions recipients to which intervention is directed	Multi-target	Behaviors expected of program participants are not explicitly described but can be expected to include patient level behaviors including medication adherence, engagement with therapy, attending appointments among others.
3. Organizational levels targeted by the intervention	Single category	Program is directed at patient participants.
4. The degree of tailoring intended or flexibility permitted across individuals in applying or implementing the intervention	Highly tailored/flexible	While program components are universally available to participants, the combination and intensity of individual component will be uniquely customized to the needs of the individual participant.
5. The level of skill required by those delivering the intervention in order to meet the intervention objectives.	Intermediate level skills	Interdisciplinary team members are practicing within their established scope of practice, however, requires training for providers in “population-centric models of care.”
6. The level of skill required for targeted behavior when entering the study by those receiving the intervention, in order to meet the intervention objectives	Basic skills	There is not expectation that participants enter the program with previously existing skill sets.
7. The degree of interaction between intervention components, including the independence/interdependence of intervention components	High level interaction	Program components are derived from care provided by interdisciplinary team which is intentionally coordinated and interdependent.
8. The degree to which the effects of the intervention are dependent on the context or setting in which it is implemented	Highly context dependent	Program components are presumed to be unique to the offerings of the existing programs which were co-located and integrated. Other implementation sites may not have access to the same offerings.
9. The degree to which the effects of the intervention are changed by recipient or provider factors.	Moderately dependent on individual level factors	A participant’s ability to engage with the care offered is likely dependent on their current symptom status of their serious mental illness and other comorbidities.
10. The nature of the causal pathway between the intervention and the outcome it is intended to effect.	Pathway variable, long	While not specifically articulated, the causal pathway is expected to be complex with multiple steps required for an individual participant and that one participants path towards improved health and stable housing could look different from another participant.

15. ACCESS Studies

Calloway, 1998[42]
Cheng, 2008[38]
Cocozza, 2000[41]
Morrissey, 1997[44]
Rosenheck, 1997[43]
Rosenheck, 2002[40]
Steadman, 2002[39]

Brief Study Description		
A quasi-experimental federal demonstration program, Access to Community Care and Effective Strategies and Supports (ACCESS), conducted over 5 years ending in 1999 which was designed to support system change through partnership development across federal, state, local, and private service agencies for people experiencing homelessness with serious mental illness and co-occurring substance disorders. A second goal of the program was to identify effective, replicable system integration strategies. Funding (average $5 million; approximately $250,000 per site) was provided at the state level to support provision of essential services to the target population, including assertive outreach, case management (100 patients per site per year), housing, mental health, and substance abuse treatment. Per communication with an author, while the intention was that primary care would be incorporated at each site; the extent to which that happened varied. Primary outcome = varied by article, but outcomes included continuation of services after funding ended, size of caseload, integration strategies chosen, quantification of level of implementation; extent of agency linkages; treatment outcomes; perceived needs by patient and service provider; gender-specific response to initiative Setting = 18 US sites in 9 states (*ie*, Connecticut, Illinois, Kansas, Missouri, North Carolina, Pennsylvania, Texas, Virginia, and Washington); in each state identified one systems integration site and one control site (matched on demographic and economic variables)		
Core Dimension	Judgment	Support for Judgment
1. Active components included in the intervention, in relation to comparison	More than one component and delivered as a bundle	The stated requirements for ACCESS participation sites were broad and did not dictate how all components of interdisciplinary and interagency care for patients experiencing homelessness with SMI were delivered. However, involvement of multiple agencies and multiple types of care delivery were expected to be provided to individual patients.
2. Behavior or actions of interventions recipients to which intervention is directed	Multi-target	Target behaviors of ACCESS program were largely directed at the providers or agencies serving the target population. Developing linkages and integration services across multiple organizations is expected to be complex and require multiple behaviors (*eg,* interagency communication, alignment of efforts, *etc*)
3. Organizational levels targeted by the intervention	Multi-level	ACCESS was designed to impact at the community level (*eg*, increase interagency linkages), agency/clinic level (*eg*, develop new clinic level resources), and patient level (*eg*, direct case management and outreach).

