Implementing Knowledge Translation Strategies in Funded Research in Canada and Australia: A Case Study

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> " *Having knowledge but lacking the power to express it* "
> *clearly is no better than never having any ideas at all.*

Pericles (495–429 BC)
General, statesman, and orator

There is an emerging literature describing the use of knowledge translation strategies to increase the relevance and usability of research, yet there are few real-world examples of how this works in practice. This case study reports on the steps taken to embed knowledge translation strategies in the Movember Foundation's Men's Mental Health Grant Rounds in 2013–14, which were implemented in Australia and Canada, and on the support provided to the applicants in developing their knowledge translation plans. It identifies the challenges faced by the Men's Mental Health Program Team and how these were resolved. The strategies explored include articulating knowledge translation requirements, ensuring a common understanding of knowledge translation, assessing knowledge translation plans, methods of engaging end users, and building capacity with applicants. An iterative approach to facilitating knowledge translation planning within project development was rolled out in Australia just prior to Canada so that lessons learned were immediately available to refine the second roll out. Implementation included the use of external knowledge translation expertise, the development of knowledge translation plans, and the need for internal infrastructure to support monitoring and reporting. Differences in the Australian and Canadian contexts may point to differential exposure to the concepts and practices of knowledge translation. This case study details an example of designing and implementing an integrated knowledge translation strategy that moves beyond traditional dissemination models. Lessons learned point to the importance of a long lead-up time, the use of knowledge translation expertise for capacity building, the need for flexible implementation, and the need for efficiencies in supporting applicants.

Introduction

There is an increasing emphasis on the need to integrate knowledge translation strategies into funded research processes to ensure research is relevant to identified needs and prompts action. For example, Sibbald, Tetro, and Graham (2014) and Hoeijmakers, Harting, and Jansen (2013) describe research partnership approaches to increasing the relevance of research and its use in policy and practice; Grimshaw and colleagues (2012) provide guidance on targeting research summaries and syntheses to particular audiences; Ruppertsberg, Ward, Ridout, and Foy (2014) point to the need to develop audit criteria to assess knowledge translation plans in health research proposals. Yet little is known about how research funders implement knowledge translation strategies in their grant processes or how they support applicants in developing knowledge translation plans in real-world contexts.

This article presents a worked example of how an international not-for-profit organization, the Movember

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Foundation, integrated its commitment to knowledge translation into the grant process through which it funds new research projects. A case study of the grant rounds for the Movember Foundation's Men's Mental Health Program is used to illustrate the steps taken by the Program's team to embed knowledge translation strategies in organizational operations and provide support to applicants to develop knowledge translation plans in the Men's Mental Health Program Grant Rounds, in order to identify key actions, share the lessons learned, and build capacity in the wider research sector.

The Movember Foundation's Knowledge Translation Strategy

The Movember Foundation (movember.com) is an independent, global men's charity that funds and establishes major programs of work to drive improvements for its prioritized men's health issues: prostate cancer, testicular cancer, and mental health. Operating in 21 countries, the Movember Foundation's focus is to address gaps in knowledge and in effective programs pertaining to men's health, with a focus on prevention and treatment in these key areas.

In September 2014, the Movember Foundation commissioned the Sax Institute in Australia (saxinstitute.org.au), to work with them in designing an organization-wide Knowledge Translation Strategy that would use a comprehensive approach to integrating evidence-based knowledge translation activities across the spectrum of its programs. The strategy was developed in consultation with the Movember Foundation's staff from Canada, the United Kingdom, and Australia, who had oversight of major biomedical and health services funded research programs and of the implementation of population-level programs in men's health and men's mental health. Engaging staff from each country in which the programs were funded was considered essential to capture the diversity of programs, stages of development, and local contexts in which the programs were funded and implemented.

The plan encompassed four action areas: funded research, knowledge mobilization, networking and collaboration, and infrastructure. Together, these action areas were intended to embed knowledge translation in the Movember Foundation's own operations as well as in its major funded programs. This integration would help ensure that evidence from its funded research and knowledge gained through its population-

level interventions would reach its target audiences in a way that was tailored to their needs and would prompt action. Key audiences included the Men's Health Partners who had carriage of major funded programs; organizations who could effect change based on the results of its funded research; men with lived experience of prostate and testicular cancer and mental health problems; and the community more broadly.

