

# Knowledge Translation, Evidence-Based Practice, and You

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Have you ever thought of yourself as a knowledge user? You likely are, whether you are a clinician, a manager, a clinic owner, a professional practice leader, the chief executive officer of a hospital, a patient, a researcher, or a health policy maker. The Canadian Institutes of Health Research (CIHR), a federal agency that funds health research throughout Canada, describes a knowledge user as “an individual who is likely to be able to use the knowledge generated through research to make informed decisions about health policies, programs and/or practices.”<sup>1</sup> As a knowledge user, you are a potential partner in research. A researcher interested in increasing use of a particular knowledge product, such as a clinical practice guideline, must identify potential knowledge users and, to optimize the relevance of their knowledge translation efforts, collaborate with them.

Not everyone is clear on what the term “knowledge translation” means, because it is often used interchangeably with related terms such as “knowledge transfer,” “knowledge exchange,” “research utilization,” “implementation,” “dissemination,” or “diffusion.” Graham et al.<sup>2</sup> provided a comprehensive discussion of these terms in their 2006 article, for those interested in reading further. CIHR has defined knowledge translation as a

dynamic and iterative process that includes synthesis, dissemination, exchange and ethically sound application of knowledge to improve the health of Canadians, provide more effective health services and products and strengthen the health care system. This process takes place within a complex system of interactions between researchers and knowledge users that may vary in intensity, complexity and level of engagement depending on the nature of the research and the findings as well as the needs of the particular knowledge user.<sup>1</sup>

Knowledge translation is a process that, fundamentally, attempts to bridge the gap between what is known from scientific research and how that knowledge is used by various stakeholders in the delivery of health care services to further the health of Canadians.<sup>2</sup> The involvement of a range of stakeholders who interact within the health care system is what makes knowledge translation

a broader process than, for example, evidence-based practice (EBP), which is within the purview of the individual practitioner.

Sackett’s definition of evidence-based medicine (EBM) as “the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients”<sup>3(p.71)</sup> has endured since 1996, and many authors have described the steps of EBP.<sup>4</sup> According to Sackett’s initial description of the process, physiotherapists should consider research findings when selecting a new assessment tool, formulating a prognosis, or choosing a treatment intervention.<sup>3</sup> Rehabilitation proponents of EBP have extended the purpose of information gathering beyond personal learning and decision making by the individual practitioner to communicating evidence to clients and caregivers, colleagues within inter-professional teams, managers, funders, and policy makers.<sup>5</sup> For example, a physiotherapist providing home care may communicate research evidence to the case manager to advocate for additional treatment sessions in order to complete an exercise regime that systematic reviews have shown to be efficacious.

A major tie between knowledge translation and EBP is the importance of waiting for a body of evidence—that is, a sufficient number of studies supporting the same conclusion—before using this information to change practice. To this end, CIHR holds regular grant competitions to fund projects designed to synthesize a body of literature that will affect how knowledge users go about their work in the health care system in a meaningful way. Such a synthesis might be a systematic review or a clinical practice guideline. In order to maximize the relevance and applicability of the research to the decision makers it will affect, CIHR requires that a knowledge user be a member of the research team and that investigators provide an “end-of-grant knowledge translation plan” for disseminating the outcomes of the project to knowledge users.<sup>1</sup> In essence, this funding agency is improving the way we do knowledge translation research, with the goal of ensuring that the research is relevant to the context of the current health care system.

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In a survey of 270 physiotherapists who deliver health care services to people with stroke,<sup>6</sup> respondents most commonly identified protected time (46%), clinical practice guidelines (42%), and synthesis of research findings in a more accessible format (34%) as strategies likely to facilitate efforts to update clinical practice with new knowledge. In a follow-up qualitative study, physiotherapists explained how these strategies and research resources help to address barriers to acquiring research evidence, including insufficient time and personal skill or confidence to acquire and appraise unmanageable numbers of individual studies to answer a specific clinical question.<sup>7,8</sup> They suggested strategies, such as the use of non-technical language, glossaries of research terms, and quality ratings of studies, to make research reports more accessible.<sup>8</sup> Providing detailed descriptions of new treatment interventions, including frequency and duration of sessions, and providing a video of treatment implementation were strategies participants preferred to enable application in clinical practice.<sup>8</sup>

As we advance our understanding of how best to approach EBP, we can learn from our colleagues in medicine who have proposed a time-efficient “5S” approach to seeking research evidence to answer clinical questions that takes advantage of pre-appraised research.<sup>9</sup> Using the 5S approach, clinicians access five types of evidence-based information, in the following order: *systems*, such as computerized decision-support systems; *summaries* (evidence-based textbooks); *synopses* (summaries of studies or syntheses); *syntheses* (meta-analyses, systematic reviews, clinical practice guidelines); and, lastly, individual *studies*. Proponents of the 5S approach promote the use of progressive EBM Web sites, such as Clinical Evidence from the BMJ Publishing Group, that provide and regularly update syntheses of research information and additional EBM resources to support treatment decisions.<sup>9</sup> Leaders in stroke-rehabilitation research are creating similar online resources for both clinicians and families. Web sites developed by Teasell and Korner-Bitensky have made the results of systematic reviews of assessment tools and treatment interventions for stroke rehabilitation available worldwide (see the Evidence-Based Review of Stroke Rehabilitation<sup>10</sup> and StrokEngine<sup>11</sup>). These efforts are being replicated for other areas of clinical practice.

One thing is certain: researchers and knowledge users need to partner in knowledge translation and EBP initiatives to continue to improve the health care system. Interestingly, my colleagues and I have found that physiotherapists who perceive research findings as useful in daily practice and who participate in research activities for some percentage of their work time are more likely

to self-report reading and using the research literature in their clinical decision making.<sup>12,13</sup> The way we are conducting knowledge translation research is changing for the better, with the goal of making our efforts relevant to daily practice. So the next time a researcher invites you to collaborate on a project as a knowledge user, get involved! Together, we will make a difference.

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