

# Adaptation of a Quality Improvement Approach to Implement eScreening in VHA Healthcare Settings

James Pittman<sup>1,2,3</sup> Borsika Rabin<sup>1,4</sup> Erin Almklov<sup>1,2</sup> Niloofar Afari<sup>1,2,3</sup> Elizabeth Floto<sup>5</sup> Eusebio Rodriguez<sup>1</sup> & Laurie Lindamer<sup>1,2,3</sup>

<sup>1</sup>VA Center of Excellence for Stress and Mental Health, <sup>2</sup>VA San Diego Healthcare System, <sup>3</sup>University of California, San Diego, Department of Psychiatry, <sup>4</sup>University of California, San Diego, Department of Family Medicine and Public Health,

<sup>5</sup>VA Roseburg Healthcare System

## Background

- eScreening is a VA mobile health technology that provides customized and automated self-report mental and physical health screening via iPad, clinical alerts, patient feedback, and medical record integration.
- eScreening is used to support quality improvement efforts such as measurement-based care and early identification/intervention of health problems.
- eScreening has demonstrated a significant impact on clinical care and there is overwhelming demand from the field.
- But limited knowledge of how best to broadly implement and scale up health technologies.

## Aims

We aimed to develop a process guide for eScreening implementation in VHA clinics to automate self-report screening of mental health symptoms and psychosocial challenges.

