

**VA**



U.S. Department  
of Veterans Affairs



# **DEPARTMENT OF VETERANS AFFAIRS FY 2023 ANNUAL EVALUATION PLAN**

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## 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 2023 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 after peer review and the results and findings are likewise peer-reviewed. To select those evaluations most suited to the requirements of the Annual Evaluation Plan and the intent of the

Evidence Act, OMB suggested criteria (Memorandum 19-23, footnotes 21 & 61) for identification of significance of evaluations:

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

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

### **VA Criterion #1: Existing Lines of Inquiry**

(Consistent with guidance criterion #3)

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

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

In addition, as organizations outside of VHA (which is highly mature in its capacity to build and use evidence based on VA's Capacity Assessment) build their own evaluation capacity, VA will broaden its focus to include administrative and other program offices that are not primarily Veteran-facing.

### **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)

Early in VA's deliberations, it became clear that the virtues of pursuing a rigorous set of evaluations that would be showcased to many stakeholders due to the very public nature of the Evidence Act requirements, such as wide public dissemination of findings, meant that our longer-term Learning Agenda should be closely tied to Annual Evaluation Plan studies. In this way, both documents would focus attention on issues of wide public concern and be complementary. The goal is to provide preliminary evaluation findings to policymakers early in the span of the Strategic Plan to address initial, broader questions while providing further details with evaluations later in the cycle.

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

### **VA Criterion #5: Nomination Using Administrations' Existing Prioritization**

(Consistent with all guidance criteria)

The FEBPWG decided that those individuals who were responsible for carrying out such Agendas and Plans should use their existing, documented priorities (which align to VA's Strategic Plan) to nominate a set of questions and research topics. Those professionals are located organizationally within the major VA Administrations – the Veterans Benefits Administration (VBA), the Veterans Health Administration (VHA) and the National Cemetery Administration (NCA). The FEBPWG worked with the Administrations to focus their nominations based on the overarching VA criteria.

Each Administration has their own strategy and business documents that tie directly to the VA-level Strategic Plan, and they are familiar with the most significant issues they face that address the above criteria. In addition, VHA enters the Evidence Act process already recognized as a thought leader in program evaluation and implementation sciences, while VBA has a substantial process-analytic foundation but not one focused heretofore on evaluation. (For VBA and other offices needing to develop their evaluation

and evidence-building and -use capacity, VA's Capacity Assessment and related budget initiatives address such gaps.)

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

In the following sections, VHA and VBA identify the means they used to nominate evaluation topics which were subjected to the above criteria for inclusion in this Annual Evaluation Plan, and present specific plans to address Learning Agenda topics.

## 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

#### ***A.1. MISSION 401 Underserved Facilities and Populations***

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

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

Timeline: Activities will continue in FY 2023. Efforts to obtain decisive evidence in this area will be ongoing with no likely firm end date. Rather, each year VHA will learn more about VHA's supply of health care, Veteran demand for health care and the best approaches with which to address both.

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.<sup>i</sup> To improve Veteran access to quality care, VA implemented the Maintaining Internal Systems and Strengthening Integrated Outside Networks Act of 2018 (MISSION).<sup>ii,iii</sup> In compliance with Section 401 of the MISSION Act, the Office for Veterans Access to Care (OVAC), 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 objective of this evaluation is to study the effectiveness of the underserved scores and mitigation strategies at measuring and addressing facility-level underservedness, to continually improve the statistical models used and to expand these models to identify underservedness relative to specialty care. The evaluation will also take into consideration priority populations (i.e., underserved, marginalized populations) as outlined in the recent Executive Order 13985 (Advancing Racial Equity

and Support of Underserved Communities Through the Federal Government), issued January 27, 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 their effectiveness. Data to be analyzed include administrative data on health care use (from VHA's Corporate Data Warehouse), Veteran demographics and facility and market characteristics, as well as interviews with key stakeholders.

*Analysis:*

*Assessment of Scoring Methodologies*

The evaluation will assess how well the scoring methodologies for primary care measure underservedness. It will also assess 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.

*Assessment of Mitigation Strategies*

In 2019, OVAC submitted the first annual report to Congress that included the action plans from the top seven underserved facilities. The facilities centered their mitigation strategies in three areas: personnel-focused (recruit and retain high-need providers), virtual care-focused (increase virtual care capacity) and infrastructure-focused (increase physical space, as needed). OVAC and its partners will track a variety of metrics constructed using administrative data and site visits and interviews to evaluate the effectiveness of these mitigation strategies at addressing facility-level underservedness.

Evaluators will 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 (top 20 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).

*Implementation into Specialty Care*

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

<b>FY 2023</b>	
<b>Q1</b>	<ul style="list-style-type: none"> <li>• Model development – primary care, specialty care</li> <li>• Calculate this year’s underserved scores (primary care, specialty care)</li> <li>• Quantitative evaluation data analysis – assess variable integrity and effectiveness at measuring underservedness</li> <li>• Qualitative evaluation data collection and analysis – disseminate email surveys to and conduct phone interviews with local leadership, analyze impact of implemented mitigation strategies</li> </ul>
<b>Q2</b>	<ul style="list-style-type: none"> <li>• Submit underserved scores to national/local leadership</li> <li>• Compile and submit final evaluation report</li> </ul>
<b>Q3</b>	<ul style="list-style-type: none"> <li>• Debrief with national/local leadership to improve model and evaluation process–conduct phone interviews upon request, provide scoring breakdowns for specific facilities, incorporate feedback into model refinement in Q4</li> </ul>
<b>Q4</b>	<ul style="list-style-type: none"> <li>• Model refinement–incorporate leadership feedback from Q3 into model, update data sources and datasets when available, include new variables where appropriate</li> <li>• Quantitative evaluation data analysis – assess variable integrity and effectiveness at measuring underservedness</li> <li>• Plan analyses for expanded evaluation focused on virtual care for other services such as mental health</li> <li>• Qualitative evaluation data collection and analysis – disseminate email surveys to and conduct phone interviews with local leadership, analyze impact of implemented mitigation strategies</li> <li>• Compile and submit next cycle’s interim evaluation report</li> </ul>
<b>FY 2024</b>	
<b>Q1</b>	<ul style="list-style-type: none"> <li>• Model development–primary care, specialty care</li> <li>• Calculate this year’s underserved scores (primary care, specialty care)</li> <li>• Quantitative evaluation data analysis–assess variable integrity and effectiveness at measuring underservedness</li> <li>• Qualitative evaluation data collection and analysis – disseminate email surveys to and conduct phone interviews with local leadership, analyze impact of implemented mitigation strategies</li> </ul>
<b>Q2</b>	<ul style="list-style-type: none"> <li>• Submit underserved scores to national/local leadership</li> <li>• Compile and submit final evaluation report</li> </ul>
<b>Q3</b>	<ul style="list-style-type: none"> <li>• Debrief with national/local leadership to improve model and evaluation process–conduct phone interviews upon request, provide scoring breakdowns for specific facilities, incorporate feedback into model refinement in Q4</li> </ul>



FY 2024	
Q4	<ul style="list-style-type: none"> <li>• Model refinement – incorporate leadership feedback from Q3 into model, update data sources and datasets when available, include new variables where appropriate</li> <li>• Quantitative evaluation data analysis – assess variable integrity and effectiveness at measuring underservedness</li> <li>• Qualitative evaluation data collection and analysis – disseminate email surveys to and conduct phone interviews with local leadership, analyze impact of implemented mitigation strategies</li> <li>• Compile and submit next cycle’s interim evaluation report</li> </ul>

**Anticipated challenges:** Evaluators anticipate that the newness of the underserved program may make evaluation difficult. With only three years of data, changes in underservedness may be hard to quantify. Thus, quantifying the program’s overall impact may also prove difficult. Additionally, every care specialty has unique access challenges. Developing new models will require multiple iterations and meeting congressional deadlines for annual underserved designations may be difficult while still maintaining statistical integrity. To address this, evaluators will continually update the models to include the most recent and granular data possible as well as improve model form whenever issues or concerns arise, be they from the evaluation team or external stakeholders. Lastly, COVID-19 significantly impacted FY 2020 and FY 2021 data. Determining how to best account for these disruptions to care delivery will be challenging and may take several years to finalize.

