DEPARTMENT OF VETERANS AFFAIRS FISCAL YEAR 2024 ANNUAL EVALUATION PLAN

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 2024 Annual Evaluation Plan accompanies the VA Annual Performance Plan and Report, per statute and 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 200 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.

CRITERIA FOR SIGNIFICANCE AND TOPIC SELECTION

The Evidence Act requires agencies to identify "significant" evaluations and address them in its 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 through peer review. Results and findings are also 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 Evidence Act provisions on behalf of Veterans, their families, caregivers and survivors, the VA FEBPWG considered these criteria and added several VA-specific criteria to identify the evaluations resulting in the biggest impact to at-risk, marginalized, underserved and vulnerable Veterans and their families. These criteria were introduced in the initial Annual Evaluation Plan covering FY 2022 and continue to be reflected in both the FY 2022-28 Strategic Plan and the prior Annual Evaluation Plan.

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. 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. For those efforts, or aspects of efforts (such as, but not limited to, providing additional subpopulation demographics to account for equity, diversity and inclusion considerations), which are not already within the scope of current services, priority resource proposals have been developed.

VA Criterion #2: Mission Focus on Veterans

(Consistent with guidance criterion #1)

VA acknowledges that there are several challenges it faces both with respect to our direct mission-driven care and services, as well as our 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 we would focus on the most compelling of our Objectives, namely enhancing care and services for at-risk, marginalized, underserved and vulnerable Veterans, such as those facing addiction, suicide, military environmental exposures and Coronavirus Disease - 2019 (COVID-19).

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)

VA's Learning Agenda is closely tied to its Annual Evaluation Plan due to the public-facing requirements of the Evidence Act. Both documents focus attention on issues of wide public concern and are 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 a substantial process-analytic foundation but currently focused

on evaluation. VA's Capacity Assessment and related budget initiatives address opportunities for VBA, NCA and staff offices to expand their evaluation capabilities.

This 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.

VHA EVALUATION PLANS

VHA will address care for at-risk, marginalized, underserved and vulnerable Veterans with focused evaluations on enhancing access to care, suicide prevention, opioids and substance use disorder and the impact of COVID-19.

A. Access

Learning Agenda Question: How can VA ensure that Veterans have access to timely care in their preferred setting?

A.1. 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: Many Veterans who are enrolled in VHA care live in areas with limited access to some health care services. Approximately 16% of Veterans live within primary care shortage areas and 70.2% live in mental health care shortage areas.[1] To improve Veteran access to quality care, VA implemented the Maintaining Internal Systems and Strengthening Integrated Outside Networks Act of 2018 (MISSION).[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 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.

Study objective: The objectives of this evaluation are 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 relative to specialty care. The evaluation will also take into consideration priority populations (i.e., underserved, marginalized populations) as outlined in 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. Both a quantitative longitudinal cohort study and a qualitative study design will be employed to evaluate effectiveness. Data to be analyzed include administrative data on health care use (from VHA Corporate Data Warehouse), Veteran demographics and facility and market characteristics, as well as interviews with key stakeholders.

Analysis: The evaluation will assess how well the scoring methodology for primary care measures underservedness. It will also evaluate 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 will also interview local leadership to determine what mitigation strategies (e.g., personnel strategies, telehealth modalities, physical space) were employed to improve access to care. This information will then be used to assess how well those strategies worked by evaluating changes in access measures and underserved scores. Regression models will be used to control for potential confounding factors and to test the statistical significance of between group differences. To reflect what mitigation strategies were, in fact, implemented, evaluators will include a set of indicator variables in the underserved models in place of the proposed action plan data. The analysis will also include a comparison of underservedness between the facilities required to submit action plans (most underserved) and those that were not. Evaluators will estimate the effectiveness of the program by measuring the extent to which the action planning group demonstrates greater improvement than the comparison group on various metrics (e.g., underserved score, hiring, utilization of technology-based care).

Statistical models like the one used for primary care are currently in development for specialty care. The previously scheduled implementation of specialty care models was delayed due to operational factors. These different areas of care require unique approaches given the differences in the types of care provided and how that care is delivered. Specialty care models are being finalized with the input of IVC, the Office of Specialty Care and various specialty care leads.

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 Veterans >65yo) and Veteran health status (Nosos risk score). The models do not account for race/ethnicity, gender, or housing insecurity. No evaluation work has been done to determine if VAMCs identified as underserved serve a larger proportion of Veterans from historically disadvantaged groups. Further, no evaluation work has been done to determine if the underserved designation leads to better access to care for Veterans from historically disadvantaged groups. These will be focuses of future evaluations.

In FY 2023, the MISSION 401 supply and demand models began being used as a baseline for staffing models that are congressionally mandated in response to the Honoring our Promise to Address Comprehensive Toxics (PACT) Act of 2022. 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.

Anticipated challenges: Evaluators anticipate that evaluation of the underserved program may be difficult, due to the newness of the program. With only four years of data, changes in underservedness may be hard to quantify. Thus, quantifying the program's overall impact may also prove difficult. Additionally, every specialty has unique access challenges. Developing new models that accurately measure underservedness in various specialties will require multiple iterations. Meeting congressional deadlines for annual underserved designations may be difficult while still maintaining statistical integrity. Also, COVID-19 significantly impacted FY20 and FY21 data. Determining how to best account for these disruptions to care delivery will be challenging and may take several years to finalize.

Dissemination: IVC will continue to receive annual evaluation reports from its research partners. The findings will also be shared with Congress in the program's annual congressionally mandated reports. 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. 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 four years.
• Future use of specialty care underserved models were well received by national and local leadership.
• Underserved designation found to improve access to care at facility level.
• 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 2024	
Q1	• Model finalization – primary care, specialty care • Calculate this year's underserved scores – primary care, specialty care.
Q2	• Submit underserved scores to national leadership. • Hold office hours with local leadership to explain model/underserved scores.

