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Welcome to the JBI Handbook for Evidence Implementation

The JBI Handbook for Evidence Implementation is intended to provide an overview of JBI-endorsed approaches to getting evidence into practice. There are many different approaches that can be used to implement evidence into healthcare or community settings. This handbook covers some of the approaches utilised within JBI that can inform clinicians striving to get evidence into practice.

In particular, this handbook is aimed at participants undertaking the JBI Evidence Implementation Training Program (formerly Evidence-based Clinical Fellowship Program) and health professionals and organisations wanting to implement evidence into practice. The handbook serves as both a resource to contribute to the field of implementation science and as a practical guide for those who are currently undertaking or planning to undertake an evidence implementation project.

This handbook intends to cover the broad spectrum of evidence implementation approaches. The first introductory section situates implementation science within the broader evidence-based healthcare (EBHC) context. This section explains in detail the JBI Model of Evidence-based Healthcare and our approach to evidence implementation from a theoretical perspective, while highlighting some key elements that we deem critical for any evidence implementation activity.

The following sections cover the various approaches that JBI currently uses and endorses for evidence implementation. Section 2 of the handbook provides a detailed guide for evidence implementation projects using an audit and feedback approach informed by the JBI Implementation Framework as seen in the JBI Evidence Implementation Training Program (formerly Evidence-based Clinical Fellowship Program).

In the future, additional sections will be included, such as using a guideline development/adaptation process, as seen in JBI CAN-IMPLEMENT, clinical decision support systems, action research and journal clubs.

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About this Handbook

The JBI Handbook for Evidence Implementation provides guidance to health professionals, researchers and public health practitioners planning to implement evidence into their setting. This is the 1st edition of the JBI Handbook for Evidence Implementation. The handbook includes separate sections devoted to different approaches towards evidence implementation.

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Section 1: An introduction to evidence implementation

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Section 1: Contents

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Section 1 Introduction

Evidence-based healthcare (EBHC) has been defined as “clinical decision-making that considers the feasibility, appropriateness, meaningfulness and effectiveness of healthcare practices” (p.5). (Jordan et al. 2016) Healthcare practices should be informed by the best available evidence, the context in which the care is delivered, the individual patient, and the professional judgment and expertise of the health professional (Jordan, Z et al. 2016; Jordan, Z. et al. 2018). However, getting evidence into practice is not necessarily straightforward, with a simple estimate of the time it takes from evidence being created to its use in practice being 17 years (Morris, Wooding & Grant 2011). This delay in uptake is often due to a variety of gaps in the movement of research from one stage to another (i.e. from pre-clinical research through to clinical trials). How to bridge the gap between the evidence and the translation (or uptake) of research into clinical practice has been a point of ongoing debate over the years (Lang, Wyer & Haynes 2007; Pearson, Jordan & Munn 2012).

The field of knowledge translation (which we view as a broad term encompassing the movement of research findings and knowledge) has been established to address the facilitation of knowledge through the various phases of creation through to its use (Munn et al. 2018; Pearson, Jordan & Munn 2012). As eloquently stated by Woolf 2008, “translational research means different things to different people, but it seems important to almost everyone” (p.211) (SH. 2008). For some, research translation refers to bench to human research, while for others focused on healthcare delivery and improving population health, translational research refers to human research to policy or practice (Milat & Li 2017; Munn et al. 2018).

In addition to the differences in the interpretation of the definition and application of translational research, there are commonly used terms that are interchangeably applied. Translational research, knowledge translation, knowledge to action, implementation science, knowledge transfer— all of these terms are used to describe processes to address the gap between research knowledge and its application in treatment, policy and practice (Milat & Li 2017). The underlying premise for each of these terms is similar and focused on reducing this gap with the common goal to improve practice and outcomes.

Within JBI, while we acknowledge the importance of the entire translation science movement, we have a particular focus on implementing findings from systematic reviews, trustworthy clinical practice guidelines and other evidence-based resources into policy and practice. When we use the terms implementation science and evidence implementation, we are particularly focusing on strategies and methods to move the results and guidance in these evidence-based resources into policy, practice and action.
The emerging field of implementation science

Implementation science is defined as "the scientific study of methods to promote the systematic uptake of research findings and other evidence-based practices into routine practice and, hence, to improve the quality and effectiveness of health services and care" (p.1) (Eccles & Mittman 2006). This field of inquiry emerged out of a need to address the ongoing difficulties associated with getting research into practice (Nilsen, P 2015). It is well documented that existing barriers are a main contributor to the discrepancy between evidence-based recommendations and practice (Rainbird 2006; Pearson, Field & Jordan 2007). The findings of a systematic review identified three overarching domains related to barriers and facilitators of implementing evidence into practice: system, staff and intervention (Geerligs et al. 2018). System-level barriers and facilitators include environmental context (staff time, workload, workflow, space and staff turnover), culture (attitude to change, commitment, motivation, roles/trust and champions), communication processes and external requirements (reporting, standards and guidelines) (Geerligs et al. 2018). Staff-level barriers and facilitators include staff commitment and attitude, understanding and awareness, identification of individual roles, skills, ability and confidence. (Geerligs et al. 2018). Barriers and facilitators related to the intervention include the ease of integration (complexity, costs and required resources), validity of the evidence base, safety, legal and ethical concerns, and supportive components such as education and training, marketing and awareness (Geerligs et al. 2018).

Implementation science seeks to understand these barriers and facilitators, and to empower health professionals to utilise evidence-based approaches with the end goal of improving the quality and service of healthcare (Tabak et al. 2012). Implementation has been defined as “the methods to promote the systematic uptake of clinical research findings and other evidence-based practices into routine practice and hence improve the quality and effectiveness of healthcare policy and practice” (p.1) (Eccles & Mittman 2006).

A variety of theoretical approaches, models and frameworks are prescribed within this field, with the central aim to assist in developing a better understanding and explanation of why and how implementation succeeds or fails (Atkins et al. ; Ayanian & H. 2016; Brown & McCormack 2005; Gardner, Gardner & O’Connell 2014; Graham et al. 2006; Kralij 2017; Kitson, Harvey & McCormack 1998; Nilsen, 2015; Prochaska & DiClemente 1983; Rogers 1995; Rycroft-Malone & Bucknall 2010; Rycroft-Malone et al. 2002). Table 1 below details some of the existing frameworks and models available to assist with the implementation of evidence into practice. The list is by no means a comprehensive list of all existing frameworks and models, but it does highlight the complexity involved in getting evidence into practice. A recent review examining the differences and similarities of research translation frameworks identified 41 frameworks and models, with the four most published and cited frameworks being the Reaching Effectiveness Adoption Implementation Management (RE-AIM) framework, Knowledge to Action (KTA) framework, knowledge translation continuum models, or ‘T’ models, and the PARiHS frameworks. All identified frameworks described the gap that exists between research knowledge and its application into policy and practice, and all acknowledged the importance and difficulty in closing this gap (Milat & Li 2017). A plethora of published information is available on the different frameworks and models.

