





RESEARCH ARTICLE

Tracking implementation strategies in real-world settings: VA Office of Rural Health enterprise-wide initiative portfolio

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Abstract

Objective: To use a practical approach to examining the use of Expert Recommendations for Implementing Change (ERIC) strategies by Reach, Effectiveness, Adoption, Implementation, and Maintenance (RE-AIM) dimensions for rural health innovations using annual reports on a diverse array of initiatives.

Data Sources and Study Setting: The Veterans Affairs (VA) Office of Rural Health (ORH) funds initiatives designed to support the implementation and spread of innovations and evidence-based programs and practices to improve the health of rural Veterans. This study draws on the annual evaluation reports submitted for fiscal years 2020–2022 from 30 of these enterprise-wide initiatives (EWIs).

Study Design: Content analysis was guided by the RE-AIM framework conducted by the Center for the Evaluation of Enterprise-Wide Initiatives (CEEWI), a Quality Enhancement Research Initiative (QUERI)-ORH partnered evaluation initiative.

Data Collection and Extraction Methods: CEEWI analysts conducted a content analysis of EWI annual evaluation reports submitted to ORH. Analysis included cataloguing reported implementation strategies by Reach, Adoption, Implementation, and Maintenance (RE-AIM) dimensions (i.e., identifying strategies that were used to support each dimension) and labeling strategies using ERIC taxonomy. Descriptive statistics were conducted to summarize data.

Principal Findings: A total of 875 implementation strategies were catalogued in 73 reports. Across these strategies, 66 unique ERIC strategies were reported. EWIs applied an average of 12 implementation strategies (range 3–22). The top three ERIC clusters across all 3 years were *Develop stakeholder relationships* (21%), *Use evaluative/iterative strategies* (20%), and *Train/educate stakeholders* (19%). Most strategies

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were reported within the Implementation dimension. Strategy use among EWIs meeting the rurality benchmark were also compared.

Conclusions: Combining the dimensions from the RE-AIM framework and the ERIC strategies allows for understanding the use of implementation strategies across each RE-AIM dimension. This analysis will support ORH efforts to spread and sustain rural health innovations and evidence-based programs and practices through targeted implementation strategies.

KEYWORDS

ERIC, evaluation, implementation strategies, RE-AIM framework, rural health, Veterans

What is known on this topic

- Implementation science theories, models, and frameworks can support the planning, implementation, evaluation, and sustainment of evidence-based programs and practices.
- A combination of thoughtfully selected and partner-informed implementation strategies can be used to optimize the Reach, Effectiveness, Adoption, Implementation, and Maintenance of evidence-based programs and practices.
- Few studies have looked at the longitudinal use of implementation strategies across multiple programs.

What this study adds

- Content analysis of readily-available organizational documents such as annual reports can be used to examine implementation strategy utilization.
- We identified what implementation strategies were used most frequently in conjunction with each RE-AIM dimension.

1 | INTRODUCTION

Use of implementation science theories, models, and frameworks can support and guide the planning, implementation, evaluation, and sustainment of evidence-based programs and practices. The Reach, Effectiveness, Adoption, Implementation, and Maintenance (RE-AIM) framework has been broadly used to guide all stages of the implementation continuum including iteratively optimizing pre-implementation, implementation, evaluation, and sustainment activities.¹⁻³ When using RE-AIM for all of these activities, one can explore not only progress on key implementation outcomes but also critical strategies that have the potential to enhance or optimize these outcomes.^{4,5}

The literature shows that the use of a combination of well thought out and partner-informed strategies can increase the likelihood that evidence-based programs and practices are meaningfully adopted, implemented, and sustained; reach priority populations; and have equitable impact. It is also expected that implementation strategies (what we do, how we do them, and how much of them we do) will change over the stages of the implementation process.⁶ Hence, there is value in systematically and longitudinally documenting implementation strategies. At this time, there is little known about what types of strategies are best suited to support the different stages of the implementation process and whether we can generalize across evidence-based programs and practices and contexts. The Expert Recommendations for