Q3	• Model refinement – primary care, specialty 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, specialty care. • Calculate this year's underserved scores – primary care, specialty 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.

A.2 Virtual Care

Evaluation Questions:

1. What has been the adoption rate of virtual care among VHA providers and how has it varied geographically and across specialties?
2. How does virtual care utilization impact clinic functionality, efficiency and access to care; and are there unintended consequences of virtual care utilization?
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: The project started in FY 2021 and will run through FY 2024.

Background: Many Veterans who are enrolled in VHA care live in areas with limited access to some health care services. Approximately 16% of Veterans live within primary care shortage areas and 70.2% live in mental health care shortage areas.[4] VHA was a pioneer and adopted virtual care services in 2003 to reduce the access barriers Veterans face. By 2018, VA had provided over a million virtual care services.[5] As part of the MISSION Act of 2018, VA established the "Anywhere to Anywhere" virtual care initiative to ensure that all VA providers in outpatient mental health and primary care service lines were able to provide telehealth services in Veterans' home by 2021.[6]

The COVID-19 pandemic presented a considerable challenge and required VA to lean heavily on virtual care rather than face-to-face care to continue serving Veterans safely.[7] 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 VA 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.[8]

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 will also be 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 will especially focus on the impact of virtual care expansion during the COVID-19 pandemic.

Study design and data sources: This is a retrospective observational study. The multivariate regression model parameters will be estimated using data from multiple sources. VHA health administrative data (from the Corporate Data Warehouse) will provide information on clinic efficiency, access to car and certain patient outcomes such as continuity of care and readmission rates. Veteran satisfaction measures from the Survey of Healthcare Experience of Patients will provide information on patient satisfaction with virtual care. For the provider turnover and retention analysis, the study will use provider characteristics and preferences from the All-Employee Survey. The study will control 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 will come from the Survey of Enrollees. In addition, the study will control for several local area characteristics, which will be 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 will inform model improvement, such as how aspects of care delivery, patient outcomes, clinic efficiency, access to care and provider turnover and retention are measured.

Analysis: Evaluators will document the geographic variation in the growth of various types of virtual care (e.g., Video to clinic, Asynchronous Store and Forward encounters, VA Video Connect encounters to home, phone) over time and across specialties (primary care, mental health care and various specialties such as cardiology, gastroenterology, orthopedics, urology and dermatology). Evaluators will estimate the impact of virtual care on patient outcomes, such as patient satisfaction, continuity of care and frequency of adverse events; whether virtual care has the potential to improve access to care, especially in certain geographical areas; and the impact of virtual care on retention of the provider workforce and on clinic efficiency (accounting for the potential learning curve) in terms of producing more visits per day.

Evaluators will also 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 will 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.

Because there is a vast amount of data related to mental health care, economic models will be developed in mental health care first, based on the rapidly increasing use of virtual care for mental health encounters and the potential for clinic efficiency

improvement. A model will be developed for each outcome measure within the broad categories of patient outcomes, clinic efficiency, access to care and retention of the provider workforce. Each model will be designed to focus on identifying the effect of virtual care usage on the respective outcome measure. Economic models will be grounded in a conceptual framework based on economic theory of supply and demand. The models will 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.

These models will be estimated via multivariate regression. Evaluators will translate these concepts into an empirical model and use regression estimation to test hypotheses, such as whether virtual care had an impact on clinic efficiency. Potential confounders are that the demand for VHA services changed (due to COVID-19) while supply or use of virtual care changed dramatically. Evaluators will investigate whether the natural experiment of the COVID-19 pandemic created variation in the use of virtual care that was not related to demand shifts.

During the second phase, PEPReC will examine changes in Veterans' access to care (e.g., wait times, satisfaction) and health care utilization during the pandemic, with a specific focus on virtual care. Evaluators will identify facility-level variation in the timing of the transition from in-person to virtual care, the volume of virtual care and with COVID-19 burden within each facility's catchment area. The variation in county-level COVID-19 burden will be leveraged as a natural experiment to identify whether facilities with greater adoption of virtual care experience fewer excess deaths on average, compared to facilities with similar levels of COVID-19 burden but lower rates of virtual care adoption. Analyses will control for historical trends in virtual care adoption prior to the COVID-19 pandemic.

Throughout the development process, evaluators will seek feedback from local leadership and other researchers to improve the model by assisting how to measure certain supply variables. Local leadership will also provide a better understanding of the application to policy. After the model on mental health and primary care is developed and tested for robustness, model development will expand to include 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: Prior to 2020, the use of virtual care was not widespread. In 2020, health care clinics were required to rapidly adopt and implement this type of care. Due to the timeline for implementing virtual care, the data may not be clean or readily available for all clinics. Thus, documenting the variation in virtual care and quantifying its impacts may be limited to areas that do provide clean data. Moreover, since much of the timeframe of our 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.

As virtual care utilization evolves over time, gaps in knowledge and limitations 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 equity concerns (the impact of virtual care on VHA access standards; addressing the digital divide among Veterans; considering cultural sensitivity and demographic needs); and concerns with Veteran autonomy (considering patient and provider preferences; privacy concerns). Future work will focus on the impact of overall increased utilization within VHA on access to care and Veteran health outcomes.[9]

Dissemination: The Chief Strategy Office (CSO) will receive annual evaluation reports from the Partnered Evidence-based Policy Resource Center (PEPReC) at the conclusion of each fiscal year. Evaluators will share findings with local and national leadership as requested. Evaluators will 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 VA Video Connect modality, indicating a potential longer-term shift towards virtual mental health care services.
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).

