

Using Implementation Science Frameworks to Support Implementation and Growth of Project ECHO

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Background

Project ECHO uses videoconference to build primary care provider (PCP) capacity to manage complex patient health concerns through knowledge sharing, dissemination of best practices, and the development of virtual communities of practice. The Project ECHO model has rapidly expanded, with over 800 international ECHO programs currently in operation. As such, it is increasingly important to ensure that emerging programs maintain fidelity to the model in order to allow across-program evaluation, and to ensure a strong return on investment.

ECHO Ontario Mental Health at the Centre for Addiction and Mental Health and the University of Toronto (ECHO-ONMH) has adapted Damschroder et al.'s (2009) Consolidated Framework for Implementation Research and Proctor et al.'s (2011) Proposed Taxonomy of Implementation Outcomes to: 1) Create a set of assessment questions to help organizations assess their readiness and capacity to support an ECHO project; and 2) Provide those who have determined ECHO is the correct model with a checklist to support successful implementation that achieves fidelity to the ECHO model.

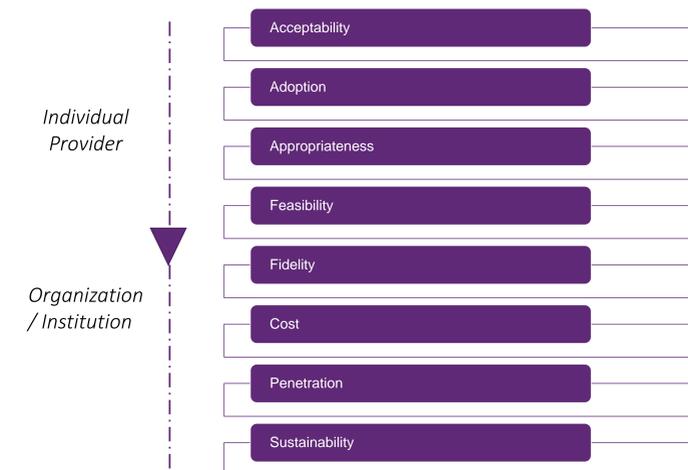
Proctor et al.'s (2011) implementation outcomes (Acceptability, Adoption, Appropriateness, Feasibility, Fidelity, Cost, Penetration, and Sustainability) have also been used to describe specific implementation outcomes measures for ECHO-ONMH (3).

Theoretical Framework

Consolidated Framework for Implementation Research (Damschroder et al., 2009)

Domain	Constructs
Intervention Characteristics	Source; evidence strength & quality; relative advantage; adaptability; trialability; complexity; design quality; cost.
Outer Setting	Patient needs & resources; cosmopolitanism; peer pressure; external policy & incentives.
Inner Setting	Structural characteristics; networks & communications; culture, implementation climate; readiness.
Characteristics of Individuals	Knowledge & beliefs; self-efficacy; individual stage of change; individual identification within organization; other personal attributes.
Process	Planning; engaging; opinion leaders; internal leaders; champions; external change agents; executing; reflecting & evaluating.

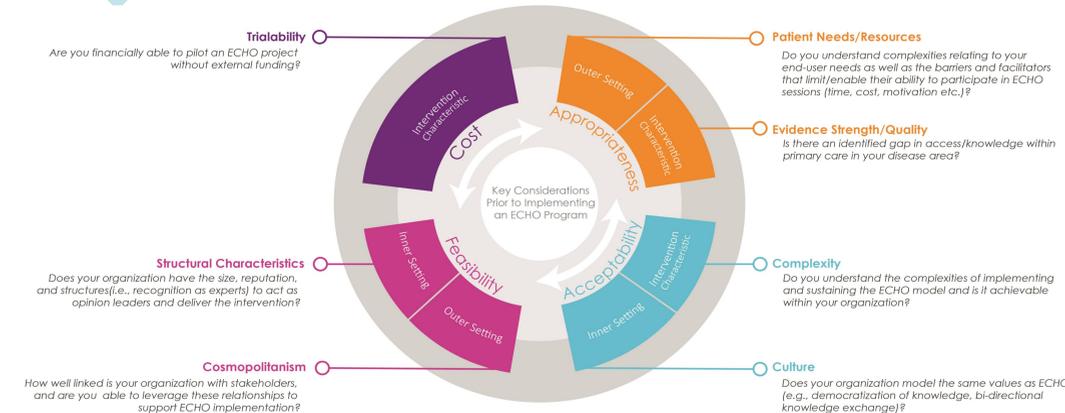
Proposed Taxonomy of Implementation Outcomes (Proctor et al., 2011)



