Implementation Strategies

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Session Outline

- What are implementation strategies?
- 6 factors to consider when developing an implementation strategy
- Implementation Research Development (ImpRes) tool

Implementation Strategies

- ‘Implementation strategies have **unparalleled importance** in implementation science, as they constitute the **‘how to’** component of changing healthcare practice’

- **‘Methods** or **techniques** used to enhance the adoption, implementation, and sustainability of a clinical programme, practice or intervention’ (Proctor et al, 2013)

Proctor et al (2013). Implementation strategies: recommendations for specifying and reporting. Imp Sci, 8:139.

Implementation Strategies

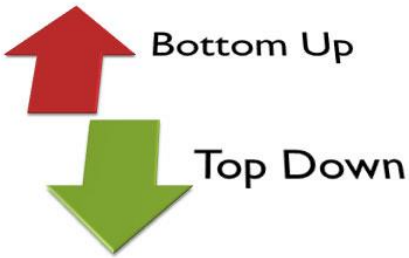
Discrete implementation strategy: single action or process (e.g. reminders, educational materials)

Multifaceted implementation strategy: Use of two or more discrete strategies (e.g. reminders + educational materials)

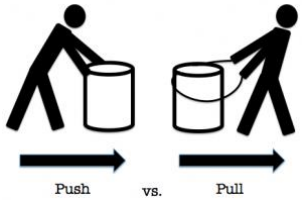
Powell et al (2012). A compilation of strategies for implementing clinical innovations in health and mental health. Med Care Res Rev ;69:123–57.

Implementation Strategies

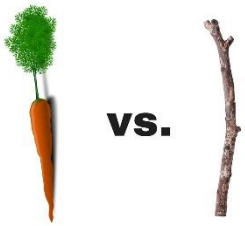
- Top down/ bottom up



- Push/pull



- Carrot/stick tactics



Proctor et al (2009) Implementation research in mental health services: an emerging science with conceptual, methodological, and training challenges. Adm Policy Ment Health; 36: 24-34.

Expert Recommendations for Implementing Change

The Expert Recommendations for Implementing Change (ERIC) study was developed to address two major limitations of the published literature:

1. Lack of conceptual clarity surrounding terms and definitions for implementation strategies
2. Insufficient guidance about how to select appropriate implementation strategies

Waltz et al. Implementation Science 2014, 9:39
http://www.implementationscience.com/content/9/1/39

IMPLEMENTATION SCIENCE

STUDY PROTOCOL Open Access

Expert recommendations for implementing change (ERIC): protocol for a mixed methods study

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

Abstract

Background: Identifying feasible and effective implementation strategies that are contextually appropriate is a challenge for researchers and implementers, exacerbated by the lack of conceptual clarity surrounding terms and definitions for implementation strategies, as well as a literature that provides imperfect guidance regarding how one might select strategies for a given healthcare quality improvement effort. In this study, we will engage an Expert Panel comprising implementation scientists and mental health clinical managers to: establish consensus on a common nomenclature for implementation strategy terms, definitions and categories; and develop recommendations to enhance the match between implementation strategies selected to facilitate the use of evidence-based programs and the context of certain service settings, in this case the U.S. Department of Veterans Affairs (VA) mental health services.

Methods/Design: This study will use purposive sampling to recruit an Expert Panel comprising implementation science experts and VA mental health clinical managers. A novel, four-stage sequential mixed methods design will be employed. During Stage 1, the Expert Panel will participate in a modified Delphi process in which a published taxonomy of implementation strategies will be used to establish consensus on terms and definitions for implementation strategies. In Stage 2, the panelists will complete a concept mapping task, which will yield conceptually distinct categories of implementation strategies as well as ratings of the feasibility and effectiveness of each strategy. Utilizing the common nomenclature developed in Stages 1 and 2, panelists will complete an innovative menu-based choice task in Stage 3 that involves matching implementation strategies to hypothetical implementation scenarios with varying contexts. This allows for quantitative characterizations of the relative necessity of each implementation strategy for a given scenario. In Stage 4, a live web-based facilitated expert recommendation process will be employed to establish expert recommendations about which implementations strategies are essential for each phase of implementation in each scenario.

Discussion: Using a novel method of selecting implementation strategies for use within specific contexts, this study contributes to our understanding of implementation science and practice by sharpening conceptual distinctions among a comprehensive collection of implementation strategies.

Keywords: Implementation research, Implementation strategies, Mixed methods, U.S. Department of Veterans Affairs

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Taxonomy of Implementation Strategies

Aim: Refine a published compilation of implementation strategy terms and definitions by generating consensus on implementation strategies and definitions.

Methods: Panel of experts in implementation and clinical practice participated in a modified Delphi process

Results: 73 discrete implementation strategies

Powell et al. Implementation Science (2015) 10:21
DOI 10.1186/s13012-015-0209-1

IMPLEMENTATION SCIENCE

RESEARCH Open Access

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

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

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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Powell et al. A refined compilation of implementation strategies: results from the Expert Recommendations for Implementing Change (ERIC) project. Implement Sci. 2015; 12;10:21

73 Discrete Implementation Strategies

Strategy: Audit and provide feedback

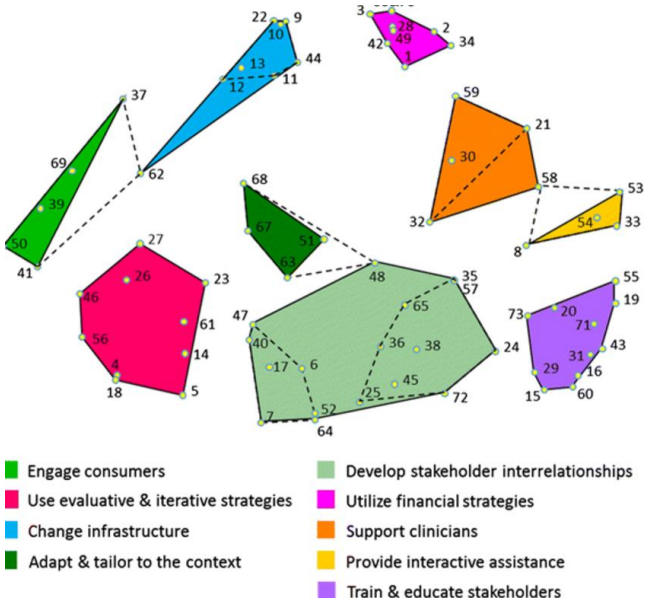
Definition: Collect and summarize clinical performance data over a specified time period and give it to clinicians and administrators to monitor, evaluate, and modify provider behaviour