Table 1: Description of Implementation Theories, Models and Frameworks

<table>
<thead>
<tr>
<th>Theory / Model / Framework</th>
<th>Description</th>
</tr>
</thead>
</table>
| **Diffusion of innovation model** | • Knowledge phase: involves learning about the innovation to be implemented (such as a guideline, or best practice recommendation).  
• Persuasion phase: relies on opinion leaders with good knowledge, who are credible, approachable, can effectively influence practice and encourage others to take up new evidence in practice by personal example - facilitating individuals to form positive (or sometimes negative) attitudes to the innovation.  
• Decision phase: the point in time where the acceptability of the changes are determined by stakeholders as either worthwhile or not worth pursuing.  
• Adoption or rejection phase: reflects the outcome of the decision phase and is the ultimate decider as to whether evidence is implemented in practice. |
| **Health education theory model** | • Behaviour change requires that knowledge and skills be addressed at the individual level.  
• The positive impact of health education theory is proportional to the degree of active learning. |
| JBI implementation framework | The model has three governing principles that guide a seven-step process.  
|                            | The seven-step process is grounded in the audit/feedback/change/re-audit cycle and is of critical importance when attempting to promote sustainable change in health.  
|                            | Further detail provided in section 2 of this handbook. |
| Knowledge to action (KTA) framework | Consists of two interconnected cycles (knowledge creation and action).  
|                            | At the centre of the model is knowledge creation, which includes the three phases of knowledge inquiry (primary research), synthesis (systematic reviews), and products/tools (guidelines, algorithms, etc.).  
|                            | Surrounding knowledge creation is the action cycle, which consists of seven phases. These phases may occur sequentially or simultaneously (identify problem; adapt knowledge to local context; assess barriers to knowledge use; select, tailor and implement interventions; monitor knowledge use; evaluate outcomes; sustain knowledge use). |
| PARiHS model | Research implementation expressed as a function of the relationships among evidence, context and facilitation:  
|                | Evidence (research, clinical experience, patient experience)  
|                | Context (culture, leadership and evaluation)  
|                | Facilitation (purpose, role, skills and attitudes) |
| PDSA model | The model is cyclic comprising four stages:  
|                | Plan - the change to be tested or implemented  
|                | Do - carry out the test or change  
|                | Study – based on the measurable outcomes agreed before starting, collect data before and after the change, and reflect on the impact of the change and what was learned  
|                | Act - plan the next change cycle or full implementation |
| Pipeline model | Evidence enters the pipeline and flows through a variety of stages from awareness of the evidence to adherence by patients/clients.  
|                | Between these are stages of acceptance of the evidence, applicability of the evidence and the ability to implement into the particular area of practice.  
|                | Finally, there are stages of acting on the evidence, reaching agreement between practitioners and patients, and sustained adherence. It is only at this stage that patient outcomes will be affected. |
| RE-AIM | Reach (proportion of the target population that participated in the intervention).  
|                | Efficacy or effectiveness (success rate if implemented as in guidelines; defined as positive outcomes minus negative outcomes).  
|                | Adoption (proportion of settings, practices, and plans that will adopt intervention).  
|                | Implementation (extent to which intervention is implemented as intended in the real world).  
|                | Maintenance of intervention effects in individuals and settings over time. |
| Social theory model | Layers of culture and society at play in the work environment. |
| Theoretical domains framework | A theoretical framework that targets behaviour change in health professionals and comprises 14 domains that encompass factors likely to influence healthcare professional behaviour change: knowledge; skills; social/professional role and identity; beliefs about capabilities; optimism; beliefs about consequences; reinforcement; intentions; goals; memory, attention, and decision processes; environmental context and resources; social influences; emotion; and behavioural regulation. |
| The triple C model | Stage 1: Consultation  
|                | Stage 2: Collaboration  
<p>|                | Stage 3: Consolidation |</p>
<table>
<thead>
<tr>
<th>Translation research continuum or &quot;T&quot;-models</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Description and discovery.</td>
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<tr>
<td>• From discovery to health application.</td>
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<tr>
<td>• From health application to evidence guidelines.</td>
</tr>
<tr>
<td>• From guidelines to health practice.</td>
</tr>
<tr>
<td>• Evaluation of effectiveness and cost-effectiveness of such interventions in the real world and in diverse populations.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Trans-theoretical model</th>
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<tbody>
<tr>
<td>• Pre-contemplation</td>
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<tr>
<td>• Contemplation</td>
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<tr>
<td>• Preparation</td>
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<tr>
<td>• Action</td>
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<tr>
<td>• Maintenance</td>
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The JBI Model of Evidence-based Healthcare: Evidence Implementation

JBI has played a significant role in developing the science of synthesis and in implementing evidence in policy and practice. Within the revised JBI Model for Evidence-based Healthcare (Figure 1), implementation is defined as “purposeful and enabling set of activities designed to engage key stakeholders with research evidence to inform decision-making and generate sustained improvement in the quality of healthcare delivery” (p.67) (Jordan, Z et al. 2016).

![Figure 1: The JBI Conceptual Model for Evidence-based Healthcare](image)

Importantly, the JBI Model of Evidence-based Healthcare provides an overarching framework for implementation in healthcare. Although there is only one section specifically labelled “evidence implementation” within the model, this component should not be viewed in isolation from the entire framework. The JBI Model demonstrates the intersection between identifying health needs, generating evidence to address those needs, and then synthesising this evidence to inform evidence transfer and implementation activity. Training and education to equip health professionals with the skills, knowledge and resources for EBHC are central for evidence implementation. JBI actions this globally through collaboration, education programs, living networks, and by working with health professionals who want to drive EBHC in their area of practice. All of these preceding elements of the model are key to our understanding of evidence implementation.

Within this section of the model (with the caveat that the preceding elements of the model are also critical for evidence implementation), we assert that the components of evidence implementation include:

- Context analysis
- Facilitation of change
- Evaluation of process and outcome
Context analysis

A context analysis is diagnostic. The purpose is to understand issues within a local context that are important to practice change, and to identify factors likely to influence the proposed change. Inadequate understanding of the context in which evidence implementation occurs contributes to the gap between research and practice; therefore, it is an essential component of any evidence implementation project (Pfadenhauer et al. 2017).