Implementing Change (ERIC) taxonomy was proposed to help researchers and practitioners classify activities undertaken by a team to support program implementation.^{7,8} ERIC is a taxonomy of implementation strategies developed through a systematic review⁹ and a modified Delphi process to determine the 73 strategies and their definitions.⁷ Implementation experts mapped the strategies into clusters and ranked each by importance and feasibility.⁸ Combining the structure of an implementation science framework and the ERIC taxonomy enables us to compare the use of strategies across multiple projects and develop an understanding for key strategies used and needed at each stage.⁶

The U.S. Department of Veterans Affairs (VA) Office of Rural Health (ORH) has funded over 30 enterprise-wide initiatives (EWIs) and their evaluations. EWIs support the implementation and spread of innovations and evidence-based programs and practices that improve the health of rural Veterans. EWIs range in terms of clinical topic, priority sub-population, and implementation setting.¹⁰ While the overall ORH EWI program serves all VA healthcare systems, each individual EWI is implemented at a smaller number of VA medical centers and community-based outpatient clinics and the number of sites varies widely between EWIs. In addition, new sites are continuously added, while other sites are moving into sustainment or discontinuing an EWI; thus, each EWI may include sites in adoption, implementation, and sustainment phases within a single fiscal year. Annual evaluation reports are structured with the RE-AIM framework. The VA ORH selected the RE-AIM framework because

it allows for emphasis of *reach* to rural Veterans and its relative ease of use as a planning and evaluation framework.

The Center for the Evaluation of Enterprise-Wide Initiatives (CEEWI) was established in FY19 to develop a standardized EWI evaluation program for the VA ORH. CEEWI is also a Quality Enhancement Research Initiative (QUERI)-ORH partnered evaluation initiative (PEC 19-456), which allows integration of specific implementation research questions. QUERI initiated the program of partnered research nearly a decade ago for this purpose.¹¹ Partnered QUERIs strengthen implementation science questions as implementation scientists learn the real-world issues their operational partners face and integrate and test the latest developments in operational settings.

CEEWI developed a RE-AIM logic model to guide assessment of each EWI's progress.^{12,13} As part of this process, we explored what types of activities were undertaken in EWIs to support different RE-AIM dimensions. These activities were then classified based on ERIC taxonomy clusters.⁸ We report a practical approach for tracking implementation strategies, our findings from this analysis, and describe the types and number of strategies that were used in each RE-AIM dimension across EWIs with particular focus on *reach* to rural Veterans. Our objective was to present a practical approach for identifying implementation strategies in a readily available dataset reporting on evidence-based programs and practice implementation and then describe patterns of strategy use in real-world, operational settings. This work lays the groundwork for future analyses of clusters of implementation strategies and supporting EWIs' choice of implementation strategies in rural settings.

2 | METHODS

2.1 | Setting

The VA ORH supports the 2.7 million rural Veterans enrolled in the VA, as well as the VA employees who serve them. The VA ORH began implementing EWIs to ensure that innovations and evidence-based programs and practices reach rural Veterans. In 2019, the VA ORH partnered with QUERI to establish CEEWI and standardize evaluations across all EWIs.

2.2 | Data sources

This study focused on 30 EWIs with at least one annual evaluation report from FY20-22.¹⁰ In total, the dataset included 73 EWIs annual evaluation reports (FY20 = 23; FY21 = 27; FY22 = 23), which were completed using a standardized reporting template with RE-AIM dimensions as a central feature of the content (Figure S1).

2.3 | Study design

The study design was a content analysis,¹⁴ which allowed for quantitative analysis of textual data (EWI annual evaluation reports).