**Dissemination:** OVAC began to receive annual evaluation reports from its research partners in FY 2021Q2. 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 deidentified and/or aggregated results that can be shared with the public. This cycle of dissemination will continue so long as model development and evaluation continue.

**Anticipated milestones:**

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

**A.2 Evaluating the Effectiveness of Virtual Care at VHA**

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

Evaluation Questions:

1. What has been the adoption rate of virtual care among VHA providers and how has it varied geographically?
2. Does virtual care utilization improve clinic functionality and efficiency and increase access to care?
3. Does virtual care utilization affect patient outcomes and how do outcomes differ across underserved and marginalized Veteran groups?
4. Does virtual care affect provider retention and turnover?
5. Are there unintended consequences of virtual care utilization?

Timeline: The project started in FY 2021 and will run through FY 2024.

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.<sup>iv</sup> VA 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.<sup>v</sup> 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 capable and experienced with providing telehealth services into the Veteran's home by 2021.<sup>ii</sup>

The COVID-19 pandemic brought an unprecedented public health emergency, requiring VA to lean heavily on virtual care rather than face-to-face care so it could continue serving Veterans safely. Going forward, it is important to understand how virtual care has been adopted and scaled-up by VHA and how and whether virtual care should be continued and promoted post-pandemic when in-person care is safer.

Study objective: The objective is to evaluate the use and effectiveness of virtual care on four broad categories: patient outcomes, clinic efficiency, access to care and retention and turnover among provider workforce.

Study design and data sources: Evaluators will assess the geographic variation in the growth of various types of virtual care (e.g., telemedicine, Veteran Virtual Connect and clinical resource hubs). Evaluators will develop economic models that evaluate the effect of virtual care on patient outcomes, clinic efficiency, access to care and retention and turnover among provider workforce.

The model parameters will be estimated using data from multiple sources. VHA health administrative data (from VHA's Corporate Data Warehouse) will provide information on clinic efficiency, access to care and certain patient outcomes such as continuity of care and readmission rates. Veteran satisfaction measures from the Survey of Healthcare Experience of Patients (SHEP) 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; these Veteran characteristics will come from the Survey of Enrollees. In addition, the study will control for a number of local area characteristics, which will be derived from various data sources, such as the Area Health Resources Files, Bureau of Labor Statistics, Census Bureau and the Centers for

Medicare and Medicaid Services. Stakeholder interviews and feedback from academic subject matter experts will inform model improvement, in particular how aspects of care delivery, patient outcomes, clinic efficiency, access to care and provider turnover and retention are measured.

Analysis: Evaluators will document the geographic variation in the growth of various types of virtual care (e.g., telemedicine, Veteran Virtual Connect and clinical resource hubs) over time. 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 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.

Economic models will be developed in primary care first, due to more detailed data and procedure coding. 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 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, for example. 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 potential natural experiments exist that create variation in the use of virtual care that is not related to demand shifts.

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 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, the external validity of the findings may need to rely on stronger assumptions.

**Dissemination:** The VHA Chief Strategy Office (CSO) will receive annual evaluation reports from the Partnered Evidence-based Policy Resource Center (PEPReC). 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.

**Anticipated milestones:**

<b>FY 2023</b>	
<b>Q1</b>	<ul style="list-style-type: none"> <li>• Incorporate virtual care into PEPReC’s existing model on access to primary care</li> <li>• Ascertain relevant measures necessary for the model</li> <li>• Assess integrity and effectiveness of measures</li> <li>• Estimate the access to primary care model using the data collected</li> <li>• Develop and estimate model that evaluates the impact of virtual care on clinic efficiency in specialty care clinics</li> </ul>
<b>Q2</b>	<ul style="list-style-type: none"> <li>• Discuss preliminary findings of access to primary care models &amp; clinic efficiency in specialty care models with national/local leadership and other researchers</li> <li>• Refine all models, incorporating feedback from leadership and researchers</li> <li>• Update data if applicable</li> <li>• Use access to primary care model to generate policy simulations</li> <li>• Develop and estimate model that evaluates the impact of virtual care on patient outcomes in specialty care clinics</li> </ul>
<b>Q3</b>	<ul style="list-style-type: none"> <li>• Develop a conceptual model that evaluates the impact of virtual care on the primary care provider workforce</li> <li>• Interview providers to understand qualitatively their perspective on virtual care</li> <li>• Develop measures that quantify aspects of the provider workforce (e.g., turnover and burnout)</li> <li>• Ascertain other measures necessary for the model</li> <li>• Assess integrity and effectiveness of measures</li> <li>• Estimate the model using the data collected</li> </ul>
<b>Q4</b>	<ul style="list-style-type: none"> <li>• Discuss all findings with national/local leadership and other researchers</li> <li>• Refine all models, incorporating feedback from leadership and researchers</li> <li>• Update data if applicable</li> <li>• Develop and estimate model that evaluates the impact of virtual care on access to specialty care</li> <li>• Compile and submit next cycle’s interim evaluation report</li> </ul>

FY 2024	
Q1	<ul style="list-style-type: none"> <li>• Develop and estimate model that evaluates the impact of virtual care on specialty care provider workforce</li> <li>• Use specialty care access and clinic efficiency models to generate policy simulations</li> <li>• Develop plan to address other policy relevant questions, such as:                             <ul style="list-style-type: none"> <li>○ Evaluate whether virtual care affects Veteran demand for community care relative to in-house care</li> <li>○ Identify areas that would benefit the most from virtual care</li> <li>○ Identify specialties that would benefit the most from virtual care</li> <li>○ Evaluate the potential expansion of production due to virtual care capacity</li> <li>○ Identify administrative processes that make virtual care more efficient</li> </ul> </li> </ul>
Q2	<ul style="list-style-type: none"> <li>• Expand to more specialties beyond the initially selected 3-5 specialties</li> <li>• Discuss all findings with national/local leadership and other researchers</li> <li>• Refine all models, incorporating feedback from leadership and researchers</li> <li>• Update data if applicable</li> </ul>
Q3	<ul style="list-style-type: none"> <li>• Implement plan to address other policy relevant questions (FY 2024Q2)</li> </ul>
Q4	<ul style="list-style-type: none"> <li>• Compile and submit next cycle's interim evaluation report</li> </ul>

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

## B. Suicide Prevention and Mental Health

### B.1 Caring Letters for Veterans Crisis Line Callers

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

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

Timeline: Ongoing; the project began in FY 2020 and will continue through FY 2023.

Background: Suicide is a leading cause of death in the Veteran population. Veterans accounted for 13.5% of all deaths by suicide among U.S. adults in 2017.<sup>vi</sup> Suicide rates vary depending on service branch, age, sex/gender and other factors.<sup>vii</sup> Reducing rates of Veteran suicide is VA's top clinical priority. The President's Roadmap to Empower Veterans and End a National Tragedy of Suicide (PREVENTS) takes an all-inclusive, public health approach to suicide prevention. This roadmap prioritizes suicide reduction research, implementation strategies and emphasizes the need for program evaluations to ensure better suicide prevention for Veterans. The Commander John Scott Hannon Veterans Mental Health Care Improvement Act also expands VA and VHA efforts to prevent Veteran suicide and improve mental health outcomes. To this end, there are several ongoing suicide prevention programs and interventions being evaluated for their effectiveness in the Veteran population.

Previous studies, including a 1976 randomized control trial of Caring Contacts in the civilian population and later, studies in multiple different countries and populations, have shown that Caring Contacts is an effective method of suicide prevention, in which caring, non-demanding messages of support are sent to high-risk individuals.<sup>viii</sup> Contacts can be digital (text messages) or physical (postcards or letters).