While it is tempting to rush to get started, a good project is based on a clearly defined rationale, supported by data that measurably demonstrate the need for the project, and engages with key people, committees and organisational leaders to gather support for the topic as an organisational priority. Context analysis is therefore a strategic first step in the process of evidence-based practice change.
Facilitation of change

Facilitation is a useful approach to support change within an organisation. It is complex and challenging. Achieving facilitated change requires effective leadership and facilitation skills, including the ability to articulate a plan and a purpose; inform, motivate and persuade others; solicit support; and foster team development (Lizarondo & McArthur 2017).
Evaluation of process and outcome

Systematic approaches to practice change should include plans to monitor and evaluate, maintain and reinforce positive changes, and identify any ongoing issues with poor-quality practice. This may include periodic, scheduled re-evaluation. Donabedian principals suggest that evaluation should focus on the impact of changes to the structures or processes of care, as well as the outcomes, in order to identify clinically important improvements to the quality of care and patient outcomes. Successful evaluation depends on how well the evaluation methods account for changes in practice and is a key component for sustaining any progress made over time.

Drawing on existing models and theories about change management and knowledge translation, the evidence implementation wedge of the JBI Model of Evidence-based Healthcare seeks to ensure that this process is informed by and relevant to local culture and context, and builds capacity (internal facilitation) by supporting a culture of practice improvement.
Section 2: Evidence implementation projects using an evidence-based audit and feedback approach: the JBI Implementation Framework

Zachary Munn, Alexa McArthur, Kylie Porritt, Lucyl Lynn Lizarondo, Sandeep Moola, Craig Lockwood.

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- Conclusion
Section 2 Introduction

This section of the handbook provides an overview of the steps required when conducting a small (single unit or single site) or large-scale (multi-unit or multi-site) evidence implementation project across a health organisation, informed by the JBI Implementation Framework (Figure 2). In essence, an evidence implementation project is a clinically oriented, team-based initiative toward implementing the best available evidence into an organisation’s systems and processes of everyday care. These evidence implementation projects are quality-improvement initiatives utilising a very similar approach to the Plan, Do, Study, Act cycle, with an emphasis on clinical leadership and evidence-based practice change. The JBI Implementation approach is firmly grounded in the audit, feedback and re-audit process and a structured approach to the identification and management of the barriers to change. This approach has been found to be successful in the JBI Clinical Fellowship Program, where more than 300 healthcare professionals have successfully implemented and changed practice following this framework (Bayuo, Munn & Campbell 2017; Craven et al. 2014; Mwita et al. 2013; Sykes 2012). Additionally, this framework has been used in large, multi-site studies (Harvey, Gill, Kitson & Munn 2012; Kurmis et al. 2015; Stephenson et al. 2015). The development of this framework has been informed by the experience of JBI while conducting evidence implementation projects for more than 20 years, in addition to the best available evidence regarding evidence implementation from reviews of models, theories and frameworks in the field of knowledge translation and implementation science (Milat & Li 2017; Nilsen, P 2015; Strifler et al. 2018; Tabak, RG et al. 2012).

![JBI Implementation Framework](image)

Figure 2: JBI Implementation Framework

This section of this guide presents a “hands-on” overview of the practical requirements and considerations in setting up and running a successful evidence implementation project. This guide is designed to provide project teams with a comprehensive guide to conducting a JBI evidence implementation project.
Step 1: Identify the practice area

The following section provides an overview of the key information related to step 1 of the framework, including identifying the practice area, gaining consensus from stakeholders, establishing a working party and engaging stakeholders.

Identify the practice area

There are many important considerations when looking to change policy and practice, particularly when it comes to implementation. Implementation is far more likely to be successful when the questions being answered are relevant to key stakeholder groups (be they policy makers, managers, clinicians, patients/consumers) (Pearson, Jordan & Munn 2012). This is a key argument for why changes in policy or practice should be led by those who work in the area, rather than by external agencies. Clinicians and those supporting clinical practice are well situated to consider changes to the structures and processes of care. The context-rich knowledge practitioners bring has immense significance to policy or practice change processes.

Working in clinical practice and the management or administrative aspects of health service delivery raises many questions about how we might act to improve the provision of care. Sometimes these questions come from our own observations, from colleagues or from the people we care for. There are many valid and useful approaches to identifying areas of concern where practice might not be based on good evidence, or where there is a known problem or issue (Institute for Healthcare Improvement 2003). The first step is to ask as a team, “What are we trying to accomplish?” (Institute for Healthcare Improvement 2003; Langley et al. 1996). Topic identification may be supported by data such as hospital reports, adverse events, clinical pathway variance reports, morbidity and mortality data. Additionally, team members may know of better results occurring elsewhere for the same issue and be aware that evidence-based practice is not being followed (Institute for Healthcare Improvement 2003). Some approaches for identifying topic areas for evidence-based implementation projects include aspects of care that are:

- High cost
- High frequency (regardless of cost)
- High risk (known poor process or outcome)
- Topic of local concern
- Known variability in practice
- Flagged through critical incident review
- Practice area addressed by recent evidence-based guidelines.

Sometimes it is helpful to review a process of care simply because it has been an accepted routine procedure or process, and no one has previously considered whether current practice is best practice, potentially making no difference or even causing harm.

The importance of teamwork cannot be over stressed in determining the long-term success/sustainability of an implementation project.

It is important to choose a topic relevant to your clinical area of interest to which the clinical team can relate. If you do not have the support of the team (and broadly across the organisation) from the outset, the likelihood of achieving sustainable change will be challenging at best. All evidence implementation projects are soundly grounded in a multidisciplinary team effort. No single healthcare professional group is responsible for excellent patient care. The first activity to be completed during this step is to construct a rationale, using the data that you have gathered, to demonstrate that the lack of evidence implementation within the organisation is causing a problem. By providing this data to key stakeholders, you will hopefully be able to achieve the critical buy-in from both your key stakeholders and your executive leadership group.

Gaining consensus with key stakeholders

Healthcare delivery is a collaborative activity, with people working in teams, units, departments and divisions in order to bring together different strengths, skills and expertise to best serve the needs of particular groups of people. As such, identifying areas for improvement should be a collaborative process (Cranley et al. 2012). Consider who the key stakeholders are for the area of care; the patients (or clients or residents) who may be impacted by the change; the identification of relevant leaders and leadership skills that need to be accepting and engaged; and the organisational communications channels, committees and reporting requirements. This identification process means considering the trajectory of a project from start to finish, and knowing (or learning) the organisational pathways or processes to facilitate the successful completion of an evidence implementation study. Modern healthcare provision is team-based, multidisciplinary and integrative, bringing together organisational resources to efficiently and effectively meet healthcare needs.

Establishing a working group
When preparing to undertake an implementation project, consideration needs to be given to the human as well as the technical resources needed to complete the project. A project of this nature will require a team of people to engage with others and enact a process of change and change management. It is recommended that this team is established well before confirmation of the project topic, scope and direction to ensure the project is feasible and will be accepted across the organisation.

