Author's response to reviews

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

Authors:

Helen I Meissner (meissneh@od.nih.gov)
Russell E Glasgow (glasgowre@mail.nih.gov)
Cynthia A Vinson (cvinson@mail.nih.gov)
David Chambers (dchamber@mail.nih.gov)
Ross C Brownson (rbrownson@wustl.edu)
Lawrence W Green (lwgreen@comcast.net)
Alice S Ammerman (alice_ammerman@unc.edu)
Bryan J Weiner (weiner@email.unc.edu)
Brian Mittman (brian.mittman@va.gov)

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Author's response to reviews: see over
Dear Dr. Strauss:

Thank you for the opportunity to submit our revised manuscript, *The U.S. Training Institute for Dissemination and Implementation Research in Health*. We appreciate the reviewers’ thoughtful comments and hope that we have adequately addressed their concerns.

**Comments from the Editor:**
*We would like more details on the train the trainer aspect of the initiative and the success of this aspect of the program.*

Abstract & Page 8: We have tried to clarify what we mean by *train-the-trainer*. Given that this term may have different meaning to different audiences, we now refer to it as a train-the-trainer-like approach. We explain that we did not expect to trainees to be expert D&I researchers at the end of one week, but rather that we expected to increase their scope of knowledge regarding critical areas of and approaches to D&I research, as well as a commitment to pursue D&I research funding and build capacity for D&I within the local institutions.

**Referee #1**

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.

We couldn’t agree more with this comment and added text to this effect:

Abstract and Structure, Page 8, second paragraph: We state that it is unrealistic to expect trainees to become expert in the science of D&I with only a 5-day course. However, we think it reasonable for them to share knowledge gained with their colleagues, and to convey the importance of pursuing D&I as an important and legitimate area of scientific inquiry.

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?

This is a challenging issue we struggled with for both the 2011 (reported here) and 2012 TIDIRH agendas, and will continue to struggle with in the future. There clearly is a trade-off between exposing trainees to a panoramic view of the field vs. delving deeper into a few narrowly defined areas. As well, trainees come to TIDIRH with different levels of knowledge and experience on a given topic, so their needs for training are variable. In the end, we opted for the more comprehensive approach, with the hope that trainees will come away with knowledge of where to turn for more resources, training and assistance in a given area. Even if we were to narrow the focus of the curriculum, 5 days still would not be enough time for most topics.

Were there comments from trainees regarding the wide scope of the TIDIRH?

In general, trainees did not tell us that they found the scope of TIDIRH too wide. However, one trainee wrote on the overall evaluation completed on the last day of the training that fewer topics should be covered so that more time could be allocated per session. Nevertheless, most trainees said that 5 days was about the right amount of time for the material covered and for them to network with peers and faculty. Throughout the week, though, we did find that there was never enough time to do a given topic justice, which is why we took our cues from trainees and adapted the schedule to better meet their needs.

Are the D&I applications submitted by trainees in the 6 months following the TIDIRH in line with the topics explored during the training?

Since trainees submitted applications to a variety of funders, this would be difficult for us to track without specifically asking them for their applications (we only asked if they had submitted applications). We could possibly try to match NIH grant applications that are submitted by TIDIRH trainees to topics covered in the curriculum. However, doing so would require analyses beyond the scope of this manuscript and would be challenging given that many of the topics covered in TIDIRH were broad (e.g., methods) and content areas (all conditions and prevention relevant to NIH), that could be difficult to capture without doing a thorough review of the entire grant application.

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.

We agree on the central importance of being guided by models. However, we found that trying to agree on a single “unified” model was not practical. Faculty members included those who have developed several of the leading D&I models including PRECEDE_PROCEED, CFIR and RE-AIM. We found that one model did not necessarily fit all aspects of the curriculum, much like one model does not necessarily inform all aspects of D&I research. Rather, we explain that our approach the following year was to discuss the commonalities of the many models that have been used for D&I research and things to consider when selecting a model or models to guide
one’s research, and focused on an in press article now published (Tabak et al, 2012) that discussed the range and application of different D&I models. We edit this paragraph (page 14) in the conclusion to try and clarify this point.

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?**

We have added text regarding the advantages of training junior investigators (page 15). In 2012, we had a greater number of established researchers than in 2011. For the breakout group sessions, we decided to mix junior and senior investigators because we felt that they would benefit from hearing from people with different levels of experience. We are unable to attribute comments on the evaluation to individuals, since participants were not required to identify themselves when they provided the feedback.

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

**Referee#2**

*For the outcome of influencing peers, more details or examples of what follows in the survey at the end of the article, could be presented in the text and abstract, as these are critical outcomes but not easy to define.*

We added some examples of how trainees used the knowledge to influence colleagues to the text (p.13) and abstract.

Embedded comment responses in annotated review:

Abstract: We have revised the abstract in response to reviewer suggestions. The abstract methods now better correspond to the abstract results. We specify key elements of the training, as suggested, and also provide more focus on training approach in the results. The abstract conclusions were revised to provide more specificity supported by the results.

Background, Page 4, Paragraph #1: we added a sentence and references to acknowledge that other institutions have taken D&I seriously in recent years. We added a link to a NIH database where interested readers can search on funded D&I research.

Background, Page 5, Paragraph #3: The content analysis was conducted by Wes Gibbert, a research assistant with the Prevention Research Center in St. Louis. He has been added to the acknowledgements. We corrected the UCSF program and added web links to the others.

Methods, Application Process, Page 9: We clarify how the call for applications was disseminated.
Results, Page 10-11: We specify how the number of trainee spots was determined and how selection was made. We also specify how many applicants self-rated as experienced/knowledgeable regarding D&I research when completing their needs assessments.

Evaluation and Follow-up, Page 13: We added some examples of how trainees used the knowledge to influence colleagues.

Discussion, Page 14: We added that TIDIRH is not institution bound.

Sincerely,

Helen I. Meissner, Sc.M., Ph.D.