DEPARTMENT OF VETERANS AFFAIRS
FY 2025 ANNUAL EVALUATION PLAN

LETTER FROM THE EVALUATION OFFICER

Each year, VA summarizes significant program evaluations in the Annual Evaluation Plans addressing key questions posed in our Learning Agenda, as specified in the Evidence Act. While no single document can fully capture the breadth of all analyses each year across the spectrum of issues we address in VA, this Annual Evaluation Plan attempts to extract the highlights from the fifteen most significant program evaluations which address topics that span our Strategic Plan and its constituent Learning Agenda.

The evaluations, as this Plan documents, will develop evidence to assist VA officials make key decisions about long-standing policy and programmatic issues. They also support the investments VA is making in our FY 2025 budget, such as addressing the consequences of infrastructure choices for rural access to care and improving mental health services. In addition, VA's advocacy of Veterans is featured in the Camp Lejeune and Toxic Military Exposures evaluation. All the investigations summarized in this plan are supported by the President's Budget for FY 2025, and the value they offer to improve the lives of Veterans, their families, caregivers and survivors implements that document.

There are other topics that are ripe for study, which are introduced in this Plan, including women Veterans' health, an emerging "whole person, whole life" housing security/ homelessness model and workforce issues which will be addressed in future plans.

You will see in this plan an extract of the issues that Veterans, their families, caregivers and survivors face, and which VA addresses on a daily basis on their behalf. The evaluations featured here show that while much progress has been made, there is still more to be done. Those of us who strive to be of service to those who have served are grateful for the opportunity to spearhead these evaluations and we welcome your feedback and suggestions for how to do better.

/s/ Eugene Lockwood-Shabat (Acting)

Table of Contents

BACKGROUND AND APPROACH

The Foundations for Evidence-based Policymaking (EBP) Act of 2018 (P.L. 115-435, "Evidence Act") requires cabinet-level agencies, including the Department of Veterans Affairs (VA), to create and use Learning Agendas, Annual Evaluation Plans and Capacity Assessments. In guidance documents, the Office of Management and Budget (OMB) specified requirements for these deliverables.

The VA Learning Agenda and the VA Capacity Assessment documents are appendices to the VA Fiscal Year (FY) 2022-2028 Strategic Plan. This VA FY 2025 Annual Evaluation Plan is fully aligned with the Learning Agenda, as discussed below.

Since the Evidence Act became law in early 2019, the chartered VA Foundations for Evidence-Based Policymaking Working Group (FEBPWG) has superintended efforts to meet the statutory requirements of the Evidence Act across VA. The FEBPWG has over 250 representatives from the Veterans Benefits Administration (VBA), Veterans Health Administration (VHA), National Cemetery Administration (NCA) and staff offices supporting implementation of the Evidence Act. The FEBPWG and its membership facilitate the completion and approval of the Evidence Act deliverables, including this Annual Evaluation Plan.

WHAT HAS CHANGED FROM THE FY 2024 ANNUAL EVALUATION PLAN

- Reorganized the presentation by strategic plan element beginning with evaluations related to access to care and benefits, then delivery of care, and finally stewardship (see table, below)
- Included a table on completed FY 2024 evaluations
- Added back three evaluations which appeared in the FY 2023 Annual Evaluation Plan, including the Veteran Readiness & Employment Longitudinal Study, Caring Letters and Reach Out, Stay strong Essentials (ROSE)
- Added several studies for the first time, including Camp Lejeune & PACT Act, Clinical Efficiency – Screening Workflows and Direct/Community Care
- Added as "Under Development" an evaluation of Housing Security/ Homelessness that is the focus of the recently published Supplement to the VA Learning Agenda on Homelessness
- Updated FY 2024 evaluations with current status and findings, when available
- Embedded COVID's effects on service/care delivery in specific studies rather than as a separate evaluation.

Evaluation	Strategic Plan Goal Element	Org.	Status
Veteran Readiness & Employment (VR&E) Longitudinal Study	Access	VBA	Restored
Post-Separation Transition Assistance Program (TAP) Assessment	Access	VBA	Updated
Mission 401 Underserved	Access	VHA	Updated
Virtual Care	Access	VHA	Updated
PTSD Access to H/C (PATH)	Access	VHA	Updated
Camp Lejeune & PACT Act	Access	VHA	New
Clin. Eff. - Screening Workflows	Access	VHA	New
Women Veterans' Health	Access	VHA	Development
Caring Letters	Deliver Care: Suicide & MH	VHA	Restored
Reach Out, Stay strong Essentials (ROSE)	Deliver Care: Suicide & MH	VHA	Restored
Veteran Sponsorship Initiative	Deliver Care: Suicide & MH	VHA	Updated
Risk Identification Strategy (Risk ID)	Deliver Care: Suicide & MH	VHA	Updated
Homelessness/Housing Model	Deliver Care: Suicide & MH	VA	Development
Post-Incarceration Engagement (PIE)	Deliver Care: Subs. Use Disorder	VHA	Updated
Rural Access to Buprenorphine	Deliver Care: Subs. Use Disorder	VHA	Updated
Homeless Overdose Prevention Expansion (HOPE)	Deliver Care: Subs. Use Disorder	VHA	Updated
Direct & Community Care	Deliver Care: Subs. Use Disorder	VHA	New
Human Resource and Workforce Outcomes	Stewardship	VHA	Development

CRITERIA FOR SIGNIFICANCE AND TOPIC SELECTION

The Evidence Act requires agencies to identify "significant" evaluations and address them in their Annual Evaluation Plan, as well as provide a definition of "significant." Since the passage of the Evidence Act, VA has viewed the opportunity of publicizing its most significant evaluation and research priorities as fully consistent with its vital mission on behalf of Veterans and their families and welcomes the chance to further advocate for them by focusing attention on important issues.

VA engages in thousands of peer-reviewed evaluations and research studies each year, and none of them are considered insignificant. All are used to advance service delivery, improve access, enhance quality and contribute to their respective fields of inquiry both within VA and for Veterans and others. For example, as part of the internal solicitation protocol for research and evaluation proposals across the Office of Research and Development (ORD), VHA has a well-established set of criteria to verify significance:

- Programmatic or policy importance or value of the evaluation and its value to Veterans health care and health outcomes
- Whether the evaluation addresses a new topic or topic that has not been resolved
- Whether it addresses a critical question related to barriers to optimal service
- Whether if completed successfully, there is a pathway for the results to inform improvements

Based on these criteria, proposals are identified for implementation after peer review, and the results and findings are likewise peer-reviewed. To select those evaluations most suited to the requirements of the Annual Evaluation Plan and the intent of the Evidence Act, OMB suggested criteria (Memorandum 19-23, footnotes 21 & 61) for identification of significance of evaluations:

1. Importance of a program or funding stream to the agency mission
2. The size of the program in terms of funding or people served
3. The extent to which the study will fill an important knowledge gap regarding the program, population(s) served, or the issue(s) that the program was designed to address

To maximize the value of implementing the Evidence Act provisions on behalf of Veterans, their families and caregivers, the VA FEBPWG considered these criteria and identified several VA-specific criteria consistent with guidance to further narrow down our most significant issues and evaluations. These criteria were introduced for the initial Annual Evaluation Plan covering FY 2022, and they continue to reflect the emphasis in both the FY 2022-2028 Strategic Plan and subsequent Annual Evaluation Plans on at-risk, marginalized, underserved and vulnerable Veterans and their families.

VA Criterion #1: Existing Lines of Inquiry
(Consistent with guidance criterion #3)

VA's current efforts entail thousands of evaluations every year, conducted with a variety of means and for many reasons, including statutory requirements. Evaluation practitioners therefore seek to focus on existing lines of inquiry embodied in current evaluation studies and efforts. Practitioners think that all areas of national importance are currently being addressed at some point in the evaluation lifecycle.

Those identifying potential evaluations were required to attest that their pursuit of those questions could be completed using existing funds under current services, whether by reprioritization of existing budgets, or identification of evaluations that were already anticipated.

VA Criterion #2: Mission Focus on Veterans
(Consistent with guidance criterion #1)

VA acknowledges that there are several challenges in direct mission-driven care and services, as well as administrative functions. However, VA chooses to focus initial efforts under the Evidence Act on purely Veteran-facing topics. By doing so, efforts to address the requirements of the Evidence Act will additionally stimulate internal VA interest and external stakeholder attention on the most important issues facing Veterans and their families.

VA Criterion #3: Care and Services for At-Risk, Marginalized, Underserved and Vulnerable Veterans
(Consistent with all guidance criteria)

VA's FY 2022 – FY 2028 Strategic Plan encompass myriad areas in which VA impacts Veterans – truly every aspect of the life journeys of Veterans – requiring a focus on a meaningful subset of our Strategic Objectives. An immediate consensus emerged that to rally attention and effort to VA's public evaluation activities under the Evidence Act, VA would focus on the most compelling Objectives, namely enhancing care and services for at-risk, marginalized, underserved and vulnerable Veterans, such as those facing addiction, suicide, and toxic military exposures.

This focus aligns, as discussed below, the VA Learning Agenda with this Annual Evaluation Plan.

VA Criterion #4: Alignment of Learning Agenda with Evaluation Plans
(Consistent with all guidance criteria)

Early in VA's deliberations, it became clear that the virtues of pursuing a rigorous set of evaluations that would be showcased to many stakeholders due to the very public

nature of the Evidence Act requirements, such as wide public dissemination of findings, meant that our longer-term Learning Agenda should be closely tied to Annual Evaluation Plan studies. In this way, both documents would focus attention on issues of wide public concern and be complementary. The goal is to provide preliminary evaluation findings to policymakers early in the span of the Strategic Plan to address initial, broader questions while providing further details with evaluations later in the cycle.

Therefore, a critical criterion in VA for "significance" is an evaluation which directly supports VA's Learning Agenda.

VA Criterion #5: Nomination Using Administrations' Existing Prioritization
(Consistent with all guidance criteria)

The FEBPWG decided that those individuals who were responsible for carrying out such Agendas and Plans should use their existing, documented priorities (which align to VA's Strategic Plan) to nominate a set of questions and research topics. Those professionals are located organizationally within the major VA Administrations – the Veterans Benefits Administration (VBA), the Veterans Health Administration (VHA) and the National Cemetery Administration (NCA). The FEBPWG worked with the Administrations to focus their nominations based on the overarching VA criteria. Each Administration has their own strategy and business documents that tie directly to the VA-level Strategic Plan, and they are familiar with the most significant issues they face that address the above criteria. In addition, VHA enters the Evidence Act process already recognized as a thought leader in program evaluation and implementation sciences, while VBA has been building capacity rapidly on its substantial process-analytic foundation. (For VA organizations needing to develop their evaluation and evidence-building and -use capacity, VA's Capacity Assessment and related budget initiatives address such gaps and opportunities.)

This federated approach ensures that policymakers can obtain the most salient findings addressing the most significant issues they are likely to face, while the Administrations are able to pursue questions they can address in this Annual Evaluation Plan using the current and likely state of knowledge, expertise and analytic capacity they encompass.

In the following sections, VA's Strategic Plan elements related to (1) Access to Care and Benefits, (2) Delivery of Care and Benefits and (3) Stewardship are addressed with significant evaluations meeting the above criteria.

COMPLETED EVALUATIONS

The following table presents preliminary results and other documentation of the completion of prior years' Annual Evaluation Plans.

Name	Completion Date	Preliminary Results and/or Other Documentation
MISSION 507 – Medical Scribes	4Q FY2022	1. Shafer, P. R., Garrido, M. M., Pearson, E., Palani, S., Woodruff, A., Lyn, A. M., Williams, K. M., Kirsh, S. R., & Pizer, S. D. (2021). Design and implementation of a cluster randomized trial measuring benefits of medical scribes in the VA. Contemporary clinical trials, 106, 106455. https://doi.org/10.1016/j.cct.2021.106455 2. Regular Interim/Final Reports from evaluators to VHA's Office of Veteran Access to Care (OVAC) 3. Annual Congressionally Mandated Reports from OVAC 4. Paper in progress – Comparison of Full Time Equivalent (FTE) and Clinic Time Capacity Metrics in Productivity Measures 5. Paper in progress – Impact of Scribes on Emergency Department Wait Times 6. Paper in progress – Implementation of the MISSION Act 507 Scribes Pilot Program
COVID-19 – All-Cause Mortality	1Q FY2023	1. Feyman Y, Auty SG, Tenso K, Strombotne KL, Legler A, Griffith KN. County-Level Impact of the COVID-19 Pandemic on Excess Mortality Among U.S. Veterans: A Population-Based Study. Lancet Reg Health Am. 2022 Jan;5:100093. doi: 10.1016/j.lana.2021.100093. Epub 2021 Oct 30. 2. Griffith KN, Asfaw DA, Childers RG, Wilper AP. Changes in US Veterans' Access to Specialty Care During the COVID-19 Pandemic. JAMA Netw Open. 2022;5(9):e2232515. doi:10.1001/jamanetworkopen.2022.32515 3. Feyman Y, Avila CJ, Auty S, et al. Racial and ethnic disparities in excess mortality among U.S. veterans during the COVID-19 pandemic. Health Services Research. 2022 Dec. DOI: 10.1111/1475-6773.14112. PMID: 36478574; PMCID: PMC9878051. 4. Paper In Progress: Tenso, K, Strombotne, KL, Feyman, Y, Auty, SG, Legler, A, & Griffith KN. (under review). "Excess Mortality at Veterans Health Administration Facilities During the COVID-19 Pandemic."

Name	Completion Date	Preliminary Results and/or Other Documentation
SCOUTT	4Q FY 2022	1. <u>Hawkins et al. (JAMA Network Open)</u> 2. <u>Gordon et al. (Substance Abuse)</u> 3. <u>Hawkins et al. (Addiction Science + Clinical Practice)</u> 4. Facilitators – train the trainer model, education, external facilitation. Barriers – restrictive prescribing privileges, limited time for trainings, lack of leadership support 5. Monthly and quarterly reports shared with operations partners and implementation teams
STORM	4Q FY 2023	1. <u>Strombotne et al. (J Gen Internal Med)</u> – mandated case review associated with decrease in all-cause mortality 2. <u>Minegishi et al. (JGIM)</u> – no observed relationship between inclusion of oversight language and opioid-related SAEs 3. Auty SG, Barr KD, Frakt AB, Garrido MM, Strombotne KL. Effect of a Veterans Health Administration mandate to case review patients with opioid prescriptions on mortality among patients with opioid use disorder: a secondary analysis of the STORM Randomized Control Trial. Addiction. 2022 Dec 10. 4. Li Y, Barr KD, Garrido MM, Frakt AB, Strombotne KL. (Under Review, Addiction). The Impact of STORM Mandated Case Review on Opioid Discontinuation among Long-term Opioid Users: A Stepped-wedge Cluster Randomized Controlled Trial. 5. Garrido MM, Legler A, Strombotne KL, Frakt AB. (Working Paper). Calibration bias in a Veterans Affairs opioid risk prediction model. 6. Emmitt C, Avila CJ, Frakt A, Strombotne K. "<u>Stratification Tool for Opioid Risk Mitigation (STORM)</u>." Partnered Evidence-based Policy Resource Center, October 2022
CIDMO	4Q FY 2023	1. Feyman, Y, Figueroa, SM, Yuan, Y, et al. <u>Effect of mental health staffing inputs on suicide-related events.</u> Health Serv Res. 2022; 1- 8. doi:10.1111/1475-6773.14064 2. Paper in Progress – Engagement in the VA for Transitioning Service Members with Mental Health Diagnoses

Name	Completion Date	Preliminary Results and/or Other Documentation
		3. Presentation – Effect of Mental Health Services Capacity and Efficiency on Veteran Suicidality – Academy Health (June 2021) 4. Presentation – Effect of Clinic Capacity, Efficiency, and Community Care on Veterans Engagement in Mental Health Care – Academy Health (June 2021) 5. Secondary Analyses under development and underway

SELECTION OF EVALUATIONS

Given VA's focus on supporting smooth military-to-civilian transitions, there is an interest in understanding the needs of particular underserved and vulnerable subgroups during such transitions. As stated in VBA's strategic planning efforts, VA has a commitment to evaluating this topic to better inform VA efforts to provide equitable and effective support to service members during this crucial time.

Related to this work, VBA completed an extensive literature review of peer-reviewed journals, scientific sources and scholarly articles, with an emphasis on sources that cover the military-to-civilian transition, integration and reintegration into civilian social structures, transition stress, community reintegration and support structures, identity and military culture, engagement of Service members and Veterans and user-oriented design.[1] In this analysis, VBA discovered the need for additional research focused on particular transition needs and new challenges. The review also identified the need to better understand the applicability of skills obtained from the military experience to the civilian context. Recommended research also includes the construct of working with transitioning Service members as a family unit both pre-and post-separation. Addressing whether Veterans are receiving what they want and what they believe they need are the aims of these studies. VA continues to explore opportunities to independently assess the sufficiency of these and other benefits programs.

In VHA, evaluation plans undergo standardized peer review processes to ensure evaluation independence and integrity of findings. The Quality Enhancement Research Initiative (QUERI) requests applications to fund field-based investigators to conduct evaluations. Short-term (time-sensitive) evaluations are submitted to the QUERI Center for Evaluation and Implementation Resources (CEIR) web portal. Long-term evaluations are sent through the National Institutes of Health Electronic Research Administration (eRA) commons review portal.

After identifying potential conflicts of interest, QUERI assigns reviewers (i.e., national evaluation experts drawn from VA research and university programs) to each evaluation. Application reviewers provide scores and written critiques for each proposal and QUERI VHA Central Office leadership makes final decisions based on overall quality of proposals, alignment with Learning Agenda priorities, and resource availability (e.g., QUERI funding or center support).

Overall, this process ensures standards for high-quality evaluation are met and ensures independence of evaluation methods from the sponsoring national program office or other entity. In addition, all evaluations are expected to submit results to scientific peer-reviewed journals for publication, and The Office of Health Services Research & Development and QUERI track publication acceptances yet do not require prior concurrence or review of papers prior to publication, which also ensures independence.

ACCESS EVALUATIONS

A. Veteran Readiness & Employment (VR&E) Longitudinal Study

Learning Agenda Question: Does the completion of the VR&E (aka Chapter 31) program coincide with more successful post program outcomes as compared to Veterans who discontinue from the program?

Evaluation Question: Do VR&E cohort participants have successful long-term outcomes (i.e., income, homeownership, employment) by using the VR&E program compared to cohort participants who were discontinued from the VR&E program?

Timeline: Ongoing; The Congressionally mandated (P.L. 110-389, Section 334) longitudinal study is a 20-year study. Cohort 1 (FY 2010) has completed 13 years of participation, Cohort II (FY 2012) has completed 11 years of participation and Cohort III (FY 2014) has completed nine (9) years of participation. The study is set to be completed in 2035.

Background: The VR&E program, known as the Chapter 31 program, assists Veterans and service members with service-connected disabilities and an employment barrier to prepare for, obtain and maintain suitable employment. VR&E provides comprehensive services to include vocational assessment, rehabilitation planning and employment services. For Veterans with service-connected disabilities so severe they cannot immediately consider work, the VR&E program offers services to improve their ability to live as independently as possible in their families and communities.

Study design and data sources: As participants are followed over the 20 years of the study and as more VR&E participants exit the program, additional information will be available on the long-term outcomes of Veterans and the key programmatic and demographic factors relating to outcomes. The study includes three cohorts and collects data on gender, age, program track, education, employment and other relevant factors.

Section 334 of the Veterans' Benefits Improvement Act, Public Law 110-389, requires the Department of Veterans Affairs- (VA) to report to Congress on 16 specific data elements. More applicable to this request for evaluations, the specific outcomes of interest in the mandate are employment, income, home ownership and use of supplemental programs. The data elements are listed below.

Domain	Measure	Source of Data
Background characteristics	The number of individuals participating in vocational rehabilitation programs under this chapter who suspended participation in such a program during the year	Administrative Data
Background characteristics	The average number of months such individuals served on active duty	Administrative Data

Domain	Measure	Source of Data
Background characteristics	The distribution of disability ratings of such individuals	Administrative Data
Background characteristics	The types of other benefits administered by the Secretary received by such individuals	Administrative Data
Background characteristics	The number of such individuals enrolled in an institution of higher learning, as that term is defined in section 3452(f) of this title	Survey
Background characteristics	The average number of academic credit hours, degrees and certificates obtained by such individuals during the year	Survey
Background characteristics	The average number of visits such individuals made to Department medical facilities during the year	Survey
Background characteristics	The average number of visits such individuals made to non-Department medical facilities during the year	Survey
Background characteristics	The average number of dependents of each such Veteran	Survey
Employment	The average number of months such individuals were employed during the year	Survey
Employment	The average annual starting and ending salaries of such individuals who were employed during the year	Survey, Administrative Data
Income	The average annual income of such individuals	Survey
Income	The average total household income of such individuals for the year	Survey
Homeownership	The percentage of such individuals who own their principal residences	Survey
Use of other public program benefits	The types of Social Security benefits received by such individuals	Survey
Use of other public program benefits	Any unemployment benefits received by such individuals	Survey, Administrative Data

The VR&E longitudinal study data sources used for analysis include self-reported survey data and VBA administrative data.

Survey Data: A survey questionnaire is distributed to a sample of study participants at the beginning of each fiscal year. The domains of interest used to stratify the sample are employment handicap, gender (binary only), age at program entry, and program track. Data included in the longitudinal study includes binary gender: Male or Female and null or N/A, if not entered by the Veteran. The information is collected from VA data on the participant (see below). Participants are invited to complete the survey initially

online and then by mail or phone over a 12-week period. The survey provides VA with information not available through VA resources such as employment, homeownership, income and overall satisfaction with the program.

VR&E completed cognitive testing with sampled participants from cohort groups. The survey questionnaire was updated to further clarify the questions based on the cognitive interviews results. The revised survey questionnaire was submitted to OMB for review.

VBA Administrative Data: At the end of each fiscal year, VR&E provides data on all study participants such as claimant participation, outcomes and general demographics, but data on race and ethnicity is not available.

The VBA administrative variables used for the analysis are:
- Case status
- Program track
- Extended evaluations
- Serious employment handicap (SEH) flag
- Gender (binary only)
- Age
- Length of active-duty service (in months)
- Combined disability rating percentage
- Pre-rehabilitation level of education
- Pre-rehabilitation annual salary
- Primary diagnosis
- Era of service
- Branch of service
- Rank upon exit from military
- Training type for which a subsistence allowance is received
- Date of a case status change

Analysis: With additional data collected over time, VA can examine substantive trends in outcomes. Specifically, VA will be able to draw comprehensive comparisons between those who achieved rehabilitation (those who completed a program) and those who discontinued from the program. Individuals who choose to discontinue the program may have characteristics that are distinct from those who achieve rehabilitation.

Anticipated challenges: The study is not designed to demonstrate causality or the impact of program participation on outcomes of interest. Instead, the study can provide information on self-reported outcomes and can examine relationships between outcomes and program participation, demographic characteristics, or other data points.

Participation from cohorts has decreased throughout the 20-year period and may continue to decrease because participation is voluntary.

Dissemination: The final reports submitted to Congress are available to the public on the VA website.

Anticipated milestones:

FY 2024	
Q1	• Survey distributed to participants • VBA administrative data received
Q2	• Survey period completed • Survey and VBA administrative data analyzed • First draft of report delivered to VA
Q3	• Report concurred by VA
Q4	• Report to Congress delivered by July 1

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B. Post-Separation Transition Assistance Program (TAP) Assessment Outcome Study

Learning Agenda Question: To what extent is VA's TAP supporting the transition needs of newly separated Veterans and what changes are needed to improve TAP for future performance?

Evaluation Questions:
1. To what degree do Transitioning Servicemembers (TSMs) who participate in TAP experience life satisfaction and positive/negative short-term and long-term outcomes?
2. Is TAP perceived as effective in preparing TSMs for their transition, measured at three checkpoints by the cross-sectional portion (six months/12 months and 36 months post separation)?
3. Do TSMs indicate that TAP prepares them for their transition as they progress through their transition journey, measured by the longitudinal portion?
4. What effect does TAP participation have on Veterans' understanding of the benefits and services across the six life domains (employment, education, health, relationships, finances and well-being).
5. Does the full TAP training increase Veterans' knowledge, awareness and access to benefits and services available to them? How can VA and the interagency partners modify/revise training and/or operational activities aimed at enhancing the knowledge, awareness and access to benefits and services available to Veterans?

Timeline: The PSTAP contract is slated to end in 2024 with the publication of the 2023 Report in spring 2024. VA is currently developing a follow-on contract to continue the study for an additional five years.