Caring Contacts was adapted for implementation in the Veteran population in 2019 for emergency department visits and piloted at one VA facility with positive feedback. The Veterans Crisis Line (VCL) Caring Letters initiative is expected to have the largest reach of all Caring Contact implementations yet and targets all Veterans from VHA who call VCL, VA's suicide telephone hotline. While the Quality Enhancement Research Initiative (QUERI) funded partnered evaluation of this program is planned for three years (FY 2020 – FY 2023), the Caring Letters program, in which Veterans will receive letters over the course of a year after their call, is intended to become a permanent part of VCL care for callers.

**Study objective:** This evaluation aims to determine the effects of Caring Letters on care utilization, mental health outcomes and suicide behaviors of VCL callers, identify facilitators and barriers to program implementation and conduct a budget analysis of program costs.

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

**Study design and data sources:** As an effectiveness-implementation hybrid design this evaluation focuses on both clinical effectiveness and implementation goals. This evaluation includes a randomized and a non-randomized component. In the randomized portion of the study, all Veterans who meet the inclusion criteria will receive nine caring, non-demanding letters over the course of a year following their call to VCL, randomized by signatory (by provider or by peer). Participants were included in the evaluation cohort if they called VCL during the evaluation period (6/22/2020 – 6/30/2021) and were an identifiable VCL caller (e.g., not an anonymous caller); had a valid mailing address on file with the VA; and were calling about themselves (i.e., not calling about a loved one). Quantitative and qualitative analyses will be conducted. Quantitative data sources will consist of secondary VA data that are collected as a part of routine care and/or clinical management. These include the VCL data repository, Corporate Data Warehouse (CDW), suicide attempt data and DOD-VA Suicide Data Repository and mortality data. Qualitative data sources include program documentation content analysis for

implementation evaluation, as well as surveys and stakeholder interviews that include Veterans' perspectives.

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

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

For the non-randomized portion of the evaluation (comparison of letters vs no letters), evaluators will compare outcomes among the randomized cohort to outcomes from a matched comparison cohort of VCL callers from two years prior to the program's launch in 2020. Outcomes will be assessed using VHA administrative data. Differences in outcomes will be analyzed with chi-square tests, Wilcoxon rank-sum tests, logistic regression, zero-inflated Poisson, or negative binomial models.

Evaluators will assess the program's reach by measuring the total number of eligible Veterans as well as the number reached. Analyses will include the number of cards sent, the number of undeliverable cards, as well as the number of opt-outs. Data will be compiled into a master file in CDW, pulled from a backup of the VCL database (Medora), postal receipt information provided by the printing contractor and opt-out feedback provided to the general e-mail or the VA311/VCL line.

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

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

A qualitative analysis component will provide insight into the effectiveness of the intervention at different points in the evaluation and will be used to track implementation barriers and facilitators. As part of the stakeholder interview process evaluators will inquire about the perceived helpfulness of the letters and Veterans will self-report on their care and resources. This data will be provided to VCL for continued program quality improvement.

*Anticipated challenges:* A significant challenge of this intervention is being able to isolate the impact of the intervention from the effect of COVID-19 on outcomes among

VCL callers. Pandemic aside, because this is the largest implementation of a Caring Contacts project to date, logistics of continuously enrolling a large number of patients into the intervention will require careful coordination between the different groups involved working on participant data design and tracking, program implementation, printing and qualitative/quantitative evaluation.

Dissemination: Regular quarterly reports on the intervention’s reach will be compiled and provided to VA leadership, particularly the Office of Mental Health and Suicide Prevention (OMHSP). Insights on the program’s impacts, as well as associated costs, can be used to guide future implementation at the local and regional levels. Once the program evaluation is complete, the evaluation team will share findings with the key stakeholders. We will also tailor results reporting in consultation with communication leads to reach a broader audience of Veterans through media and publications. Since this will be the largest Caring Letters program to date, the results of this evaluation will also inform Caring Letters programs within and beyond the VCL and VA system. Additional dissemination activities will include peer-reviewed journal articles and promotional materials developed by the Center for Information Dissemination and Education Resources (CIDER), a QUERI resource center.

Anticipated milestones:

FY 2023	
Q1	<ul style="list-style-type: none"> <li>• Quarterly stakeholder reporting, incorporating total cards sent, undeliverable cards, number of opt-outs, percentage of target population reached</li> <li>• Ongoing data collection for program fidelity, implementation barriers and facilitators and budget tracking</li> <li>• Ongoing analyses: baseline comparison group, pre-post, cross-arm comparison</li> </ul>
Q2	<ul style="list-style-type: none"> <li>• Quarterly stakeholder reporting, incorporating total cards sent, undeliverable cards, number of opt-outs, percentage of target population reached</li> <li>• Ongoing data collection for program fidelity, implementation barriers and facilitators and budget tracking</li> <li>• Ongoing analyses: baseline comparison group, pre-post, cross-arm comparison</li> </ul>
Q3	<ul style="list-style-type: none"> <li>• Quarterly stakeholder reporting, incorporating total cards sent, undeliverable cards, number of opt-outs, percentage of target population reached</li> <li>• Ongoing data collection for program fidelity, implementation barriers and facilitators and budget tracking</li> <li>• Ongoing analyses: baseline comparison group, pre-post, cross-arm comparison</li> </ul>



FY 2023	
Q4	<ul style="list-style-type: none"> <li>• Quarterly stakeholder reporting, incorporating total cards sent, undeliverable cards, number of opt-outs, percentage of target population reached</li> <li>• Ongoing data collection for program fidelity, implementation barriers and facilitators and budget tracking</li> <li>• Ongoing analyses: baseline comparison group, pre-post, cross-arm comparison</li> </ul>
FY 2024	
Q1	<ul style="list-style-type: none"> <li>• Quarterly stakeholder reporting, incorporating total cards sent, undeliverable cards, number of opt-outs, percentage of target population reached</li> <li>• Ongoing data collection for program fidelity, implementation barriers and facilitators and budget tracking</li> <li>• Ongoing analyses: baseline comparison group, pre-post, cross-arm comparison</li> </ul>
Q2	<ul style="list-style-type: none"> <li>• Quarterly stakeholder reporting, incorporating total cards sent, undeliverable cards, number of opt-outs, percentage of target population reached</li> <li>• Ongoing data collection for program fidelity, implementation barriers and facilitators and budget tracking</li> <li>• Ongoing analyses: baseline comparison group, pre-post, cross-arm comparison</li> </ul>
Q3	<ul style="list-style-type: none"> <li>• Quarterly stakeholder reporting, incorporating total cards sent, undeliverable cards, number of opt-outs, percentage of target population reached</li> <li>• Ongoing data collection for program fidelity, implementation barriers and facilitators and budget tracking</li> <li>• Ongoing analyses: baseline comparison group, pre-post, cross-arm comparison</li> </ul>
Q4	<ul style="list-style-type: none"> <li>• Quarterly stakeholder reporting, incorporating total cards sent, undeliverable cards, number of opt-outs, percentage of target population reached</li> <li>• Ongoing data collection for program fidelity, implementation barriers and facilitators and budget tracking</li> <li>• Ongoing analyses: baseline comparison group, pre-post, cross-arm comparison</li> </ul>

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

## ***B.2 Clinical Informatics and Data Management Office (CIDMO)***

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

Evaluation Question: How do facility-level differences in mental health staffing and operations impact mental health access, utilization and outcomes?

Timeline: The CIDMO project began in FY 2020 and is expected to continue in upcoming fiscal years.

Background: Suicide was the tenth leading cause of death in the United States in 2018. Though they represent only 5 percent of the total population, Veterans die by suicide at a disproportionately high rate, accounting for more than 13 percent of all deaths by suicide. The risk to Veterans is highest in the first two years post-discharge and remains persistently high in the six years following military service.<sup>ix</sup> Nearly 60% of the Veterans who died by suicide in 2017 had been diagnosed with a mental health condition in the past two years, making improving the continuity of mental health care for transitioning Veterans a key lever for suicide prevention.<sup>x</sup> To help address this issue and assist Servicemembers transition to VA care, VA, Department of Defense (DoD) and Department of Homeland Security (DHS) implemented the Joint Action Plan that expands access to mental health treatment and suicide prevention services during the first year post-service.<sup>xi</sup>

Study objective: The study objective is to estimate causal effects of mental health capacity, both in and outside of VHA and efficiency, on engagement in mental health care among a cohort of recently separated Veterans, as well as on the likelihood of a Veteran experiencing a suicide-related event (SRE) or other serious adverse event (SAE). This information has rich practical application to key operational issues such as optimal size of a mental health clinic, clinic efficiency improvements and the geographic distribution of resources.

