



# Mapping Expert Recommendations for Implementing Change (ERIC) Strategies to the Stages of Implementation Completion® (SIC) Process: A Universal Approach for Implementation Across Contexts.

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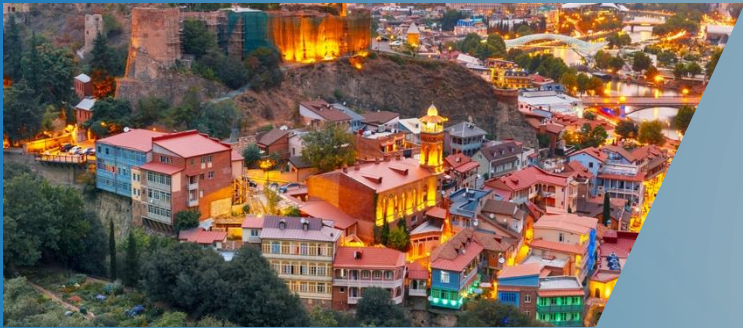
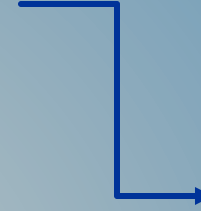
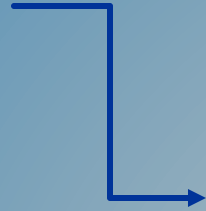
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Many of the slides are curtesy of Saldana and Powell



# WHO AM I?



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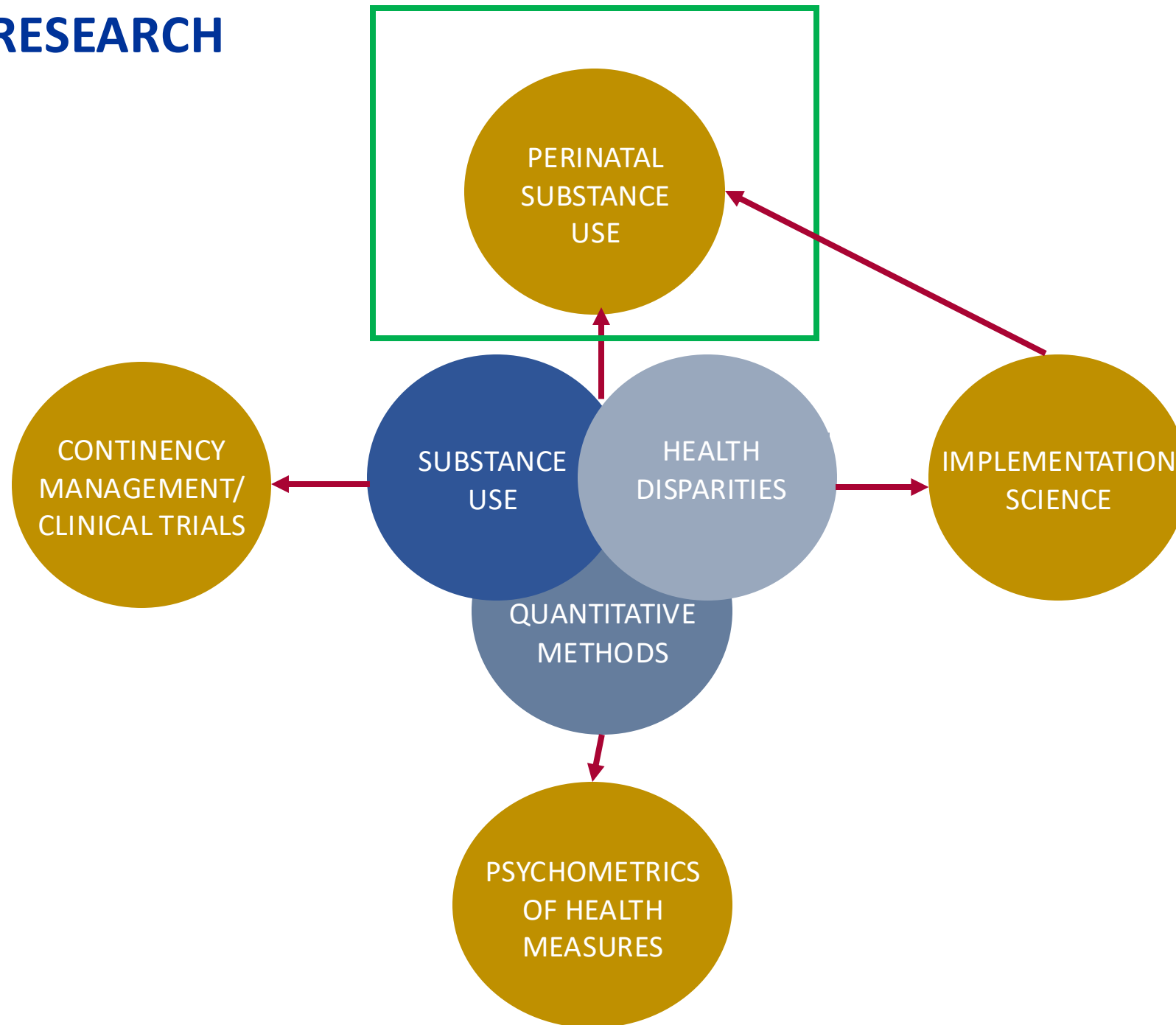


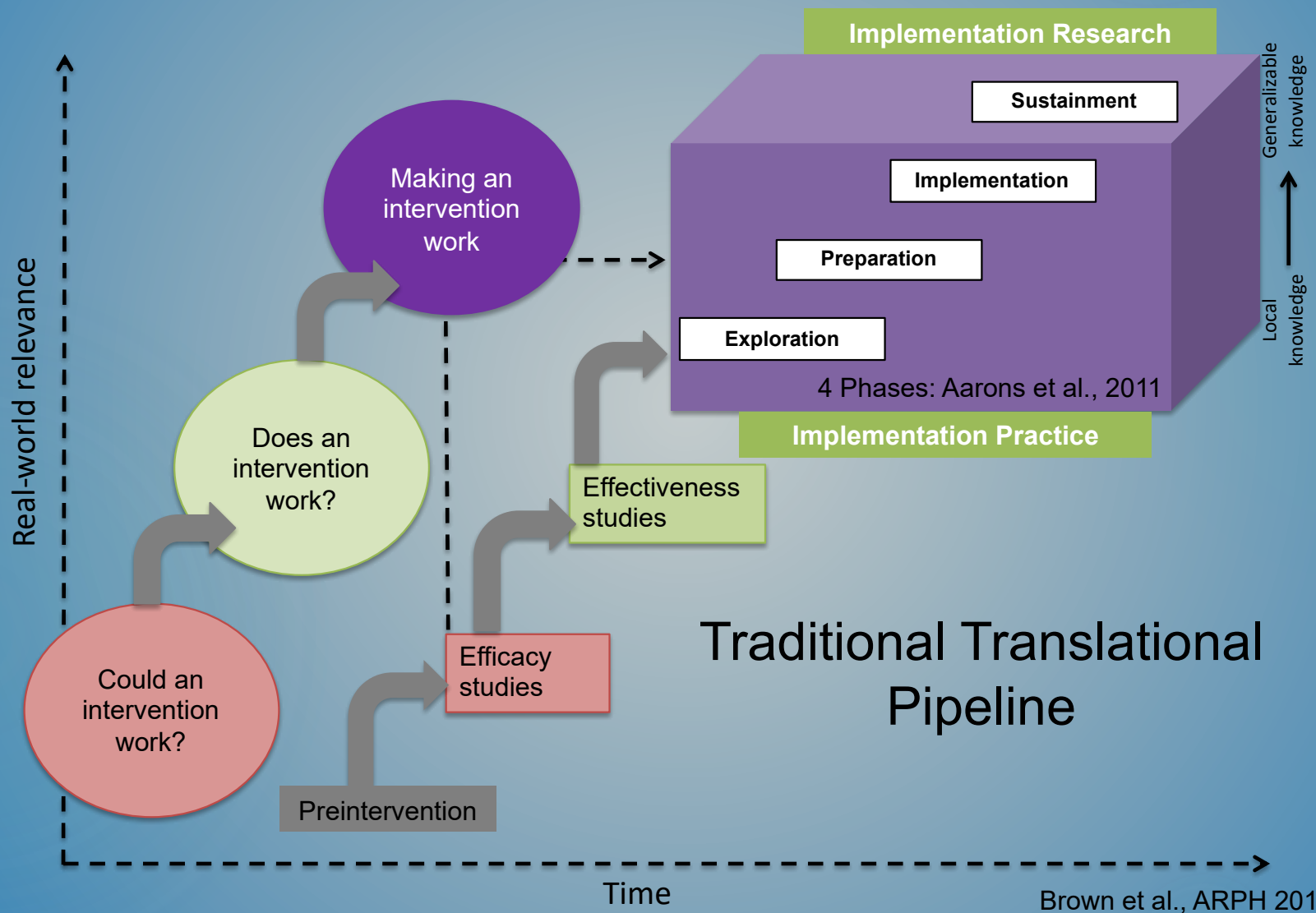
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# PROGRAM OF RESEARCH

