Author's response to reviews

Title: Core competencies in the science and practice of knowledge translation: description of a Canadian strategic training initiative

Authors:

sharon e straus (sharon.straus@utoronto.ca)
melissa brouwers (mbrouwer@mcmaster.ca)
david johnson (david.johnson@albertahealthservices.ca)
john lavis (lavisj@mcmaster.ca)
france legare (france.legare@fmed.ulaval.ca)
sumit r majumdar (me2.majumdar@ualberta.ca)
k. ann mckibbon (mckib@mcmaster.ca)
anne sales (anne.sales1@gmail.com)
dawn stacey (dawn.stacey@uottawa.ca)
gail klein (kleing@smh.ca)
jeremy grimshaw (jgrimshaw@ohri.ca)

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Author's response to reviews: see over
Dear Editors

Thank you very much for considering our manuscript. We have carefully considered the thoughtful reviews and have revised the manuscript based on this feedback. The comments provided by the reviewers and our responses to these comments are included in the table below. We have made these revisions to the manuscript using tracked changes.

<table>
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<tr>
<th>Reviewer Comments</th>
<th>Response</th>
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<tr>
<td>The thinking that the KTA loop may be less helpful as a framework for policy makers than other groups could be explained.</td>
<td>On page 6, we have added the explanation for this statement: This framework may be particularly helpful to strategies targeting clinicians, patients, citizens, and managers but may be less helpful for strategies targeting policy makers because many policy maker targeted interventions may focus on facilitating access to research in a timely fashion rather than supporting behavior change.</td>
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<td>How trainees are matched with mentors, how mentors are identified and the feasibility and sustainability could be described in more detail</td>
<td>On page 9, we have provided additional details on the mentorship component: More than 60 faculty members from across Canada are involved with the training initiative and are available to provide mentorship. New trainees meet with the Program Director to explore their interests and goals. This discussion is used to identify potential mentors if the trainee does not have</td>
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During the Summer Institute, opportunities to meet with the potential mentors are available. These opportunities include a ‘speed mentoring’ session on Day 1 which invites the trainees to meet with multiple potential mentors during 15 minute sessions. These sessions are focused on identifying if there is interest in exploring a mentoring relationship. Trainees also have the opportunity to meet with other mentees who work with that mentor to determine if it might be a good fit. Longer meeting sessions are then available on Day 2 of the Summer Institute to facilitate mentorship.

On page 12, we also mention that the faculty development program is focused on mentorship and is based on the results of several systematic reviews of mentorship that we have completed:

Mentorship is a key component of this initiative and while the key mentors have extensive mentorship expertise, ongoing faculty development will be available for mentors and Stream 1 trainees. A mentorship
program and tools have been developed based on our research including several systematic reviews on this topic.[14-16] Mentorship tools (e.g. individual development plans, interactive case discussions) have been used at sessions including the Summer Institutes and will be evaluated in this training initiative. We are also completing a series of interviews with expert mentors to provide strategies and tactics for effective mentorship and these are available online. Our work is aimed to give trainees the skills and professional training that will allow them to become leaders in KT and KT research and to mentor future generations of researchers.

Is there any thought to bigger picture evaluation, including impact of grants, effectiveness of different components of the program

On page 12 we have provided additional detail on the evaluation of this program. Two-thirds of the funding for this program has to go directly to student stipends so any evaluation that is done has to be funded by other sources. We have applied for funding to complete additional evaluation activities.

Core measures will include: (1) number of trainees in each of the 3 streams (and their discipline); (2) numbers of publications, research presentations, grants, honours,
programs developed and implemented by trainees, impact of research and engagement with relevant stakeholders; and (3) number of KT researchers recruited and retained.

Summative evaluation will include surveying participants from all 3 streams about their perceptions and experiences with this initiative and its effect on employment, position and their practice of KT; and, surveying team members about their experiences and perceptions of the initiative. In a formative evaluation strategy, each year a sample of trainees from each of the 3 streams will be invited to participate in a semi-structured interview to explore their experiences with the initiative, their perceptions of effective/ineffective components and to propose revisions to the training program. The results of these evaluations will be used to continuously refine and improve this initiative.

What are the costs of the program and how are they met?

On page 13 we have added information about costs of the program and have provided some strategies for sustainability. If the reviewer would like details on any of the individual costs (i.e. costs to develop the online modules etc.) we are happy
to provide but did not include in this report since we are limited by the word count.

Costs of the Program
This program is funded by the CIHR ($1.7 million over 6 years) and two-thirds of the funding must be used for student stipends.

We have obtained additional grant support to provide activities such as the Summer Institute.

We are actively seeking partnerships to sustain and grow the program. For example, we have a partnership with the BMJ to fund fellows interested in KT and health informatics and are exploring similar partnerships with other interested stakeholders including provincial funding agencies.

