Primary Care Engagement Among Veterans with Experiences of Homelessness and Serious Mental Illness: An Evidence Map

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Prepared by:
Evidence Synthesis Program (ESP) Center
Durham VA Healthcare System
Durham, NC
Karen M. Goldstein, MD, MSPH, Co-Director
Jennifer M. Gierisch, PhD, MPH, Co-Director

Authors:

Megan Shepherd-Banigan, PhD
Connor Drake, PhD, MPA
Jessica R. Dietch, PhD
Abigail Shapiro, MPH
Amir Alishahi Tabriz, MD, PhD, MPH
Elizabeth E. Van Voorhees, PhD
Diya M. Uthappa, BS
Tsai-Wei Wang, BS
Jay B. Lusk, BSc
Stephanie Salcedo Rossitch, PhD
Jessica Fulton, PhD
Adelaide Gordon, MPH
Belinda Ear, MPH
Sarah Cantrell, MLIS
Jennifer M. Gierisch, PhD, MPH
John W. Williams, Jr., MD, MHSc
Karen Goldstein, MD, MSPH

U.S. Department of Veterans Affairs
Veterans Health Administration
Health Services Research & Development Service

PREFACE

The VA Evidence Synthesis Program (ESP) was established in 2007 to provide timely and accurate syntheses of targeted healthcare topics of importance to clinicians, managers, and policymakers as they work to improve the health and healthcare of Veterans. These reports help:

- Develop clinical policies informed by evidence;
- Implement effective services to improve patient outcomes and to support VA clinical practice guidelines and performance measures; and
- Set the direction for future research to address gaps in clinical knowledge.

The program comprises three ESP Centers across the US and a Coordinating Center located in Portland, Oregon. Center Directors are VA clinicians and recognized leaders in the field of evidence synthesis with close ties to the AHRQ Evidence-based Practice Center Program and Cochrane. The Coordinating Center was created to manage program operations, ensure methodological consistency and quality of products, and interface with stakeholders. To ensure responsiveness to the needs of decision makers, the program is governed by a Steering Committee composed of health system leadership and researchers. The program solicits nominations for review topics several times a year via the program website.

Comments on this evidence report are welcome and can be sent to Nicole Floyd, Deputy Director, ESP Coordinating Center at Nicole.Floyd@va.gov.

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Andrew Pomerantz, MD
National Mental Health Director, Integrated Care, VA Central Office
Washington, DC

Michal Wilson, MD
Medical Advisor, Homeless Programs, VA Central Office
Washington, DC

Peer Reviewers

The Coordinating Center sought input from external peer reviewers to review the draft report and provide feedback on the objectives, scope, methods used, perception of bias, and omitted evidence. Peer reviewers must disclose any relevant financial or non-financial conflicts of interest. Because of their unique clinical or content expertise, individuals with potential conflicts may be retained. The Coordinating Center and the ESP Center work to balance, manage, or mitigate any potential nonfinancial conflicts of interest identified.

EXECUTIVE SUMMARY

INTRODUCTION

Adults with experiences of homelessness, both those who have been homeless and those with housing insecurity, are more likely to suffer from higher rates of chronic illness and early mortality compared with those who are not homeless. Adults with experiences of homelessness experiences also have a higher mental health burden than the general population; about 20-25% of people who experience homelessness in the United States also have been diagnosed with serious mental illness (SMI). The VA National Psychosis Registry defines SMI as the presence of schizophrenia, other psychotic disorders, or bipolar disorder. Mental and behavioral health disorders threaten household stability, which, in turn, leads to poor community integration and engagement with medical care. Hence, both experiences of homelessness and mental illness are vulnerabilities that negatively impact health and receipt of health care. Individuals with experiences of homelessness and SMI would benefit greatly from longitudinal medical care delivered in the context of a population-tailored clinical setting, yet the underlying context of both experiences of homelessness and SMI create notable barriers to accessing and engaging with traditional clinic-based primary care. As a result, these individuals receive less preventive care and chronic disease management and often receive the majority of their health care in episodic acute care visits delivered in more costly locations such as emergency departments, which are ill equipped for the complexity of this patient population.

