

## PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form (<http://bmjopen.bmj.com/site/about/resources/checklist.pdf>) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

### ARTICLE DETAILS

<b>TITLE (PROVISIONAL)</b>	Implementing an exercise oncology model to reach rural and remote individuals living with and beyond cancer: A hybrid effectiveness-implementation protocol for Project EXCEL (EXercise for Cancer to Enhance Living Well)
<b>AUTHORS</b>	Culos-Reed, Nicole; Wagoner, Chad; Dreger, Julianna; McNeely, Margaret; Keats, Melanie; Santa Mina, Daniel; Cuthbert, Colleen; Capozzi, Lauren; Francis, George; Chen, Guanmin; Ester, Manuel; McLaughlin, Emma; Eisele, Max; Sibley, Daniel; Langley, Jodi; Chiekwe, Joy; Christensen, Thomas

### VERSION 1 – REVIEW

<b>REVIEWER</b>	Focht, Brian Ohio State University
<b>REVIEW RETURNED</b>	06-Jun-2022

<b>GENERAL COMMENTS</b>	<p>This protocol paper addresses the rationale and design of the EXCEL hybrid effectiveness-implementation trial designed to deliver an evidence-based exercise intervention to 1500 individuals living with cancer residing in rural and/or remote areas. Expanding the reach and access of supportive care exercise interventions is a significant objective with strong scientific merit and potential for meaningful impact. Overall, the trial is generally well-designed and addresses a vulnerable, understudied sample of underserved individuals with cancer living in rural area characterized by substantive health disparities and access to cancer care. Given EXCEL implements the RE-AIM framework in a large sample of underserved individuals with cancer, the proposed trial is significant, novel, and has potential for meaningful impact. Despite these notable strengths of the study rationale and design, there are multiple conceptual and methodological concerns which detract from the potential impact of the paper. While most concerns reflect issues which simply require clarification, other select concerns necessitate more detailed justification or reinterpretation.</p> <p>1. Although the hub-spoke model for connecting to the community is a significant feature of the trial, more details on how the EXCEL team is developing, cultivating, and maintaining the successful community partnerships with both existing and planned sites (in BC and Quebec) is not clearly articulated. I encourage the authors to provide a more detailed description of the process for identifying, connecting with, and formally establishing these community partnerships. An explicit description would aid in both evaluating this aspect of the trial and facilitating replication of the methods in future community-based trials.</p>
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	<p>2. A more detailed description of the training procedures and content for the CEPs and moderators for the exercise intervention would be instructive. I encourage the authors to provide an explicit description of this process to facilitate future replication of the methodology.</p> <p>3. Although the battery of outcome assessments is comprehensive and generally appropriate select measures would benefit from expanded justification and/or explanation for inclusion. For example, given the multiple ways to utilize technology to obtain valid, objective assessment of weight, the focus on self-reported height and weight to calculate BMI warrants more detailed justification. Similarly, more explicit justification for the use of the GLTEQ as the primary self-reported measure of PA is also warranted.</p> <p>4. Description of any of the specific behavioral strategies/supports that will be implemented to promote adoption and maintenance of exercise participation are not sufficiently developed and could be more clearly articulated.</p> <p>5. It doesn't appear as though the anticipated attrition rates for the trial are provided. I encourage the authors to add a statement addressing drop-out, justify the estimate, and discuss the extent to which attrition may impact the trial findings.</p> <p>6. Whereas the authors have effectively addressed select trial limitations (i.e., lack of comparison to standard of care), an expanded discussion of other potential limitations would be instructive.</p>
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<b>REVIEWER</b>	Greenfield, Diana Sheffield Teaching Hospitals NHS Foundation Trust, Specialised Cancer Services
<b>REVIEW RETURNED</b>	15-Sep-2022

<b>GENERAL COMMENTS</b>	This review protocol is well written, clear and logical. It clearly sets out the methods, including the exercise intervention, to be used in this challenging study to address inequity of access for rural communities across Canada. There are no obvious major flaws in the study design which may prevent sound interpretation of the data. The study is already underway and has received appropriate research governance approvals.
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### VERSION 1 – AUTHOR RESPONSE

#### **Reviewer 1 (Dr. Brian Focht, Ohio State University)**

##### *Comments to the Author:*

- This protocol paper addresses the rationale and design of the EXCEL hybrid effectiveness-implementation trial designed to deliver an evidence-based exercise intervention to 1500 individuals living with cancer residing in rural and/or remote areas. Expanding the reach and access of supportive care exercise interventions is a significant objective with strong scientific

merit and potential for meaningful impact. Overall, the trial is generally well-designed and addresses a vulnerable, understudied sample of underserved individuals with cancer living in rural area characterized by substantive health disparities and access to cancer care. Given EXCEL implements the RE-AIM framework in a large sample of underserved individuals with cancer, the proposed trial is significant, novel, and has potential for meaningful impact. Despite these notable strengths of the study rationale and design, there are multiple conceptual and methodological concerns which detract from the potential impact of the paper. While most concerns reflect issues which simply require clarification, other select concerns necessitate more detailed justification or reinterpretation.