The Knowledge Translation Strategy included a three-year implementation plan with identified objectives and accountabilities as well as detailed strategies specific to each of its major program areas. In May 2015, the Movember Foundation finalized its Knowledge Translation Strategy and in November launched its public version (Moore et al., 2015): tinyurl.com/za66y2x

Consistent with the Movember Foundation's mission, the Knowledge Translation Strategy was intended to support and increase the impact of programs on the health and wellbeing of men and boys, through changing policy, practice, and research. Specifically, the Knowledge Translation Strategy sought to promote new knowledge from research and innovation that would advance treatment, care, and survival for men diagnosed and living with cancer, and would improve the physical and mental health and wellbeing of men and boys at a population level.

While the Knowledge Translation Strategy addressed organizational strategies broadly, it also provided detailed guidance on strategies for each of the Movember Foundation's key program areas, which were to be followed by implementation plans to be used in all countries. One of these key program areas was the Men's Mental Health Program.

The first task for the Men's Mental Health Program was to develop a detailed implementation plan targeted to the goals of the program. The implementation plan identified actions to be taken, the target audience, where the impact of each strategy should be observed, who would be accountable, what resources would be required, and what the first steps in implementation should be. The plan was completed early in 2016.

The implementation plan drew on the experience of the Men's Mental Health Program, which embedded knowledge translation strategies into its grant rounds in Australia in 2013 and in Canada in 2014 and is described in detail below. These were the organization's first attempts at integrated knowledge translation plan-

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ning in its funded research, an approach described by Graham and Tetroe in 2009, and crystallized issues that would need to be addressed in the development of the organization's Knowledge Translation Strategy and in the later design of the Men's Mental Health Programs implementation.

Key Implementation Challenges

In developing the Movember Foundation's Men's Mental Health Program implementation plan, seven challenges were identified:

1. *Different contexts.* The implementation plan was to be enacted in very different contexts, in Canada, the United States, the United Kingdom, and Australia, with their different cultures, programs, and populations. Implementation strategies cannot be universal (Research Councils UK, 2014; Kings College London & Digital Science, 2015) but must be sensitive to context and circumstances (LaRocca et al., 2012). This requires a degree of flexibility in knowledge translation planning that enables the incorporation of local knowledge and facilitation, making each unique (Kitson et al., 2008).

2. *Consistency and responsiveness.* Implementing the plan would require balancing a consistent approach with flexibility in responding to the different contexts, stakeholders, and needs. Known as the fidelity/adaptation dilemma (Cherney & Head, 2010), this is an enduring challenge where responsivity to context, while vital, risks the loss of core content or standards (Bond et al., 2000).

3. *Applicant capacity for knowledge translation.* Applicants submitting knowledge translation plans are likely to have differential expertise in knowledge translation and may require different levels of support. The complex mix of factors that influence individual capacity to engage with knowledge translation have been acknowledged (Dobbins et al., 2001; Scott et al., 2008) and are reflected in some knowledge translation frameworks (e.g. Graham et al., 2006) and theories (Ottoson, 2009).

4. *Program capability to support knowledge translation.* The Men's Mental Health Programs Team needed a realistic assessment of its capability to support knowledge translation implementation. Capacity is often intangible and is likely to differ considerably across

any organization (Kaplan, 2000). Further, knowledge translation itself is multifaceted, fuzzily defined (Straus et al., 2009) and was a relatively new practice cornerstone in the Movember Foundation. More recently, tools are being developed that assess differential capacity for knowledge translation within organizations (e.g. Makkar et al., 2016a; Makkar et al., 2016b) pointing to their important role in implementation.

5. *Rapid learning.* Embedding an action research approach that would enable lessons learned in implementation in the early funded programs to be promptly identified and shared to inform the development of new programs. The complex systems in which implementation takes place almost inevitably result in unpredictable interactions, which may strengthen or weaken knowledge translation efforts (Dixon-Woods et al., 2011). Effective knowledge translation planning is adaptive and thus maximizes the use of this information (Jones, 2011).