Study design and data sources: The evaluation uses econometric methods to develop a value analysis model and planning framework for Veterans' mental health care. The model estimates changes in mental health treatment engagement and SREs/SAEs among Veterans seeking care facilities with varying levels of mental health staffing. The project employs data from numerous sources including the VHA Corporate Data Warehouse (CDW) and Department of Defense and Department of Veterans Affairs Infrastructure for Clinical Intelligence (DaVINCI). Analysis of SREs and SAEs relies on data from VA surveillance systems, including the VA-Suicide Prevention and Application Network (SPAN), the Comprehensive Suicide Risk Evaluation (CSRE) and the Suicide Behavior and Overdose Report (SBOR).

Analysis: The project focuses on developing metrics to identify measures of value relating mental health staffing to two specific outcomes: treatment engagement and SREs/SAEs. When evaluating engagement in mental health treatment among recently separated Veterans, the evaluation has two outcomes of interest: engagement within the first 12 months post-discharge and time to first engagement. The evaluation will utilize descriptive analysis and discrete time hazard models with instrumental variables

to introduce exogenous variation in mental health capacity and efficiency. In addition, the evaluators will control for individual- and area-level characteristics.

Relative to the analysis of SREs and SAEs, evaluators are working to refine initial modeling efforts. As suicide mortality is relatively rare within the datasets being utilized, the analysis of SREs/SAEs is critical as they are inextricably linked to mental health. The project identifies SREs as being inclusive of death by suicide, suicide attempts, suicidal self-directed violence and undetermined self-directed violence. These events are captured through numerous surveillance systems which rely on accurate reporting and documentation. The evaluators will use instrumental variable analysis to correct for statistical limitations, such as ascertainment bias, that may arise from the use of these datasets.

Anticipated challenges: The primary challenges encountered and anticipated are statistical limitations inherent to the datasets under analysis. First, evaluators are working to address the issue of ascertainment bias associated with the recording of mental health outcomes. Ascertainment bias poses a significant challenge as outcomes (SREs) are only recorded to the extent that they are known to providers within the VHA system. Failing to account for ascertainment bias may result in the model failing to identify an effect of capacity on SREs.

The evaluators also anticipate other methodological challenges relative to facility-level differences. For example, operational practices may vary from facility to facility in ways that are difficult to assess via administrative data, as well as differences in the collection and documentation of that data. Similarly, it will be difficult to fully account for regional differences in community need for mental health treatment services.

Dissemination: Since implementation, evaluators have disseminated findings to both research and operational partners. This practice will continue as the evaluation progresses. Evaluators also plan to share findings through academic, peer-reviewed journals, as well as presentations at relevant subject matter conferences.

Anticipated milestones:

FY 2023	
Q1	<ul style="list-style-type: none"> <li>• Identify specific components of mental health capacity and efficiency and other clinic organization variables that need to be assessed for their impact on patient care for inclusion into model</li> <li>• Identify sites which would benefit most greatly from new mental health capacity</li> <li>• Consult regularly with the Office of Mental Health and Suicide Prevention, the Access Office and other operational partners to solicit feedback on what aspects of mental health operational practices should be assessed</li> <li>• Enhance dissemination efforts through publication, conference presentation, policy brief, or other communication materials</li> </ul>

<b>FY 2023</b>	
<b>Q2</b>	<ul style="list-style-type: none"> <li>• Integrate clinic efficiency and other clinic organization variables into model</li> <li>• Identify sites which would benefit most greatly from new mental health capacity</li> <li>• Consult regularly with the Office of Mental Health and Suicide Prevention, the Access Office and other operational partners to solicit feedback on what aspects of mental health operational practices should be assessed and in what manner</li> <li>• Enhance dissemination efforts through publication, conference presentation, policy brief, or other communication materials</li> </ul>
<b>Q3</b>	<ul style="list-style-type: none"> <li>• Integrate clinic efficiency and other clinic organization variables into model</li> <li>• Conduct initial analysis of efficiency and other clinic organization variables on treatment engagement and SREs/SAEs</li> <li>• Consult regularly with the Office of Mental Health and Suicide Prevention, the Access Office and other operational partners to solicit feedback on what aspects of mental health operational practices should be assessed and in what manner</li> <li>• Enhance dissemination efforts through publication, conference presentation, policy brief, or other communication materials</li> <li>• Draft interim report of findings for operational partners</li> </ul>
<b>Q4</b>	<ul style="list-style-type: none"> <li>• Continue analysis of efficiency and other clinic organization variables on treatment engagement and SREs/SAEs</li> <li>• Consult regularly with the Office of Mental Health and Suicide Prevention, the Access Office and other operational partners to solicit feedback on what aspects of mental health operational practices should be assessed and in what manner</li> <li>• Disseminate interim report to operational partners</li> <li>• Enhance dissemination efforts through publication, conference presentation, policy brief, or other communication materials</li> </ul>
<b>FY 2024</b>	
<b>Q1</b>	<ul style="list-style-type: none"> <li>• Continue analysis of efficiency and other clinic organization variables on treatment engagement and SREs/SAEs</li> <li>• Consult regularly with the Office of Mental Health and Suicide Prevention, the Access Office and other operational partners to solicit feedback on what aspects of mental health operational practices should be assessed and in what manner</li> <li>• Maintain multimodal dissemination efforts</li> </ul>
<b>Q2</b>	<ul style="list-style-type: none"> <li>• Continue analysis of efficiency and other clinic organization variables on treatment engagement and SREs/SAEs</li> <li>• Consult regularly with the Office of Mental Health and Suicide Prevention, the Access Office and other operational partners to solicit feedback on what aspects of mental health operational practices should be assessed and in what manner</li> <li>• Maintain multimodal dissemination efforts</li> </ul>

FY 2024	
Q3	<ul style="list-style-type: none"> <li>Identify components of capacity and efficiency that need to be further assessed, based on the advice of operations partners. These components may include scheduling practices, composition of mental health staff, proportion of group therapy visits, cancellation no-show rates, unscheduled work and return visit frequency</li> <li>Consult regularly with the Office of Mental Health and Suicide Prevention, the Access Office and other operational partners to solicit feedback on what aspects of mental health operational practices should be assessed and in what manner</li> <li>Draft interim report of findings for operational partners</li> <li>Maintain multimodal dissemination efforts</li> </ul>
Q4	<ul style="list-style-type: none"> <li>Conduct feasibility study of assessing components of mental health capacity and efficiency that have been identified by operations partners as needing analysis. These components may include scheduling practices, composition of mental health staff, proportion of group therapy visits, cancellation no-show rates, unscheduled work and return visit frequency</li> <li>Consult regularly with the Office of Mental Health and Suicide Prevention, the Access Office and other operational partners to solicit feedback on what aspects of mental health operational practices should be assessed and in what manner</li> <li>Disseminate interim report to operational partners</li> <li>Maintain multimodal dissemination efforts</li> </ul>

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

## C. Opioids and Substance Use Disorder

### C.1 The Stratification Tool for Opioid Risk Mitigation (STORM)

**Learning Agenda Question:** How can VHA provide clinically appropriate pain management to Veterans while simultaneously decreasing dependence on opioids?

**Evaluation Questions:**

- Does STORM improve opioid safety, as measured by the probability that a patient experiences a serious adverse event?
- Do patient outcomes differ when STORM policy language outlines consequences for failing to meet minimal case review targets?