The degree to which engaging with stakeholders influences a project or process may vary, from being passively informed through to being truly active partners. A dominant theme in all literature about change management, and therefore implementation science, is the acknowledgement that leadership support is essential—particularly when it comes to large, complex organisations such as hospitals (Redfern & Christian 2003; Salmela, Eriksson & Fagerström 2012; Kitson, Alison et al. 1996; Redfern & Christian 2003; McGrath et al. 2008; Shanley 2007). Informing and persuading leadership of the need for change is critical to the long-term success of the project. The executive leadership support becomes invaluable in the constructive management of the identified barriers to the proposed change. Once you have leadership support, they will be able to direct you to the key stakeholders who should be involved. The identification of a project team that reflects the key stakeholders impacted by the project is a crucial activity during this phase of the project. The key principles governing the working party for an evidence implementation project are as follows:

- Establishing clear goals, aims or objectives
- Obtaining support (and representation where possible) from executive leadership
- Creating a clear communications strategy for the organisation
- Including representatives from all sites across the organisation or where the implementation will take place
- Ensuring an inter-professional team
- Selecting key opinion leaders, as well as representatives with knowledge in areas such as evidence-based practice, quality improvement and the evidence implementation project topic

**Stakeholder engagement**

Stakeholders reflect those who are involved in all aspects of clinical practice (generating policy on delivering and receiving care). The methods used to engage members of the stakeholder group should be transparent and allow the sharing of ideas in ways that permit ongoing feedback. When seeking stakeholder involvement, the agenda should be focused and the purpose and outcomes should be transparent and clearly articulated. Table 2 presents the core principles of stakeholder engagement.

<table>
<thead>
<tr>
<th>Core Principles of Stakeholder Engagement</th>
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<tbody>
<tr>
<td>Diversity of group members</td>
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<tr>
<td>Transparency in purpose and outcomes</td>
</tr>
<tr>
<td>Focused/deliberate agenda</td>
</tr>
<tr>
<td>Influence in achieving change/improvement</td>
</tr>
<tr>
<td>Accommodation of different opinions/ideas</td>
</tr>
<tr>
<td>Equality of ideas/input</td>
</tr>
<tr>
<td>Legitimacy of group activities</td>
</tr>
<tr>
<td>Presentation and sharing of ideas</td>
</tr>
<tr>
<td>Ongoing feedback</td>
</tr>
<tr>
<td>Inclusivity of each member in group activities</td>
</tr>
</tbody>
</table>

Stakeholder engagement can be facilitated by the following methods:

- Establishing a project steering committee
- Ensuring representative working group membership
- Ensuring all people who will be affected by the project have a chance to provide input and feedback
- Ensuring the project is transparent
- Ensuring feedback is provided frequently.

Go to Step 2: Engage change agents
Step 2: Engage change agents

This section outlines the importance of engaging with change agents who can assist with implementing evidence into practice. Change agents may be leaders, facilitators or champions; their involvement is pivotal to successful change (Kitson, Alison et al. 1996; Redfern & Christian 2003).

Types of leaders

Not all key stakeholders need to be involved or engaged with a project, but most will need to be aware, have sufficient information to be supportive, and be able to bring resources to bear for the benefit of the project as required. Different kinds of leadership exist, and knowing these types of leadership can assist in identifying whom to inform, whom to engage and whom to invite as active co-participants.

Classifications of types of leadership include:

- **System leader**: This person is an influencer and leads across departments, organisations or sectors. System leaders have the ability to overcome barriers and are able to facilitate and make progress towards change.

- **Technical expertise**: This person has exceptional knowledge in the subject matter, requiring a degree of enthusiasm and expertise. If the subject is particularly broad, such as vital signs, then technical experts with different backgrounds may be warranted.

- **Day-to-day leadership**: This responsibility should rest with someone who has time and professional interest/enthusiasm to devote to the project. This person should also be able to recruit others and encourage relevant activity.

Project management

Large-scale implementation projects may benefit from the appointment of a project manager. This person will have the following roles:

- Coordinating group member access to evidence-based healthcare resources needed to undertake the project, such as the JBI clinical audit resources
- Coordinating training sessions
- Managing timelines
- Monitoring data collection and analysis
- Scheduling project meetings to review audit results and preparing strategies for improvement
- Coordinating strategy implementation
- Ensuring feedback has been provided at all steps to the organisation.

Facilitation

In evidence implementation projects, there is often need for a person to play the lead role in achieving change at the point of care. These people are sometimes called champions, change agents or facilitators of practice change. Kitson et al. defined facilitation as “a technique by which one person makes things easier for others” (p.152) (Kitson, A., Harvey & McCormack 1998).

Health professionals face difficulties navigating the change process as it is such a complex phenomenon, and many approaches to managing change exist (Salmela, Eriksson & Fagerström 2012). Some of the essential ingredients for successful change include:

- Organisational commitment
- Active support from key stakeholders
- Recognition of the importance of change
- A credible change agent
- Face-to-face contact with practitioners to promote enthusiasm
- Ensuring targeted staff have ownership of the innovation and are empowered to change (Redfern & Christian 2003).

As you can see, a credible change agent or leader or facilitator is pivotal to successful change (Kitson, Alison et al. 1996; Redfern & Christian 2003). During the change process, these facilitators need to “guide, motivate, set norms and standards; maintain open communication, invite and listen openly and actively to the opinions, attitudes and ideas of others; continuously re-evaluate facts, beliefs and positions; encourage two-way feedback; integrate the efforts of others; promote and sustain efficient performances; and delegate power and authority” (p.424) (Salmela, Eriksson & Fagerström 2012). The steps that can lead to change include reflection, discussion, measurement and strategising approaches to change (Deegan et al. 2005; Munn, Zachary et al. 2016).

Facilitators should ensure they are communicating the purpose of change clearly to all stakeholders. (McGrath et al. 2008). This should be in the form of open consultation and dialogue (Deegan et al. 2005). As Deegan states, “people need to be involved in aspects of change that affect them, because they will only accept changes that fit into their cultures. This implies that, because stakeholders ‘own’ the changes, the processes and the outcomes, they are more likely to accept and sustain the changes” (p.26) (Deegan et al. 2005).
Findings from evaluation studies on facilitation suggested that facilitation which provides face-to-face communication and uses a range of enabling techniques can lead to positive changes in clinical and organisational practice (Harvey, G. et al. 2002).

Go to Step 3: Assess context and readiness to change
Step 3: Assess context and readiness to change

This section outlines the key components of step 3, assessment of context and readiness to change.

Context analysis

Context analysis asks the question, how ready is the organisation for change or evidence implementation? This is sometimes described as an organisation’s readiness to change. (Harvey, G. & Kitson 2016) which encompasses whether there is a commitment to change (wanting to change) in addition to the ability to change (called change efficacy) (Weiner 2009). A context analysis is a diagnostic process, the purpose of which is to understand issues within the local context that are important to practice change, and to identify factors likely to influence the proposed change. Understanding change, or creating the case for change, requires data collection and engaging with key personnel to establish their support for the project.