Analysis focused on systematically cataloguing and correlating enterprise-wide initiative program activities to ERIC taxonomy implementation strategies.⁷

2.4 | Data collection and extraction methods

CEEWI analysts conducted a content analysis of all FY20-22 EWI annual evaluation reports submitted to the VA ORH. The content analysis was aided by the development and use of a RE-AIM logic model organized by the five RE-AIM dimensions (Figure 1). We also created an ERIC taxonomy codebook in which each strategy was defined and categorized by the nine clusters (e.g., *Engage consumers*, *Use evaluative and iterative strategies*, and *Change infrastructure*).⁸

Reports were divided among three teams of three qualitatively trained analysts. Each team had no more than nine reports; thus, each team member was never responsible for more than three reports. Each team worked on their process for extracting activities and labeling them with the ERIC strategies. We also had weekly meetings where all teams came together to review questions about activities and ERIC strategy labels. During these meetings, questions were answered through consensus. Notes and frequently asked questions were tracked so team members could refer to them later.

CEEWI analysts then entered activities and corresponding ERIC strategies into a Microsoft Access database under one of four RE-AIM dimensions (Reach, Adoption, Implementation, Maintenance). We determined that strategies across the RE-AIM dimensions were used in support of the Effectiveness dimension (Figure 1). While the majority of activities and implementation strategies were entered in the same RE-AIM dimension as the original EWI reports, CEEWI analysts made the final determination of corresponding dimensions. Each activity could only be labeled with one ERIC strategy and one RE-AIM dimension. After CEEWI completed the RE-AIM logic model, the EWI evaluation teams reviewed their logic models as a validation step.

The database was programmed to visually display the information in the RE-AIM logic model (Figure S2). Of note, activities described by the EWI evaluation team were included alongside the corresponding ERIC strategy so the way the teams described their activities (emic/insider perspective) was included with the ERIC strategy (etic/outsider implementation science expert perspective). CEEWI determined some strategies did not correlate to an ERIC strategy and were tracked as "non-ERIC strategies" (Table S1). Non-ERIC strategies were not included in the analysis.

This evaluation-of-evaluations process was developed to support the VA ORH's need for efficient summarization of EWI annual reports. CEEWI completed the process described above within the first two months of receiving EWI annual reports, so a RE-AIM logic model for each EWI was available to inform the VA ORH's budget decision-making for the following fiscal year. CEEWI's process was guided by a continuous quality improvement framework. Each year, CEEWI reviewed the strengths and weaknesses of the reports as a whole and revised the annual report template to improve and standardize the information reported by each EWI (e.g., added RE-AIM dimension

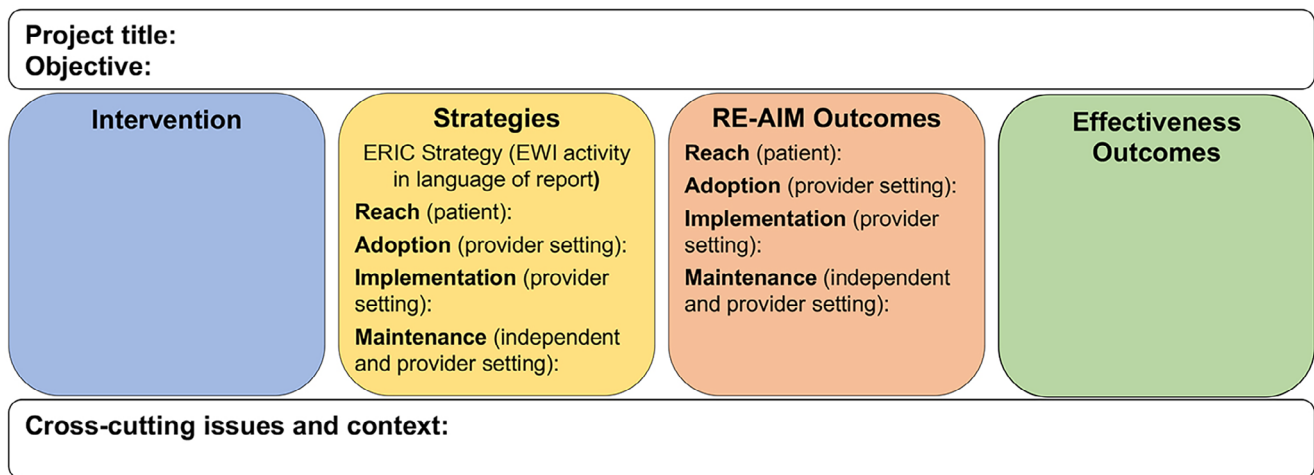


FIGURE 1 RE-AIM logic model for categorizing ERIC (Expert Recommendations for Implementing Change) implementations strategies among enterprise-wide initiatives (EWIs).