Previously developed interventions have focused on collaborations between primary care and either persons with SMI or persons with experiences of homelessness, but few interventions have targeted both populations simultaneously. To date there have been no systematic examinations of the breadth of the literature about interventions that attempt to improve engagement in care for populations with intersecting needs related to SMI and experiences of homelessness. For health systems to better meet the health care needs of this complex population, it is critical to learn about the types of interventions, strategies that have been tested, and outcomes evaluated to better connect patients with housing insecurity and SMI to primary care. In this evidence map, we systematically examine the literature and provide an overview of the quantity and distribution of intervention types and components that were assessed to improve engagement in primary care for individuals with experiences with homelessness and SMI.

The Key Questions (KQs) for this evidence map were:

KQ 1: What intervention strategies have been studied among adults with experiences of homelessness or who are at high risk of becoming homeless and who have serious mental illness (SMI) to promote engagement in primary care?

KQ 2: What measures have been used to evaluate interventions among adults with experiences of homelessness or at high risk of becoming homeless and who have SMI to promote engagement in primary care?

METHODS

We followed a standard protocol for this evidence mapping review developed in collaboration with our operational partners and a technical expert panel. The protocol was developed prior to

the conduct of the review, and there were no significant deviations after registration. The methods for this systematic review followed standards described in the Cochrane Handbook.

Data Sources and Searches

We collaborated with an expert medical librarian to conduct a primary search of the literature from database inception to May 15, 2020, in MEDLINE® (via Ovid®), EMBASE (via Elsevier), and PsycINFO (via Ovid®). We also hand-searched the bibliographies previous systematic reviews related to primary care for patients with SMI and those related to primary care for patients with experiences of homelessness for potential inclusion.

Study Selection

Studies identified through our primary search were classified independently by 2 investigators for relevance to the KQs based on our *a priori* eligibility criteria. We accepted any definition of homelessness or housing insecurity as used by the authors. Studied interventions had to be designed to target patients with serious mental illness (SMI), include at least 75% of patients meeting diagnostic criteria for SMI, or include a subgroup analysis of patients with SMI. While studies were not required to be solely or primarily focused on engaging target patients to primary care, they were required to have some direct connection or ability to link patients with primary care clinics. A standard dual-reviewer approach to identifying eligible articles was used at title and abstract levels as well as full-text levels.

Data Abstraction and Quality Assessment

Data from included studies were abstracted into a customized DistillerSR database by 1 reviewer and over-read by a second reviewer. We approached data abstraction in 2 phases. First, study characteristics such as key descriptors to assess applicability, high-level intervention details, and outcomes were abstracted. Second, a subgroup of the larger team abstracted specific strategies used by each intervention or program. As this is an evidence mapping review, we did not assess the methodological quality of individual studies.

Data Synthesis and Analysis

We used summary tables to describe the key study characteristics of the primary studies: study design, patient demographics, and details of the intervention. In order to systematically characterize the complexity of included interventions and programs, we used the intervention Complexity Assessment Tool for Systematic Reviews (iCAT_SR). Next, we categorized each intervention's degree of integration with primary care informed by existing frameworks for the integration of behavioral and physical health care. Data were summarized narratively. Data presentations include tabular and graphical formats, as appropriate, to convey the breadth of the extant literature.

RESULTS

Results of Literature Search

We identified 7,904 articles; after removing duplicates, there were 4,650 unique citations, 191 of which were eligible for full-text review. Twenty-two articles ultimately met our inclusion criteria as evaluating 15 unique interventions to promote engagement in primary care for unhoused or

housing-insecure adults with SMI. Seven studies evaluated the multi-site comparative federal demonstration program, Access to Community Care and Effective Services and Support (ACCESS), and 15 studies evaluated 14 other eligible interventions. Study designs varied widely from randomized controlled trials and cohort studies to single-site program evaluations. All studies were conducted in either the United States or Canada. Most of the included studies were not designed primarily to promote primary care engagement of the target population despite featuring interventions that included engagement with primary care.