**Timeline:** Initial evaluation completed in FY 2020; evaluation extension anticipated through FY 2023.

**Background:** The opioid epidemic has ravaged communities in the United States, with Veterans facing an increased likelihood of developing opioid use disorder (OUD) due to a variety of unique military stressors.<sup>xii, xiii, xiv</sup> In 2018, over 900,000 Veterans treated in VHA had an opioid prescription.<sup>xv, xvi</sup> VA developed the Stratification Tool for Opioid Risk Mitigation (STORM) in 2017 to help clinical providers better identify Veterans who might

be particularly vulnerable to negative opioid-related outcomes.<sup>xvii</sup> VA issued a policy notice that required clinicians to conduct case reviews and identify appropriate risk mitigation strategies for patients who were identified as high-risk for opioid-related adverse events by STORM.<sup>xviii</sup>

*Study objective:* The STORM evaluation is a multiyear effort that aims to determine if the use of the STORM tool decreases the rate of opioid-related adverse outcomes and whether the inclusion of consequences for failing to meet the minimum case review target would affect both the behavior of VHA providers and the opioid-related adverse event rate.

*Study design and data sources:* The evaluation is an interventional, cluster randomized trial that uses a stepped-wedge design to measure both the effectiveness of VHA's case review policy and the STORM dashboard in identifying patients at a high-risk of opioid-related serious adverse events (SAEs). Demographic, diagnostic, pharmacy and health care utilization data are pulled from the VHA Corporate Data Warehouse (CDW).

*Analysis:* The evaluation includes two interventions. In the first intervention, VHA facilities are required to review patients with different risk levels as identified by the STORM tool. For the first nine months of the evaluation, the facilities include patients in the top 1% of risk. After that, half the facilities are randomly selected to increase their case review load to include patients identified in the top 5% of risk. All participating VHA facilities case review rates are reviewed using VHA administrative data 18 months after the initial start date.

In the second intervention, VHA facilities are randomly selected into two groups. One group will receive a policy memo indicating consequences if case review completion targets are not met, the other will receive a memo without any mention of the consequences. Like the first part of the evaluation, participants' case review rates are reviewed using VHA administrative data 18 months after initiation.

The primary outcome variables measured for both interventions are opioid-related SAEs – opioid overdose, accidental falls and possible and confirmed suicide attempts – which will be identified using ICD-10 codes. The rate of opioid related SAEs will be compared between a treatment group (high risk patients as identified by the STORM dashboard) and a control group (patients who were not displayed on the dashboard) over the course of two years. Patients are censored from the study if they experience one of the SAEs, die, or leave the study.

The data is analyzed using an intention-to-treat approach with patient-month-level survival analysis for both parts of the evaluation (effectiveness of policy memo and effectiveness of the STORM tool).

The evaluators will conduct quantitative analyses to evaluate the effects of the differing policy approaches and patient inclusion on the STORM tool's high-risk list on time to first opioid-related SAE, using data from the dashboard and CDW. The evaluators will examine the consequences of expanding the risk strata at each step wedge on patient load, case review rates and risk mitigation rates. These findings will help inform future policy roll outs and implementation initiatives.

Evaluators will also conduct exploratory analyses in addition to the analyses outlined in the clinical trial protocol. These additional analyses will seek to understand (1) whether there are any racial/ethnic disparities in outcomes among individuals in the top 5% of high-risk patients, (2) the impact of the STORM roll-out on provider practice patterns and (3) the impact of the STORM roll-out on outcomes for patients diagnosed with OUD.

***Anticipated challenges:*** Evaluators found that the expansion of case review requirements, from the top 1% of high-risk patients to the top 5% of high-risk patients, dramatically increased mental health providers’ workload. If the STORM dashboard is implemented at this level with no additional changes (e.g., additional staffing), this could pose a challenge for mental health providers in the future, potentially leading to provider burnout. Another notable challenge to this work is that VHA is unable to observe prescriptions and opioid-related adverse events that occur outside of the VHA system. This knowledge gap and how it impacts STORM, will likely be an area of future study.

***Dissemination:*** Evaluators have presented the evaluation protocol at the 2017 Academy Health National Health Policy Conference and as a VHA cyber-seminar in 2020. The findings from the evaluation were presented by poster at the RX Summit in April 2021 and were presented at the Academy Health Annual Research Meeting in June 2021, where one of the abstracts was chosen as best of conference. In addition, they have also published research articles in peer-reviewed journals showcasing the design and protocol of the study and have presented findings, internally, to VA researchers, physicians and policy makers. Dissemination efforts will be updated as more results become available.

***Anticipated milestones:***

FY 2023	
Q1	<ul style="list-style-type: none"> <li>Finalize data collection from STORM dashboard</li> <li>Finalize evaluations of STORM policy and dashboard</li> <li>Perform secondary analyses of STORM intervention and impact on patient outcomes to inform VA best practices in pain management</li> </ul>
Q2	<ul style="list-style-type: none"> <li>Update findings on STORM’s impact on patient outcomes and private practice</li> <li>Final dissemination of reports to operational partners and implementation teams</li> </ul>
Q3	<ul style="list-style-type: none"> <li>Finalize evaluation report synthesizing qualitative and quantitative findings</li> </ul>
Q4	<ul style="list-style-type: none"> <li>Finalize publication of findings in peer-reviewed journals and presentation of findings at conferences</li> </ul>

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

***C.2 Post-Incarceration Engagement (PIE)***

***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?

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.<sup>xix,xx,xxi</sup> The risk of homelessness is high, with 30% experiencing some homelessness post-release, compared to 6% among the general population of adult men.<sup>xxii</sup> The VA's Health Care for Re-Entry Veterans (HCRV) specialists assess needs pre-release, link VA-eligible Veterans with appropriate services including housing and treatment for mental health and substance use disorders upon release and provide short-term case management post-release.

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

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 HCRV program. PIE complements the existing HCRV service array through the addition of intensive peer support 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 who were released less than one year from prison or jail was 7% compared with the statewide rate of 17% for those released from prisons run by the



Massachusetts Department of Correction in 2016, the most recent year that data are available.<sup>xxiv</sup> 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.<sup>xxv</sup> 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.<sup>xxvi</sup> 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.<sup>xxvii</sup> PIE seeks to build on these findings within the justice-involved Veteran population.

Study objective:

PIE aims to improve access to and engagement in mental health and substance use treatment services, with the goal of ultimately reducing homelessness and the likelihood that Veterans being released from jails and prisons will commit crimes in the future. 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. Finally, PIE will develop an Implementation Playbook that may sustain the PIE peer support model and may be adopted by VAs to enhance services and outcomes for Veterans leaving incarceration.

Study design and data sources:

The study will use a stepped wedge implementation-effectiveness study design to examine both effectiveness of PIE as an intervention by assessing barriers to implementation, as well as the effectiveness of the implementation strategies at instituting and sustaining the PIE intervention at the site by evaluating the effectiveness of high- versus low-intensity implementation strategies on Veteran engagement with services and on fidelity to the mode.

PIE will be implemented in six VA medical centers across the U.S. for a minimum of 18 months with additional time for follow-up evaluation. Implementation will be staggered at the six sites and began in FY 2021 and is expected to continue through FY 2025. The PIE program will be embedded with VA medical centers' Veterans Justice Programs, which includes HCRV as well as and Veterans Justice Outreach (VJO) program. Additionally, in three of the six sites, the Housing Urban Development – Veterans Affairs Supportive Housing (HUD-VASH) program will also be involved in the PIE implementation. In those sites, the peer support specialist will function as an interdisciplinary member of the HUD-VASH team and will be 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. 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 utilizes a Hybrid Type III effectiveness-implementation cluster randomized stepped wedge trial. Instead of starting all intervention and control sites together, this design staggers the introduction of the implementation strategies 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). Evaluators anticipate that higher intensity implementation strategies 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 support specialist will be audited and then documented work will be summarized for each site monthly. 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 CDW and Homeless Operations Management and Evaluation System (HOMES) will be utilized. 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 fidelity consistent adjustments for each site including 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.<sup>xxviii</sup> 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 versus yet to undergo implementation and (ii) examine the impact of secular trends on the observed changes in the measures.

