

Editorial

Program evaluation within the research translation framework

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A program evaluation is the systematic collection and analysis of data designed to examine the value of a program in terms of implementation, efficiency and effectiveness.^{1–3} In healthcare, a program evaluation can demonstrate improved patient and economic outcomes or, if an improvement is not shown, the evaluation can potentially minimise avoidable waste for the health service by reducing the provision of low-value care practices.⁴ The evaluation may also reduce avoidable waste in research by improving the rate of successful replication of basic research and translation to healthcare.⁵ Program evaluation provides a bridge between research and clinical practice. The purpose of this editorial is to highlight that program evaluation lies within the research translation framework, as well as to discuss the key elements of program evaluation methodology and give examples for appropriate application of a program evaluation.

Program evaluation is a part of the research translation framework in healthcare, similar to many quality improvement activities that aim to test implementation of research in a local setting before widespread uptake. Program evaluation can be considered as a knowledge transfer step within the phases of research translation; it is reflected in the third stage of research translation, known as T3 (from guidelines to health practice), and in the fourth stage of research translation, known as T4 (from health practice to population health outcomes).⁶ Program evaluation includes both knowledge transfer (closing the ‘know-do’ gap between what is known and what is done)⁷ and implementation science (‘how to’ implement the knowledge).⁸

Program evaluation has three distinct components: formative, process and summative evaluations.^{3,9,10} The formative phase is designed to help shape the evaluation by assessing the program design and piloting it prior to implementation across the health service. For example, the formative evaluation may include: a gap analysis to report on current state compared to evidence-based clinical guidelines; a needs assessment to report the perceived want or need from those influencing or impacted by the program; and an analysis of barriers and facilitators to inform the implementation strategy.

Process evaluation is designed to determine the extent to which a program was implemented according to plan. Should a program fail, it is imperative to distinguish between a defective program and a defective implementation strategy. For example, the process evaluation outcome may simply include measured adherence to a published implementation framework using a single metric such as that for stroke guidelines¹¹ or more comprehensively consider success/lack of success to achieve the eight recommended implementation outcomes, including: acceptability, adoption, appropriateness, feasibility, fidelity, implementation cost, penetration, and sustainability.¹²

The summative evaluation may be more familiar to traditional researchers and clinicians, as this is an assessment of the overall impact of the program based on the program objectives and includes analysis of the health and economic outcomes, both intended and

unintended. The summative evaluation can occur at completion of the project or substantially after its implementation.³ To capture both the process and summative evaluations, an established tool may be used, such as the Standards for Reporting Implementation Studies: StaRI checklist,¹³ to evaluate both the implementation strategy and program effectiveness.

Core to the methodology that underpins the formative, process and summative evaluation are three corresponding elements. First, there is the development of a theory of change to conceptualise how change will occur. Also, a logic model captures the inputs (resources), activities, outputs and outcomes.⁹ In addition, there is the development of primary and secondary evaluation questions, as they relate to recommended implementation outcomes.¹²

Having reviewed what program evaluation is, the next step is to understand when to undertake a program evaluation. The impetus to complete a program evaluation may include: the development of a new program (especially when funding is contingent upon the completion of a program evaluation); awareness of new evidence; concerns about the effect or cost of an established program; plans to scale-up an established program; and as a reaction to an external threat to a service or program. The latter impetus may include the threat of funding cuts or amalgamation of services, and in this case a program evaluation may be an attempt to prove or shore up perceptions of value. A program evaluation is particularly relevant when the more common pre-intervention and post-intervention cohort or observational study designs are not appropriate.

In order to maximise the value of the program evaluation findings and reduce research waste via successful dissemination strategies, the clinical team may benefit from having a researcher as a member of the team. The researcher can provide valuable input from inception of the evaluation through to dissemination of findings, and provide the necessary link with the human research ethics regulatory authority/institutional review board. Another important consideration for program evaluation is the identification and involvement of stakeholders.¹⁴ The inclusion of stakeholders can serve to enhance an evaluation and its findings; however, challenges with obtaining and sustaining stakeholder engagement as well as the risk of equity and bias from stakeholder involvement have been identified and require careful consideration when undertaking a program evaluation.¹⁵

In Victoria, Australia, through the state government’s Department of Health and Human Services, there are opportunities for clinicians to seek funding to undertake healthcare improvement initiatives evaluated via a program evaluation. For example the ‘Better Care Victoria Innovation Fund’ targets the T3 phase of research translation (from guidelines to health practice) and the ‘Safer Care Victoria Scaling Collaborations’ targets the T4 phase of translation (from health practice to population health outcomes).¹⁶ Both of these funding schemes require a program evaluation. It is likely that similar schemes and requirements exist in other jurisdictions.

