

The Knowledge Broker's "Fit" in the World of Knowledge Translation

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Evidence-informed practice (EIP) is a challenge. Success requires facilitators at multiple levels: the individual clinician (e.g., skills for accessing and appraising literature); the organization (e.g., providing resources for training and protected time); professional and regulatory bodies (e.g., need for consensus on standards of practice and regulations); and the patient (e.g., support for health behaviour change). Unfortunately, the absence of many of these facilitators has resulted in an untenable gap between evidence and practice: it takes an estimated 17 years for 14% of research findings to be adopted into practice;¹ only 30% to 50% of patients receive recommended care; and between 20% and 30% receive care that is not needed or is potentially harmful.^{2,3} It has become abundantly clear that existing strategies to improve EIP are insufficient to reduce this gap. Use of didactic sessions, educational resources, clinical pathways, audit and feedback, reminders, local opinion leaders, decision aids, and computer decision support typically change clinical practice by approximately 10%.⁴ A recent strategy to support EIP has been the establishment of knowledge broker (KB) positions. In this editorial, we briefly review the role of the KB within the framework of knowledge translation (KT) in health care, with specific reference to the Physical Therapy KB position in British Columbia (BC), and provide recommendations for future development of KB roles.

The KB's role is essentially to be an intermediary. The KB "bridges the gap" between evidence and practice, acting as a catalyst and "boundary spanner" and linking researchers, clinicians, and decision makers to facilitate creation or synthesis, translation, dissemination, implementation, and adoption of evidence to change practice.⁵ The KB is defined as the "human force" that makes knowledge transfer (the movement of knowledge from one place or group of people to another) more effective and is distinct in aiming to bring people together for mutual advantage.⁶ Broadly speaking, the KB's main roles are, first, to make evidence more accessible and tailored for clinicians and health care decision makers (*knowledge management*); second, to facilitate mutual learning between researchers and clinicians (*linkage and exchange*); and, finally, to develop clinicians' and decision makers' skills and capacity for EIP (*capacity*

building).^{7,8} Ward and colleagues have identified five key elements of the KB role: identifying and communicating the problem; analyzing the context (identifying barriers and facilitators); developing, selecting, or translating the knowledge to be transferred; selecting or tailoring the appropriate KT interventions; and evaluating the impact.⁹ Because the KB role is relatively new in health care (with a longer history in industry and international development), the evidence for its effectiveness is limited.^{6,7,10} However, recent reviews have highlighted the following essential characteristics for effective knowledge brokering: knowledge, skills, and credibility in both clinical and research worlds; extensive network of key stakeholders; ability to facilitate reciprocal understanding; and ability to discern potential new linkages.^{11,12}

In 2009, in response to both the need to support EIP and the increasing interest in the KB role, a Physical Therapy Knowledge Broker position was established in BC. The role is supported by a unique partnership of the University of British Columbia Department of Physical Therapy, the Physiotherapy Association of BC (PABC), and the research institutes of two health care organizations, Providence Health Care and Vancouver Coastal Health. Whereas many Canadian health care KB positions are based on short-term contracts for specific projects, BC's 0.5-FTE KB position has secured 3-year funding cycles, and there are no external restrictions on its scope. The role has three domains of focus: research, development of practice resources, and support for enhancing EIP skills. Key outcomes have included 11 projects involving more than 200 clinicians, researchers, and decision makers; 8 grants totalling approximately CAD\$1,200,000 in funding; 14 publications (many with first-time clinician co-authors); development of 11 practice resources (clinical decision-making tools or toolkits); and 13 webinars synthesizing and providing practical resources to support EIP for physiotherapy management of a variety of conditions or guidance in skills for acquiring, appraising, and applying evidence.

The response from the physiotherapy community has been remarkable. Since the inception of the position, there has been a 230% increase in traffic to the Knowledge Broker section of the PABC website, a 302% increase in the number of people attending webinars or down-

loading recorded webinars, and a reported increase of up to 43% in confidence in skills in EIP.¹³ Evidence of the appeal of the practice resources is exemplified by more than 16,000 downloads of the Achilles Tendinopathy Toolkit by physiotherapists in 45 countries. A survey evaluating the impact of this toolkit on the knowledge, attitudes, and behaviours of BC physiotherapists is currently underway. Detailed information on each project and copies of the resources are available at <http://physicaltherapy.med.ubc.ca/physical-therapy-knowledge-broker/>.

Interest in the BC Physical Therapy KB position has stimulated several questions, both in Canada and abroad: Why has the position been successful in connecting clinicians and researchers? What are the challenges? What are the recommendations for the future of knowledge brokering? Answers can be derived from experiences encountered within the position, as well as from the literature of implementation science—the science behind KT. First, the position's success derives from its structure. The partnership of the four funders has ensured buy-in from clinical, education, research, and professional domains. Each has committed resources (financial and in-kind) and provided considerable autonomy to the KB in selecting activities; in addition, each has unique resources that have been leveraged to support the activities of the KB (e.g., videoconferencing, webinars, technical and administrative support). Moreover, a 2012 survey on the impact of the KB role found that clinicians, decision makers, and researchers all benefit, albeit differently, from these activities. Clinicians noted that the KB position provides opportunities to get involved in research, stay abreast of the latest evidence and build skills and knowledge; decision makers said that it facilitates staff motivation for and involvement in providing EIP; and researchers reported that it improves their ability to obtain grant funding and increases the impact of research findings.¹⁴ Challenges associated with the role are consistent with those reported in the KB literature: defining the scope of the role, accessing additional training, and the lack of a clear career pathway.^{7,15}

Based on our experience, we offer the following recommendations with respect to cultivating KB roles: (1) establish standardized training and certification; (2) ensure sustained funding from stakeholders representing research, clinical, and decision-making realms; (3) create a network of knowledge brokers to enable shared learning and support; and (4) rigorously evaluate the impact of the role.

The KB role, important though uncommon, requires competence and comfort in being a “Jack of all trades,” an ability to understand and address the needs of differ-

ent stakeholder groups, and a passion for building partnerships. KBs can be an integral piece of the puzzle to help health care providers, partnering with researchers and decision makers, ensure EIP.

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