Anticipated milestones:

FY 2024	

Q1	• Develop and estimate model that evaluates the impact of virtual care on specialty care provider workforce.
	• Use specialty care access and clinic efficiency models to generate policy simulations.
	• Develop plan to address other policy relevant questions, such as:
	  - Evaluate whether virtual care affects Veteran demand for community care relative to in-house care.
	  - Identify areas that would benefit the most from virtual care.
	  - Identify specialties that would benefit the most from virtual care.
	  - Evaluate the potential expansion of production due to virtual care capacity.
	  - Identify administrative processes that make virtual care more efficient.

Q2	• Expand to more specialties beyond the initially selected 3-5 specialties. • Discuss all findings with national/local leadership and other researchers. • Refine all models, incorporating feedback from leadership and researchers

	• Update data if applicable.
Q3	• Implement plan to address other policy relevant questions (FY 2024-Q2).
Q4	• 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.

A.3 *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 at least 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.[10] 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).[11,12]

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.[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).[17,18,22,23] Research consistently demonstrates that Veterans treated with PE or CPT exhibit clinically significant decreases in PTSD symptoms and increased quality of life.[24]

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.[25,26,27,28,29] VHA primary care staff are prompted to complete the screen by a clinical reminder in VHA's computerized patient record system.

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.[25]

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 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.[26]

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 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 will be 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 will be examined. National data from the VA CDW will be used to perform these analyses using the classification methods developed in the pilot work.[26]

In Aim 2, evaluators will 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.

Then, in Aim 3, evaluators will 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 will use VA CDW data for these analyses.

Analysis: Analyses for **Aim 1** will 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 will 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 will build on the pilot work, which examined Veterans who newly screened positive for PTSD in FY 2017-18, by including any Veteran who screened positive between FY 2017-21. 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 will 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 will then conduct univariate chi-square and bivariate logistic regression analyses to determine the association between moderating variables and the initial action taken. Moderating variables will include contextual- (e.g., rural versus urban setting; screened in a Community Based Outpatient Clinic [CBOC] versus VHA Medical Center [VAMC]) and individual-level (e.g., gender; race; ethnicity; service era) variables, as well as possible interaction terms that previous literature suggests may be salient between these variables (e.g., gender by ethnicity).[30,31,32]

For **Aim 2**, evaluators will use rapid assessment, an anthropological approach to rapidly inform policy development, to analyze the qualitative data.[33] Following established procedures, evaluators will develop a codebook using *a priori* constructs from the conceptual framework. Transcripts will be initially coded using these *a priori* constructs. A directed content analysis approach with allowance for new themes to emerge will be used.[34] 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 will have been achieved.

Findings will then be 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 will provide 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.[35]

Aim 3 will build 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 will determine 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 will 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 will 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 will 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 will 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 will conduct hierarchical logistic regressions, where the outcome variable is success at each access pathway step. Evaluators will report descriptive analyses (means and frequencies) for the remaining three pathways because the anticipated small sample sizes do not lend themselves to inferential statistics.

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.[36] Further, certain Veteran groups may be more likely to develop PTSD and less likely to receive PTSD treatment.[37,26,27] 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 will be able to provide information about not only where we may be losing Veterans to care but also

when and why. This will allow 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 by 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.

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 being lost to VHA mental health care 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).[38,39] This study will be 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 will work 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 will also work 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. Also, 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
• Paper published: Bovin, M. J., Resnik, J., Linsky, A. M., Stolzmann, K., Mull, H. J., Schnurr, P. P., Post, E. P., Pleasants, E. A., & Miller, C. J. (2022). Does screening for PTSD lead to VHA mental health care? Identifying the spectrum of initial VHA screening actions. *Psychological services*, 10.1037/ser0000651. Advance online publication. https://doi.org/10.1037/ser0000651.

Anticipated milestones:

FY 2024	
Q1	• Conduct qualitative interviews (Aim 2).

	• Develop qualitative codebook (Aim 2). • Conduct qualitative analyses (Aim 2).
Q2	• Conduct qualitative analyses (Aim 2). • Develop/test/train chart review tool (Aim 3). • Conduct chart abstraction (Aim 3). • Dissemination & implementation activities.
Q3	• Conduct chart abstraction (Aim 3). • Dissemination & implementation activities.
Q4	• Conduct chart abstraction (Aim 3). • Update VA CDW dataset as needed (Aim 3).

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

B. Suicide Prevention and Mental Health

Learning Agenda Question: What strategies work best to prevent suicide among Veterans?

B.1 Veteran Sponsorship Initiative (VSI)

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 will continue through FY 2024 with high likelihood of extension beyond.

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 47 per 100,000 in 2018.[40] 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.[41]

Because efforts to lower Veteran suicide rates have traditionally emphasized clinical interventions with limited success, VA recently implemented a public health approach that incorporates proactive community-focused interventions as well as clinical care. Because 53% of Veterans who die by suicide have never received VA care, 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).[42] 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.[43,44] Recently passed legislation including the Commander John

Scott Hannon Veterans Mental Health Care Improvement Act of 2019[45,46] allows VA to further expand its reach.

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.[47] 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)[48] 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)[49] 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.[50] 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.[51] 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) and is planned for three years in Texas. Pending results, VA leaders will implement VSI across the nation and integrate lessons learned from the PEI in Texas. 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.[52]

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 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,[53] connectedness,[54] anxiety,[55] depression, suicidal ideation and behaviors,[56] and VA/non-VA service utilization. Implementation goals will be assessed through the Reach, Effectiveness, Adoption, Implementation and Maintenance (RE-AIM) framework and the Practical Robust Implementation and Sustainability Model (PRISM) framework.

This new study will focus on TSMVs who sign up while still in the military.[57] Since it is a Hybrid Type 2 trial, we will continue to assess 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 will 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 will 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: Analyses for this intervention will be both quantitative and qualitative analysis. Using RE-AIM, reach of VSI will be assessed by calculating the proportion of eligible

TSMVs that enroll in ETS-SP from target bases compared to the total number of eligible TSMVs from target bases. Effectiveness will be 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 will 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.

