

## Evaluating the Evidence on Knowledge Brokers: The Journey Continues

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### Summary of Progress: Lessons Learned from September 2003 – December 2007

Our current study, approved by the Canadian Institutes of Health Research (CIHR) 2003 Knowledge Translation and Exchange (KTE) review, is the first randomized controlled trial (RCT) in Canada evaluating the impact of a Knowledge Broker (KB) to promote evidence-informed decision making (EIDM) among public health decision makers (DM). Mixed methods were used to evaluate and understand the impact of 3 KTE strategies (control, Tailored Messaging (TM), and KB). 108 of 141 (77%) public health organizations in Canada participated in the study. The control group had access to [www.health-evidence.ca](http://www.health-evidence.ca), as well as targeted marketing materials. TM had the same as the control group and received direct mailing (electronic and hard copy) of abstracts, short summaries, and the full text of systematic reviews evaluating HBW promotion strategies. KB received the same along with a broker who worked one-on-one with participants to build capacity for EIDM, and assist in translating research evidence. Data were collected at baseline, post intervention (FU1) and one year post (FU2) by survey, organizational documents, qualitative interviews and the KB's daily reflective journal.

Emerging findings include: 1) having access to a registry of synthesized and translated research evidence (control group) has no impact on EIDM; 2) TM is significantly more effective in promoting EIDM than other strategies ( $p < .009$ ); and 3) a number of organization factors significantly moderated the treatment effect. While not surprising that the control group experienced no change, we were surprised at how much more effective TM appeared in comparison to KB. We conducted additional analyses by developing a scale of the average of four organizational culture items. When considering a mid value (4 on a 7 point scale) of the perception of culture, the intervention effect was exactly as we hypothesized – the control group was unchanged, TM improved somewhat, and KB improved dramatically. With higher perceptions of culture however (6/7), the control group remained unchanged, KB became much worse and TM improved greatly.

The qualitative findings **contradict** the quantitative results. Participants in the KB group who were interviewed perceived the KB to have significantly impacted EIDM capacity for them personally as well as their organization. One-to-one interaction was effective in building a trusting relationship which in turn facilitated EIDM. Areas for which the greatest impact were perceived included: 1) consistently including research evidence in decision making; 2) realizing the need to be a critical consumer of research evidence; and 3) providing justification for capacity development among staff at all levels. Suggestions for improving the intervention included longer duration (2-3 years); having multiple DMs from the organization involved; more opportunities for training and capacity development; and opportunities to debate with other DMs about how to translate evidence into practice. Analysis of the KB's reflective journal produced very similar findings to the qualitative results. We propose the following explanations. First, these findings suggest that straightforward, simple interventions are likely more effective than complex, multi-faceted ones. Alternatively it could be argued that the KB intervention was not of sufficient duration to facilitate significant change in decision making. It could also be argued that organizations exposed to the KB intervention experienced some beginning changes but that this was not of sufficient magnitude to result in significant changes to EIDM.

Other explanations suggest that interaction with a KB for organizations that perceived themselves to be 'evidence-informed', and thus had higher perception scores on the culture scale, learned that they were not as 'evidence-informed' as they thought, resulting in the organization rethinking its decision making processes, and perhaps, slowing the decision-making process. Again, similar findings have been presented by others. Finally, given the limited available information on the KB role at the start of this study, it is possible that the intervention implemented did not contain all of the components necessary to produce a positive effect. There is emerging evidence that a facilitated social network such as a community of practice may be an integral component of knowledge brokering.