4. The degree of tailoring intended or flexibility permitted across individuals in applying or implementing the intervention	Highly tailored	Each ACCESS site developed its own approach to implemented intended domains.
5. The level of skill required by those delivering the intervention in order to meet the intervention objectives.	Intermediate level skills	ACCESS intended for existing agencies to combine efforts, so were presumably using existing skill sets though likely had to work on new skills around system integration.
6. The level of skill required for targeted behavior when entering the study by those receiving the intervention, in order to meet the intervention objectives	Basic skills	No special experience required for participants of the program.
7. The degree of interaction between intervention components, including the independence/interdependence of intervention components	High level interaction	While variable across sites, integration strategies and degree of linkages suggest that intervention components delivered by cooperating agencies would impact those delivered by another agency.
8. The degree to which the effects of the intervention are dependent on the context or setting in which it is implemented	Highly context dependent	State and city level resources and regulations as well as interests and priorities are expected to have contributed significantly to effect of the intervention.
9. The degree to which the effects of the intervention are changed by recipient or provider factors.	Highly dependent on individual level factors	A participant's ability to engage with the care offered is likely dependent on their current symptom status of their serious mental illness and other comorbidities. Similarly, since much of the ACCESS intervention occurred at the agency level, the degree to which agencies were integrated likely depended on their ability and willingness to collaborate.
10. The nature of the causal pathway between the intervention and the outcome it is intended to effect.	Pathway variable, long	While not specifically articulated, the causal pathway is expected to be complex with multiple steps required for an individual agency to create new linkages and for participants to have improved health, and stable housing.

APPENDIX H. PEER REVIEW COMMENTS AND RESPONSE TABLE

Question Text	Reviewer Number	Comment	Response
Are the objectives, scope, and methods for this review clearly described?	1	Yes	
	2	Yes	
	3	Yes	
	4	Yes	
	5	Yes	
	6	Yes	
	7	Yes	
Is there any indication of bias in our synthesis of the evidence?	1	No	
	2	No	
	3	No	
	4	No	
	5	No	
	6	No	
	7	No	
Are there any published or unpublished studies that we may have overlooked?	1	No	
	2	No	
	3	No	
	4	No	
	5	No	
	6	No	
	7	No	
Additional suggestions or comments can be provided below. If applicable, please indicate the	1	I think the report clearly demonstrates that this is not a well studied area despite the high morbidity and mortality in this population. I think these are two populations that commonly suffer from healthcare inequities for many reasons. The meager evidence base suggests that similar gaps may also exist in research. People with serious mental illness are disproportionately represented in the homeless population and more effort should be devoted to this type of research.	

page and line numbers from the draft report.	2	General feedback: the presentation of results, switching between categories of findings and "most common" strategies, was confusing and make it a bit difficult to know what to value in terms of findings.	We appreciate this source of confusion and have addressed as described below.
		Presentation of characteristics of studies in narrative form was a bit difficult to follow and would be better done via a Table.	We agree and have added an evidence profile table.
		The Executive Summary Methods left out key information related to the process of selecting studies for inclusion. More specific feedback: p.8 - Can you include a sentence to explain the process by which 4,000+ articles were excluded? This was not clear based on your previous Methods section.	We have clarified in executive summary method that a standard dual-screener approach was used to exclude ineligible citations. In keeping with current standards, we have left additional detail in the main body of the report.
		p.8 – 22 studies were included in your review sample yet the total number of strategies here is more than 22. Similarly, your previous section mentions that there are 15 unique interventions but this mentions 22 intervention strategies. Can you mention that some studies had more than one level of focus or otherwise clarify this seeming lack of continuity?	We understand this confusion. We have added detail to clarify that each individual study could have used multiple intervention strategies at multiple levels.
		p.8 - Another point of clarification - did you approach focus only on the primary strategy within each study, or the primary strategy at each level within a study (if one study could be counted multiply at patient/clinic/system levels), or could a single study have multiple strategies which were recorded? Tis would be useful to clarify, as these sentences about the "most common" strategies at the clinic and systems level are not clear to the extent that they are a comprehensive list of ALL mentioned strategies or only the most commonly-mentioned strategies, given the relatively small number of studies in each of these groups.	We appreciate this confusion and have removed the phrase “most common” from the report. Indeed, we identified all mentioned strategies across all included studies. We now use the phrase “most frequently described” to indicate that the relevant strategy was one that was reported the most across all included studies.
		p. 9 – you mention one outcome of “reduced recidivism” as outcome of interest, but do not mention what action is being reduced – use of high-intensity MH services? Use of ED services? Inpatient care? It would be good to clarify.	We have revised this to read: “Reduced criminal recidivism”