Evaluators have already received CDW access and will also access: 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 will be 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 will 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 will be assessed by the degree to which eligible cities, military bases and organizations agree to participate in the VSI.

Evaluators will also apply PRISM that expands the RE-AIM framework to identify contextual factors from multi-level, multi-stakeholder perspectives.[58] The evaluators will 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 will integrate periodic reflections – an innovative low-burden method for documenting implementation phenomena such as barriers, facilitators, adaptations and changes to context.[59] These reflections will be 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.

An additional Budget Impact Analysis,[60] an assessment approach that is distinct from other forms of financial analysis and which estimates the costs and affordability of adopting an intervention, will incorporate 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. Because this approach is innovative, local VA stakeholders and community partners may not be aware of the initiative or may 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.

Evaluation plans will account for factors related to diversity, equity, inclusion and justice (DEIJ) that are relevant to and impact the scope of the experiences of the Veteran population. Specifically, the implementation team has made extensive efforts to address the unique situations faced by women and minorities. 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[61] and that lesbian, gay, bisexual, transgender and questioning (or queer) (LGBTQ) Veterans may be at increased risk for suicide.[62] On its online application form, ETS-SP provides the option for women TSMVs to select the preferred gender of their sponsor. Given the increased risk for suicide among women TSMVs, VSI over-recruits women sponsors so that at least 30% of its sponsors are women. This percentage is compared to 15% of active US Army Soldiers being a woman. This ensures that ETS-SP can accommodate every request from women TSMVs to work with a woman sponsor. Specific to LGBTQ TSMVs, last year the VSI coordinated with VA Pride[63] to develop a new 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. Once the program evaluation is complete, the evaluation team will share findings 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[64] and promotional materials developed by the Center for Information Dissemination and Education Resources (CIDER), a QUERI resource center, at the completion of the study.

Anticipated milestones:

FY 2024	
Q1	- Conduct analysis of quantitative and qualitative results. - Develop business plan for maintenance and further national expansion. - Quarterly stakeholder reporting incorporating total sponsors enrolled and certified, status of integration of local VA partners, number of SMs enrolled - Ongoing data collection for program fidelity, implementation barriers and facilitators and budget tracking.
Q2	- Conduct analysis of quantitative and qualitative results. - Develop business plan for maintenance and further national expansion.
Q3	- Conduct analysis of quantitative and qualitative results. - Develop business plan for maintenance and further national expansion.

Q4	• Publish quantitative and qualitative results. • Submit business plan for maintenance and further national expansion.

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.

B. 2 VA Suicide Risk Identification Strategy (Risk ID)

Evaluation Questions:

1. By incorporating suicide screening and evaluation enterprise-wide across patient populations, can Risk ID increase the number of Veterans at risk for suicide who receive a safety plan?
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.[65] 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.[66,67,68] These findings underscore the importance of suicide risk screening and evaluation across hospital settings to identify patients with acute risk—those who may only disclose suicidal thoughts/behaviors if they are asked directly.[69] 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.[70]

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.

The study will test whether a staged implementation approach consisting of audit and feedback followed by augmentation with external facilitation improves uptake of Risk ID for facilities that continue to demonstrate low uptake with audit and feedback alone. The rationale for starting with audit and 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 will be 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?

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 2024-25):

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.[71]

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 will be evaluated across several domains based on the Reach, Adoption, Implementation and Maintenance (RE-AIM) Qualitative Evaluation for Systematic Translation (QuEST) mixed methods framework.[72] 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 will be 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 will each be 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 will be made based on the coefficient associated with the group variable and 97.5% confidence intervals (CI) will be reported (alpha=0.025).

Secondary aims will be 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 will be modeled as a function of group, the baseline outcome value, the stratification variables and geographic region (if sample sizes allow). Inference will be made based on the coefficient associated with the group variable and 95% CIs will be reported (reduced from 97.5% due to smaller sample/power).
2. An analysis like that described for secondary aim one will be 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 will be 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 will have its own trajectory. The trajectory for each group will be plotted with pointwise confidence intervals.

Exploratory Aim: Key informant interviews will be 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 will be compiled and managed using Nvivo V. 9.0 software. We will take a general inductive approach. Specifically, data analysis will be 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 2024-25):

a. Reach will be 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 will then be calculated for each assessment stage of Risk ID. Representativeness of patients reached will be 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 will be conducted to identify and characterize empirically distinct risk groups.
c. Mixed-effects logistic regression will be 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 will be repeated with the addition of a group by (categorical) acute risk interaction.
d. Modified Poisson regression with robust error variance will be used to evaluate the predictive validity of the item 9 score of Patient Health Questionnaire-9 and C-SSRS screener results. Outcome variables will be the presence of psychiatric hospitalizations, suicide attempts and suicide deaths prior to 6 and 12 months. Predictor variables will be C-SSRS Screener results (overall and item level) and the item 9 score of Patient Health Questionnaire-9. Covariates will include demographic and clinical variables (age, sex, mental health diagnoses). Separate regression analyses will be conducted for each outcome at each time point. For each analysis, the incremental validity of the C-SSRS will be 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 will be reported for each predictor of interest.

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.[73]

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 resulted in extraordinary operational changes across VA, many of which had implications for the implementation of Risk ID itself, as well as facility-level adoption of the implementation strategies outlined in the evaluation. The most notable of these changes was the transition of almost all outpatient visits to virtual care beginning mid-March 2020 and a significant decrease in overall number of outpatient encounters. Thus, starting the audit and feedback intervention did not occur immediately; instead, evaluators delayed audit and feedback to allow facilities to establish processes for virtual care and for the number of outpatient encounters to approach pre-COVID averages. Also, during this time, a protocol was developed for virtual external facilitation, given that site visits were no longer possible due to VA travel restrictions.