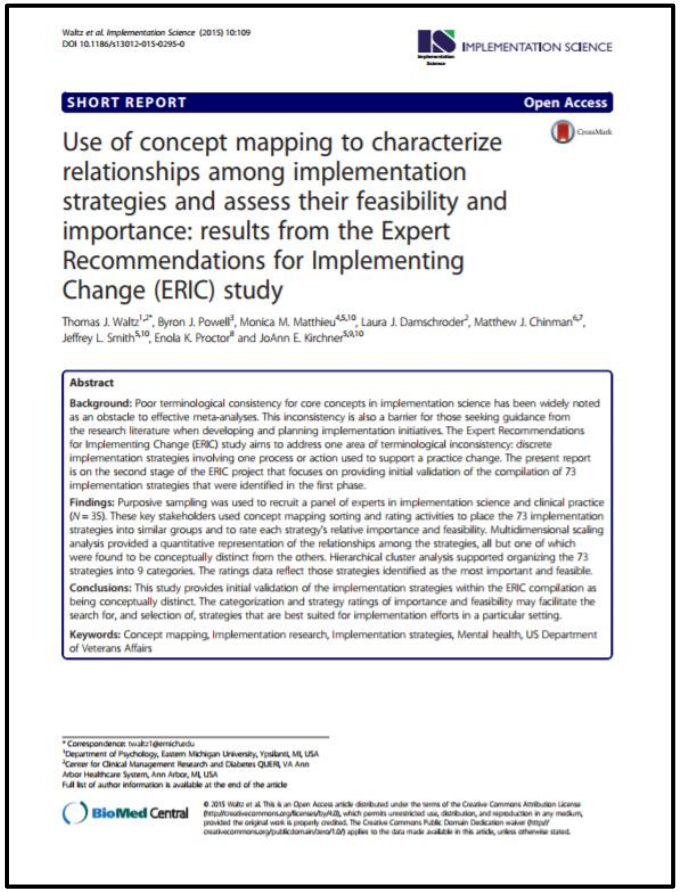
Table 3 ERIC discrete implementation strategy compilation (n = 73)

Strategy	Definitions
Access new funding	Access new or existing money to facilitate the implementation
Alter incentive/allowance structures	Work to incentivize the adoption and implementation of the clinical innovation
Alter patient/consumer fees	Create fee structures where patients/consumers pay less for preferred treatments (the clinical innovation) and more for less-preferred treatments
Assess for readiness and identify barriers and facilitators	Assess various aspects of an organization to determine its degree of readiness to implement, barriers that may impede implementation, and strengths that can be used in the implementation effort
Audit and provide feedback	Collect and summarize clinical performance data over a specified time period and give it to clinicians and administrators to monitor, evaluate, and modify provider behavior
Build a coalition	Recruit and cultivate relationships with partners in the implementation effort
Capture and share local knowledge	Capture local knowledge from implementation sites on how implementers and clinicians made something work in their setting and then share it with other sites
Centralize technical assistance	Develop and use a centralized system to deliver technical assistance focused on implementation issues
Change accreditation or membership requirements	Strive to alter accreditation standards so that they require or encourage use of the clinical innovation. Work to alter membership organization requirements so that those who want to affiliate with the organization are encouraged or required to use the clinical innovation
Change liability laws	Participate in liability reform efforts that make clinicians more willing to deliver the clinical innovation
Change physical structure and equipment	Evaluate current configurations and adapt, as needed, the physical structure and/or equipment (e.g., changing the layout of a room, adding equipment) to best accommodate the targeted innovation
Change record systems	Change records systems to allow better assessment of implementation or clinical outcomes
Change service sites	Change the location of clinical service sites to increase access
Conduct cyclical small tests of change	Implement changes in a cyclical fashion using small tests of change before taking changes system-wide. Tests of change benefit from systematic measurement, and results of the tests of change are studied for insights on how to do better. This process continues serially over time, and refinement is added with each cycle
Conduct educational meetings	Hold meetings targeted toward different stakeholder groups (e.g., providers, administrators, other organizational stakeholders, and community, patient/consumer, and family stakeholders) to teach them about the clinical innovation
Conduct educational outreach visits	Have a trained person meet with providers in their practice settings to educate providers about the clinical innovation with the intent of changing the provider's practice
Conduct local consensus discussions	Include local providers and other stakeholders in discussions that address whether the chosen problem is important and whether the clinical innovation to address it is appropriate
Conduct local needs assessment	Collect and analyze data related to the need for the innovation
Conduct ongoing training	Plan for and conduct training in the clinical innovation in an ongoing way
Create a learning collaborative	Facilitate the formation of groups of providers or provider organizations and foster a collaborative learning environment to improve implementation of the clinical innovation
Create new clinical teams	Change who serves on the clinical team, adding different disciplines and different skills to make it more likely that the clinical innovation is delivered (or is more successfully delivered)
Create or change credentialing and/or licensure standards	Create an organization that certifies clinicians in the innovation or encourage an existing organization to do so. Change governmental professional certification or licensure requirements to include delivering the innovation. Work to alter continuing education requirements to shape professional practice toward the innovation
Develop a formal implementation blueprint	Develop a formal implementation blueprint that includes all goals and strategies. The blueprint should include the following: 1) aim/purpose of the implementation; 2) scope of the change (e.g., what organizational units are affected); 3) timeframe and milestones; and 4) appropriate performance/progress measures. Use and update this plan to guide the implementation effort over time

Implementation Strategies

- 73 discrete Implementation Strategies; 9 categories (Waltz et al, 2015)





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

IMPLEMENTATION SCIENCE

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[1,2*], Byron J. Powell[3], Monica M. Matthieu[4,5,10], Laura J. Damschroder[2], Matthew J. Chinman[6,7], Jeffrey L. Smith[5,10], Enola K. Proctor[8] and JoAnn E. Kirchner[5,9,10]