p.21-22: can a table be created to summarize the characteristics of the studies included in this review. The narrative provides a lot of numbers describing different characteristics of included studies which tend to blend together and would be better presented as a table.	We agree. As noted above, we have added an evidence profile table for clarity.
p.23 – you state that you "identified 22 patient-level strategies across 6 groups; 4 clinic-level intervention strategies across 3 groups… " etc. The term "group" here is a bit confusing, as I was not clear if you meant this to reflect different studies, subpopulations which might be represented across different studies, or populations within the same study which were compared. Is there a better term to use here instead of "group"?	We agree and have relabeled this section. We now refer to intervention *strategies* as those activities conducted as part of a study to effect a benefit for the target population. Strategies were grouped by *domain*, and domains were categorized by patient/clinic/system *levels*.
p.23 – you mention the "most common patient-level strategies…" this phrasing is a bit imprecise and makes interpretation of this section a bit confusing. Does this mean that less-common strategies are not reported in this analysis? Also, the presentation approach which mentions the 5 categories into which all patient-level strategies will be classified, followed by a presentation of the "most common" strategies which span multiple categories, is further confusing. This section could be improved by clarifying that the 5 "groups" reflect the categories which patient-level intervention strategies were organized into and by dropping any mention of "most common" strategies unless this can be more clearly quantified (by number of studies?). This shift from the categories of interventions to types of interventions in a manner that does not go through the categories of interventions is very confusing. Perhaps some sub-headings would improve this section, by dividing the discussion into categories of strategies rather than jumping between them?	As noted above, we have removed the phrase "most common" to categorize strategies and are using "most frequently described". We have also added the # of studies using listed strategies within the text for clarity
p.27 – similar to the section on patient-level strategies, the section on clinic-level strategies would benefit from more organization/structure. I recommend either creating subheadings which reflect the categories of strategies or moving in a more structured way through a presentation of the categories and the strategies which fall in each category. A presentation of "most common strategies" is confusing given the current lack of clear structure in this narrative section.	We have also restructured the clinic and system-level strategy sections as described above for clarity and consistency.

