Reviewer’s report

Title: Implementation of a program for diabetes type 2 patients based on the Chronic Care Model in a hospital centred care system: "the Belgian experience".

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Reviewer: Rolf Wahlstrom

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Implementation of a program for diabetes type 2 patients based on the Chronic Care Model in a hospital centred care system: "the Belgian experience"

Comments to the authors
This study deals with two major global problems in health care of today: the increasing burden of chronic diseases and the adaptation of systems to meet the challenges of this health transition. In this case, the fragmented and dissociated primary care system in Belgium is in focus.

The reported study has several strengths: built on theories and models, focus on one disease, large-scale intervention in existing system, long-term, established evaluation methods. However there are some aspects that are less well covered, in particular description of methods and the structure and focus of the discussion. The paper would benefit from revisions in these parts as suggested below.

Major Compulsory Revisions

Methods
1. The description of the methods used must be more detailed. Although the authors have used the ACIC, it doesn’t tell exactly how this was done. The following additional information should be provided: type of surveys: content, number, target groups; number and profession of interviewed persons; participants in focus group interviews: how many groups, number and character of participants; number and competence of interviewers and moderators and other data collectors; which kind of documents were analysed. The consensus procedure for the scoring could be more clarified: was it the six scorers or all authors, how was consensus reached, bias problems. The consensus process for facilitators and barriers should also be clarified in a similar way: was it done by the three researchers only, what did the regional stakeholders agree on (I assume it was rather results than “conclusions” as is written in the manuscript).

2. The time frame for data collection should also be clarified. Was all data collection done in a similar way in 2003 and 2007 for the ACIC components? When was other data collected?
3. It is not acceptable for the international reader that the authors refer to a report in Dutch for further information about the methods.

4. The paper reports an evaluation of an intervention, which is described partly in the Background. More information is needed about the implementation process, did it start full-scale in 2003 or was it gradually implemented, at what pace?

Background
1. A bit long, but most of the information is relevant. However some reduction would be beneficial.

2. I would prefer to move the description of the intervention to the Methods, in particular information about target group and participants. Was the initial survey in 2003 conducted and analysed by the research group?

Results
1. The first paragraph needs revisions. In the first sentence it could be emphasised that the limited support was found in all subcomponents. In the second sentence the word “still” should be deleted as the information refers to the baseline measures (you have not shown any previous measurements with which it could be compared). The last sentence is incorrect in two ways: it is only the clinical information system that has not received a score at a higher level (delivery system design has reached 4.5 according to Table 2), and the level that it remains at is the level of limited support (not basic).

2. Part 1: it is mentioned that study groups for different disciplines were installed. However, the more important functioning and outcomes of these groups are not reported. It is well known that established groups are not the same as functioning and sustainable groups. So information about how these groups worked and what happened afterwards, should be added.

3. Part 3a: It seems a bit strange that the patients should have a referral from their GP. It would be good if this could be discussed in relation to the empowerment theory and the participation rate in the self-management groups. Was the rate of 20% considered high or low in relation to plans and other experiences? The sentence about 70% of the GPs referring at least one patient after two years is not clear. Does it mean that seven out of ten GPs had referred at least one patient during the first two years after introduction of the programme? In that case “had” must be inserted before “referred”.

4. Part 3d: The information that 49% of the GPs contributed to the registration should be added here (it is now in the Discussion).

5. Facilitators and barriers: The first two paragraphs after the two introductory sentences could be shortened. The first sentence in the paragraph on the bottom-up process is not clear. What is meant by the statement that it was the “bottom-up process” that made the participants confirm the appropriateness of the program? This must be written clearer and also be discussed more in depth as there were also (maybe inevitably) top-down components in this intervention and implementation as described in the following paragraph in the manuscript (about distributing the protocol).
6. The last paragraph: It is not clear what is meant by “participation of the region”. Does it refer to the regional authorities? Other interpretations are possible.

Discussion

1. Too many results are repeated here and there in the Discussion in the same way as in the Results section. For example, the actual scores should not be shown in the first sentence. Instead the sentence could end as follows: “… succeeded in improving the overall support for chronic care for diabetes from a limited to a basic level.”

2. Past tense should mostly be used, e.g., in the second sentence.

3. The fourth sentence as it stands could have been written without performing the study. The contribution to reducing knowledge gaps would become clearer if the sentence is changed as follows: “This context-specific understanding of the factors … but may also be helpful …”.

4. The comments in the second paragraph on risks with pilot studies (the word ‘pilotitis’ should be deleted) looks a bit strange as the whole intervention is referred to as a pilot study both in the Abstract and in the Background. The comment would gain from clarifying the actual situation and how length and sustainability of the intervention was planned and perceived by those participating. There are comments about this, but I think the authors should be even more critical in their own analysis as they seem to at least partly have entered into a situation similar to what they criticise in this paragraph.

5. The example (without any reference) given in the third paragraph is not necessary for the discussion of the findings and can be deleted. Instead, I suggest a more elaborate discussion of the implications and reasons to expect success regarding the feedback given to the commissioners and how this was supported by the model.

6. Fifth paragraph: Repetition of exact wording from Results should be deleted. It could also here or somewhere else be even more clearly described how the regional initiators and researchers attempted to achieve a bottom-up process, although the whole project was obviously planned from the top.

7. Same paragraph: The study groups are mentioned here. As mentioned above it would be an advantage to get some further information on how these were implemented and functioning.

8. Paragraph 7: Provisional conclusions about the quality of care are mentioned but no results are reported. Either such results should be included in the Results, or it should be made clear that the authors consider that the quality is not enough for presentation.

9. Paragraph 8: Again, the figures should not be repeated. Instead the first sentence could be formulated like this: “The particular ACIC score for the delivery system also improved from limited to basic support.”

10. Some more reflections could be added on the improvement in relation to the very low score at start. Wasn’t it almost inevitable to achieve at least some improvement?
11. Some considerations about methods should also be included. The content of that is difficult to suggest without the additional information I have requested.

Conclusions
The conclusions must be revised. The first sentence has no connection with the aims of the study and has not been investigated. The second sentence is neither an aim of the study and has no support from the findings. The last sentence is not incorrect but rather trivial and also not directly related to the findings. The authors need to consider more carefully what can actually be learnt from this study. Some suggestions would relate to the mode of implementation (balance between top-down and bottom-up), importance of securing support, negative effects of insecurity about sustainability, the constraints to overcome system barriers (GPs’ competition about patients, etc.).

Minor Essential Revisions
1. Hyphens are used differently, e.g., both “ACIC score” and “ACIC-score”. This should be harmonised and the correct would be “ACIC score”. However, as far as I have understood, hyphens should be used when two-word nouns are used together with a third noun, e.g., “health care”, but “health-care intervention”. Change for example “pilot-study” in the Abstract to “pilot study”.
2. Discussion, eighth paragraph, sixth sentence: The brackets around “chronic” do not make sense. Change to “the care of chronic diseases” or similar. There is also no need to repeat “patient list” etc in the same sentence as it is mentioned already in the same paragraph.
3. Abstract: Change the objective and phrase it like in the text, i.e., a pilot study to explore, not a study to study! Explain also CCM first time it appears (first line). Change conclusions as suggested above.
4. Introduction: In the second sentence it is referred to “Western countries”. This is not a clear concept and it is not true that this transition occurs only in a specific type of countries. My suggestion is that the authors either use the now accepted concepts of high-, middle- and low-income countries or geographical attributes like European, North American, African, etc.

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Level of interest: An article of importance in its field
Quality of written English: Acceptable
Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I declare that I have no competing interests.