Reviewer’s report

Title: A novel behavioural INTErvention to REduce Sitting Time in older adults undergoing orthopaedic surgery (INTEREST): protocol for a randomised controlled feasibility study

Version: 0 Date: 09 Feb 2019

Reviewer: Jonathan Quicke

Reviewer's report:

INTervention to REduce Sitting Time in older adults undergoing orthopaedic surgery (INTEREST): study protocol for a feasibility study

Many thanks for submitting your paper "INTervention to REduce Sitting Time in older adults undergoing orthopaedic surgery (INTEREST): study protocol for a feasibility study" to Pilot and Feasibility Studies.

In my opinion, interventions aimed at reducing sedentary time are of clinical importance. The authors highlight the links between sedentary behaviours and negative health outcomes, and identify the elderly with mobility limitations as a clinical population at risk of more time spent sedentary. They make the case for novelty based on this clinically important study population.

The authors report drawing on both the SPIRIT guidelines and the TIDieR checklist in informing the content of their protocol and intervention respectively although I believe some relevant items relating to the SPIRIT guidelines are missing from the manuscript that would strengthen the protocol and improve reporting detail. The authors gained ethical approval for their work and have prospective trial registration. The standard of scientific writing was generally clear but could be made more so with some minor reordering, rewording and further rationale of decision making in places. I recommend that the paper be considered for publication with major changes.

Aims/background

The background work up included rationale for addressing sedentary behaviour in older adults with mobility limitations but I wonder if the link as to why this intervention is to be delivered in those awaiting joint replacement for OA could be strengthened. The prehab context and rationale for potential post-operative outcome improvements is mentioned in the abstract (lines 36-38), however this is not justified within the background (line 103).

Given the specific focus of this study on sedentary behaviour could the sentence (lines 94-96) be rephrased slightly for clarity? You refer to the more general term "activity" and it is not clear to if this reference relates to sedentary behaviour, moderate-vigorous activity or any other type of activity.
Please add citations to support the sentence ending on line 79.

This paper aimed to "assess the feasibility of reducing sedentary time using a novel behaviour change intervention in a population of adults >60 years waiting hip and knee replacements" and also "assess the feasibility and acceptability of conducting procedures required to conduct a full-scale RCT, etc". The authors then go on to give additional "primary and secondary aims". Do the authors think that it would be more appropriate to speak of the first aim in terms of assessing the feasibility of delivering the sedentary "behavioural intervention" rather than the feasibility of reducing sedentary behaviour per se? I also suggest that rather than reporting multiple aims it may help the reader to have one or two aims and then subsequent objectives relating to how these overarching aims would be met (covering content in lines 110 to 113).

Methods and analysis

The methods describe a single site, parallel group RCT using 2:1 randomisation to intervention and control respectively.

It may be clearer to say that the research nurses will screen for patients matching "all required study eligibility criteria" (this implies both inclusion and exclusion criteria are satisfied) (line 141-142). Please briefly explain your rationale for the 2:1 randomisation (line 162).

If the potential future main trial would be delivered at multiple centres by different clinicians then there may have been benefit in assessing feasibility across more than one site and with more than one individual delivering the intervention. It is not possible to address this at this stage of the feasibility trial but this is a limitation to consider as mentioned later in the discussion. Please add further detail/rationale around the sentence that study procedures and intervention/assessment visits will take place either at participants' own homes, at the hospital, or at Birmingham university (lines 120-122). Do you have any existing hospital data that you could link to your that justifies your 12-month recruitment period?

Please provide a model consent form in the appendices (line 158). Please provide detail on the third party who will carry out the randomisation (line 162). In my ignorance I found the language within the sentence on line 176-178 slightly unclear. Given that the readers of pilot and feasibility studies will not necessarily have a psychology background please can you rephrase this for clarity for a non-specialist readership.

I think that the order you describe your intervention in could be altered to help orientate the reader. For example, I believe a brief overview summary of the intervention at line 165 (sessions/ mode of delivery/ brief content etc) prior to talking about the underpinning theoretical framework etc. Please describe what "usual care" is for this patient group. It is important to report this in sufficient detail for the study to be reproducible. Please can you add information about concomitant care and interventions that are permitted/prohibited during the interventions.

Please can you report how will you capture data on fidelity of intervention delivery (line 246-249). Will this be on case report forms? Would it be stronger and possible to have a separate
independent assessor assessing intervention fidelity rather than the same author delivering the intervention?

Can you concisely offer details on how many qualitative interviews you plan to carry out with the recruiting research nurses and what elements of feasibility you are looking to understand within these interviews (line 286-288/ 302). You mention that data will be analysed thematically-please provide additional information about this process, will it be deductive based on existing theory, inductive or a combination of the two?

For your exploratory outcomes it would aid the reader to know how these are captured, validity of measures where appropriate and scale ranges etc.

Do you have any "stop- go" criteria for a main trial? How will you collate and triangulate your feasibility findings in order to make a decision about whether you can progress to a main trial?

Discussion and conclusion

Please add information about your rationale for how you will choose your primary outcome measure for the main trial.

References: Please use consistent formatting with your references. For example, references 3 and 12 do not require both web address and journal reference.

Please add discussion about the limitations linked to lack of blinding and the clinical importance of this trial.

Figures

Please add the research nurse "one week post PIS form phone call" to figure 1.

I found the logic model for Figure 2 slightly disorientating. Is it possible to keep all blue "intervention components" at the top of the page (eg reposition "self-monitoring") to help the reader follow the logic flow?

Final assessment:

Major corrections

1. Please add rationale for why you are looking to deliver your intervention in people with OA specifically at the time point prior to joint replacement (line 103).

2. Please describe what "usual care" is for this study (around line 242)

3. Please add information regarding concomitant treatments (intervention description)
4. Please provide additional description regarding qualitative interviews as suggested above.

5. Please describe your criteria for continuing to a main trial

Minor corrections:

Please see additional points in the above text.

Level of interest
Please indicate how interesting you found the manuscript:

An article of importance in its field

Quality of written English
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

Declaration of competing interests
Please complete a declaration of competing interests, considering the following questions:

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No