Background: Each year, approximately 250,000 Servicemembers transition from military to civilian life in the United States. While each transition is different, some of the most common issues facing newly separated Servicemembers include: 1) Reconnecting with family; 2) Entering the workforce; and 3) Enrolling in VA benefits and service programs.

TAP is delivered through the Department of Defense (DoD) in cooperation with VA, the Departments of Labor (DOL), Education (ED), and Homeland Security (DHS), the Small Business Administration (SBA) and the Office of Personnel Management (OPM). TAP supports TSMs in achieving their life outcomes by standardizing the transition process and better preparing Servicemembers to achieve success in their post-military lives.

Study objective: To determine if Veterans are receiving the transition information the way they want, and believe they need, in the life domains of employment, education, health, relationships, finances and well-being.

VA understands the subjectivity of this question and uses multiple avenues to address this in an objective manner. The PSTAP utilizes an extensive series of questions covering the life domains based on peer reviewed published scientific research to ensure the data meets the industry accepted standards for data validity. The questions are designed to be both objective and subjective in nature and enable the Veteran to provide holistic feedback, including information that will be used to improve transition and other VA related activities. VA believes Veterans' responses are objectively based on their own lived experiences, including real-life challenges they have been experiencing since separation from the military. VA also conducts text analysis using open-ended questions to reduce potential subjective bias. Additionally, the survey responses are combined with multiple administrative data sets associated with the various life domains focused on outcomes.

The majority of Veterans surveyed by the PSTAP report that the VA TAP prepared them for transition. Excerpt from the 2022 draft PSTAP report: "The VA Benefits and Services Course is still useful to a high percentage of Veterans, even as far as five years after separation. Specifically, about 72% of Veterans felt the VA Benefits and Services Course was beneficial in gaining the information and skills they needed to be prepared for their post-military life up from ~67% in the 2021 report. Over 50% of Veterans still use the knowledge they gained from the VA Benefits and Services Course as they continue their transition." In addition to this, text analysis is conducted on two open-ended questions to draw additional information on both the needs of Veterans as well as if the way TAP is being administered is optimal.

Study design and data sources: The post-separation TAP (PSTAP) is comprised of two separate assessment instruments (initial survey launched in June of 2019) used

to assess TAP as well as provide holistic feedback and information used to improve transition and other VA activities:

1. Annual cross-sectional survey of three cohorts that provides a point-in-time set of results across the post-separation space
2. Annual longitudinal survey of Veterans that "opt-in" to be part of a longer-term study from a cross-sectional survey that provides trends over time and more focused investigation. PSTAP reports are located at: VBA's PSTAP Reports.

PSTAP uses various methods to analyze findings, such as statistical modeling and regression analysis on various sections to determine the relative importance and weight of the information to Veterans. Regression analysis is conducted to identify which courses are associated with increasing satisfaction with TAP. An additional regression model is run on the entire respondent population to identify possible demographic differences that may influence satisfaction with TAP. To understand the factors that have a significant impact on the transition of Veterans to civilian employment and their relationship to TAP, a statistical model was built using logistic regression. The model analyzes which challenges were most associated with to Veterans' overall satisfaction with TAP using the question: "Overall, the program was beneficial in helping me gain the information and skills I needed to prepare me for my transition and post-military life".

VBA utilizes multiple administrative data associated with the various life domains to look at the outcomes. The questions are objective and subjective to provide holistic feedback and information used to improve transition and other VA activities.

The reports have a section for each life domain that references this administrative data. For example, the education section addresses the percentage of Veterans that are enrolled in an education program across study cohorts/demographics and how many of those are utilizing their GI Bill Benefits to do so. The health section references how many have health care coverage and how many are enrolled in VHA health care.

Analysis: VA and other agency's administrative data will be combined to provide a holistic profile of Veterans' transition and their long-term success.

1. Cross-Sectional Survey:
   - Given every year to a different two-month group of Veterans at three time frames: six months, 12 months and 36 months post-separation
   - Provides point-in-time results on all the life domains, and how the utility of TAP/VA Benefits and Service usage impacts general long-term outcomes

2. Longitudinal Survey:

- Given each year to the same group of Veterans based upon the voluntary participation of the cross-sectional cohort
- Provides information over time as to how each Veteran is progressing across their personal transition and how the utility of TAP/VA Benefits and Service usage influences their long-term success

The two surveys have sections dedicated to capture TSMs' perceptions of the delivery, content and utility of the information received during the TAP classes using batteries of Likert scale questions. The questions are modeled on the Transition Assistance Participant Assessment given to TSMs after completion of TAP classes prior to separation from military service.

The PSTAP TAP uses the following relevant questions for the overall TAP experience:
- "To what extent do you agree or disagree with each of the following statements about TAP?"
  a. Overall, the program was beneficial in helping me gain the information and skills I needed to prepare me for my transition and post-military life.
  b. Overall, the program enhanced my confidence in transition planning.
  c. Overall, I used what I learned from the program during my transition.

These questions are analyzed individually as well as aggregated to provide an overall assessment of the program as indicated by the PSTAP participants. Overall utility during transition is captured in a separate Likert scale question for each TAP module: "When considering the course information for each TAP module, how useful was the content during your transition?"

Additionally, the two surveys (cross-sectional and longitudinal) also contain more in-depth Likert scale questions specifically about the VA portion of TAP to garner a deeper understanding of the VA course and ensure it is meeting TSM needs. The questions in this section assess how well the VA TAP course addresses overall understanding of VA benefits and services for both the Veteran and their family, how to apply for benefits, preparing for economic well-being, changes in personal life, homelessness prevention, obtaining VA health and mental health care.

Both surveys also ask the participants what benefits they have applied for or intend to apply for in the future.

The data regarding life satisfaction is gathered using several batteries of Likert scale question that address individual aspects that contribute to life satisfaction as well as several direct questions soliciting participants feedback on their life satisfaction:
1. Section header for satisfaction: "Now we would like to ask some final questions about your overall satisfaction and well-being"

2. Main direct question: "Thinking about your own life and personal circumstances, how satisfied are you with your life as a whole?"
3. Overall battery covers satisfaction with:
   a. Standard of living
   b. Health
   c. Life achievement
   d. Personal relationships
   e. Feeling of safety
   f. Community integration
   g. Future security
   h. Spirituality or religion

These sections are used collectively to measure the extent to which TAP and specifically VA's portion are meeting the needs of the Veterans and where they can be improved.

The PSTAP instruments are comprised of sections to investigate Veteran information in each of the life domains, as well as the overall sentiments of TAP. Most questions use a Likert scale format with several opportunities for free text comments. The questions are both objective and subjective to ensure a holistic view of the Veteran's transition are captured. The survey instruments are included in each year's report appendices and are available at: https://benefits.va.gov/TRANSITION/tap-assessments.asp.

The PSTAP has a high-level section about the overall delivery, content and utility of TAP to the TSM, a more detailed section specifically about the VA Benefits and Services utility and then different sections about each of the life domains and benefit utilization. The Life Satisfaction portion is the final summary section in the surveys.

The assessment data is also combined with sets of VA administrative data to further expand the scope of the overview to include information already known to VA, such as benefit utilization, health care enrollment and interactions with all VBA Lines of Business and a host of other information in VA's databases. VA's Outreach, Transition and Economic Development (OTED) component is currently developing an MOU with the National Directory for New Hires for data sets to further enhance the administrative data utilized in the PSTAP analysis. OTED is also coordinating a contract with the National Student Clearinghouse to get information on participants' education attainment.

PSTAP analysts constructed weights to conduct a nonresponse bias analysis (NRBA). Weights adjust the number of responses so the proportion of survey respondents by key characteristics matches the proportion in the survey universe. The weights account for: 1) the probability of selection; 2) potential nonresponse bias.

Since PSTAP was a census (that is, all Veterans in each cohort received an invitation to complete the survey), the probability of selection was the same for all (set to 1). To adjust for nonresponse, weights were adjusted for differences in response rates among groups based on known characteristics of respondents and non-respondents.

The NRBA compared the characteristics of the survey respondents to the entire survey universe (non-respondents and respondents combined) using administrative data available for each cohort. The analysis uses both weighted and unweighted data to check for statistically significant differences between respondents and non-respondents. This process serves as a check for nonresponse bias, as well as a test of the effectiveness of the weights in mitigating bias.

Anticipated challenges: None

Dissemination: The PSTAP reports and associated appendices are published each year to coincide with the following year's execution (see table below). The annual PSTAP reports are typically released in Q4. The releases are coordinated based on a communication plan including internal and external stakeholder communications and VA blogs. The reports/appendices are posted on the Internet at https://benefits.va.gov/TRANSITION/tap-assessments.asp.

Report	Completion Date	Preliminary Results and/or Other Documentation
2019 PSTAP Report	June 3, 2020	A. Amongst the components provided within TAP, the VA Benefits I/II Briefing (VA Briefings) was identified as the most useful (about 85% found it useful), followed by the Department of Labor (DOL) Employment Workshop (about 75%). B. About 67 percent of Veterans who participated in TAP felt that they adjusted well to civilian life and are making progress towards their civilian goals. C. Roughly 80 percent of Veterans who took TAP understood the VA benefits available to themselves.
2020 PSTAP Report	April 30, 2021	D. VA Benefits I/II Briefing (VA Briefings) were identified as the most useful (about 76% found it useful). E. The most important factor driving how useful the VA Benefits Briefings course was learning how to apply for VA benefits, followed by preparing Veterans for potential impacts to their economic well-being after their service and how to obtain VA Health Care. F. Veterans who took TAP either all or partly in person have significantly higher rates of satisfaction with

		TAP compared to those taking the courses completely online. G. When comparing the 2019 and 2020 Cross-Sectional Survey respondents, Veterans in 2020 saw an increase of over 20 percentage points in enrollment in VA Health Care.
2021 PSTAP Report	May 24, 2022	H. The VA Benefits and Services Course was identified as the most useful course by Veterans in all three cohorts in 2021, as it was in 2020 and 2019. I. In 2021, those who took TAP either all or partly in-person had significantly higher rates of satisfaction compared to those taking the course completely online. J. Overall, Veterans who took TAP applied for benefits at a higher percentage than the study population, even as much as five years after separation. K. For Veterans in the Longitudinal Survey, only about 2% of respondents did not know about certain VA benefits including disability compensation, education, health care and home loans.

Anticipated milestones:

FY 2024	
Q1	• Analysis and draft of the 2023 PSTAP report
Q2	• Finalization of 2023 PSTAP Report with internal/external stakeholders • Development of the public release communications plan
Q3	• Public Release of the 2023 PSTAP Report

Points of contact: William Brinley (William.Brinley@va.gov), lead analyst; Courtney Coble courtney.coble@va.gov, evaluation manager.

C. MISSION 401 Underserved Facilities and Populations

Evaluation Question: How effective are the underserved scores and subsequent mitigation strategies in addressing facility-level underservedness?

Timeline: Ongoing.

Background: Most Veterans who are enrolled in VHA care live in areas with limited access to health care services. Approximately 16% of Veterans live in areas without enough primary care providers and 70.2% live in areas without enough mental health care providers.[1] To improve Veteran access to quality care, VA implemented the

Maintaining Internal Systems and Strengthening Integrated Outside Networks Act of 2018 (MISSION Act).[2,3] In compliance with Section 401 of the MISSION Act, the Office for Integrated Veteran Care (IVC) (formally Office for Veterans Access to Care), in collaboration with other research and operations offices, developed a program that is based on a systematic algorithm and follow-up process for sites to improve Veteran access. The Partnered Evidence-Based Policy Resource Center (PEPReC) MISSION 401 program uses scoring algorithms to identify underserved VA medical facilities in both primary care and mental health care. Each year, the most underserved facilities are required to develop action plans explaining how they intend to improve Veteran access to care at their facilities. (VA is required to identify underserved *facilities;* measure of that characteristic includes population-level attributes.)

Study objective: The objective of this evaluation is to study the effectiveness of the underserved scores and mitigation strategies at measuring and addressing facility-level underservedness; to continually improve the statistical models used; and to expand these models to identify underservedness in specialty care. The evaluation will also take into consideration priority populations (i.e., underserved, marginalized populations) as outlined in the recent Executive Order 13985 (Advancing Racial Equity and Support of Underserved Communities Through the Federal Government), issued January 20, 2021.

Study design and data sources: Models are developed using the economic principles of supply and demand. Quantitative and qualitative study design methodologies will be employed to evaluate the effectiveness of the underserved designation. Data to be analyzed include hiring strategies, administrative data on health care use (from VHA Corporate Data Warehouse (CDW)), Veteran demographics, and facility and market characteristics, as well as interviews with key stakeholders.

Analysis: The evaluation assesses how well the scoring methodology for primary care measures underservedness. It also evaluates individual variables to ensure they are important components in the measure of underservedness and worth keeping in the algorithm (e.g., wait times, capacity, Veteran demographics). Should the evaluation show that individual variables do not add any information of value to the model, refinements will be made ahead of future underserved score calculations to either replace or improve those variables.

Evaluators also interview local leadership at VA Medical Centers (VAMCs) and Veteran Integrated Service Networks (VISNs) to determine what mitigation strategies (e.g., personnel strategies, telehealth modalities, physical space) were employed to improve access to care. Evaluators will estimate the effectiveness of the MISSION 401 program by measuring the extent to which the action planning group demonstrates greater improvement than the comparison group on various metrics (e.g., hiring, utilization of technology-based care).

In the most recent FY 2022 evaluation, PEPReC evaluated the effectiveness of each mitigation strategy deployed by the facilities in response to their underserved scores. To understand the implementation of these strategies, we surveyed facility leadership at the top five underserved facilities in both primary care and mental health care. The Qualtrics survey asked each facility to report on: their understanding of underservedness at their facility; the barriers, successes and context surrounding the mitigation strategies they employed; the current level of implementation of those strategies; and if they would choose different strategies in retrospect. Of the nine facilities (one facility was underserved in both primary care and mental health care), five facilities responded to the survey, about a 56% response rate. All surveyed facilities agreed with the underserved designation and that it aligned with their experiences on the ground. The facilities were divided regarding their perception of the underserved program, some describing it as an asset while others described it as a hindrance. All surveyed facilities noted that they implemented many different hiring mitigation strategies in response to their underserved designation. All said they used direct hiring authority and the Education Debt Reduction Program. They still noted that the human resources department often moves very slowly, making hiring challenging.

Lastly, statistical models like the one used for primary care may be developed for specialty care. These different areas of care require unique approaches given the differences in the types of care provided and how that care is delivered. New models would be developed with the input of IVC and the Office of Specialty Care.

A recent development in FY 2023, the MISSION 401 supply and demand models are being used as baselines for staffing models that are congressionally mandated in response to the Sergeant First Class Heath Robinson Honoring our Promise to Address Comprehensive Toxics (PACT) Act. Starting with the MISSON 401 models, evaluators and analysts are developing staffing models that will provide national and local leadership with an up-to-date assessment of workforce needs at each VA facility and evidence-based suggestions on how to better serve the enrolled Veteran population.

Diversity, equity, inclusion and justice factors for consideration: Using CDW, Centers for Medicare and Medicaid Services (CMS), and Survey of Enrollees data, the MISSION 401 models account for socioeconomic status (Priority Group, household income, house price, unemployment rate, private insurance coverage), rurality (drive time, community care utilization), age (percentage of Veterans under 65 years old, demographics (gender [binary only], race, and ethnicity), and Veteran health status (CMS risk adjustment model). The models do not account for housing insecurity. Through the FY 2022 evaluation work, we found that, in primary care and mental health care, underserved sites care for a disproportionate share of rural Veterans. This finding mirrors a historical trend of staffing limitations resulting in access issues in rural communities.

It is possible to assess the demographics of underserved sites to get insight into what populations are most impacted by these access issues. The results show patterns of poorer health care access for historically marginalized populations. In primary care, the underserved facilities are concentrated in the rural southeast, and the data show that a disproportionate share of Black Veterans receive care at underserved facilities. In mental health, the underserved facilities are concentrated in the Midwest, and the data show that a disproportionate share of American Indians receive care at underserved facilities.

Anticipated challenges: Quantifying the MISSION 401 program's overall impact may prove difficult because only a few facilities are defined as underserved in a particular year. Additionally, every specialty has unique access challenges. Developing new models that accurately measure underservedness in various specialties will require multiple iterations. Lastly, COVID-19 significantly impacted FY 2020 and FY 2021 data. Determining how to best account for these disruptions to care delivery continues to be challenging and may take several years to finalize. Continued evaluation of this program demonstrates that underserved sites may still struggle with access, despite their participation in the program. Our evaluation suggests that the program would be even more effective if underserved statuses were coupled with additional resources.

Dissemination: IVC receives annual evaluation reports from its research partners. The findings are also shared with Congress in the program's annual congressionally mandated report. Evaluators will share findings with local and national leadership as requested. Evaluators will also produce aggregated results that can be shared with other VA researchers. Additionally, PEPReC hosts annual informational office hours sessions for underserved facilities and provides bi-weekly updates to IVC. This cycle of dissemination will continue so long as model development and evaluation continue.

Preliminary results (not yet peer-reviewed)
• Primary care model has been used to produce underserved scores for five years.
• Future use of specialty care underserved models were well received by national and local leadership.
• Models deemed accurate and effective at measuring underservedness.
Recent dissemination activities
• Pearson et al. (HSR) – policy implications
• Yee et al. (Health Econ) – technical methodology
• Policy two-pager on evaluation plan
• Multiple briefings to national and local leadership each year

Anticipated milestones:

FY 2025	
Q1	• Model finalization – primary care • Calculate this year's underserved scores – primary care
Q2	• Submit underserved scores to national leadership

	• Hold office hours with local leadership to explain model/underserved scores
Q3	• Model refinement – primary care ○ Incorporate leadership feedback from Q3 into model, update data sources and datasets when available, include new variables where appropriate • Compile and submit evaluation report
Q4	• Model finalization – primary care • Calculate this year's underserved scores – primary care

Point of Contact: The Partnered Evidence-based Policy Resource Center (PEPReC) is responsible for this evaluation. PEPReC can be reached at peprec@va.gov.

D. Virtual Care

Evaluation Questions:

1. What has been the adoption rate of virtual care among VHA providers and how has it varied geographically?
2. How does virtual care utilization impact clinic functionality, efficiency, and access to care?
3. Does virtual care utilization affect patient outcomes and satisfaction; and how do outcomes differ across underserved and marginalized Veteran groups?
4. Does virtual care affect provider retention and turnover?

Timeline: Ongoing.

Background: Most Veterans who are enrolled in VA care live in areas with limited access to health care services. Approximately 16% of Veterans live in areas without enough primary care providers and 70.2% live in areas without enough mental health care providers.[4] VA was an early adopter of telehealth, pioneering implementation on a national scale in 2003 to reduce the access barriers Veterans face. Any Veteran who qualifies to receive VHA care benefits and lives within the United States is eligible to utilize VHA telehealth services, with multiple telehealth modalities available, in addition to digital tools that help Veterans navigate their health care.

By 2018, VHA had provided over a million virtual care services. More than half of these visits were for Veterans located in rural areas, and 10% of these visits used VA Video Connect (VVC), a secure video-teleconferencing platform, which allows providers to treat Veterans on their mobile devices or personal computers at a location of the Veteran's choice. As part of the MISSION Act of 2018, VHA established the "Anywhere to Anywhere" virtual care initiative to ensure that all VHA providers in outpatient mental health and primary care service lines were able to provide telehealth services in Veterans' homes by 2021.[5]

The COVID-19 pandemic necessitated the 2021 timeline for telehealth expansion to be rapidly accelerated. VHA was primed to minimize disruptions to care because of the pandemic and social distancing requirements due to its prior investments and infrastructure. The COVID-19 pandemic presented a considerable challenge and required VHA to lean heavily on virtual care rather than face-to-face care to continue serving Veterans safely.[6] Going forward, it is important to understand how virtual care has affected health care delivery, how it has contributed to the health outcomes of Veterans, and the extent to which virtual care utilization has changed over time and across VHA sites, before, during, and after the COVID-19 public health emergency. The pandemic presents a natural experiment and grants the ability to observe both the consequences of stalled routine/elective care for Veterans' short- and long-term health outcomes and the role of virtual care in mitigating those consequences.[7]

Study objective: The study objective is to observe virtual care utilization in VHA over time and evaluate its effectiveness across several broad categories. This includes the impact of virtual care utilization on patient outcomes, clinic efficiency, and access to care. Additionally, impacts to retention and turnover among the provider workforce are also being examined, as virtual care allows for more flexibility and creates an opportunity for providers to connect to their patients and to other providers. This may alleviate caseload burden and increase efficiency in sharing patient information. The evaluation also focuses on the impact of virtual care expansion during and after the COVID-19 pandemic.

Study design and data sources: This is a retrospective observational study. The multivariate regression model parameters are estimated to use data from multiple sources. VA health administrative data (from the Corporate Data Warehouse) provides information on clinic efficiency, access to care, and certain patient outcomes such as continuity of care and readmission rates. Veteran satisfaction measures from the Survey of Healthcare Experience of Patients provide information on patient satisfaction with virtual care. For the provider turnover and retention analysis, evaluators use facility and county characteristics influencing turnover from the VA CDW and Area Health Resources Files. The study controls for Veteran characteristics in its models, such as income levels, employment status, race, marital status, gender, age, enrollment in other health coverage. Many of these Veteran characteristics come from the Survey of Enrollees. In addition, the study controls for several local area characteristics, which are derived from various data sources, such as the Area Health Resources Files, American Community Survey, Bureau of Labor Statistics, Census Bureau, and the Centers of Medicare and Medicaid Services. Stakeholder interviews and feedback from academic subject matter experts inform our model improvement, in particular, how aspects of care delivery, patient outcomes, clinic efficiency, access to care, and provider turnover and retention are measured.

Analysis: Evaluators have documented the geographic variation in the growth of various types of virtual care (e.g., telemedicine, Veteran Virtual Connect, phone) over time and

across specialties (e.g., primary care and mental health care). Evaluators have estimated the association between virtual care and patient satisfaction and patient experience. Evaluators are currently investigating whether virtual care has the potential to improve access to care, especially in certain geographical areas; and whether it contributes to the retention of the provider workforce or clinic efficiency (accounting for the potential learning curve) in terms of producing more visits per day.

Evaluators plan to investigate whether there are certain administrative processes that make virtual care more efficient, such as scheduling protocols that intermix in-person and virtual care appointments or consolidate virtual care to certain days of the week. Evaluators plan to identify geographical areas or Veteran subpopulations that may benefit from virtual care more than others and identify specialties that may benefit from virtual care more than others.

Quantitative models are being developed, focusing on mental health care first due to the rapidly increasing use of virtual care for mental health encounters. Currently, evaluators are identifying factors affecting the use of virtual care across geography and over time. In addition, evaluators are modeling the effects of virtual care on patient satisfaction and experience, access to care, and provider turnover and capacity. Evaluators plan to develop models that will be used to estimate the impact of virtual care on clinic efficiency and patient outcomes. An instrumental variables approach will be used to estimate the effects.

All models are grounded in a conceptual framework based on economic theory of supply and demand. The models include supply factors, including the use of virtual care; and demand factors, such as measures of alternative health coverage for Veterans, socioeconomic measures, racial/ethnic composition, and other demographics of Veterans. Models also control for other nationwide factors that might influence outcomes, such as COVID-19, the Choice Act, and MISSION Act. Evaluators will estimate multivariate regression to test hypotheses, such as whether virtual care had an impact on provider turnover. To the extent possible, evaluators will use an instrumental variables approach to estimate potential effects and make causal inferences; otherwise, evaluators will estimate associations. Potential confounders are that the demand for VHA services changed (due to COVID-19) coincidently with the supply of virtual care. (While an instrumental variables approach does not explicitly include a counterfactual, it does allow evaluators to isolate the causal impact of virtual care on the outcomes of interest.)

Throughout the development process, evaluators will seek feedback from local leadership and other researchers to improve the model and improve measurement of variables studied. Local leadership will also provide a better understanding of the application to policy. After the model on mental health is developed and tested for robustness, model development will expand to include primary care and specialty care.

Since each division of care may be different in terms of its use, implementation, and recording of virtual care; the data and models developed may be different for each one.

Anticipated challenges: The timespan of various datasets and frequency of updated data may not be aligned, so the analysis period may shorten due to needing overlapping timespans. Moreover, since much of the timeframe of the analysis (and the take-up of virtual care) is during the COVID-19 pandemic, the external validity of the findings may not represent the pattern of use in steady state after the pandemic. The pandemic may have also affected all areas of care in similar ways, limiting the ability to use it as an exogenous shock and instrument in analysis.