Contextual analysis is key when trying to investigate whether a process of change in policy or practice is feasible. There are a variety of ways of undertaking a diagnostic/situational analysis; for example, a SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis (Pickton & Wright 1998) can be a quick and effective framework at this stage. In any context, a situational analysis is vital when trying to stimulate a process of change in policy or practice. It recognises that interventions to promote change need to be tailored to the particular context. There are eight elements that should be covered in a good situation analysis. These elements are presented along with some guiding questions to help the assessment team think about what each element means. A SWOT analysis could be used and applied to each of these factors.

1. Structure - To what extent does decision-making occur in a decentralised manner, and is there enough staff to support the change process?
2. Workplace culture - To what extent is the proposed change consistent with the value and beliefs of the practice environment, and to what degree does the culture support change and value evidence?
3. Communication - Are there adequate communication systems to support information exchange relating to the change and the implementation process?
4. Leadership - To what extent do the leaders within the practice environment support (visibly and behind the scenes) the implementation?
5. Resource availability - Are the necessary human, physical and financial resources available to support implementation?
6. Knowledge, skills and attitudes - Do staff have the necessary knowledge and skills? Which potential group is open to change and new ideas, and to what extent are they motivated to implement the change?
7. Commitment to quality management - Do quality processes and systems exist to measure results of implementation?
8. Interdisciplinary relationships - Are there positive relationships and trust between the disciplines that will be involved or affected by the change?

There may also need to be cultural changes in the workplace to facilitate evidence implementation. The literature clearly indicates that culture and climate affect organisational performance, and in the context of healthcare, this can have serious effects on patient care as well as staff (Tillott, Walsh & Moxham 2013). This demonstrates the importance of being able to recognise, understand and subsequently develop effective cultures in the workplace. (Manley et al. 2011) The evidence indicates that although many tools exist to measure organisational culture and climate, many are not validated and the choice of tools will depend on the reason measuring organisational culture in the first place (Gerardi 2004; Jung et al. 2009).

Culture is deeply entrenched in an organisation, and changing it is complicated (Jung et al. 2009). The evidence base on strategies to change culture highlights this (Parmelli et al. 2011). Parmelli et al. conducted a systematic review investigating the effectiveness of strategies to change organisational culture to improve healthcare performance (Parmelli et al. 2011). Additionally, they also intended to assess the identified strategies in relation to different patterns of organisational culture. No high-quality studies met the inclusion criteria. The authors recommended further research, but noted that the lack of available evidence may be due to the lack of a clear definition of organisational culture and the ways to measure it.

Organisational culture interventions

Ng et al. (Ng et al. 2014) reviewed the evidence on organisational culture interventions across any setting. Interventions were grouped under the following categories: 1) organisational-wide culture interventions; 2) workplace civility and staff engagement interventions; (3) leadership interventions; (4) teamwork interventions; (5) anti-bullying interventions and (6) mindfulness and stress/burnout interventions.

Interventions relating to teamwork and mindfulness and stress/burnout represented half of the evidence located. The components and findings of each category are summarised in Table 3.
### Table 3. Findings from a Literature Review on Organisational Culture Interventions (Ng et al. 2014)

<table>
<thead>
<tr>
<th>Intervent ion Type</th>
<th>Description of Intervention</th>
<th>Example</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organisational-wide culture interventions</td>
<td>Large scale, complex and long term, comprising strategies at multiple levels across the organisation</td>
<td>Workshops, training, coaching to raise awareness</td>
<td>Small number of studies located but indicated carefully planned interventions that have strong support from senior management and good participation from employees resulted in positive changes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Increased communication (e.g. newsletters)</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Codes of conduct</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Role play</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Simulations</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Self-assessment tools</td>
<td></td>
</tr>
<tr>
<td>Workplace civility and staff engagement interventions</td>
<td>Purpose is to create/improve on a culture that values respect, collaboration and engagement</td>
<td>Most interventions used the Civility, Respect, and Engagement at the Workplace (CREW) program involving facilitated discussions, role play and action plans</td>
<td>Significant positive effects on workplace culture</td>
</tr>
<tr>
<td>Teamwork interventions</td>
<td>Purpose is to create/improve on a culture that nurtures teamwork and collaboration</td>
<td>All interventions were based on Crew Resource Management (CRM), a set of training procedures that uses a participative approach such as debriefing, podcasts, communication and self-review</td>
<td>Improvements in positive behaviours and attitudes created culture change</td>
</tr>
<tr>
<td>Leadership interventions</td>
<td>Targeted at managers and leaders to upskill in managing culture change</td>
<td>Executive education and coaching</td>
<td>Improvements in trust in leadership, workplace health and safety, and workplace morale</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reflective and visionary practice</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Action-learning leadership development workshops</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Leadership learning modules /interactive leadership</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Simulations and role play</td>
<td></td>
</tr>
<tr>
<td>Anti-bullying interventions</td>
<td>Purpose is to reduce bullying behaviour, including preventive and reactive measures</td>
<td>Change frameworks to guide interventions</td>
<td>Small number of studies located that showed increased awareness in prevention</td>
</tr>
<tr>
<td>Mindfulness and stress /burnout interventions</td>
<td>Interventions focused on the individual; aims to modify response to stress and enhance well-being</td>
<td>Mix of strategies such as training and mindfulness practice; could also incorporate weekly homework and coaching</td>
<td>Some benefits seen but take time to feed into culture change; relies on individual compliance</td>
</tr>
</tbody>
</table>

After reviewing the findings, the process of changing/improving culture should be systematic and clearly communicated and implemented. The literature suggests that the following elements should be considered:

- **Diagnosis of the problem/s:**
  - Identifying and understanding the current culture, as well as developing a vision on how to change it, is considered the first step in changing culture. As discussed previously, there are tools available and choosing the most appropriate will depend on an organisation's unique circumstances.
  - Vision and support from leadership, working with active members who are engaged and supportive of change
    - Brunges and Foley (Brunges & Foley-Brinza 2014) recommend that changing the culture requires full support from leaders within an organisation; they need to have vision and management tools in order to engage individuals into embracing change. Although open communication is considered vital in promoting a positive cultural message, it is also crucial that organisations demonstrate what they advocate. For example, if the tools needed to meet organisational expectations are not provided to individuals (such as providing adequate staffing), then the messages that were communicated will be seen as dishonest (Gershon et al. 2004). Periodically assessing the current culture/climate was also recommended in the literature (Gershon et al. 2004; Tillott, Walsh & Moxham 2013). This may prove to be of particular importance when there are major changes in management.
    - A combination of interventions that are evidence-based
Once the current culture/climate is identified, Brunges and Foley (2014) advocate that the organisation must clearly communicate their vision/plans to changing the culture and the reasoning behind doing so. Nilson (Nilson 1999) suggests introducing new values and behavioural norms in various ways, such as issuing policies and behavioural directives, and using training programs. It is also important to ensure that the new behaviours are rewarded through personal recognition and public acknowledgement. These values should be integrated into human resource systems, such as performance management, career development, succession planning, etc.