There is a plethora of literature that describes the program evaluation framework^{1–3,9,17,18} as well as published studies relating to physiotherapy that report using a program evaluation.^{19–22} However, few of the published studies actually used a program evaluation definition and framework,^{19,22} and instead reported the findings using other study designs such as an observational study.^{20,21} This indicates that while the term program evaluation is commonly used, many studies are not reported according to the framework. It is unknown how often a program evaluation framework is being utilised in the healthcare setting to evaluate a new or established program, implement new evidence, or scale-up an established program due to a likely gap in dissemination of the program evaluation findings beyond the health service. This has the potential to impact widespread implementation and uptake.

Understanding how to bring a more theoretical analytic perspective to program evaluation would improve its acceptance within the research translation framework in healthcare. Program evaluation methodology is at risk of bias from poor content-related validity, low inter-rater reliability, and self-reported bias.^{23,24} However, the last decade has seen significant development in the field of program evaluation, including the development of program evaluation reporting guidelines^{10,25} to strengthen program evaluation design and ensure systematic reporting of results.²⁶

From our experience in public health, private health and government sectors involved in research and clinician-led program evaluation, our perspective is that there has been a recent and welcome shift to integrate program evaluation into research design. With this has come a collaboration between researchers and clinicians to work together on the design, evaluation and dissemination phases of research activity. We applaud this move towards recognising the value of program evaluation and the bridging of research and clinical practice.

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References

- Owen J. *Program evaluation: forms and approaches*. third edition. New York: Guilford Press; 2007.
- Chen HT. *Practical program evaluation*. London: Sage; 2014.
- New South Wales Agency for Clinical Innovation. Understanding Program Evaluation: An ACI Framework; 2013. www.aci.health.nsw.gov.au.
- Levinson W, et al. *BMJ Qual Saf*. 2015;24:167–174.
- Chalmers I, et al. *Lancet*. 2014;383:156–165.
- Khoury MJ, et al. *Am J Epidemiol*. 2010;172:517–524.
- World Health Organisation. Knowledge translation; 2018. http://www.who.int/ageing/projects/knowledge_translation/en/. Accessed August, 2018.
- Khalil H. *Int J Evid-Based Healthc*. 2016;14:39–40.
- Department of Health and Human Services. Evaluation Guide: Centre for Evaluation and Research. Victorian Government, 1 Treasury Place, Melbourne; 2017. <https://intranet.dhhs.vic.gov.au/evaluation-and-research-support>.
- Chacón Moscoso S, et al. *Int J Clin Health Psychol*. 2013;13:58–66.
- National Stroke Foundation. Implementing the Clinical Guidelines for Stroke Management; 2011. www.strokefoundation.com.au.
- Proctor E, et al. *Adm Policy Ment Health*. 2011;38:65–76.
- Pinnock H, et al. *BMJ*. 2017;356:i6795.
- Johnson K, et al. *Am J Eval*. 2009;30:377–410.
- Brandon PR, Fukunaga LL. *Am J Eval*. 2014;35:26–44.
- Department of Health and Human Services. Better Care Victoria funded innovation projects; 2018. <https://www.bettercare.vic.gov.au/innovation-fund>. Accessed August, 2018.
- Newcomer KE, et al. *Handbook of practical program evaluation*. Hoboken, USA: John Wiley & Sons; 2015.
- Fitzpatrick JL, et al. *Program evaluation: Alternative approaches and practical guidelines*. Pearson; 2004.
- McAuley C, et al. *Physiother Can*. 2014;66:274–285.
- Solomon P, Salfi J. *Educ Health*. 2011;24:616.
- Dufour SP, et al. *Physiother Theory Pract*. 2015;31:29–38.
- Bajnok I, et al. *Contemp Nurse*. 2012;42:76–89.
- Brandon PR, Singh JM. *Am J Eval*. 2009;30:123–157.
- Peck LR, et al. *Am J Eval*. 2012;33:350–365.
- Portell M, et al. *Psicothema*. 2015;27:283–289.
- Labin SN, et al. *Am J Eval*. 2012;33:307–338.