definitions to the template, added a section for media coverage, etc.; Figure S3). The RE-AIM logic models served not only as one-page summaries of the annual reports but became part of the continuous quality improvement feedback process.

2.5 | Analysis

Descriptive statistical analyses were conducted to summarize data and examine patterns and longitudinal trends, including the average number of strategies per EWI per year; number of strategies over time per EWI; and most used strategies overall, by RE-AIM dimensions, by fiscal year, and by rurality.

3 | RESULTS

A total of 875 implementation strategies (FY20 = 301; FY21 = 312; FY22 = 262) were catalogued in 73 reports. Sixty-six unique ERIC strategies were reported among the 73 strategies in the taxonomy. Strategies occurred in each of the nine ERIC clusters, the most common being *Develop stakeholder relationships* (21%), *Use evaluative/iterative strategies* (20%), and *Train/educate stakeholders* (19%). Per fiscal year, EWIs used an average of 12 implementation strategies (range 3–22). Among the top quartile of strategies, the most strategies occurred in the same three clusters (*Use evaluative/iterative strategies*, *Develop stakeholder relationships*, and *Train/educate stakeholders*; Table 1). Within the *Use evaluative/iterative strategies* cluster, the individual strategy *purposely reexamine the implementation* was identified 48 times, and in reviewing the reports, these actions primarily included debriefings, qualitative interviews, and focus groups with a wide variety of stakeholders to assess implementation, examination of implementation, and clinical outcome data used to make changes, and use of additional theories, models, and frameworks to review implementation. For the *Develop stakeholder interrelationships* cluster, *build*

a coalition ($n = 29$) was the top individual strategy and reports described relationship-building with clinical services locally, regionally, and nationally, and other services such as biomedicine and public affairs offices. *Conduct educational meetings* ($n = 35$) was the top individual implementation strategy in *Train/educate stakeholders* cluster and included meetings to educate program staff and staff who may refer others to the program. Longitudinally, we examined the number of strategies each EWI used per fiscal year and found no distinct pattern in the number of strategies across years. We also compared the top quartile of implementation strategies across fiscal years and found that only *purposely reexamine the implementation* was catalogued in each year (Table 2).

Integrating RE-AIM into the analysis, nearly double the number of strategies were reported within the Implementation dimension compared with the three other dimensions (Figure 2). There were 119 Reach, 187 Adoption, 417 Implementation, and 152 Maintenance strategies in total. The top quartile of strategies in each RE-AIM dimension is presented in Table 3. Among the top quartile strategies, two occurred in each of the RE-AIM dimensions *purposely reexamine the implementation* and *promote adaptability*. While multiple strategies occurred in each of the dimensions, the dimensions each had four to five strategies that were unique to the dimension.

We examined Reach strategies in greater detail due to the VA ORH's emphasis on reaching rural Veterans. Comparing Reach strategies across years, the most common strategy shifted from *increase demand* in FY20 and FY21 to *purposely reexamine the implementation* in FY22. However, among the top quartile, no strategies appeared for Reach across all three fiscal years. We also used the VA ORH's benchmark of EWIs serving at least 50% rural Veterans among their intervention population. For those that met the benchmark for a given fiscal year, the top three implementation strategies were *audit and provide feedback*, *change record systems*, and *conduct education meeting*. These same three strategies did not appear in the top quartile of strategies used by EWIs performing under the benchmark (Table S2).

TABLE 1 Top quartile of implementation strategies among enterprise-wide initiatives (EWI) combining fiscal years, FY20-22.