- Communication, communication, communication
  - Clear communication is strongly encouraged in the literature. Gershon (2004) advises that if cultural aspects within an organisation are clearly expressed, there will be improved cohesion and stability regarding the collective behaviour of individuals. If they are not articulated clearly (i.e. they constantly change, are poorly communicated, are vague, are not reinforced and are not supported well administratively), inconsistencies in perception and behaviour will result, impacting patient care and safe work practices. The values and principles of an organisation also need to be clearly communicated to individuals. This allows individual employees to compare their own values and principles with that of the organisation.

- Use of an evidence-base and evaluative process
  - Intervention strategies and implementation should be informed by the latest research and conducted within an organisation where change is most needed. An evaluative process should be incorporated into implementation projects, and should occur at different stages of the implementation project to determine effectiveness of the intervention and to ensure outcomes are achieved (Ng et al. 2014).

Lastly, an understanding that culture change takes time and a commitment to the long term are required. Culture change only happens because people want it to. Ng et al. (2014) recommend leaders identify units/areas that are ready to change and commence the intervention/s there first.

Once the topic of focus has been identified and an evidence implementation project is deemed feasible within the current setting, the JBI Implementation Framework can provide guidance to the implementation process.

Go to Step 4: Review practice against evidence-based audit criteria
Step 4: Review practice against evidence-based audit criteria

This section outlines the key components of step 4, which involves the development of evidence-based audit criteria and the review of current practice against the evidence-based criteria by conducting a clinical audit.

Evidence-based audit criteria

Clinical audit can be defined as “a quality improvement process that seeks to improve patient care and outcomes through systematic review of care against explicit criteria and the implementation of change” (p. 1) (Hart, 2002).

It is important to highlight that audit is a systematic process, not one that is ad hoc. An audit proposal or plan should be clear and easy for others to read, and make an assessment about its purpose, quality and outcomes.

Clinical audit is a critical process; it asks what is happening here. It forms the basic process in continuous quality assessment (Pearson, Field & Jordan 2009). Audit evaluates current practices. It is not a form of competency assessment, performance appraisal or a disciplinary process. However, if we implement clinical audit without communicating effectively and involving clinicians, they may feel as if it is a negative process. If audit is seen as a management tool that will be used to punish staff, then the likelihood that it will be used effectively to improve the quality of care will be diminished. The ultimate aim of audit is to improve outcomes, whatever these end points are (for example, reduced levels of pain, infection, spiritual distress).

Audit can have a number of goals: (Pearson, Field & Jordan 2009)

- It can broadly address components of clinical effectiveness in the ongoing goal of improving the quality of health care.
- It can provide the means whereby clinical units and organisations can assess and compare their work with established guidance. This may also be useful for bench-marking within or across organisations.
- It can promote self-assessment in practitioners, which can provide professional and practice development as well as add to an overall quality agenda.

An important part of implementing evidence into practice is the ability to collect data related to clinical activities via the process of clinical audit, and develop a standardised work plan incorporating problem identification, action planning and action taking. Each audit criterion needs to be generated from evidence within the literature and, at the very least, have an evidence summary supporting it (Pearson, Field & Jordan 2009).

Clinical audits should have a number of attributes. They should:

- Be professionally led
- Be seen as an educational process, even if that is only represented by raising awareness
- Form part of routine clinical practice, which is where it is most effective
- Be based on the setting of standards
- Generate results that can be used to improve patient outcomes
- Involve management in process and outcome

If the above is what audit should be, the following is what audit should not be:

- A measure of satisfactory progress for staff training
- A system of ensuring that staff in training are making satisfactory progress; this is probably a function of organisations and professional educational bodies, as well as the individual
- A performance appraisal of posts in organisational terms, such as monitoring of quantity of activity or time keeping
- A disciplinary mechanism if results show less than optimum care
- Research that is concerned with establishing new knowledge, although this issue is not always clear cut, with a large grey area or overlap between the two
- An assessment of need, which may be an outcome from the audit.

Development of JBI evidence-based audit criteria

Audit criteria in this context can be considered “well-defined standards set on the principles of evidence-based healthcare” (p.250) (Esposito & Canton 2014). Teamwork is essential in the development of audit criteria in determining the long-term success/sustainability of an implementation project. This stage requires expert skills in searching subject matter databases and critically appraising the research publications. At JBI, we undertake this complex and time-consuming process for the busy clinician. JBI audit criteria are evidence-based standards of care intended to assist the evaluation of current practice against best practice. Audit criteria are developed from topics related to policy or practice and are derived from the recommendations made within an Evidence Summary.
Audit methods

Sampling

Audit sampling can be as rigorous as that used for any research or can be based on convenience. There are no hard and fast rules, but there are benefits and disadvantages to certain methods of sampling and determining sample size.

Firstly, consider if you have adequate time, money and support within the audit schedule to examine a large population, such as every patient in the health centre or every person admitted with chest pain. Secondly, consider if the topic is one that may be significant enough to warrant ongoing audit, such as outcomes post-surgery, length of stay or diagnosis-related group data. Thirdly, know what other participants and key figures consider appropriate. If this leads to the decision to choose a sample, a form of random selection is generally considered appropriate.

With random sampling methods, each member of the population has the same probability of being included. This significantly reduces the risk of selection bias; hence, the quality of the results have greater validity. Conversely, non-probability sampling or convenience sampling means there is no way of knowing the probability of being selected; hence, the representativeness of the sample is also unknown.

Bias occurs when the results of an audit are influenced by the sampling methods used, outside influences or even the perspective of the people involved. Time-related bias may occur if the topic involved assessment of older adults with flu-like symptoms, and the audit was conducted in summer (i.e. a time of year when the condition being observed is less prevalent). Equally, retrospective audits, which review past occurrences, may lack relevance to current practice. It is important to take time to review the methods to be undertaken in the project and consider whether bias is being introduced.

Data collection methods

Observation

Observation allows the collection of data as events occur. Debate over the degree of involvement (e.g. direct or indirect observation, participatory or non-participatory observation) continues (Anguera et al. 2018; Bergold & Thomas 2019). The argument is based around the benefits of objectivity versus understanding. It may be that one method better suits your question or is more appropriate. For example, if you are auditing the provision of care in your own clinical area, you may feel obliged to participate in activities that you are actively auditing. There are no hard and fast rules, but you should be transparent about your involvement, as it may influence the results.