Specific Comments:

1. Although the hub-spoke model for connecting to the community is a significant feature of the trial, more details on how the EXCEL team is developing, cultivating, and maintaining the successful community partnerships with both existing and planned sites (in BC and Quebec) is not clearly articulated. I encourage the authors to provide a more detailed description of the process for identifying, connecting with, and formally establishing these community partnerships. An explicit description would aid in both evaluating this aspect of the trial and facilitating replication of the methods in future community-based trials.
  - a. *Response: Thank you for your suggestion. We have added a table (now Table 1) below the Design and Setting section that outlines our outreach efforts across hubs to both establish and maintain partnerships with HCPs and QEPs.*
2. A more detailed description of the training procedures and content for the CEPs and moderators for the exercise intervention would be instructive. I encourage the authors to provide an explicit description of this process to facilitate future replication of the methodology.
  - a. *Response: Thank you for your suggestion. We agree that this information is valuable, and we have included a paragraph that provides a general overview of the training process. We have also provided the service website link (i.e., Thrive Health Services) so readers can easily access module topics if they choose to do so.*
3. Although the battery of outcome assessments is comprehensive and generally appropriate select measures would benefit from expanded justification and/or explanation for inclusion. For example, given the multiple ways to utilize technology to obtain valid, objective assessment of weight, the focus on self-reported height and weight to calculate BMI warrants more detailed justification. Similarly, more explicit justification for the use of the GLTEQ as the primary self-reported measure of PA is also warranted.
  - a. *Response: Thank you for your comment, however we do disagree that an explicit justification for the use of these measures is necessary. First, this intervention is being delivered online. Thus, to reduce participant burden, we only require the most recent self-reported height and weight as opposed to requiring participants to have other equipment to measure these metrics. Second, the GLETQ is widely used within exercise oncology research (and other populations) and is considered both valid and reliable within the context of self-reported exercise measures.*
4. Description of any of the specific behavioral strategies/supports that will be implemented to promote adoption and maintenance of exercise participation are not sufficiently developed and could be more clearly articulated.
  - a. *Response: We agree that this information is important and was not adequately described. We have added a paragraph to the bottom of the Exercise Intervention*

*section that provides a description of our “Exercise and Educate” approach to support both adoption and maintenance of physical activity.*

5. It doesn't appear as though the anticipated attrition rates for the trial are provided. I encourage the authors to add a statement addressing drop-out, justify the estimate, and discuss the extent to which attrition may impact the trial findings.
  - a. *Response: Thank you for the suggestion. Based on our previous work with the ACE study, we have added an estimated attrition rate and explanation to our Sample Size and Statistical Analysis section.*
  
6. Whereas the authors have effectively addressed select trial limitations (i.e., lack of comparison to standard of care), an expanded discussion of other potential limitations would be instructive.
  - a. *Response: Thank you for pointing this out. Per your suggestion and suggestions from the editor, we have edited the “Strengths and Limitations” section that is placed after the abstract.*

**Reviewer 2 (Prof. Diana Greenfield, Sheffield Teaching Hospitals NHS Foundation Trust)**

Comments to Author:

- This review protocol is well written, clear and logical. It clearly sets out the methods, including the exercise intervention, to be used in this challenging study to address inequity of access for rural communities across Canada. There are no obvious major flaws in the study design which may prevent sound interpretation of the data. The study is already underway and has received appropriate research governance approvals.

**VERSION 2 – REVIEW**

<b>REVIEWER</b>	Focht, Brian Ohio State University
<b>REVIEW RETURNED</b>	04-Nov-2022

<b>GENERAL COMMENTS</b>	The authors have thoroughly addressed each of the concerns raised in the initial review of the ms. I commend the authors for their detailed, thoughtful revision & responses. The revised ms is strong and will make a meaningful contribution to the literature. I have no further requested revisions.
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