		p.30 – similar feedback to that related to p. 23 and p. 30 – more clear structure in this narrative section will help avoid confusion related to strategies, categories, and "most common" strategies.	We have also restructured the clinic and system-level strategy sections as described above for clarity and consistency.
		p.38 – this presentation of detailed findings was very clear and well-written.	Thank you.
		P.39 – Figure 7: this provided more clear information on findings, using numbers to reflect measures at different levels.	Thank you.
		p.41 – the presentation focusing on "most common" strategies without any mention of the categories of strategies from earlier in the report makes me think that it may be more useful to focus on a count of the number of studies that used each strategy as well as a presentation which reflects % of studies that reflected each strategy –this could provide more concrete framing of how wide-spread the "common" studies are within the	We appreciate this suggestion and have added quantitative data to support and clarify these assertions.
	3	Page 6 line 20- the adjective "knowledgeable" appears to be applied to "clinical setting", which seems off. "context of a knowledgeable and familiar clinical setting"	We have reworded this sentence to read "in the context of a population-tailored clinical setting".
		Page 6 line27 "Thoughtful interventions exist which focus on collaborations with either SMI or homelessness.." Are words missing? This appears to refer to collaborations between health/ social conditions, when it is assumed to be intended to refer to professionals collaborating.	We have reworded this sentence to read: "Previously developed interventions have focused on collaborations between primary care and either persons with SMI or persons experiencing homelessness, but few have targeted both populations simultaneously."
		Page 11 line 22 "Disorientation" is not a common symptom among those with most types of SMI. Disorientation would be more common in dementia or delirium. The phrase "disorientation due to SMI symptoms" would itself perpetuate the next issue in the list - "stigma in the health system".	We appreciate this point and have removed this phrase from the text.
		Page 12 line 27 The concept of protocol registration is introduced without being defined. It is not entirely clear whether	We have removed the term 'registration' and clarified that the protocol was published the program website.

publishing the protocol online is the registration process or something else. Page 13 lines 54-56- Most VA readers will lack a minimal understanding of what is included in the National Psychosis Registry (NPR) . Probably zero non-VA readers will know this. The acknowledgement of variation in SMI definitions is noted and appreciated. Clarification is on whether NPR includes some non-psychotic psychiatric diagnoses. I believe that it does, but a leader is likely to assume from the name of the registry that it only includes psychotic disorder. There is no definition of SMI known to me that includes only psychotic disorders. Non-psychotic bipolar disorder would be a good example of an SMI that would be included in nearly every SMI definition.	We have added that The VA National Psychosis Registry defines SMI as the presence of schizophrenia, other psychotic disorders, or bipolar disorder to the Introduction section of the executive summary, the Introduction section of the full report, and the Definitions section of the Methods.
Page 13 Conceptual model is very clear and well-done generally.	Thank you.
Page 15 The definition of SMI here makes no mention of National Psychosis Registry, so it is unclear if there is a different definition than on page 13.	We have added language to Table 1 to indicate that we used the same definitions as outlined on page 13.
Page 16 EPOC is defined in terms of what the letters stand for, but the association with these letters and types of studies has not been explained.	We have clarified in a foot note for Table 1: “Cochrane EPOC criteria identify study designs optimal for evaluation of health system interventions” and have provided a citation for addition reference.
Page 21 line 28-29 “mental health comorbidities” - comorbid to what? It seems SMI is your primary condition, so it is not clear to what comorbidities refers	We agree that this is confusing and have removed this phrase.
Page 23 the graphic is very nice. Could it possibly be expanded to include names of strategies and possibly sub strategies?	Thank you. Figure 4 is intended to provide a high-level overview of the way the subsequent section is organized. Additional details about the names of the strategies and domain are listed in subsequent tables. Thus, we have relabeled Figure 4 as a “Framework of Multi-Level Intervention Strategies” to clarify the figure intent.
Page 24 Assertive community treatment is also a clinic and possibly system level intervention. I am making a note here in case ACT is not also classified this way later in the paper.	We agree that Assertive community treatment could have been classified in multiple ways. Because we were identifying strategy levels based on the targeted effect, we elected to categorize as patient-level. We have added a statement in the limitations that these could have been categorized differently.