The number of outpatient encounters approached pre-COVID averages in September 2020. However, at that time, OMHSP was in the process of changing Risk ID policy and requirements to a) streamline the screening process (moving from a 2-step screening process to a single screening step) and b) expand screening requirement to all Veterans receiving VA care. To avoid releasing audit and feedback tools that were based on requirements that were in the process of changing, the evaluation team waited until implementation of the new policy requirements to start the baseline period (January 2021). From September 2020 to December 2020, the team developed and validated new measures (i.e., eCSSRS1 and eCSRE1) to match the new policy requirements. These unanticipated changes resulted in a shortened timeline for both baseline and intervention phases.

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.

Anticipated milestones:

FY 2024	
Q1	• Complete data analysis for primary and secondary aims.
	• Begin additional evaluation aims – impact of Risk ID on care processes and patient outcomes (1a-d).

Q2	• Prepare and submit manuscript based on primary and secondary aims.
Q3	• Analyze qualitative data (exploratory aims) to identify organizational factors that impact effectiveness of implementation strategies.
Q4	• Present recommendations to OMHSP for continuation/sustainment of implementation strategies based on evaluation findings.

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

C. Opioids and Substance Use Disorder

Learning Agenda Question: How can VHA provide clinically appropriate pain management to Veterans, especially those from underserved and marginalized populations, while simultaneously decreasing dependence on opioids?

C.1 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 FY 2021 and will run through FY 2025.

Background: Justice-involved populations, including Veterans, have a considerable burden of chronic physical and behavioral health conditions including alcohol use disorder, mental illness and SUD.[74,75,76] The risk of homelessness is high, with 30% experiencing some homelessness post-release, compared to 6% among the general population of adult men.[77] 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 FY 2008-2013 found that 57% had been diagnosed with a mental health disorder, 47% had a substance use disorder and 35% had both.[78]

The 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.[79] 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.[80] 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.[81] 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.[82] 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 will first identify pre-implementation barriers to adopting PIE and adapt implementation strategies for each of the six sites that are implementing the PIE model. Second, PIE will evaluate the effectiveness of high- versus low-intensity implementation strategies on Veteran engagement with services and on fidelity to the model. Each site will begin with a low intensity, baseline implementation strategy (educational outreach/academic detailing) and in successive waves will add a higher intensity implementation (facilitation) on a rolling basis. Also, 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 will use a stepped wedge implementation-effectiveness study design 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 will 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 can compare 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 will 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 FY 2022 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. Additionally, in three of the six sites, the Housing and Urban Development-Veterans Affairs Supportive Housing (HUD-VASH) program is involved in the PIE implementation. In those sites, the peer specialist functions as an interdisciplinary member of the HUD-VASH team and is trained in the PIE model as well as the HUD-VASH 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 will 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 will be conducted with key stakeholders including HCRV case managers at each site and with HUD-VASH staff at the sites using a hybrid HUD-VASH/HCRV peer to better understand the context.

Aim 2. PIE uses 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 will also be 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 will be audited and then documented work will be summarized monthly for each site. 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) will be used. Additionally, the VINElink website will be used for information on criminal recidivism.

Analysis: **Aim 1.** PIE will use 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 will be used by the PIE team to make site-specific adjustments, while preserving fidelity to the PIE model. Such changes may include changes in implementation strategies, and in some cases, elements of the intervention itself.

Aim 2. Effectiveness outcomes will be assessed using the standard modeling approach for analysis of stepped wedge designs as described by Hussey and Hughes.[83] Specifically, PIE will estimate 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 will be a fixed effect for the implementation strategy, and models will 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 will depend on the distribution of the outcome of interest (e.g., logistic models for dichotomous outcomes; linear models for continuous outcomes). PIE will examine 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 will take 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 always exists the possibility that the number of in-person visits between peer specialists and Veterans might be limited by external factors. For example, unforeseen events such as a natural disaster or public health emergency may impact the ability to conduct in-person visits. Similarly, the geographic distance between Veterans and peer specialists may prove challenging to meeting in-person. 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. Also, the collaboration with HUD-VASH is a new aspect of the PIE program, and as such will require time before it is optimized. As some Veterans will not be eligible for HUD-VASH, evaluators will look at placement in a variety of types of housing; for those in temporary housing, evaluators will try to assess if they worked toward achieving permanent housing with the help of the PIE peer specialist.

Justice-involved Veterans are a vulnerable population who often face homelessness and housing insecurity and have difficulty finding employment upon release. Participants will not be excluded based on factors that are individual to Veterans (e.g., race/ethnicity, sexual orientation, disability, religious affiliation, or inclusion in a vulnerable group). Evaluators will 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 will 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 will consider system-level experiences (e.g., rurality); the six sites are in different regions and some participants may be released to rural areas. Evaluators will also be collecting data on service connection (SC) disability ratings 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 will update research and operational partners. Evaluators plan to 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.

Anticipated milestones:

FY 2024	
Q1	- Continue implementation of PIE intervention within the designated VAMC 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 HUD-VASH and grow partnerships. - Synthesize findings relative to implementation strategies.
Q2	- Continue implementation of PIE intervention within the designated VAMC 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 HUD-VASH and grow partnerships. - Synthesize findings relative to implementation strategies. - 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. • Finalize implementation of PIE intervention at remaining VAMC sites. • Continue collaboration with HUD-VASH and HCRV and share early results. • Continue analyses on PIE intervention effect on homelessness and recidivism. • Continue publication of findings in peer-reviewed journals and dissemination to key stakeholders.
Q4	• 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 HUD-VASH and HCRV and sharing early results. • 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.