6. *A systems approach.* Monitoring and reporting systems were needed that would address accountability and contribute to the Movember Foundation's own understanding of best practice in knowledge translation. This approach was intended to maximize learning from experience and find ways to integrate this into everyday practice in a process of continual improvement. As the literature on learning organizations indicates, this requires effective data collection, knowledge management, and strategic leadership that nurtures an adaptive work culture (Senge, 2014).

7. *Infrastructure for knowledge translation.* Structures were needed that could enable grant recipients to share new knowledge produced by the funded projects, and to contribute to the developing understanding of and capacity for knowledge translation. Similar issues have been identified by others (Househ et al., 2011; Kothari et al., 2014; Wathen et al., 2011).

Addressing the Challenges

To describe how these challenges played out and were addressed in a concrete way, this case study reflects on the implementation of the Men's Mental Health Grant Rounds, rolled out in Australia in late 2013 and in Canada in early 2014. A summary of the strategies used in addressing the challenges is provided in Table 1.

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Table 1. Strategies used to address the seven challenges

Challenge	How the Challenge Was Addressed
1. Different contexts	A planning template was designed with broad questions and a requirement for responses to address contextual factors.
2. Consistency and responsiveness	The standardized approach was balanced with support to ensure plans were targeted to local contexts, including access to knowledge translation expertise in the application phase and suggestions about relevant resources.
3. Applicant capacity for knowledge translation	Access to knowledge translation expertise was provided for all applicants, using web conferences and a Q&A process. Mentoring by knowledge translation experts was provided to grant recipients to ensure a comprehensive and targeted approach to knowledge translation planning and implementation, and to build skills in key competencies such as in using conceptual frameworks, engaging potential partners, and managing co-production in the design, implementation, and evaluation of funded projects.
4. Program capability to support knowledge translation	Grant rounds in both Australia and Canada were managed by the same Men's Mental Health Program Team, with external knowledge translation experts invited to participate in weighting and assessing knowledge translation plans.
5. Rapid learning	Rapid identification of issues as the first grant round was implemented and the ways in which these were resolved was integral to the process. The staggered implementation meant lessons learned could be integrated without delay.
6. A systems approach	Existing monitoring and evaluation processes were adapted to include knowledge translation, with capacity building for the monitoring and evaluation team. Additional monitoring was provided in the symposium (see Challenge 7).
7. Infrastructure for knowledge translation	A symposium was held and included consultation about the development of a community of practice.

Both the Australian and Canadian grant rounds used the Men's Mental Health Request for Applications and were similar in application format and priority areas, with the application and review process managed by the same Men's Mental Health Program Team.

In introducing knowledge translation requirements into the grant rounds, the Men's Mental Health Team were able to draw on professional opinion about what might work, on their own experience of implementing knowledge translation activities, and on a somewhat limited evidence base about the effectiveness of knowledge translation strategies. Evidence of strategies' effectiveness is particularly limited in the mental health domain (Williamson et al., 2015).

Articulating knowledge translation requirements
The Men's Mental Health Team's expectations regarding the knowledge translation plans of the Request for Applications were made clear from the outset; projects required an integrated knowledge translation strategy in order to be funded. Applicants were required to outline how the knowledge produced from the project would be disseminated and used to influence and inform practice, in alignment with the project's goals. The end users of this knowledge were to be identified and engaged in the project's design early in its development; end users were broadly conceived and included men with a mental health problem, their families, community members, and practitioners. In addition, applicants were directed to the five areas identified by the

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Canadian Institutes of Health Research (CIHR; cihr-irsc .gc.ca) that contribute to successful knowledge translation strategies: goals, audiences, expertise, strategies, and feasibility in terms of financial, human, and in-kind resources. (See CIHR peer review resources: cihr-irsc .gc.ca/e/37790.html).

In setting forth requirements for knowledge translation plans, the Men's Mental Health Team anticipated that these would generate mixed results. For example, some applicants may be more familiar with the end-of-grant knowledge translation approach (Graham & Tetroe, 2009), which focuses on publication and presentations of research findings; others may agree in principle with a co-production approach (Heaton et al., 2016), but might lack the skills or networks to make this is a reality in advance of submitting an application. The Men's Mental Health Team therefore decided to provide access to knowledge translation experts for successful applicants whose knowledge translation plans needed further development. This approach would build capacity in the grant recipients, ensuring that funded projects included sound knowledge translation strategies.