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<th>Reviewer 2</th>
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<td>The competencies should be listed in the article and I think it would be useful to have a table that describes those didactic and experiential learning techniques that will be used for each.</td>
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| | On pages 6 and 7 we have listed the core competencies, and we have provided a Table outlining the core competencies and the educational initiatives that are targeted to each competency: |
| | The core competencies for Stream 1 trainees are based on the MRC and KTA Frameworks and include: |
| | • Knowledge and understanding of models and theories of KT |
and KT research;

- Capacity to conduct syntheses to address KT questions, specifically reviews of complex interventions which may include consideration of qualitative and quantitative research;

- Capacity in multiple research methods including qualitative methods to examine the determinants of knowledge use across different settings and stakeholder groups; and,

- Capacity to design and evaluate the impact, effectiveness and sustainability of KT strategies in different settings.

We have also outlined the different educational interventions that are used to meet each of these: Overarching each of these competencies is the need to develop skills in engaging relevant
stakeholders (including the public, health care providers, managers and policy makers) to facilitate an integrated KT approach.

Each of these competencies is addressed through a variety of educational initiatives including modular courses, a national seminar series, an annual Summer Institute, yearly research meetings and a research practicum if desired by the trainee. We are exploiting technology to ensure national accessibility of these educational activities.

Courses in systematic reviews of complex interventions and in pragmatic trials of KT interventions are available online and in-person. (Table 2) Similarly we have developed courses in end of grant KT to help trainees as they prepare grants.

A monthly e-seminar series (topics in Table 3) focuses on KT Research Methodology. Webcasts of these seminars are available on our KT Canada website[12].
quarterly ‘Research Operations’ e-seminar series is being offered in 2011 for students focusing on writing grants; reviewing grants; preparing presentations, grants, ethics submissions and manuscripts; retrieving relevant literature and discussing ethical issues in KT research and project management. One of the outputs from the initial student seminar was to develop an online series of interviews with KT experts who outline their career paths and what factors influenced their career choice. This online series is available on our program website. (www.ktclearinghouse.ca).

Graduate students are invited to participate in the annual KT Summer Institute which focuses on a different theme each year, addressing one or more of the core KT competencies including developing KT interventions and targeting them to different stakeholder groups. To date we have held 3 Summer Institutes with involvement of 90 trainees. (Table 4) These Institutes include didactic and active learning with small group
work focused on an assigned KT project and exposure to mentors. Trainees also present their research in progress during facilitated poster sessions to gain skills in presentation. To date, trainees have been involved with three publications. And, they have also been involved with preparation of collaborative, multi-site grants. Similarly trainees have worked together on education modules and presentations; for example, two trainees presented at a recent Cochrane meeting to outline the methodological challenges in doing reviews of qualitative literature and subsequently submitted a grant on this topic. Trainees have developed collaborations in other projects including a community of practice[12] which has received funding to host meetings to develop this community.

<table>
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<tr>
<th>How is this funded? Who will need to fund this to have it reach a broad audience?</th>
<th>As described above, we have added a section on costs on Page 13.</th>
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<td>Look for ways to measure impact of training</td>
<td>We thank the reviewer for this comment and agree that it’s challenging to look at impact of a training initiative on clinical outcomes. We have outlined a variety of evaluation strategies as mentioned in the response to Reviewer 1 above.</td>
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<td>Include actual experiences or self report of how those who have undergone the program have used it in their own work.</td>
<td>We are limited by the word count and cannot include a lot of description on trainees’ experiences but we do post this information on the training website for other trainees to review. In particular, we post the evaluations of our various educational initiatives including the Summer Institutes and could make these available in an online appendix if the editors wish.</td>
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<td>Reviewer 3</td>
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<td>There is no coherent picture presented of the program. What are the core competencies for each stream? What is the curriculum? What are the learning objectives for Streams 2 and 3? Provide more details on mentorship – what qualities are required of the mentor, how are mentors and students matched, what are the expectations of mentors and students?</td>
<td>We thank the reviewer for the comment and we have provided a list of the core competencies in the manuscript. We also describe each of the educational initiatives included in the training program and provide a table (Table 1) which matches the educational initiative to the core competencies for Stream 1 trainees. We have also highlighted the core competencies for Streams 2 and 3. As noted above, we have provided additional detail on the mentorship strategy. We have based this on the results of the 3 systematic reviews of mentorship and career choice that we have completed, as well as a large qualitative study of mentorship (references 14 to 16 in the manuscript). We used this body of research to create a series of mentorship tools and to create our approach to linking mentees with potential mentors. For example, evidence from qualitative studies suggests that assigning mentors can lead to superficial relationships and that it is better to facilitate mentorship through identification of potential mentors and provision of opportunities for mentors and mentees to meet.</td>
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<td>Is there a strategy for marketing and selecting students? Are opinion leaders selected? Provide more details on the application process including need to have representation from each province</td>
<td>We have added detail on the application process as outlined in our response to reviewer 2.</td>
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