Anticipated challenges:

PIE anticipates several challenges as the evaluation progresses. First, there are concerns that the number of in-person visits between peer support specialists and Veterans might be limited by external factors, in particular the COVID-19 public health emergency and the geographic distance between veterans and peer specialists. In addition, the rules of the local correctional facility may determine and impact pre-release visits as well as the ability to transport on the day of release. From an internal operations standpoint, the ability to hire, train and onboard peer support specialists expediently is a concern. Lastly, the collaboration with HUD-VASH is a new aspect of the PIE program and as such will require time before it is optimized.

Dissemination: Over the course of the evaluation, the evaluators will update research and operational partners, with initial reports made in FY 2022Q1. Evaluators plan to share findings through academic, peer-reviewed journals, as well as presentations at relevant subject matter conferences.

Anticipated milestones:

FY 2023	
Q1	<ul style="list-style-type: none"> <li>• Continue implementation of PIE intervention within the designated VA medical center sites</li> <li>• Continue analyses on PIE’s direct impact on patient outcomes, including patient engagement in mental health and SUD care</li> <li>• Continue analyses on PIE intervention effect on homelessness and recidivism</li> <li>• Collaborate with HUD-VASH and develop iterative processes to improve collaboration</li> <li>• Synthesize findings relative to implementation strategies</li> </ul>
Q2	<ul style="list-style-type: none"> <li>• Continue implementation of PIE intervention within the designated VA medical center sites</li> <li>• Continue analyses on PIE’s direct impact on patient outcomes, including patient engagement in mental health and SUD care</li> <li>• Continue analyses on PIE intervention effect on homelessness and recidivism</li> <li>• Synthesize findings relative to implementation strategies</li> <li>• Continue publication of findings in peer-reviewed journals and dissemination to key stakeholders</li> </ul>

<b>FY 2023</b>	
<b>Q3</b>	<ul style="list-style-type: none"> <li>• Continue analyses on PIE’s direct impact on patient outcomes, including patient engagement in mental health and SUD care</li> <li>• Finalize implementation of PIE intervention within the designated VA medical center sites</li> <li>• Continue analyses on PIE intervention effect on homelessness and recidivism</li> <li>• Continue publication of findings in peer-reviewed journals and dissemination to key stakeholders</li> </ul>
<b>Q4</b>	<ul style="list-style-type: none"> <li>• Continue analyses on PIE’s direct impact on patient outcomes, including patient engagement in mental health and SUD care</li> <li>• Continue analyses on PIE intervention effect on homelessness and recidivism</li> <li>• Continue publication of findings in peer-reviewed journals and dissemination to key stakeholders</li> </ul>
<b>FY 2024</b>	
<b>Q1</b>	<ul style="list-style-type: none"> <li>• Continue implementation of PIE intervention within the designated VA medical center sites</li> <li>• Continue analyses on PIE’s direct impact on patient outcomes, including patient engagement in mental health and SUD care</li> <li>• Continue analyses on PIE intervention effect on homelessness and recidivism</li> <li>• Collaborate with HUD-VASH and develop iterative processes to improve collaboration</li> <li>• Refine findings relative to implementation strategies</li> <li>• Initiate development of Implementation Playbook</li> </ul>
<b>Q2</b>	<ul style="list-style-type: none"> <li>• Continue implementation of PIE intervention within the designated VA medical center sites</li> <li>• Continue analyses on PIE’s direct impact on patient outcomes, including patient engagement in mental health and SUD care</li> <li>• Continue analyses on PIE intervention effect on homelessness and recidivism</li> <li>• Continue refinement of findings relative to implementation strategies</li> <li>• Continue development of Implementation Playbook</li> <li>• Continue publication of findings in peer-reviewed journals and dissemination to key stakeholders</li> </ul>
<b>Q3</b>	<ul style="list-style-type: none"> <li>• Continue analyses on PIE’s direct impact on patient outcomes, including patient engagement in mental health and SUD care</li> <li>• Finalize implementation of PIE intervention within the designated VA medical center sites</li> <li>• Continue analyses on PIE intervention effect on homelessness and recidivism</li> <li>• Continue development of Implementation Playbook</li> <li>• Continue publication of findings in peer-reviewed journals and dissemination to key stakeholders</li> </ul>

FY 2024	
Q4	<ul style="list-style-type: none"> <li>• Continue analyses on PIE’s direct impact on patient outcomes, including patient engagement in mental health and SUD care</li> <li>• Continue analyses on PIE intervention effect on homelessness and recidivism</li> <li>• Initiate finalization of Implementation Playbook</li> <li>• Continue publication of findings in peer-reviewed journals and dissemination to key stakeholders</li> </ul>

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

**D. Impact of COVID-19**

Learning Agenda Question: How has COVID-19 affected VHA care, including care delivery and Veteran health outcomes such as all-cause mortality?

Evaluation Questions:

1. How did the COVID-19 pandemic affect all-cause Veteran mortality?
2. How did the COVID-19 pandemic affect virtual care utilization?
3. Did virtual care utilization moderate the relationship between COVID-19 and Veteran mortality?

Timeline: The evaluation started in FY 2021 and will run through FY 2024.

Background: As the ongoing COVID-19 pandemic continues to impact the world at large, Veterans of the US Armed Forces are also experiencing increases in morbidity and mortality due to the virus. The Veteran population may be at higher risk than the general population, due to their higher comorbidity burden and average age which have been associated with severe COVID-19 illness.<sup>xxix,xxx</sup> Nationally, studies estimate that all-cause mortality among the general population increased by approximately 20% from March to October 2020.<sup>xxxi</sup> These provisional estimates are based on nationwide age distributions, prevalence rates and historical mortality. However, there is a dearth of research using individual-level data or on sub-national excess mortality estimates.

The COVID-19 pandemic presented a challenge for VA, requiring VA to lean heavily on virtual care rather than face-to-face care so it could continue serving Veterans safely.<sup>xxxii</sup> 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, as well as the extent to which virtual care utilization has changed over time and across VA sites during 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.<sup>xxxiii</sup>

Study objective(s): The Partnered Evidence-based Policy Resource Center (PEPReC) COVID-19 evaluation is a multiyear effort to determine impact of the pandemic on all-cause Veteran mortality and virtual care utilization. PEPReC will assess whether the

transition from in-person to virtual care utilization moderated the relationship between COVID-19 and excess mortality in 2020, in addition to assessing differences among the urban and rural populations.

***Study design and data sources:*** Data on Veteran-level demographics, health services utilization, comorbidities and dates of death will be obtained from the CDW, which incorporates death data from the Veterans Benefits Administration and Social Security Administration (SSA). Data on county-level COVID-19 deaths and confirmed cases will be extracted from Johns Hopkins University Coronavirus Resource Center, as well as hospital-level COVID-19 capacity data recently made public by the Department of Health and Human Services.<sup>xxxiv,xxxv</sup>

In the first phase of the evaluation, PEPReC will develop county-level predictive models for Veteran mortality using data from 2015-2019 and apply estimates to data from 2020. Differences in observed and estimated probability of death will produce estimates of excess mortality among Veterans associated with the COVID-19 pandemic. Results will be validated against county-level COVID-19 burden (i.e., confirmed cases and deaths). A priori, it is expected that counties with greater excess mortality in 2020 will also experience greater COVID-19 burden, on average.

During the second phase, PEPReC will examine changes in Veterans' access to care (e.g., wait times, satisfaction) and health services 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 the COVID-19 burden within each facility's catchment area will be assessed. 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.

***Analytic approach:*** The analysis for the first phase will proceed as follows. First, evaluators will create a dataset with aggregate mortality at the county-month level using data from CDW and SSA. This dataset will also include county-year-level summary data for socio-demographic background (e.g., age, gender, marital status, priority group) and prevalence of Quan-Elixhauser comorbidities.<sup>xxxvi</sup> Second, the 2015-2019 data will "train" a variety of mortality risk prediction models including negative binomial, Poisson, quasi-Poisson and generalized estimating equation (GEE) regression models. These models were chosen because they are either most appropriate for count outcomes (Poisson), help address issues with overdispersion (negative binomial), or have statistical properties making them robust to misspecification of correlation structure (GEE). The best-performing model will be selected using two measures of predictive validity within the training dataset: mean squared error (MSE) and mean average prediction error (MAPE). The resulting coefficients from the preferred model will then be used to generate county-level predictions for 2020; observed mortality will be divided by expected mortality to generate risk-adjusted observed-to-expected (O/E) ratios.

