

Knowledge Translation: Bridging gaps between researchers and policy makers

“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

The problem

Research findings are often caught in the know-do gap: they are not acted upon in a timely way or not applied at all. According to a [Lancet study](#)¹, the failure to put research findings into action is a major societal issue and contributes to 200 billion dollars of wasted research funding because the full potential of studies is not realized. Individual studies rarely, by themselves, [provide sufficient evidence for practice and policy changes](#)². There are two main reasons for this: dissemination failure (evidences don't reach policy makers and, when they do, stakeholders cannot understand them) or knowledge production failures (not producing research addressing real needs and problems of the knowledge users, who can be policy makers, practitioners, etc. This knowledge gap is currently present in all areas, ranging from biology to social sciences.

The solution: Knowledge Translation

Over the last decades, there has been increasing international research attention on how to reduce the evidence-practice and policy gap. One of the most used, referenced and researched approaches to bridge this gap is Knowledge Translation (KT) or Knowledge Integration (KI), often described in more than 20 other terms. Independently of naming, KT is an umbrella of tools and activities to move research evidences into the hands of people and organizations who can put them into practical use to generate impact. Knowledge translation aims to get the right information, to the right people, at the right time³, and in the most effective way to ensure that policies, programs and practice are informed by the best available evidence. It is a solution to increase the relevance, applicability and impact of research in all fields.

Origins

¹ Macleod MR, Michie S, Roberts I, Dirnagl U, Chalmers I, Ioannidis JPA, et al. Biomedical research: increasing value, reducing waste. *Lancet*. 2014;383:101–104. doi: 10.1016/S0140-6736(13)62329

² Grimshaw JM, Eccles MP, Lavis JN, Hill SJ, Squires JE. Knowledge translation of research findings. *Implement Sci*. 2012;7:50. Published 2012 May 31. doi:10.1186/1748-5908-7-50

³ Garinger C, Reynolds K, Walker J, Firsten-Kaufman E, Raimundo A, Fogarty P, Leonhart M. Mobilizing Minds Research Group. 2016. Mobilizing minds: Integrated knowledge translation and youth engagement in the development of mental health information resources. *International Journal of Community Research and Engagement* 9(1): 172-185

Although the practice of knowledge translation started in the agriculture, it was in the health sector that the concept gained traction and importance. KT techniques applied to health began to be developed in the 70's, but in the end of 90s and 2000 became more institutionalized and implemented by United States and Canada, which is currently the reference country in this field. Although the majority of literature on knowledge translation relates to health, the concept is gradually expanding to other areas such as the legal field (in the US). It has been studied as an effective tool and process to sensitize policy makers, especially when they actively participate on the research process: from the definition of research gaps and needs to the implementation.

How KT works with policy makers

A widely recognized and accepted tenet of knowledge translation is the integration of knowledge users - who can use the results to inform decisions - throughout the research process, starting with identification of the research question. According to Graham, Ian D et al. (2018)⁴, "this is a key step in achieving societal impact and a way for society to speak to science." Stakeholders include all those with an interest in the issue or research. They collaborate on issue-driven research with the expectation the research will generate implementable solutions to long-standing problems on the targeted area. A [study from University College London \(UCL\)](#)⁵ identified six effective intervention mechanisms with policy makers: awareness of evidence-informed decision-making; agreement about what is evidence; communication and access to evidence; facilitation of engagement between researchers and decision makers; decision makers' skills to access and use evidence; and influencing decision-making structures and processes.

Importance of targeted messages to the audience

Dissemination efforts need to take into account communication pillars such as the message, source, audience, and channel. According to Grimshaw, Jeremy M et al., actionable messages and policy briefs are more appropriate materials to policy makers. Evidence summaries help them better understand the findings presented in systematic reviews. One-on-one meetings, workshops and seminars are also essential channels of distribution⁶. It is also important to create an environment and an infrastructure (such as platforms) that address the needs of various stakeholders involved in the process. They should be effective to overcome common barriers in the knowledge translation such as the sheer volume of research evidence currently

⁴ Graham ID, Kothari A, McCutcheon C, Integrated Knowledge Translation Research Network Project Leads. Moving knowledge into action for more effective practice, programmes and policy: protocol for a research programme on integrated knowledge translation. *Implement Sci.* 2018;13(1):22. Published 2018 Feb 2. doi:10.1186/s13012-017-0700-y

⁵ Langer, Laurenz & Tripney, Janice & Gough, David. (2016). The Science of Using Science: Researching the Use of Research Evidence in Decision-Making. *Technical Report*.