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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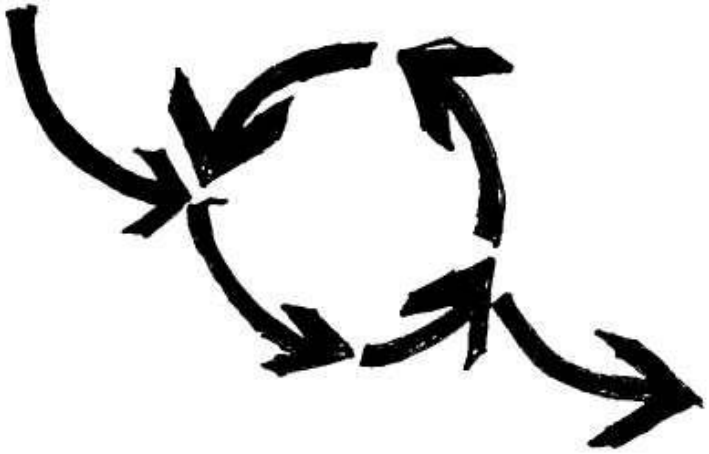
BioMed Central

Waltz et al (2015) 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. Implement Sci;10:109.

1. Use Evaluative and Iterative Strategies

N= 10



- Assess for readiness and identify barriers and facilitators: Assess various aspects of an organization to determine its degree of readiness to implement, barriers that may impede implementation, and strengths that can be used in the implementation effort

- Audit and provide feedback: Collect and summarize clinical performance data over a specified time period and give it to clinicians and administrators to monitor, evaluate, and modify provider behaviour

2. Provide Interactive Assistance

N= 4

- Facilitation: A process of interactive problem solving and support that occurs in a context of a recognized need for improvement and a supportive interpersonal relationship

- Provide clinical supervision: Provide clinicians with ongoing supervision focusing on the innovation. Provide training for clinical supervisors who will supervise clinicians who provide the innovation

3. Adapt and Tailor to Context

N= 4

- Tailor strategies: Tailor the implementation strategies to address barriers and leverage facilitators that were identified through earlier data collection

- Promote adaptability: Identify the ways a clinical innovation can be tailored to meet local needs and clarify which elements of the innovation must be maintained to preserve fidelity

4. Develop Stakeholder Interrelationships

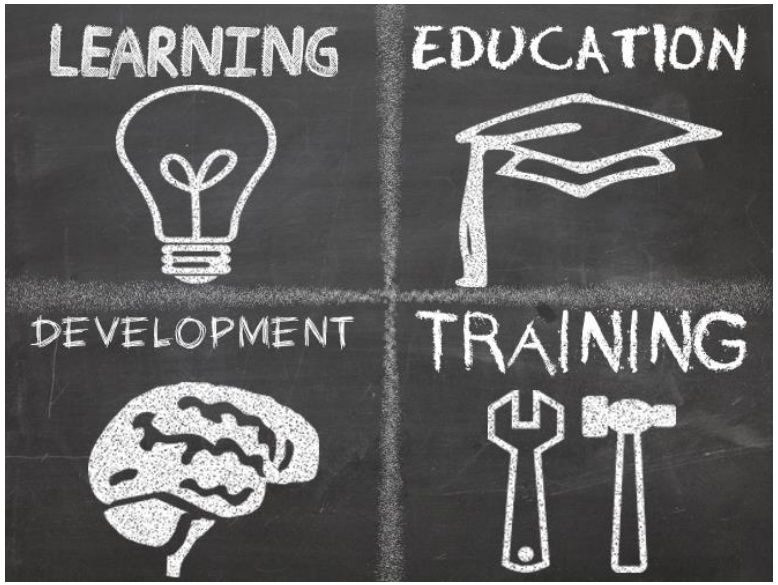
N= 17

- Identify and prepare champions: Identify and prepare individuals who dedicate themselves to supporting, marketing, and driving through an implementation, overcoming indifference or resistance that the intervention may provoke in an organization

- Inform local opinion leaders: Inform providers identified by colleagues as opinion leaders or “educationally influential” about the clinical innovation in the hopes that they will influence colleagues to adopt it

5. Train and Educate Stakeholders

N= 11



- Conduct ongoing training: Plan for and conduct training in the clinical innovation in an ongoing way
- Distribute educational materials: Distribute educational materials (including guidelines, manuals, and toolkits) in person, by mail, and/or electronically

6. Support Clinicians

N= 5

- Remind clinicians: Develop reminder systems designed to help clinicians to recall information and/or prompt them to use the clinical innovation
- Revise professional roles: Shift and revise roles among professionals who provide care, and redesign job characteristics

7. Engage Patients and Service Users

N= 5

- Intervene with patients to enhance uptake and adherence: Develop strategies with patients to encourage and problem solve around adherence
- Use mass media: Use media to reach large numbers of people to spread the word about the clinical innovation

8. Utilise Financial Strategies

N= 9

- Alter incentive/allowance structures: Work to incentivise the adoption and implementation of the clinical innovation
- Develop disincentives: Provide financial disincentives for failure to implement or use the clinical innovations

9. Change Infrastructure

N= 8

- Mandate change: Have leadership declare the priority of the innovation and their determination to have it implemented

- Change liability laws: Participate in liability reform efforts that make clinicians more willing to deliver the clinical innovation

What makes a good implementation Strategy?

- Must address and tackle numerous barriers to evidence-based care and the various properties of interventions that make them more or less amenable to implementation

- Based on evidence, theory, and stakeholder input (Powell et al, 2015)

Powell et al. Methods to improve the selection and tailoring of implementation strategies. J Behav Health Serv Res. 2015.

Developing a '*good*' Implementation Strategy

A tool to select Implementation Strategies

- ERIC project
- Study 3 (ongoing/not currently published)
- Aim to address insufficient guidance about how to select appropriate implementation strategies
- Develop a tool to guide the selecting and tailing of implementation strategies


Waltz et al. Implementation Science 2014, 9:39
http://www.implementationscience.com/content/9/1/39

IMPLEMENTATION SCIENCE

STUDY PROTOCOL Open Access

Expert recommendations for implementing change (ERIC): protocol for a mixed methods study

Thomas J Waltz[1,2*], Byron J Powell[3,4], Monica M Matthieu[7], Enola K Proctor[3]

Abstract

Background: Identifying feasible and [illegible] implementation strategies that [illegible] is a challenge for research [illegible] and [illegible] concepts, [illegible] terms and [illegible] for implementation strategies, [illegible] as a literature that provides [illegible] how [illegible] for [illegible] quality improvement [illegible] effort. In this study, we will engage an Expert [illegible] implementation scientists and mental health clinical managers to: establish consensus on a common [illegible] implementation strategy terms, definitions and categories; and develop recommendations to enhance the match between implementation strategies selected to facilitate the use of evidence-based programs and the context of certain service settings, in this case the U.S. Department of Veterans Affairs (VA) mental health services.