Adapting Implementation Science Frameworks to the ECHO Model

1 Phase 1 - Pre-Implementation Organizational Readiness Questions Development of key considerations prior to adopting the ECHO model

- 1 • Damschroder's CFIR Constructs reviewed and discussed
- 2 • ECHO-related tasks mapped onto CFIR Constructs
- 3 • Questions developed, reviewed and piloted
- 4 • Questions organized according to Proctor's Implementation Outcomes
- 5 • Overlapping questions discarded



The Pre-Implementation list consists of 20 considerations which can be applied concurrently.

2 Phase 2 - Process List Development of practical, high-level processes to guide implementation

- 1 • ECHO ONMH project plans reviewed
- 2 • ECHO Institute's repository for implementation and project plan tools reviewed
- 3 • Tasks and procedures linked to 4 sub-categories of CFIR process construct
- 4 • Implementation steps discussed and categorized
- 5 • List of high-level implementation steps developed



The Process Checklist is a 26 item checklist to help launch an ECHO project; items map onto Damschroder et al.'s (2009) CFIR constructs of Planning, Engaging, Executing, and Reflecting and Evaluating.

ECHO Implementation Outcome Measures

3 Phase 3 - Proposed Measurement Criteria for ECHO-ONMH

Implementation outcome definition (Proctor et al., 2011)	Description of implementation measures for ECHO-ONMH context
Acceptability: how agreeable, palatable or satisfactory the innovation is to its stakeholders.	Mean score for weekly survey statement 'Overall, I am satisfied with the session' on a 5-point Likert scale.
Adoption: uptake of a practice or innovation by an individual or organization, including both intent to try and action itself.	Intent to try: Number of PCPs that registered for ECHO-ONMH each cycle. Action: 1. Number of participants who attend ≥1 ECHO-ONMH sessions within a given cycle. 2. Average number of participants in attendance per session within a given cycle. 3. Breakdown of participant attendance per cycle into quartiles.
Appropriateness: perceived fit, compatibility, and relevance of an innovation to an individual or organization's problem, challenge and/or setting.	Mean score for weekly session satisfaction survey statement 'This session addressed my learning need' on a 5-point Likert scale.
Cost: pricing of the intervention and its implementation.	1. Per- person cost to participate in ECHO-ONMH (72 CME hours). 2. Total cost per CME hour for ECHO-ONMH. 3. Total cost for all individuals to participate in ECHO-ONMH.
Feasibility: considers whether an innovation is practical for a provider and/or organization, shaping if it can be implemented.	Average number of sessions participants attend within a given cycle. Further analysis will explore attendance rates by profession, practice types, and practice location for those who attended ≥60% of sessions per cycle.
Fidelity: actual implementation compared to that which was prescribed by a particular protocol or model to determine adherence, quality and integrity	Adherence to five global ECHO principles within a random sample of video recorded sessions per ECHO-ONMH cycle: 1) Evidence Based Didactic; 2) Case Based Learning; 3) Technology; 4) Assess Outcomes; and 5) All Teach/All Learn
Penetration: integration or spread of a particular service, practice or innovation	Proportion of regional areas reached each cycle.
Sustainability: innovation is maintained or established as an ongoing, institutionalized offering.	Number of years that minimum adoption was sustained.

Conclusions

- » This set of foundational questions, rooted in implementation science frameworks, can help ensure organizational fit and readiness to start an ECHO project, and reduce wasted cost to funders by avoiding financing projects that are not prepared to implement an ECHO successfully.
- » The Pre-Implementation list and the Process Checklist support a standardized approach to the implementation of the ECHO model, with flexibility to adapt the model to adjust for contextual factors. These tools serve to complement the replication support that is provided to newly developing ECHO projects by the ECHO Institute in New Mexico.
- » The proposed measurement criteria for ECHO-ONMH provides an example of how implementation outcomes can be measured within ECHO programs.

References

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