		Page 32 I am sorry if I missed it, but have you all talked about the relationship of having housing with engagement with primary care. The relationship was discussed in the intro, and I understand the paper is on homeless people. Still, one would expect homelessness to be dynamic. Getting folks housing surely increases engagement with healthcare, right? Housing First is a big intervention in this field. I wonder if you all might want to look at healthcare engagement in these trials. Apologize if I missed this.	We agree that the experience of homelessness is a dynamic process and has the potential to impact an individual's ability to engage with healthcare. In particular, we explored an individual's ability to engage with primary health care. See Figure 5 for how we considered intervention approaches to engage with primary care. (See also Whisler A, Dosani N, To MJ, O'Brien K, Young S, and Hwang SW. The effect of a Housing First intervention on primary care retention among homeless individuals with mental illness. *PLoS One*. 2021;16:e0246859.)
		The paper would generally benefit from further review by a medical editor. There are some places where the writing could be made more clear.	We have worked with our medical editor to improve the clarity of the writing.
	4	I will upload the ESP with comments embedded in the PDF.	
		Figure 4. Multi-level Intervention Strategies Not sure of point of this figure. Maybe would be easier to interpret if the strategies were listed and the corresponding table number were embedded into the three levels	Thank you for this suggestion. As noted above, we have reworked this figure for clarity and to optimize added value.
		Patient-Level Intervention Strategies 5 groups, but 6 patient-level strategies.... is there one missing? Might be helpful to use the same language.	We have corrected this typo.
		Pg 23 Row 56 Are these now describing sub-strategies?	As noted above, we have relabeled each level for clarity. This line is referring to strategies.
		Pg 24 row 22 By "strategies" here, does this mean sub-strategies?	As noted above, we have relabeled each level for clarity. This line is referring to strategies.
		Table 2. Patient-Level Intervention Strategies; Evidence-based patient interactions Can call this provider-patient communication techniques? wonder if CBT, ACT, counseling and family therapy should be in the left column preceded by "Other: xxx" with the definition in this column.	Thank you, we have renamed this category "Patient-provider communication techniques"

Table 2. Patient-Level Intervention Strategies; Assertive outreach IS this the same as ACT above?	Thank you for this suggestion. We agree that it would generally be assumed that Assertive community treatment (ACT) would include assertive outreach. Although a study could potentially have assertive outreach without including other tenets of ACT so we have left as separate.
Table 2. Patient-Level Intervention Strategies Wonder if middle column can be moved to left preceded by "Other: xxx" so it can be defined in the middle column, as column heading specifies. What is, for example, "reasonable"?	We have shifted those strategies previously in the middle column to the left column and added appropriate definitions as requested. The term “reasonable costs” came directly from the cited study which used the full phrase “provides services at reasonable costs.”
Table 3. Clinic-Level Intervention Strategies; Medical scribes Not sure why this is here? Not mentioned in text as part of logic model and not in any study	We identified an initial collection of strategies based on existing systematic reviews of similar types of interventions. Though we did not find each a priori identified strategy in the included studies, we kept them in our report so as to describe the breadth of potential strategies as fitting an evidence map.
Table 4. Clinic Level Staffing by Discipline; Pharmacist Does this mean "none"?	Yes. We have reworded this row to “none” from “not applicable”
Intervention Complexity (Pg 35) also interesting that organization level expected to be quite low, maybe in terms of shared EHR, data, outcomes, etc?	This core dimension refers to the number of organizational categories to which the study intervention was directed (*ie*, individuals, groups or teams of individuals, systems). So the lack of complexity across studies in this dimension reflects that most interventions targeted individuals vs across all levels.
Summary of KQ 2 Findings (pg 39) I could see MH and SUD outcomes obtained at baseline. Was the goal for these studies to improve MH/SUD outcomes as a byproduct of PC engagement?	The primary outcome or objective of included studies varied. Most were not primarily aiming to improve primary care engagement.