Methods/Design: This study will use purposive sampling to recruit Expert Panelists [illegible] implementation science experts and VA mental health clinical managers. A novel, [illegible] sequential mixed methods design will be employed. During Stage 1, the Expert Panel will participate in a modified Delphi process [illegible] of implementation strategies [illegible] be used to establish consensus on terms and definitions [illegible] implementation strategies. In Stage 2, panelists will complete a concept mapping task, which will yield distinct categories of implementation strategies as well as ratings of the feasibility and effectiveness of each strategy. Utilizing the [illegible] developed in Stages 1 and 2, panelists will complete an innovative [illegible]-based choice task in Stage 3 that involves matching implementation strategies to [illegible] implementation scenarios with varying contexts. This allows for quantitative characterization of the necessity of each implementation strategy for a given scenario. [illegible] Expert recommendation process will be employed to [illegible] about which implementations strategies are essential for [illegible] scenario.

Discussion: [illegible] selecting implementation strategies for use within specific contexts, this [illegible] understanding of implementation science and practice by sharpening conceptual distinctions among a comprehensive collection of implementation strategies.

Keywords: Implementation research, Implementation strategies, Mixed methods, U.S. Department of Veterans Affairs

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6 Guiding Principles

1. Context
2. Methods
3. Evidence-based IS
4. Importance & Feasibility
5. Number of implementation strategies
6. Implementation outcomes

Implementation strategies should be tailored and selected according to barriers and facilitators

The first step in selecting and tailoring implementation strategies is to conduct an assessment of factors that influence implementation processes and outcomes (Wensing et al, 2011)

Wensing M, Oxman A, Baker R, et al. Tailored implementation for chronic diseases (TICD): A project protocol. Implementation Science. 2011; 6(103): 1–8.

A Simple Example…

Barriers to implementation		Implementation Strategies
Lack of knowledge and skills to implement intervention	→	Distribute educational materials: *Distribute educational materials (including guidelines, manuals, and toolkits) in person, by mail, and/or electronically*
High costs associated with implementing the intervention	→	Access new funding: *Access new or existing money to facilitate the implementation*

Another Simple Example…

Facilitators to implementation		Implementation Strategies
Individuals Motivated and committed to implementing intervention	→	Identify and prepare champions: *Identify and prepare individuals who dedicate themselves to supporting, marketing, and driving through an implementation, overcoming indifference or resistance that the intervention may provoke in an organization*

Methods

Methods to Improve the Selection and Tailoring of Implementation Strategies

Byron J. Powell, PhD
Rinad S. Beidas, PhD
Cara C. Lewis, PhD
Gregory A. Aarons, PhD
J. Curtis McMillen, PhD
Enola K. Proctor, PhD
David S. Mandell, ScD

Abstract

Implementing behavioral health interventions is a complicated process. It has been suggested that implementation strategies should be selected and tailored to address the contextual needs of a given change effort; however, there is limited guidance as to how to do this. This article proposes four methods (concept mapping, group model building, conjoint analysis, and intervention mapping) that could be used to match implementation strategies to identified barriers and facilitators for a particular evidence-based practice or process change being implemented in a given setting. Each method is reviewed, examples of their use are provided, and their strengths and weaknesses are discussed. The discussion includes suggestions for future research pertaining to implementation strategies and highlights these methods' relevance to behavioral health services and research.

Powell et al (2017). Methods to Improve the Selection and Tailoring of Implementation Strategies. J Behav Health Serv Res. 2017;44(2):177-194.

Methods

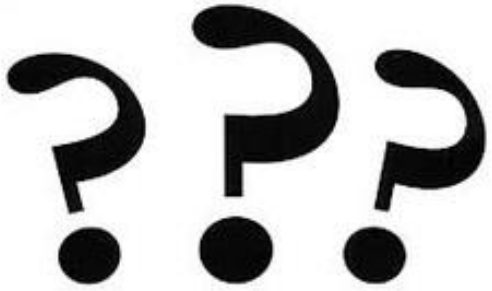
4 methods proposed

- Concept mapping
- Group model building
- Conjoint analysis
- Intervention mapping

- Step-by-step process for selecting and tailoring implementation strategies
- Emphasis on stakeholder participation
- Systematic, transparent, replicable processes

Unanswered Questions

- Which methods are most acceptable and feasible for stakeholders and to implement?
- Whether methods result in similar constellations of discrete implementation strategies
- Whether some are more efficient and effective in identifying key contextual factors and matching discrete strategies to address them
- Cost-effectiveness of these methods