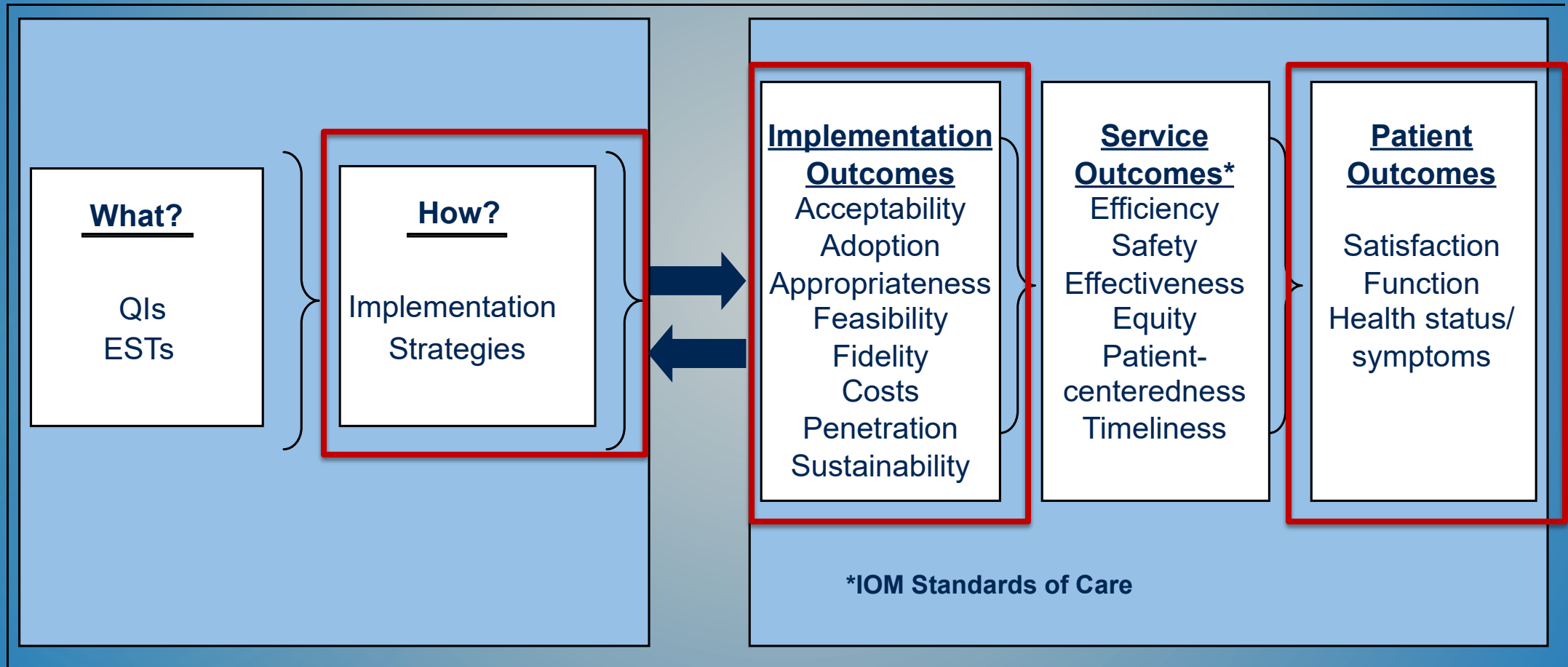




Brown et al. (2017). PMC5384265

Brown et al., ARPH 2017

# ► Why Implementation Science?



## IMPLEMENTATION STRATEGIES ARE...

“...Methods or techniques used to enhance the adoption, implementation, and sustainability of a clinical program or practice”

OR

The “*how*” of implementation



Proctor, Powell, & McMillen, 2013



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# Definition & Types of Strategies

**Implementation Strategies** – Methods or techniques used to enhance the adoption, implementation, sustainment, and scale-up of a program or practice.

**Discrete Strategy** – Single action or process (e.g., reminders, audit and feedback, supervision)

**Multifaceted Strategy or Implementation Intervention** – Combination of multiple discrete strategies.



# Developing & Refining a Compilation of Implementation Strategies

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Review

## A Compilation of Strategies for Implementing Clinical Innovations in Health and Mental Health

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SAGE

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Christopher R. Carpenter<sup>3</sup>, Richard T. Griffey<sup>3</sup>,  
Alicia C. Bunger<sup>4</sup>, Joseph E. Glass<sup>1</sup>, and Jennifer L. York<sup>3</sup>

### Abstract

Efforts to identify, develop, refine, and test strategies to disseminate and implement evidence-based treatments have been prioritized in order to improve the quality of health and mental health care delivery. However, this task is complicated by an implementation science literature characterized by inconsistent language use and inadequate descriptions of implementation strategies. This article brings more depth and clarity to implementation research and practice by presenting a consolidated compilation of discrete implementation strategies, based on a review of 205 sources published between 1995 and 2011. The resulting compilation includes 68 implementation strategies and definitions, which are grouped according to six key implementation processes: planning, educating, financing, restructuring, managing quality, and attending to the policy context. This consolidated compilation can serve as a reference to stakeholders who wish to implement clinical innovations in health and mental health care and can facilitate the development of multifaceted, multilevel implementation plans that are tailored to local contexts.

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Powell et al. *Implementation Science* (2015) 10:21  
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RESEARCH

Open Access

## A refined compilation of implementation strategies: results from the Expert Recommendations for Implementing Change (ERIC) project

Byron J Powell<sup>1\*</sup>, Thomas J Waltz<sup>2</sup>, Matthew J Chinman<sup>3,4</sup>, Laura J Damschroder<sup>5</sup>, Jeffrey L Smith<sup>6</sup>, Monica M Matthieu<sup>6,7</sup>, Enola K Proctor<sup>8</sup> and JoAnn E Kirchner<sup>6,9</sup>

### Abstract

**Background:** Identifying, developing, and testing implementation strategies are important goals of implementation science. However, these efforts have been complicated by the use of inconsistent language and inadequate descriptions of implementation strategies in the literature. The Expert Recommendations for Implementing Change (ERIC) study aimed to refine a published compilation of implementation strategy terms and definitions by systematically gathering input from a wide range of stakeholders with expertise in implementation science and clinical practice.

**Methods:** Purposive sampling was used to recruit a panel of experts in implementation and clinical practice who engaged in three rounds of a modified Delphi process to generate consensus on implementation strategies and definitions. The first and second rounds involved Web-based surveys soliciting comments on implementation strategy terms and definitions. After each round, iterative refinements were made based upon participant feedback. The third round involved a live polling and consensus process via a Web-based platform and conference call.

**Results:** Participants identified substantial concerns with 31% of the terms and/or definitions and suggested five additional strategies. Seventy-five percent of definitions from the originally published compilation of strategies were retained after voting. Ultimately, the expert panel reached consensus on a final compilation of 73 implementation strategies.

**Conclusions:** This research advances the field by improving the conceptual clarity, relevance, and comprehensiveness of implementation strategies that can be used in isolation or combination in implementation research and practice. Future phases of ERIC will focus on developing conceptually distinct categories of strategies as well as ratings for each strategy's importance and feasibility. Next, the expert panel will recommend multifaceted strategies for hypothetical yet real-world scenarios that vary by sites' endorsement of evidence-based programs and practices and the strength of contextual supports that surround the effort.

**Keywords:** Implementation research, Implementation strategies, Knowledge translation strategies, Mental health, US Department of Veterans Affairs

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Waltz et al. *Implementation Science* (2015) 10:109  
DOI 10.1186/s13012-015-0295-0



SHORT REPORT

Open Access

## Use of concept mapping to characterize relationships among implementation strategies and assess their feasibility and importance: results from the Expert Recommendations for Implementing Change (ERIC) study

Thomas J. Waltz<sup>1,2\*</sup>, Byron J. Powell<sup>3</sup>, Monica M. Matthieu<sup>4,5,10</sup>, Laura J. Damschroder<sup>2</sup>, Matthew J. Chinman<sup>6,7</sup>, Jeffrey L. Smith<sup>5,10</sup>, Enola K. Proctor<sup>8</sup> and JoAnn E. Kirchner<sup>6,9</sup>

### Abstract

**Background:** Poor terminological consistency for core concepts in implementation science has been widely noted as an obstacle to effective meta-analyses. This inconsistency is also a barrier for those seeking guidance from the research literature when developing and planning implementation initiatives. The Expert Recommendations for Implementing Change (ERIC) study aims to address one area of terminological inconsistency: discrete implementation strategies involving one process or action used to support a practice change. The present report is on the second stage of the ERIC project that focuses on providing initial validation of the compilation of 73 implementation strategies that were identified in the first phase.

**Findings:** Purposive sampling was used to recruit a panel of experts in implementation science and clinical practice (N = 35). These key stakeholders used concept mapping sorting and rating activities to place the 73 implementation strategies into similar groups and to rate each strategy's relative importance and feasibility. Multidimensional scaling analysis provided a quantitative representation of the relationships among the strategies, all but one of which were found to be conceptually distinct from the others. Hierarchical cluster analysis supported organizing the 73 strategies into 9 categories. The ratings data reflect those strategies identified as the most important and feasible.

**Conclusions:** This study provides initial validation of the implementation strategies within the ERIC compilation as being conceptually distinct. The categorization and strategy ratings of importance and feasibility may facilitate the search for, and selection of, strategies that are best suited for implementation efforts in a particular setting.