Communicating knowledge translation requirements to applicants
The next task was to ensure that applicants were provided with consistent information to support the development of their knowledge translation plans in an easy and comprehensible format. The need for such assistance has been acknowledged by others; for example Proctor and colleagues (2012) provide ten "tips" for writing grant proposals. In the emerging field of knowledge translation however there are few such guides. The CIHR talks about the need to clearly communicate their knowledge translation vision to applicants (CIHR, 2012) and Barwick provides an example of a knowledge translation template to guide researchers (Barwick, 2008).

The Men's Mental Health Team devised a written Knowledge Translation Planning Template (see Appendix 1) and provided webinars shortly after the release of the Request for Applications in both countries. This was followed by consolidated Q&As, made available online and emailed to those who had indicated an intention to submit. Additionally, questions from individuals were shared for consideration by applicants prior to submission. This consolidated document was available in both official languages in Canada (i.e., English and French) and this was intended to address the fact that applicants may have very differing levels of exposure to or experience of knowledge translation.

The strategy was successful to a degree; however, the reviewers assessing the knowledge translation plans in the Australian grant round provided some pertinent feedback. The majority of proposals addressed the question of stakeholder engagement (often limiting this to the design stage), but failed to consider strategies in the implementation stage of the project. Most plans lacked the detail needed to demonstrate how the strategies would actually be operationalized or sustained. There was a lack of familiarity with the literature on the effectiveness of knowledge translation strategies and a lack of awareness about theories, models, and frameworks that might support implementation; the reviewers pointed to Colquhoun and colleagues (2014) as an example, and we are aware of others (e.g., Ottoson, 2009; Sudsawad, 2007). The Men's Mental Health Team's expectation that applicants would prioritize traditional dissemination through peer reviewed publication and presentation was also realized.

Assessing and weighting knowledge translation plans
The first grant round assessed the knowledge translation plans against three criteria:

1. The proposal contains a comprehensive knowledge translation strategy detailing how knowledge produced from the project will be shared and disseminated, in alignment with the project's goals and to prompt changes.

2. Recipients of the knowledge generated by the project have been identified and engaged in the project's design.

3. The knowledge translation strategy addresses how new knowledge gained through the project can be applied at a population level to change practice and behaviour.

In the second round, and to prompt a more considered approach by the applicants in Canada, the Team drew on the approach from Ruppertsberg and colleagues (2014) and worked with two well established knowledge translation experts, one of whom developed new criteria to assess the plans. These criteria were then used by both reviewers.

In addition, consideration was given to how to weight knowledge translation plans within the Request for Applications, using a "merit review" process similar to that described by the CIHR (2011), where the scientific merit and the potential impact are assessed using separate scores, and the assessment panel includes a re-

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searcher and a knowledge-user. In line with its definition of stakeholders, the Men's Mental Health Team took a somewhat different approach. The panel included researchers, practitioners, and men with lived experience of mental health problems. Applications were given a combined score, aimed to measuring the likelihood that the project's outcomes will support the creation, dissemination, and translation of new knowledge that would lead to behaviour change and improved mental health and wellbeing for men and boys.

Allowing for differential expertise in knowledge translation among applicants in these initial grant rounds, the panel looked for "good bones" for knowledge translation, the presence of the critical elements outlined above, and factored-in mentoring for successful applicants as a condition of funding. The flexibility in this approach was engineered to address the third challenge described above.

Monitoring and reporting on knowledge translation
In addition to establishing systems to promote and assess knowledge translation in the Request for Applications process, the Men's Mental Health Team also needed to set up monitoring and reporting systems to evaluate the implementation of the funded projects, to allow for the organization's understanding of knowledge translation to develop, and to have systems in place that would capture learning in an ongoing way.

The Men's Mental Health Team used the existing Movember Foundation system of "report cards" (au.movember.com/programs/strategy), which enables information about projects to be reviewed and in part uploaded to the Foundation's website to promote learning and transparency. Additional questions pertaining to knowledge translation were added to the annual internal project reporting process. This is consistent with Graham and colleagues (2006), who discuss the importance of monitoring knowledge translation to know how new knowledge is implemented and to assess which strategies are most effective.

