eScreening for Suicide Prevention in VA Programs using a Stepped-wedge, Mixed-method, Hybrid Type-II Implementation Trial

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Background

- Post-9/11 Veterans who enroll in VA health care frequently present with suicidal ideation and/or recent suicidal behavior.
- Screening for suicide risk and associated factors can lead to early detection and referral to effective treatment.
- Military to VA Case Management (M2VA) Programs at the Veterans Health Administration (VHA) screen veterans and coordinate health care at the point of enrollment.
- eScreening is a web-based, self-report screening system, developed with user-centered design methods to improve quality, access to care, and documentation.
- eScreening has evidence to support its effectiveness and implementation potential in M2VA
- However, implementation of evidence-based practices is often slow and there is limited understanding of how best to implement health technologies.
- A wide range of quality improvement methods and strategies have been used to support implementation of interventions and processes in healthcare, including the Lean/Six Sigma Rapid Process Improvement Workshop (RPIW) and implementation facilitation.
- The Practical Robust Implementation and Sustainability Model (PRISM) is a contextually extended version of the Reach, effectiveness, adoption, implementation, Maintenance (RE-AIM) framework. (see Figure 2).

Aims

- The aims will be guided by the RE-AIM outcomes of PRISM (see Figure 2) and will address:
  1) Whether using eScreening compared to oral and/or paper-based methods in M2VA will result in improved rates and speed of mental health and suicide screening & evaluation, and increased referral to treatment.
  2) Whether and to what degree our multi-component implementation strategy (MCIS) is feasible, acceptable, and has the potential to impact adoption, implementation, and maintenance of eScreening.
  3) How contextual factors influence the implementation between high and low eScreening adopting sites.

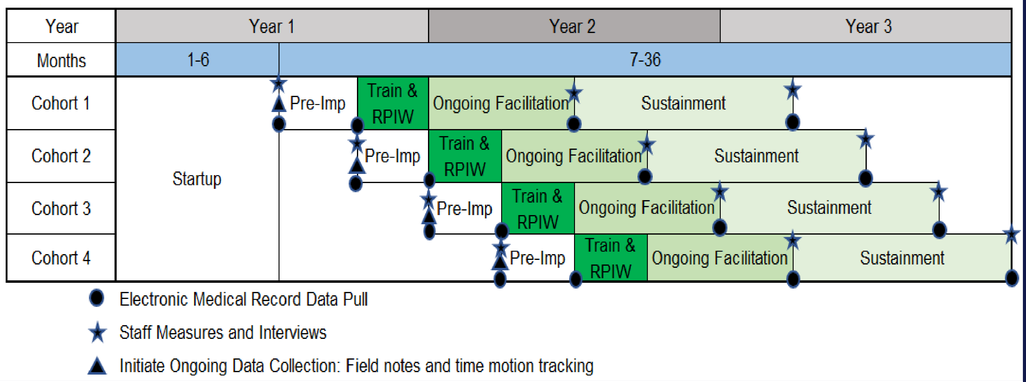
Study Design

- This is an eight site, four year, stepped-wedge, mixed-method, hybrid type-II implementation/pragmatic trial comparing eScreening to screening as usual (see Figure 1).
- We will evaluate the impact of the MCIS focusing on blended facilitation and RPIW.
- Year 4 is composed of analyses, implementation guide completion, and dissemination.

Pre-Implementation
- A 3-month process (serving as a control condition) that consists of data collection and establishing lines of communication.

Active Implementation
- Delivering the MCIS: 1) eScreening software provision, 2) training, 3) RPIW, and 4) ongoing blended facilitation

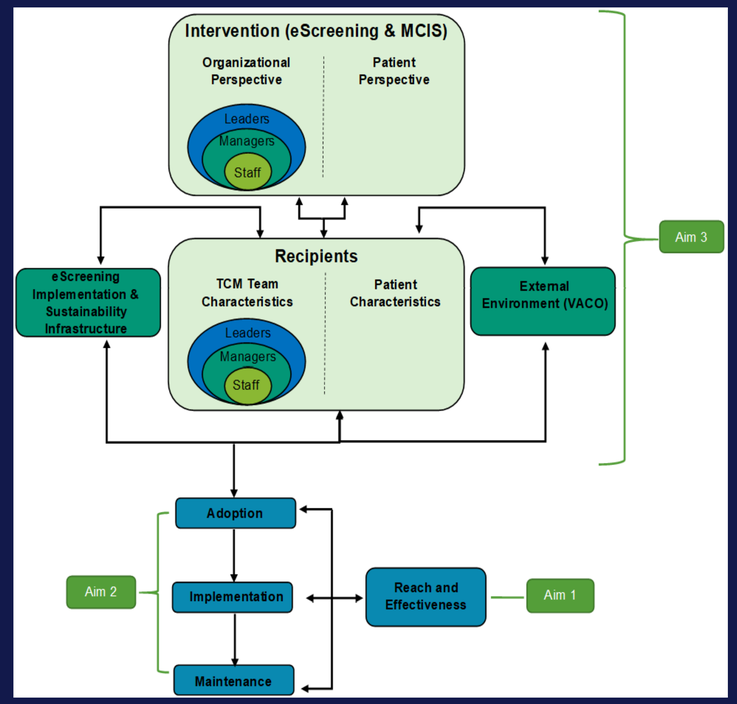
Figure 1. Project Overview



Data Sources and Analytic Approach

- Data to address Aim 1 will be collected via medical record query while data for Aims 2 and 3 will be collected from TCM staff surveys and qualitative interviews.
- **Reach:** Measured by the proportion of eligible veterans screened and unscreened
- **Effectiveness:** Measured as the length of time between enrollment and mental health and suicide screenings, and the number of health care referrals.
- **Adoption:** Will be captured with quantitative data measuring the proportion of M2VA staff who attend the training and RPIW, as well as with staff survey data assessing barriers and facilitators to adoption. Qualitative data (interviews and observations) will also be collected to assess barriers and facilitators, strategies used, and reasons for or against eScreening.
- **Implementation:** To characterize feasibility, acceptability, and replication costs, we will collect quantitative data, including % of TCM clinics and providers that use eScreening, time tracker data, and acceptability and feasibility survey data. Qualitative data will include an adaptation tracking log, as well as data on barriers, facilitators, acceptability and feasibility that will be collected via observations and interviews.
- **Maintenance:** Quantitative data will show the % of TCM clinics and providers using eScreening at 9 months post-MCIS. Qualitative staff interview data will capture barriers and facilitators.
- The PRISM constructs of **Organizational Perspective and Characteristics, External Environment, Implementation & Sustainability Infrastructure** will be used for comparative analysis between high and low Reach sites.

Figure 2. Adapted PRISM Model



Discussion

- Results will help identify best practices for electronic screening in suicide prevention for post-9/11 veterans enrolling in VA health care and will provide information on how best to implement technology-based screening into real world clinical care programs.
- This study will expand our understanding of what factors predict variation in utilization of certain implementation tools across facility organization, clinic structure, and leadership support; and how implementation science models can guide and evaluate larger scale healthcare delivery efforts.
- These data will inform the development of an eScreening Implementation Guide that will provide step-by-step guidance and needed resources for the scale up of eScreening across the VHA and beyond.

Funding & More Information

This project is funded through VA HSR&D Merit Award:1I01HX003079-01A1.

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