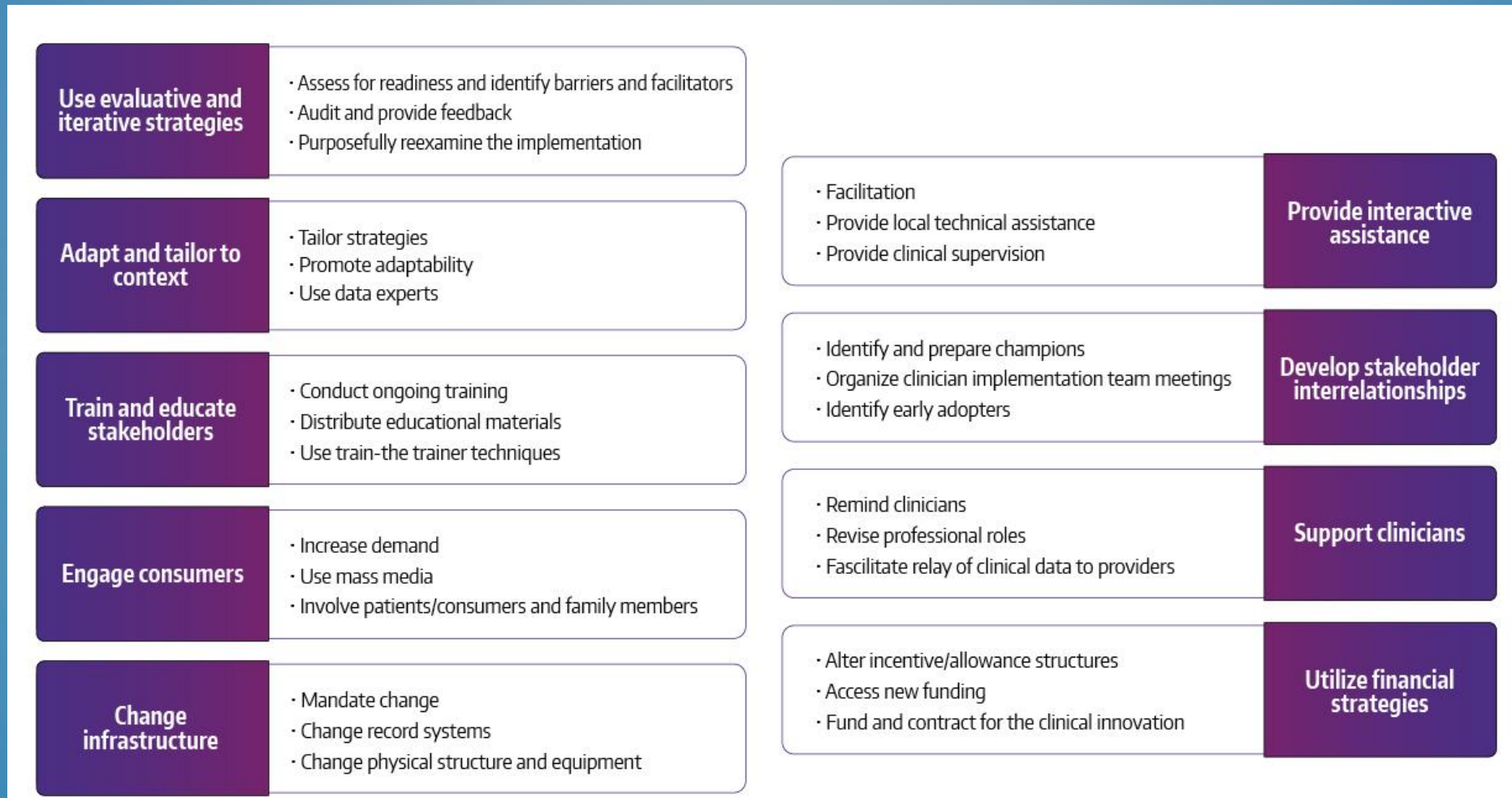
**Keywords:** Concept mapping, Implementation research, Implementation strategies, Mental health, US Department of Veterans Affairs

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# Expert Recommendations for Implementing Change (ERIC)



Powell et al. (2012). PMC3524416; Powell et al. (2015). PMC4328074 (see Additional File 6); Waltz et al. (2015). PMC452734  
<https://impsciuw.org/implementation-science/research/implementation-strategies/>

# The Development and Application of the ERIC Survey


Rogal et al. *Implementation Science* (2017) 12:60  
DOI 10.1186/s13012-017-0588-6

Implementation Science

RESEARCH Open Access

The association between implementation strategy use and the uptake of hepatitis C treatment in a national sample

Shari S. Rogal<sup>1,2,3\*</sup>, Vera Yakovchenko<sup>4</sup>, Thomas J. Waltz<sup>5,6</sup>, Byron J. Powell<sup>7</sup>, JoAnn E. Kirchner<sup>8</sup>, Enola K. Proctor<sup>9</sup>, Rachel Gonzalez<sup>10</sup>, Angela Park<sup>11</sup>, David Ross<sup>12</sup>, Timothy R. Morgan<sup>10</sup>, Maggie Chartier<sup>12</sup> and Matthew J. Chinman<sup>1,13</sup>




Rogal et al. *Implementation Science* (2019) 14:36  
https://doi.org/10.1186/s13012-019-0881-7

Implementation Science

RESEARCH Open Access

Longitudinal assessment of the association between implementation strategy use and the uptake of hepatitis C treatment: Year 2

Shari S. Rogal<sup>1,2,3\*</sup>, Vera Yakovchenko<sup>4</sup>, Thomas J. Waltz<sup>5,6</sup>, Byron J. Powell<sup>7</sup>, Rachel Gonzalez<sup>8</sup>, Angela Park<sup>9</sup>, Maggie Chartier<sup>10</sup>, David Ross<sup>10</sup>, Timothy R. Morgan<sup>8</sup>, JoAnn E. Kirchner<sup>11</sup>, Enola K. Proctor<sup>12</sup> and Matthew J. Chinman<sup>1,13</sup>



Yakovchenko et al.  
*BMC Health Services Research* (2021) 21:1348  
https://doi.org/10.1186/s12913-021-07312-4

BMC Health Services Research

RESEARCH ARTICLE Open Access

Mapping the road to elimination: a 5-year evaluation of implementation strategies associated with hepatitis C treatment in the veterans health administration

Vera Yakovchenko<sup>1</sup>, Timothy R. Morgan<sup>2</sup>, Matthew J. Chinman<sup>3,4</sup>, Byron J. Powell<sup>5</sup>, Rachel Gonzalez<sup>2,6</sup>, Angela Park<sup>7</sup>, Patrick S. Malone<sup>8</sup>, Maggie Chartier<sup>9</sup>, David Ross<sup>9</sup> and Shari S. Rogal<sup>3,10\*</sup>




Yakovchenko et al.  
*Implementation Science Communications* (2023) 4:42  
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Implementation Science Communications

RESEARCH Open Access

Refining Expert Recommendations for Implementing Change (ERIC) strategy surveys using cognitive interviews with frontline providers

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AASLD  
The American Association for the Study of Liver Diseases

ORIGINAL ARTICLE

Core implementation strategies for improving cirrhosis care in the Veterans Health Administration

Vera Yakovchenko<sup>1</sup> | Timothy R. Morgan<sup>2,3</sup> | Edward J. Miech<sup>4,5</sup> | Brittney Neely<sup>6</sup> | Carolyn Lamorte<sup>6</sup> | Sandra Gibson<sup>6,7</sup> | Lauren A. Beste<sup>8,9</sup> | Heather McCurdy<sup>10</sup> | Dawn Scott<sup>11</sup> | Rachel I. Gonzalez<sup>12</sup> | Angela M. Park<sup>13</sup> | Byron J. Powell<sup>14</sup> | Jasmohan S. Bajaj<sup>15,16</sup> | Jason A. Dominitz<sup>17,18</sup> | Maggie Chartier<sup>19</sup> | David B. Ross<sup>19</sup> | Matthew J. Chinman<sup>6,20</sup> | Shari S. Rogal<sup>6,7,21</sup>

Strategy Configurations Directly Linked to Higher Hepatitis C Virus Treatment Starts

An Applied Use of Configurational Comparative Methods

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# Extensions for Schools, Digital Mental Health, & Financing in BH

Prevention Science (2019) 20:914–935  
<https://doi.org/10.1007/s11211-019-01017-1>

## Adapting a Compilation of Implementation Strategies to Advance School-Based Implementation Research and Practice



Clayton R. Cook<sup>1</sup> · Aaron R. Lyon<sup>2</sup> · Jill Locke<sup>2</sup> · Thomas Waltz<sup>3</sup> · Byron J. Powell<sup>4</sup>

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### Abstract

Schools, like other service sectors, are confronted with an implementation gap, with the slow adoption and uneven implementation of evidence-based practices (EBP) as part of routine service delivery, undermining efforts to promote better youth behavioral health outcomes. Implementation researchers have undertaken systematic efforts to publish taxonomies of implementation strategies (i.e., methods or techniques that are used to facilitate the uptake, use, and sustainment of EBP), such as the Expert Recommendations for Implementing Change (ERIC) Project. The 73-strategy ERIC compilation was developed in the context of healthcare and largely informed by research and practice experts who operate in that service sector. Thus, the comprehensibility, contextual appropriateness, and utility of the existing compilation to other service sectors, such as the educational setting, remain unknown. The purpose of this study was to initiate the School Implementation Strategies, Translating ERIC Resources (SISTER) Project to iteratively adapt the ERIC compilation to the educational sector. The results of a seven-step adaptation process resulted in 75 school-adapted strategies. Surface-level changes were made to the majority of the original ERIC strategies (52 out of 73), while five of the strategies required deeper modifications for adaptation to the school context. Six strategies were deleted and seven new strategies were added based on existing school-based research. The implications of this study's findings for prevention scientists engaged in implementation research (e.g., creating a common nomenclature for implementation strategies) and limitations are discussed.