ERIC strategy	ERIC cluster	Number of occurrences
Purposely reexamine the implementation	Use evaluative and iterative strategies	48
Conduct educational meetings	Train and educate stakeholders	35
Promote adaptability	Adapt and tailor to context	35
Build a coalition	Develop stakeholder interrelationships	29
Capture and share local knowledge	Develop stakeholder interrelationships	27
Tailor strategies	Adapt and tailor to context	27
Promote network weaving	Develop stakeholder interrelationships	26
Assess for readiness and identify barriers and facilitators	Use evaluative and iterative strategies	25
Conduct ongoing training	Train and educate stakeholders	25
Develop and implement tools for quality monitoring	Use evaluative and iterative strategies	25
Audit and provide feedback	Use evaluative and iterative strategies	24
Provide ongoing consultation	Train and educate stakeholders	24
Centralize technical assistance	Provide interactive assistance	21
Use mass media	Engage consumers	21
Access new funding	Utilize financial strategies	20
Develop a formal implementation blueprint	Use evaluative and iterative strategies	20
Develop and organize quality monitoring systems	Use evaluative and iterative strategies	20

Note: Change Infrastructure and Support Clinicians are the only 2 of the 9 ERIC (Expert Recommendations for Implementing Change) clusters with no strategies in the top quartile.

4 | DISCUSSION

QUERI's partnered evaluation initiative provided our team the opportunity to meet the VA ORH's needs for standardizing and improving their evaluation process, while at the same time allowing us to examine ongoing questions in implementation research regarding how implementation strategies are used in real-world, operational settings. In our content analysis, we successfully combined the RE-AIM dimensions with ERIC taxonomy to describe the use of strategies to support RE-AIM of rural health innovations and evidence-based programs and practices across EWIs. Many approaches to tracking implementation strategies have been developed, including surveys,¹⁵⁻¹⁸ review of

meeting minutes,¹⁹ brainstorming and activity logs,^{20,21} and multi-model approaches.^{6,22} Reviewing reports from innovations and evidence-based programs and practices such as the work described here is a practical approach that can be systematically applied and analyzed for greater understanding of the use and potential effectiveness of implementation strategies using readily-available data, similar to the work QUERI has done of its own reports.¹¹

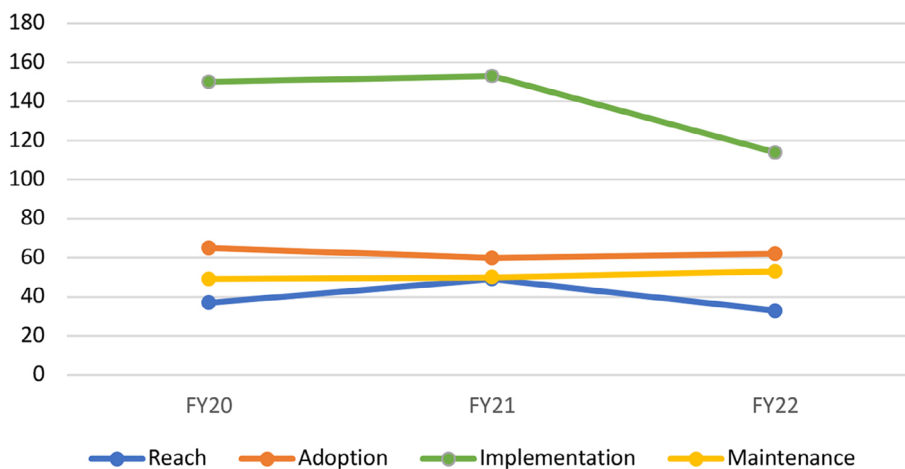
A contribution of this study is the ability to examine implementation strategies across many different innovations and evidence-based programs and practices focused particularly on rural health. Much attention has been placed on tracking implementation strategies for implementation research for single and multi-site studies with a single intervention.^{6,16-20,22} This study allowed us to compare across 30 diverse projects within the largest integrated healthcare system in the United States. The EWIs cover many different clinical and workforce development areas despite all focusing on improving the health and well-being of rural Veterans. With over 66 of the 73 ERIC strategies being documented across the EWIs, it demonstrates the application and usefulness of a wide range of strategies in the area of rural health. More specifically, *purposely reexamine the implementation* was the most-used implementation strategy and consistently applied across all fiscal years and RE-AIM dimensions. Given its saliency in each of the analyses, EWI teams clearly chose this strategy to improve their program implementation among a variety of activities. It also aligns with implementation experts' rating of the importance and feasibility of the 73 implementation strategies. Among implementation experts in the Waltz and colleague's study, *purposely reexamine the implementation* was rated among the highest implementation strategies in both importance and feasibility.⁸ *Conduct educational meetings* and *promote adaptability* were also used repeatedly and consistently across analyses of the enterprise-wide reports. The high use of *purposely reexamine the implementation* and *promote adaptability* reinforces the importance of flexibility and willingness to change in support of program improvement. It is also noteworthy that *Change in infrastructure* and *Support clinicians* were two clusters of ERIC strategies that did not appear in the top quartile of strategies. Looking closely at these clusters, both contain strategies that change the focus from restructuring of professional roles and new clinical teams to changing record systems or physical structure. Comparing this with Waltz and colleagues' examination of importance and feasibility, strategies in both of these ERIC clusters (*Change in infrastructure* and *Support clinicians*) rank among the least important and least feasible.⁸ In terms of importance and feasibility, our work demonstrates the real-world value practitioners place on the range of implementation strategies and its general alignment with the Waltz et al study.