The next phase will examine sensitivity of these results to various other specifications and functional forms to ensure that our estimates are robust. Lastly, linear regression

models will be used to examine the association between our estimates of excess mortality among Veterans and county-level measures of COVID-19 burden.

During phase two, the same identification strategy outlined in phase one will be used to examine an expanded set of outcomes, including virtual-care utilization, in-person utilization, wait times and patient satisfaction, among others. The work done in the first phase will validate the approach for characterizing the burden of COVID-19 and how the pandemic impacted these additional outcomes. Lastly, linear regression models will again be used to examine the association between our estimates of excess mortality among Veterans and county-level measures of COVID-19 burden. However, models will now include a measure of virtual care access (e.g., percentage of pre-COVID in-person volume that was transitioned to virtual care) and an interaction between the COVID-19 and virtual care measures. This final step will allow evaluators to identify whether the transition to virtual care moderates the relationship between local COVID-19 burden and excess Veteran mortality.

Anticipated challenges: There are a few study limitations. First, there are potential reporting delays in Veteran deaths and a lack of data on confirmed COVID-19 diagnoses, especially in the pandemic’s early stages. Cause-of-death data is imported into the CDW annually and as data tends to lag two years, cause-of-death data is not available for 2020. Thus, evaluators cannot attribute excess deaths during the pandemic to specific causes. Analyses will be repeated once these data become available to decompose excess mortality into those deaths directly related to COVID-19 versus other causes. For sparsely populated rural areas, estimates for changes in mortality or utilization may be less precise due to the limited number of VA enrollees.

Second, prior to 2020, the use of virtual care was not widespread. In 2020, VA clinics were required to rapidly adopt and implement this type of care. Evaluators anticipate that, due to the timeline for implementing virtual care, the data may not be clean or readily available for all clinics. Thus, documentation of variations in virtual care utilization (including different modalities) may be limited to areas that do provide clean data. Moreover, the external validity of our findings may need to rely on stronger assumptions.

Dissemination: Evaluators will publish research articles in peer-reviewed journals documenting the impact on Veteran outcomes. They will present findings, both internally and externally, to researchers, physicians and policymakers. The study design, analytic code and aggregate county-month dataset will be made available to VA researchers interested in COVID-19 analyses.

Anticipated milestones:

FY 2023	
Q1	<ul style="list-style-type: none"> <li>• Develop a conceptual model that evaluates the impact of COVID-19 on Veteran satisfaction surveys</li> <li>• Develop measures of satisfaction surveys</li> <li>• Ascertain other measures necessary for the model</li> <li>• Assess integrity and effectiveness of measures</li> </ul>

<b>FY 2023</b>	
<b>Q2</b>	<ul style="list-style-type: none"> <li>• Discuss preliminary findings of the effect of COVID-19 on satisfaction surveys with national/local leadership and other researchers</li> <li>• Refine the specification model, incorporate feedback from leadership and researchers</li> <li>• Update data if applicable</li> </ul>
<b>Q3</b>	<ul style="list-style-type: none"> <li>• Develop a conceptual model that evaluates the impact of virtual care on Veteran satisfaction with care</li> <li>• Select measures of Veteran satisfaction</li> <li>• Ascertain other measures necessary for the model</li> <li>• Assess integrity and effectiveness of measures</li> <li>• Estimate patient outcome models using the data collected</li> <li>• Document the geographic variation in health care utilization, including use of virtual care and its effect on Veteran satisfaction</li> </ul>
<b>Q4</b>	<ul style="list-style-type: none"> <li>• Discuss preliminary findings of Veteran satisfaction models with national/local leadership and other researchers</li> <li>• Refine the model, incorporate feedback from leadership and researchers</li> <li>• Update data if applicable</li> <li>• Compile and submit next cycle's interim evaluation report</li> </ul>
<b>FY 2024</b>	
<b>Q1</b>	<ul style="list-style-type: none"> <li>• Develop a conceptual model that evaluates the impact of COVID-19 on Veteran health outcomes</li> <li>• Develop measures of health outcomes</li> <li>• Ascertain other measures necessary for the model</li> <li>• Assess integrity and effectiveness of measures</li> </ul>
<b>Q2</b>	<ul style="list-style-type: none"> <li>• Discuss preliminary findings of the effect of COVID-19 on Veteran health outcomes with national/local leadership and other researchers</li> <li>• Refine the specification model, incorporate feedback from leadership and researchers</li> <li>• Update data if applicable</li> </ul>
<b>Q3</b>	<ul style="list-style-type: none"> <li>• Develop a conceptual model that evaluates the impact of virtual care on Veteran health outcomes</li> <li>• Select measures of Veteran health outcomes</li> <li>• Ascertain other measures necessary for the model</li> <li>• Assess integrity and effectiveness of measures</li> <li>• Estimate Veteran health outcomes models using the data collected</li> <li>• Document the geographic variation in health care utilization, including use of virtual care and its effect on Veteran health outcomes</li> </ul>
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*Point of contact:* The Partnered Evidence-based Policy Resource Center (PEPReC) is responsible for this evaluation. PEPReC can be reached at [peprec@va.gov](mailto:peprec@va.gov).

## 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 Environmental Exposures***

Over three million US Servicemembers 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, radiation, occupational hazards, warfare agents) that can lead to poor health outcomes. There is also growing urgency to address the potential health effects of military environmental exposures of post-9/11 deployed Veterans more proactively and comprehensively.

VHA's Office of Research and Development (ORD) and Office of Patient Care Services, Health Outcomes Military Exposures (HOME) are focused on investigating the associations between environmental exposures and long-term health effects and the Gulf War Veterans' Illnesses Research Advisory Committee recommended to the VA Secretary a comprehensive clinical research structure to enhance clinical care delivery and evaluation in this area. Congress also mandated the VA/Department of Defense (DoD) Airborne Hazards and Open Burn Pit Registry (AHOBPR).

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

- To what extent have 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 environmental 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 military environmental 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, VHA's Corporate Data Warehouse, DoD Manpower Data Center, CDC 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. 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 Learning Agenda questions:

- How can VHA use virtual care modalities to improve women Veterans' access to VHA care?
- How can VHA ensure women Veterans secure and maintain 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 the CDW.

## **VBA TOPIC IDENTIFICATION PROCESS**

VBA's Approach to Evaluation Identification Linked to VA's Significance Criteria: To address the poverty element of VA's FY 2022 – 2028 Strategic Plan, all three studies VBA evaluators will undertake in FY 2023 examine income and employment status as central measures of interest. VBA examines homelessness in a study focused on the GI Bill and examines military-to-civilian transition in a study evaluating the Transition Assistance Program (TAP).

Finally, as part of its efforts to support the President's Executive Order: Advancing Racial Equity and Support for Underserved Communities Through the Federal Government, VBA is taking steps to ensure that each of its evaluations sufficiently include demographic categories that can reveal if program delivery and outcomes are equitable. Specific plans note where efforts will be taken to expand administrative data to account for these demographics.

## VBA TOPIC IDENTIFICATION PROCESS

VBA's Approach to Evaluation Identification Linked to VA's Significance Criteria: To address the poverty element of VA's FY 2022 – 2028 Strategic Plan, studies undertaken in FY 2023 examine income and employment status as central measures of interest and military-to-civilian transition in a study evaluating the Transition Assistance Program (TAP).

Finally, as part of its efforts to support the President's Executive Order: Advancing Racial Equity and Support for Underserved Communities Through the Federal Government, VBA is taking steps to ensure that each of its evaluations sufficiently include demographic categories that can reveal if program delivery and outcomes are equitable. Specific plans note where efforts will be taken to expand administrative data to account for these demographics.