**Keywords** Implementation science · Implementation strategies · School-based mental and behavioral health · Evidence-based practices

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### Introduction

Research continues to produce a steady stream of innovations that can improve routine care for youth with behavioral health problems, such as anxiety, depression, trauma, and disruptive behavior problems (Weisz and Kazdin 2017). Despite the promise of such research, these findings often are not successfully translated into everyday service settings in which youth naturally exist (Dingfelder and Mandell 2011; Owens et al. 2014). Implementation research across different service sectors has shown that without deliberate efforts to bridge the science-to-practice gap through the use of implementation strategies, there is likely to be uneven uptake, use, and sustainment of research findings as part of routine practice (Proctor et al. 2013; Powell et al. 2015). In fact, research from the broader field of implementation science has estimated that two thirds of implementation efforts fail (Burnes 2004; Damschroder et al. 2009) and most have no impact on service recipient outcomes (Powell et al. 2014).

There has been a strong push among researchers and policymakers to strategically increase the availability of



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## Implementation Strategies for Digital Mental Health Interventions in Health Care Settings

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U.S. health care systems are tasked with alleviating the burden of mental health, but are frequently underprepared and lack workforce and resource capacity to deliver services to all in need. Digital mental health interventions (DMHIs) can increase access to evidence-based mental health care. However, DMHIs commonly do not fit into the day-to-day activities of the people who engage with them, resulting in a research-to-practice gap for DMHI implementation. For health care settings, differences between digital and traditional mental health services make alignment and integration challenging. Specialized attention is needed to improve the implementation of DMHIs in health care settings so that these services yield high uptake, engagement, and sustainment. The purpose of this article is to enhance efforts to integrate DMHIs in health care settings by proposing implementation strategies, selected and operationalized based on the discrete strategies established in the Expert Recommendations for Implementing Change project, that align to DMHI-specific barriers in these settings. Guidance is offered in how these strategies can be applied to DMHI implementation across four phases commonly distinguished in implementation science using the Exploration, Preparation, Implementation, Sustainment Framework. Next steps to advance research in this area and improve the research-to-practice gap for implementing DMHIs are recommended. Applying implementation strategies to DMHI implementation will enable psychologists to

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1080

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Original Empirical Research

## A scoping review of strategies for financing the implementation of evidence-based practices in behavioral health systems: State of the literature and future directions

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**Abstract**  
**Background:** Increased availability of evidence-based practices (EBPs) is essential to alleviating the negative public health and societal effects of behavioral health problems. A major challenge to implementing and sustaining EBPs broadly is the limited and fragmented nature of available funding.  
**Method:** We conducted a scoping review that assessed the current state of evidence on EBP financing strategies for behavioral health based on recent literature (i.e., post-Affordable Care Act). We defined financing strategies as techniques that secure and direct financial resources to support EBP implementation. This article introduces a conceptualization of financing strategies and then presents a compilation of identified strategies, following established reporting guidelines for the implementation strategies. We also describe the reported level of use for each financing strategy in the research literature.  
**Results:** Of 23 financing strategies, 13 were reported as being used within behavioral health services, 4 had potential for use, 5 had conceptual use only, and 1 was potentially contraindicated. Examples of strategies reported being used include increased fee-for-service reimbursement, grants, cost sharing, and pay-for-success contracts. No strategies had been evaluated in ways that allowed for strong conclusions about their impact on EBP implementation outcomes.  
**Conclusion:** The existing literature on EBP financing strategies in behavioral health raises far more questions than answers. Therefore, we propose a research agenda that will help better understand these financing strategies. We also discuss the implications of our findings for behavioral health professionals, system leaders, and policymakers who want to develop robust, sustainable financing for EBP implementation in behavioral health systems.

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# How relevant are the “ERIC strategies” internationally?

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Implementation Science

SYSTEMATIC REVIEW

Open Access

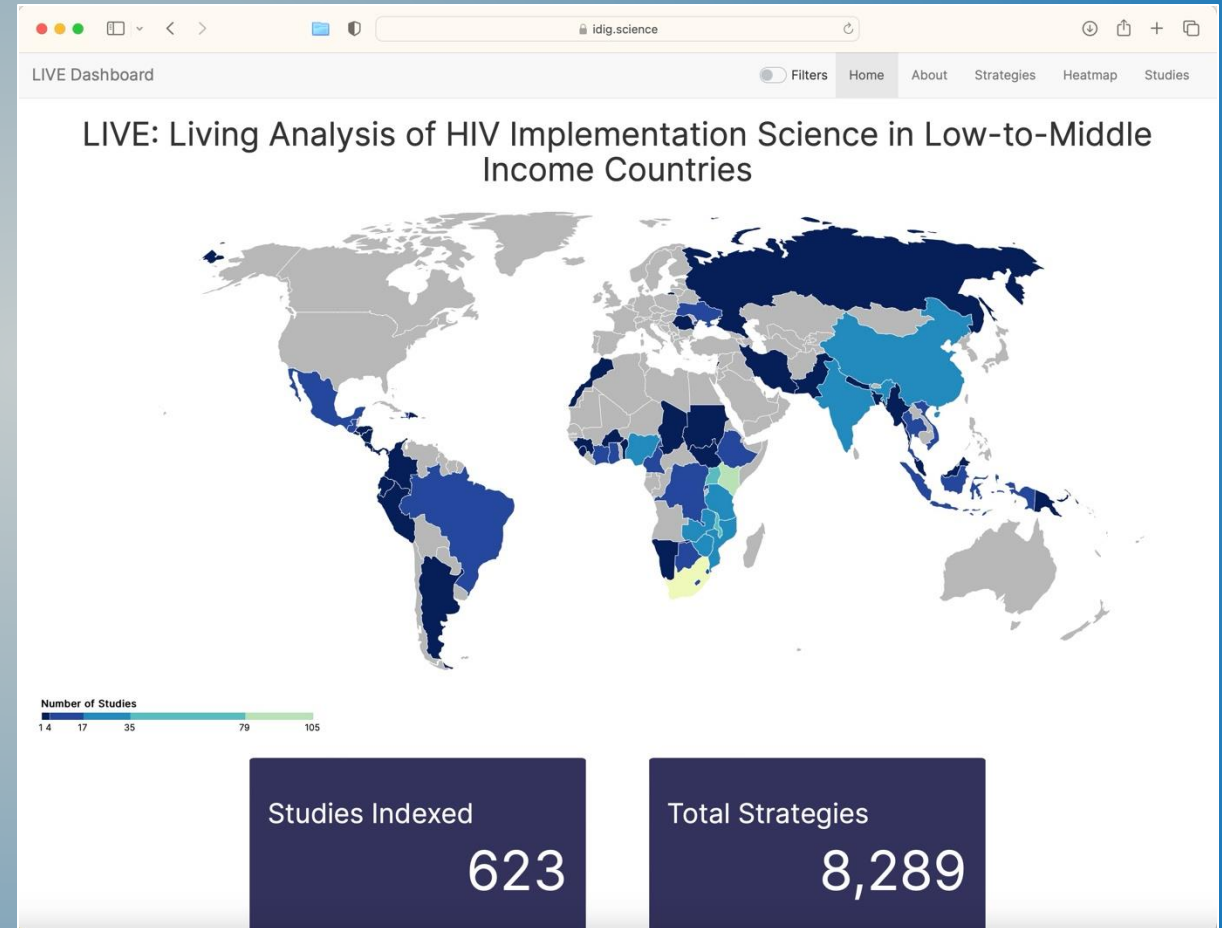
Application of the Expert Recommendations for Implementing Change (ERIC) compilation of strategies to health intervention implementation in low- and middle-income countries: a systematic review

Kathryn L. Lovero<sup>1\*</sup>, Christopher G. Kemp<sup>2†</sup>, Bradley H. Wagenaar<sup>3,4</sup>, Ali Giusto<sup>5</sup>, M. Claire Greene<sup>6</sup>, Byron J. Powell<sup>7,8,9</sup> and Enola K. Proctor<sup>7,8</sup>



ERIC strategies have been translated from English to: German (Regauer et al., 2021. PMC8527650), Spanish (Van Pelt et al., 2024. PMC11253493); and Japanese (In Process).