Enacting a "learning organization" approach
Given the very tight timeline between the roll-out of the grant rounds in Australia and Canada, the Men's Mental Health Team identified a window of opportunity to learn from the Australian implementation and apply this learning to improve the process for the Canadian implementation. For example, based on feedback from the reviewers of Australian knowledge translation plans, and working with two Canadians with knowledge translation expertise, the requirements were adjusted

in the second round to include an additional paragraph that provided applicants with greater guidance:

> *"It is important to note that 'knowledge translation' is not merely the dissemination of project information and findings. Knowledge translation is fundamentally about practice/behaviour change and ensuring that the project learnings are implemented by others. In particular, given that the Movember Foundation's strategic goal for this project is to contribute to change at a population level, the knowledge translation strategy should address how new knowledge gained through the project can be applied at a population level."*

The staggered implementation across the two countries allowed early learning about guiding applicants in preparing knowledge translation planning in the Australian grant rounds to be rapidly taken up in the grant round in Canada,

Mobilizing knowledge
With its grants rounds in place, the Men's Mental Health Team turned its attention to systems to enable researchers to share their experiences of implementing knowledge translation strategies, to build relationships with their fellow researchers, and to identify ways to improve their knowledge translation plans. The symposium served a dual purpose as it also enabled the Men's Mental Health Team to communicate and clarify its expectations of grant recipients as they worked through their projects.

At the symposium, grant recipients were asked about their interest in developing a community of practice, a group of people who engage in collective learning around a shared endeavour (Wenger-Trayner & Wenger-Trayner, 2015). This idea resonated with the recipients and was formally included in the Men's Mental Health Programs' implementation plan. The development of a framework to underpin the community of practice is now in the design phase, and an online survey of needs has been undertaken. A pilot will be conducted late in 2016 and full implementation will include open access for all those who might wish to learn, collaborate, or network in the field of men's mental health. Opportunities for face-to-face interaction are also envisaged.

Key Learnings

Allowing sufficient lead-up time
Integrating knowledge translation into the Request for Applications process and designing strategies to sup-

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port applicants may have benefited from a longer lead-up time than the Men's Mental Health Team had at their disposal. Further, the implementation of the grants round in Canada followed swiftly on the Australian round, leaving little opportunity for the Men's Mental Health Team to investigate and evaluate other models of embedding knowledge translation into funded programs.

In addition, implementing new processes in two continents while developing new systems to support knowledge translation added to the complexity. A longer lead-up time would have allowed a more in-depth exploration of the lessons learned in others' experiences of integrating and implementing knowledge translation strategies into grant funding models and more time to review their effectiveness and transferability to the Men's Mental Health grants rounds context.

Addressing the fidelity/adaptation dilemma
The need for consistency in core components and diversity in their application is an established principal in competitively funded research processes. The Men's Mental Health Team built this flexibility into the grant applications, as the core knowledge translation components were listed and explained, and the applications were each specific to its own context, population, and identified needs. This is a relatively new aspect of knowledge translation, however, and aligns with the literature on co-production where the end product is negotiated among stakeholders and integrates diverse views (Heaton et al., 2016). Given the international context in which the grant rounds were operationalized, it would be worth exploring this in greater detail with a view to assessing its effectiveness.

Finding efficient ways to support applicants
Given the critical lead up time, the Men's Mental Health Team chose to support applicants through webinars and a Q&A process. The decision to supplement this universal approach with mentoring for grant recipients was intended to address the weaknesses identified by reviewers, in advance of projects' implementation. However, it is not clear whether the improvement in the quality of the knowledge translation plans in the Ca-

nadian round was due to the changes made to the processes, stimulating a more considered approach among applicants, or arguably, to a more widespread culture of knowledge translation in Canada compared to Australia, or to the Men's Mental Health Team's access to a larger and more established pool of knowledge translation experts in Canada. Determining whether to target resources for capacity building to the application phase, or to successful recipients, or both, will be something for the Men's Mental Health Team to review in future grant rounds. It is possible that, as a culture for knowledge translation planning becomes more widespread, a less resource-intensive process will be needed. Standardized approaches such as webinars and information materials will also be developed.