At the same time, we found several challenges in conducting our longitudinal analysis, including the tremendous variety of EWI clinical topics and the fact that "stages of implementation" were in constant flux—new sites adopting an evidence-based programs and practice in the same year that other sites in the EWI were moving toward sustainment. This made it impossible to classify an EWI into a particular implementation phase. The number of strategies in each dimension was stable with the exception of the drop in the number of strategies

TABLE 2 Comparison of top quartile of implementation strategies by fiscal years.

Strategy	FY20	Strategy	FY21	Strategy	FY22
Conduct educational meetings	17	Purposely reexamine the implementation	14	Purposely reexamine the implementation	21
Purposely reexamine the implementation	13	Promote adaptability	13	Tailor strategies	12
Promote adaptability	13	Develop and implement tools for quality monitoring	13	Promote network weaving	12
Centralize technical assistance	12	Conduct educational meetings	11	Build a coalition	10
Assess for readiness and identify barriers and facilitators	11	Use mass media	11	Capture and share local knowledge	10
Provide ongoing consultation	11	Build a coalition	10		
		Promote network weaving	10		

Note: Shaded cells indicate strategies that occur in more than one dimension.

**FIGURE 2** Total number of implementation strategies among enterprise-wide initiative (EWI) by RE-AIM dimensions, FY20-22.

in the implementation dimension (Figure 2). Our hypothesis is that implementation strategies stabilize over time and EWI begin to hone in on specific strategies that aid program implementation and drop less effective strategies. In short, strategies in the Implementation dimension become “core” to the EWI. However, reaching more Veterans, adding more sites, and sustaining the EWI is a constant.

We catalogued the use of 66 implementation strategies among 30 EWIs over three years. This is similar in comprehensiveness to Rogal and colleagues' study of implementation of a new Hepatitis C treatment in the VA Health Care System. In the first year of surveying sites, 3 of the 73 ERIC strategies were not endorsed,¹⁸ while in the second year, only 1 of the 73 strategies was not endorsed (alter patient fees).¹⁷ All three strategies not endorsed in Rogal and colleagues' studies were also not found in our content analysis of CEEWI annual reports. All three were in the ERIC cluster of *Utilize financial strategies*.