Questionnaires

Questionnaires are notoriously difficult to perfect but can be useful for obtaining feedback from patients and others. The way the questionnaire is constructed can direct the answer or limit the scope of responses. For example, a yes/no response to the question “Did nurses respond to your requests for analgesia promptly” is clearly black or white, but the word “promptly” may be interpreted in different ways, particularly when the action of many analgesics are time-related. In addition, nurses may not always respond in the same way, depending on how the word “respond” is interpreted.

A more sensitive question might include the use of a scale, such as always, mostly, often, rarely or never. A question with a scale avoids prompting the answer, but interpretation of certain words, for example “mostly”, could raise questions of exactly how often that is. Questionnaires that are mailed tend to get low response rates (less than 50% and often as low as 20 or 30%); therefore, follow-up is usually required. However, questionnaires continue to be widely used because of their functionality and versatility.

Interview

Interviews can gain detailed descriptions and be of benefit in sensitive topics, but are reliant on the participants' ability to express their views. Issues to consider include interviewer skill, reliability of using more than one interviewer, place and time of interview, and time needed to conduct interviews. In addition, the issue of power has to be addressed. The interviewer is often in a privileged position that allows him or her to manipulate the responses. For example, if a nurse on the ward conducts the interview with patients for the audit, would patients be truthful about their care, particularly if their pain relief rarely arrived promptly?

Document review

Document review (e.g. from case notes or records) sounds easy, but often when collecting data, it can be difficult to record a clear response to questions, and amendments may have to be made.

Pilot the methods for data collection

A pilot test with a small sample will provide evidence that the correct information is being collected. Pilots indicate if a data collection form is ambiguous, too complex, or missing the mark altogether. Pilot testing takes time, but saves time and money in the long run.
Go to Step 5: Implement changes to practice using GRiP
Step 5: Implement changes to practice using GRiP

This section outlines the key components of implementing changes to practice. Baseline clinical audit results are evaluated, and these findings are used to assist with identifying barriers and enablers to the utilisation of evidence, and planning and implementing change. Grimshaw et al. write that “unfortunately our evidence on likely effectiveness of different strategies to overcome specific barriers to knowledge translation remains incomplete. Individuals involved need to: identify modifiable and non-modifiable barriers relating to behaviour; identify potential adopters and practice environments; and prioritise which barriers to target” (p.5) (Grimshaw, JM et al. 2012). This approach to identifying barriers and targeting strategies to these barriers forms the basis of the JBI practice change method, Getting Research into Practice (GRiP) (Harvey, Gill, Kitson & Munn 2012; Kurmis et al. 2015; Munn, Zachary et al. 2015; Pearson, Field & Jordan 2009; Stephenson et al. 2015).

Getting Research into Practice

The GRiP method aims to compare the findings of the audit, identify barriers and enablers to the utilisation of evidence, and assist in developing implementation strategies to reduce the evidence-to-practice gap. The GRiP method can be undertaken in three stages: 1) evaluating baseline audit findings, 2) identifying barriers and enablers to evidence utilisation and 3) developing and implementing strategies for change.

Evaluate baseline audit findings

Before any implementation changes to practice commence, it is important to compare current practice to best practice (using the findings from the baseline audit). These findings (both good and bad) should be presented to the staff involved in the project and the working group overseeing the project. Feedback may be provided in a number of forms—verbal, printed or electronic—and it may be that a variety of these are used (when possible). Feedback can be delivered one-on-one with individuals, although there may be benefits in providing feedback to a group in a constructive way (Cooke et al. 2018). Everyone in the organisation either directly or indirectly involved needs to feel they can access data at any time. Considerable time and effort must be spent sharing the outcomes of the research. The data need to be presented in a variety of modalities to ensure everyone has the opportunity to remain informed and therefore engaged in the change process.

It is important that the facilitator reassures the project team that poor compliance in the baseline audit is to be expected in most instances. Feedback is delivered to the working group by the project leader with the purpose of identifying barriers and enablers to evidence utilisation. The project leader is required to lead the team’s review and discussion of the compliance (audit) results for each evidence-based criterion. Maintaining objectivity during the interpretation of the data is essential.

Generally, people are willing to be involved in practice change if they believe there is a good reason behind it, if they know what they need to do and if they feel they have a say in how it is brought about. When these factors are not present, it is likely that people will be resistant to change. A robust process of engagement will make clear to stakeholders the exact purpose of the change and the evidence on which the need for change is based.

Clinical practice is complex and dynamic. There are many contributing factors that might impact on practice and, in turn, on whether practice is based on the evidence. Generally, a single group or individual is not responsible for these factors; therefore, any process of change needs to encompass a no-blame attitude.

Identify barriers and enablers to evidence utilisation

While it is important to identify issues or barriers to achieving best practice, it is also important to identify existing strengths or enablers as these will help you develop strategies for practice change. Using the findings from the baseline clinical audit, the working group, led by the project leader, should aim to identify any barriers and enablers to the utilisation of evidence in practice.

Although there are common barriers to evidence implementation, there are also differences across contexts. Lack of knowledge among staff about best practice is a common barrier. Another is lack of knowledge about how to implement the best practice identified by research. Addressing these barriers, which call for training and education/raising awareness, may be easier than addressing organisational barriers, such as a lack of existing incentives that encourage best practice in health organisations. Cultural or religious-based barriers to change are also harder to address. Psycho-social barriers refer to feelings, attitudes or resistance to change due to beliefs, values and previous experiences. Resource limitations (financial, material and human) are often a major stumbling block or barrier to evidence implementation, particularly in developing country settings.

Determine and implement strategies for change

Once there has been a careful review of the baseline data against the recommended practice and the identification of potential barriers, it is time to start designing the most effective and efficient way to manage the proposed barriers and achieve a successful implementation of the best available evidence. Just as the barriers and enablers to evidence utilisation are context driven, so too are the strategies to overcome and enable change.
The wide range of barriers that underpin the gap between evidence about best practice and actual practice suggests that to facilitate evidence implementation, strategies that work on many fronts are required. In one context, a particular strategy (for example, building capacity in healthcare workers) will be more effective/important than in another. In most cases, strategies will be required that change behaviour as well as organisational culture and systems. Monitoring of change is always important, as this encourages implementation and can be used to direct future strategy for improvements.

A number of strategies can be used to promote evidence implementation. Strategies highlighted in the literature include: (Foy et al. 2005; Grimshaw, J et al. 2012; Perry et al. 2019)

- Reminders (manual or computerised): which may prompt the performance of a patient-specific clinical action, for example.
- Audit and feedback: which can be understood as any summary of clinical performance over a specified period of time.
- Local consensus process: which is the inclusion of relevant professionals in discussions to agree on the approach for managing a particular clinical problem that is important and requires change.
- Patient-mediated interventions: which is specific information sought from or given to patients.
- Local opinion leaders: where healthcare professionals nominated by their colleagues as being educationally influential lead the utilisation of evidence by example.
- Educational materials: which can be the distribution of recommendations for clinical care (such as clinical practice guidelines, audio-visual materials or electronic publications).
- Educational outreach visits: which consist of a personal visit by a trained person to healthcare professionals in his or her own specific setting.
- Interactive educational meetings: which involves participation of healthcare providers in workshops that include discussion and/or practical skill development and use.
- Didactic educational meetings: which are traditional lecture-style methods with minimal participant interaction.
- Financial incentives: which are monetary payments directly rewarding healthcare providers for specified behaviours.
- Multifaceted interventions: which are a combination of two or more of any of these strategies.

