Reviewer's report

Title: The U.S. Training Institute for Dissemination and Implementation Research in Health

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Reviewer: Sophie Desroches

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Given the growing recognition that more research on D&I is key to optimize population health and healthcare delivery, this paper targets an important challenge: enhancing capacity of D&I and D&I research to address the shortage of people trained in this field. The paper describes the background, purposes, curriculum, initial results and future plans for the Training in Dissemination and Implementation Research in Health (TIDIRH) held in the U.S.

The paper is well written. The background provides an overview of available training programs in D&I in the US and Canada. The methods section presents the structure, application process and curriculum including the website where all the presentations are publicly available. Overall a nice addition to the literature about D&I training, but I do have a few concerns that should be addressed to further clarify the goals, expected outcomes, and future plans of the TIDIRH.

Major compulsory revisions

1. The TIDIRH aims for a “train the trainer” approach, where trainees are encouraged to use the same lectures in their home institutions and network activities. Although the transparency of the approach is interesting, my concern is about the extent to which trainees taking part of this training are all prepared for being trainers. D&I research is a science for which evidence based on rigorous methodologies is needed to close the know-do gap. Therefore, expecting trainees to be ready to train others after 5 days of TIDIRH sounds premature and may underestimate the science behind D&I. This issue needs to be discussed further in the paper.

2. As for the curriculum, and also in line with my previous point, the number of topics discussed seems a little overwhelming. The content is structured around the main components of D&I science and provides a nice overview of this science, but it is very unlikely that the training will provide enough depth in each topic to be applied by trainees. Researchers in D&I often develop expertise related to specific areas such as measurement, intervention, implementation, etc. Is there a plan for future TIDIRH to narrow the scope of the curriculum so as to target just a few issues about D&I science at a time? Were there comments from trainees regarding the wide scope of the TIDIRH? Are the D&I applications submitted by trainees in the 6 months following the TIDIRH in line with the topics explored during the training?
3. In the conclusion, the authors mention that D&I training does not need to be guided by a model. I am not totally convinced by this. Implementing public health programs or clinical pathways into health systems is costly and D&I science contributes to making sure that what is implemented is worth implementing and relevant for users. In real life, this requires a step by step approach that may be successfully guided by a framework – should training be guided similarly? This needs to be developed further.

4. One of the challenges mentioned was that both junior and more established researchers participated to the TIDIRH and that more experienced researchers may benefit more from the training. Only reasons for why established researchers would benefit more are listed; what would be the advantages of training junior investigators or postdoc? Would it be possible in the future to train them in big groups sessions together, but to separate them for the breakout groups so that their tasks are different and more relevant to their needs? In the evaluations completed by trainees, were comments from junior researchers different vs. those coming from more senior ones?

Minor essential revisions

Page 3, para 1, line 15: replace "application" by "applications"

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I have no competing interests in relation to this paper.