Interestingly, Rogal and colleagues focused on a single intervention and tracked 70–72 strategies, while CEEWI reviewed 30 interventions and tracked a total of 66. Boyd and colleagues reported 26 unique strategies for one intervention across six sites¹⁹; Smith and colleagues reported 34 total implementation strategies at one site with one intervention⁶; Perry and colleagues reported 33 across seven

collaboratives (1721 clinics) with one intervention²²; and Bunger and colleagues reported 45 unique strategies in a statewide implementation of a single intervention.²⁰ Among the EWIs, the most implementation strategies in a single EWI reported was 22 with an average of 12 per EWI, while Rogal and colleagues reported an average of 25 and 28 per site, per year.^{17,18} Given these inconsistencies, it is difficult to discern whether a site, an intervention, or the tracking approach has the most influence on the number of implementation strategies tracked.

Walsh-Bailey and colleagues shed some light on the question of approach.²¹ In their pilot study of tools to track implementation strategies, their brainstorming tool led to a greater number of barriers, implementation strategies, and adaptations being tracked compared with two different activity logs. Focusing specifically on the reporting by the implementation practitioner on the teams, the practitioners reported 22 implementation strategies with the brainstorming tool and 9 in both activity logs. These results across tools suggest more examination of tracking practices is needed when focused on number and frequency of strategies.

Very few studies have applied the ERIC taxonomy and a theory, model, or framework to examine how implementation strategies are used.²³ Haley and colleagues used the Consolidated Framework for

TABLE 3 Top quartile of implementations strategies per RE-AIM dimension, FY20-22.

Reach		Adoption		Implementation		Maintenance	
Strategy	Grand total	Strategy	Grand total	Strategy	Grand total	Strategy	Grand total
Use mass media	9	Conduct educational meetings	15	Purposely reexamine the implementation	24	Purposely reexamine the implementation	13
Increase demand	9	Build a coalition	12	Tailor strategies	20	Access new funding	11
Conduct educational meetings	6	Assess for readiness and identify barriers and facilitators	11	Promote adaptability	20	Promote network weaving	7
Promote network weaving	6	Conduct local needs assessment	9	Capture and share local knowledge	20	Provide ongoing consultation	6
Purposely reexamine the implementation	6	Create new clinical teams	8	Conduct ongoing training	18	Develop educational materials	5
Promote adaptability	5	Promote adaptability	5	Develop and implement tools for quality monitoring	17	Build a coalition	5
Change record systems	5	Change service sites	5	Revise professional roles	15	Promote adaptability	5
Conduct local needs assessment	4	Tailor strategies	5	Audit and provide feedback	15	Involve executive boards	5
Distribute educational materials	4	Conduct educational outreach visits	5	Provide ongoing consultation	13	Identify and prepare champions	4
Involve patients/ consumers and family members	4	Organize clinician implementation team meetings	5	Develop a formal implementation blueprint	12	Capture and share local knowledge	4
		Conduct ongoing training	5	Develop and organize quality monitoring systems	12	Audit and provide feedback	4
		Purposely reexamine the implementation	5	Centralize technical assistance	11	Develop a formal implementation blueprint	4
				Assess for readiness and identify barriers and facilitators	11		
				Promote network weaving	11		
				Conduct educational meetings	11		

Note: Shaded cells indicate strategies that occur in more than one dimension.

Implementation Research (CFIR) to code barriers and contextual factors related to implementation strategies but primarily focused on documentation of adaptations. For RE-AIM, it is not surprising that double the number of strategies were found within the Implementation dimension, since we would expect reporting of implementation strategies to occur in the Implementation dimension. Yet, by categorizing implementation strategies by Reach, Adoption, and Maintenance, our analyses demonstrated that implementation strategies can target RE-AIM dimensions other than Implementation. Specifically, implementation strategies categorized as Reach or Adoption could help in targeted decision making if an innovation needs to increase its patient population or clinician users, while strategies that are categorized as Maintenance may lead to greater sustainment. Targeting strategies to particular theoretical constructs and phases of implementation are beginning to be explored²⁴ and should be examined in future studies. Combining ERIC strategies with RE-AIM or other theories, models or frameworks can help to examine where implementation strategy

taxonomies can provide targeted suggestions based on constructs and identify where gaps in types of strategies remain.