		Limitations; Study Quality and Design (pg 43) This limitation is important. would include this in the executive summary. I think I only saw that PC engagement was not endpoint for many studies.	We agree and have added this point to the executive summary.
	5	This evidence synthesis compiles the literature on primary care utilization and engagement among adults with homeless experiences and serious mental illness. The authors are to be commended for the tremendous effort put into this report; they thoroughly synthesized the literature and aimed to use key findings to inform VA's efforts to develop programs to enhance primary care use among Veterans with homeless experiences and serious mental illness. The report is clear and well-written. I have a variety of comments below. Some overarching feedback, buried in these comments, includes the following:	Thank you.
		a) The report could benefit from more clarity about the definition of homelessness / housing insecurity. I would recommend using the term adults with homeless experiences, and defining up front that this includes individuals who have experienced homelessness and those with housing insecurity	We have changed the first sentence of the introduction in the executive summary and main report to use this language and stated this definition. In addition, we have changed the patient to be person-first throughout. We have also changed the title accordingly.
		b) It would help to define this population as a population with "two vulnerabilities;" this would clarify some key points made in the report – that perhaps could be highlighted – that systems of care tailored to this population with two vulnerabilities currently focus on homelessness or serious mental illness, and few efforts have been made to address both vulnerabilities and the intersection between them	Thank you for this point. We appreciate this framing and have added language to the Introduction in Executive Summary and the main Introduction.
		c) In thinking about evaluation measures for interventions (KQ2), a key problem in evaluating in the literature is the dearth of measures that are validated for persons with homelessness, much less persons with homeless experiences and SMI.	This is an important point which we have added to the discussion of the limitations of the current literature (see page X).
		• Acknowledgments o The National Center on Homelessness among Veterans typically does not capitalize the "A" in among	Thank you. We have corrected this typo.
		•Technical Expert Panel o Corrections to my name	Thank you, we have made these changes.

○ My degrees are MD, MPH (VA was accidentally included) ○ My title can be Physician and Health Services Researcher	
•Executive summary ○ I would define SMI the first time it is mentioned in the executive summary. Can be interpreted in many ways as a diagnostic group. ○ Minor typos: ▪ Page 9, line 38, remove comma between assessed and included ▪ Page 9, line 56, there needs to be a space between over and time ▪ Page 9, line 56 missing word – Third, there IS a need to…	We have added the VPR definition of SMI to the executive summary introduction. The noted typos have been corrected.
• Introduction ○ I would like to see clear definitions of homelessness and SMI up front – these are presented later (in the methods), but anyway to move them up to the introduction would improve the document	We have added greater definition for each these terms at the beginning of the introduction.
○ Page 11, line 22 uses the word “disorientation” due to SMI symptoms – I’m not sure what that means. Persons with psychotic disorders are not disoriented. They may be conceptually disorganized.	We have removed this word.
○ Another key point for the introduction is that stigma often results in patients with SMI’s medical complaints being dismissed or thought of as psychiatric in nature	We agree with this point and have added a few citations to substantiate the importance of stigma for individuals with SMI and homelessness. If the reviewer has a specific reference regarding the dismissal of medical complaints, we would be happy to review and add it.
• Methods ○ The conceptual framework might benefit from more population-specific examples of moderators and outcomes. For example, an important patient characteristic might be housing status. Important patient outcomes might be housing outcomes, psychiatric symptoms.	We agree with this suggestion and have provided more population specific examples of moderators and outcomes. We have modified the wording in the description of the conceptual model and better defined the 3 levels.