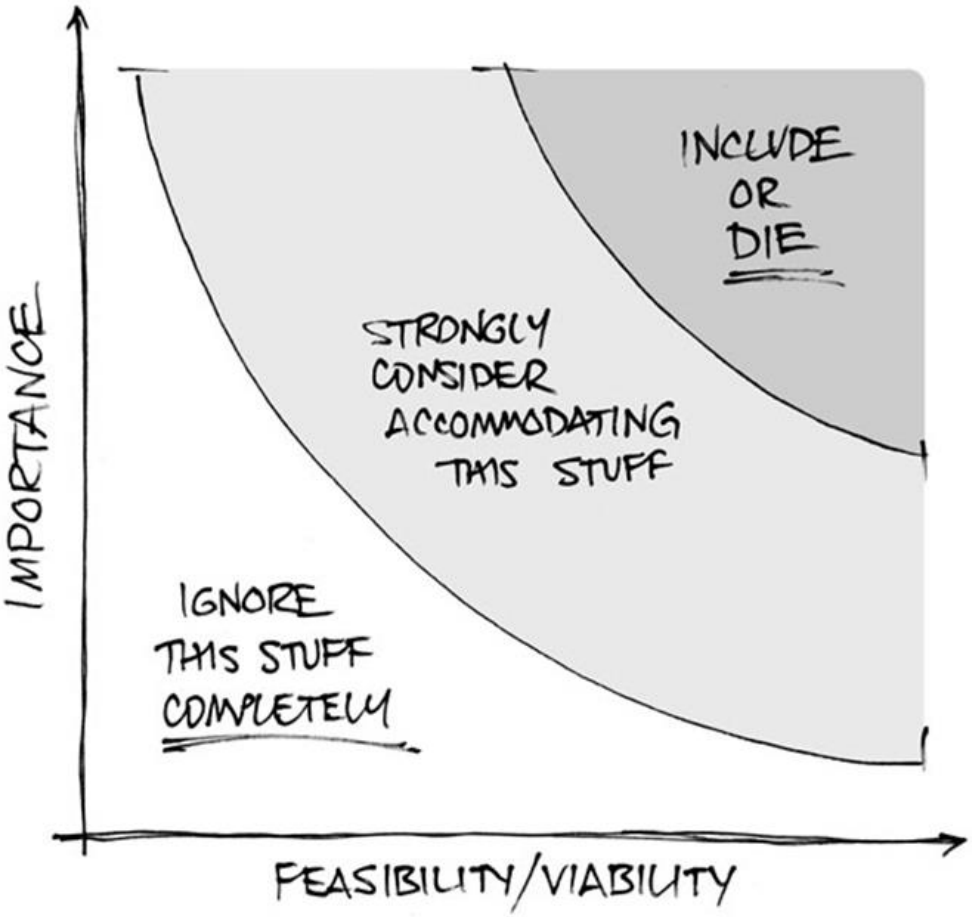
Evidence-based Implementation Strategies

- Cochrane Effective Practice and Organization of Care (EPOC) group has conducted systematic reviews that document the effectiveness of implementation strategies

- Printed educational materials
- Educational meetings
- Educational outreach
- Local opinion leaders
- Audit and feedback
- Computerized reminders
- Tailored implementation strategies

Grimshaw JM, Eccles MP, Lavis JN, Hill SJ, Squires JE. Knowledge translation of research findings. Implementation Science. 2012; 7(50):1–17.

Importance and Feasibility



'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' (p.1)

Waltz et al (2015) 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. Implement Sci;10:109.

Importance and Feasibility

- Strong, positive correlation between importance and feasibility

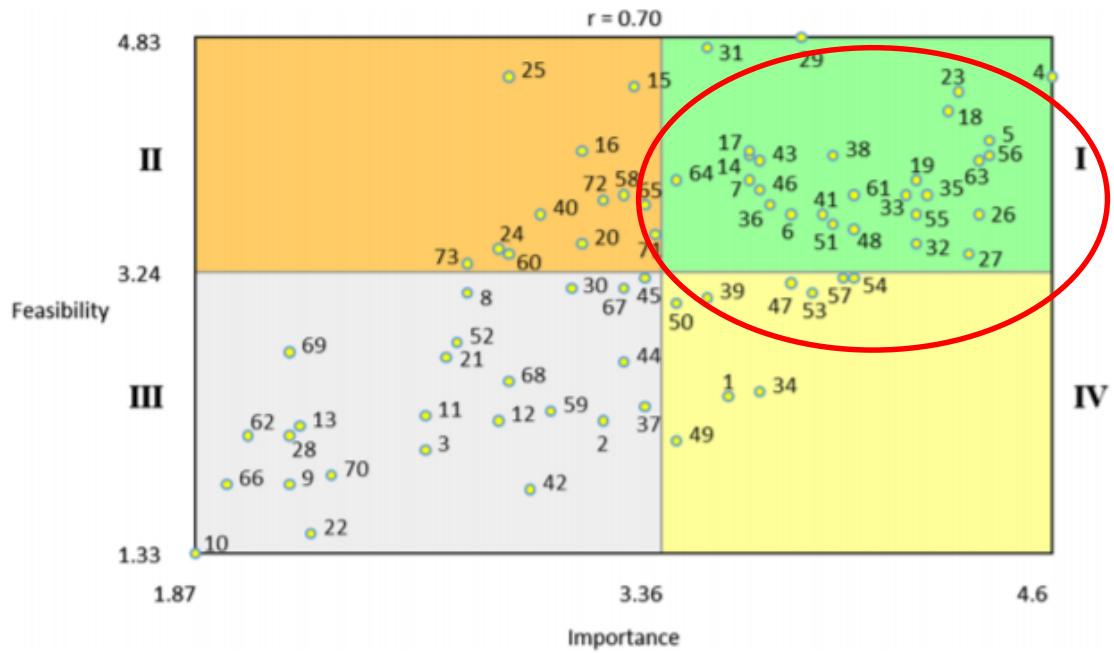
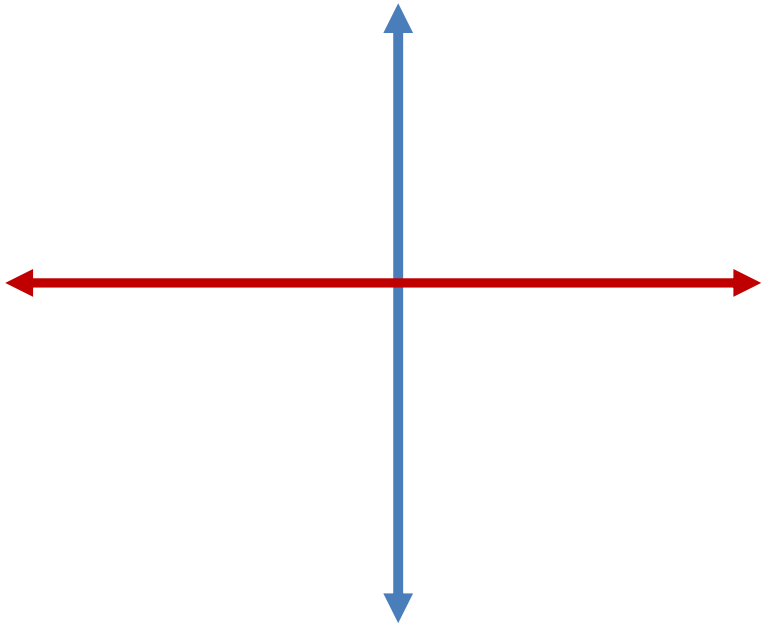


