**Reviewer's report**

**Title:** Enhancing delivery of osteoarthritis care in the general practice consultation: evaluation of a behaviour change intervention

**Version:** 0  **Date:** 02 Feb 2017

**Reviewer:** Blair H Smith

**Reviewer's report:**

BMC FAMP-D-16-0304. Porcheret et al.

This paper reports an analysis of part of the intervention in a larger RCT on managing osteoarthritis (OA) in primary care. It analyses the interim effectiveness of an educational intervention aiming to improve GPs' behaviour during consultations where OA presents anew, and represents the next stage of the development reported in references 14 and 20.

OA is a common condition, in which there is evidence of sub-optimal management in primary care, where it usually presents and is managed. The RCT in which this study is embedded is a high quality trial, funded by NIHR and ARUK, two of the most important funders in the UK. This study therefore represents part of the high quality approach to an excellent venture, by a group known as leaders in the field of research around managing musculoskeletal conditions in primary care.

It is a small before-and-after study, reporting on just 15 GPs, 14 of whom had attended any of the educational workshops that form the intervention. These workshops appear to be well-honed, and their development is reported in reference 14. Assessment of behaviour change is based on performance during simulated consultations, an acknowledged proxy measure, whose development is reported in reference 20. Two of the most important components of this study do not therefore form part of this paper. Assessment of performance was undertaken rigorously, in blinded and randomised fashion. Statistical analysis was appropriate for this before-and-after study, and clearly reported. Rigour and analytical flexibility would have been enhanced by inclusion of a control group who had not attended workshops. This does not seem to have been considered by the authors, though I assume it was beyond the resources or logistics available.

They found that, among these 15 GPs, competency was improved as judged by a median increase from 7/15 to 11/15 identified tasks; and that score delivery increased for 6 tasks at one month, sustained for 3 tasks at 5 months. A larger sample size may have resulted in more score changes with significant p-values. The authors acknowledge the potential bias resulting from participants being under observation (a Hawthorn effect). They also imply a selection bias resulting from voluntary participation in the study, but perhaps do not discuss this sufficiently.
with respect to the ability generalise from this study. A fuller critical discussion of this selection bias would help readers to assess the overall value of this study.

They conclude, appropriately, that GP competency for undertaking OA consultations can be enhanced, and that these workshops can inform further initiatives to improve OA care in general practice. These rather limited conclusions are all that can be drawn from a small study such as this. However, the high quality approach to developing every stage in this study means that the intervention is likely to be replicable (if taken along with references 14 and 20), and therefore generaliseable. Publication of this study will also enhance the rigour with which readers will eventually be able to assess the final report of the main RCT. Full effectiveness of the intervention will become clear when the RCT is completed.

The paper is clear and well-written. Thank you for asking me to read it.

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

Yes

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

No

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

Yes

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

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

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

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?

If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

I declare that I have no competing interests

I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license (http://creativecommons.org/licenses/by/4.0/). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal