Author's response to reviews

Title: Collaboration processes and perceived effectiveness of integrated care projects in primary care: a longitudinal mixed-methods study

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Author's response to reviews: see over
Ms. Eloisa Nolasco  
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Subject: Revised manuscript submission (Manuscript ID 6066520121727397)  

Dear Ms. Valencia,  

Please find attached a revised version of our manuscript ‘Collaboration processes and perceived integration effectiveness of integrated care projects in primary care: a longitudinal mixed-methods study (Manuscript ID 6066520121727397)’, which we would like to resubmit for publication in BMC Health Services Research.  

We are grateful for the valuable suggestions and comments made by the reviewers. This enabled us to significantly improve the quality of our manuscript. In the following pages we address the specific comments made by the reviewers. Revisions in the text are shown using yellow highlights.  

We hope that the revisions in the manuscript and our accompanying responses will be sufficient to make our manuscript suitable for publication in BMC Health Services Research.  

We look forward to hearing from you at your earliest convenience.  

Yours sincerely,  

And on behalf of all authors,  

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Response to Reviewers

Responses to the comments of Reviewer David Ryan (Reviewer # 1)

1. This is an interesting study in an important area and worthy of publication. I have identified several opportunities for improvement. In the notes below several clarification issues are identified. The data appears sound with the exception that multicollinearity has not been discussed.

   Response: Pearson correlation was assessed to check for multicollinearity between the integration variables. All correlations were < 0.5, indicating that there was no multicollinearity between the clustering variables. Within the revised method section we added a sentence as well as references (lines 316-317 and 736-739) how we assessed for multicollinearity within our study.

2. The studies limitations require clarification i.e. sampling issues, issues related to response rates, perceived outcomes and generalizability.

   Response: We have revised and changed the discussion section of our manuscript (lines 543-545, 556, 558-559, 561-563 and 570-575) to address the issues raised by reviewer #1. First, the revised discussion section now states that the lack of patient perspective in the current study could have influenced the completion of the ICPs typology (lines 543-545). Second, we explicitly state that the selection and response bias (e.g. relatively high response rates at the organisational level) could have influenced the results of the study (lines 558-559). Third, we describe the limitation of the use of self-reported data, and that further research is needed using more objective instead of subjective data (e.g. stakeholders’ perceived effectiveness) as a proxy of an ICP effectiveness (lines 570-575). Finally, we state that the results at the organisational level might be overrepresented and that caution should be taken when generalising the results of this study (lines 561-563).

3. In the discussion comments on the use of the findings to inform strategies for integration improvements might be considered.

   Response: As suggested by reviewer #1, we revised the discussion section of the manuscript (lines 582-590). We have now described more precisely how the typology of ICPs can be used as a framework and potential diagnostic tool for professionals, managers, commissioners, and policymakers.

4. Here are some line by line comments that I hope are helpful: 87 the definition of integrated primary care is a little confusing. Is integrated primary care an interprofessional and interorganizational network of ambulatory care providers? Or is something else intended?

   Response: As suggested by reviewer #1, we excluded the words ‘a network of’ within our definition, to avoid misinterpretation (lines 85-89).

5. 93 – 100 this paragraph is important but confusing. It seems to be saying a) Early research has focused on centralized implementation strategies b) These strategies are focused on embedding integration efforts within org. and political systmes through structural and
bureaucratic control based mechanisms. c) These approaches have failed to demonstrate improved outcomes. d) And suggest that this approach is insufficient to achieve integration.

Response: We highly appreciate these valuable suggestions made by reviewer #1. We agree that the structure of this paragraph was confusing. We therefore followed the suggested structure of reviewer #1 to revised this paragraph (lines 92-98).

6. 101 use parallel structure i.e. More recently collaboration and self-organization . . might be more effective strategies. These more collaborative approaches are considered essential for managing . . . arrangements.

Response: As suggested by reviewer #1 we also revised the structure of this paragraph. Within the revised background section we united the previous ‘top-down’ and ‘bottom-up’ paragraphs into one paragraph (lines 92-98). First, we state that previous research was typically focused on centralised top-down implementation strategies and that these studies highlighted the difficulties of aligning various actors (e.g. policymakers, managers, organisations, professionals) across multiple settings. Second, we explain that recently scholars argue that bottom-up collaborative approaches are considered more effective strategies to implement integrated care in practice.

7. 106 is an ‘integrated care arrangement’ different from “integrated care strategies”?

Response: We agree that the use of different terms (i.e. arrangement versus strategies) caused confusion. An arrangement means the actual agreements regarding a specific integrated care effort, where strategies describe the intended goals and objectives of a specific integrated care effort. The specific sentence was rephrased (see also response # 6). Throughout the rest of the manuscript we tried to avoid the use of ‘arrangement’ and ‘strategies’ within the same sentence.

8. 114 Suggest saying “it has been suggested that . . . 114 need to decide what to call these collaborative partnerships i.e. trust based collaborative partnerships or bottom up collaborative partnerships

Response: We revised this paragraph extensively (see also comments reviewer #2) in order to explain more clearly why we studied the underlying collaboration processes. Within the revised paragraph we now describe that within integrated care studies the collaboration processes that underlie the development of integrated care is often evaluated as a “black box,” with little understanding of the critical mechanisms for success or failure (lines 106-110). We also state that this particular knowledge gap restrains the opportunities to identify effective implementation strategies within the field of integrated care (lines 110-113). To sum, we agree that within the previous section the use of words like collaborative and bottom-up (partnerships caused confusion. We therefore revised this paragraph to describe the particular knowledge gap regarding the collaboration process within the field of integrated care more precisely (lines 106-118).