A comprehensive narrative description of the strategies implemented should provide sufficient details to readers or those who may want to use similar strategies to promote change. The information provided should address and describe in detail what the strategy was and who was involved/targeted. It should also clarify who delivered the strategy. If there were resources developed (e.g. posters/algorithms), these should be described in this section and included as an appendix. This information should be presented in table format (see the GRiP matrix in Table 4).

**Table 4: Getting Research into Practice matrix**

<table>
<thead>
<tr>
<th>Barrier</th>
<th>Strategy</th>
<th>Resources</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>W</td>
<td>What was the action to overcome the barrier (e.g. development of tool, delivering educational sessions, development of pamphlets)?</td>
<td>What resources did you use to achieve a desirable outcome (e.g. tool, charts, educational package, seminars, extra staff)?</td>
<td>What was the result? How was an improvement measured?</td>
</tr>
</tbody>
</table>

Go to Step 6: Re-assess practice using a follow-up audit
Step 6: Re-assess practice using a follow-up audit

A repeat audit after changes have occurred is the core activity of this step, including careful examination of the results and discussion among the implementation team about next steps, with the goal of 100% compliance with all proposed evidence-based criteria associated with the project (Pearson, Field & Jordan 2009).

Determining the ideal timing of this repeat audit requires careful consideration of the following:

- Type of strategies implemented (simple versus complex). For example, if one of the strategies required the introduction of a new form of documentation, this will often need to go through committee reviews and several levels of approval, each of which take time to plan. Once approved, each of the different members of the clinical team would need to be oriented to the new documentation. This is only one of possibly three to four strategies the team may need to introduce into the organisation to achieve effective implementation of the evidence
- Volume of staff involved in the process
- Experience level of staff involved
- Hostile versus accommodating culture

Once results have been collected, a careful review of the differences between the baseline and follow-up results needs to be undertaken by the project team. All data and ideas used during the review of baseline audit results must be transparent during this and subsequent repeat audits. The project team needs to feel supported in sharing their ideas about the strengths and weaknesses of current strategies and the determination of alternative solutions/strategies.

A common experience following the repeat/follow-up audit is to lose hope, particularly if the audit results show poor compliance. The project team have now entered the stage of their implementation project that has been coined the “awkward stage”. To be successful, the team need to be willing to:

- Learn from mistakes
- Provide new and effective strategies
- Continue buy-in efforts with the organisation as a whole
- Manage expectations
- Overcome fear and inertia

The executive leadership buy-in will only be upheld if the team demonstrates they are effectively managing the initial phases of the implementation by asking the question: “How are we supporting and problem solving the anticipated fallout of the change process?” The project team needs to appreciate that practice change is an ongoing process that requires constant attention.

Successful implementation on a useful scale requires organised, expert assistance:

- An individual or group of individuals with programmatic content expertise who actively work to implement the proposed strategies as intended
- These experts accumulate data and experiential knowledge and become more effective and efficient overtime
- They work simultaneously at multiple levels of the organisation/system

This expert assistance is essentially the project team. However, depending on the nature of the project, additional local implementation teams may need to be formulated. These additional teams will involve people who have the knowledge, skill, freedom and authority to act (e.g. within a larger organisation or consortium).

The data collection process for the follow-up audit should mimic that of the first audit to ensure that results and data are comparable.

Go to Step 7: Consider sustainability of the project
Step 7: Consider sustainability of the project

The key components of step 7 include considerations toward future audits and sustainability, as well as scaling up the project.

Future audits

The time frame for subsequent follow-up audits is up to the organisation, but we suggest a minimum of yearly. Table 5 provides a rough guide for how to determine the frequency of follow-up audits. Careful analysis of the current results against preceding results helps identify other areas that may need further analysis. In addition, this becomes an excellent avenue for capacity building. Core members of staff can become actively involved in auditing their practice against the identified best practice standard.

<table>
<thead>
<tr>
<th>Compliance with standards</th>
<th>Compliance with standards</th>
<th>Compliance with standards 80-100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;50%</td>
<td>50-80%</td>
<td>80-100%</td>
</tr>
<tr>
<td>Audit every 3 months 3 monthly audits</td>
<td>Audit every 6 months</td>
<td>Audit every 12 months</td>
</tr>
</tbody>
</table>

Sustainability

Sustainability refers to the capability of maintaining and sustaining evidence-based practice beyond the implementation project; it is a growing field within implementation science. Sustainability cannot be achieved without the change being embedded into the organisational norms/culture (Khalil 2017). Several emerging factors associated with sustainability include context (e.g. policy and legislation, leadership, staffing, funding), intervention characteristics (adaptability, need, complexity), processes (engagement, training, capacity building) and implementer population characteristics (skills, expertise, attitudes, motivation) (Shelton, Cooper & Stirman 2018).

The project team cannot nor should not be responsible for the ongoing clinical audits. Instead, this repeat audit responsibility needs to be handed to another. Ideally this other team is a Practice or Continuous Quality Improvement Committee who have the authority to conduct random audits and the expertise to constructively review and manage the results, or who are able to embed the data collection within current workflows and processes via an automated system.

Maintaining evidence-based practices is critical to achieving health benefits; therefore, consideration of a project’s sustainability is important (Shelton, Cooper & Stirman 2018).

Scaling up

Scaling up can be defined as “deliberate efforts to increase the impact of successfully tested health innovations so as to benefit more people and to foster policy and program development on a lasting basis” (p.2) (World Health Organisation 2010). Attention should be given to how best to scale up an implementation project from a local, small-scale clinical audit project to one undertaken on a much broader scale.

Careful consideration, strategic planning and management is required, and should focus on thoughtful resource allocation, whether the location/setting is similar enough to the original implementation project site, and how members from new sites can be included with any new initiatives (World Health Organisation 2010).
Conclusion

Evidence-based clinical audit and feedback is recognised as a valuable approach to implementing evidence into practice. Recognising and understanding the role of professional culture, organisational support and leadership in this process is pivotal to its successful utilisation.
References


Morris, ZS, Wooding, S & Grant, J 2011, The answer is 17 years, what is the question: understanding time lags in translational research, J R Soc Med, vol. 104, no. 12, pp. 510-520.