C. 2 Rural Access for Opioid Use Disorder (OUD) 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.[84]

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.[85] 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.[86,87] 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.[88]

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.[89,90] While specialty OUD services may be inaccessible, rural Veterans have good access to primary care services through community-based outpatient clinics (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.[91]

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 uses 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. Aim 1 will use VA administrative data from the Corporate Data Warehouse to characterize VA facilities' rates of primary care-based buprenorphine prescribing over time to inform sampling in Aim 2 and characterize differences in primary care-based buprenorphine prescribing for rural versus urban facilities.

Aim 2. Aim 2 will sample from the rural facilities identified in Aim 1 that have increased their rate of primary care-based buprenorphine prescribing to patients with OUD from 2014-2018. Qualitative data will be collected through key informant interviews with clinical administrators and direct care providers within these facilities to uncover implementation strategies used, facilitators and barriers to success, and methods to overcome implementation barriers. Aim 2 will inform the design of components of an implementation strategy to be piloted in Aim 3.

Aim 3. This aim will be a pilot trial of the proposed implementation strategy within two rural VA Portland Health Care System CBOCs. Data will be 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 will 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).

Analysis:

Aim 1a. *Descriptive analyses: Characterize VA facilities' rates of primary care-based buprenorphine prescribing over time.* Evaluators will characterize 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 FY 2003 through FY 2018 or the most current year of data available. Evaluators with then calculate yearly trends of mean values of each of the outcome measures. Together, results from this descriptive analysis will 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 analyses will be leveraged to identify facilities for sampling in Aim 2.

Aim 1b. *Regression analyses: Characterize differences in primary care-based buprenorphine prescribing for rural versus urban Veterans.* Evaluators hypothesize 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 will 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 will include facility as a random effect to account for the correlation among patients within each facility. This analysis will enable 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. Evaluators will sample six rural VA facilities that increased their rate of primary care-based buprenorphine prescribing over time as identified in Aim 1a, ensuring geographic representation. Qualitative telephone interviews with clinician administrators (n=1/facility) and direct care providers (n=4/facility) will focus on the process of implementing buprenorphine prescribing within primary care, implementation strategies utilized and facilitators and barriers to success. Qualitative data will be 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. Analysis will occur simultaneously with data collection. Each interview will be transcribed verbatim and read carefully by members of the research team. To develop a codebook, two members of the research team (Drs. Wyse and Morasco) will independently code three interviews in total using the Qualitative Software Program ATLAS.ti. Coding will attend to normalization process theory (NPT) constructs and emergent concepts. The team will then meet to identify areas of divergent coding and come to consensus. Potential codes, drawn from NPT, include "coherence," "reflexive monitoring" and "collective action." Other codes, reflecting concepts emergent from the interview data, may include, "medication stigma," "buprenorphine for pain" and "tele-medicine." Once all interviews are complete and all data are coded, qualitative finding from Aim 2 will be used to elaborate and contextualize the quantitative results from Aim 1.

Aim 3. Evaluators will develop and pilot an implementation strategy designed to increase buprenorphine prescribing within rural primary care clinical settings. The strategy will be 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 will assess 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-groundwork 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 will be limited to patients treated within the VA system. Other non-VA data sources have similar limitations and were ruled out. Evaluators also intend to align their research questions and findings with the classification system used by the Office of Rural Health, which uses rural-urban commuting area codes (RUCA) to delineate between urban vs rural areas, to facilitate information sharing and dissemination of key results.

A potential roadblock for Aim 2 is constraints on staff time. Primary care clinician administrators and care providers maintain busy schedules and may be reluctant to participate in interviews when approached. To address this concern, evaluators will assure interview respondents that interviews will last no more than 30 minutes and will be conducted over the phone at a time of the participants' choosing. Evaluators will also leverage their connections to VA operations leadership to identify willing participants. If unable to identify enough primary care staff to interview, evaluators may pursue alternatives, including selecting a different facility or partnering with local VA researchers who can already have relationships with clinical staff.

Also, 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.

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 will update research and operational partners. Evaluators plan to share findings through academic, peer-reviewed journals, as well as presentations at relevant subject matter conferences.

Anticipated milestones:

FY 2024	
Q1	• Design implementation strategy. • Qualitative and quantitative data collection. • Prepare academic manuscripts for publication in peer-reviewed journals. • Present findings to-date at relevant scientific conferences.
Q2	• Design implementation strategy. • Qualitative and quantitative data collection. • Consult with key stakeholder groups (e.g., Veteran Engagement Group). • Prepare academic manuscripts for publication in peer-reviewed journals. • Present findings to-date at relevant scientific conferences.
Q3	• Design implementation strategy. • 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. • Qualitative and quantitative data collection. • Data Analysis and Evaluation. • Consult with key stakeholder groups (e.g., Veteran Engagement Group). • Develop and disseminate internal VA memoranda and briefs.

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

C. 3 Homeless Overdose Prevention Expansion (HOPE)

Evaluation Question: Are education and auditing sufficient to 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 September of 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.[92] 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.[93] 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.[94] However, few are prescribed naloxone, an effective, evidence-based intervention to reverse opioid overdose.[95] Naloxone is a life-saving medication that can reverse overdose from opioids (including heroin, fentanyl and prescription opioid medications).[96] Often in the form of a nasal spray, naloxone is easy to use and does not require medical training or authorization to administer.[97] 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.

HOPE is part of the VHA Bridging the Care Continuum 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.[98]

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 will help 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.

Study design and data sources: HOPE will assess 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.

Pre-implementation, semi-structured interviews have been completed at two sites. Implementation has started at two sites in Veterans Integrated Service Network (VISN) 21. Two implementation sessions have been completed at the two 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.

Additional data will be sourced from VA's administrate Corporate Data Warehouse (CDW). CDW data will be 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 will come from the Homeless Operations Management and Evaluation System (HOMES) dataset provided by Homeless Programs Office (HPO).