Diversity, equity, inclusion and justice factors for consideration: As virtual care utilization evolves over time, limitations to its use have been anticipated and observed. This includes logistical challenges (patient and provider learning curves; interstate licensure barriers; operational feasibility across specialties and procedures); accessibility and concerns regarding equity (the impact of virtual care on VHA access standards; addressing the digital divide among Veterans; considering cultural sensitivity and demographic needs); and prioritizing Veteran autonomy (considering patient and provider preferences; privacy concerns). Future work will focus on access to virtual care provided by the VHA among underrepresented and minoritized groups.[8] The findings will identify groups that may need more assistance in order to access virtual care, thereby highlighting who needs more resources to gain access.

Dissemination: The Chief Strategy Office (CSO) receives annual evaluation reports and/or briefing presentations from the Partnered Evidence-based Policy Resource Center (PEPReC). Evaluators share findings with local and national leadership as requested. Evaluators also produce deidentified and/or aggregated results that can be shared with the public through conference presentations, academic publications, and media outlets.

Preliminary Results (not yet peer-reviewed)
• Since the onset of the COVID-19 pandemic in March of 2020, there has been a change in utilization patterns of the various VHA care modalities. Across primary care, specialty care, and mental health care, in-person visits decreased during the beginning months of 2020, while the use of phone care increased.
• While in-person visits began to increase again in primary and specialty care in the second half of 2020, telehealth utilization remained high in mental health care. There is a particular increase in the use of the VVC modality, indicating a potential longer-term shift towards virtual mental health care services.
• All VHA facilities transitioned to offer mental health telehealth visits. Approximately 80% of providers and 80% of patients almost exclusively delivered or scheduled telehealth visits over in-person visits at the peak of the COVID-19 pandemic. However, by April 2022, only 35% of providers almost exclusively delivered virtual care visits. Meanwhile, by April 2022, 60% of patients still almost exclusively

	scheduled virtual care visits. However, most providers offered patients a choice of modality when scheduling appointments.
•	Wait times for new patients are similar across in-person and video mental health appointments, allowing patients to have a choice between modalities. By April 2022, the volumes for video and in-person visits are similar as well, suggesting potential substitution between the two modalities. However, there is decreasing volume of phone visits (relative to video and in-person), suggesting that phone visits may not be equally preferred to in-person visits.
•	Veterans with a high proportion of video visits were more likely to be satisfied and rate their provider higher (to a small degree) than Veterans who had a low proportion of video visits.
•	Video visits may provide slightly better communication and care coordination experiences.

Recent Dissemination Activities
• Policy brief shared on PEPReC website: Sadej, I, Lum, J, Pearson, E, Pizer, S. Virtual health care: Using telehealth to provide care in VHA. PEPREC. (2021)
• 2/10/22: PEPReC provided a briefing presentation to the Virtual Care Consortium of Research on evaluation activities.
• 6/22: PEPReC presented evaluation activities and preliminary findings at the American Society of Health Economists and Academy Health academic conferences.
• 11/18/22: PEPReC provided a briefing presentation to CSO on evaluation activities and preliminary findings.

Anticipated Milestones:

FY 2025	
Q1	• Draft manuscript (and other dissemination vehicles) describing findings on the relationship between virtual care use and outcomes for mental health patients.
Q2	• Expand to primary care: Adjust measures and models of clinic efficiency, patient outcomes and satisfaction, access to care, and provider capacity and turnover. • Discuss findings with national/local leadership and other researchers.
Q3	• Continue to improve models for primary care. • Refine all models, incorporating feedback from leadership and researchers. • Update data if applicable.
Q4	• Draft manuscripts (and other dissemination vehicles) describing findings on the relationship between virtual care use and outcome measures explored pertaining to primary care. • Compile and submit next cycle's interim evaluation report.

Point of Contact: The Partnered Evidence-based Policy Resource Center (PEPReC) is responsible for this evaluation. PEPReC can be reached at peprec@va.gov.

E. The PTSD Access To Healthcare (PATH) Study

Evaluation Questions:

1. What are facilitators and barriers to receipt of appropriate follow-up care (accessing VHA mental health care) among Veterans who screen positive for PTSD in a VHA primary care setting?
2. Where in the access pathway does referral and connection to mental health services get disrupted (i.e., Veterans are lost to follow-up and do not successfully access care)?
3. Are there any system-, facility-, provider-, or individual-level factors associated with some Veterans not receiving VHA mental health care following their positive PTSD screen?

Timeline: Ongoing through FY 2025.

Background: Most Veterans who are enrolled in VHA care live in areas with limited access to health care services. Approximately 16% of Veterans live within primary care shortage areas and 70.2% live in mental health care shortage areas.[9] One way VHA addressed this and aimed to improve Veteran access to quality care was by implementing the Maintaining Internal Systems and Strengthening Integrated Outside Networks Act of 2018 (MISSION Act).[10,11] Posttraumatic stress disorder (PTSD) is one of the most common mental disorders impacting U.S. Veterans, and is associated with a range of adverse outcomes, including suicide, impaired functioning and quality of life, and a higher risk of mental and physical health comorbidities.[12][13][14][15][16][17][18] In addition, the economic cost of PTSD is immense; health care costs for Veterans with PTSD are 3.5 times higher than for those without.[19]

VHA-based treatment for PTSD is both highly efficacious and available to all Veterans. To address Veterans' disproportionate need for PTSD treatment, VHA medical facilities are required to offer a full spectrum of evidence-based treatment options for Veterans with PTSD.[20][21] In addition to being able to prescribe a range of psychotropic medications recommended for the treatment of PTSD, all VHA medical centers must provide access to two evidence-based psychotherapies for PTSD: Prolonged Exposure (PE) and Cognitive Processing Therapy (CPT).[20][21][22][23] Research consistently demonstrates that Veterans treated with PE or CPT exhibit clinically significant decreases in PTSD symptoms and increased quality of life.[24]

Screening Veterans in primary care is an important first step to identify Veterans with PTSD and connect them to mental health services. Because individuals with mental health problems frequently present first to primary care settings, and Veterans with PTSD are more likely to seek medical care than mental health care, screening is required in VHA primary care clinics.[25][26][27] VHA primary care staff are prompted to

complete the screen by a clinical reminder in VHA's computerized patient record system.[28] [29]

Little is known about why a large percentage of Veterans who screen positive for PTSD in VHA primary care settings do not access VHA mental health care. To date, only one study has examined this on a national scale. Bohnert and colleagues investigated whether the location of the services received on the day of a positive PTSD screen predicted the initiation of VHA mental health care among all VHA primary care patients screened in FY10. Results indicated that nearly 45% of Veterans with a positive PTSD screen did not receive any follow-up VHA mental health care within one year of their positive screen. Of note, this study was conducted more than a decade ago, and may therefore not reflect the current context.[30]

Study objective: To improve access to care for Veterans diagnosed with PTSD, VHA needs to understand who is being lost to follow-up, where in the process they are being lost, and why they are not receiving VHA care. Several different pathways to VHA-based care are possible after a positive screen. Evaluators have adopted the term "access pathways" to refer to the series of options offered to, and choices made by, Veterans after screening positive for PTSD in a VHA primary care clinic that may eventually lead to the receipt of VHA mental health care. Each access pathway likely has many steps, and the absence of an action toward care at any step of a pathway could lead to the Veteran not receiving care. Therefore, the immediate goals of the PTSD Access To Healthcare (PATH) Study are to map the access pathways Veterans follow once screening positive for PTSD that may eventually lead to VHA mental health care, and to understand the factors that may facilitate or hinder this process. This evaluation follows a pilot study that determined best practices for analysis methods.[31]

Study findings will directly inform the development of policy guidance and the implementation of targeted access interventions, thereby improving access to VHA mental health care and well-being for all Veterans with PTSD.

Study design and data sources: This study employs a sequential mixed method design and a positive deviance methodology to achieve three aims. In **Aim 1**, Veterans are classified based on the "initial action" taken immediately after screening positive (i.e., the first step in the access pathway). In the pilot study, seven initial actions were identified that could potentially lead to VHA care (including those referred to community care via the MISSION Act), and two initial actions that could not lead to VHA care (see Analysis section, below). Similar to the pilot study, once Veterans are classified, the association between the initial action classification and both contextual- and individual-level variables is examined. National data from the VA Corporate Data Warehouse (CDW) is used to perform these analyses using the classification methods developed in the pilot work.[31]

In **Aim 2**, evaluators seek to understand VHA providers' and patients' experiences with, and perspectives on, barriers and facilitators of an initial action toward VHA care (including the MISSION Act), by conducting semi-structured interviews with stakeholders at high- and low-performing facilities.

Finally, in **Aim 3**, evaluators map the remaining access pathway steps hypothesized to follow each of the seven initial VHA access steps by leveraging the methods developed in the pilot work. Evaluators use VA CDW data for these analyses.

Analysis: Analyses for **Aim 1** include determining which Veterans are classified into VHA initial access steps and identifying factors that reliably differentiate how Veterans are classified. To classify Veterans, evaluators use a combination of VHA administrative data and chart review to identify the initial actions following a positive PTSD screen for Veterans presenting for treatment in primary care. This Aim 1 sample builds on the pilot work, which examined Veterans who newly screened positive for PTSD in FY 2017 - 2018, by including any Veteran who screened positive between FY 2017- 2021. In the pilot study, nine initial actions were identified (see below); Veterans with evidence of more than one type of action were classified hierarchically, consistent with the framework relating to intensity of care and with the VA/DoD Clinical Practice Guideline:

> 1. Inpatient/residential: Veterans with a consult placed to any 500-level stop code (i.e., VHA MH clinic) within 7 days of the PTSD screen by a primary care provider which also has an inpatient flag.
> 2. Specialty Mental Health (SMH) clinic: Veterans with a 500-level stop code consult indicative of mental health treatment (e.g., PTSD clinic team) placed within 7 days of the PTSD screen by a primary care provider with an outpatient flag.
> 3. Primary Care Mental Health Integration (PC-MHI): Veterans with: 1) a 500-level stop code consult indicative of PC-MHI placed within 7 days of the PTSD screen by a primary care provider with an outpatient flag; 2) a PC-MHI visit within 60 days of the PTSD screen; and/or 3) chart language – identified by a Text Integration Utility (TIU) search – indicating that Veteran had been referred to PC-MHI. Because PC-MHI appointments are often "warm hand-offs" rather than formal consults, our search criteria for this classification goes beyond just consults placed.
> 4. Other Outpatient Mental Health (MH) Clinic: Veterans with a 500-level stop code consult not indicative of treatment (e.g., Health Care for Homeless Veterans/Homeless Chronically Mentally Ill; HCHV/HCMI) placed within 7 days of the PTSD screen by a primary care provider with an outpatient flag.
> 5. Medication Prescribed in Primary Care (Rx in PC): Veterans with new or refilled prescription for a medication with demonstrated efficacy in treating PTSD symptoms (i.e., sertraline, paroxetine, fluoxetine, venlafaxine, imipramine, prazosin, trazodone, or mirtazapine) written on the day of the primary care visit.

6. MH referral language in chart: Veterans with no evidence of a consult to a 500-level clinic, PC-MHI visit, or psychotropic prescription that are identified by a text search with chart language indicating that a referral was discussed and/or placed (e.g., "Contact made, referral information for Mental Health").

7. Community Care (CC) Consult: Veterans with no evidence of an earlier classification and evidence of a consult placed to a CC provider. Using text from the consult table, Veterans will be subdivided based on whether the referral was MISSION Act-based.

8. Declined: Veterans with no evidence of membership in any earlier classification and with chart language (identified by a TIU search) indicating that the Veteran was offered, but declined, VHA MH care (e.g., "Patient does not wish to be treated for PTSD at this time").

9. No-evidence of follow-up: Veterans with no evidence of membership in the other eight bins.

After classifying Veterans into one of these nine initial actions, evaluators collapse the nine initial actions into a single dichotomous variable: evidence that an initial action toward VHA-based mental health care was taken (actions 1-7, above) versus not (actions 8-9). Evaluators then conduct univariate chi-square and bivariate logistic regression analyses to determine the association between moderating variables and the initial action taken. Moderating variables include contextual- (e.g., rural versus urban setting; screened in a Community Based Outpatient Clinic (CBOC) versus VA Medical Center (VAMC)) and individual-level (e.g., race; ethnicity; service era) variables, as well as possible interaction terms that previous literature suggests may be salient between these variables (e.g., race by ethnicity).[32] [33] [34]

For **Aim 2**, evaluators use rapid assessment, an anthropological approach to rapidly inform policy development, to analyze the qualitative data.[35] Following established procedures, evaluators are developing a codebook using *a priori* constructs from the conceptual framework. Transcripts are initially coded using these *a priori* constructs. A directed content analysis approach with allowance for new themes to emerge is used.[36] New coding categories may be added, or existing categories split or combined as more examples accumulate, similarities become apparent, and code definitions are refined. When no new concepts are discovered in the interview transcripts, saturation is considered achieved.

Findings are synthesized to create a picture of how contextual and individual factors interact to determine Veteran classification into VHA initial access steps at high- and low-performing sites by producing descriptive summaries for each. This provides insight about the salience of the predictive variables identified by Aim 1 analyses at each site and allow to identify additional factors that may influence this classification process. This type of sequential mixed methods approach — using quantitative data to purposively select sites for conducting qualitative interviews — is a hallmark of the positive deviance approach.[37]

Aim 3 builds on Aim 1 by mapping the additional steps in the VHA action pathways which begin with the initial actions described above (1-7). The VHA initial access step is only the first step of the access pathway; there are subsequent steps at which Veterans might be lost to VHA follow-up care despite being classified into a VHA initial access step. For example, although a Veteran receives a consult to a SMH clinic, the SMH clinic may not accept the consult, or an intake appointment may not be scheduled or attended. Importantly, different barriers and facilitators may determine who proceeds on a VHA access pathway at each step; these factors may also differ substantially from those that determine whether a Veteran is classified into a VHA initial access step in primary care. For instance, whereas lack of psychoeducation about PTSD may cause a Veteran to refuse a consult to SMH in primary care, lack of time or travel concerns may impede a Veteran who has accepted a referral to SMH from attending an intake appointment.

This Aim also provides an opportunity to explore what happens to Veterans who are referred to MISSION Act-based mental health community care. Therefore, as part of this Aim, evaluators are determining whether these Veterans: 1) receive this CC; and 2) are subsequently referred to the VHA for mental health care.

Like the methods used for Aim 1, evaluators use a combination of VHA administrative data and chart review to identify the remaining steps in the seven VHA access pathways described above. After mapping each access pathway, evaluators conduct quantitative analyses to understand how Veterans who achieve access differ from those who do not at each step. For example, for the SMH clinic pathway, evaluators first compare Veterans for whom the consult was accepted by the associated clinic to those for whom it was not; then compare Veterans for whom an intake was scheduled to those for whom it was not; and finally, compare Veterans who attended the intake to those who did not. Predictors include contextual- and individual-level variables initially identified in Aim 1, as well as additional variables identified in our qualitative interviews accessible from the VA CDW, and interaction terms that previous literature suggests may be salient (as identified in Aim 2). For the four largest access pathways (SMH, PC-MHI, MH referral language in chart, and Rx in PC), evaluators conduct hierarchical logistic regressions, where the outcome variable is success at each access pathway step. Evaluators are reporting descriptive analyses (means and frequencies) for the remaining three pathways because the anticipated small sample sizes do not lend themselves to inferential statistics.

Diversity, equity, inclusion and justice factors for consideration: A key element of this study is to better understand the factors associated with initiation of mental health care for PTSD. PTSD disproportionately affects Veterans compared to civilians.[38] Further, certain Veteran groups may be more likely to develop PTSD and less likely to receive PTSD treatment. [39][32][33] By comprehensively examining all Veterans who have screened positive for PTSD in VHA primary care clinics nationwide over the last five years and

exploring how a range of contextual- and individual-level factors may moderate the association between a positive PTSD screen and ultimately accessing VHA mental health care (including MISSION Act care), this project provides information about not only where VA may be losing Veterans to care but also when and why. This allows the development of interventions that specifically target the needs of sub-groups of Veterans and help them gain access to the care they need.

Anticipated challenges: There are limitations, in part, due to the variables available in the VA CDW, including possible changes because of electronic health record modernization efforts. However, this concern is somewhat alleviated by the robust qualitative component in Aim 2. The work in the pilot study demonstrated that incomplete or irregular differences in data entry between VHA medical centers can hinder analysis. Nevertheless, evaluators have integrated knowledge of and solutions to those challenges into the research plan and, further augmented by Aim 2.

In August 2022, investigators were made aware of a national VA data provisioning issue that impacted hundreds of studies using the VA Electronic Medical Record (EMR). This evaluation was identified as one that was "highly affected" with "a high proportion of records" missing from the Aim 1 dataset. As a result, a new dataset was requested. As VA EMR data pulls are just the first step that are followed by a series of Text Integration Utility searches and chart reviews, six months were spent redoing these tasks with the new dataset in FY23. Aim 1 and the beginning of Aim 2 are expected to be completed by the end of FY23.

Dissemination: The VHA Office of Primary Care is keenly interested in using these study results to inform efforts to improve access to VHA mental health care. By developing a nuanced understanding of which Veterans are not being adequately cared for by VHA mental health care services and why, results from the proposed research can inform the best ways to deploy, tailor, and supplement existing access interventions and implementation strategies (e.g. PC-MHI, direct-to-Veteran media campaigns).[40] [41] This study is the first to provide actionable information regarding which sites or Veterans may be most in need of specific implementation efforts at different points along the VHA access pathways.

Evaluators are working with Dr. Edward Post — a consultant on the project and the Senior Medical Advisor of the VHA PC-MHI Program — to develop policy and practice guidance, and Dr. Post will disseminate these to VHA primary care and PC-MHI leadership at the national level. Evaluators are also working with Dr. Post and Dr. Paula Schnurr — a study consultant and the Direction of the Executive Division of the National Center for PTSD — to disseminate the methodology for classifying access pathways following primary care screening for other conditions. Finally, study results will be disseminated via presentations at national conferences and peer-reviewed articles.

Preliminary Results (not yet peer-reviewed)
• Most Veterans screening positive for PTSD in VHA primary care clinics have evidence of initial actions taken toward VHA-based mental health care; however, a substantial minority do not, making them unlikely to receive follow-up care. Findings highlight the potential benefit of targeted primary care-based access interventions.
Recent Dissemination Activities
• Bovin MJ, Resnik J, Linsky AM, Stolzmann K, Mull HJ, Schnurr PP, Post EP, Pleasants EA, & Miller CJ. Does screening for PTSD lead to VA mental healthcare? Identifying the spectrum of initial VA screening actions. Psychol Serv. In Press. https://doi.org/10.1037/ser0000651 • Paper Under Review: Resnik J, Miller CJ, Roth CE, Burns K, Bovin MJ. (manuscript under review). A Systematic Review of VA Mental Healthcare Access Interventions for Veterans with Posttraumatic Stress Disorder.

Anticipated milestones:

FY25	
Q1	• Conduct chart abstraction (Aim 3) • Update VA CDW dataset as needed (Aim 3) • Conduct Aim 3 analyses • Dissemination & implementation activities
Q2	• Dissemination & implementation activities
Q3	• Dissemination & implementation activities
Q4	• Dissemination & implementation activities

Point of Contact: Dr. Michelle Bovin is the PI of this study and can be reached at Michelle.Bovin@va.gov.

F. Camp Lejeune and Military Toxic Exposures

Evaluation Questions:

1. What is the association between the 2012 Camp Lejeune Family Act and VA Rule 38 CRF3 (2017) regarding service-connected presumptive and associated conditions and claims for disability and use of VA health care by Veterans who were stationed at Camp Lejeune (CL)?
    a. What are the prevalence, use, and costs of VA care for presumptive and associated diagnoses for CL Veterans compared to a similar group of Veterans based at Camp Pendleton, who were not exposed to industrial toxins?
    b. Do prevalence, use, and costs vary by sex, race, ethnicity, geographic location, or military service?
    c. To what extent and for which conditions is care being provided in the community through VA's community care program?

> d. What have been Veterans' experiences in seeking compensation and VA health care for presumptive and associated conditions related to toxin exposures at Camp Lejeune?

2. What is the association between enactment of the Promise to Address Comprehensive Toxics (PACT) Act and Veterans with newly identified presumptive conditions?
    a. What are Veterans' understanding of the PACT Act and their experiences with seeking disability claims? Does this differ by Veteran demographics or military characteristics?
    b. Has the PACT Act resulted in an increase in claims for service-connected conditions identified as presumptive due to military toxin exposures? Does this differ by patient characteristics (e.g., sex, race, ethnicity, geographic location)?
    c. What are the prevalence, use, and costs of VA care (including care in the community) for conditions identified as presumptive in the PACT Act?
    d. What Veteran characteristics including military service (e.g., duration, location(s), branch of service, time of service/era) are associated with incidence of conditions identified in the PACT Act?

3. Have there been any unintended consequences that have resulted from military toxin legislation?

Timeline: FY 2023 through FY 2027.

Background: Many Veterans have been exposed to toxic substances in the air and water because of their military service. Notable examples are through contaminated water at Marine Corps Camp Lejeune (1953-1987)[42][43] and exposure to airborne particulate matter and pesticides from open burn pits (1990s-2000s).[44] It is estimated that at least 1 million Veterans were exposed to toxins (e.g., trichloroethylene, benzene) at Camp Lejeune (CL) during this time period. Legislation in the 2010s (e.g., Camp Lejeune Family Act and VA Rule 38 CFR3)[45][46] identified 8 conditions as presumptive for service-connected compensation, and 7 other associated conditions for which VA has provided free access to care. In 2022, President Biden signed into law the PACT Act to expand coverage for illnesses and conditions related to toxic exposures in the military.[47] The presumptive conditions include 12 respiratory and other cancers, 12 respiratory illnesses associated with airborne toxins, and hypertension and monoclonal gammopathy as presumed conditions from Agent Orange exposure. It is estimated that 3.7 million Veterans may be eligible for benefits because of this legislation.

Study objective: The overall objective of this evaluation is to assess the association between legislative acts and VA policies related to the following:

Aim 1: Military toxic exposures on claims for disability.
Aim 2: Veterans' use of VA and community-based health care use services and costs related to conditions.

Aim 3: Veterans' experiences with seeking care for toxin-related conditions.

Evaluators hypothesize that there will be an increase in the number of claims for service-connected disability associated with presumptive conditions identified in the PACT Act after enactment, especially for Veterans who served in Vietnam and recent conflicts (e.g., Operation Iraqi Freedom (OIF), Operation Enduring Freedom (OEF), and Operation New Dawn (OND)). They also anticipate there will be variation in which Veterans are more likely to receive care for their presumptive conditions from community (non-VA) providers by characteristics such as rurality, race, and other sociodemographic characteristics. Additionally, evaluators hypothesize that there will be increases in the number of Camp Lejeune based Veterans who utilize care from VA following the 2012 Camp Lejeune Family Act and following the 2017 VA Ruling of presumptive and associated conditions compared to Veterans who were based at Camp Pendleton. Following the 2017 VA Ruling of the 8 presumptive conditions associated with exposure to toxins in the water at Camp Lejeune, they expect to see increases in the number of claims for service-connected disability related to these 8 conditions from Veterans who were based at Camp Lejeune compared to those Veterans who were at Camp Pendleton. There will be variation in which Camp Lejeune (CL) Veterans are likely to receive care for their presumptive conditions from community (non-VA) providers by characteristics such as rurality, age, and other characteristics.

Study design and data sources:
A mixed methods approach combining analysis of clinical and administrative databases (retrospective cohort studies) with surveys and interviews will be used to address the study objectives. For those exposed to toxins at CL, a non-equivalent control group will be used by leveraging prior research that assessed the relationship between exposure to toxins at CL and diagnosis of Parkinson's disease.[48] (Using a non-equivalent control group design allows us to be able to compare the relative odds of developing any of the identified presumptive conditions for those veterans who were at Camp Lejeune compared to those who were at Camp Pendleton.)

Aim 1: Aim 1 will obtain data from the Agency for Toxic Substances and Diseases Registry (ATSDR) for 340,489 Marines stationed at either CL or Camp Pendleton (CP), California (control group) between 1975-1985. Almost half of these Veterans utilized VA health care between FY2000 - 2021. Data included time in camp, demographics, duration, and level of exposure to toxins, and vital status. CP is another Marine base camp that was not exposed to toxins in the water for which there are similar data.

Aim 2: Aim 2 will merge ATSDR files with VA's Corporate Data Warehouse (CDW) to identify Veterans with VA and VA-paid community care utilization between 2000-2022, and access Centers for Medicare & Medicaid Services (CMS) data (2000-2020) to identify Veterans who used non-VA care. These data will be linked to Veterans Benefits Administration (VBA) Compensation & Pension files to obtain claims data including service-connected status and diagnoses. They will look longitudinally at the occurrence of these conditions over time in the VA CDW databases (between FY 2018 - 2025), flagging those that were deployed to areas where burn pits and airborne hazards were common (e.g., Iraq, Afghanistan). Analyses will include comparisons by sex, race,

ethnicity, and urban/rural residence over time looking for use of VA, VA-paid community-based, and CMS care.