## VBA EVALUATION PLANS

Topic Nomination: In FY 2023, VBA will focus its evaluation efforts on military-to-civilian transition and the effects on Veteran well-being. Both studies represent Veteran-facing, program-focused evaluations of established programs (TAP, the GI Bill and Chapter 31 (Veteran Readiness and Employment (VR&E), formerly known as Vocational Rehabilitation and Employment).

### A. VR&E Longitudinal Study (PL 110-389, Section 334)

Learning Agenda Question: Does the completion of the Chapter 31 program lead to more successful post program outcomes as compared to Veterans who discontinue from the program?

Given VBA's focus on supporting smooth military-to-civilian transitions, there is an interest in understanding the needs of particular underserved and vulnerable subgroups during such transitions. As stated in the VBA Strategic Plan, VBA has a commitment to evaluating this topic to better inform VBA efforts to provide equitable and effective support to Servicemembers 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 Servicemembers and Veterans and user-oriented design.<sup>1</sup> 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 Servicemembers as a family unit both pre-and post-separation.

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<sup>1</sup> Veteran's Benefits Administration, "Military-to-Civilian Readiness: The Past, Present and Future of the Transition Process," <https://www.benefits.va.gov/transition/docs/military-to-civilian-readiness.pdf>.

**Evaluation Question:** What significant differences in post program outcomes (i.e. income, home-ownership, employment) exist between those completing the Chapter 31 program compared to those who leave the program voluntarily?

**Timeline:** Ongoing; The Congressionally mandated Longitudinal Study is a 20-year study. Cohort 1 (FY 2010) has completed 11 years of participation, Cohort II (FY 2012) has completed nine (9) years of participation and Cohort III (FY 2014) has completed seven (7) years of participation. The Longitudinal Study is set to be completed in 2035.

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

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

Section 334 of Public Law 110-389 requires VA to report to Congress on 16 specific data elements. The data elements are listed below for reference. The specific outcomes of interest in the mandate are employment, income, home ownership and use of supplemental programs.

Table 1 – Data Elements Mandated by PL 110-389 § 334 to be Collected for the VR&E Longitudinal Study

<b>Domain</b>	<b>Measure</b>	<b>Source of data</b>
Background characteristics	The number of individuals participating in vocational rehabilitation programs under this chapter who suspended participation in such a program during the year	Administrative Data
Background characteristics	The average number of months such individuals served on active duty	Administrative Data
Background characteristics	The distribution of disability ratings of such individuals	Administrative Data
Background characteristics	The types of other benefits administered by the Secretary received by such individuals	Administrative Data
Background characteristics	The number of such individuals enrolled in an institution of higher learning, as that term is defined in section 3452(f) of this title	Survey

Domain	Measure	Source of data
Background characteristics	The average number of academic credit hours, degrees and certificates obtained by such individuals during the year	Survey
Background characteristics	The average number of visits such individuals made to Department medical facilities during the year	Survey
Background characteristics	The average number of visits such individuals made to non-Department medical facilities during the year	Survey
Background characteristics	The average number of dependents of each such Veteran	Survey
Employment	The average number of months such individuals were employed during the year	Survey
Employment	The average annual starting and ending salaries of such individuals who were employed during the year	Survey, Administrative Data
Income	The average annual income of such individuals	Survey
Income	The average total household income of such individuals for the year	Survey
Homeownership	The percentage of such individuals who own their principal residences	Survey
Use of other public program benefits	The types of Social Security benefits received by such individuals	Survey
Use of other public program benefits	Any unemployment benefits received by such individuals	Survey, Administrative Data

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

- Survey Data

A survey questionnaire is distributed to a sample of Longitudinal Study participants at the beginning of each fiscal year. The domains of interest used to stratify the sample for the VR&E Longitudinal Survey are gender, age and program track. Participants are invited to complete the survey initially through an online Web survey and then by mail or phone over a 12-week period. The survey provides VA with information not available through VA resources such as employment, homeownership, income and overall satisfaction with the program. A link is provided to the study's Technical Appendices to address questions regarding response rates and non-responses.<sup>2</sup>

- VBA Administrative Data

<sup>2</sup> VR&E Longitudinal Study Technical Appendices.  
[https://www.benefits.va.gov/VOCREHAB/docs/VRE2019\\_LongStudy.pdf](https://www.benefits.va.gov/VOCREHAB/docs/VRE2019_LongStudy.pdf)

At the end of each fiscal year, VR&E provides data on all Longitudinal Study participants such as claimant participation, outcomes and general demographics. This information includes such data elements including, but not limited to: case status at the end of the year, program track, age, gender, serious employment handicap and combined service-connected disability rating.

The VBA administrative variables used for the analysis are:

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

Race, gender identity and ethnicity data are currently unavailable to report for this study.

Analysis: With additional data collected over time, VA can examine substantive trends in outcomes. Specifically, VA will be able to draw comprehensive comparisons between those who achieved rehabilitation (those who completed a program) and those who discontinued from the program.

Anticipated challenges: The VR&E Longitudinal Study requires contractual support to survey participants, analyze data and develop the report to Congress. Contractual support is dependent on available general operating expense funding. Another challenge is that the study is not designed to demonstrate causality or the impact of program participation on outcomes of interest. Instead, the study can provide information on self-reported outcomes and can examine relationships between outcomes and program participation, demographic characteristics, or other data points.

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

Anticipated milestones:

FY 2023	
Q1	<ul style="list-style-type: none"> <li>• Survey distributed to participants</li> <li>• VBA administrative data received</li> </ul>

FY 2023	
Q2	<ul style="list-style-type: none"> <li>• Survey period completed</li> <li>• Survey and VBA administrative data analyzed</li> <li>• First draft of report delivered to VA</li> </ul>
Q3	<ul style="list-style-type: none"> <li>• Report concurred by VA</li> </ul>
Q4	<ul style="list-style-type: none"> <li>• Report to Congress delivered by July 1</li> </ul>

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## **B. Post-Separation Transition Assistance Program (PSTAP) Assessment Outcome Study**

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

Evaluation Questions: Investigators will seek to answer the following questions:

1. To what degree do Transitioning Servicemembers (TSMs) who participate in TAP experience life satisfaction and positive/negative short-term and long-term outcomes?
2. Is TAP 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. Is TAP effective in preparing TSMs for their transition as they progress through their transition journey, measured by the longitudinal portion?
4. What effect does TAP participation have on Veterans in 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: FY 2023

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

TAP is delivered through the U.S. 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 provides a cohesive and outcomes-based program that standardizes the transition process and better prepares Servicemembers to achieve successful outcomes in their post-military lives.

Study objective: The objective of the study is to aid VA in the continual improvement of TAP and ensure TSMs receive the information on benefits and services they need in the most effective manner to improve their short and long-term outcomes in the life domains of employment, education, health, relationships, finances and well-being.

Study design and data sources: The 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”.

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

- 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
- 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 impacts their specific long-term outcomes

The two surveys have sections dedicated to evaluating 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 evaluation section utilizes the following relevant questions for the overall TAP experience:

1. TAP evaluation section top line question on a Likert scale response: “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

All these sections are used collectively to evaluate how well TAP and specifically VA's portion are meeting the needs of the Veterans and where they can be improved.

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

The assessment data is also combined with sets of VA administrative data to further expand the scope of the overview to include information already known to VA, such as benefit utilization health care enrollment and interactions with all VBA Lines of Business and a host of other information in VA's databases.

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 2020 PSTAP report was released in June 2021 when the 2021 PSTAP invitations were sent to the participants.

The release is coordinated based on a formal communication plan including a press release, social media engagement, 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 2023	
Q1	<ul style="list-style-type: none"><li>• Analysis and draft of the 2022 PSTAP report</li></ul>
Q2	<ul style="list-style-type: none"><li>• Finalization of 2022 PSTAP Report with internal and external stakeholders</li><li>• Development of the public release communications plan</li></ul>
Q3	<ul style="list-style-type: none"><li>• Public Release of the 2022 PSTAP Report</li><li>• Initiation of the PSTAP 2023 data collection</li></ul>
Q4	<ul style="list-style-type: none"><li>• Completion of the PSTAP 2023 data collection</li></ul>

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