Fig. 2 Go-zone plot for all 73 strategies based on expert ratings. *Note*. The range of the *x* and *y* axes reflect the mean values obtained for all 73 of the discrete implementation strategies for each of the rating scales. The plot is divided into quadrants on the basis of the overall mean values for each of the rating scales. Quadrant labels are depicted with *roman numerals* next to the plot. Strategies in *quadrant I* fall above the mean for both the importance and the feasibility ratings. Thus, these strategies are those where there was the highest consensus regarding their relative high importance and feasibility. Conversely, *quadrant III* reflects the strategies where there was consensus regarding their relative low importance and feasibility. *Quadrants II* and *IV* reflect strategies that were relatively high in feasibility or importance, respectively, but low on the other rating scale

Importance and Feasibility

Most important: Assessing readiness and identify barriers and facilitators

Least feasible: Changing liability laws



Most feasible: Developing educational materials

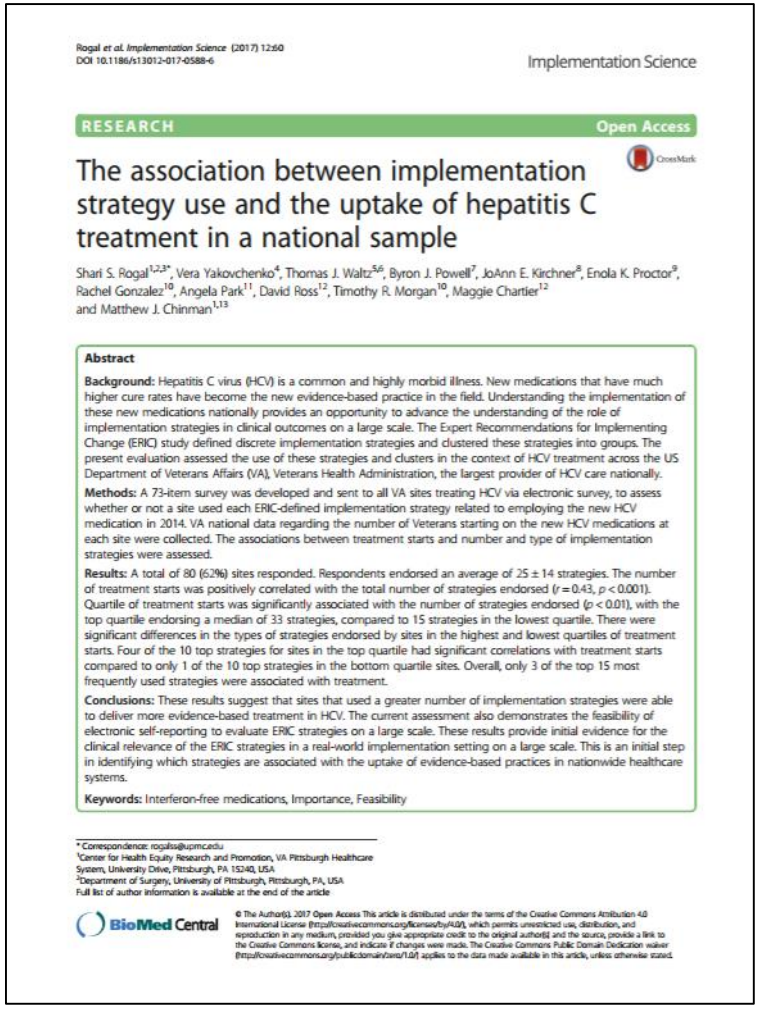
Least important: Changing liability laws

Waltz et al (2015) 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. Implement Sci;10:109.

Number of Implementation Strategies

Methods

- 73-item survey developed and sent to all VA sites treating HCV to assess whether or not a site used each ERIC-defined implementation strategy
- Assessed associations between treatment starts and number and type of implementation strategies used



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

Abstract

Background: Hepatitis C virus (HCV) is a common and highly morbid illness. New medications that have much higher cure rates have become the new evidence-based practice in the field. Understanding the implementation of these new medications nationally provides an opportunity to advance the understanding of the role of implementation strategies in clinical outcomes on a large scale. The Expert Recommendations for Implementing Change (ERIC) study defined discrete implementation strategies and clustered these strategies into groups. The present evaluation assessed the use of these strategies and clusters in the context of HCV treatment across the US Department of Veterans Affairs (VA), Veterans Health Administration, the largest provider of HCV care nationally.

Methods: A 73-item survey was developed and sent to all VA sites treating HCV via electronic survey, to assess whether or not a site used each ERIC-defined implementation strategy related to employing the new HCV medication in 2014. VA national data regarding the number of Veterans starting on the new HCV medications at each site were collected. The associations between treatment starts and number and type of implementation strategies were assessed.

Results: A total of 80 (62%) sites responded. Respondents endorsed an average of 25 ± 14 strategies. The number of treatment starts was positively correlated with the total number of strategies endorsed ($r = 0.43$, $p < 0.001$). Quartile of treatment starts was significantly associated with the number of strategies endorsed ($p < 0.01$), with the top quartile endorsing a median of 33 strategies, compared to 15 strategies in the lowest quartile. There were significant differences in the types of strategies endorsed by sites in the highest and lowest quartiles of treatment starts. Four of the 10 top strategies for sites in the top quartile had significant correlations with treatment starts compared to only 1 of the 10 top strategies in the bottom quartile sites. Overall, only 3 of the top 15 most frequently used strategies were associated with treatment.

Conclusions: These results suggest that sites that used a greater number of implementation strategies were able to deliver more evidence-based treatment in HCV. The current assessment also demonstrates the feasibility of electronic self-reporting to evaluate ERIC strategies on a large scale. These results provide initial evidence for the clinical relevance of the ERIC strategies in a real-world implementation setting on a large scale. This is an initial step in identifying which strategies are associated with the uptake of evidence-based practices in nationwide healthcare systems.