Aim 3: Aim 3 will assess Veterans' experiences managing their health care associated with toxin exposure, evaluators will develop two online surveys (utilizing a virtual Delphi process involving stakeholder: researchers, representatives from VA's Health Outcomes and Military Exposures (HOME) office, ASTDR and the Community Assistance Panel [CAP], a group of Marines and family members from CL) to develop survey questions. Using 2-3 rounds of a Delphi approach, survey items will be developed including questions about any unintended consequences or possible equity issues related to these policies. At the end of the survey, respondents will be invited to participate in a telephone interview if they would like to share further details about their experiences. Efforts to learn what Veterans know about the PACT Act will begin with a series of focus groups with Veterans who participated in the Airbourne Hazards and Open Pit Registry. A stratified random sample of participants will be selected to invite to participate in virtual focus groups from this list. The goal will be to identify current understanding of the PACT Act, experiences with exposures to airborne and other toxins during military service, and use of VA and/or other health care services.

Analysis:
Aim 1: Descriptive statistics will be used to characterize Veterans with the identified conditions (and by camp). To determine if the likelihood of being diagnosed with one of the selected conditions is associated with having been based at CL, logistic regressions with propensity matching (1 case:4 controls) will be used, where propensity scores will be estimated based on Veterans' characteristics (e.g., age, race).

Aim 2: To assess the impact of the 2012 & 2017 Camp Lejeune legislation, evaluators will compare healthcare utilization at VA and community facilities between Veterans with presumptive conditions from both camps. They will assess condition specific VA healthcare utilization from the time of diagnosis through FY 2022 using multivariable regression analyses. The analyses will use generalized linear models (GLM) to account for skewness in cost data and adjust for Veteran characteristics and clinical risk scores (e.g., Charlson or Elixhauser comorbidity index, etc.). Evaluators will also conduct budget impact analyses to assess the impact of the CL legislation for the conditions above and estimate the budget impacts under alternative scenarios in which these conditions were associated or presumptive. Once PACT Act claims have been processed and Veterans begin seeking and receiving care in VA (FY 2023 - 2026), similar analyses as described for the CL cohort with respect to prevalence, utilization and cost will be conducted. Examination of these measures by patient and military service characteristics will identify areas of potential disparities.

Aim 3: Veteran survey data will be analyzed using descriptive statistics, and associations between Veteran characteristics and their personal experiences with seeking disability claims and health care related to toxic exposures will be analyzed using regression analyses. Focus group and interview data will be coded using qualitative analyses with grounded theory and iterative review, using NVivo software to identify themes. Key informant interviews will be analyzed using a rapid qualitative

analysis approach.

Diversity, equity, inclusion and justice factors for consideration: All analyses will report on findings by age, race/ethnicity, sex (binary only), urban/rural residence, military characteristics (e.g., era of service, deployed to theatre, combat, etc.). Veteran surveys will ensure sampling includes representation from underrepresented minorities, women, and transgender individuals (self-reported) across geographic regions of the country. Any disparities identified will be examined more closely in consultation with VA leadership to determine what may be causing these disparities.

Anticipated challenges: VA and CMS data are not available before Oct. 1, 1999, so early occurrences of conditions may be missed, particularly if a Veteran dies prior to 2000. Further, the survey responses will not be a representative cohort of CL Veterans, and the response rate may be low. However, the evaluators feel it is important to capture any Veterans' and families' experiences to inform policy makers. The PACT Act was just enacted so it will take time before claims are submitted and processed. The ability to look at the impact on VA health care use and costs will be limited during the first years since enactment.

Dissemination: Findings will be shared with VHA and VBA representatives, the VA HOME office, ASTDR, the CAP, and survey participants. Traditional dissemination in journals and at national meetings also are planned. Findings will be discussed with operations partners to determine if any changes in current policies should be considered.

Anticipated milestones:

FY 2025	
Q1	• Generate infographic and reports from CL analyses and Field PACT Act survey; examine descriptive data on PACT eligible Veterans
Q2	• Examine pretest use of VA care by individuals eligible for PACT and conduct PACT interviews
Q3	• Complete PACT Act survey analyses, code interview data, and begin post-test analyses
Q4	• Examine health care use by source of care (VA, VA-paid community-based care, CMS)

Point of Contact: The Evidence to Practice Evaluation Center for Veterans (EPEC-Vet) is responsible for this evaluation. Dr. Fran Weaver can be reached at frances.weaver@va.gov.

G. Improving Clinical Efficiency of Screening Workflows in Primary Care

Evaluation Questions:

What clinical workforce initiatives have helped VA Medical Centers improve primary care access through reduced clinician burnout and turnover?

Timeline: 2.5 years with interim reporting throughout, starting in FY 2025.

Background: Retaining high-quality clinical personnel is central to ensuring healthcare access and quality, especially in the wake of COVID-19. Shortages are projected in the United States of over 200,000 nurses[49] by 2026 and 55,000 primary care physicians by 2032.[50] Primary care personnel experience increasing pressure to achieve productivity, quality, and customer service goals with fewer staff and often lower pay,[51] leading to significantly higher turnover rates than other specialties, ultimately jeopardizing patient care.[52][53] Primary care physician turnover has been shown to reduce patients' satisfaction with their care even in light of no objective change in care quality.[54] Primary care turnover is also expensive (replacing a single primary care physician ranges from $250,000 to over $1 million[55]) and detrimental to care quality and access.

COVID-19 has magnified the problem of turnover, as overworked, stressed, and burnt-out clinicians have left their jobs to address their own health and that of their families. In response to this challenge, VHA's Organizational Health Council (OHC) has recommended implementing a number of workforce initiatives to help mitigate burnout and improve employee engagement throughout the VHA, in the hopes of improving access and the quality of care for Veterans. Initiatives include addressing inefficiencies, maximizing use of HR policies and workplace flexibilities, optimizing meeting practices and Talent Management System training, and strengthening mental health support for employees.[56] These cross-cutting initiatives are intended to materially improve working conditions for clinicians, thereby building added personnel capacity and, in turn, access for Veterans. This evaluation concentrates on one of these initiatives, addressing inefficiencies in screening services in primary care. Preventive screening, where asymptomatic patients are tested to diagnose a disease and (when needed) referred for early treatment, lies at the heart of high-quality primary care and involves all members of the primary care team as well as handoffs to specialty care. Consequently, an in-depth examination of screening services can provide insights for addressing workflow inefficiencies in all areas of primary care and beyond.

Pandemic-era clinicians faced sudden, unprecedented changes in staffing and workflow to meet pandemic demands. These changes resulted in unintended interruptions to preventive screening and referral services. Facilities across VA therefore experienced variation in screening outcomes during the pandemic. Facilities can enhance their ability to maintain normal levels of screening and referral during the next pandemic or disruption by reconsidering their own work processes. By evaluating the workflow processes of VA facilities that experienced different levels of success during the pandemic, this evaluation identifies factors that degrade or bolster screening performance during external shocks, such as a pandemic; its effects on access and turnover can also be assessed.

Study objectives:

1. Compare differences among VHA facilities of varying primary care performance profiles (high, low, improving, plummeting, variable) in implementation of workforce initiatives to address workflow inefficiencies in primary care screening, OHC and their impact on subsequent employee turnover and access to care.
2. Identify team-, facility-, and system-based barriers and facilitators to implementation of OHC-recommended initiatives.

Study design and data sources: Evaluators will employ qualitative, primary analysis of focus groups and interviews with facility leadership and primary care personnel at 10 VA medical centers. Evaluators will examine two sites from each of the following primary care screening performance profiles: *high performers* (facilities whose scores on existing screening performance metrics during the observation period are consistently above established statistical process control (SPC) limits), *low performers* (facilities whose scores on these corresponding screening metrics fall consistently below established SPC limits), *improvers* (facilities whose screening metric scores start near or below the lower SPC limit but show an improving trend towards the upper SPC limit at the end of the observation period), *plummetters* (facilities whose screening metric scores start near or above the upper SPC limit but show an decreasing trend towards the lower SPC limit at the end of the observation period), and *highly variable performers* (facilities whose screening scores exhibit the highest standard deviations across measures and quarters *combined* during the observation period).

Sites were previously selected for an evaluation of screening services; HERMES has existing relationships with them, thereby enhancing feasibility. Turnover and access outcome data will be extracted from the Strategic Analytics for Improvement and Learning (SAIL) metrics available via the VHA Corporate Data Warehouse.

Analysis: Evaluators will conduct up to two virtual, 60-minute semi-structured focus groups with clinicians at each of the 10 sites using Microsoft Teams. As pre-work for these focus groups, clinicians at each site will review a standard process map for each of four preventive screening metrics., selected for their differences in workflow (e.g., colorectal cancer screening requires multiple procedures and referral to specialty care, whereas mental depression screening can be conducted via telehealth by a single clinician as part of the visit). This pre-work will then guide the focus groups to identify what workforce initiatives have been implemented to address any inefficiencies in the workflow.

Trained project coordinators from the Methods and Knowledge Translation cores will take notes using a structured template to identify initiatives for improving inefficiencies, barriers, and facilitators; this will accelerate analysis and facilitate knowledge translation. If evaluators encounter difficulty exploring certain issues in depth due to power dynamics or the lingering burden of the pandemic on frontline clinicians, they will conduct follow-up individual semi-structured interviews to further explore emergent themes. All focus groups and interviews will be recorded and auto transcribed using

Microsoft Teams; a project coordinator will check transcripts for accuracy. Focus group data will be analyzed as it is collected using ATLAS.ti to check for thematic saturation to accelerate analysis. Transcripts and field notes will be summarized using a template based on key areas of interest, emergent themes, and key observations. Thematic categorization to identify workflow adaptations and improvements will be guided by the Systems Engineering Initiative for Patient Safety (SEIPS) model, which encompasses five classes of work system factors (people, tools and technology, tasks, organization, and environment). These factors will also be used to categorize the barriers and facilitators identified through the interviews and will be organized according to level of aggregation (individual, team, facility, system). Two evaluation team members will independently complete one summary per site; the pair will then discuss their summaries and create one consensus summary per site. After completion of all consensus summaries, data will be visualized in a matrix. Evaluators will then compare sites' thematic matrices to identify commonalities and material differences between sites. The ten sites, which were originally selected as part of an earlier evaluation due to their membership in one of four performance categories, will now be grouped by similarity of workflow adaptations and implementation of improvement initiatives, an emergent finding from the qualitative data. Their group membership will then be used to predict employee turnover and access to care.

Diversity, equity, inclusion and justice factors for consideration: Evaluators will catalogue facility-specific or condition-specific screening issues that disproportionately impact Veterans identified as being at risk, vulnerable, and/or historically under-represented in VA. These findings can be shared with VHA's Office of Health Equity and other relevant stakeholders.

Anticipated challenges: As the proposed project is necessarily retrospective, participants may inaccurately recall events of interest and provide biased responses. The focus group design limits bias, as other group members can correct or add detail to a response from a participant, forming a transactive memory system and reducing inaccuracies. The semi-structured approach, where questions are broad yet still elicit information about specific constructs, also mitigates this concern.

Dissemination: Site specific reports, as well as an overall report of findings, will be prepared and disseminated to all participating sites during the final quarter of the evaluation. Also, during the final quarter of the evaluation, evaluators will develop a recommendations report tailored to each site*,* and (if desired by the site) deliver a virtual presentation of recommendations to the site and VISN leadership. Evaluators will also work with the PEPReC as a dissemination partner that cuts across individual program offices to disseminate key findings as they emerge to the appropriate stakeholders, including the Office of Management and Budget.

Anticipated milestones:

FY 2025

Q2	• Finalize Data use agreements for outcome variables
Q3	• Recruit / enroll care line leadership at sites • Report to partners
Q4	• Conduct care line leadership interviews

Point of Contact: Sylvia Hysong is the HERMES primary investigator and evaluation lead. She can be reached at sylvia.hysong@va.gov.

ACCESS EVALUATIONS – UNDER DEVELOPMENT

Women Veterans' Health

There are over two million women Veterans in the United States today and they are the fastest growing group, expected to account for almost one fifth of all Veterans by 2040. These women Veterans may face challenges with existing VA structures that were built around the health and economic needs of men from prior eras. Thus, VA must adapt to ensure women Veterans receive the health care they deserve – including mental health care and obstetrics/gynecological care – as well as the necessary social and economic supports to thrive.

The Quality Enhancement Research Initiative (QUERI), the VA Office of Women's Health, VA Center for Women Veterans, the VA Women's Health Research Network, and other research and operations partners work together to study how well VA serves women Veterans now and where there is room for improvement. Evaluators leverage data from VHA's Corporate Data Warehouse.

The new QUERI-funded Leading Evaluations to Advance VA's Response to National Priorities (LEARN) Evidence-Based Policy Evaluation Center is studying the impact of women's health-earmarked funds on staffing levels and access to women's health services. Other current evaluation focuses related to the health care needs of women's Veterans include suicide prevention, post-traumatic stress disorder, maternal and pregnancy outcomes, patient experience, and intimate partner violence.

Future VA Annual Evaluation Plans will aim to address the following policy questions:

- How can VA use virtual care modalities to improve women Veterans' access to VHA care?
- What approaches are effective to assist women Veterans in securing and maintaining post-deployment employment and economic stability?
- What strategies are effective to appropriately study and treat the health needs and well-being of women Veterans related to military toxic exposure?

Future evaluation activities may be informed by the Honoring our Promise to Address Comprehensive Toxics (PACT) Act of 2022 and recent congressional interest in the impact of military toxic exposures on women Veterans' health.

DELIVERY OF CARE EVALUATIONS – SUICIDE PREVENTION & MENTAL HEALTH

H. Caring Letters for Those Who Contact the Veterans Crisis Line

Evaluation Question: Are Caring Letters an effective and sustainable intervention to reduce suicide behaviors among Veterans?

Timeline: The project began in FY 2020 and evaluation will continue through FY 2025.

Background: Suicide continues to be a leading cause of death in the Veteran population. Veterans accounted for 13.8% of all deaths by suicide among U.S. adults in 2020.[57] Suicide rates vary depending on service branch, age, sex/gender, and other factors.[58] Reducing rates of Veteran suicide is a top clinical priority for VA and a significant priority for the current presidential administration whose national strategy, "Reducing Military and Veteran Suicide: Advancing a Comprehensive, Cross-Sector, Evidence-Informed Approach," articulates a holistic, public health approach to suicide prevention. This builds on the success of other recent initiatives and is consistent with VA's long-term strategic plan for preventing Veteran Suicide.[59] Together these efforts support immediate actions to assist Veterans in crisis (SP Now) as well as longitudinal actions towards suicide prevention (Suicide Prevention 2.0) including short- and long-term suicide reduction research, implementation strategies, and program evaluation. The Commander John Scott Hannon Veterans Mental Health Care Improvement Act[60] also expands VA efforts to prevent Veteran suicide and improve mental health outcomes. To this end, there are several ongoing suicide prevention programs and interventions being evaluated for their effectiveness in the Veteran population. Previous studies, including a 1976 randomized control trial of Caring Contacts in the civilian population, and later studies in multiple different countries and populations, have shown that Caring Contacts is an effective method of suicide prevention, in which caring, simple messages of support are sent to high-risk individuals.[61,62,63,64,65,66] Contacts can be digital (e-mails or text messages) or physical (postcards or letters).[67]

Caring Contacts was adapted for implementation in the Veteran population in 2019 for emergency department visits and piloted at one VA facility with positive feedback. The Veterans Crisis Line (VCL) Caring Letters initiative is expected to have the largest reach of all Caring Contact implementations yet and targets all Veterans from the Veteran Health Administration who contact VCL, VA's suicide hotline. The Quality Enhancement Research Initiative (QUERI)-funded partnered evaluation of this program is planned to last through FY25. Pending the results of the evaluation, the Caring Letters program, in which Veterans will receive letters over the course of a year after their contact, may become a permanent part of VCL care for those who contact VCL.

Study objective: This evaluation aims to determine the effects of Caring Letters on care utilization, mental health outcomes, and suicide behaviors of those who contact the

VCL, identify facilitators and barriers to program implementation, and conduct a budget analysis of program costs.

The primary aim of this evaluation is to evaluate the effects of Caring Letters on clinical outcomes (including incidence of VA-documented suicide attempts) and clinical utilization rates (including VA inpatient mental health hospitalization and outpatient mental health utilization). An additional exploratory aim is to examine rates of all-cause mortality and suicide for Veterans who receive Caring Letters compared to the comparison cohort of Veterans from the two years prior to the launch of the Caring Letters campaign. Since this is a new population for the use of the intervention, the project is evaluating the effects of two different Caring Letter signatories (VA Counselor and a Peer Veteran) by randomizing each enrolled Veteran to one of two conditions. The evaluation is also examining facilitators and barriers to implementing the Caring Letters program using the RE-AIM (Reach, Effectiveness, Adoption, Implementation, Maintenance) framework, including budget impact analyses.

An extension of the project began in FY 2022 and focuses on those who have repeat contact, with the same outcomes to be examined as the original evaluation. In this extension, those with repeat contact who have completed the initial course of Caring Letters were randomized to receive either no additional letters or three additional letters over a six-month period.

Study design and data sources: As an effectiveness-implementation hybrid design, this evaluation has focused on both clinical effectiveness and implementation goals. This evaluation includes a randomized and a non-randomized component. In the randomized portion of the study, all Veterans who met the inclusion criteria received nine caring, simple letters over the course of a year following contact to the VCL, randomized by signatory (by provider or by peer). Participants were included in the evaluation cohort if they contacted VCL during the evaluation period (June 2020 to June 2021) and were an identifiable VCL contactor (i.e., not anonymous); had a valid mailing address on file with the VA; and had contacted the crisis line about themselves (i.e., not contacting about a loved one). Both quantitative and qualitative analyses are underway. Quantitative data sources consist of secondary VA data that are collected as a part of routine care and/or clinical management. These include the VCL data repository, Corporate Data Warehouse (CDW), suicide attempt data and DOD-VA Suicide Data Repository, and mortality data. Qualitative data sources include program documentation content analysis for implementation evaluation, as well as surveys and stakeholder interviews that include Veteran's perspectives.

In the non-randomized portion of the study, clinical outcomes and clinical utilization are being compared among Veterans who contacted the VCL after June 2020 (when Caring Contacts began to be mailed) and among Veterans who contacted the VCL from June 2018 – May 2020. This pre-post design will provide data on differences in outcomes among VCL contactors who do and do not receive letters.

For the extension, repeat contactors were randomly assigned to either receive an additional three letters, or zero letters. In the case of three letters, these were sent will be sent every other month with the final mailings scheduled to be sent in final quarter of FY 2023.

Analysis: For the randomized portion of both the original and extension of the evaluation (comparison of letter signatory), differences in outcomes for pre-post and signatory comparisons are being analyzed with chi-square tests, a Wilcoxon rank-sum test, logistic regression, zero-inflated Poisson, or negative binomial models. Analysis for this intervention utilizes the RE-AIM framework.

For the non-randomized portion of the evaluation (comparison of letters versus no letters in the original cohort), evaluators are comparing outcomes among the randomized cohort to outcomes from a matched comparison cohort of VCL contactors from two years prior to the program's launch in 2020. Outcomes are assessed using VHA administrative data. The evaluation team is analyzing differences in outcomes will be with chi-square tests, Wilcoxon rank-sum tests, Cox models, logistic regression, zero-inflated Poisson, or negative binomial models.

The evaluators assess the program's reach by measuring the total number of eligible Veterans as well as the number reached. Analyses include the number of cards sent, the number of undeliverable cards, as well as the number of opt-outs. Data is compiled into a master file in the Corporate Data Warehouse, pulled from a backup of the VCL database (Medora), postal receipt information provided by the printing contractor, and opt-out feedback provided to the general e-mail or the VA411/VCL line.

Ongoing effectiveness analyses examine increased use of resources, incidence and frequency of documented suicide attempts, rates of inpatient mental health hospitalization, emergency department visits, and engagement in mental health care. Upon completion of the evaluation period, effectiveness analyses will look at rates of suicide and all-cause mortality as well (suicide analyses will be delayed due to standard delays in the availability of national cause of death data). Maintenance analyses will determine guidance and recommendations for sustainability and future VA use of the Caring Letters program.

Additional analyses will evaluate whether there are specific groups of patients for whom caring letters are more likely to have the intended impact. Among the original cohort, we will conduct hypothesis-driven heterogeneous treatment effect analyses. The primary analyses will consist of a series of stratified difference-in-differences analyses and will produce estimates of the change in outcomes associated with receipt of letters among selected subgroups of callers. Subgroups include Veterans living in rural areas (relative to urban areas) and Veterans without a VA mental health care visit in the past year before the call (vs those with a visit).

An additional budget impact analysis will incorporate the cost of materials, staff time devoted to launching and maintaining the program, and pre- and post-intervention comparisons of care utilization, to determine the mean costs of the program.

The qualitative analysis component provides insight into the effectiveness of the intervention at different points in the evaluation timeline and helps track implementation barriers and facilitators. As part of the stakeholder interview process, evaluators inquired about the perceived helpfulness of the letters and Veteran self-reported on their care and resources. This data was provided to VCL for continuous quality improvement.

Diversity, equity, inclusion and justice factors for consideration: Quarterly data reports of letter recipients feature breakdowns of race (including White, Black, Asian, and Other) ethnicity (Hispanic), age, and sex (defined as sex assigned at birth, male or female), which will also be featured in academic publications and considered during qualitative interviews. For interview recruitment, women Veterans were oversampled to ensure they'd have adequate representation in the sample. The race and age of qualitative interview participants will be reported. This information will be vital to the design and implementation of future interventions as well as subpopulation-level analyses.

Ongoing planned analyses and descriptive paper publications will identify and describe what differences subgroups experience relative to the prevalence of suicide events or health care utilization.

As more data has become available from the evaluation cohort, it is now possible to look at associations between Caring Letters receipt and outcomes of interest (suicide events and health care utilization) within different sub-populations. As part of the extension, targeting analyses are underway and will identify whether there are specific groups of patients for whom Caring Letters are more likely to have the intended impact. Among the original cohort, the evaluators are conducting hypothesis-driven heterogeneous treatment effect analyses. The evaluation team plans to examine Veterans living in rural areas (relative to urban areas), those without a VA mental health care visit in the past year before the call (vs those with a visit), those recently discharged from a psychiatric hospitalization, those with an elevated Recovery Engagement and Coordination for Health – Veterans Enhanced Treatment (REACH VET) score, and a history of self-harm events.

Anticipated challenges: From an analytic standpoint, the most significant challenge of this intervention has been isolating the impact of the intervention from the effect of COVID-19 on outcomes among those who contact the VCL. As this is the largest implementation of a Caring Contacts project to date, logistical considerations are complex and many. The logistics of continuously enrolling many patients into the intervention required careful coordination between the different groups involved working on participant data design and tracking, program implementation, printing, and qualitative/quantitative evaluation. Attempts to streamline and automate data flow and reporting of key project metrics have been largely successful towards mitigating these

logistical concerns. However, due to the vital and sensitive nature of the data, ongoing manual review, data transfer, and quality control efforts are still employed. The implementation and evaluation of this project has benefited from planned and ad hoc continuous quality improvement efforts as well as a high level of engagement and dedication among evaluation partners.

Dissemination: Reports on the intervention's reach will be compiled and provided to VA leadership, particularly the Office of Mental Health and Suicide Prevention (OMHSP), on a regular basis. Insights on the program's impacts, as well as associated costs, can be used to guide future implementation at the national level. Upon evaluation completion, the evaluation team will share findings with the key stakeholders. In consultation with communication leads, results will be disseminated to a broader audience of Veterans through media and publications.

Since this will be the largest Caring Letters program to date, the evaluators anticipate that there will be interest in the evaluation results within and beyond the VCL and VA system. Additional dissemination activities will include peer-reviewed journal articles and promotional materials developed by the Center for Information Dissemination and Education Resources (CIDER), a QUERI resource center.

