Reviewer's report

Title: Decreasing the number of arthroscopies in knee osteoarthritis – the Personalised Knee Improvement Programme (P-KIP). A service evaluation of a de-implementation strategy

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Reviewer: Leti Van Bodegom-Vos

Reviewer's report:

As mentioned in my previous review, the study described in the manuscript addresses an important subject that has currently international attention. A strength of the manuscript is that they also included patient outcomes to show that the implementation of P-KIP does not have a negative effect on patients. Although the manuscript is improved, I still have some major and minor comments. Furthermore, the manuscript needs some language editing, because the authors are a bit sloppy in their formulations and abbreviations. Furthermore, I recommend that a statistician of the journal assesses the analyses for accuracy.

Comments:

Abstract

1. Abstract/Conclusions: 'Results suggest that P-KIP reduces the number of arthroscopies performed, while improving patients' knee and general health outcomes. P-KIP has the potential to deliver large efficiency savings and relieve pressure on operative lists, however replication in other sites is required.' --&gt; the authors cannot state that patients' knee and general health outcomes improve as result of P-KIP, because they did not compare the results with a control group.

Introduction

2. Row 116-131. The authors describe that they assessed the barriers among surgeons and patients. However, the barriers mentioned in the manuscript are all described from the perspective of the surgeons. What barriers did the patients experience?

3. Row 131: time pressure --&gt; who feels time pressure? And from what?

4. Row 141-3:'There is some evidence that such targeted interventions have greater effects,16 and a growing body of evidence on de-implementation strategies (reducing low value care) has emerged in recent years.17-19 ' --&gt; these and the following sentences do not provide a logical structure for the argumentation in this part of the manuscript. For example, why 'AND' in de above sentence?'
5. Row 145-7: I do not understand the following sentence: "Although there is a lack of robust evidence for the methods or rationale behind identifying the substituting behaviour, we used the barriers identified in the TDF above to develop PKIP". It seems not logical to use barriers though there is a lack of robust evidence for methods or rationale begin identifying substituting behavior. Methods for substituting behavior cannot be translated to barriers. One of the barriers may be the lack of alternatives but they way the authors worded this is not clear.

Results

6. Result section table 2: why do the authors only give the characteristics of the patients included in P-KIP, it would be valuable to have also the characteristics of the patients that are included before the implementation of P-KIP - Jan 2014 till July 2015 (to check for comparability of the patients before and after the implementation). This would strengthen the manuscript because the manuscript has still a major limitation (which is now discussed in the discussion section, which is good) because the authors still use the number of arthroscopies as main outcome measure, and this number can also change as result of the number of patients seen and the case mix of patients seen.

7. Row 369-371: I was a bit surprised that the cost savings are described in the result section. This is not mentioned in the method section. And how many patients can be included in the P-KIP program for £90,000?

Discussion

8. Row 407 - Why are this early results? You did not describe this in the aim or method section

Conclusion

9. Row 537-538 - 'This project joins the body of evidence supporting the efficacy of interventions targeted to specific barriers, specifically of substitution strategies in de-implementation of low value care, and also provides an example of how interrupted time series analysis can be used in assessing the efficacy of interventions.' Too long sentence. I advise the authors the split it up. Furthermore I do not understand the part 'the body of evidence supporting the efficacy of interventions targeted to specific barriers, specifically of substitution strategies in de-implementation of low value care..'. Providing a substitute is a way to handle a barrier (for example to give the surgeons an option to do something for the patients because they want to help the patients). But the sentence says something else. So the language must be improved.

10. Row 533-536 - 'The result of this service evaluation suggests that the conservative care pathway P-KIP decreases the number of arthroscopies performed for knee osteoarthritis
and leads to improvements in knee specific and general health outcomes.' the authors cannot state that patients' knee and general health outcomes improve as result of P-KIP, because they did not compare the results with a control group.

Language editing:

* Row 128: Preassure --&gt; pressure
* Row 135: 'This included offering a service that was seen as "not more physiotherapy", that surgeons and patients felt was an acceptable alternative'. -- &gt; improve the language of this sentence.
* Row 155: arthrocropy --&gt; arthroscopy
* Row 153-155: " Our aim was to offer an accessible, evidence based conservative care pathway as an alternative to knee arthroscopy." You already mentioned this in row 149-150. You can delete this.
* Row 282 The authors use P-KIP and PKIP, choose one abbrevations, and use it everywhere in the manuscript.
* The wording of the manuscript is not clear everywhere. For example, sometimes the authors use 'intervention' and sometimes 'implementation of P-KIP'.
* Row 411 - OKS - introduce this abbreviation in the manuscript (this is the first time the authors use this abbreviation).

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.

Yes

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

No

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 recommend additional statistical review

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