○ I am struggling with the inclusion criteria of currently homeless – in the literature this generally includes persons who are engaged in housing services, particularly within VA. Homelessness is a transient state that individuals vacillate in and out of. We generally talk about persons with homeless experiences to use person centered language.	We have reworded this criteria to "Ambulatory adults (≥18 years of age) who have had experiences of homelessness or those with housing insecurity"
• KQ1 ○ Housing First is mentioned for the first time on p.24, line 8. I would define this as "permanent housing with supportive services, including linkages to non-mandated health services."	We have reworded this sentence to the following: "This included, but was not limited, to studies that incorporated the "Housing First" program model, which prioritizes permanent, stable housing with supportive services, including linkages to non-mandated health services"
○ It's hard to conceptualize what "crisis intervention" looks like in terms of primary care engagement (p. 24, lin3 19) → this term generally does not describe a response to acute concerns that can be managed in primary care settings	We appreciate this question. It is important to note that we identified all intervention strategies regardless of whether or not they were specifically relevant to primary care as they were part of an intervention that included primary care engagement. We have added the following sentence to the beginning of the intervention strategies results section:" Intervention strategies identified were not restricted to those pertaining to primary care engagement."
○ Table 4: ▪ The definition of psychiatrist probably should not say "psychiatrist." Perhaps - Physicians trained in psychiatry; psychiatric/menta health nurse practitioners. Note that psychiatrists do fall under behavioral health as well.	We have reworded as suggested.
▪ Is there a reason not to define nursing? Is this RN level care? NPs?	We have added the following definition: "Nurses without prescribing privileges of any training level or not otherwise specified"
▪ Primary care provider should parallel the psychiatrist definition. Perhaps Physicians trained in primary care, primary care nurse practitioners/physician assistants	We have reworded this definition as suggested.
▪ I am not sure what social work (non-specified as LCSW) means. Is this referring	LCSW refers to a specific licensure for individuals with a masters of social work who have also

to social workers but you don't know whether or not they are licensed?	undergone extensive training and certification to diagnose and treat mental health disorders using psychotherapy approaches.
• Clinical and policy implications o Page 43 – line 17: rename the Center the National Center on Homelessness among Veterans	We have renamed as recommended.
o The VA has tested PCMH models for Veterans with homelessness (HPACT) and Veterans with SMI (SMI-PACT)	
▪ There are two contrasting approaches in thinking about PC engagement for persons with SMI in these two models. The HPACT model tailors care for people with homelessness, many of whom have mental health problems (including SMI), but it is ultimately a primary care setting. SMI PACT actually is distinct model, a PACT for people with SMI, but it is intentionally a model for people with SMI who have relatively stable mental illness that can be managed in primary care settings, with psychiatric/mental health consultation only	Thank you for this point—we have expanded our discussion of these services and added information about supported employment and the MHICM in the clinical implications section.
▪ There is a larger notion in terms of clinical implications that I would love to see mentioned somewhere. For homeless people with SMI, there is the idea that primary care services can be embedded in mental health settings (people with SMI may be most engaged in MH) or there is the distinct idea that PC and MH should be integrated in a PC setting (though at VA and in many other settings, PCMHI is not well-suited for persons with SMI, so this would require further tailoring).	While we agree with the reviewer's recognition of the important clinical implications here, because this is an evidence map and not a systematic review – we are unable to draw specific conclusions to support specific recommendations for clinical care delivery.
▪ Relevant in the VA context are programs like MHICM, which serve patients with SMI	We mentioned this point in the Clinical Implications section

exclusively, but often do not have embedded PC services	
• Limitations ○ Page 43, line 39 – the authors describe "connecting patients with SMI to primary care" – did they intend to use homelessness somewhere in this sentence also?	Yes, we have added this language.
○ Page 43, line 44 – the word housing insecurity is used, not homelessness. I mentioned this earlier but I think I would use an all-encompassing definition up front of homeless experiences that includes persons at risk for becoming homeless to clean up the nomenclature throughout	We agree and have changed this language throughout.
○ The discussion about outcome measures is interesting – to me, a clear limitation of the body of literature being synthesized is that use of measures that are not validated or even intended to be used by this population with two core vulnerabilities	We agree with this point and have added this to the limitation section as follows: "Finally, no outcome measures were clearly validated or designed for the specific patient population of those with experiences of homelessness."
○ Page 44, line 51 – consider changing to …clinical setting (two were in VA)…	This has been corrected as recommended.
○ Though the VA is an integrated health and social service system, the challenge would be integrate across its health and social service sectors, which can be challenging	We agree with this point and have added language and a citation to support fragmented service delivery across the health and social sectors in VA in the Generalizability to VA section of the report
• Table 9 ○ See earlier comments about concerns using the words housing insecurity instead of homelessness	This language has been corrected throughout.
○ Not sure what is meant by Patients with SMI and housing insecurity with additional co-occurring chronic health conditions – does this refer to strategies to address specific chronic health conditions, e.g., diabetes? Chronic medical illness is highly prevalent – and the norm – in this population of adults with two vulnerabilities	This sentence has been removed.
○ Page 46, line 16 – primary care teamS differ ○	Typo corrected