Lovero et al. (2023). PMC10617067; Eshun-Wilson et al. (2022). PMC9582919; <https://idig.science/LIVE/>



# Systematic reviews looking at strategies to support the implementation of research in clinical practice aren't delivering definitive insights

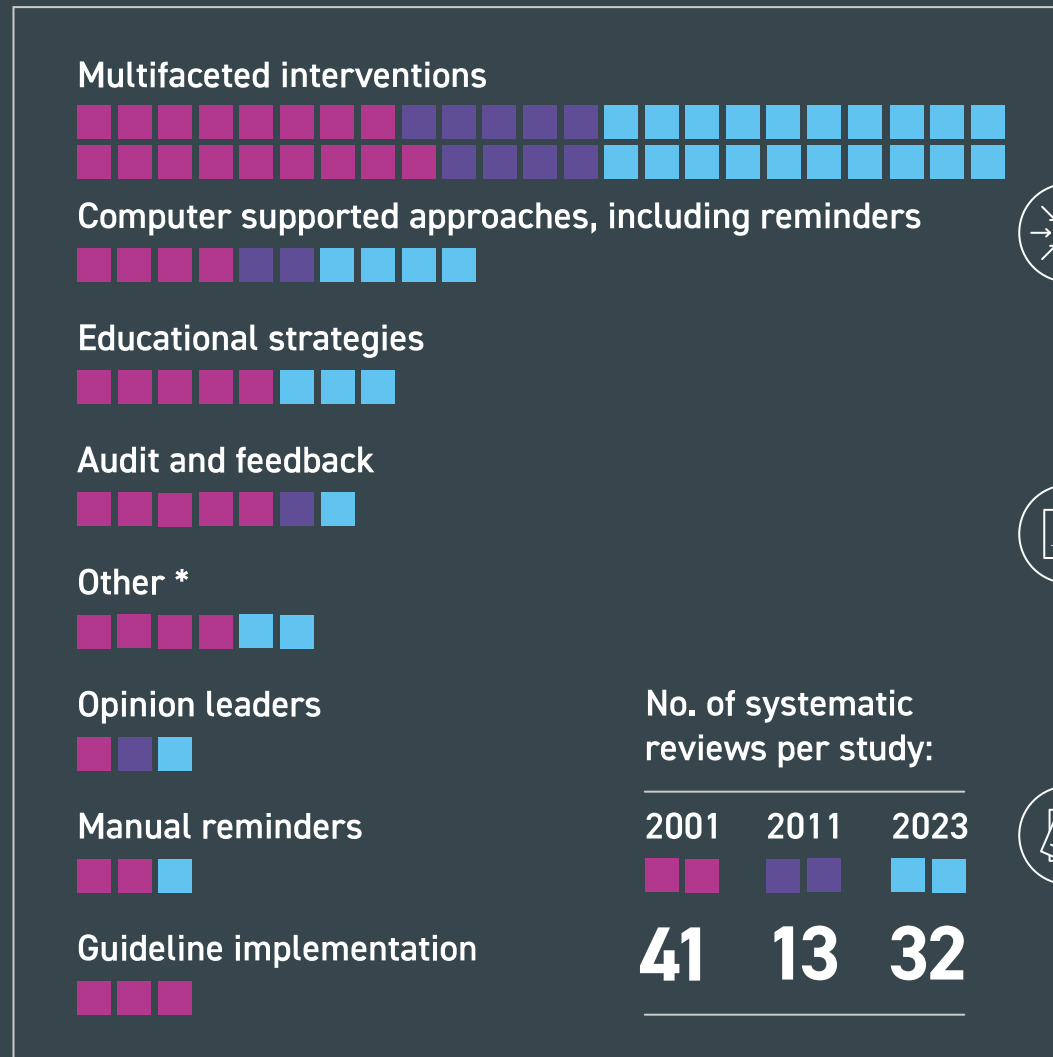
Our 2023 study explored a knowledge base of

# 86

systematic reviews of different types of strategies

and included reviews from low and middle income countries

Boaz, A., Baeza, J., Fraser, A. et al. 'It depends': what 86 systematic reviews tell us about what strategies to use to support the use of research in clinical practice. Implementation Sci 19, 15 (2024). <https://doi.org/10.1186/s13012-024-01337-z>  
 'It depends': what 86 systematic reviews tell us about what strategies to use to support the use of research in clinical practice | Implementation Science



\*one each (social media, toolkit, costing information, outreach visit, continuous quality improvement, mass media)

**We found that the impact of implementation strategies is small** and mainly on processes of care

**Context is key** while some more recent reviews recognise its importance, this information has traditionally been omitted from studies

**What is needed isn't more reviews or reviews of reviews,** but research to explore the situated, relational and organisational nature of evidence informed practice



[www.transforming-evidence.org/resources/it-depends](http://www.transforming-evidence.org/resources/it-depends)



Strategy Review	Number of Trials	Effect Sizes
Printed Educational Materials	14 Randomized Trials 31 ITS	Median absolute improvement 2.0% (range 0% to 11%)
Educational Meetings	81 Randomized Trials	Median absolute improvement 6% (IQR 1.8% to 15.3%)
Educational Outreach	69 Randomized Trials	Median absolute improvement in prescribing behaviors 4.8% (IQR 3% to 6.6%), other behaviors 6% (IQR 3.6% to 16%)
Local Opinion Leaders	18 Randomized Trials	Median absolute improvement 12% (6% to 14.5%)
Audit and Feedback	140 Randomized Trials	Median absolute improvement 4.3% (IQR .5 to 16%)
Computerized Reminders	28 Randomized Trials	Median absolute improvement 4.2% (IQR .8 to 18.8%)
Tailored Interventions	26 Randomized Trials	Meta-Regression using 15 trials. Pooled odds ratio of 1.56 (95% CI, 1.27 to 1.93, $p < .001$ )

# How do I pick my strategies?



**MORE IS NOT BETTER**

# “Method to the Madness”

---

- Implementation of new innovations entails extensive planning, training, and quality assurance
- Involves a complex set of interactions between developers, system leaders, front line staff, and consumers
- Recursive process of well-defined stages or steps that are not necessarily linear



# Implementation Process Models:

- Describe and/or guide the process of translating research into practice
- Recognize a temporal sequence of implementation endeavors
- Specify steps (stages, phases) of implementation

Implementation Strategies Occur Throughout the Steps



# Value of Understanding Implementation Process

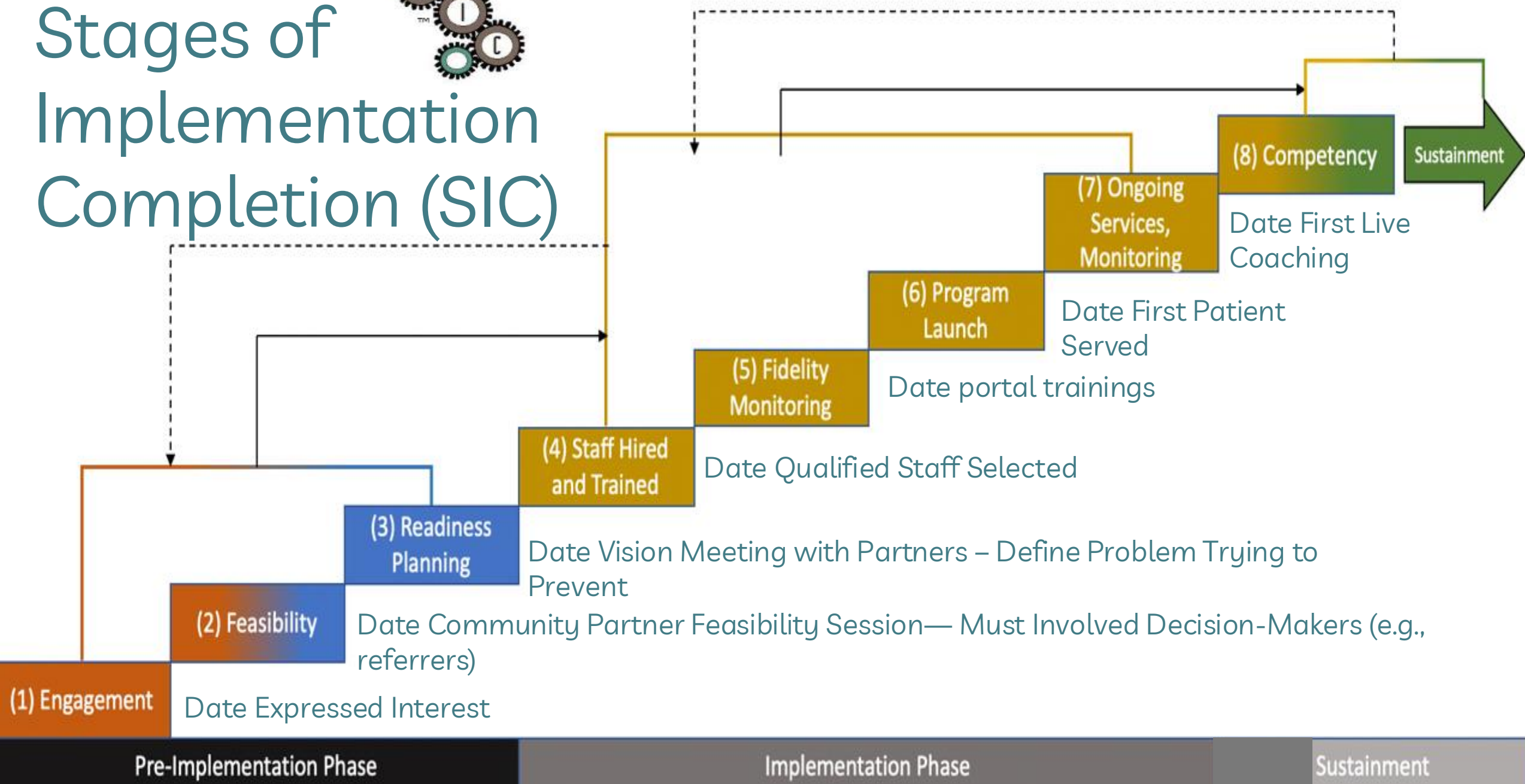
- ▶ Building Blocks for What Makes an **Implementation** Work



Measuring What **and** How Much



# Stages of Implementation Completion (SIC)



# THREE Scores By Phase and Stage



- ▶ Duration
- ▶ Proportion
- ▶ Stage Score (1-8)



# UNIVERSAL SIC: ACTIVITIES PER STAGE



- Stage 1: Engagement 4
- Stage 2: Feasibility Assessment 4
- Stage 3: Readiness Planning 10
- Stage 4: Hiring and Training 5
- Stage 5: Fidelity Monitoring Established/Set-Up 4
- Stage 6: Program Start-Up 4
- Stage 7: Ongoing Service Delivery, Quality Assurance 11
- Stage 8: Demonstration of Competency 4