Preliminary results to date
Descriptive statistics of who utilizes the Veterans Crisis Line and are enrolled in the intervention and health care utilization trends
Letter signatory was not associated with different outcomes or utilization
Among individuals without another call in past 12 months, receipt of letters may be associated with increased healthcare utilization
Recent dissemination activities
Reger et al. (*HSR*) - Development and implementation of the intervention
Policy brief and two-pager – Suicide prevention and how Caring Letters fits in the overall strategy
Landes et al. (*Psychiatric Services*)[68] – Qualitative findings indicating receipt of Caring Letters associated with positive Veteran experience, feelings of connectiveness with VA

Anticipated milestones:

FY 2025	
Q1	Ongoing data collection for program fidelity, implementation barriers and facilitators, and budget tracking Ongoing analyses: mortality analyses for original cohort, baseline comparison group, cross-arm comparison for extension cohort; subgroup analyses 2022 mortality data available
Q2	Final analyses: baseline comparison group, cross-arm comparison for extension cohort; subgroup analyses

Point of Contact: This evaluation is being led by Dr. Mark Reger of VA Puget Sound Healthcare System in collaboration with the Partnered Evidence-based Policy Resource Center (PEPReC). PEPReC can be reached at peprec@va.gov and Dr. Reger can be reached at mark.reger@va.gov.

I. Reach Out, Stay strong Essentials (ROSE)

Evaluation Questions:

1. Which implementation strategy (Evidence-Based Quality Improvement or Replicating Effective Programs) is most effective at increasing the reach of Reach Out Stay strong Essentials (ROSE) and its impact on access to and engagement in preventive services?

2. Do engagement and clinical outcomes (e.g., reported incidence of depression) differ among eligible Veterans at sites that use different implementation strategies?

Timeline: FY 2021 through FY2025.

Background: Perinatal depression is a common pregnancy complication affecting one in seven women and is associated with myriad adverse outcomes for mother and child, including increased risk of suicidal ideation in mothers and long-term mental and behavioral health problems in children.[69] Perinatal depression, which includes the onset of major or minor depressive episodes during pregnancy or the first 12 months post-partum[70], has numerous risk factors including a history of depression, current depressive symptoms, a history of physical and sexual abuse, unwanted and unplanned pregnancy, intimate partner violence, stressful life events, pregestational or gestational diabetes, and pregnancy complications.[71]

Women Veterans experience additional unique stressors (compared to the civilian population) which may further increase the risk of perinatal depression and/or suicidal ideation, including combat-related exposures[72], military sexual trauma[73], and post-traumatic stress disorder (PTSD)[74]. While perinatal depression has been well-studied in the general population, studies in women Veterans are only recently emerging. A study of 501 pregnant women Veterans found 28% had clinically significant depressive symptoms.[75] Women Veterans who utilize VA prenatal care benefits have higher rates of self-reported depression, current depressive and PTSD symptoms, and PTSD compared with pregnant women Veterans who use other insurance methods during pregnancy[76] [77]. Together, these factors speak to the urgent need for evidence-based interventions to prevent perinatal depression in women Veterans receiving VA care.

ROSE is an evidence-based, telehealth intervention for preventing perinatal depression among racially and ethnically diverse low-income women at high risk for perinatal depression[78]. The intervention teaches women interpersonal psychotherapy skills to improve communication and bolster social support and is administered in small groups

at outpatient clinics providing prenatal care. The effectiveness of the ROSE intervention in reducing the risk of major depressive disorder or depressive episodes post-partum in non-Veteran populations has been studied in five randomized controlled trials[79] [80] [81] [82] [83]. The United States Preventive Services Task Force Recommendation Statement noted that subgroup analysis of trials using ROSE showed a 50% risk reduction of perinatal depression.[84]

Study objective: ROSE is part of Enhancing Mental and Physical Health of Women through Engagement and Retention (EMPOWER) 2.0, which is engaged in implementation of three telehealth-based evidence-based practices for women Veterans, the other two being Telephone Lifestyle Coaching (TLC) and the virtual Diabetes Prevention Program (DPP).

Aim 1: Using two implementation strategies, Replicating Effective Practices (REP)[85] and Evidence-Based Quality Improvement (EBQI)[86], support implementation and sustainment of three evidence-based practices (EBPs) focused on preventive lifestyle and mental health care for women Veterans across 20 VA facilities (ten with REP, ten with EBQI), several of which are rural, low-performing in women's health care, and/or lead sites for high reliability organization. Low-performing sites are determined by site visit assessment data, local VA facility Women's Assessment Tool for Comprehensive Health (WATCH) data of women assigned to a Designated Women's Health Provider, and VA quality metrics with gender disparities such as wait time, HbA1c, depression, and preventive screening and immunizations.

Aim 2: Conduct a mixed methods implementation evaluation using a cluster randomized hybrid type 3 effectiveness-implementation trial design comparing the effectiveness of REP and EBQI in terms of: (a) improved access to and rates of engagement in preventive lifestyle and mental telehealth services; (b) progression along the Stages of Implementation Completion (SIC); (c) adaptation, sensemaking, and experiences of EBP implementation among multilevel stakeholders; and (d) cost and return on investment.

Aim 3: Generate implementation "playbooks"[87] for program partners that are scalable and serve as guidance for future implementation of a broader array of evidence-based women's health programs and policies.

While there are no formal hypotheses for ROSE, investigators expect to be able to detail the ways in which each implementation strategy supported implementation of ROSE across varying settings. The primary goal is to evaluate the effectiveness of REP and EBQI intervention strategies for achieving implementation of ROSE. Implementation is assessed via primary outcome measures assessing the number of provider referrals for ROSE and proportion of eligible patients with a ROSE encounter. There is also an examination of clinical outcomes and VA performance measures for pregnant and post-partum Veterans related to the average number of ROSE sessions

completed, completion of depression screening, number of patients who return to VA post-partum (i.e., utilization of VA care in the 12 months post-partum).

Study design and data sources: In this five-year study, the Quality Enhancement Research Initiative (QUERI) conducts a cluster randomized type 3 hybrid effectiveness-implementation trial to evaluate the effectiveness of two implementation strategies (REP and EBQI) in supporting the implementation of ROSE to increase the use of prevention-focused virtual care among women Veterans (Aim 1). The trial is conducted in four Veterans Integrated Service Networks (VISNs) (7, 17, 19, 22) and includes 20 VA medical centers. To ensure adequate numbers of pregnant women for ROSE, all 20 sites with a maternity care coordinator (or comparable role) have the option to implement ROSE for their pregnant patients. In alignment with QUERI priorities, a multi-faceted implementation evaluation strategy (Aim 2) is utilized. Building on Aim 2 findings, implementation playbooks and other operations-focused products developed in Aim 3 provide a pragmatic, flexible, and sustainable platform for ongoing scale-up.

Given the breadth of this implementation evaluation, data come from multiple sources.

Primary and clinical outcomes and performance measures: VA administrative data are gathered from the Corporate Data Warehouse (CDW) via the VINCI platform to measure access and engagement. Based on input from partners in the Office of Women's Health, changes and trends in VA performance measures are monitored using the Reporting, Analytics, Performance, Improvement & Deployment's Electronic Quality Measurement (eQM) portal. Since many of the interactive algorithms available on the eQM portal are not available by site and gender, algorithms and data available on the portal merge patient-level data in CDW to create gender-specific performance measures focusing on diabetes, hypertension, and self-reported depression. Additional engagement and outcome data specific to ROSE are collected, including number of intervention sessions completed.

Stages of Implementation Completion (SIC): SIC is a data-driven database developed in a large, randomized trial for the purpose of comparing "progress and milestones toward successful implementation…regardless of the implementation strategy utilized".[88] SIC allows for quantitative scoring of sites' implementation progress, reflecting multiple components of overall implementation success.

Qualitative data on implementation process, context, and modifications: Adaptation, sensemaking, and experiences of implementation are evaluated through interviews and brief structured data collection with multilevel engaged partners, such as regional leadership, facility leadership, Women's Health Medical Directors, facility-level Women Veteran Program Managers, and Practice-Based Research Network Site Leads. Individuals in these roles are identified using publicly available information as well as lists provided by the site leads. Using a snowball sampling approach, individuals in the eligible roles are asked to recommend other pertinent partners. Based on the

evaluators' prior work, it is estimated that there will be six interviewees per site (120 total) and five per VISN (20 total) for a total sample at pre-implementation of 140 interviewees. A similar sample size is anticipated for post-implementation/pre-sustainment interviews.

Periodic reflections are completed with members of the implementation team for each EBP and site (e.g., evaluators, project managers, site leads, EBQI and REP leads). Periodic reflections allow for consistent documentation of key activities and other implementation phenomena. Periodic reflections are conducted approximately monthly via telephone by the Empower QUERI 2.0 Implementation Core with members of the implementation team for each EBP and site, following the template developed for use in EMPOWER 1.0.[89]

Tracking logs that allow facilitators and other QI leads to document site contacts and meetings are utilized; the log format includes open-ended, templated written reflections on implementation progress from the external team member's perspective.

Analysis:
Primary and clinical outcomes and performance measures: Generalized linear models are used to evaluate the effectiveness of REP and EBQI on ROSE implementation and, thus, on increasing women Veterans' participation in telehealth-based preventive care. The models account for clustering at the site level as well as incorporating site- (e.g., model of women's health care) and patient-level (e.g., demographics) covariates. The main outcomes include the composite measures of the proportion of women referred and enrolled in preventive telehealth care services, and the primary independent variable of interests are implementation using REP versus EBQI.

Subgroup analyses are conducted to evaluate the effect of implementation strategies on the primary impact performance metrics for telemental health; in each model, the potential moderating effects of site-level characteristics (e.g., facility type, size, women's health care program model, etc.) are examined. Adjustment for clustering is performed using Stata v15, and goodness-of-fit is evaluated using Mallows statistic (Cp). Evaluators compare the number of reported depression symptoms among ROSE participants. Analyses account for the number of ROSE visits completed by participants.

Stages of Implementation Completion (SIC): SIC allows for calculation of the following scores: each site's stage score, which describes the ultimate stage achieved at a given site; proportion score, which describes the proportion of activities completed by a site within a given stage; and duration score, which describes the amount of time a site spends in each stage.

Qualitative data on implementation process, context, and modifications: All interviews are digitally recorded and securely transmitted to an approved transcriptionist for verbatim transcription. Transcripts are reviewed, edited for accuracy, and summarized

by the qualitative team. Consistent with the team's approach across multiple projects, matrix analysis methods[90] are used for rapid turn-around of the results to inform implementation processes. In-depth analysis of the qualitative data is conducted using ATLAS.ti, a qualitative data analysis software program. Initially, a top-level codebook was developed for the pre-implementation interviews based on constructs (e.g., intervention characteristics such as evidence strength, complexity, relative advantage, compatibility) from the Consolidated Framework for Implementation Research (CFIR) and the semi-structured interview guide. This codebook is elaborated upon based on emergent themes. Interviews are compared within site, across sites (e.g., to compare urban and rural sites), across implementation strategies, and over time.

Periodic reflections and other sources of qualitative data (i.e., meeting minutes, templated reflections in site tracking logs, and archival information) are coded separately and in relation to the interview data, with particular attention to adaptations, individual and team sensemaking, and changes over time[91]. Specifically, in the pre-implementation transcripts, commonly shared knowledge, attitudes, and beliefs related to the EBPs and their foci are identified, as well as anticipated barriers to and facilitators of implementation. In post-implementation interview data, a summative approach is taken in characterizing overall experiences of and perspectives on implementation, with a particular focus on expectations for sustainment of the EBPs and the implementation strategies.

It is an innovation and strength of this program that data sources are combined to link qualitative (via interviews, reflections, etc.) assessments of CFIR constructs with implementation and effectiveness outcomes – including SIC scores for stage, duration, and proportion – for each EBP and implementation strategy. This allows investigation of whether EBQI, a strategy that requires more intensive activity in the initial stages and, may thus be slower to reach implementation launch, is associated with improved sustainment.

Budget impact analysis (BIA): In line with current recommendations for BIA for single payers[92] and within VA[93], costs associated with delivery of usual care are compared with costs for implementation and delivery of ROSE. For example, the BIA will determine whether the cost of implementing the ROSE intervention is associated with cost savings related to post-partum mental health care. Currently, there is no time frame established for conducting this comparison.

Qualitative data collected for Aim 2c are also examined to understand the "qualitative residual" that often remains underexplored in traditional quantitative economic evaluations, aiding in improved cost estimates and understanding of how stakeholders, staff, providers, and implementation teams make sense of implementation need, impact, and cost.[94]

EMPOWER 2.0 evaluates the business case for REP and EBQI in implementing ROSE by first drawing upon the Cost of Implementing New Strategies (COINS) method for identifying resources invested in implementation[95] COINS provides a systematic way of assessing costs associated with each SIC, which provides the blueprint for the business plan.[96] In establishing cost estimates, data are integrated from stakeholder interviews, site tracking logs, and reflections to assess costs as they occurred: a) at each site, b) for each EBP, c) for both REP and EBQI, and d) according to each stage of the implementation effort. As a measure of implementation process, the SIC is cross-walked with the COINS to develop template plans and timelines for future adopters.

Diversity, equity, inclusion and justice factors for consideration: ROSE is an evidence-based intervention for perinatal depression among racially and ethnically diverse low-income women at high risk for perinatal depression. The trials incorporate ethnically and racially diverse women from low-income backgrounds. However, the trials do not analyze implementation at the urban versus rural level.

Anticipated challenges: Anticipated challenges for ROSE implementation include staff capacity (i.e., are there individuals who can be trained in ROSE and deliver it), reaching and engaging pregnant Veterans in the sessions, and navigating delivery options (virtual, in person) that will meet Veterans' and clinic needs. It is anticipated that the findings will speak to common challenges in addressing the unique needs and resources of local settings.

Collection of self-identified gender identity in VA's electronic health record only began recently in January 2022. As such, use of those data is currently limited. As the self-identified gender identity variable becomes more populated over time, it will be considered for future analyses.

Dissemination: Internal health services research and development reporting will be utilized and then the report will be disseminated further with the Center for Information Dissemination and Education Research (CIDER). Once results are available, findings will be published in academic papers and presented at conferences.

Preliminary results (not yet peer-reviewed)
• Completed ROSE trainings at EMPOWER sites: 18 (EBQI condition) + 60 (REP condition) = 78 total
• Completed ROSE trainings at non-EMPOWER sites: 79 total
• 11 ROSE intro/kick-off meetings with various facilities in FY 2023
Recent dissemination activities
• Hamilton AB, Finley EP, Bean-Mayberry B, Lang A, Haskell SG, Moin T, Farmer MM; EMPOWER QUERI Team. Enhancing Mental and Physical Health of Women through Engagement and Retention (EMPOWER) 2.0 QUERI: study protocol for a cluster-randomized hybrid type 3 effectiveness-implementation trial. Implement Sci Commun. 2023 Mar 8;4(1):23.

	• 3 partner meetings in FY 2023 – Office of Mental Health and Suicide Prevention (2), Technical Expert Panel Annual Meeting (1)

Anticipated milestones:

FY 2025	
Q1	• Change practice to facilitate long term adoption, prepare package for dissemination, customize delivery. Foster regional spread and create summative evaluation.
Q2	• Data gathered and analyzed to draft implementation playbooks.
Q3	• Implementation playbooks finalized and disseminated.
Q4	• Final formal evaluations of ROSE sustainability sites conducted and disseminated.

Point of Contact: Alison Hamilton, PhD, MPH, is responsible for this evaluation. Dr. Hamilton may be reached at Alison.Hamilton@va.gov.

J. Veteran Sponsorship Initiative

Evaluation Question: Is the Veteran Sponsorship Initiative (VSI) an effective and sustainable intervention to reduce suicidal behaviors among Transitioning Service members/Veterans (TSMVs) who are entering civilian life?

Timeline: Ongoing; the project began in FY 2021 and is extended through FY 2025.

Background: The United States is currently experiencing an epidemic of suicide for its youngest Veterans, with suicide rates for those aged 18-34 years more than doubling from approximately 23 suicide deaths per 100,000 in 2006 to 46 per 100,000 in 2020.[97] The first year after military service is a particularly high-risk period for these Veterans, with recent estimates showing that TSMVs in this period die by suicide at twice the rate of other Veterans. Rates remain elevated nine years post-discharge.[98]

National efforts by VA to lower Veteran suicide rates have traditionally emphasized clinical interventions and have had limited success. One contributing factor is that 53% of Veterans who die by suicide have never received VA care.[99] Therefore, VA has recently implemented a public health approach that incorporates proactive community-focused interventions as well as clinical care, influenced by the passage of the Commander John Scott Hannon Veterans Mental Health Care Improvement Act of 2019.[100][101] The goal is to move interventions upstream and better engage all Veterans, especially those not currently receiving VA care, and to better address social determinants of health and risk factors for suicide (e.g., homelessness, financial concerns, relationship distress, unemployment).[102] This prevention-based effort is being accomplished through collaboration with key stakeholders in the community (e.g., other federal entities, employers, schools, nonprofit organizations, local and state leaders) in an attempt to connect with and assist Veterans prior to the onset of severe mental health symptoms and suicidal ideation.[102][103]

Klonsky and May's Three-Step Theory of Suicide (3ST) provides theoretical underpinning for public health approaches like those endorsed by both VA and the Hannon Act.[104] Applying the 3ST to community interventions for TSMVs suggests that successful programs for minimizing suicide risk in this population are likely to emphasize two key components: (1) reducing pain associated with the stress of reintegration challenges, and (2) increasing a sense of social support and connectedness. As TSMVs exit the military (or Expiration Term of Service, ETS) and reintegrate to their civilian lives, they experience a dearth of support from the military in their post-military hometowns.

VSI is a VA public-private partnership that connects TSMVs with VA certified one-on-one sponsors in their post-military hometowns, who help them accomplish reintegration tasks as they transition out of military service. VSI synchronizes the efforts of the VA, the DoD, local governments, nonprofits and corporations, with all partners dedicated to the goal of successfully reintegrating TSMVs and mitigating suicide risk. In partnership with the VA's Center for Healthcare Advancement and Partnerships, the Veteran Sponsor Partnership Network (VSPN)[105] assists in VHA regional offices forming non-monetary partnerships with community organizations engaged in the VSI.

The VSI builds on recent efforts to maximize utility of public-private partnerships driven by operational partnerships between leaders of the VA, US Department of Defense (DoD), US Department of Labor, national nonprofit organizations, such as Expiration Term of Service Sponsorship Program (ETS-SP)[106], and community-focused organizations.

Recent research suggests that TSMVs assigned to a Veteran service organization and an ETS-SP sponsor experienced less reintegration difficulties and more connectedness compared to TSMVs randomly assigned to a Veteran service organization without an ETS-SP sponsor.[107] Qualitative results showed that the most commonly reported benefit for TSMVs who received an ETS-SP sponsor involved connectedness (e.g., feeling understood and cared for, receiving honest advice, etc.), followed by benefits stemming from the frequency of communication and feeling there was a good match between the TSMV, sponsor, and program offerings.

Study objective: The objective of this study is to implement a community-focused suicide prevention intervention with two aims.[108] The first aim is to determine the continued effectiveness of VSI, as evidenced by measurement of individual TSMVs (n=630). The second aim is to determine the feasibility and potential utility of implementing VSI in six cities in Texas. This study is a Partnered Evaluation Initiative (PEI) funded by VA and the Quality Enhancement Research Initiative (QUERI). Based on emerging results, the VA will implement VSI across the nation and integrate lessons learned from the PEI in Texas to best support a national expansion. For example, and aligned with the VSI, the VSPN is working with VHA regional offices to form non-

monetary partnerships with community organizations to optimize the pairing of TSMVs with VSI sponsors and help TSMVs and their families access VA services and community resources, such as employment opportunities, education benefits, housing assistance, and more.[105]

Study design and data sources: As a Type 2 effectiveness-implementation hybrid design this evaluation focuses on both effectiveness and implementation goals. Effectiveness builds off of the Geraci, et al. randomized controlled trial that established initial effectiveness for VSI and will be further assessed in this study with individual TSMVs regarding reintegration difficulties,[109] connectedness,[110] anxiety,[111] depression, suicidal ideation and behaviors,[112] and VA/non-VA service utilization. The study integrates a suicide risk calculator developed by researchers within the VA, the DoD Study to Assess Risk and Resilience in Servicemembers-Longitudinal Study (STARRS-LS), and Harvard Medical School.[113] Administered upon enrollment in the initiative, the calculator provides a capability to deliver stepped-care interventions to TSMVs within the VSI based on risk-level. For instance, TSMVs identified as high-risk will most likely benefit from individualized and intensive care that consists of a sponsor and streamlined access to VA healthcare, including case management, primary care, and suicide-safety planning group treatment.[114]

Implementation goals are assessed through the Reach, Effectiveness, Adoption, Implementation, and Maintenance (RE-AIM) framework and the Practical Robust Implementation and Sustainability Model (PRISM) framework.

This study focuses on TSMVs who sign up while still in the military.[108] As a Hybrid Type 2 trial, the evaluation team assesses the effectiveness with this new population in addition to assessing the strategies to overcome the barriers to implementation.

The evaluators are using a stepped wedge design with three steps of four phases each, which relies on sequential roll-out to participating cities over time, while using other cities as controls until they begin implementation. This allows the evaluators to assess within-site and between-site comparisons.

For the within-site comparison, cities act as their own controls in a program evaluation that compares cities pre- versus post- implementation. The comparison examines cities as they crossover from control to intervention states. The between-site comparison evaluates the intervention period for a city versus all other intervention and control periods for all cities.

Outcomes of interest are measured for all TSMVs at Time 1 (six months prior to military discharge), Time 2 (two months prior to military discharge), Time 3 (two months post-military discharge) and Time 4 (six months post-military discharge). Six cities are participating participate in the program evaluation, with two cities (one small and one large) allocated to each of the three start dates or steps, with an even distribution of

TSMVs across steps. The evaluation is randomized at the city level. Because cities differ regarding organizational characteristics, we used the restricted selection method of randomization to balance cities across the three implementation steps over time based on the number of projected TSMVs moving to target cities and the availability of community-focused organizations.

Data sources include self-reported measures provided by TSMVs via Qualtrics surveys, interviews conducted by VA staff with TSMVs, VA Corporate Data Warehouse (CDW), VA Informatics and Computing Infrastructure (VINCI), the ETS-SP dashboard and the Texas Veteran Network with community referral data.

Analysis: This evaluation relies on both quantitative and qualitative analysis. Using RE-AIM, the reach of VSI is assessed by calculating the proportion of eligible TSMVs that enroll in ETS-SP from target bases. Effectiveness is based on the change scores between baseline assessment (six months prior to ETS), assessment conducted after ETS, and the assessment conducted six months post ETS for TSMVs. These assessments consist of clinical interviews and administration of validated instruments routinely used to assess reintegration difficulties and social determinants of health. The primary outcome of interest for effectiveness is successful reintegration and reduced suicide risk. TSMVs encounter a number of difficulties (employment, housing, healthcare, etc.) as they leave service and reintegrate into civilian life. In a successful reintegration, the TMSV has both the resources to mitigate these difficulties as well as a ready and viable support network to promote connectedness within their community.

The analysis relies on access to CDW as well as VA enrollment and utilization status, medical diagnosis; psychotropic and other medication prescriptions; service connection disability rating; Veteran Benefits, financial and other social data. Hierarchical models are run in which TSMVs are nested within city, analyzing the results of the pre-implementation and post-implementation assessments. Hierarchical random effects models examine within- and between-group change across time and by condition (Transition as Usual vs. Transition with VSI). Evaluators use mixed effects modeling as it accounts for the underlying heterogeneity between and within participants (i.e., intercepts and slopes are allowed to vary across participants). Adoption is assessed by the degree to which eligible cities, military bases, and organizations agree to participate in the VSI.

Evaluators also apply PRISM that expands the RE-AIM framework to identify contextual factors from multi-level, multi-stakeholder perspectives.[115] The evaluators interview TSMVs with open-ended questions regarding the status of their transition, challenges experienced, and any feedback regarding their sponsor and community/VA services. To identify contextual factors from stakeholders, the evaluators integrate periodic reflections – an innovative low-burden method for documenting implementation phenomena such as barriers, facilitators, adaptations, and changes to context.[116] These reflections are used to inform the rollout of program to the additional steps and the

national implementation, particularly the toolkits developed to ensure lessons learned are appropriately captured and utilized.

Evaluators are also conducting a Budget Impact Analysis,[117] which estimates the costs and affordability associated of adopting an intervention. This analysis incorporates the cost of the program, VA staff time devoted to launching and maintaining the program, and pre- and post-intervention comparisons of VA care utilization, to determine the mean costs of the program, measured by TSMVs per month.

Anticipated challenges: The evaluators anticipate challenges integrating the new program with local VA stakeholders and community partners. While ETS-SP has been around for some time, the VSI is new as of April 2021. It is considered innovative, which may cause local VA stakeholders and community partners to have a lack of awareness of the initiative and to be hesitant about full engagement. To address these potential barriers to implementation, the evaluators are applying the implementation strategies of building a partnership with local VA stakeholders and community partners and providing implementation facilitators who will support the partners and conduct audits that enable them to see how the metrics for the program are mutually beneficial.