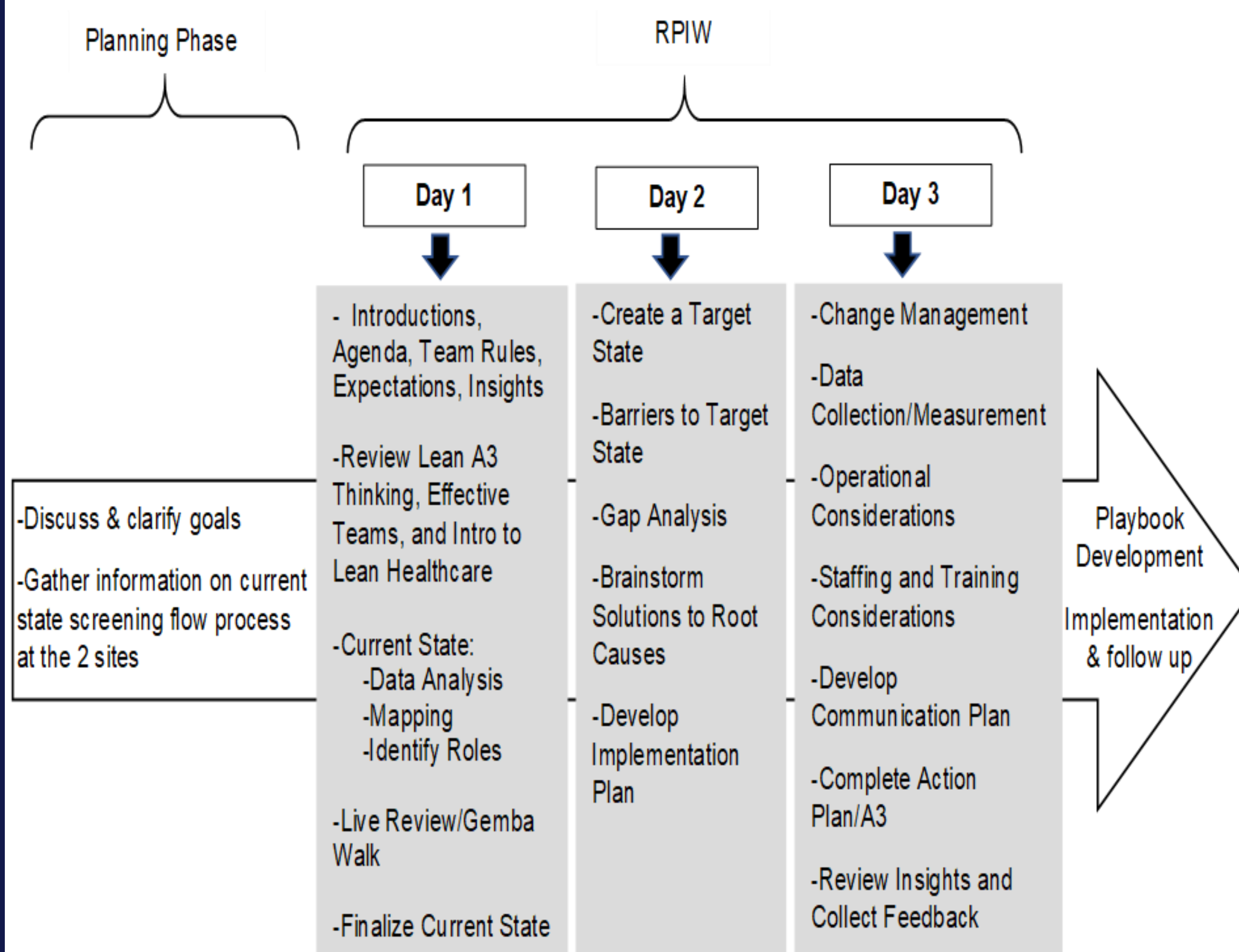
## Methods

- This was a two-phase, mixed methods implementation project building on an adapted quality improvement method.

### Phase 1:

- We adapted and conducted a **Rapid Process Improvement Workshop (RPIW)** to develop a generalizable process guide for eScreening implementation (**eScreening Playbook**).
- A RPIW is a systematic process in which stakeholders focus for several days of data collection, analysis, process mapping, and action planning toward improving a process. It serves to identify current state challenges, the future state solution, and gaps between them.

### Our Modified RPIW Approach



## Methods Continued

### Phase 2: Development of a multicomponent Implementation Strategy (MCIS)

- We integrated the eScreening Playbook and RPIW with additional strategies of training and facilitation to create a MCIS for eScreening.
- We then piloted the MCIS in two VHA sites

### Data Collection and Analysis

- Quantitative data** on the implementation strategy was obtained from a 29-item pre-implementation survey that was guided by the Consolidated Framework for Implementation Research (CFIR) and Theoretical Domains Framework (TDF).
  - Response options for each survey question were collapsed into three categories: disagree, neither agree nor disagree, and agree.
  - The % of respondents who endorsed each category was calculated for the 2 sites.
- We gathered **Qualitative data** from Implementation Process Mini Interviews designed to identify diverse contextual barriers and facilitators.
  - Data were collected from the implementation site visit to 6 months post-implementation.
  - Data was coded using pre-defined codes and analyzed using a rapid qualitative analytic approach.
  - CFIR intervention characteristics and process domains were used to support areas for coding including implementation strategies used by each site, challenges of implementation, solutions, and adaptations.