# STAGES OF IMPLEMENTATION COMPLETION (SIC)

## 8 Stages:

## Involvement:

Pre



1. Engagement
2. Consideration of Feasibility
3. Readiness Planning

System and/or Agency Leader  
System and/or Agency Leader  
System and/or Agency Leader

Imp



4. Staff Hired and Trained
5. Fidelity Monitoring Established
6. Services and Consultation
7. Ongoing Services,  
Consultation, Fidelity, Feedback

Agency, Practitioner  
Practitioner, Client  
Practitioner, Client  
Practitioner, Client

Sus



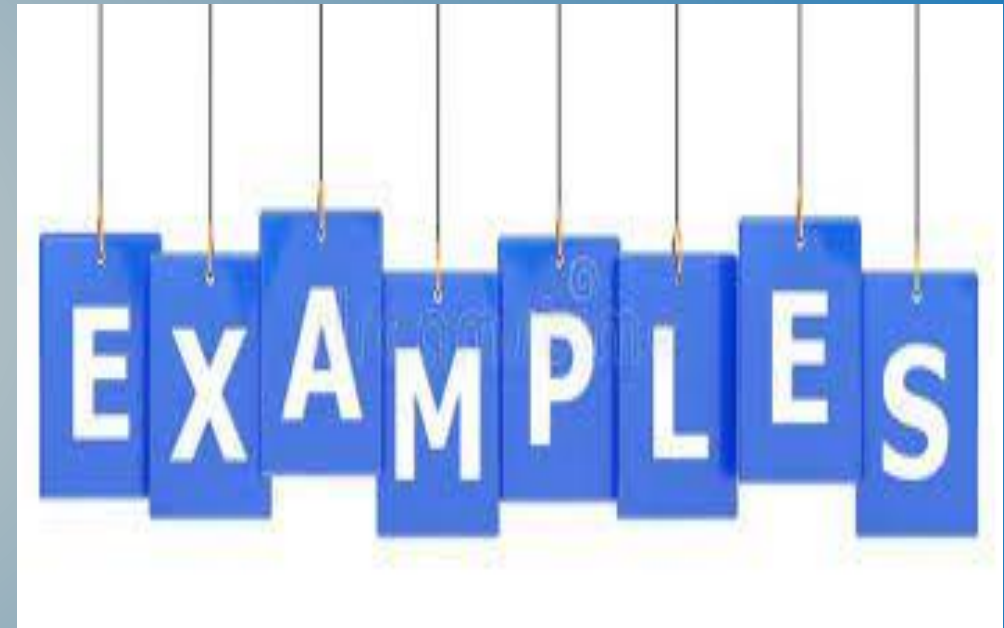
8. Competency (certification)

System Leader, Agency,  
Practitioner, Client



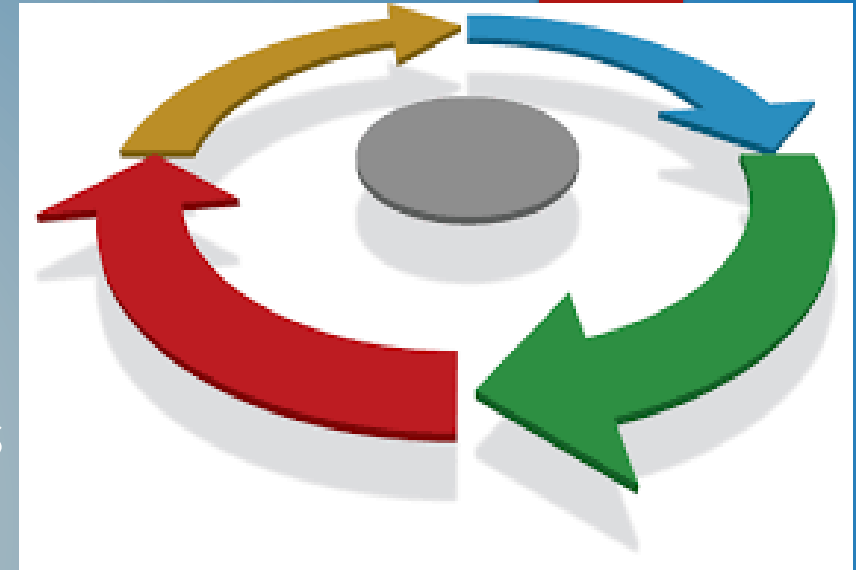
# SAMPLE Activities Within EACH Stage

1. Engagement
  - Date agreed to consider implementation
2. Consideration of Feasibility
  - Date of Community Partner Vision Meeting
3. Readiness Planning
  - Date of cost calculator/funding plan review
  - Date referral flow established
4. Staff Hired and Trained
  - Date of initial supervisor training
5. Fidelity and Adherence Monitoring Established
  - Date fidelity technology set-up
6. Services and Consultation Begin
  - Date of first patient enrolled
7. Ongoing Services, Consultation, Fidelity, Feedback
  - Date of Implementation Review #1
  - Date 50% of providers achieve 80% fidelity
8. Competency (certification)
  - Date first provider achieves certification standards



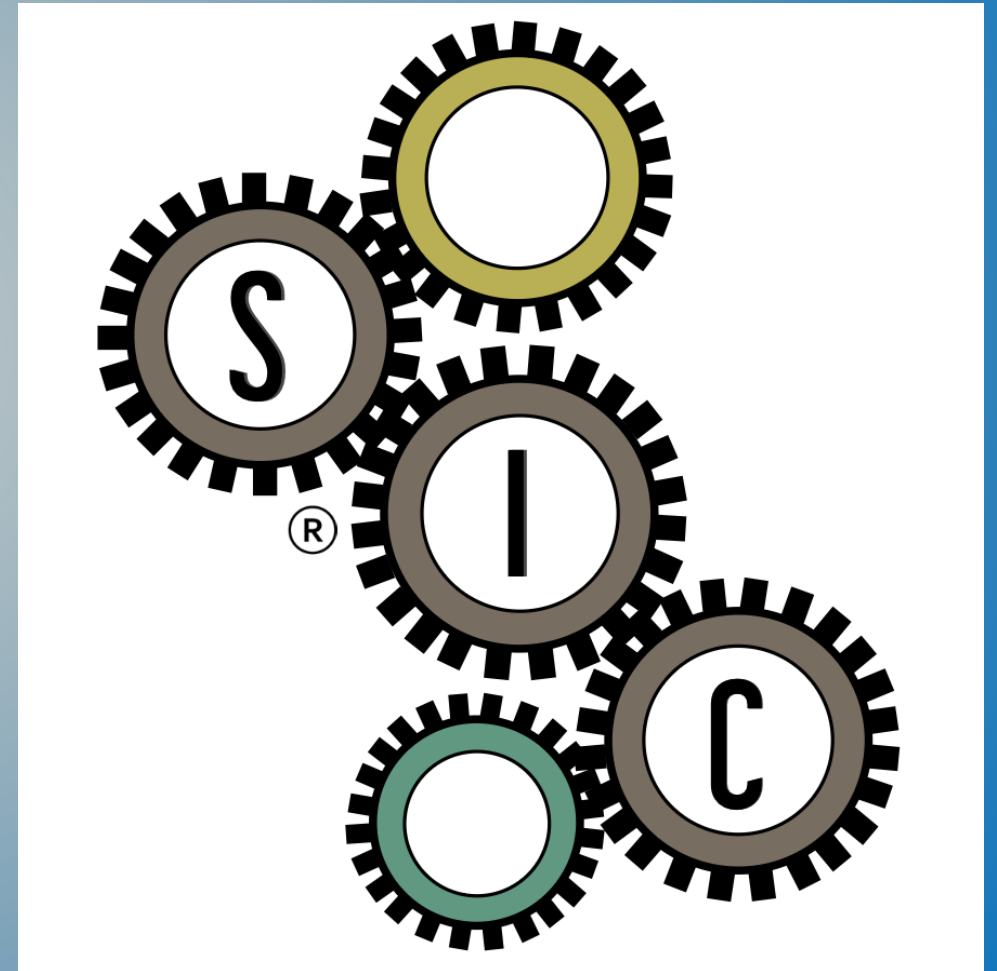
# Adaptation/Customization Process

- ▶ Operationalizing the Implementation Process
  - ▶ Collaborative and Iterative
  - ▶ Defining "Completion" of Implementation Activities
  - ▶ Defining Decision Rules for Validity Checks
  - ▶ Comparing Skeletal SIC with Reality and Making Adjustments
  - ▶ Program onto the SIC website and Training
- 
- ▶ 85+ Adaptations/Customizations across multiple service sectors feeding into SIC Repository



# Service Contexts of Universal and Tailored SIC

- ▶ SCHOOLS
- ▶ LINKED SCALE-UPS
- ▶ STATE/REGIONAL/COUNTRY SCALE-UPS
- ▶ CHILD WELFARE
- ▶ ADULT JUSTICE
- ▶ JUVENILE JUSTICE
- ▶ PRIMARY CARE/PEDIATRIC HEALTHCARE
- ▶ HOSPITAL HEALTHCARE
- ▶ GLOBAL HEALTH
- ▶ EARLY EDUCATION
- ▶ PREVENTION
- ▶ TREATMENT