Diversity, equity, inclusion and justice factors for consideration: Throughout the course of the evaluation, the evaluation team has accounted for factors related to diversity, equity, inclusion, and justice, specifically those factors that are relevant to and impact the scope of the experiences of the Veteran population. To date, the evaluation team has made extensive efforts to address the unique situations faced by women and minority Veterans. These efforts are important as recent estimates suggest the suicide rate for women Veterans has increased to about 2.2 times that of non-Veteran women suicide rates[118] and that lesbian, gay, bisexual, transgender and questioning (or queer) (LGBTQ) Veterans may also be at increased risk for suicide.[119] To this end, great care was taken when developing the ETS-SP application. Relative to both gender and sexual orientation, the definitions used are consistent those utilized by the United States Census Bureau. On the ETS-SP online application form, TSMVs are able to select from six options for gender (male, female, transgender, non-binary, other, or prefer not to answer) and five options for sexual orientation (straight/heterosexual, lesbian/homosexual, bisexual, something else, or prefer not to answer). Similarly, the ETS-SP application form provides the option for women TSMVs to select the preferred gender of their sponsor. Given the increased risk for suicide among women TSMVs, VSI purposely over-recruits women sponsors so that at least 30% of all sponsors are women. As women comprise 15% of active US Army Soldiers, this ensures that ETS-SP can accommodate every request from women TSMVs to work with a woman sponsor. Specific to LGBTQ TSMVs, VSI has previously coordinated with VA Pride[120] to develop a pilot in which sponsors can receive additional training to work more effectively with LGBTQ TSMVs.

Dissemination: Regular reports on the intervention's reach will be compiled and provided to VA leadership. Insights on the program's impacts, as well as associated costs, can be used to guide future implementation at the national level. Upon completion of the evaluation, findings will be shared with the key stakeholders. Evaluators will also tailor results reporting in consultation with communication leads to reach a broader audience of Veterans through media and publications. The findings of this study will likely inform future programs that span both military service and civilian life. Additional dissemination activities will include peer-reviewed journal articles[108] and promotional materials developed by the Center for Information Dissemination and Education Resources (CIDER), a QUERI resource center, at the completion of the study.

Recent dissemination activities
• Geraci et al. (*Implementation Science*). Partnered Implementation of the Veteran Sponsorship Initiative

Anticipated milestones:

FY 2025	
Q1	• Continue ongoing evaluation activities relative to program fidelity, implementation barriers and facilitators, and budget tracking • Publish quantitative and qualitative results • Additional dissemination activities to support long-term program implementation
Q2	• Continue ongoing evaluation activities relative to program fidelity, implementation barriers and facilitators, and budget tracking • Publish quantitative and qualitative results • Additional dissemination activities to support long-term program implementation
Q3	• Continue ongoing evaluation activities relative to program fidelity, implementation barriers and facilitators, and budget tracking • Publish quantitative and qualitative results • Additional dissemination activities to support long-term program implementation
Q4	• Continue ongoing evaluation activities relative to program fidelity, implementation barriers and facilitators, and budget tracking • Publish quantitative and qualitative results • Additional dissemination activities to support long-term program implementation

Point of Contact: This evaluation is being led by Dr. Joseph Geraci of VA Transitioning Service member/Veteran and Suicide Prevention Center (VA VISN 2 MIRECC and VA VISN 2 Center of Excellence for Research on Returning War Veterans). Dr. Geraci can be reached at joseph.geraci@va.gov.

K. VA Suicide Risk Identification Strategy (Risk ID)

Evaluation Questions:

1. What impact does incorporating suicide screening and evaluation enterprise-wide across patient populations have on the timeliness of safety planning? Does the level of risk impact receipt of safety planning?

2. Can implementing Risk ID facilitate a deeper understanding of suicide prevention from a population health perspective?

Timeline: Evaluation began in FY 2020 with an initial end date of FY 2022. An evaluation extension is planned through FY 2025, in partnership with the Office of Mental Health and Suicide Prevention (OMHSP).

Background: Reducing Veteran suicide is one of VA's highest priorities. Over the past decade VA has made significant strides towards this mission, particularly for Veterans receiving VA care. Until recently, these efforts have largely relied on downstream programs or policies focused on improving suicide risk management among those already identified to be at elevated risk. More upstream programs, such as population-based suicide risk screening, have not been systematically implemented across VA settings.

In 2016, the Joint Commission released a *Sentinel Event Alert* that prompted a shift in how health care systems approach the detection and management of suicide risk.[121] This alert highlighted findings that a significant number of individuals who die by suicide were not identified as psychiatric patients nor were they receiving mental health care. Instead, such individuals were often seen in primary care, ED or other medical settings in the year and months before their death.[122][123][124] These findings underscore the importance of suicide risk screening and evaluation across hospital settings to identify patients with occult risk—those who may only disclose suicidal thoughts/behaviors if they are asked directly.[125] Hospital wide suicide risk screening in both VA and non-VA health care systems, however, has not been routinely implemented.

To address this gap, OMHSP established an interdisciplinary workgroup of subject matter experts to identify an evidence-informed, population-based approach to detect suicide risk among patients presenting to a wide range of health care settings. This resulted in the development of the VA Suicide Risk Identification Strategy (Risk ID). Risk ID policy requires that all Veterans receiving VA care are screened annually using the Columbia Suicide Risk Severity Rating Scale (C-SSRS) Screener. Veterans with a positive suicide risk screen are then required to receive a comprehensive suicide risk evaluation (CSRE) on the same day (ambulatory care settings). Risk ID is also consistent with evidence-based practices outlined in the VA and Department of Defense clinical practice guidelines.[126]

Strategies to support implementation of Risk ID include critical information technology enhancements (i.e., new informatics tools and clinical reminder updates), educational webinars, facility champions, and a fallout report dashboard to help facilities track incomplete secondary screens and CSREs, among others. Despite these efforts, many facilities continue to face implementation challenges. To facilitate continuous quality improvement (QI) of Risk ID, ongoing evaluation of Risk ID is needed to address the range of implementation barriers, as well as facility-specific nuances. Some facilities (i.e., early adopters) may not need additional intervention. Among facilities that do require additional intervention, the dose and type of intervention needed may vary.

Evaluators propose testing whether a staged implementation approach consisting of audit & feedback followed by augmentation with external facilitation improves uptake of Risk ID for facilities that continue to demonstrate low uptake with audit & feedback alone. The rationale for starting with audit & feedback alone is that it is a relatively low-intensity/low-cost strategy. External facilitation requires more resources. Beginning with a less resource-intensive intervention and augmenting with a more resource-intensive intervention may be a more strategic and cost-effective approach to supporting implementation of Risk ID.

Study objective: The objective of this evaluation is to develop an adaptive strategy to improve implementation of Risk ID to fidelity. Two evidence-based implementation strategies are evaluated: Audit and Feedback (A/F) and Audit and Feedback plus External Facilitation (A/F+EF).

Primary Aim:

1. Among sites that do not meet the benchmark for adequate performance (i.e., timely completion of annual suicide risk screening and CSRE for 70% or more of eligible patients) following three months of Implementation as Usual (IAU), does the addition of A/F for eight months significantly improve scores on Risk ID performance measures (eCSSRS1 and eCSRE1) compared to IAU alone? (More information on the performance measures is available on the VA intranet.)

Secondary Aims:

1. Among sites that continue to not meet the benchmark for adequate implementation after eight months of A/F, does the addition of EF significantly improve scores on Risk ID performance measures (eCSSRS1 and eCSRE1) compared to A/F alone?
2. Among sites that meet the benchmark following A/F alone, is performance maintained following discontinuation of A/F?

Exploratory Aim:

1. Examine contextual factors that may impact the a) implementation of Risk ID to fidelity and b) adoption of the implementation interventions.

Additional Evaluation Aims identified in QUERI Extension (FY 2024 - 2025):

    a. Examine impact of universal screening (C-SSRS screen) and, when clinically indicated, suicide risk evaluation (CSRE) on patient care and outcomes.

    b. Examine the extent to which universal screening is reaching the intended population and compare the characteristics of Veterans reached to all Veterans eligible for screening.

    c. Using data from CSRE, determine empirically distinct risk groups and defining features of these risk groups (acute and chronic risk levels).

    d. Evaluate impact of CSRE receipt on care processes (evidence-based interventions) and patient outcomes (suicidal behavior, treatment engagement).

    e. Examine the psychometric properties, including predictive validity of the C-SSRS screener in comparison to item 9 of the Patient Health Questionnaire-9 for 6- and 12-month outcomes including psychiatric hospitalizations, suicide attempts, and suicide deaths.[127]

Study design and data sources: Risk ID uses a Sequential Multiple Assignment Randomized Trial (SMART) design to evaluate two evidence-based implementation strategies: A/F and A/F+EF. These strategies are evaluated across several domains based on the Reach, Adoption, Implementation, and Maintenance (RE-AIM) Qualitative Evaluation for Systematic Translation (QuEST) mixed methods framework.[128] The exact uses of these elements are detailed in the table below.

Level of Evaluation: Clinical Innovation:

RE-AIM Domain	Operationalization	Data Sources
Reach	The absolute number and representativeness of Veterans that received annual suicide risk screening and follow-up CSRE.	Administrative data from Corporate Data Warehouse (CDW) eCSSRS1 and eCSRE1
Effectiveness	Impact of CSRE receipt on care processes and patient outcomes.	CDW
Implementation	Percentage of eligible Veterans sampled at each facility who receive the different stages of Risk ID as intended. Barriers & facilitators to implementation to fidelity.	CDW eCSSRS1 and eCSRE1 Key Informant (KI) Interviews & Surveys

Level of Evaluation: Implementation Strategy

RE-AIM Domain	Operationalization	Data Sources
Effectiveness	Effect of A/F intervention on implementation of Risk ID to fidelity compared to IAU alone. Effect of A/F + EF intervention on implementation of Risk ID to fidelity compared to A/F alone.	CDW eCSSRS1 and eCSRE1
Adoption	Number of sites randomized to the implementation interventions that participated. Characteristics of participating/non-participating sites and reasons for participating/not participating.	KI & Debriefing Interviews
Implementation	Percent of sampled instances of implementation intervention delivered to fidelity (i.e., met criteria for adherence).	Fidelity Checklists; KI & Debriefing Interviews
Maintenance	Maintenance of adequate implementation following removal of A/F. Sustained implementation of Risk ID for high performers.	CDW Data eCSSRS1 and eCSRE1

Analysis: Primary aims are analyzed using linear regression. The primary outcomes of change in eCSSRS1 and eCSRE1 from the third month of the baseline period to the eighth month of the first interventional phase are each modeled as a function of group (A/F vs. IAU), the baseline outcome value, the stratification variables of facility complexity (high, medium, low) and baseline performance level (above or below the median average fallout rate), and geographic region (West, Midwest, Southwest, Southeast and Northeast). Inference is made based on the coefficient associated with the group variable and 97.5% confidence intervals (CI) is reported (alpha=0.025).

Secondary aims are analyzed in the following ways:

1. To test the effect of the addition of EF for those who do not implement adequately at end of interventional phase one, the primary outcomes of change in eCSSRS1 and eCSRE1 from the eighth month of interventional phase one (baseline for interventional phase two) to the tenth month of interventional phase two are modeled as a function of group, the baseline outcome value, the stratification variables and geographic region (if sample sizes allow). Inference is made based on the coefficient associated with the group variable and 95% Cis is reported (reduced from 97.5% due to smaller sample/power).

2. An analysis similar to that described for secondary aim one is employed to investigate the effect of discontinuing A/F for those who implemented adequately at the end of interventional phase one.

Mixed-effects models with random intercepts and slopes are used to model each of the outcomes as a function of categorical group and an interaction between group and a B-spline transformation on time (allowing the outcome to vary smoothly over time, using 19-time points [i.e., the third baseline month and every month of each interventional phase]) such that each group has its own trajectory. The trajectory for each group is plotted with pointwise confidence intervals.

Exploratory Aim: Key informant interviews are used to examine factors influencing adoption of the implementation interventions and barriers and facilitators of implementing Risk ID to fidelity. All qualitative data sources, including interview transcripts and documents are compiled and managed using Nvivo V. 9.0 software. This is a general inductive approach. Specifically, data analysis is determined by both the research objectives (i.e., domains of the RE-AIM framework) and multiple readings and interpretation of the raw data (i.e., content analysis). The goal is to establish clear links between the research objectives and the summary findings derived from the raw data.

Additional Evaluation Aims for QUERI Extension (FY 2024-2025):

a. Reach is calculated using the following formula: actual number of Veterans screened or evaluated divided by actual number of Veterans eligible for screening, calculated cumulatively across all three study phases and all sites. Reach is then calculated for each assessment stage of Risk ID. Representativeness of patients reached are examined by comparing demographic characteristics and other relevant variables (e.g., settings in which screening was completed) between eligible Veterans who were screened and/or evaluated and those who were not.

b. Latent class analysis of CSRE data is conducted to identify and characterize empirically distinct risk groups.

c. Mixed-effects logistic regression is used to model the outcome of safety plan within 2 weeks (yes/no) of a positive screen as a function of group (receipt of CSRE/positive on C-SSRS and no CSRE) with a random subject within facility effect. To determine if receipt of a timely safety plan depends on whether Veterans are considered to be at low, moderate or high acute risk of suicide, this model is repeated with the addition of a group by (categorical) acute risk interaction.

d. Modified Poisson regression with robust error variance is used to evaluate the predictive validity of the item 9 score of Patient Health Questionnaire-9 and C-SSRS screener results. Outcome variables are the presence of psychiatric hospitalizations, suicide attempts, and suicide deaths prior to 6 and 12 months. Predictor variables are C-SSRS Screener results (overall and item level) and the

item 9 score of Patient Health Questionnaire-9. Covariates include demographic and clinical variables (age, sex, mental health diagnoses). Separate regression analyses are conducted for each outcome at each time point. For each analysis, the incremental validity of the C-SSRS is evaluated based on the chi-square test for this variable within the model full model including the item 9 score of Patient Health Questionnaire-9 and all covariates. Relative risks with 95% CIs are reported for each predictor of interest.

Diversity, equity, inclusion and justice factors for consideration: Examining reach of Risk ID is an important first step to understanding potential disparities in suicide risk screening and evaluation. This is particularly important given recent data showing increased rates of suicide among minoritized Veterans.[129]

Anticipated challenges: Although there were no specific anticipated challenges at the onset of this evaluation, several *unanticipated* challenges arose, notably, the onset of the COVID-19 pandemic and a policy change in November 2020. Lessons learned from mitigating both challenges can be applied to future issues that may arise.

The COVID-19 pandemic is no longer a challenge for this evaluation. It had previously provided extraordinary operational changes across VA, which delayed RISK implementation (e.g., audit, feedback) until facilities established processes for virtual care and outpatient encounters approached pre-COVID averages. However, suicide risk screening and follow-up evaluations are now being conducted during both in person and telehealth encounters. Procedures for ensuring warm hand-offs for follow-up evaluations during telehealth encounters have been established.

Dissemination: Manuscripts from the original evaluation have been submitted, with successful publication in journals including *JAMA Network Open, PLOS One*, and the *Journal of Implementation Science.* Future dissemination activities include publications, visual abstracts, webinars, and conference presentations.

Preliminary results (not yet peer-reviewed)
• Timely completion of annual suicide risk screening (eCSSRS1) in ambulatory care settings improved 10%
• Timely completion of follow-up evaluation (eCSRE1) improved by 10%.
Recent dissemination activities
• Multiple briefings to national and local leadership
• Presentation - Bahraini, N., Matarazzo, B., Hostetter, T., Reis, D., & Brenner, L. (2022, April). Population-Based Suicide Risk Screening in the Veterans Health Administration. Presentation at the 2nd Annual Partnerships in Veteran & Military Health Conference: Strengthening the Networks, Aurora, CO. - Presentation
• Presentation - Bahraini, N. (2023, February). *Adaptive Designs in Implementation Research: Lessons Learned via the VA Suicide Risk Identification Strategy*

	National QI Project. QUERI Implementation Research Group Cyberseminar Series, Virtual. - Presentation

Anticipated milestones:

FY25	
Q1	• Complete analysis of reach and impact of CSRE on care processes and patient outcomes and submit manuscripts for publication.
Q2	• Complete latent class analysis and prepare manuscript for publication.
Q3	• Complete analysis of C-SSRS psychometric properties and prepare manuscript for publication.
Q4	• Identify potential changes to screening and evaluation procedures based on collective findings.

Point of Contact: This evaluation is led by Nazanin Bahraini, Ph.D., Nazanin.Bahraini@va.gov.

DELIVERY OF CARE EVALUATIONS – UNDER DEVELOPMENT

Understanding and Improving Housing Security for Veterans

VA reiterates its commitment to prevent and end homelessness among Veterans in the FY 2022-2028 Strategic Plan in Strategic Objective 2.1 regarding underserved, marginalized and at-risk Veterans. The associated implementing strategy states VA will strengthen and build partnerships across Federal, Tribal, state, local, territorial and private sector organizations and provide integrated support to homeless and at-risk Veterans to ensure homelessness is prevented, curtailed and non-recurring.

Research on the causes and contributing factors to Veteran homelessness has thus far established that the strongest and most consistent risk factors are substance use disorders and mental illness, followed by low income and other income-related factors.[130] Some evidence exists that social isolation, adverse childhood experiences and past incarceration are also important risk factors.[131] Assessment of the number of Veterans experiencing homelessness who are and are not accessing VA services has relied on an annual point-in-time (PIT) count since 2009.

An understanding of the causes and contributing factors to being at risk for homelessness among Veterans and the number of Veterans at risk of homelessness is not robust. First, the definition of at risk of homelessness encompasses a wide range of situations including, but not limited to, having one's own housing while being on the brink of being unable to pay rent or mortgage to not having one's own housing and sleeping at various people's homes. Furthermore, a national count and/or registry of at risk of homelessness populations does not exist, including those who have entered legal proceedings for eviction. These factors, and others, mean that a robust longitudinal, analytic model of housing insecurity and homelessness does not exist for Veterans. Thus, potential interventions cannot be reliably identified, evaluated and validated to remediate such risks without comprehensive, deep data on Veteran experiences of a long-term period.

Recent scholarship has highlighted the value of viewing episodes of patient care as "whole person, whole life" exercises, rather than as clinical experiences focused on specific complaints.[132] The origins of this approach include a VA-based comprehensive Roadmap for detecting, understanding and intervening on health and health care disparities.[133] This emerging view is especially useful for complex issues involving multiple life activities and multiple social systems across multiple phases of a person's life – not just for individuals who are Veterans. In this view, homelessness is not so much a single event requiring a specific set of interventions but a manifestation of a recurring and long-standing risk profile susceptible to a variety of remediations throughout the life of the individual.

Investigators have recently identified a foundational issue that investigators will need to address initially in evidence-building: the consequences of definitional issues, such as the stigma related to the terms "homeless" and "housing insecurity."[134] VA will first consider whether a more neutral term, such as "housing security," or "housing stability," elicit feedback that reduces the impact of response bias and will review the feasibility and consequences of such a recontextualization.

VA researchers will then identify specific needed data/evidence that is available, and data/evidence gaps which will need to be filled, like greater resolution of the variables of social and structural determinants of housing security across populations. This exercise will advance evidence-based identification of interventions geared to prevent and end homelessness among Veterans and the needed supports required by frontline workforce to implement, refine and maintain these interventions.

Future Annual Evaluation Plans will aim to address the following policy questions:

- How do Veterans (and other populations) view homelessness and housing security and assess their own experiences with these conditions, and what are the implications for further validation of longitudinal model building to assess program and policy over time?
- What are the social, societal and individual determinants of homelessness and housing security for Veterans (and other populations) and to what extent do they vary throughout the person's life journey?
- For Veterans (and other populations), to what extent do determinants such as socio-economic, structural, social, geographic and health factors related to homelessness and housing security impact individuals' housing outcomes throughout their life journey, including as Veterans?
- What potential interventions may be most effective to promote housing security, prevent primary housing insecurity and end homelessness throughout an individual's life journey?
- What skills, tools and other supports for the workforce serving Veterans (and others) at risk or who are experiencing homelessness, including program staff members who work in programs designed to prevent housing insecurity and end homelessness are associated with effective interventions?

VA has published a <u>Supplement on Homelessness to the VA Learning Agenda</u> which explores these issues and proposes to address the five questions over the span of the current and future Strategic Plans. This work begins with the development of an innovative "whole person, whole life" analytical model which will inform policy makers and program developers as they seek to understand and address housing insecurity and homelessness.

DELIVERY OF CARE EVALUATIONS – OPIOIDS & SUBSTANCE USE DISORDERS

L. Post-Incarceration Engagement (PIE)

Evaluation Questions:
1. Does PIE improve linkage with and engagement in mental health and substance use treatment and housing for reentry Veterans?
2. Is there an association between peer specialist fidelity to the PIE model and the use of higher intensity implementation strategies?

Timeline: The current iteration of the PIE program launched in FY21 and will run through FY25.

Background: The latest Bureau of Justice Statistics estimates from 2016 indicated there are 107,400 Veterans incarcerated in state or federal prisons. Justice-involved populations, including Veterans, have a considerable burden of chronic physical and behavioral health conditions including alcohol use disorder, mental illness, and SUD.[135] [136] [137] The risk of homelessness is high, with 30% experiencing some homelessness post-release, compared to 6% among the general population of adult men.[138] The VA's Health Care for Re-Entry Veterans (HCRV) specialists assess needs pre-release, link VA-eligible Veterans with appropriate services including housing and treatment for mental health and substance use disorders upon release, and provide short-term case management post-release.

Many of the Veterans in the HCRV program have mental health and/or substance use disorders. The HCRV program is designed to promote successful community reintegration and to prevent homelessness upon release. A retrospective study of Veterans who had an HCRV outreach visit in fiscal years 2008-2013 found that 57% had been diagnosed with a mental health disorder, 47% had a substance use disorder, and 35% had both.[139]

The Post-Incarceration Engagement (PIE) program was designed to add a peer support component to HCRV services and to integrate these peer services into HCRV to provide more comprehensive support for reentry Veterans. PIE is an enhancement to VA's Health Care for Re-entry Veteran (HCRV) program. PIE complements the existing HCRV service array through the addition of intensive peer specialists who can help bridge resources and services across multiple contexts including correctional facilities, community-based organizations, and VA. Working with HCRV specialists, peer specialists assist reentry Veterans leaving prison or jail to connect with VA and the community resources they need. PIE peer specialists can help Veterans with pre-release planning, provide day of release support (including transport from the prison or jail to parole/probation and to their pre-arranged housing), and then deliver tailored services post-release for approximately 6-12 months.

PIE was one of four innovative practices that was pilot tested as part of the VA Bridging the Care Continuum Quality Enhancement Research Initiative (Bridge QUERI) program from 2015-2020. Bridge QUERI sought to improve the health of vulnerable Veterans by improving diagnosis, outreach, linkage and engagement with specialty care. Evaluation of the PIE program found that when compared with a historical comparison group, participants in the PIE intervention were significantly more likely to receive substance use treatment (86% vs 19%, p<.0001) and to be engaged in mental health services (93% versus 64%, p<.003). The recidivism rate for the 43 male Massachusetts PIE participants less than one year from release from prison or jail was 7% compared with the statewide rate of 17% in 2016, the most recent year that data are available.[140] [141] In addition, most of the PIE participants achieved permanent housing.

The PIE intervention is grounded in a growing body of evidence regarding the role of peer-specialists in efforts to help link and support engagement in health care and community support services.[142] A cluster randomized controlled trial (cRCT) involving Veterans with mental illness showed greater improvement in patient activation (knowledge, skill, confidence, and attitudes for managing health and treatment) in Veterans with peers on their case management teams, compared to Veterans whose case management teams did not have a peer.[143] Eleven studies conducted outside VA, including RCTs, quasi-experimental, and correlational studies, have shown improvements in hospitalization rates, treatment engagement, appointment no-shows, social functioning, and unmet needs through the use of peer support.[144] PIE seeks to build on these findings within the justice-involved Veteran population.

Study objective: PIE aims to improve access to and engagement with mental health and substance use treatment services, with the goal of ultimately reducing homelessness and recidivism. To achieve this, PIE first identifies pre-implementation barriers to adopting PIE and adapt implementation strategies for each of the six sites that are implementing the PIE model. Second, PIE evaluates the effectiveness of high- versus low-intensity implementation strategies on Veteran engagement with services and on fidelity to the model. Each site begins with a low intensity, baseline implementation strategy (educational outreach/academic detailing) and in successive waves adds a higher intensity implementation (facilitation) on a rolling basis. Finally, PIE will develop an Implementation Playbook that may sustain the PIE peer support model and may be adopted by VAs to enhance services and outcomes for Veterans leaving incarceration.

