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Are public health researchers in Brazil ready and supported to do knowledge translation?

Os pesquisadores em saúde pública no Brasil estão preparados e apoiados para a translação do conhecimento?

¿Están los investigadores en salud pública preparados y se encuentran apoyados para transmitir conocimientos?

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Introduction

Are public health researchers in Brazil ready and supported to do knowledge translation? The answer is: NOT YET! But there are some solutions.

Knowledge translation (KT) is a collaborative process between knowledge producers (mostly researchers) and knowledge users (communities, decision-makers, and stakeholders) involving many elements like synthesis, dissemination and sharing. It can also improve health systems, as well as increase the likelihood that scientific evidence will be used in policy and practical decisions enabling researchers to further contribute to these questions [1]. There is a growing body of literature showing that KT can improve health care quality and safety [2]. According to a recent systematic review, it is estimated that up to 50% of care, provided into childcare settings, is not needed or not based on current evidence [3].

Although research about KT has increased for several years, the many terms used to indicate similar or complementary practices demonstrate how much KT is still expanding. In addition, it is our understanding that there has been little progress made about how the KT process can be improved in low- and middle-income countries, such as Brazil [4]. KT strategies do not seem to be fully assimilated by Brazilian researchers and institutions working in the financing and application of products of knowledge [5]. As products of knowledge are not simple or easy. They require much skill and support to be successful.

The purpose of this commentary is to provide an overview of the challenges that public health researchers in Brazil face in applying KT strategies to improve the public health care and to propose measures to reduce these challenges. We understand that the incorporation of KT processes by researchers implies skill development, including the use of theoretical models and institutional support, as logistic and strategic bear for their application.

Knowledge translation process and terminologies

Regarding public health research, Lemire et al. [6] described four major categories of knowledge: (i) knowledge from research (often referred to as scientific knowledge); (ii) knowledge from tactics (knowledge of professionals with practical experiences); (iii) knowledge from data analysis (information to be transmitted in an appropriate form to stakeholders); and (iv) knowledge from users/clients [6]. Thereby, in the last two decades, the Canadian Foundation for Healthcare Improvement has promoted the use of the term knowledge translation which has resulted in an increased prevalence of KT-labelled papers in Canada [7]. For the research institution working on KT in Canada, it consists of a process involving synthesis, dissemination, exchange and ethical application of knowledge to improve health, including having more effective health services and products [8]. More recently, the participatory approach in KT showed the importance of long-term interactions between knowledge producers and users.

Internationally, the KT process has different terminologies such as: knowledge translation, knowledge transfer, knowledge sharing and knowledge implementation. The terminology "knowledge transfer" emerged during the 1990s as a process by which research messages were "pushed" by knowledge producers towards knowledge users and have been discussed and adapted since then. The terminology also has changed according to different contexts, from implementation science in Europe, to dissemination and research use in the United States, to knowledge translation in Canada [9]. In Brazil, KT is the terminology mostly used, but is still developing [10,11]. In the last twenty years, the terminology and understanding about the term have evolved from only "transfer" to sharing and constructing knowledge together with the commitment of moving "beyond dissemination of knowledge" to the actual use of knowledge [9].

Irrespective of the terminology chosen, the most important aspect of an effective KT practice is to know how to translate knowledge into action. To address this gap, theoretical and practical contributions are required; specifically, how and when producers' findings should be translated into users' needs [12]. The participatory or collaborative way of co-constructing knowledge among research partners can contribute to fulfil this gap, as well as building interfaces between researcher teams, policymakers and communities. Some of the challenges facing KT researchers are adaptation of the research cycle to fit real-world timelines, establishing relationships with decision-makers, justifying activities that poorly fit the traditional academic performance expectations [7]. These challenges can be related to the lack of skills expected to appraise evidence, since this approach has been absent in most educational curricula [13]. The lack of funding, time, institutional infrastructure and resources to participate in KT activities are frequently mentioned as barriers to policymakers and researchers [14]. Also, the political agenda in low- and middle-income countries is historically dynamic. Some research studies, once completed, may no longer be valuable to decision-makers and other stakeholders, or may bring results that are inconvenient to the current political situation [15]. This issue can lead decision-makers not to use or consider the importance of knowledge produced through scientific studies.