Contents lists available at ScienceDirect



Journal of Substance Use and Addiction Treatment

journal homepage: [www.journals.elsevier.com/journal-of-substance-use-and-addiction-treatment](http://www.journals.elsevier.com/journal-of-substance-use-and-addiction-treatment)



Science Con  
10.1186/s43

STUDY PROTOCOL

Open Access

# Using economic evaluation in implementation science to increase transparency in costs and resources for organizational decision-making

## Facilitating implementation of a substance use intervention for youth: Outcomes from a randomized trial of the SIC-coaching implementation strategy<sup>☆</sup>

Lisa Saldana<sup>a,\*</sup>, Gayle Dakof<sup>b</sup>, Gracelyn Cruden<sup>a</sup>, Holle Schaper<sup>a</sup>, Wambui Young<sup>a</sup>, Madison Liddle<sup>b</sup>, Jason Chapman<sup>a</sup>

<sup>a</sup> Chestnut Health Systems, Lighthouse Institute, 1255 Pearl St., Eugene, OR 97401, USA  
<sup>b</sup> MDFT International, 6619 South Dixie Highway, #117, Miami, FL 33143, USA

Global Implementation Research and Application  
https://doi.org/10.1007/s43477-020-00003-y

# An Exploratory Study of a School-Based Program to Improve Implementation of Evidence-Based Interventions

Emma M. Sterrett-Hong<sup>1</sup> · Lisa Saldana · Katherine Cameron<sup>1</sup>

Received: 4 August 2020 / Accepted: 23 November 2020  
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Brown et al. *Implementation Science* 2014, 9:134  
http://www.implementationscience.com/content/9/1/134



RESEARCH

Open Access

## Evaluation of two implementation strategies in 51 child county public service systems in two states: results of a cluster randomized head-to-head implementation trial

C Hendricks Brown<sup>1\*</sup>, Patricia Chamberlain<sup>2</sup>, Lisa Saldana<sup>2</sup>, Courtenay Padgett<sup>2</sup>, Wei Wang<sup>3</sup> and Gracelyn Cruden<sup>1</sup>

Alley et al. *Implementation Science* (2025) 18:50  
https://doi.org/10.1186/s13012-023-01285-0

Administration and Policy in Mental Health  
DOI 10.1007/s10488-011-0363-y

ORIGINAL PAPER

# Predicting Program Start-Up and Sustainability: A Systematic Review

Lisa Saldana · Patricia Chamberlain · Wei Wang · C. Hendricks Brown

RESEARCH

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## The relative value of Pre-Implementation stages for successful implementation of evidence-informed programs

Zoe M. Alley<sup>1</sup>, Jason E. Chapman<sup>1</sup>, Holle Schaper<sup>1</sup> and Lisa Saldana<sup>1\*</sup>

Child & Youth Services Research  
DOI 10.1007/s11267-021-18949-2

Implementation Science

Child & Youth Services Research  
(2025) 25:631  
https://doi.org/10.1007/s11267-021-18949-2

BMC Health Services Research

## Study of the co-creation of the Pre-Implementation Readiness Assessment to support introduction of pre-exposure prophylaxis into new settings

Benjamin Lane<sup>1</sup>, Jason Zucker<sup>2</sup>, Yumeng Wu<sup>1</sup>, Caroline Carnevale<sup>3</sup>, Helen Burnside<sup>4</sup>, Mayes<sup>5</sup>, Gillianne Narcisse-Cempini<sup>7</sup>, Melanie A. Gold<sup>8</sup>, Lisa Saldana<sup>9</sup> and Sarit A. Golub<sup>10</sup>



# SIC and ERIC

Which strategies should we use? And when along the process?



# Objectives

- To identify key strategies from ERIC that align with universal SIC stages.
- To map out a simplified approach for successful implementation across addiction disciplines.



# METHODS

## Mapping Process of ERIC to SIC

- Reviewed 73 ERIC strategies grouped into 9 categories.
- Compared them with 46 SIC stages grouped into 8 stages.
- Multiple rounds of feedback to assess and align strategies.
- Alignment checked by each team member individually.



# RESULTS

## Alignment of ERIC Strategies to SIC Stages

**Instructions:** The goal of this task is to link ERIC variables to SIC variables. Review the list of ERIC variables in column C and decide which ones you feel "match" (are the same as) the SIC variables in column A. When you have identified a match, copy the variable from column C and paste it into column B, next to the SIC variable that you feel it matches. For example, if you feel that ERIC variable 3\_06, "Identify and prepare champions," matches SIC variable 1\_04, "Initial cost/resource information sent," you would copy 3\_06 into column B, next to 1\_04. **Note:** You may choose to link variables across stages. You may also choose to match more than 1 ERIC variable to a single SIC variable, or you may choose not to link any ERIC variables to certain SIC variables. If you match more than 1 ERIC variable to a SIC variable, do so by adding an additional linking column (replicating column B) and adding the additional linked variable there. Do this as many times as

SIC Variable	Linked ERIC Variable	Linked ERIC Variable 2	Linked ERIC Variable 3
<b>Stage 1-Engagement</b>			
1_01: Site is informed/learns services/program available	3_08: Inform local opinion leaders	6_01: Conduct educational meetings	
1_02: Site indicates interest			
1_03: Site initially agrees to try implementation	3_13: Promote network weaving	3_01: Build a coalition	5_02: Develop resource sharing agreements
1_04: Initial cost/resource information sent	6_06: Distribute educational materials		
<b>Stage 2-Consideration of Feasibility</b>			
2_01: First site planning contact	3_03: Conduct local needs assessment	6_01: Conduct educational meetings	3_07: Identify early adopters
2_02: Feasibility stakeholder meeting	6_01: Conduct educational meetings	3_09: Involve executive boards	3_01: Build a coalition
2_03: Feasibility questionnaire completed	7_01: Assess for readiness and identify barriers and facilitators	3_03: Conduct local needs assessment	8_03: Involve patients/consumers and family members
2_04: Liaison/program champion rep identified to purveyor	3_06: Identify and prepare champions	3_14: Recruit, designate and train for leadership	
<b>Stage 3-Readiness Planning</b>			
3_01: Cost calculator/funding plan review	9_01: Access new funding	9_05: Fund and contract for clinical innovation	
3_02: staff sequence, timeline, hiring plan review	5_05: Revise professional roles	5_01: Create new clinical teams	
3_03: Support staff hiring/recruitment plan review	3_14: Recruit, designate and train for leadership	5_01: Create new clinical teams	8_05: Use mass media
3_04: Referral criteria review	6_05: Develop educational materials	3_05: Develop an implementation glossary	8_05: Use mass media
3_05: Communication plan review	3_05: Develop an implementation glossary	3_12: Organize clinician implementation team meetings	
3_06: Readiness stakeholder and/or leadership meeting	7_01: Assess for readiness and identify barriers and facilitators	3_09: Involve executive boards	3_15: Use advisory boards and workgroups
3_07: Written implementation plan completed	7_05: Develop a formal implementation blueprint		1_02: Tailor strategies
3_08: Service provider selected			
3_09: Signed contract received	3_11: Obtain formal commitments		
3_10: Initial program materials sent	6_06: Distribute educational materials		
<b>Stage 4-Staff Hired &amp; Intro Training</b>			
4_01: First intervention/program staff hired/identified	5_01: Create new clinical teams	5_05: Revise professional roles	
4_02: Program supervisor trained	6_03: Conduct ongoing training	4_03: Provide clinical supervision	5_04: Remind clinicians
4_03: Initial intervention/program training held	6_03: Conduct ongoing training	6_10: Use train the trainer strategies	6_07: Make training dynamic
4_04: Support team training held	6_03: Conduct ongoing training	6_08: Provide ongoing consultation	3_16: Use an implementation advisor
4_05: Expert consultant assigned to site	6_08: Provide ongoing consultation	3_16: Use an implementation advisor	
<b>Stage 5-Fidelity Monitoring Processes in Place</b>			
5_01: Fidelity system training held	7_06: Develop and implement tools for quality monitoring	7_07: Develop and organize quality monitoring systems	6_08: Provide ongoing consultation
5_02: First site leadership/admin call to establish program performance feedback	4_02: Facilitation	6_08: Provide ongoing consultation	7_09: Purposely reexamine the implementation
5_03: Fidelity technology equipment ready and/or first/test video uploaded	7_06: Develop and implement tools for quality monitoring	7_07: Develop and organize quality monitoring systems	1_02: Tailor strategies
5_04: IT technician identified	4_04: Provide local technical assistance	4_01: Centralize technical assistance	
<b>Stage 6-Services &amp; Consultations to Services Begin</b>			
6_01: First client is served/service delivered	8_02: Intervene with patients/consumers to enhance uptake and adherence	5_04: Remind clinicians	
6_02: First consult/coaching call	6_08: Provide ongoing consultation	6_03: Conduct ongoing training	4_03: Provide clinical supervision
6_03: First fidelity review of clinical team and/or supervision meeting	7_02: Audit and provide feedback	1_04: Use data warehousing techniques	3_12: Organize clinician
6_04: First fidelity review of clinical intervention session/program delivery	7_02: Audit and provide feedback		
<b>Stage 7-Model Fidelity and Staff Competence &amp; Adherence Tracked</b>			
7_01: Site visit 1	7_02: Audit and provide feedback	4_03: Provide clinical supervision	7_09: Purposely reexamine the implementation
7_02: Site visit 2	7_02: Audit and provide feedback	4_03: Provide clinical supervision	7_09: Purposely reexamine the implementation
7_03: Site visit 3	7_02: Audit and provide feedback	4_03: Provide clinical supervision	7_09: Purposely reexamine the implementation

# RESULTS

## Alignment of ERIC Strategies to SIC Stages

- 78% (57/73) of ERIC strategies align with 46 universal SIC stages
- 80% (37/46) of SIC stages align with more than one ERIC strategy.
- 10 activities of SIC Stage 3 (readiness planning) had the most alignment (24 ERIC strategies).
- **Several** ERIC strategies did not match universal SIC stages, however...