Study design and data sources: The study uses elements of stepped wedge and adaptive designs to examine both effectiveness of PIE as an intervention, as well as the effectiveness of the implementation strategies at instituting and sustaining the PIE intervention at the site. To look at effectiveness, investigators track caseload with the goal of each peer having an optimal caseload of 12-15 clients by the end of 6 months. In addition, the study compares low vs high implementation strategies by evaluating metrics pulled from encounter notes entered into the medical record by the PIE peer, such as the proportion of participants with contact by a PIE peer each month, and the

proportion receiving at least 120 minutes of contact time per month. Investigators measure sustainment by noting if the peer position continues to be dedicated to PIE reentry support after active implementation has completed.

PIE is being implemented in six VAMCs across the U.S. for a minimum of 18 months with additional time for follow-up evaluation. Implementation is staggered at the six sites and began in FY22 and is expected to continue through FY 2025. The PIE program is embedded with VAMC Veterans Justice Programs, which includes HCRV and Veterans Justice Outreach (VJO) program.

Aim 1. PIE utilizes Rapid Assessment, Response, and Evaluation (RARE) processes in each of the six PIE sites to 1) understand the practice setting and ecological system in which it operates, and 2) determine whether adaptations need to be made to the implementation strategies or the evidence-based practice (EBP). The RARE model leverages qualitative and quantitative research methods to facilitate both process evaluation as well as rapid iteration of the PIE intervention as necessary. Formative qualitative interviews are being conducted with key stakeholders including HCRV case managers at each site and with some HUD-VASH staff at the sites to better understand the context.

Aim 2. PIE utilizes a Hybrid Type III effectiveness-implementation cluster randomized stepped wedge trial to test the project's selected implementation strategies (e.g., training, audit and feedback, facilitation) while simultaneously documenting and evaluating outcomes related to fidelity and uptake of the PIE intervention. In a stepped wedge design, instead of starting all intervention and control sites together, the introduction of the implementation strategies is staggered such that all sites begin with low intensity implementation strategies and after approximately six months move into higher intensity implementation strategies in successive waves (three waves of two sites each). An economic analysis is being conducted to learn more about the costs of low- versus high-implementation strategies. Evaluators anticipate that higher intensity implementation strategies may cost more but will result in increased fidelity to the intervention and may result in greater linkage and engagement with appropriate treatment and housing services.

For implementation strategy tracking, Computerized Patient Record System notes (which include a template for entering PIE-related fidelity information) entered by the peer specialist are audited and then documented work is summarized for each site on a monthly basis. Regular audits and feedback will allow evaluators to assess fidelity and consistency to the model. To gather information on effectiveness outcomes, including data on healthcare usage, overdose rates, and linkage to permanent housing, data from the VHA Corporate Data Warehouse (CDW) and Homeless Operations Management and Evaluation System (HOMES) are utilized. Additionally, the VINElink website is used for information on criminal recidivism.

Analysis: **Aim 1.** PIE uses rapid analysis techniques, using brief summaries of interview audio recordings or interview notes, and data templates to summarize unique elements of each practice setting and ecological system which may need adaptation. These data are used by the PIE team to make site-specific adjustments, while preserving fidelity to the PIE model. Such changes include changes in implementation strategies, and in some cases, elements of the intervention itself.

Aim 2. Effectiveness outcomes are assessed using the standard modeling approach for analysis of stepped wedge designs as described by Hussey and Hughes.[145] Specifically, PIE estimates the effect of transitioning to a higher-intensity implementation strategy from a baseline low-intensity strategy on each effectiveness outcome using mixed effects regression models. The covariate of primary interest is a fixed effect for the implementation strategy, and models include a fixed effect to account for temporal trends and a random effect for study site to account for clustering of individuals within sites. The specific functional form of these models depends on the distribution of the outcome of interest (e.g., logistic models for dichotomous outcomes; linear models for continuous outcomes). PIE examines within-site changes in outcome measures evaluated under the proposed design.

In addition to assessing within-site changes in these measures and while accounting for similarities/differences in site-level characteristics across participating sites, PIE takes advantage of the cascading implementation start times of the stepped wedge design to (i) cross-sectionally compare sites that are undergoing implementation to sites that have yet to undergo implementation and (ii) examine the impact of secular trends on the observed changes in the measures.

Anticipated challenges: PIE anticipates several challenges as the evaluation progresses. First, there are concerns that the number of in-person visits between peer specialists and Veterans might be limited by external factors, in particular the COVID-19 public health emergency and the geographic distance between Veterans and peer specialists. In addition, the rules of the local correctional facility may determine and impact pre-release visits as well as the ability to transport on the day of release. From an internal operations standpoint, the ability to hire, train, and onboard peer specialists expediently is a concern. As some Veterans are not eligible for HUD-VASH, evaluators are looking at placement in a variety of types of housing and, for those in temporary housing, evaluators are trying to assess if they worked toward achieving permanent housing with the help of the PIE peer specialist.

Diversity, equity, inclusion and justice factors for consideration: The evaluation looks at factors related to diversity, equity, inclusion, and justice (DEIJ). Justice-involved Veterans are a vulnerable population, who often deal with homelessness and housing insecurity and have difficulty finding employment upon release. Participants are not excluded based on DEIJ factors that are individual to Veterans (e.g., race/ethnicity, sexual orientation, disability, religious affiliation, or inclusion in a vulnerable group).

Evaluators consider gender identity but anticipate most PIE participants will identify as male, given population characteristics of the nationally incarcerated and the HCRV and VJO programs. Evaluators collect demographic information on race/ethnicity. A related project intends to learn how materials could be better tailored to address the needs of communities of color, who are disproportionately incarcerated at a higher rate than White individuals. Evaluators consider system-level experiences (e.g., rurality); the six sites are be located in different regions and some participants may be released to rural areas. Evaluators are also collecting data on service connection (SC) disability ratings in an effort to see if those with a higher SC rating benefit differently from those who are not or who have a lower SC rating.

Dissemination: Over the course of the evaluation, the evaluators update research and operational partners. Evaluators share findings through academic, peer-reviewed journals, as well as presentations at relevant subject matter conferences. Dissemination activities to date include presentations at Academy Health, American Public Health Association, Annual Conference on the Science of Dissemination and Implementation in Health, Society for Implementation Research and Collaboration, Academic Consortium on Criminal Justice Health, American Society for Criminology, as well as internal VA webinars and meetings.

Recent Dissemination Activities
• Hyde, J; Byrne, T; Petrakis, BA; Yakovchenko, V; Kim, B; Fincke, BG; Bolton, R; Visher, C; Blue-Howells, J; Drainoni, ML; McInnes, DK. (2022) Enhancing Community Integration After Incarceration: Findings from a Prospective Study of an Intensive Peer Support Intervention for Veterans with Historical Comparison Group. Health & Justice, vol. 10, December 2022. https://doi.org/10.1186/s40352-022-00195-5
• Hyde JK, Bolton R. Kim,B, Yakovchenko V, Petrakis BA, Visher C, McInnes, DK. I've just never done that: The influence of transitional anxiety on post-incarceration reentry and reintegration experiences among veterans. Health & Social Care in the Community, July 2022. https://doi.org/10.1111/hsc.13481.
• Richardson E, Petrakis BA, Hyde J, McInnes DK, Garvin L, Kim Bo. Process mapping as a tool to prepare for multi-site implementation of a peer-based intervention for Veteran prisoner reentry support. Poster presentation at 2023 HSR&D/QUERI National Conference, Baltimore, MD, February 2023
• Elwy AR, Kim B, Maguire EM, Sliwinski S, Petrakis BA, Kyrish A, Hyde J, McCullough M, Yakovchenko V, Javier S, Byrne T, Smelson D, Midboe A, McInnes DK. A centralized implementation core for tracking implementation strategies across a VA-wide QUERI program. Oral presentation as part of the symposium "Methods for Documenting and Tracking Implementation Strategies in Research Consortia" (Chair: W. Norton) at the NIH/AcademyHealth Science of Dissemination and Implementation in Health 15th annual conference, Washington, DC, December 14, 2022.

•	Sliwinski S, Kim B, Maguire EM, Hyde JK, Petrakis BA, McCullough M, Yakovchenko V, Javier S, Kyrish A, McInnes DK, Midboe A, Smelson D, Elwy AR. Applying the dynamic sustainability framework to synthesize qualitative data in a multi-project implementation program. Poster presentation at 15th Annual D&I Conference, December 13, 2022.
•	Richardson E, Petrakis BA, Hyde J, McInnes DK, Garvin L, Kim B. Process Mapping As a Tool to Prepare for Multi-Site Implementation of a Peer-Based Intervention for Veteran Prisoner Reentry Support. Poster presentation at Academy Health 2022, June 6, 2022.

Anticipated milestones:

FY 2025	
Q1	• Move to sustainment phase (withdraw facilitation and use of other implementation strategies) at all PIE sites • Continue analyses on PIE's direct impact on patient outcomes, including patient engagement in mental health and SUD care • Continue analyses on PIE intervention effect on homelessness and recidivism • Continue collaboration with HCRV and HUD-VASH • Refine findings relative to implementation strategies • Initiate development of Implementation Playbook
Q2	• Continue sustainment phase of PIE intervention • Continue analyses on PIE's direct impact on patient outcomes, including patient engagement in mental health and SUD care • Continue analyses on PIE intervention effect on homelessness and recidivism • Continue refinement of findings relative to implementation strategies • Continue collaboration with HCRV and HUD-VASH • Continue development of Implementation Playbook • Continue publication of findings in peer-reviewed journals and dissemination to key stakeholders
Q3	• Continue analyses on PIE's direct impact on patient outcomes, including patient engagement in mental health and SUD care • Continue analyses on PIE intervention effect on homelessness and recidivism • Continue collaboration with HCRV and HUD-VASH • Continue development of Implementation Playbook • Continue publication of findings in peer-reviewed journals and dissemination to key stakeholders
Q4	• Finalize analyses on PIE's direct impact on patient outcomes, including patient engagement in mental health and SUD care

	• Finalize analyses on PIE intervention effect on homelessness and recidivism • Continue collaboration with HCRV and HUD-VASH and present results to VA's Homeless Programs Office which includes HCRV and HUD-VASH • Finalize Implementation Playbook • Continue publication of findings in peer-reviewed journals and dissemination to key stakeholders

Point of Contact: The Center for Healthcare Organization & Implementation Research (CHOIR) is responsible for this evaluation. Contact: Beth Ann Petrakis, BethAnn.Petrakis@va.gov.

M. Rural Access to OUD Care with Buprenorphine

Evaluation Questions:
1. How have VA primary care-based buprenorphine prescription rates varied in rural and urban areas over time?
2. Among rural facilities with improved primary care-based buprenorphine prescribing, what implementation strategies and facilitators were successfully utilized to achieve improved prescription rates and how can they be replicated at other facilities?

Timeline: This evaluation launched in FY 2020 and will continue through FY 2025.

Background: Within VHA, there has been a sharp rise in the number of patients diagnosed with opioid use disorder. In 2003, 25,031 Veterans receiving care in VHA had a diagnosis of opioid use disorder (OUD); by 2018, the prevalence of OUD diagnoses had risen to more than 70,000.[146] Medication is the standard of care for OUD, but remains underutilized within VA. Three medications are approved for the treatment of OUD: (1) methadone, an agonist, (2) buprenorphine, a partial agonist, and (3) extended-release injectable naltrexone (XRN), an antagonist.[147] Medications used in the treatment of OUD have been found to decrease illicit opioid use and protect against relapse, improve health outcomes and reduce the risk of death.[148] [149] They are also more effective in reducing opioid use and retaining patients in treatment than behavioral treatments alone. Despite this, most VA patients diagnosed with OUD do not receive medication for the disorder and there is wide variability in prescribing patterns, even when indicated, ranging from 2%-76% of eligible Veterans receiving treatment.[150]

Buprenorphine is often the medication of choice for treating OUD. There are no limitations on the clinical setting in which buprenorphine can be prescribed (i.e., it can be prescribed in primary care clinics). Patients often prefer it out of the three medication options as well. Despite this, within VA, buprenorphine is overwhelmingly prescribed within specialty substance use disorder and mental health clinical settings, which substantially limits patient access.

Medication treatment for OUD is particularly inaccessible to rural Veterans. Accounting for 23% of all VA patients, rural Veterans are 37% less likely to receive a medication for OUD than Veterans residing in urban areas.[151] [152] While specialty OUD services may be inaccessible, rural Veterans have good access to primary care services through Community Based Outpatient Clinic (CBOCs). Thus, increasing rural patients' access to addiction pharmacotherapy requires the expansion of medication prescribing to rural, primary care clinical settings.

Increasing access to OUD medications is a major priority for VA. VA has undertaken multiple initiatives to expand medication access, from educational and quality improvement efforts to national policy and big data initiatives. This evaluation advances multiple research and clinical priorities, including access to care, mental health, primary care practice and opioids/pain, and utilization of implementation science methodology. It is also a Strategic Analytics for Improvement and Learning (SAIL) metric and it aligns with the VHA Strategic Plan.[153] [154]

Study objective: The goal of the study is to expand access to medications for OUD among rural Veterans. There are three research aims:

Aim 1: Characterize a) VA facilities' rates of primary care buprenorphine prescribing over time and b) differences in primary care-based buprenorphine prescribing for rural versus urban Veterans.

Aim 2: Among rural facilities with improved primary care-based buprenorphine prescribing, qualitatively explore implementation strategies utilized, facilitators to success, and methods to overcome implementation barriers.

Aim 3: Develop and pilot test an implementation strategy designed to facilitate the initiation and scale-up of buprenorphine prescribing in two rural CBOCs from one VA parent facility.

Study design and data sources: This study utilizes a mixed methods sequential explanatory design, in which findings from each research aim inform the design and conduct of subsequent aims, which themselves contextualize and elaborate upon initial findings.

Aim 1. _(partially completed)_ Aim 1 used VA administrative data from the Corporate Data Warehouse to characterize VA facilities' rates of primary care-based buprenorphine prescribing over time. This analysis informed sampling in Aim 2 and is helping characterize differences in primary care-based buprenorphine prescribing for rural versus urban facilities.

Aim 2. *(completed)* Aim 2 sampled 6 rural facilities identified in Aim 1 that increased their rate of primary care-based buprenorphine prescribing to patients with OUD from 2015-2020. Thirty qualitative interviews were conducted with clinical administrators and direct care providers within these facilities to uncover implementation strategies utilized, facilitators and barriers to success, and methods to overcome implementation barriers. Interviews were recorded and transcribed verbatim and analyzed using directed qualitative content analysis. Aim 2 is informing the design of components of an implementation strategy being piloted in Aim 3.

Aim 3. *(ongoing)* This aim is a pilot trial of the proposed implementation strategy within two rural VA Portland Health Care System CBOCs. Data are collected via surveys with CBOC staff at three months and six months following strategy roll-out, as well as with semi-structured interviews with staff participating in the pilot (n = 5 / site). Formative evaluation methods evaluate the acceptability, adoption, and feasibility of the strategy within a rural primary care setting. Acceptability describes participant satisfaction with the innovation, adoption evaluates actual uptake and utilization, and feasibility evaluates the extent to which the innovation can coexist with existing practice. The results from this pilot will inform a larger multi-center trial of the implementation strategy within all rural CBOCs of Veterans Integrated Service Network 20 (Alaska, Washington, Oregon, and Idaho—states with a considerable rural Veteran population).

<u>Analysis:</u> Please see below for a detailed analysis for each separate Aim.

Aim 1a. *Descriptive analyses: Characterize VA facilities' rates of primary care-based buprenorphine prescribing over time (complete).* Evaluators identified facility-level rates of buprenorphine prescription (overall, in primary care, and in non-primary care), methadone maintenance, and injectable naltrexone in each year starting in FY2015-FY2020. Evaluators then calculated yearly trends of mean values of each of the outcome measures. Together, results from this descriptive analysis provide a comprehensive picture of how prescription practices evolved over time as the opioid crisis unfolded, including changes in the clinical setting in which medication was prescribed, and how trends differed between rural and urban facilities. Descriptive analysis was leveraged to identify rural facilities with greater than average improvements in primary care MOUD prescribing measures for sampling in Aim 2.

Aim 1a yielded the following findings: From 2015 to 2020, MOUD access increased substantially: the average proportion of patients receiving MOUD increased from 34.6 to 48.9%, with a similar proportion of patients treated with MOUD in rural and urban systems in all years. Overall, a small proportion (1.8%) of MOUD was provided via Community Care, and Community Care was used at similar rates in urban and rural systems.

Aim 1b. *Regression analyses: Characterize differences in primary care-based buprenorphine prescribing for rural versus urban Veterans (partially complete).*

Evaluators hypothesized that rural patients, relative to urban patients, will be less likely to receive buprenorphine in a primary care setting in comparison to buprenorphine received in specialty mental health or substance use disorder settings after controlling for patient- and facility-level covariates. Among patients receiving buprenorphine, evaluators use a mixed effects logistic regression model with location of buprenorphine prescription (primary care versus elsewhere) as the outcome and whether a patient's residence is rural or urban as the main independent variable. Evaluators include facility as a random effect to account for the correlation among patients within each facility. This analysis enables the estimation of an adjusted odds ratio comparing whether buprenorphine prescription in primary care (vs. elsewhere) is less likely for patients residing in rural areas.

Aim 2. *(complete)* Evaluators sampled six rural VA facilities that increased their rate of primary care-based buprenorphine prescribing over time as identified in Aim 1a. Thirty qualitative telephone interviews with clinician administrators (n=6) and direct care providers (n=24) were conducted between November 2021 and September 2022. Interview questions focused on the process of implementing buprenorphine prescribing within primary care, implementation strategies utilized, and facilitators and barriers to success. Qualitative data was analyzed using directed qualitative content analysis. This method allows the researcher to approach the data with a priori research questions in mind, while also allowing for new themes to emerge inductively. Each interview was transcribed verbatim and read carefully by members of the research team. To develop a codebook, two members of the research team independently coded three interviews using the Qualitative Software Program ATLAS.ti. The final codebook included normalization process theory (NPT) constructs and emergent concepts, examples of which include: pharmacist role, leadership support and stigma.

The team then met to identify areas of divergent coding and come to a consensus on the codebook. Each interview was independently coded by at least 2 members of the research team, who then met to discuss emerging themes and resolve any discrepancies. Qualitative findings from Aim 2 were used to elaborate on and contextualize the quantitative results from Aim 1.

Aim 3. *(ongoing)* Evaluators developed and piloted an implementation strategy designed to increase buprenorphine prescribing within rural primary care clinical settings. The strategy is being piloted in two rurally located CBOCs that are part of the VA Portland Health Care System, which are not currently prescribing buprenorphine for OUD. Evaluators are assessing three outcomes: acceptability, adoption and feasibility through a qualitative formative evaluation, based on the Quality Enhancement Research Initiative's implementation guide.

The implementation strategy will be considered acceptable if, at both waves of the survey, 75% of respondents evaluate the strategy as "working well" or "working very well" (on a five-point Likert scale) and 75% of respondents respond affirmatively to the

statement, "Buprenorphine: Go! resources helped our clinic to implement buprenorphine prescribing."

The implementation strategy will be considered successful in terms of adoption if more than half of surveyed clinicians report using two or more of the implementation strategy components at each time period.

Feasibility will be evaluated based on achievement of the following targets during the one-year pilot: (1) Conduct outreach to and enroll two rural CBOCs as pilot sites; (2) Prepare and distribute the educational materials to clinical staff in each pilot site; (3) Initiate and sustain a monthly, peer-to-peer call; (4) Provide on-going site visits for technical assistance and problem-solving; (5) Obtain the data needed to conduct audit and feedback over 10 or more months.

These analyses will be contextualized and illuminated through a qualitative formative evaluation involving interviews with staff participating in the pilot. Individual interviews with key staff (n=5/facility) who took part in the pilot will evaluate staff perceptions of the implementation strategy, and how it affected the on-the-ground work of implementing buprenorphine prescribing in routine care. Investigators will interview clinicians who provided buprenorphine treatment, clinical directors, and non-clinical staff involved in buprenorphine care (e.g., clinical pharmacists, nurse care managers, social workers). Information gleaned through these interviews will help inform an understanding of the acceptability and feasibility of the strategy, identify strategy components that require reworking or redesign, and ultimately lay the groundwork for a larger multicenter trial.

A future larger-scale test of the implementation strategy will also include additional implementation outcomes (e.g., cost, sustainability), as well as key health services and clinical outcomes such as the buprenorphine prescribing rate and the occurrence of opioid-related adverse events.

Anticipated challenges: While national VA administrative data include fee-basis files, such as records of prescription medication received by VA patients in non-VA pharmacies, fee-basis files do not contain information regarding the clinical setting in which buprenorphine is prescribed. Thus, data analyses about clinical setting were limited to patients treated within the VA system. Other non-VA data sources have similar limitations and were ruled out.

Lastly, findings from this study may not be generalizable. Ultimately, a larger multi-center trial will be necessary to confirm initial findings and application to other sites.

DEI factors for consideration:
The goal of this study is to expand access to a life-saving medication for a currently underserved patient population – rural Veterans. Rurality is a significant barrier to timely

and adequate access to care. Evaluators will also specifically examine differences across race, ethnicity, and gender to identify disparities in access that can be addressed through future research and policy activities. Such activities may include investigating the relationship between the share of patients who identify as racial and ethnic minorities (specifically African American and Latinx patients) at the facility-level and access to buprenorphine at the facility-level. An additional avenue of inquiry might be to examine whether disparities in access to buprenorphine are more or less pronounced within rural relative to urban facilities.

Dissemination: Over the course of the evaluation, the evaluators update research and operational partners regarding study progress and outcomes. Evaluators also share findings through academic, peer-reviewed journals, as well as presentations at relevant subject matter conferences. To advance rural primary-care based buprenorphine prescribing, in Aim 3, evaluators will design elements of an implementation strategy, including clinical resources, which will be made broadly available. The development of these resources drew upon knowledge gained from Aim 2 interviews regarding facilitators to prescribing and tools needed to support clinicians in this work.

Preliminary results (not yet peer-reviewed)
• Interview data indicate that the integration of B-MOUD into primary care was facilitated by the presence of motivated PC clinicians, dedicated clinical pharmacy support and clear clinical need. Sustainability and spread were enhanced by clear engagement from leadership. Interviewees suggested that effort is needed to address PC clinicians' discomfort and hesitancy towards B-MOUD by providing individualized, face-to-face education, clarify rules and share patient and provider success stories.
Recent dissemination activities
• Wyse JJ, Mackey K. Developing a Primary-Care Based Buprenorphine Clinic and E-Consult: lessons from implementation science. *Stepped Care for Opioid Use Disorder Train the Trainer (SCOUTT) i-lead National Call*. April 12, 2023. (82 participants)
• <u>Access to Medications for Opioid Use Disorder in Rural Versus Urban Veterans Health Administration Facilities</u> – Wyse et al.
• Wyse JJ, Morasco BJ, Carlson KF, Korthuis PT, Gordon AJ, Ono SS, Newell S, Eckhardt A, Takara K, Lovejoy TI. Implementing Buprenorphine Prescribing in Rural, Primary Care Settings: Lessons from Successful Health Care Systems. *Academy Health Dissemination and Implementation Annual Meeting,* Washington D.C.*, December 16, 2022.*
• Wyse, JJ**.** Expanding access to opioid use disorder treatment for Veterans in rural, primary care settings. VISN2 New York/New Jersey MIRECC Webinar Series. October 19, 2023. *133 participants
• Wyse, JJ, Shull S, Lindner S, Morasco BJ, Carlson K, Korthuis PT, Ono SS, Gordon AJ, Lovejoy TI. Closing the Gap: Access to Medication for Opioid Use Disorder in Rural VA Facilities. *AcademyHealth Annual Research Meeting,* June 4-7, 2022, Washington D.C.

Anticipated milestones:

FY 2025	
Q1	• Prepare IIR application • Qualitative and quantitative data collection • Data Analysis and Evaluation • Prepare academic manuscripts for publication in peer-reviewed journals • Present findings to-date at relevant scientific conferences
Q2	• Prepare IIR application • Qualitative and quantitative data collection • Data Analysis and Evaluation • Prepare academic manuscripts for publication in peer-reviewed journals • Consult with key stakeholder groups (e.g., Veteran Engagement Group) • Present findings to-date at relevant scientific conferences
Q3	• Prepare IIR application • Qualitative and quantitative data collection • Data Analysis and Evaluation • Prepare academic manuscripts for publication in peer-reviewed journals
Q4	• Prepare academic manuscripts for publication in peer-reviewed journals • Consult with key stakeholder groups (e.g., Veteran Engagement Group) • Develop and disseminate internal VA memoranda and briefs • Submit IIR application

Point of Contact: This evaluation is being led by Dr. Jessica Wyse. Dr. Wyse can be reached at Jessica.Wyse@va.gov.

