Engaging Veterans Experiencing Homelessness in Primary Care

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PREFACE

The VA Evidence Synthesis Program (ESP) was established in 2007 to conduct timely, rigorous, and independent systematic reviews to support VA clinicians, program leadership, and policymakers to improve the health of Veterans. ESP reviews have been used to develop evidence-informed clinical policies, practice guidelines, and performance measures; to guide implementation of programs and services that improve Veterans' health and wellbeing; and to set the direction of research to close important evidence gaps. Four ESP Centers are located across the US. Centers are led by recognized experts in evidence synthesis, often with roles as practicing VA clinicians. The Coordinating Center, located in Portland, Oregon, manages program operations, ensures methodological consistency and quality of products, engages with stakeholders, and addresses urgent evidence synthesis needs.

Nominations of review topics are solicited several times each year and submitted via the ESP website. Topics are selected based on the availability of relevant evidence and the likelihood that a review on the topic would be feasible and have broad utility across the VA system. If selected, topics are refined with input from Operational Partners (below), ESP staff, and additional subject matter experts. Draft ESP reviews undergo external peer review to ensure they are methodologically sound, unbiased, and include all important evidence on the topic. Peer reviewers must disclose any relevant financial or non-financial conflicts of interest. In seeking broad expertise and perspectives during review development, conflicting viewpoints are common and often result in productive scientific discourse that improves the relevance and rigor of the review. The ESP works to balance divergent views and to manage or mitigate potential conflicts of interest.

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Operational Partners

Operational partners are system-level stakeholders who help ensure relevance of the review topic to the VA, contribute to the development of and approve final project scope and timeframe for completion, provide feedback on the draft report, and provide consultation on strategies for dissemination of the report to the field and relevant groups.

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Technical Expert Panel

To ensure robust, scientifically relevant work, the technical expert panel (TEP) guides topic refinement; provides input on key questions and eligibility criteria, advising on substantive issues or possibly overlooked areas of research; assures VA relevance; and provides feedback on work in progress. TEP members included:

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Disclosures

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The findings and conclusions in this document are those of the author(s) who are responsible for its contents and do not necessarily represent the views of the Department of Veterans Affairs or the United States government. Therefore, no statement in this article should be construed as an official position of the Department of Veterans Affairs. The final research questions, methodology, and/or conclusions may not necessarily represent the views of contributing operational and content experts. No investigators have affiliations or financial involvement (*eg*, employment, consultancies, honoraria, stock ownership or options, expert testimony, grants or patents received or pending, or royalties) that conflict with material presented in the report.

Executive Summary

KEY FINDINGS

Engaging Veterans Experiencing Housing Insecurity in Primary Care

- Engaging Veterans experiencing housing insecurity in any primary care may significantly reduce hospitalizations and emergency department visits (moderate confidence).
- Among Veterans experiencing housing insecurity, primary care visits may be high after initial engagement in primary care and then decrease over time (low confidence).
- Studies provided insufficient evidence (no conclusion) for housing or community integration outcomes for Veterans experiencing housing insecurity who are versus are not established in primary care.
- The studies did not evaluate specialty care utilization, cost and return on investment, Veteran experience or satisfaction, or disease-specific outcomes.

Effect of Homeless-Tailored Primary Care versus Usual Primary Care

- Homeless-tailored primary care may reduce inpatient hospitalizations and emergency department visits and increase appropriate use of emergency care (low confidence).
- Studies provided insufficient evidence (no conclusion) on the effect of homeless-tailored compared to usual primary care on primary care utilization or overall specialty care utilization.
- Homeless-tailored primary care may reduce mental health and substance use visits (low confidence).
- Patient experiences may be better for Veterans experiencing housing insecurity in homeless-tailored primary care compared to usual primary care (low confidence).
- Homeless-tailored primary care may increase primary care costs and reduce emergency department and overall health care costs (low confidence).
- There is no evidence for a difference in disease-specific outcomes for Veterans in homeless-tailored primary care compared to usual care (low confidence).
- The studies did not evaluate housing and community integration outcomes.

Veterans experiencing housing insecurity are a vulnerable population, and the US Department of Veteran Affairs (VA) has made addressing homelessness a priority. Although placing Veterans experiencing housing insecurity in permanent housing is important, these Veterans still have a need for health care. Physical illness, mental illness, and substance use diagnoses are all more common among Veterans experiencing housing insecurity than matched stably housed people. Medical and social needs of Veterans experiencing housing insecurity can be managed with outpatient care.