The choice of method for tracking and analyzing implementation strategies will depend on the analytic questions, resources, and expertise of the various stakeholders. For example, tracking and cataloguing implementation strategies to their corresponding ERIC strategy requires a coder (i.e., decision-maker) who may have varying levels of implementation science expertise. The completion of surveys¹⁶⁻¹⁸ also requires implementation expertise and raises the question of clinician burden depending on the role of the respondent. Many tracking approaches include Proctor and colleagues' recommendations for implementation strategy specification.²⁵ Neither the CEEWI team or Rogal and colleagues documented Proctor and colleagues' recommendations for reporting implementation strategies. In a research context, study teams used a variety of tracking strategies (e.g., meeting notes, brainstorming logs) which allowed them to also report specifications such as actor, action, and temporality from the Proctor

recommendations.^{6,19–22} While CEEWI's approach can be done in a short time period, it lacks much of the specifying information about implementation strategies that meeting note analysis may be able to answer, such as why a particular strategy was chosen (justification) at that time point (temporality) in the project. The variety of approaches found in the literature give implementation scientists the opportunity to compare and decide which aspects are most critical to their research study or operational evaluation, ranging from clinician burden to where implementation expertise is found on a team to readily-available data sources from evaluation partners.

Using operational data from a diverse array of programs comes with a number of inherent limitations. First, the intent of the EWI annual evaluation reports was not focused on implementation strategies, but rather the impact of each EWI on rural Veterans and the VA staff who care for them. The audience for the reports is the VA ORH staff, and the goal is meeting their programmatic needs. The strength of our study was our ability to leverage our operational work to track implementation strategy uses across a diverse array of real-world settings. How to best track and monitor implementation strategies in research and clinical/operational settings is an ongoing question in the field of implementation science, particularly since development of the ERIC taxonomy.^{7,9} Another limitation is lack of power when analyses are divided by fiscal year, RE-AIM dimensions, and rurality. While we identified patterns, strong conclusions cannot be made about the effectiveness of a strategy. Further limitations include lack of validation on the comprehensiveness of strategy reporting, lack of data on the fidelity of the strategies in practice, and lack of detail on the strategies as recommended by Proctor and colleagues, specifically the implementation actor, action target, temporality, dose, and justification.²⁵ Moreover, a single CEEWI team member was responsible for documenting the final decision on which ERIC strategy to label an activity reported in the EWI evaluation report. Rapid turnaround and limited resources led to the decision to have a single “coder;” however, weekly meetings of the full team enabled an intensive consensus process that promoted and supported team learning, which likely increased the reliability of coding. Related to strategy reporting, each year the EWI teams received their RE-AIM logic model as compiled by the CEEWI team. The logic model included information on the activities described in the reports and how they correlate to the ERIC taxonomy. This may have changed the EWI teams' reporting behavior and incentivized them to include more activities, although we did not see this in the data within single EWI or in aggregate as the number of strategies actually declined in FY22. It is also possible that CEEWI team members improved their ability to recognize activities and correlate them to ERIC taxonomy, although again the data do not reflect this based on overall counts.

In summary, combining ERIC strategies and the RE-AIM framework allows for comparison of implementation strategies across each dimension, and our methodology allowed us to track implementation strategies in real-world clinical and operational settings that support rural health. This analysis supports the VA ORH efforts to spread and sustain rural health innovations and evidence-based programs and practices through targeted implementation strategies. Further

research could encompass interviews with EWI teams regarding implementation strategies and additional longitudinal analysis of the current dataset as it grows with additional fiscal years to examine initiation and discontinuation of implementation strategies. Feedbacking these analyses will be critical as the VA ORH seeks to support implementation, spread, and sustainment of impactful rural innovations and evidence-based programs and practices across the enterprise.

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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