Reviewer’s report

Title: Quality of primary care delivery and productive interactions among community-living frail older persons and their general practitioners and practice nurses

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Reviewer: Ulrika Winblad

Reviewer’s report:

The article sets out to investigate whether frail community-dwelling older persons’ perspectives on quality of primary care according to the dimensions of the CCM are associated with perceived productivity of interactions with their GP and practice nurse. The text reads well and is easy to follow, its particular strength being the ambitious intervention in which a large number of GP practices participate. However, the article has some drawbacks (particularly regarding the interpretations of the results) that need to be addressed:

Introduction:

1. A general comment is that an international reader needs more information about the primary health care system in the Netherlands and the national health policy context. How is it organized and what is the role of the GPs and practice nurses in providing high quality, integrated care for this particular group of patients? Since the results show improvements over time but no differences between the intervention and control groups one could expect that external factors such as national quality improvement initiatives or other general changes could explain the results. Are there any recent political reforms, new funding schemes etc that include primary care?

2. The rationale for the study is a bit hard to follow. Particularly the argument on lines 92-122 needs to be further elaborated on. Why, more precisely, is it important to investigate if the CCM model increases the 'productivity of the patient-professional interaction' for community-dwelling frail older persons? We already know from earlier research that CCM leads to better patient outcomes and improved quality of care delivery. What is the particular reason for believing that the patient-provider relationship needs to be studied further? And, what is the motivation for investigating elderly patients in particular in this regards?

3. Regarding the aim and the causality of the model, see comments below.

Methods:

4. The selection of the studied GP practices needs to better motivated. Why were these 17 GP practices approached and not any others? What distinguishes the selected practices,
and were there any biases (for instance regarding size, scope of services, etc)? What explains the unequal number of interventions practices (12) compared the number of controls (5)?

5. The study sets out to investigate if the dimensions of CCM are associated with productivity of the patient-professional interactions. According to the authors, the CCM guide primary care practices to improve quality by organization change in six key areas: self-management support, delivery system design, decision support, clinical information systems, the health care system, and the community. I must admit that it is hard for me as a reader to understand if and how the elements in FFF approach (even if the approach itself seems very interesting) apply to the CCM. This needs to be further elaborated on in the paper.

6. I would also like to see a description of the implementation strategies, i.e. how and in what way was the FFF-intervention implemented, and did it go according to plan? Since the results show no differences between intervention/ control group it is particularly important to get more insights regarding the actual intervention - the 'null results' might be explained by an unsuccessful implementation.

In addition, it would also be useful to get a better picture of what is meant by 'usual care' within primary care in the Netherlands (particularly as the author state in the Discussion section that the primary care already has such a high standards).

Results and Discussion:

7. Upon follow-up, significant positive results were identified in both the intervention and control group, and no statistically significant effect of the intervention could be identified. While a lack of effect in both groups could be explained simply by a lack of intervention effectiveness, significant increases in both groups has worrying implications for the validity of the collected data. While one explanation could be the presence of an overall secular trend in the quality of the primary care in the Netherlands, a more likely explanation is that some unknown phenomenon resulted in both intervention and control group patients reporting higher levels of quality in both instruments upon follow-up. This "red flag" is not discussed at all in the manuscript. As a confounding effect by some data collection artifact (perhaps some form of priming occurred during the 60-75 minute long interviews?) seems consistent with the results presented in the manuscript, a satisfactory explanation for this effect must be presented if the data are to be used in secondary analyses.

8. It is not clear whether this paper is attempting to establish causality as intimated by the title, or simple association as described in most of the paper. Nor is it readily apparent that the direction of causality proposed in the manuscript is the correct one - Why should the quality of primary care not instead be influenced by productive patient-professional interactions? Given the similarity of the questions posed in these instruments, this needs a strong theoretical and/or empirical justification. You might for instance try simply
switching places of the dependent and main independent variable of interest in the multi-level model and observe whether the effects persist - If the association is due to some unobserved confounding effect on both variables, the effects should remain robust.

9. Appropriately specifying a multi-level model is tricky, and it is difficult to discern exactly what the form of the model is. Are random effects being applied at the individual or GP practice level, or is this purely a fixed effect model? Is a pre-/post-test indicator variable being used, or are test scores operationalized as separate variables? Including a formula specifying the form of your model might clarify this. Is the model based on an established method? If so, please provide references supporting your modelling decisions, and motivate your choice of approach. The interpretation of the model coefficients in the discussion is also somewhat unclear - Is it the baseline quality or the change in quality that is important here? Perhaps a simpler model might provide more interpretable results.

Minor comments:

The information in Table 2 and 3 could be merged into one table.

On line 210 it is said that older persons living in nursing homes or homes for elderly are excluded in the study. In Figure 2 under 'Lost to follow up' it seems as patients within long-term care facilities are included in the study. What is the case?

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

No

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