Keywords: Interferon-free medications, Importance, Feasibility

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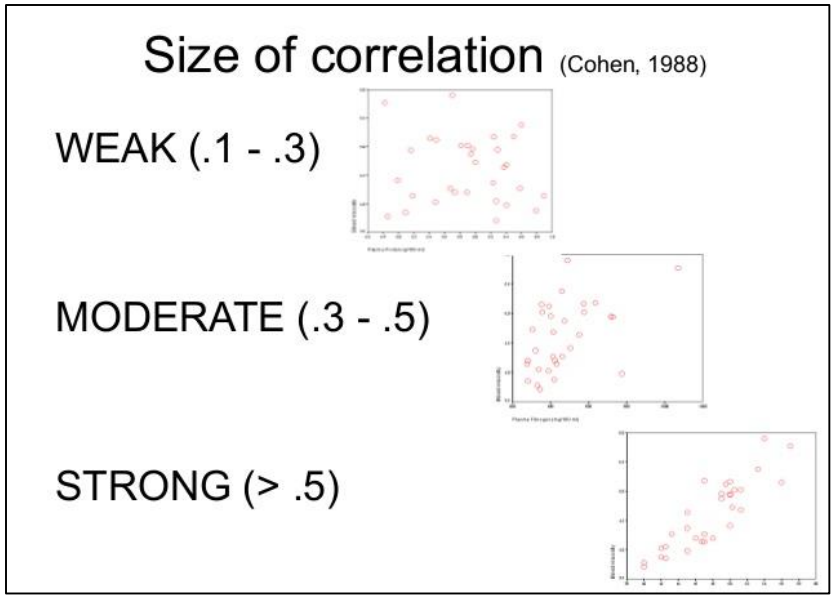
Number of Implementation Strategies

Results

- Sites used between 1 and 59 strategies (average of 25 ± 14)
- The number of treatment starts was positively correlated with the total number of strategies used ($r = 0.43$, $p < 0.001$)

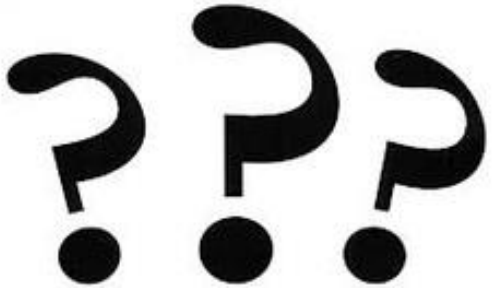
Conclusion

- Results suggest that sites that used a greater number of implementation strategies were able to deliver more evidence-based treatment in HCV.



Limitations & unanswered questions

- Sequencing, intensity, or fidelity to each implementation strategy unknown
- Rationale for strategy choices not clear- thoughtfully selected?
- Based on evidence, theory, and stakeholder input?



Implementation Strategies and Implementation Outcomes

- Implementation strategies should be selected to target and improve implementation outcome(s)

- E.g. Training or educational strategies are likely to improve fidelity

Implementation Outcomes*

Acceptability
Adoption
Appropriateness
Costs
Feasibility
Fidelity
Penetration
Sustainability

Proctor et al (2011). Outcomes for implementation research: conceptual distinctions, measurement challenges, and research agenda. Adm Policy Ment Health, 38(2):65–76.

Reporting Implementation Strategies

StaRI

Standards for reporting implementation studies

Pinnock H, Barwick M, Carpenter CR, et al. Standards for Reporting Implementation Studies (StaRI): explanation and elaboration document. BMJ Open 2017;7:e013318.

Reporting Implementation Strategies

Proctor *et al. Implementation Science* 2013, **8**:139
http://www.implementationscience.com/content/8/1/139

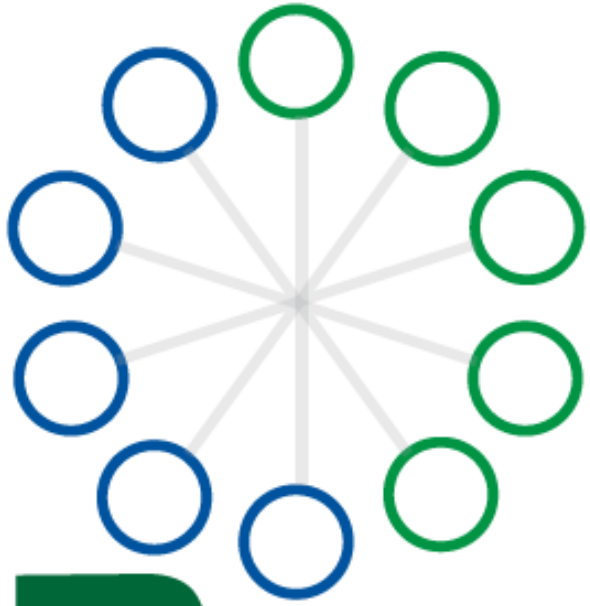
IMPLEMENTATION SCIENCE

DEBATE Open Access

Implementation strategies: recommendations for specifying and reporting

Enola K Proctor[1*], Byron J Powell[1] and J Curtis McMillen[2]

Proctor EK, Powell BJ, McMillen JC. Implementation strategies: recommendations for specifying and reporting. Implement Sci. 2013;8:139



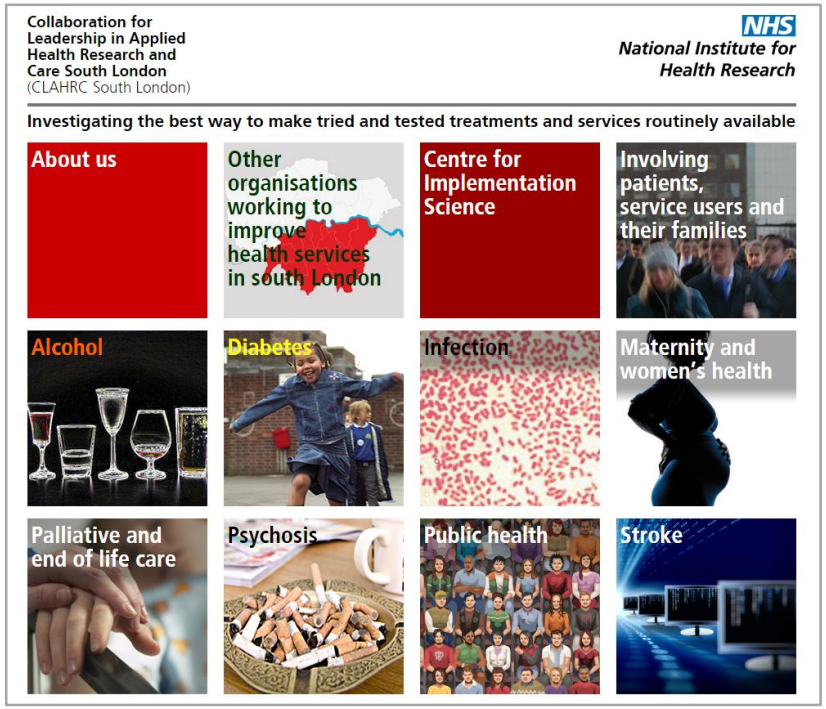
ImpRes

Implementation Science Research Development Tool

Tackling a ‘Problem’

- CLAHRC South London: 8 specialist research teams- extensive expertise and experience in conducting applied health research

- Projects implementing research findings and clinical guidelines into practice BUT varying levels of expertise in implementation science (implementation vs implementation science research)



Design Guidelines Lacking

- Although expert-derived guidelines exist for reporting implementation studies, guidelines and recommendations at the other end of the research continuum, i.e. designing, rather than reporting, implementation research are lacking.