N. Homeless Overdose Prevention Expansion (HOPE)

Evaluation Question: Do education and auditing increase and sustain the uptake of overdose education and naloxone distribution (OEND) among eligible Veterans in Housing and Urban Development-Veterans Affairs Supportive Housing (HUD-VASH) programs?

Timeline: The Homeless Overdose Prevention Expansion (HOPE) began pre-implementation in FY 2021 and will run through FY 2025.

Background: Veteran populations are acutely impacted by both the opioid epidemic and homelessness or unstable housing. Diagnosed opioid misuse is almost seven times higher in the VA patient population than in commercial health plans.[155] This is, in part, because the Veteran population experiences higher rates of long-term pain, mental health issues, and substance use disorder compared to the general U.S. population.[156] What's more, many Veterans experience both opioid use disorder (OUD) and homelessness. Up to 35% of Veterans with OUD are homeless, and Veterans with OUD are at nearly 29 times more risk for homelessness.[157]

However, few are prescribed naloxone, an effective, evidence-based intervention to reverse opioid overdose.[158] Naloxone is a life-saving medication that can reverse overdose from opioids (including heroin, fentanyl, and prescription opioid medications).[159] Often in the form of a nasal spray, naloxone is easy to use and does not require medical training or authorization to administer.[160] This is particularly relevant for opioid users experiencing homelessness as this lifesaving medication can be easily carried with them and used in almost any setting. Opioid overdose education and naloxone distribution (OEND) is a federally sanctioned, evidence-based strategy to prevent opioid-related overdoses at the population level. OEND comprises overdose education and widespread distribution of naloxone. Given the complex needs of Veterans who are homeless/unstably housed, tailored OEND implementation targeting HUD-VASH Veterans can be an effective strategy to increase access to naloxone and prevent opioid-related overdoses and deaths.

HOPE is part of the VHA Bridging the Care Continuum for Vulnerable Veterans across VA and Community Services Quality Enhancement Research Initiative (Bridge QUERI) program. Bridge QUERI is one of VA's responses to the opioid crisis, focused on improving the health of vulnerable Veterans hit hardest by overdose, suicidality, and mental illness by improving diagnosis, outreach, and engagement with specialty care.[161]

Study objective: HOPE aims to increase OEND uptake (naloxone education and the offer of naloxone, whether or not it is accepted) with a lower intensity implementation strategy of education and audit/feedback. The evaluation of HOPE helps determine whether a higher intensity implementation strategy (i.e., implementation facilitation) is needed to increase OEND uptake and sustainment among eligible Veterans in HUD-VASH programs. HOPE also seeks to identify any key implementation strategies that impact OEND uptake at an individual site. To achieve this, the HOPE team works with HUD-VASH personnel at six Veterans Integrated Service Network (VISN) 21 sites and provides them with OEND-related educational trainings, performance feedback, and additional resources.

Study design and data sources: HOPE assesses how many people have received naloxone education, including measuring the number of social workers (responsible for providing Veterans with naloxone education) who disseminate the OEND. The social workers are linked to a prescriber who can sign the note and release the naloxone prescription to the Veteran. The HOPE team have monthly audits and collect feedback data to see how the sites are doing. The audit data includes how many Veterans accepted OEND, how many Veterans declined OEND, and if/how they got naloxone.

Implementation has been completed at two sites in VISN 21 and is ongoing at two additional VISN 21 sites. An implementation session is education and audit/feedback delivered via Teams. Implementation sessions occur once per month for at least six months for each of the six implementation sites.

Data is sourced from VA's administrate Corporate Data Warehouse (CDW). CDW data is used for (1) selection of sites and the determination of start dates at that site, (2) audit/feedback, including eligible patients, and (3) assessing Reach, Adoption, and Effectiveness of the implementation trial. Other data comes from the Homeless Operations Management and Evaluation System (HOMES) dataset provided by Homeless Programs Office (HPO).

Additionally, semi-structured interviews are being completed at sites to collect qualitative data. Pre-implementation, semi-structured interviews were completed at the four VISN-21 sites to better understand the site context prior to implementation. Progress focused and sustainability interviews are also being completed at sites to gather information about ongoing implementation as well as measures of fidelity.

Analysis: HOPE uses a Hybrid Type III effectiveness-implementation design. Pre-implementation interviews indicated a modified stepped wedge design was not a feasible approach and other control sites are being selected.

The evaluation team is assessing a variety of outcomes using the RE-AIM framework as a guide.

Outcomes are currently being tracked at the four sites that started implementation. These include the number of Veterans who have been offered OEND, number of Veterans who have received or declined OEND, the number of HUD-VASH and prescribing providers attending monthly education and audit/feedback sessions, and fidelity to the various elements of the EBP protocol. CDW data is being used to track outcomes.

Rapid qualitative analysis approach is used to identify themes from the pre-implementation, progress focused, and sustainability interviews. Information from qualitative interviews has been used to learn more about the site context, barriers and facilitators to implementation and sustainment, and fidelity to the EBP.

Additionally, the study is conducting a budget impact analysis of intervention and implementation costs. In conjunction with that budget impact analysis, HOPE is endeavoring to assess downstream costs.

Anticipated challenges: This study relies on non-prescribers, someone other than a doctor, to educate about overdose and naloxone (i.e., social workers). There are varying levels of comfort and familiarity with this information, its presentation, and its implementation. The non-prescriber's ability to successfully engage with these materials may impact uptake. The use of social workers has presented some challenges, including pushback from a state social work board concerned about this initiative and the defined social work scope of practice. HOPE evaluators met with members of the

state social work board to provide clarification about scope of practice and mitigate concerns from social workers.

Additionally, Veterans need to be linked to a prescriber for naloxone to be released to the Veteran. Identifying a prescribing provider for each site may be a challenge. To address this issue, HOPE worked with sites to identify providers who would be able to assist in the naloxone prescribing process.

Among Veterans, the primary anticipated challenge is Veteran refusal to participate in OEND due primarily to stigma around opioid use.

Diversity, equity, inclusion and justice factors for consideration: Veterans experiencing homelessness, unstable housing, and/or OUD are a marginalized population. At its core, this evaluation focuses on improving access to care for those who are underserved. Additionally, Dr. Sarah Javier works with the HOPE project to evaluate this through a funded Quality Enhancement Research Initiative to Advance Diversity in Implementation Leadership (QUERI ADIL). She examines racial/ethnicity disparities in receipt of OEND across HUD-VASH and other homeless programs.

Dissemination: HOPE data is presented in academic papers and on national calls with operational partners. Findings are also shared through presentations at relevant subject matter conferences and through VA cyberseminars. Additionally, the goal is that these OEND trainings can be standardized and then disseminated broadly.

Recent dissemination activities
• Javier et al. Formative Evaluation of barriers and facilitators to implementing opioid overdose education and naloxone distribution in Veterans Health Administration homelessness and housing programs. Poster presented at SIRC; Sept 2022
• Daniels et al. A scoping review of implementation of health-focused interventions in vulnerable populations, Translational Behavioral Medicine; Sept 2022
• Regular briefings with VISN 21 Network Homeless Coordinator and monthly briefings with operational partners

Anticipated milestones:

FY 2025	
Q1	• Continue RE-AIM analysis and economic analysis • Develop implementation playbook and plan for future sites
Q2	• Dissemination – develop reports to partners, publication preparation
Q3	• Refine implementation playbook
Q4	• Dissemination – create final reports, publications, presentations

Point of Contact: Angela Kyrish (angela.kyrish@va.gov) and (Donald) Keith McInnes (Donald.mcinnes@va.gov) are the points of contacts for this study.

O. Alternatives for Expanding Access to Care for Opioid Use Disorder

Evaluation Question: How do access, quality, and cost compare between VA direct and community care for methadone treatment, and when is it cost effective for VA to deliver care directly versus purchase community care?

Timeline: Evaluation started in FY 2023 and is ongoing with no set end date.

Background:
Make vs. Buy. Following implementation of the Choice Act of 2014 and MISSION Act of 2018, about one-third of VA's nine million Veteran enrollees utilize care in the private sector purchased by VA ("community care").[162] In order to make informed decisions about VA direct or community care, also called the "make vs. buy" decision, evaluations are needed to compare access, quality, cost, and cost effectiveness between direct and purchased options.

Methadone. Methadone is a medication that is used to help people who are dependent on opioids to manage their addiction and reduce their risk of overdose.[163] [164] Methadone treatment is not risk free, but VA has found that it can be an important tool in helping Veterans overcome opioid addiction.[165] In particular, methadone may be more effective than buprenorphine for treating OUD involving fentanyl, the current primary driver of overdose deaths.[166]

VA operates a number of opioid treatment programs (OTPs) that dispense methadone and provide other services to Veterans who are struggling with opioid addiction. OTPs provide a range of services to Veterans, including counseling, support groups, and medication treatment for opioid use disorder (MOUD).[167]

VA OTPs vs. mobile vans vs. community partners. With only 33 VA OTPs nationwide, the second most common behavioral health service purchased by VA recently is methadone treatment.[168] Methadone maintenance treatment (MMT) can be delivered through OTPs, mobile methadone vans, or through a community partnership model.

OTPs are brick-and-mortar facilities that are typically staffed by health care professionals who provide medication and counseling services to patients. One advantage of traditional methadone clinics is that they offer a stable and consistent environment for treatment, which can be particularly beneficial for individuals who may not have a supportive home environment. However, OTPs may not be accessible to individuals who live in rural or underserved areas, or who have difficulty accessing transportation.[169]

Mobile methadone vans bring MMT directly to individuals who may not have access to traditional methadone clinics due to location or transportation issues. The White House Office of National Drug Control Policy's 2022 National Drug Control Strategy speaks to expanding MMT access through mobile methadone vans.[170] Historically, mobile methadone vans have not provided the same level of services as traditional methadone clinics, such as counseling and support groups. VA is currently in the process of considering acquiring mobile methadone vans, with plans to include counseling and support groups in the vans. Mobile methadone vans are required by law to be affiliated with existing OTPs.

Community partnership models involve the delivery of MMT through partnerships with community-based organizations, such as Substance Abuse and Mental Health Services Administration (SAMHSA)-approved outpatient clinics. This model can be particularly beneficial for individuals who may not have access to VA OTPs, typically located at large medical centers in urban settings. However, community partnership models require a higher level of coordination and collaboration between VA and non-VA providers, and existing contracts with community partners do not allow for mobile treatment of any kind.

Study objective:
Through this evaluation, evaluators conduct a "make vs. buy" comparison for methadone treatment. (In future years, the team will repeat these analyses for at least two other treatment options. Evaluation foci will be selected based on cost of care and number of affected Veterans and will be chosen in consultation with VHA program office leadership.) Evaluators conduct qualitative, quantitative, and economic evaluations to address three objectives.

Objective 1: Characterize VA leadership, health care provider, and Veteran perspectives on access, quality, and cost of VA OTPs, VA mobile vans, and community partnerships providing methadone treatment for opioid use disorder.
Objective 2: Informed by Objective 1, develop and implement metrics for access, quality, and costs for VA OTPs, VA mobile vans, and community partnerships.
Objective 3: Conduct a cost-effectiveness analysis (CEA) and a budget impact analysis (BIA) – comparing options for expanding methadone treatment availability for Veterans through VA mobile vans and community partnerships.

Study design and data sources:
Objective 1: *Study Design*. Interviews are conducted using a semi-structured interview guide designed to elicit discussion about the current, planned, and future state of methadone treatment for opioid use disorder within VA, and the prospect of implementing VA mobile vans. The semi-structured interview guide is informed by the Implementation Science theory of "*Implementation Climate"* which focuses on the shared perception of organization members who are expected to use or support an innovation (i.e., VA mobile methadone treatment).[171] [172] Interviews are conducted via a

virtual platform (e.g., Microsoft Teams). Participant remarks are audio-recorded and then transcribed for analyses. The interview data collected helps evaluators determine which access, quality, and cost metrics should be used for the next evaluation steps as well as to understand feasibility, acceptability, barriers, and facilitators of delivering methadone through VA OTPs, VA mobile methadone vans, or through contracted services. Input from VA leadership, health care providers, and Veterans are needed on access, quality, and cost metrics because there are no standard metrics. Their perspectives are particularly essential for implementation as well, considering that VA mobile vans are not yet used in practice.

Data Source. To investigate VA leadership, health care provider, and Veteran perspectives evaluators will conduct 30-60 minutes interviews with leaders, providers, and Veterans belonging to high-need areas (large number of untreated patients per county); this data has been provided already by one of the team's operational partners—VA's Office of Mental Health and Suicide Prevention (OMHSP).

Participants. Evaluators anticipate speaking to the following individuals: up to 12 members of VA leadership, up to 12 health care providers (e.g., addiction medicine, psychiatry), and up to 12 Veterans; at most 36 participants overall.

Recruitment. VA leadership and health care providers are contacted via email with details about the project. Veterans are recruited through referral by participating providers and be offered both telephone and electronic options to learn details about the project.

Objective 2: *Study Design.* To assess access to care, the team measures wait times to methadone treatment in VA OTPs, VA mobile methadone vans, and through contracted services. To assess quality of care, evaluators measure retention in VA OTPs, VA mobile methadone vans, and through contracted services. To assess cost, evaluators assess per Veteran activity-based cost for every health system product and service in VA OTPs, expected activity-based cost for VA mobile methadone vans informed by Objective 1, and paid amounts to community partners. These measures are subject to change based on information collected in Objective 1.

Data Sources. For FY2021 and FY2022 at the 33 sites with VA OTPs, methadone treatment is ascertained in VA using stop code 523 and in community care with current procedural terminology (CPTs) and Healthcare Common Procedure Coding System (HCPCS), both validated with receipt of methadone by patients with OUD. Relevant CPTs and HCPCS are obtained from the list included on VA Community Care's Standardized Episode of Care (SEOC) for COMPACT Opioid Tx Prog (OTP) Meth 3M 1.8.1 and Opioid Treatment Program (OTP) Methadone 6M 1.4.8.[173] Evaluators calculate wait time by VA facility using the Feyman et al. method for sum of days to approved and to completed ("difference between when a referral was initially requested and when the appointment was completed").[174] Retention is assessed using CDW data,

and defined using the Wyse et al. method—523 encounter 4+ times/month in the first month of treatment and 1+ visits/month in months 2-12.[175] CPTs and HCPCS in community care claims are used to determine retention in the community. For costs, data are obtained from interviews in Objective 1 on van estimates, VA's Health Economics Resource Center's (HERC) Managerial Cost Accounting (MCA) for VA OTPs and claims data from the Community Care Consolidated Data Set (CDS), which is currently available for operations projects.

Objective 3: *Study Design.* Evaluators are constructing a Markov simulation model in TreeAge Pro software that follows a cohort of hypothetical patients with OUD using a lifetime time horizon. Similar to previous studies, health states for this Markov model include "on treatment, not relapsed", "on treatment, relapsed", "off treatment, relapsed", and "dead" and the cycle length will be 1 year.[176] [177] [178] relapse is defined as return to illicit opioid use and transition probabilities to this health state will be obtained from the published literature.[179] Effectiveness is measured as quality-adjusted life-years (QALYs), constructed by multiplying the time in MOUD treatment by utility values for on treatment and off treatment. Costs include fixed costs of starting a VA mobile methadone van program such as the van itself and provider staffing as well as health care utilization costs associated with being on or off MOUD and are from the VA perspective.

Data Sources. Input parameters for the Markov simulation model are obtained both from estimates generated from previous aims in the current study as well as the published literature. The fixed costs of mobile methadone clinics are obtained through interviews conducted in Aim 1. Time spent in treatment and the cost of health care utilization in VA and community-based brick and mortar methadone treatment (used as a proxy for the VA health care utilization cost for mobile methadone clinics) are obtained in Aim 2. Finally, evaluators are obtaining utility parameters to construct QALYs from the published literature.

Analysis:
Objective 1: This qualitative assessment's sample size is determined based on thematic saturation. The principle of thematic saturation is based on the idea that once themes begin to repeat (i.e., interview responses are more similar than dissimilar), additional data collection will yield diminishing additional value. The literature indicates that saturation can be reached within a homogenous cohort at N=12.[180] If evaluators have not achieved thematic saturation per cohort, they will continue collecting cohort-specific interview data until they have. Domains are developed based on the semi-structured interview guide and conceptually similar ideas and topics mentioned by participants. Once domains are solidified, a team of two qualitatively trained analysts independently code interview data using the Editing Approach by Crabtree and Miller. Data are managed using Atlas.ti, a qualitative software package. A 25% intercoder reliability process is used with coders using adjudication to resolve any coding

discrepancies between coders. The qualitative methodologist works with the study team to provide a final analysis of the data.

Objective 2: Evaluators examine descriptive statistics on access, retention, and costs — comparing VA OTPs, VA mobile methadone vans, and contracted services. To assess differences by treatment setting, the team conducts ANOVAs and calculate standardized mean differences (SMDs). Evaluators also conduct multivariate regressions with treatment setting as the key independent variable and access, quality, and cost as the outcome variables. There are likely systematic differences in who accesses methadone treatment through these different modalities, especially due to drive time to VA — which is an eligibility criterion for community care. However, Veterans are also eligible for community care due to wait time for services, which means that there is still variability in drive time for that group. Thus, the models adjust for drive time along with any other variables likely to affect treatment selection or the outcome variable, including comorbidities, age, sex, race, ethnicity, marital status, homeless status, rurality, and VA priority group assignment. Evaluators also include random effects for individuals to account for clustering of patient observations and a fixed effect for VA facility, to account for time-invariant differences between VA facilities. To account for time-variant supply and demand differences between facilities, the models include OMHSP's SUD16 metric (percent of patients with OUD receiving medication). Cumulatively, this limits the impact of selection bias on outcomes.

Objective 3: For the CEA, evaluators analyze the model using a microsimulation approach with simulated Veterans having demographic characteristics such as race and ethnicity to match the OUD Veteran population. Evaluators use a lifetime time horizon and discount future costs and QALYs at a 3% annual rate. The base-case analysis estimates the average discounted cost and QALYs per patient for each treatment strategy and combine these to obtain an incremental cost-effectiveness ratio (ICER), which is interpreted as the additional cost necessary to obtain an additional QALY by using one treatment strategy compared to another. In assessing the cost-effectiveness of expanding methadone treatment availability for Veterans through VA mobile vans and community partnerships, evaluators use a willingness-to-pay threshold of $150,000/QALY. Then, evaluators conduct deterministic sensitivity analyses by varying the values of input parameters one, two, or three at a time. Finally, the team performs probabilistic sensitivity analyses (PSAs) using 10,000 2nd order Monte Carlo simulations in which each parameter is varied simultaneously. Results from these PSAs are presented as scatterplots on the cost-effectiveness plane or as cost-effectiveness acceptability curves.

For the BIA, evaluators aggregate the treatment strategy-specific per-patient cost estimates from the Markov simulation model to the population level. This is done for facilities, VISNs, and the entire VA so as to make the results useful for a variety of VA stakeholders. The results from the BIA can be used in conjunction with those from the CEA to support decision making. The population-level differences in total expenditures

necessary to undertake each of the treatment strategies derived from the BIA allow decision makers to gauge whether they can afford the additional QALYs produced by the expanded methadone treatment availability (through VA mobile vans or community partnerships).

Diversity, equity, inclusion and justice factors for consideration: For Objective 1, VA leaders/providers and Veterans might discuss equity concerns during interviews about the current, planned, and future state of methadone treatment. For Objective 2, evaluators examine unadjusted and adjusted differences in access, retention, and cost by comorbidities, age, sex, race, ethnicity, marital status, homeless status, rurality, and VA priority group assignment for methadone treatment in VA OTPs, VA mobile vans, and through contracted services. Because collection of self-identified gender identity in VA's electronic health record (EHR) only began recently in January 2022, these analyses will be limited to the male/female sex variable from CDW, which typically represents sex assigned at birth. As the self-identified gender identity variable becomes more populated over time, it will be considered for future analyses.

Anticipated challenges:
It may take a while for VA to purchase mobile vans, and thus it may not be possible to examine actual VA mobile van access, quality, or cost for methadone treatment. If that is the case, the analyses will focus on VA OTP (assuming equal values for VA mobile) versus contracted service access, quality, and cost comparisons. For community care data, CDS is a relatively new dataset made available to operations projects. If the team encounters any difficulties with this dataset, they will leverage other datasets previously used (Program Integrity Tool [PIT], Fee Basis Claims System [FBCS], and Fee). If there are difficulties recruiting VA leadership, health care providers, and Veterans for interviews, evaluators will utilize a snowball sampling technique—where prior interviewees refer us to new interviewees.

Dissemination:
Evaluators meet every other week with the Mobile Methadone Van Workgroup, which is composed of relevant stakeholders from Pharmacy Benefits Management (PBM), the Office of Mental Health and Suicide Prevention (OMHSP), and the Office of Integrated Veteran Care (IVC). Through these interactions, evaluators develop a "playbook" that utilizes the best methods for disseminating information to providers and Veterans. Components of the playbook address how to integrate tracking of mobile services within the EHR , methods to communicate with providers (e.g., internal communications) and Veterans (e.g., social media and community Veteran groups), and how to scale nationwide. The team also disseminates results through briefings with operational partners, on VA cyberseminars, and through conferences and academic publications.

Recent dissemination activities

> • Since January 2023, the team has attended biweekly meetings with the Mobile Methadone Van Workgroup.

Anticipated milestones:

FY2 2025	
Q1-Q4	• Continue/complete qualitative analysis of VA provider and Veteran interviews. • Refine measures of access, quality, and cost of methadone treatment. • Analyze access, quality, and cost to identify trends and patterns among patients receiving methadone treatment at VA or in the community.
Q3-Q4	• Select next make vs. buy BH topic.

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STEWARDSHIP EVALUATIONS – UNDER DEVELOPMENT

Human Resource and Workforce Outcomes

Factors that impact VHA's human resource and workforce outcomes, such as provider and staff turnover, retention, and burnout, are important to understand when improving Veteran access and quality of care. Burnout rates are over 40 percent in most clinician groups, including providers, nurses, mental health professionals, and social workers.[181] Within VHA, mental health providers report the highest level of burnout, second only to primary care physicians.[182]

The largest predictor of burnout among VHA providers is exposure to organizational politics and bureaucracy.[183] Increasing productivity standards is also associated with higher levels of burnout and turnover.[184] Burnout impacts patient satisfaction and medical outcomes. Staff with higher burnout rates have been found to receive poorer satisfaction ratings.[185] For mental health professionals, working with patients who have personality disorders or are suspected of exaggerating or feigning their symptoms also puts the provider at high risk for burnout.[183]

The Quality Enhancement Research Initiative (QUERI), Health Services Research & Development (HSR&D), the Reduce Employee Burnout and Optimize Organizational Thriving (REBOOT) task force, and other research and operations partners will work together to study how to best improve workforce outcomes. Additionally, the VHA Employee Engagement and Workforce Stability research group is a collaboration of HSR&D researchers and practitioners who are interested in workforce issues.

The recently signed Honoring our Promise to Address Comprehensive Toxics (PACT) Act of 2022 is another impetus for VA to focus significantly on workforce issues, designating funding for research, modeling, and operations improvements.[186]

Future Annual Evaluation Plans will aim to address the following policy questions:

- To what extent do VHA organizational, management, and resource factors affect human resource and workforce outcomes, such as staff and provider productivity, job satisfaction, turnover, burnout, and retention?

- To what extent have these human resource and workforce outcomes affected Veteran health, well-being, and satisfaction?

- What strategies are effective to reduce staff burnout and turnover and improve productivity, job satisfaction, and retention?

Future work will include the QUERI-funded Leading Evaluations to Advance VA's Response to National Priorities Evidence-Based Policy Evaluation Center's study of the adoption and implementation of the Women's Health Innovations and Staffing Enhancement (WH-ISE) initiative in VA facilities. Another QUERI-funded Evidence-based Policy Evaluation Center, the Houston Evidence-based Rapid Measurement and Evaluations (HERMES) Center, will study the impact of clinical pathways and bottlenecks on efficiency and burnout.

Additionally, VA offices will also be involved some of VHA's efforts, including the Office of Human Resources and Administration (HR&A). HR&A is working with the QUERI-funded Partnered Evidence-based Policy Resource Center to meet a congressional request for national staffing models that are responsive to VHA's supply of care and shifts in Veteran demographics and demand for VHA care. This work is inspired by the PACT Act.

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