Conclusions

This case study details the Movember Foundation's experience of designing and implementing an integrated knowledge translation strategy in its grant review process and moves beyond traditional dissemination models. Lessons learned point to the importance of a long lead-up time, the use of knowledge translation expertise, the need for flexible implementation, and potential efficiencies in supporting applicants. These lessons may be of value for other agencies.

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Implementing Knowledge Translation Strategies in Funded Research

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Appendix 1. Mental Health Commission of Canada (MHCC): SPARK Training Workshop – Knowledge Translation (KT) Planning Template (Page 1 of 3)

MOVEMBER FOUNDATION MEN'S MENTAL HEALTH PROGRAM:
ENGAGING APPLICANTS IN CREATING AND INTEGRATION KT STRATEGIES (VERSION 1)

Step 1: State the Purpose of Your KT Plan

It's important to begin the KT process by describing what you would like to accomplish. What is your reason for doing KT? Answering these questions will better prepare you to build a KT plan.

• What problems are you trying to address?

• What are your objectives?

• What practice or policy are you trying to improve?

• What are the desired outcomes?

• What would be different if this knowledge were translated successfully?

Step 2: Select an Innovation

An Innovation is a product, action, service or relationship that has the potential to enhance health outcomes. (It is not the approach to delivering KT.) Is the Innovation specific enough? Is the Innovation feasible?

• What is the Innovation you want your target audience to know about/use?

• What is the knowledge base for this Innovation?

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Appendix 1. Mental Health Commission of Canada (MHCC): SPARK Training Workshop – Knowledge Translation (KT) Planning Template (Page 2 of 3)

Step 3: Specify Actors and Actions

If the Innovation is to be taken up by your organization or community, certain stakeholders (actors) will need to adopt new behaviours (actions). This step helps you recognize the actors who need to change and the actions they need to adopt, after which you will be in a much stronger position to plan your KT activities: you will know to whom you are presenting the Innovation and what you want each person to do.

• Actors:

• Actions:

Step 4: Identify Agents of Change

An agent of change is someone who motivates actors to adopt new actions. Agents of change include individuals or organizations who can effectively deliver knowledge and foster action. The effectiveness of an agent in creating change often depends upon the actors who need to change.

• Actors:

• Agents of change:

Step 5: Design your KT Plan

You're here! Many people, when they first approach KT, want to start at this phase. KT will be most effective when it is carefully planned and has an active rather than passive quality, which is why the first four steps of the I2I (Innovation to Implementation) are in place. Understanding which methods work most effectively for specific actors will allow you to select the KT method that is most appropriate.

    KT ACTION PLAN

    What do you need to do, in which order and by when? Who needs to be involved? What resources will you need? What are the potential barriers to success? How can you overcome these barriers?
      - Task
      - Who needs to be involved?
      - Resources needed (funding, people, skills)
      - Potential barriers
      - Which KT methods are available to you?
      - Which methods are appropriate for the particular actors who are meant to adopt this Innovation?

    Ensure that your KT Method is Interactive, Targeted and Tailored, Engaging, Endorsed, Championed, Action Oriented, and Persuasive.
      - Potential solutions
      - Completion date

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Step 6: Implement the KT Plan

You might choose to implement your KT plan all at once or in a gradual manner. Where there is low readiness to adopt the Innovation, it may prove best to use a phased approach to implementation, in which the Innovation is gradually introduced to different parts of the organization, system or community. Also, as you implement your plan, it is useful to get feedback through the use of actor consultations (e.g., interviews, survey, and focus groups) to get feedback about the KT process.

A few important questions to consider before implementing your KT plan:

• Is the KT plan perceived as appropriate and acceptable by the relevant actors?

• Are there particular elements of the plan which are not seen as acceptable or appropriate?

• Is the Innovation perceived by actors as effective and important?

• Is the Innovation perceived by actors as feasible in their organization, system or community?

Step 7: Evaluate Your Success

A number of evaluation frameworks have been proposed – but we have chosen to apply the RE-AIM framework developed by Glasgow and colleagues, primarily due to its emphasis upon sustainable system-level changes.

• Reach: Did the target population receive the intervention?

• Effectiveness: Did the intervention have its intended effect?

• Adoption: Was the intervention adopted by its intended users?

• Implementation: Was the intervention implemented with high fidelity to its essential features?

• Maintenance: Was the intervention maintained in practice over long-term follow-up?