		What spectrum is being referred to in line 27 of page 46?	We have clarified this sentence to read: "….across the spectrum of engagement from initial visit to longitudinal care"
		• Conclusions o See earlier comments about use of housing insecurity	This language has been changed throughout.
		o When commenting on the unique position of VA, I would also note that the VA is the nation's largest provider of SMI services	Thank you, we have added "As one of the nation's largest integrated heath care providers…" to the Conclusions of the report and cited Zeiss AM and Karlin BE. Integrating Mental Health and Primary Care Services in the Department of Veterans Affairs Health Care System. *J. Clin. Psychol. Med. Settings*. 2008;15:73-78.
	6	Overall a very well constructed and helpful summary. There is clearly a need for more research and better identification/measurement of primary care engagement and an understanding of longer term impacts. An additional need is exploration of engagement strategies for individuals with experiences of homelessness. The majority of studies examined did not appear to include individuals with a history of homelessness. VA tracks Veterans in homeless programs after they have been successfully housed recognizing that there are persisting risks and barriers to care and elevated morbidity and mortality. There may be differences in approach needed for "street homeless" vs. those with housing instability vs. those with experiences of homelessness but all likely require targeted enhancement strategies.	Thank you. The recognition of different populations of persons with experiences of homelessness is an important one. We did not identify any studies focused on individuals with a history of homelessness only or studies that examined how experience of homelessness (*ie*, street homelessness vs. housing instability) moderated the intervention effect. We have cited this as a limitation of the current literature and a need for future research. "For example, experience of homelessness (*ie*, street homeless vs. housing instability) could moderate intervention effects, but few studies considered patient-level moderators."
		On page 43, line 17 the sentence reads: "For example, VA offers services through the National Center on Homelessness, has tested a patient-centered medical home model for Veterans with SMI, . . . " This didn't read correctly/make sense to me and I wasn't sure if what was being referenced was SMI-PACTs or H-PACTs. Also, technically,, the NCHAV doesn't offer services directly. Services may be developed/piloted/tested via the NCHAV but core offerings such as Homeless Patient Aligned Care Teams (HPACTs) are not under the NCHAV.	Thank you for this clarification. We have revised this sentence to read: "For example, the VA Homeless Programs Office has developed and implemented designed primary care teams to provide care specifically for patients with experiences of homelessness(H-PACT), the VA and has also tested a patient-centered medical home model for Veterans with SMI (SMI-PACT),..."

	7	Page 9 line 14 - about 20% of people who experience homelessness in the United States also have diagnosed serious mental illness (SMI) - 20% seems low unless it is "diagnosed" and general population including youth/children	We identified several sources that provided prevalence estimates within this range. Our original reference was from the National Alliance on Mental Illness (2019) and we added two other references: National Coalition for the Homeless. Mental Illness and Homelessness. Available at: www.nationalhomeless.org/factsheets/Mental_Illness.pdf. Accessed March 22, 2021. 2009. and Tsai J, Mares AS, and Rosenheck RA. Do homeless veterans have the same needs and outcomes as non-veterans? *Mil. Med.* 2012;177:27-31.
		Page 46 Line 17 - VA offers services through the National Center on Homelessness - what services are you referring to? We at the Center don't offer direct Veteran care services rather we engage in research, education, model development, and being a resource center. The Homeless Programs Office oversees homeless programming. If this service is what this sentence is referring to, then would recommend replacing NCHAV with HPO. NCHAV is under HPO.	We have reworded this section as noted above.