CURRENT REVIEW

Given that Veterans experiencing housing insecurity have a high prevalence of a variety of physical and behavioral health diagnoses, it is important to understand the effect of establishing primary care on these individuals. Therefore, the Veterans Health Administration (VHA) Office of the Assistant

Undersecretary for Health - Clinical Services requested the following systematic review to examine the impact of accessing primary care services, including Patient Aligned Care Teams (PACT) and Homeless Patient Aligned Care Teams (HPACT), on health care utilization and other outcomes in Veterans experiencing housing insecurity. The following key questions (KQ) were developed in collaboration with VA partners:

1. Among Veterans enrolled in VA programs for those experiencing housing insecurity[i], what is the effect of receiving primary care through PACT and/or HPACT on Veteran-reported clinical, health service use, and housing outcomes?
2. Among Veterans experiencing homelessness or at risk for homelessness, what is the effect of PACT and/or HPACT on Veteran-reported, clinical, health service use and housing outcomes?

We searched for peer-reviewed articles in Ovid Medline, Cochrane, PsycINFO, CINAHL, Scopus, and ClinicalTrials.gov from inception until March 26, 2024. Eligible studies included US Veterans ≥18 years of age with a history of experiencing housing insecurity. For KQ 1, we focused on studies of Veterans enrolled in a named VA homeless program. For KQ 2, we focused on studies of Veterans experiencing housing insecurity regardless of enrollment in any specific VA homeless program. Studies were excluded if they consisted of home-based primary care, Geriatric PACT (GERIPACT), community primary care (*ie,* primary care outside the VA), or TriCare. Comparators of interest included Veterans experiencing housing insecurity not receiving primary care or not enrolled in PACT or HPACT, usual primary care, or no comparator. We included randomized controlled trials (RCT), nonrandomized comparative studies (NRCS), and single group studies. We analyzed Veteran-reported outcomes such as unmet medical needs, unmet supportive care needs, or satisfaction with VA; disease-specific outcomes, including binary indicators of chronic disease management and referrals to specialty services (present or absent); food insecurity outcomes; health care utilization outcomes; and housing outcomes. We assessed certainty of evidence following the GRADE (Grading of Recommendations Assessment, Development and Evaluation) approach. Single group studies without pre and post data were excluded from our GRADE assessments.

RESULTS

Four studies evaluated the effect of engaging Veterans experiencing housing insecurity in primary care (*ie,* yes or no primary care), and 16 studies compared outcomes for Veterans experiencing housing insecurity in homeless-tailored primary care to standard or usual primary care (*eg,* HPACT vs PACT). The studies span from 2006 to 2021 and involved 115,844 participants (range = 123 to 51,886). Three studies used data from the Patient-Centered Medical Home-Survey of Healthcare Experiences of

[i] VA homeless programs include US Department of Housing and Urban Development-VA Supportive Housing (HUD-VASH), Health Care for Homeless Veterans (HCHV), Grant and Per Diem (GPD), Supportive Services for Veteran Families (SSVF), Domiciliary Care for Homeless Veterans (DCHV), Homeless Veteran Community Employment Services (HVCES), Compensated Work Therapy (CWT), Health Care for Re-entry Veterans (HCRV), or Veteran Justice Outreach (VJO).

Patients and the remaining studies used data from VA electronic medical records. Only 1 study exclusively included Veterans enrolled in a named VA homeless support program (HUD-VASH), and 18 studies included Veterans experiencing housing insecurity regardless of enrollment in a named VA homeless program.

Engaging Veterans Experiencing Housing Insecurity in Primary Care

Four studies (2 nonrandomized comparisons and 2 single group analyses) conducted in the VA between 2006 and 2017 included 14,967 analyzed participants and evaluated outcomes for Veterans experiencing housing insecurity engaged in primary care (*ie,* yes or no primary care). Two studies evaluated Veterans experiencing housing insecurity new to primary care. Only a single study exclusively analyzed participants in a named VA homeless program (HUD-VASH). The studies had different follow-up periods and comparisons: 1 study compared outcomes 7 to 12 months after enrollment in homeless-tailored primary care to outcomes during the first 6 months after enrollment, 1 study compared outcomes 6 months before and after enrollment in HPACT, 1 study compared Veterans who accessed primary care within 1 month of study enrollment to those who did not, and 1 study compared Veterans who accessed primary care over a 1 year period to those who did not. In 2 studies, most participants were White (62% and 81%), 1 study reported that most participants were Black (57%), and 1 study did not report information about race. Mean age in the 4 studies ranged from 48.4 to 52.9 years old. The 4 studies reported multiple comorbidities including depression (approximately 55% in 2 studies), anxiety (33% and 47% in 2 studies), posttraumatic stress disorder (31% in 1 study), and bipolar disorder (19.2% in 1 study).

One NRCS only reported results from an unadjusted analysis (therefore, moderate risk of bias). Three studies had no methodological concerns (*ie,* low risk of bias).