Summary of Results for Key Questions

Key Question 1

We identified all intervention strategies described in each included study. Individual studies typically combined multiple intervention strategies, often at multiple levels (*ie*, patient, clinic, system). We identified a total of 31 unique intervention strategies across patient (n=22), clinic (n=4), and systems levels (n=5). The most frequently described patient-level strategies were health education, motivational interviewing, interdisciplinary intake, service navigation, and material assistance for housing. The most frequently described clinic-level strategies were multidisciplinary teams, employee training to care for this population, and established relationships with partner agencies. The most frequently described system-level strategies were data sharing and client monitoring technology. Primary care integration strategies were evenly distributed across studies and included the following not mutually exclusive categorizations: co-location, interdisciplinary care planning, standard referral, and enhanced referral (pre-existing relationships without regular structured contact). ACCESS sites evaluated tailored systems integration strategies to promote care coordination across social and medical care for persons with experiences with homelessness and mental illness. Strategies used by ACCESS sites ranged from information sharing across agencies, co-location, use of interagency service delivery teams, and use of standardized eligibility criteria. The median duration of these intervention was 12 months and ranged from 6 weeks to 2 years, although 6 studies and 7 ACCESS studies report did not report information about duration.

We categorized the complexity of included interventions using the iCAT_SR tool. Common intervention areas of moderate to high complexity included having multiple active intervention components that targeted a complex collection of behaviors, employing a high degree of tailoring or flexibility for individual patient needs, being susceptible to significant impact from patient- and provider-level factors, and potential for interactions between intervention components (*eg*, interdisciplinary care across multiple facets patient care). In contrast, we found aspects of low-level complexity around skill requirements for patients, and program staff needing little training beyond their discipline specific skills.

While in keeping with an evidence map, we did not seek to synthesize the effects of interventions described in the included articles. However, we report the findings of included articles as reported by the authors which suggest possible benefit in the areas of improved health outcomes, reduced emergency room/hospital utilization, increased primary care use, and reduced criminal recidivism; in addition, reported findings suggest that integration of care across agencies within a larger system is complex and requires intentional efforts.

Key Question 2

We also mapped measured outcomes to the patient, clinic, and systems level. Patient-level outcomes were most frequently assessed. We categorized patient-level outcomes as mental and physical health; community functioning; care utilization, patient experiences; and unmet needs and barriers to care. The most commonly reported outcomes included mental health, substance use, criminal justice involvement, housing, and hospitalizations. Outcomes that specifically addressed primary care engagement included number of primary care visits and number of days to primary care engagement. The clinic-level outcomes varied widely and only fidelity to care model was measured in more than 1 study. System-level outcomes were reported least frequently, though integration strategies and service link were measured in more than 1 study. While validated self-report measures were used for many of the patient-level outcomes, in general, the same outcome measures were not used consistently across studies.

DISCUSSION

Key Findings

We identified 22 publications describing 15 unique studies. We categorized integration strategies to promote primary care engagement for adults with experiences of homelessness and SMI. Strategies used across studies varied, but primarily targeted patient levels (*eg*, health education, evidence-based interactions such as motivational interviewing) with fewer strategies at the clinic (*eg*, employee training, multidisciplinary teams) or system levels (*eg*, data sharing). Almost all studies used strategies at multiple levels. The most common outcomes assessed included patient mental health, substance use, criminal justice involvement, housing, and inpatient utilization. Interventions evaluated by included studies displayed notable complexity around aspects such as the number of behaviors targeted, number and interaction of intervention components, and individual patient-level tailoring allowed.

Applicability

While some included studies were conducted in VA clinical settings, the majority were not. As such, readers should use caution when generalizing these findings to a Veteran population.

Research Gaps/Future Research

We identified several areas for future research. First, these interventions have high relevance for patients who have been involved in the justice system and there is a need for more work with this population. Second, interventions should focus on maintaining primary care engagement over time as a critical focus for improving long-term health outcomes. Third, there is a need to validate outcome measures used in these studies to allow synthesis across future studies, particularly in relation to primary care engagement.

Conclusions

We mapped the breadth of literature seeking to engage adults with experiences of homelessness and SMI with primary care, including localized interventions to national multi-site demonstration projects. In general, primary care engagement was not the primary objective of these studies. We found that programs are typically highly complex and employ multiple intervention strategies, usually across patient, provider, and system levels. This literature could be improved by rigorous

study designs, standardized descriptions of intervention components, and a uniform and validated approach to measuring primary care engagement. Organizations seeking to optimize the health care of this vulnerable patient population can use this map to inform program strategy choices during development and reevaluation.