StaRI

Standards for reporting implementation studies

- Whilst guidelines and recommendations exist to guide the design of specific aspect of implementation science research a tool bringing together such guidelines and recommendations does not currently exist.

Methods to Improve the Selection and Tailoring of Implementation Strategies

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Aim

To develop a evidence-based, expert-derived tool that:

1. Enables the degree and utilization of implementation science to be evaluated in implementation projects

2. Provide applied heath researchers, with a systematic step- by-step approach to design high-quality implementation science research

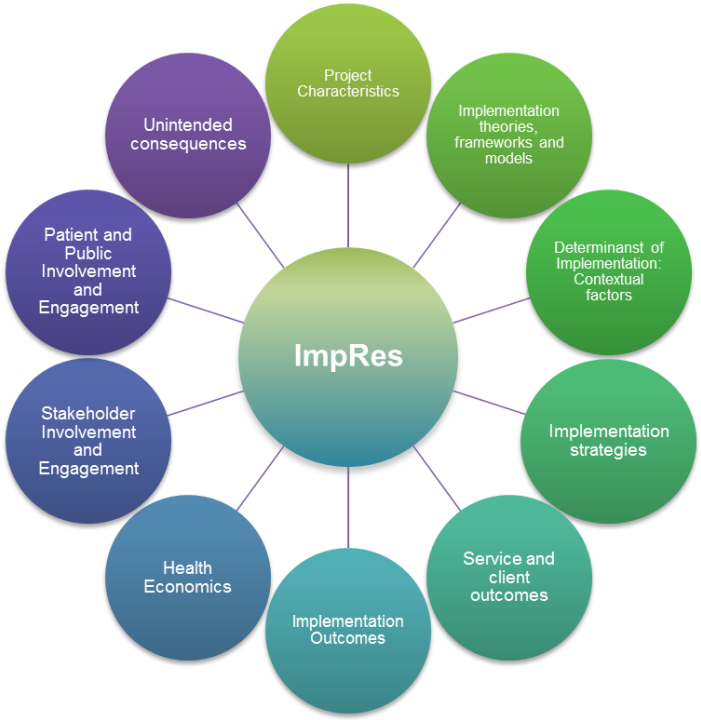
   - To identify project areas where implementation science is lacking

   - To strengthen implementation science in research projects

ImpRes

ImRes contains 10 sections that cover the core principles and methods of implementation science that researcher teams should consider when planning implementation science research:

1. Project characteristics
2. Implementation theories, frameworks and models
3. Determinants of implementation
4. Implementation strategies
5. Service and client outcomes
6. Implementation outcomes
7. Health economics in implementation research
8. Stakeholder involvement and engagement
9. Patient and public involvement and engagement
10. Unintended consequences



Application & Evaluation

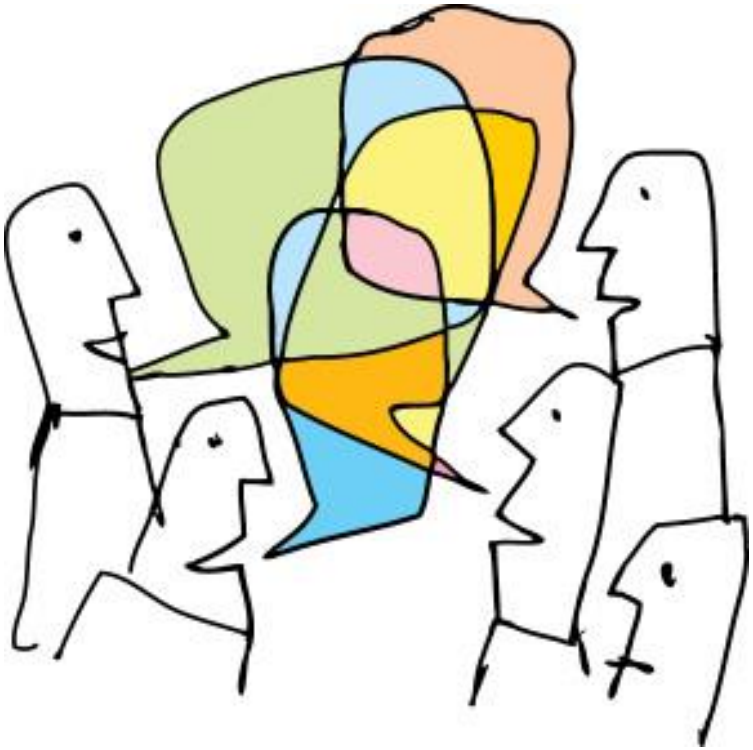
Researchers that have used the IMPRES tool to-date agreed that IMPRES is a useful tool:

- For self/project team reflection regarding implementation research
- To identify project areas where implementation science is lacking
- To strengthen implementation science in research projects
- Giving project teams feedback on their project based on IMPRES would be useful for improving the quality of implementation science research

OVER TO YOU:

PROJECT PRESENTATIONS

Group Task



Project review

TASK (45-60 minutes)

Review projects in light of implementation science principles and methods (strategies) covered in two presentations (1 hour)

- *15-20 minutes:* Identify implementation determinants (barriers and facilitators)
- *15-20 minutes:* Identify strategies (strategy list)
- *15-20 minutes:* Identify implementation outcomes to measure (what OIs will you measure)

Group Feedback (30 minutes)

- 5-10 minutes Identify one person to feedback to wider group