The studies found that establishing Veterans experiencing housing insecurity in primary care may reduce emergency department visits (2 studies) and hospitalizations (2 studies; moderate confidence for both). Primary care visits for Veterans experiencing housing insecurity newly established in primary care may be high after initial engagement and then decrease over time (1 study, low confidence). Evidence is insufficient (no conclusion) for the impact of establishing Veterans experiencing housing insecurity in primary care on housing and community integration outcomes (inconsistent estimates and methodological limitations). No study reported data on specialty/other care, patient experiences, satisfaction, cost or return on investment, or disease-specific outcomes at different time points.

The Effect of Homeless-Tailored Primary Care versus Usual Primary Care

Sixteen studies (10 nonrandomized comparisons and 6 single group analyses) conducted between 2011 and 2021 included 114,965 analyzed participants and compared homeless-tailored primary care to usual primary care. All but 1 study explicitly included Veterans with a history of being established or engaged in primary care prior to enrolling in the homeless-tailored primary care. In 13 studies, most participants were White (range of 38% to 81%), in 2 studies most participants were Black (52% and 67%), and 1 study did not report data on race. In 9 studies, the mean age was between 49.1 to 59.5 years, in 5 studies most participants were between 45 and 64 years of age (range 18 to 65+), and 2 studies did not report data on age. Thirteen studies reported a range of mental health diagnoses or use of psychiatric medication at baseline (range = 8% to 97%) and substance use disorder (2% to 75%). The studies called homeless-tailored primary care by different names (*eg,* HPACT, homeless-

orientated primary care, integrated primary care), but services offered in this model of care generally consisted of high staff-to-patient ratios, primary care, non-medical social services and outreach.

Four single group studies only reported follow up data without baseline data and were excluded from our certainty of evidence assessment. One NRCS had concerns about the comparator representativeness and unclear reporting or discrepancies in the study (therefore, high risk of bias). Eight NRCS had moderate risk of bias. Five of these NRCS used self-reported outcomes where participants were not blinded to the intervention, 1 study had unclear reporting, incomplete outcome data, and concerns about the comparator representativeness, 1 used a crude unadjusted analysis, and 1 study had concerns about the comparator representativeness. Three NRCS had no concerns (therefore, low risk of bias).

The studies provided insufficient evidence (no conclusion) for primary care utilization (4 studies) or overall specialty care utilization (3 studies) for homeless-tailored primary care compared to usual primary care (methodological limitations and inconsistent estimates). There is no evidence for a difference in disease-specific outcomes for Veterans in homeless-tailored primary care compared to usual care (2 studies; low confidence). Homeless-tailored primary care may reduce inpatient hospitalizations (4 studies) and emergency department visits (5 studies) and increase appropriate use of emergency care (4 studies; low confidence for all). Homeless-tailored primary care may reduce mental health care visits (5 studies) and substance use care visits (3 studies; low confidence). Homeless-tailored primary care may increase primary care costs and reduce emergency department and overall health care costs (1 study; low confidence). Further, patient experiences may be better for housing-insecure Veterans in homeless-tailored primary care compared to usual primary care (6 studies; low confidence). No study reported data on housing and community integration outcomes.

DISCUSSION

Four studies evaluated the effect (or association) of establishing Veterans experiencing housing insecurity with primary care (*ie,* yes or no primary care). These studies identified fewer emergency department visits, including judicious use of emergency departments, as well as fewer inpatient admissions for Veterans experiencing housing insecurity engaged in primary care compared to those without primary care engagement. This finding is consistent with the broader literature that shows improved access to primary care is generally associated with less use of acute care. Although the 4 studies did not evaluate cost, the findings of reduced acute care may translate into cost savings for Veterans engaged in primary care. There was insufficient evidence to determine the effect of engaging in primary care on primary care utilization or chronic disease management for Veterans experiencing housing insecurity.

More studies compared homeless-tailored primary care to general or usual primary care. This comparison was more frequently reported because VA providers (at the national and medical center levels) have implemented multiple models of homeless-tailored primary care. Homeless-tailored primary care may reduce inpatient hospitalizations and emergency department visits and increase appropriate use of emergency care. In addition, homeless-tailored primary care may reduce overall cost of care. These findings occurred despite insufficient evidence for primary care or specialty care utilization for Veterans in homeless-tailored primary care compared to usual primary care. Importantly, Veterans in homeless-tailored primary care reported better experience and satisfaction, indicating that they rated the services or attitudes typically provided with tailored primary care higher than usual care. Further, overall, homeless-tailored primary care reduced mental health and substance use services. One

explanation for the reduction in mental health and substance use care is that homeless-tailored primary care includes these services as part of their model of care. However, an alternative explanation is that those in HPACT may not receive the same referrals for services as non-HPACT Veterans.