KT challenges and possibilities to public health researchers in Brazil

Public health researchers in Brazil are constantly seeking to improve the quality of health of millions of Brazilians. Despite all political and structural problems, the Brazilian public health system is trying to use robust research evidence to improve the health care system [16]. Nonetheless, the application of good evidence is not easy. This issue is not specific to the Brazilian public health system. Health systems worldwide fail to use research evidence to improve the health care economically and optimally [9]. Globally, high-income countries are publishing about the application of KT strategies to close the gap between the knowledge produced and the use of this knowledge into practice and policies. Even though public health researchers understand and know about strategies to fill this gap, "the gap still remains" [17].

Considering the numerous mechanisms involved in the KT process, the challenges for low- and middle-income countries are still greater. As demonstrated in an evaluative study in a public health school in Brazil, the research interests of academic post-graduate programs are mostly geared toward

answering questions from researchers and knowledge producers, rather than to interest of knowledge users [5]. Public health researchers in Brazil appeared less prepared to deal with the variety of research agendas, the community time and context, as well as conflicts of interest (political, organizational, or academic). They also lack funding and knowledge about how to do KT. Still, the real-life in Brazil requires the public health researchers to also deal with the context of violence, poverty, political and personal interests, and lack of education of the target community before trying to develop a KT process. These challenges show the extent and complexity that public health research interventions can address, "concerned as they are with products, resources, skills, beliefs, values, systems, institutional *structures, boundaries and relationships*" [14] (p. 3). Adding to these challenges, the recommendation is that the evaluation process should be included in a KT plan with enough funding allocated to it.

Nevertheless, there are effective mechanisms provided by the KT process that can reduce the challenges to apply and disseminate this practice in public health outcomes: (1) joint researchers-decision-makers workshops are places where knowledge producers and users work together to share their preoccupations and the audience they want to reach; (2) inclusion of decision-makers in the research process as part of interdisciplinary research teams [7]; (3) a collaborative definition of research questions, nurturing the interest of knowledge users in the process of KT and increasing the sense of belonging and responsibility in both parties [7]; (4) use of intermediaries, known as "knowledge brokers" – people or organizations who know how to facilitate and support changes, and understand both the roles of knowledge producers and users [18]; (5) use of policy brief, a summary of health information helping stakeholders to understand a health issue [19]; (6) KT plans, planners to help researchers and stakeholders in organizing a practical and evidence-informed method to disseminate and implement knowledge [20]; and (7) deliberative dialogues, a face-to-face technique in which small groups of diverse stakeholders exchange ideas about a health issue in which they have a shared interest [21]. All of these factors are not engineering mechanisms. They are social actions requiring a theoretical model to inform and understand what should be translated, for whom, how and in what context.

Considering how *"knowledge can be fragmented"*, *"research proliferation is immense"*, and *"the cost of bad decision-making or slow knowledge implementation"*, KT has become a vital practice to public health [22] (p. 2). Particularly in the context of complex issues and huge inequities, as observed in Brazil, losing opportunities to put knowledge into practice can lead to wicked consequences in health care.

Conclusions

Apparently, we need perfect conditions to developed better KT practices. We need organization and fully prepared researchers. We also need the ideal place to the perfect KT process. It has been easier to write on how to promote the use of the KT than to apply it. It is a challenge to reach KT's goals, especially in low- and middle-income countries. In order to understand the KT process among public health researchers and knowledge users in Brazil, it is paramount to give research teams support by creating research organizations working together in the KT process. In particular, public health researchers in low- and middle-income countries need support, infrastructure, security, political will, and theoretical and methodological competences about KT. In that way, all aspects of the KT process can be put into practice.

Public health researchers in Brazil usually know a lot about a specific issue and the context they are working with. Still, they may know, at least in theory, about how the issue may be solved and the importance in solving it. They know very well how to disseminate research results in conferences, among peers and in some forms of KT strategies. However, there remain significant gaps to speed up KT practices in Brazil: an insufficient theoretical and methodologic understanding about know-how, political support and resources to effect change, in a practical manner. As shown, the KT process is complex and it takes time to be achieved. Public health researchers in Brazil are attentive, and already advance in this field of knowledge and practices, but they are not fully supported yet.

Contributors

E. S. Miranda and A. C. Figueiró wrote the paper. A. C. Figueró and L. Potvin reviewed the paper. All authors approved the final version of the manuscript, being responsible for all aspects of the work.

Additional informations

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