

Creating the conditions for improvement review, November 2017

1. Introduction

‘Conditions for improvement’ are defined as those contextual conditions which influence the success of improvement actions. They can be internal to an implementing organisation such as information technology, and external to it such as regulation systems. These conditions are created by and operate on, different levels of the health system. There is evidence of variations in the effectiveness of QI in different settings which may be due to differences in implementation and context (1). Evidence of which conditions influence implementation at a particular site is important for helping others to assess how similar their context may be and make judgements about whether implementation is likely to be successful. However, the boundary between context and the improvement ‘intervention’ is argued to be relatively arbitrary since they interact to influence success. The aim of this brief review of the published evidence is to summarise the evidence that informs what the conditions for improvement are and how they should be considered for planning for successful improvement implementation.

1.1 Method

A purposeful rather than an exhaustive approach was taken to the identification and selection of the literature summarised. A snowball approach was used to identify relevant secondary literature utilising a recent review by the Health Foundation as a starting point (1).

2. Findings

2.1 Understanding what conditions are important for improvement success

There is some evidence published to date that has examined the contextual conditions that have been found to influence the efficacy of improvement interventions. A substantive review of evidence from controlled trials in relation to patient safety (2), used an expert panel to reach a consensus on the contextual factors that should be considered as priority for accounting for the influence of context on effectiveness of patient safety QI at an organisation. These are categorised as: a) structural organisational characteristics such as infrastructure, b) external factors such as regulatory requirements, c) patient safety culture such as leadership, and d) availability of implementation and management tools such as training.

Evidence from experimental research is limited, as contextual conditions are usually excluded and controlled for in these studies. However, there are a number of overlapping models and frameworks that have been developed from theories described in the literature in relation to the broad range of factors that may determine the success of implementing QI interventions (3).

2.1 Evidence based models or frameworks

The Health Foundation (3) identifies the Promoting Action on Research Implementation in Health Services (PARIHS) framework and the Consolidated Framework for Advancing Implementation Science (CFIR) as the most relevant for understanding the conditions that determine the success of implementing evidence based interventions and more complex multi-level improvement. These frameworks incorporate consideration of the intervention itself and the process of implementation, alongside context.

2.1 Consolidated Framework for Implementation (CFIR)

The CFIR framework provides the most comprehensive structure for understanding the determinants of successful implementation (4). The framework integrates a broad range of overlapping theoretical frameworks or conceptual models that include Greenhalgh et al's synthesis of nearly 500 published studies that produced a 'Conceptual model for considering the determinants of diffusion, dissemination and implementation of innovations in health service delivery and organisation' along with the widely used PARIHS framework. The CFIR comprises of five domains in relation to an organisation that have been found to interact to influence the effectiveness of implementation, some of which relate to characteristics of the intervention and the process of implementation in addition to the contextual conditions internal and external to an organisation.

Overview of the CFIR

Intervention Characteristics

- Whether the characteristics of the intervention enable implementation. Such as the perception of key stakeholders about the legitimacy; strength of evidence to support the intervention having desired outcomes; and whether the intervention can be successfully tailored to meet local needs.

Inner setting

- Whether the characteristics of the inner setting of the organisation will enable implementation. Such as the structural factors that relate to the maturity and stability of the organisation in terms of staff turn over and cohesion of teams; the quality of networks and communications within an organisation; whether the culture and norms are supportive of the change and the absorptive capacity for change.

Outer setting

- Whether patient needs, as well as barriers and facilitators to meet those needs, are accurately known and prioritized by the organisation. Also whether the organisation is sufficiently networked with other organisations and whether there is competitive pressure to implement an intervention due to external forces.

Individuals involved

- Whether individuals attitudes and beliefs support implementation. Such as how self-efficacy or belief in capability to executive required change supports commitment to implementation and the extent to which individuals identify with the organisation to be able to fully engage with implementation.

Implementation process

- Whether the activities of planning, engaging, executing and evaluating can be accomplished through formal and informal action to support the process of implementation. Implementation leaders and champions are seen as essential for engaging members of teams in implementation.

2.2 Tools developed from the PARIHS framework

Organisational readiness for change

The Promoting Action on Research Implementation in Health Services (PARIHS) framework has been developed into a number of tools. The Organisational readiness to change assessment (ORCA) tool was developed to support reliable assessment of organisational readiness to implement evidence-based change. The tool provides a pragmatic structure for understanding the inter-relationship of three key PARIHS constructs: the nature of the evidence, the quality of context and capacity for expert facilitation.

Overview of ORCA tool constructs

Evidence

- the nature and strength of the evidence for the proposed change (level of support for the evidence within the practice team, clinical experience and patient preferences)

Context

- the quality of the environment or setting to support the change (determinants in relation to senior leadership, staff culture and resources)

Facilitation

- the organisational capacity to facilitate the change (senior leader practices, champion characteristics and leadership implementation roles)

Context Assessment Index

The context assessment index (CAI) tool has a focus on operationalising the 'context' construct of the PARIHS framework (6). It was developed as a validated instrument to evaluate the context of practice and its readiness to implement evidence based change (7). The CAI assesses the three elements of context (culture, leadership and evaluation) along a continuum from 'weak' to 'strong' (Table 1). For an effective culture that is receptive to change, all three elements are required to be 'strong'.

Table 1: Characteristics of context in the CAI. Adapted from McCormack et al. (6)

3. Summary

In the absence of definitive evidence about the conditions for improvement, there are a number of useful tools that provide a pragmatic structure for assessing whether an intervention or change effort is likely to be successful based on existing conditions. The context assessment index (CAI) tool has a focus on operationalising the 'context' construct of the PARIHS framework which is most relevant to supporting assessment of the conditions for improvement. However, the organisational readiness for change model is particularly useful for incorporating consideration of how success will be determined by the inter-relationship between the intervention, the facilitation of implementation and the quality of the context within an organisation.

Elements	Weak Indicators	Strong Indicators
Culture	<ul style="list-style-type: none"> • Lack of clarity around boundaries • Lack of appropriateness and transparency • Lack of power and authority • Not receptive to change • Unclear values and beliefs • Low regard for individuals • Lack of consistency 	<ul style="list-style-type: none"> • Boundaries clearly defined (physical, social, cultural and structural) • Appropriate and transparent decision making processes • Power and authority understood • Receptiveness to change • Able to define culture(s) in terms of prevailing values/beliefs • Values individual staff and clients • Consistency of individuals role/experience to value • Relationship with others • Team working • Rewards/recognition
Leadership	<ul style="list-style-type: none"> • Traditional, command and control leadership • Lack of role clarity • Lack of teamwork • Didactic approaches to teaching/learning/managing 	<ul style="list-style-type: none"> • Transformational leadership • Role clarity • Effective teamwork • Enabling/empowering approach to teaching/learning/managing
Evaluation	<ul style="list-style-type: none"> • Absence of any form feedback and information • Narrow use of performance information sources 	<ul style="list-style-type: none"> • Feedback on individual, team and systems • Use of multiple sources of information on performance • Use of multiple methods, clinical, performance and experience. • Effective organisational structure

- Evaluations rely on single rather than multiple methods
- Poor organisational structure

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Evidence and Evaluation for Improvement Team (EEvIT)

The Evidence and Evaluation for Improvement Team (EEvIT) is a collaboration between Healthcare Improvement Scotlands' Evidence Directorate and ihub with support coming from experts in knowledge and information retrieval, health services research, health economics, evaluation, and data analysis within Healthcare Improvement Scotland. To find out more the team can be contacted at hcis.eevit@nhs.net.