Implications for VA Policy

There is a VHA priority to support Veterans' whole health. For Veterans experiencing housing insecurity, this includes primary care, housing, and treatment of medical and mental health conditions. This review found that establishing or engaging in primary care was associated with lower emergency department use and fewer hospitalizations. In addition, enrollment in homeless-tailored primary care was associated with lower emergency department use, including inappropriate emergency department use, fewer hospitalizations, and Veterans in these programs felt more "engaged" in care. Because of the reduction in emergency and inpatient visits and efficient use of outpatient care, there is clear value in establishing Veterans experiencing housing insecurity in primary care. Although homeless-tailored primary care has additional benefits over usual primary care, any primary care may be beneficial for Veterans.

Engaging and retaining Veterans experiencing housing insecurity in VA care is important because this population has housing, social, and medical needs that may be difficult to address outside the VA in a community setting. The VA is positioned to enroll Veterans experiencing housing insecurity in primary care. VA programs to end Veteran homelessness (*eg,* HUD-VASH or GPD) typically have formal intake assessments, enrollments, and multiple contacts with staff. During the intake or initial contact with homeless program staff, there is an opportunity to refer Veterans to primary care. VA decision-makers should consider developing a formal protocol that facilitates transitions between homeless program staff and primary care staff. Any formal protocol should be evaluated using rigorous implementation science methods. There should also be an eye towards reproducibility and evaluation of any protocol. Evaluating efforts to strengthen connections between programs may require adding some questions or items to homeless program intake assessments.

Research Gaps/Future Research

Although it is challenging to determine the causal effect of establishing Veterans experiencing housing insecurity in primary care on outcomes, there are opportunities for qualitative research to understand barriers and facilitators to accessing care and the perceived benefits of primary care. There may also be opportunities to evaluate the effect of VA programs that seek to support access to primary care rather than the direct effect of primary care on outcomes.

Investigating homeless-tailored primary care compared to usual primary care may be an ideal scenario for a site-level randomized trial (*ie,* randomization at the Medical Center level). Cluster or site-level randomized trials may allow for higher quality studies while reducing the ethical considerations surrounding randomizing Veterans to homeless-tailored primary care or usual primary care. Future studies evaluating homeless-tailored primary care should also focus on describing the specific features of tailored primary care and understanding the aspects of tailored primary care that affect outcomes. Further, there was limited information for several outcomes of interest, including data on cost and disease-specific outcomes. Additional data on cost and cost-effectiveness would be particularly powerful in helping to understand the additional resources required to deliver homeless-tailored primary care. For studies conducted in the VA, cost data may be relatively easy to evaluate (obtained from routinely captured VA data) and would not increase participant burden with surveys. There is also a need for future studies to consider the contextual factors that influence care, such as

neighborhood factors and transportation access. Finally, identified studies were too dissimilar to permit meta-analyses. Therefore, there is a need for VA researchers and staff to prospectively plan studies together or develop consensus about the best study designs to use and most actionable outcomes to assess.

Limitations

This evidence review has several limitations. First, we were unable to differentiate between the types of homeless-tailored primary care described in the literature (*eg,* HPACT or homeless-oriented primary care) and instead treated these programs as a single intervention. Nor were we able to understand the features of homeless-tailored primary care that affect outcomes. Second, many of the studies used the same VA data, and it is possible that the same Veterans are included in multiple included studies. Third, many of the studies were not designed to directly investigate the effect of primary care on outcomes. This resulted in the review excluding comparator information from studies that compared Veterans experiencing housing insecurity to stably housed Veterans and evaluating studies originally designed as an NRCS as a single group.

CONCLUSIONS

Findings from this review highlight the potential value of establishing and engaging Veterans experiencing housing insecurity in primary care and more specifically homeless-tailored primary care. Benefits of primary care for Veterans experiencing housing insecurity include reducing hospitalizations and emergency department visits. Although these studies did not evaluate cost, the reductions in acute care may translate to cost savings and a return on investment. In addition, homeless-tailored primary care may provide some additional benefits over usual primary care for Veterans experiencing housing insecurity, including reduced inpatient hospitalizations and emergency department visits and increased appropriate use of emergency care, overall cost savings, and better experiences with care. Homeless-tailored primary care may reduce the use of mental health and substance treatment, which could be because homeless-tailored primary care includes these services in its model of care or because referral practices differ for Veterans who are versus are not enrolled in HPACT. Additional data are needed on engagement in primary care on disease and community integration outcomes, and on cost and return on investment of homeless-tailored primary care. Future studies should also aim to understand the specific features of homeless-tailored primary care and how they affect outcomes.