⁶ Brownson RC, Eyles AA, Harris JK, Moore JB, Tabak RG. Getting the Word Out: New Approaches for Disseminating Public Health Science. *J Public Health Manag Pract.* 2018;24(2):102-111.

produced, access to research evidence sources, time to read evidence sources and skills to appraise and understand research evidence.

Evidences of impact

Some systematic reviews of interventions evaluating the effects of knowledge translation strategies for policy makers or senior service managers were able to show the following impacts:

- A study from Mc Master University sent five systematic reviews to public health officials and followed up with surveys at three months and two years. The articles reported from 23% to 63% of respondents declaring they had used systematic reviews in policymaking decisions⁷.
- A randomized controlled trial evaluated the impact of knowledge translation strategies in 141 Canadian health departments and observed that tailored or targeted messages combined with access of systematic reviews had a significant effect on public health policies and programs ([Dobbins Maureen et al., 2009](#))⁸

Factors that influence the use of research evidence in policy making

A research by the Canadian Population Health Initiative⁹ mapped out the key factors for the uptake of evidences by policy makers in 16 studies conducted across a variety of jurisdictions, policy domains, content areas, and time periods. Two factors emerged as being essential to increase the policy makers' use of research evidence:

- interactions between researchers and policy makers in the context of policy networks such as formal advisory committees and in the context of informal relationships;
- research that matched the beliefs, values, interests, or political goals and strategies of elected officials, social interest groups, and others

Case studies

Wales Centre for Public Policy

Funded in 2014 to address key economic and societal challenges through the use of evidence, WCPP has been implementing KT tools with success. Their approach focuses on three steps: fostering mutual understanding of evidence needs and policy questions; facilitating communication and access to evidence; facilitating interaction between decision-makers and researchers. Policymakers often better respond to narratives and case studies which show how policies affect individuals' everyday lives. Evidence presented in this way is far more likely to be used.

⁷ Perrier L, Mrklas K, Lavis J, Straus S. Interventions encouraging the use of systematic reviews by health policymakers and managers: A systematic review. *Implement Science*. 2011;6

⁸ Dobbins, M., Hanna, S. E., Ciliska, D., Manske, S., Cameron, R., Mercer, S. L., ... Robeson, P. (2009). A randomized controlled trial evaluating the impact of knowledge translation and exchange strategies. *Implementation Science*, 4(1). doi:10.1186/1748-5908-4-61

⁹ Lavis J, Hammill AC, Gildiner A, McDonagh RJ, Wilson MG, Ross SE, Ouimet M, Stoddart GL. A systematic review of the factors that influence the use of research evidence by public policymakers: *Report submitted to the Canadian Population Health Initiative*. Hamilton, Canada; 2005.

Movember Foundation (*Multinational charity to raise awareness of and money for men's health*)

Besides introducing knowledge translation plans as a requirement for the Request for Proposals process to fund new projects, the organization created a mechanism to inform policy makers. The Prevention Centre's innovation collaborative approach aims to bring together researchers, policy makers and practitioners to develop research questions, conduct research, and analyze, interpret and disseminate the findings. This integration aims to reach its target audiences in a way that was tailored to their needs and would prompt action. The results are currently being monitored.

Brazil

EasyTelling's founder, Maria Paola de Salvo, implemented knowledge translation strategies while she was the communications director for a Bill & Melinda Gates Foundation program in Brazil, the Grand Challenges Brazil. The goal was translating evidences from 20 research projects funded by Grand Challenges to sensitize policy and decision makers at the Ministry of Health (MoH), which is a co-founder of the program. By putting researchers and policy makers together, the initiative was able to achieve the following results:

- The first meeting ever held by the Ministry of Health inviting researchers funded by the program to discuss the projects evolution and keep track of results;
- R\$1.2 million additional fund to follow up new stages of projects on maternal and child health because the MoH understood the costs and benefits to the public health system;
- Trainings to the 20 researchers funded by the program to help them communicating better their results and evidences;
- The launch of two new Grand Challenges' calls for proposals on topics and research questions based on real needs and knowledge gaps of MoH policy makers in maternal and child health and antimicrobial resistance. It resulted in 25 new research projects recently funded.