

## **Author's response to reviews**

**Title:** Implementing Evidence-based Interventions in Health Care: Application of the Replicating Effective Programs Process

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**Author's response to reviews:** see over

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We thank the Editors and Reviewers for their comments and suggestions to improve our manuscript entitled "Implementing Evidence-based Interventions in Health Care: Application of the Replicating Effective Programs Process." In addition to addressing the specific Reviewer comments, our revision considerably reduces the overall manuscript length per the Editor's suggestion. We also appreciated the Editor's comments regarding the importance of this manuscript as a valuable contribution to the implementation science literature. Responses to specific comments from the Editor and Reviewers are provided below.

We thank you consideration of this manuscript and look forward to your response.

Sincerely,



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## **RESPONSE TO EDITOR COMMENTS AND TRACKED CHANGES**

### **1. Reduce the manuscript length, in particular by streamlining the description of REP and its application to a health services intervention**

We thank the Editor for these suggestions and now have reduced the length of the manuscript to less than 4,500 words. In doing so, we followed the Editor's suggestions by omitting the detailed description of the application of REP to a bipolar disorder care model and instead consolidated the sections and now describe the REP approach in detail. We also expanded our discussion of REP's theoretical and conceptual foundations, and added discussion of its suitability for health services interventions.

### **2. Consider consistent terminology throughout such as package vs. translate, agencies, vs. community-based organizations, etc.**

We now use consistent terminology throughout to describe the REP framework (e.g., packaging, and interventions).

### **3. Consider dropping the section on challenges of implementing REP as it was redundant**

We have now omitted the section on challenges of implementing REP, as the Editor pointed out that this section was more of a description of its application.

### **4. Please provide additional text regarding the origins and basis of the model and additional text comparing this model to others.**

We now provide additional information regarding how REP contrasts with previously published implementation frameworks (e.g., QUERI, Simpson, and Bartholomew frameworks), and discuss the advantages REP has over these previously established frameworks (Pages 3-4). We also compare the REP packaging process to previously used processes that are similar (e.g., SAMHSA toolkits), page 8.

## **RESPONSE TO REVIEWER COMMENTS**

### **REVIEWER #1:**

#### **1. The Reviewer suggested adding a brief description in the Background of other implementation frameworks that are comparable to REP, notably QUERI, intervention mapping, Dwayne Simpson's model in substance use treatment. Describe specifically how the components of each model are similar, what common theories they share, and whether these other models have been tested**

See response to Editor's comment #4 We also pointed out that REP is the only framework to date that has been empirically tested in a randomized controlled trial for its effectiveness in disseminating interventions (pages 4-5).

## **2. Clarify whether Figure 1 is an original model presented by the authors**

Figure 1 is an original framework, describing REP in the context of health care interventions in general and not for HIV-specific interventions.

## **3. Consider clarifying the names of the REP phases, and when the packaging and training components take place**

We thank the Reviewer for this suggestion and have now clarified the four phases of REP (Figure 1). We also clarified that training is part of the REP Implementation phase. In addition, we clarified that the packaging process occurs in both the Pre-conditions and Pre-implementation phases, as the former is focused on having researchers draft the package to maximize fidelity, and the latter is focused on obtaining community input in order to enhance flexibility (acceptance and generalizability).

## **3a. Clarify in the text and table which stakeholders are active participants in each REP phase, and clarify who is involved in drafting the package (e.g., intervention developers)**

We apply a comprehensive definition of stakeholders based on the Pincus (2003) multi-level “6-P” framework to describe the different levels of health care: purchasers, plans, practices, providers, and patients (consumers). Given that these different levels play an important role in the use of REP to implement treatment models, they all should be considered for active participation in the Community Working Group. The text (pages 9-10) and Table 2 now clarify the active roles of these different stakeholders in advising on the package refinement and training and technical assistance protocols, as well as advising on the potential sustainability of the package implementation. For example, core elements and menu options are refined based on CWG input, but the final decisions to include menu options are made by the intervention developers (pages 9-10). We have also clarified on page 7 that the package is initially drafted by the developers of the intervention and edited by non-technical writers to ensure readability.

## **3b. Consider describing the types of data from each phase that are essential in informing the next steps of the model (e.g., customization, planning implementation) such as surveys or focus groups, observations, key informant interviews**

We now describe the types of data that would be helpful in collecting at each phase, and the specific reasons for collecting these data; notably a needs assessment of organizations planning to implement the intervention during Pre-conditions (page 7), notes from the CWG meetings and data pertaining to a pilot test of the package during Pre-implementation (page 10), and qualitative as well as quantitative (e.g., cost, outcome, fidelity) data during the Implementation phase (Page 12).

## **4. The authors should clarify the barriers to implementation**

We have now refined our discussion of barriers in health care based on the Pincus 6-P framework; specifically by describing how these barriers can be addressed using REP (Table 1).

## **5. Clarify where the authors are in implementing B-REP**

Per the Editor's suggestion, we have now omitted the discussion of REP's application to a behavioral health care model (B-REP).

**6. Is there someone on the CWG whose role is to keep the local customization consistent with the evidence base of the clinical intervention?**

We clarified on page 10 that core elements and menu options are refined based on CWG input, but final decisions to include menu options should be made by the intervention developers who also participate in the CWGs (pages 9-10).

**7. Provide evidence that REP has been tested empirically, and discuss the evaluations of previously established implementation frameworks**

We clarified on pages 4 and 15 that to date, REP is the only implementation framework that has been empirically evaluated based on a randomized controlled trial of organizations on its ability to effectively achieve intervention uptake and fidelity [16]. To date, other implementation framework components (e.g., training) have been evaluated individually but not in combination [9-14], and there have been no evaluations of implementation frameworks that combine strategies to maximize both fidelity and flexibility in implementing interventions.

**REVIEWER #2:**

**1. Clarity regarding the names of different REP phases**

See Reviewer #1, response #1.

**2. Use consistent terminology (e.g., organizations vs agencies vs community providers)**

See responses to Editor's comment #2

**3. Clarify agency versus a community-based organizations**

We now use consistent terminology throughout to describe community-based organizations that are not academic-affiliated (e.g., pages 2-3).

**4. Describe in detail the different levels of organizations involved in implementing the BCM**

Per the Editor's suggestion, we now omit the description of the BCM as an example of how REP can implement interventions.

**5. Provide detail regarding the packaging process**

We have expanded the description of the packaging part of REP on pages 7-10

**6. Check the citations and references for consistent formatting and be sure that all citations have corresponding references**

We thank the Reviewer for this input and have now corrected the citations.