Analysis: HOPE is currently assessing its capacity to conduct a modified stepped wedge design. The evaluation team is assessing a variety of outcomes using the RE-

AIM framework as a guide. 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.

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

Veterans experiencing homelessness, unstable housing, and/or OUD are a marginalized population. At its core, this evaluation is focused on improving access to care for those who are underserved. Additionally, Dr. Sarah Javier is working with the HOPE project to evaluate this through a funded Quality Enhancement Research Initiative to Advance Diversity in Implementation Leadership (QUERI ADIL). She is examining racial/ethnicity disparities in receipt of OEND across HUD-VASH and other homeless programs. To date, the study includes more men than women.

Dissemination: HOPE data is presented in academic papers and on national calls with operational partners. Additionally, the goal is that these OEND trainings can be standardized and then disseminated broadly.

Anticipated milestones:

FY 2024	
Q1	• Implementation at last 2 HOPE Veteran Integrated Service Network (VISN) 21 sites
Q2	• Finish implementation at last 2 HPE VISN 21 sites
Q3	• Sustainment interviews at 6 VISN 21 HOPE sites, RE-AIM analysis, economic analysis
Q4	• Report to partners (dissemination), sustainment interviews at 6 VISN 21 HOPE sites, RE-AIM analysis, economic analysis

Point of Contact: Amanda Midboe is the PI of this study and can be reached at amanda.midboe@va.gov. Madeleine Golding is the project manager and can be reached at madeleine.golding@va.gov.

COMPLETED EVALUATIONS

Name	Completion Date	Preliminary Results and/or Other Documentation
MISSION 507 – Medical Scribes	FY 2022Q4	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 Integrated Veteran Care (IVC). 3. Annual Congressionally Mandated Reports from IVC. 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	FY 2023Q1	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. Paper in progress – VHA Station-level Estimates of COVID-19 Excess Mortality. 3. Paper in progress – Racial Disparities in COVID-19 Excess Mortality. 4. Paper in progress – COVID-19 Excess Mortality Effect on Wait Times. 5. Paper in progress – COVID-19 Excess Mortality in Soldier's Homes.
SCOUTT	FY 2022Q4	1. Hawkins et al. (JAMA Network Open). 2. Gordon et al. (Substance Abuse). 3. Hawkins et al. (Addiction Science + Clinical Practice). 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.

Name	Completion Date	Preliminary Results and/or Other Documentation
STORM	FY 2023Q4	1. Strombotne et al. (J Gen Internal Med) – mandated case review associated with decrease in all-cause mortality. 2. Minegishi et al. (JGIM, in press) – no observed relationship between inclusion of oversight language and opioid-related SAEs. 3. Secondary analyses under development and underway. 4. Policy brief under development.
CIDMO	FY 2023Q4	1. Paper in Progress – Engagement in the VA for Transitioning Service Members with Mental Health Diagnoses. 2. Paper in Progress – Effect of Mental Health Services Capacity on Suicidality. 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.

VHA EVALUATION PLANS – UNDER DEVELOPMENT

VHA is constantly expanding its evidence development and evaluation activities into new research and policy areas. Many of these new endeavors, once finalized, will be included in future Annual Evaluation Plans. Currently, detailed evaluation plans are under development, funding is being secured and evaluation partners are being identified. This Annual Evaluation Plan serves to highlight the Department's advocacy for such emerging priorities. Below is a summary of preliminary work to develop evaluations regarding two high-priority topics.

Military Exposures

Over three million Service members have deployed to Iraq, Afghanistan, Kuwait, Qatar, Djibouti, United Arab Emirates, Syria, Kyrgyzstan and surrounding areas since February 24, 1991 – many of whom had burn pit smoke and other environmental exposures (e.g., other air pollutants, chemicals, occupational hazards) that may lead to poor health outcomes.[99] There is also growing urgency to address the potential health effects of military environmental exposures of these post-9/11 deployed Veterans more proactively and comprehensively.

Since the PACT Act, efforts are underway to screen all VHA enrollees for military environmental exposures and train providers to improve the care of Veterans regarding

these exposures. Health Outcomes Military Exposures (HOME), within the Office of Patient Care Services, is focused on policy development and investigating the associations between toxic exposures and long-term health effects. HOME oversees six Congressionally mandated registry programs (including the Airborne Hazards and Open Burn Pit Registry). HOME is developing a new program, Veterans Exposure Team-Health Outcomes Military Exposures (VET HOME), that will conduct virtual registry exams via telehealth, provide call center expertise and serve as a resource for providers with questions about military environmental exposures. HOME also maintains a substantial website on military exposures, available at Military Exposures - Public Health: Military Exposures - Public Health (https://www.publichealth.va.gov/exposures/index.asp).

In addition, HOME oversees the War Related illness and Injury Study Center (WRIISC) (https://www.warrelatedillness.va.gov/), which provides in-depth evaluations for Veterans in three locations across the U.S., and a center in Baltimore that deals with depleted uranium and toxic embedded fragments (https://www.publichealth.va.gov/exposures/toxic_fragments/surv_center.asp).

The Office of Research and Development conducts and funds extensive military exposure research and oversees the Gulf War Veterans' Illnesses Research Advisory Committee. The PACT Act focuses explicitly on military environmental exposure, allocating significant funding for research and clinical intervention.[100] VA considers this a priority and is currently assessing what evaluative activities are needed to fully understand the effectiveness of implementation. Future Annual Evaluation Plans will include additional information on VA's plans to assess the outcomes of PACT Act implementation.