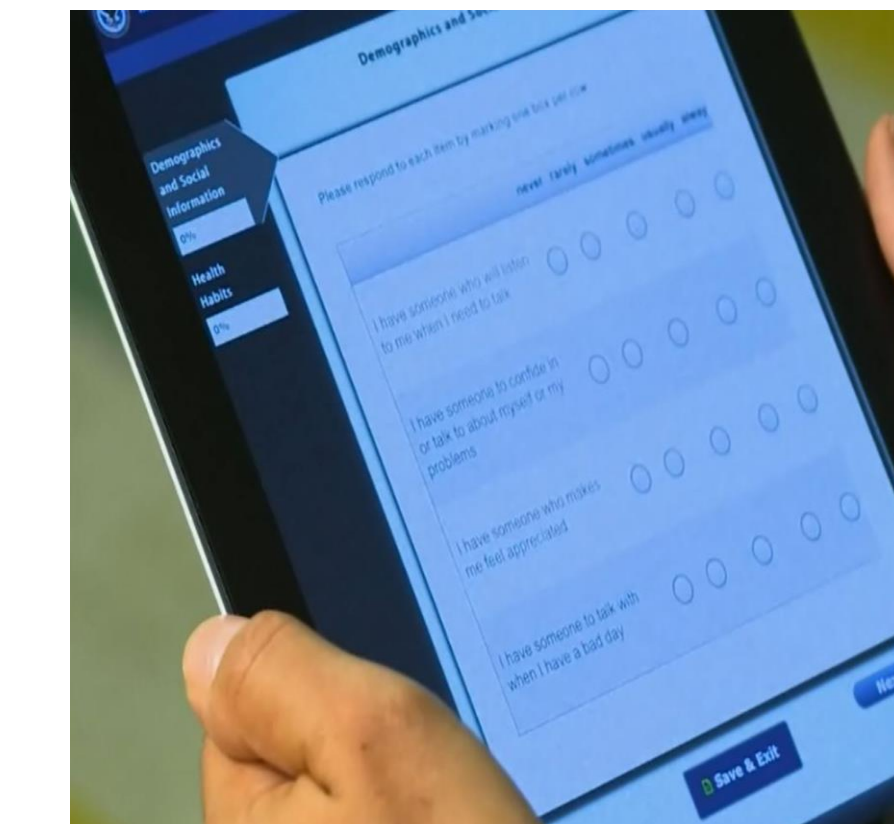
## Results

Implementation Strategies by VA Site

Strategy	Site 1	Site 2
RPIW	X	
Playbook	X	X
Training	X	X
Facilitation	X	X

### Quantitative Findings

- Both sites' staff provided positive responses on the questionnaire related to eScreening, but some slight differential trends emerged:
- Site 2 reported more leadership support & role communication than site 1.
- Site 1 had more agreement about the specific roles related to eScreening and its compatibility with workflow and resources than site 2.



### Qualitative Findings

- Mini interview data showed overall satisfaction and usefulness of the MCIS approach and identified some challenges, solutions, and potential adaptations across sites.

### Implementation Challenges

Implementation Challenges by VA Site

	Technology	Workflow/Staffing	IT Support	Educational
Site 1	X		X	X
Site 2	X	X	X	X

### Implementation Solutions

All four types of implementation barriers were resolved using the external facilitator and the playbook.

## Key Findings

- Data showed overall satisfaction and usefulness of our MCIS approach and identified some challenges, solutions, and potential adaptations across sites.
- Both sites used the components of the MCIS, but site 2 elected not to include the RPIW.
- Survey data revealed positive responses related to eScreening from staff at both sites.
- Interview data exposed implementation challenges related to the technology, support, and education at both sites. Workflow and staffing resource challenges were only reported by site 2

## Discussion

- RPIW can be an important factor in the adoption of health technology, but organizational factors also need to be addressed.
- Successful adoption of health technology needs to be flexible and contain multiple components.
- Our use of RPIW and other QI methods to both develop a playbook and an implementation strategy for eScreening has created a testable implementation process to employ automated, patient-facing assessment.
- The efficient collection and communication of patient information has the potential to greatly improve access to and quality of healthcare.

## References

- Pittman JOE, Floto E, Lindamer L, Baker DG, Lohr JB, Afari N. VA eScreening program: Technology to improve care for post-9/11 veterans. *Psychological Services*. 2017 Feb; 14(1):23-33.
- Koning H, Verver JPS, Heuvel J, Bisgaard S, Does RJMM. Lean Six Sigma in Healthcare. *Journal for Healthcare Quality*. 2006 Jun; 28(2):4-11.
- Williams N. Multilevel Mechanisms of Implementation Strategies in Mental Health: Integrating Theory, Research, and Practice. *Administration and Policy in Mental Health and Mental Health Services Research*. 2015. 43.

## For Further Information

James Pittman, PhD, LCSW  
 VA San Diego Healthcare System  
 (858) 552-8585 x7787  
 james.pittman@va.gov