# Establishing Readiness



**Readiness Planning**

**Funding Plan – Short and Long-Term**

**Staffing – Hiring and Sequencing**

**Secondary Staffing – Recruitment and Support**

**Referral Criteria and Recruitment Plan**

**Communication Plan Finalized**

**Community Partner and Leadership Meeting**

**Written Implementation Plan Completed**

**Service Provider Identified**

**Contracts, MOUS, DUAs Completed**

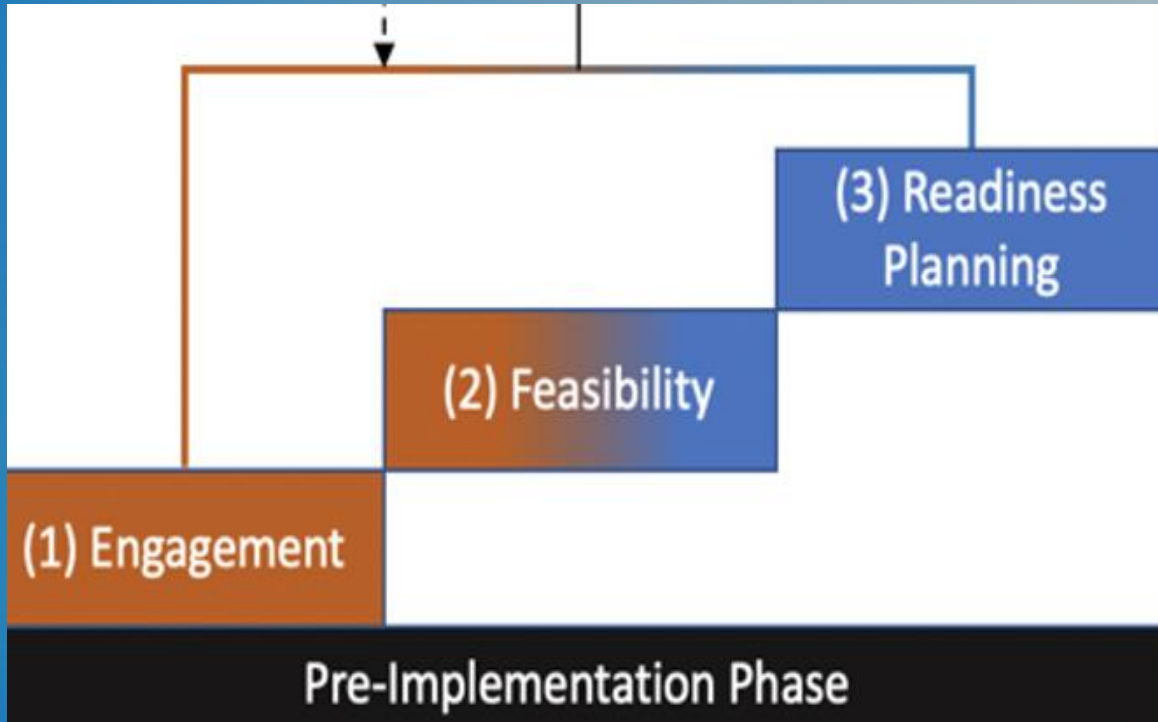
**Site Receives Initial Intervention Materials**

# KEY TAKEAWAYS

- Most SIC stages align with multiple ERIC strategies
- Stage 3 (Readiness Planning) most densely mapped
- SIC provides a process-driven application model for ERIC strategies.
- Pre implementation and Readiness planning (SIC Stage 3) phases are critical to successful implementation.



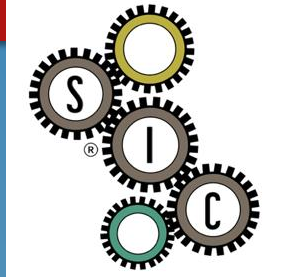
# Strong Pre-Implementation Fidelity



Presents the Greatest Opportunity to Move the Needle on Successful Implementations to Promote Equity in Receipt of EBP

# SIC Summary of Outcomes: Replication

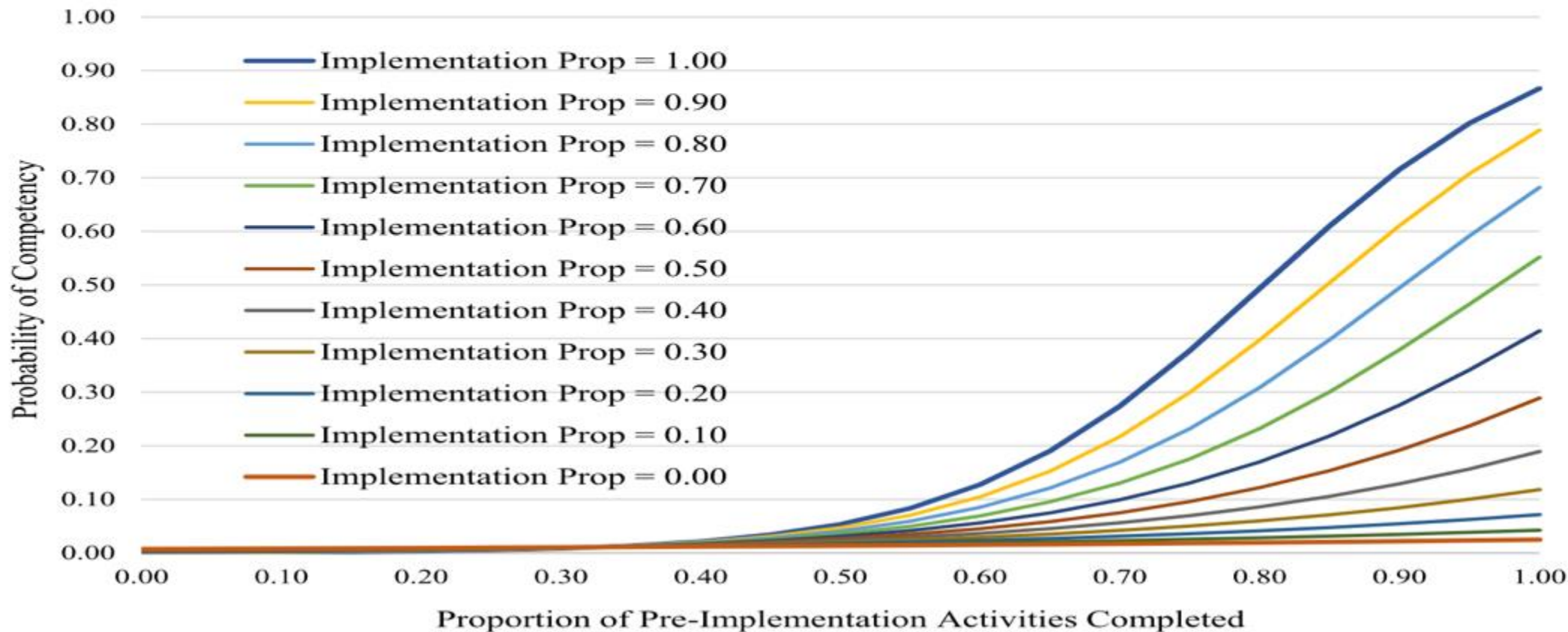
- Reliably distinguish good from poor performers
- Reliably distinguish between implementation strategies
- Pre-implementation SIC behavior predicts successful program start-up (Stage 6)
- Pre-implementation SIC behavior predicts discontinuing program
- Pre-implementation and implementation behavior combined predict development of Competency (Stage 8)
- **PRE-IMPLEMENTATION IS THE KEY TO SUSTAINMENT**



# Pre-Implementation and Implementation Behavior Predicting Competence for Sustainment

Alley et al. *Implementation Science*

(2023) 18:30



# How do I pick my strategies?



**MORE IS NOT BETTER**

# Implementation has a Cost

- ▶ When communities weigh the value of implementing new practices, they must consider the cost of implementation over and above the cost of the intervention.
- ▶ Need to consider what implementation steps are necessary for success and the resources necessary to complete them.
- ▶ Varying costs might be associated with different implementation strategies.



# Conclusions & Implications

- Universal strategies identified can be applied across disciplines, not just healthcare.
- SIC stages can guide organizations through the iterative process of implementation.
  - ▶ While being intentional with strategy choice and timing
  - ▶ Strategies can be mapped on and adapted for specific needs.
- Future research should focus on refining strategies for cross-disciplinary applications.



# გმადლობთ!

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# Targeted Questions for Discussion

- ▶ What strategies have you used without realizing it?
- ▶ Which SIC stages are most neglected in your setting?



# Targeted Questions for Discussion

## ▶ **Timing of Strategies**

▶ Which stages of implementation (e.g., engagement, readiness, sustainment) are most challenging in your context, and why?

▶ Are there local examples where early planning or readiness activities were skipped—and what was the result?

## ▶ **Relevance of Implementation Strategies**

▶ In your own country or setting, which barriers do you most often see when trying to implement new programs or interventions?

▶ Can you identify an ERIC strategy that could address that barrier?