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

- To what extent have toxic military environmental exposures harmed Veterans during their period of service, especially regarding latent or chronic adverse health effects?
- What is the impact of the collaborations across the different federal agencies on the implementation of programs and policies related to military exposures experienced by Veterans?
- What are the best strategies to implement state of the art evaluation and care models to provide effective care for Veterans exposed to airborne hazards and other military exposures?

Current evidence-based practices focus on Veterans who have been harmed from Agent Orange or diagnosed with different illnesses associated with service in the Gulf War. Potential evaluation partners for this topic include ORD-affiliated investigators and evaluations will leverage data included in the AHOBPR and HOME databases, VHA's Corporate Data Warehouse (CDW), DoD Manpower Data Center, Centers for Disease Control and National Academy of Science, Engineering and Medicine. Surveys and clinical assessments are also under consideration.

Women's Health

Women comprise approximately 17% of current military forces (16% of enlisted and

19% of officers) and approximately 877,000 women served in the military from the start of military operations after 9/11 through the end of FY 2020.[101] As the fastest growing segment of the Veteran population, these women Veterans may face challenges with the existing VA structures that were built around the health and economic needs of men from prior eras.

Thus, VHA must adapt to ensure women Veterans receive the health care they deserve – including mental health care and obstetrics/gynecological care – as well as the social and economic supports they need to thrive. The Quality Enhancement Research Initiative (QUERI), the VA Office of Women's Health, VA Center for Women Veterans and other research and operations partners will work together to study how well VHA serves women Veterans now and where there is room for improvement.

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

- How can VHA use virtual care modalities to improve women Veterans' access to VHA care?
- How can VHA assist women Veterans in securing and maintaining post-deployment employment and economic stability?

Ongoing evidence-based practices include a virtual diabetes prevention program and a post-9/11 women Veterans unemployment analysis. Potential evaluation partners for this topic include the Salt Lake Clinical Evaluation Center (SALIENCE): QUERI Women's Health Employment Project and the VA Women's Health Research Network. Evaluations will include a study conducted in response to the FY 2021 National Defense Authorization Act and may also leverage data from VHA's CDW.

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% in most clinician groups, including providers, nurses, mental health professionals and social workers.[102] Within VHA, behavioral health providers, psychiatrists, psychologists and social workers report the highest level of burnout after primary care physicians.[103]

The largest predictor of burnout among VHA providers is exposure to organizational politics and bureaucracy.[104] Increasing productivity standards is also associated with higher levels of burnout and turnover.[105] Burnout impacts patient satisfaction and medical outcomes. Staff with higher burnout rates have been found to receive poorer satisfaction ratings.[106] There is a strong link between burnout and reporting a perceived medical error.[107] For mental health professionals, working on cases with possible malingering also puts the provider at high risk for burnout.[vi]

The 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 the impacts of changing workforce outcomes and methods for improvement.

The PACT Act also focuses significantly on workforce issues, designating funding for research, modeling and operations improvements.

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

- How have VHA organizational, management and resource factors impacted human resource and workforce outcomes, such as staff and provider productivity, job satisfaction, turnover, burnout and retention?
- How have human resource and workforce outcomes impacted Veteran health outcomes and satisfaction?
- What are effective strategies to reduce staff burnout and turnover and improve productivity, job satisfaction and retention?

Ongoing evidence-based practices include recommendations from the REBOOT task force on improving organizational design and employee well-being. The Partnered Evidence-based Policy Resource Center (PEPReC) is working in partnership with the Center for Evaluation and Implementation Resources (CEIR) on an evaluation of physician training programs through the Office of Academic Affiliations (OAA) and their impact on areas of VHA priority and developing recommendations for future work. The QUERI Leading Evaluations to Advance VA's Response to National Priorities (LEARN) Evidence-Based Policy Evaluation Center will evaluate the adoption and implementation of the Women's Health Innovations and Staffing Enhancement (WH-ISE) initiative in VA facilities, particularly for women's health services. The VHA Employee Engagement and Workforce Stability (VEEWS) research group is a collaboration of HSR&D researchers and practitioners who are interested in workforce issues to brainstorm ideas and share work in progress.

VBA EVALUATION PLAN

One focus of VBA supporting smooth military-to-civilian transitions. It is therefore important to understand the needs of transitioning Veterans, and particularly the unique needs of underserved and vulnerable subgroups during such transitions. As stated in VBA's strategic planning efforts, VBA has a commitment to evaluating this topic to better inform VBA 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. VBA continues to explore opportunities to independently assess the effectiveness of these and other benefits programs.

Post-Separation Transition Assistance Program (TAP) Assessment (PSTAP) 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 Service members (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.

Background: Each year, approximately 200,000 Service members transition from military to civilian life in the United States. While each transition is different, some of the most common issues facing newly separated Service members 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), 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 Service members 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.

The majority of Veterans surveyed by the PSTAP report that VA TAP prepared them for transition. Excerpt from the 2021 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. About two-thirds 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. Almost 50% of Veterans still use the knowledge they gained from the VA Benefits and Services Course as they continue their transition."

Study design and data sources: The post-separation TAP (PSTAP) is comprised of two separate assessment instruments currently in use (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 analytical methods to develop the reports/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 have the most impact on 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 impactful 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 sets associated with the various life domains to look at 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 domains that references administrative data. For example, the education section addresses the percentage of Veterans 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 outcomes.

The two surveys have sections dedicated to capturing 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 they take the TAP classes prior to separation from military service.

The PSTAP TAP section 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

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.

All 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 assessment data is also combined with sets of 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. OTED 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 with the Department of Education and the National Student Clearinghouse to obtain information on participants' education attainment.

PSTAP analysts constructed weights to conduct a nonresponse bias analysis (NRBA). Weights adjust the number of responses so that 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, the weights were adjusted for differences in response rates among groups based on the 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. The 2022 PSTAP report is scheduled for released in FY 2023 Q3. The releases are coordinated based on a formal 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.

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.

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