9. 128-129 The RMIC model might be implying that both bottom up and top down approaches need to be combined in the concept of integrated care. Alternatively RMIC might be saying that collaborative partnerships can be considered from four perspectives. Either of these seem reasonable but perhaps the authors could clarify which interpretation of RMIC they are using. I think it is the latter.
Response: Within the revised background section we now explicitly stated how we used to RMIC to study integrated care. We state that we used the RMIC to study the (dis)similarities of integration perspectives between the stakeholders at the clinical, professional, organisational and system levels (lines 128-130 and 132-135).

10. 129 above you have said that there is no insight on collaborative processes here you imply that there is Bell Kaats and Opheij – it's okay if these insights come from outside of primary care but this needs to be clarified

Response: As suggested by reviewer #1, we added a description about the origin (including references) of the model of Bell et al. within the background section (lines 140-142 and 711-721). Within the revised background section we state that the Model of Bell et al. is developed within the field of inter-organisational management science.

11. 138 the term ‘mind-set’ needs clarification. Previously the author referred to ‘perceptions’ or ‘viewpoints’ or are these the same? Suggest using a common term

Response: We agree with reviewer #1 that the use of mind-set, viewpoints as well as perspective is confusing. We therefore changed mind-set as well as viewpoints into perspectives throughout the entire manuscript.

12. Line 141-144 the point has already been made that knowledge is scant

Response: As suggested by reviewer #1, we excluded this sentence as it is redundant with the previous sections within the background section.

13. Line 148 either ‘five conditions for achieving a constructive collaboration’ or ‘five dimensions for evaluating constructive …’ Are the authors implying that the five conditions for collaboration should be examined at each RMIC level.

Response: As suggested by reviewer #1, we changed conditions into dimensions throughout the manuscript. Within the discussion section of the manuscript we also addressed the issue that the five collaboration dimensions ideally should be evaluated at all RMIC levels, but that this particular research could not be done because the necessary data was unavailable (lines 556-563).

14. Line 155 to 163 it seems that the clinical service level of the RMIC framework has been left out. That’s okay but perhaps the reason for leaving it out could be briefly explained

Response: Within the revised method section we now explicitly describe why the clinical/service levels was not included in the present study (e.g. lack of patient data) (lines 181-185).

15. 180 -181 seem out of place

Response: As suggested by reviewer #1, we moved this particular sentence at the beginning of the data collection procedure paragraph (lines 187-188).

16. 192-218 It is unclear who is doing what in the process that includes collecting information, qualitative analysis, systematic extraction and final coding
Response: We agree with Reviewer #1 that this was not clearly described within the previous version of our manuscript. We therefore revised the data collection procedure paragraph for the system level extensively (lines 193-215). Within the revised paragraph it is stated more precisely that the information collection, analysis and coding process were conducted by the same process evaluators (Lines 199-201). See also the comment of reviewer #2 (no. 3) and our response.

17. 196 refers to interviews while line 198 refers to semi-structured interviews. Are these the same or what kind of interview was referred to in 196 – open-ended?

Response: See also response # 16. We agree with reviewer #1 that the previous data collection procedure paragraph for the system level was somewhat confusing. In line with the comments of reviewer #1 and #2 we revised this paragraph extensively. Within the revised paragraph we describe that semi-structured interviews were conducted (lines 193-197).

18. 205 more description of the qualitative templates and the extraction process

Response: Within the revised data collection procedure paragraph for the system level we describe now more precisely how the extraction process was conducted (lines 193-215). First, we describe that a thematic analysis procedure was followed to enable an overall quantitative analysis for the system level (lines 199-201). Second, we explain that the data was transcribed in a priori developed qualitative template using excel processing software (lines 204-206). And that the qualitative data was coded using the coding structure derived from the process evaluation interviews conducted at the start of the program (lines 206-208). Third, we describe that a structured case report for each ICP was written consisting of a narrative summary of all information obtained (lines 210-212). Finally, we explain how a standardised coding scheme was used to quantitatively rate the degree of system integration and final success of the ICP using the content of the case reports (lines 212-215).

19. 219 who completed the collaboration process questionnaire

Response: This was explained in the data collection procedure paragraph for the organisational level (lines 216-219). However, for more clarity and as suggested by reviewer #2, we included table 1 (lines 802-803) which provides a summary of the data collection methods, processing and variables at all different levels.

20. Line 465 what is the theory of action

Response: We agree with Reviewer #1, that this description is unclear. We therefore revised ‘theory of action’ into ‘recent theories from the literature’ (line 471).

21. Lines 755 to 762 footnotes - The item translations need a little polishing

Response: We appreciate this suggestion made by reviewer #1. We revised the organisational integration item c, and professional integration items f and l accordingly (lines 812 and 815).

22. Lines 767 The abbreviations at the bottom of table 3 do not seem to refer to anything in the table

Response: The abbreviations indeed did not refer to anything in the Table. We therefore deleted the abbreviations.
Responses to the comments of Reviewer Their Lemetti (Reviewer #2)

1. Aim of the study is unclear. Aim was “to explore how changes in collaboration processes over time are related to perceived degree of integration effectiveness from professional, organizational and system perspective”. Effectiveness toward what should be defined more accurately. Currently, it comes impression that aim is effectiveness of implementation process of the ICPs or effectively achieved integrated care through ICPs or effectively developed integrated care through improvement of collaboration processes which were developed help with the ICPs. But it has not been clearly stated in the manuscript. The questions in the semi-structured interview scheme included a lot of questions from the success of the projects, not perceived degree of the integrated care.

Response: We agree with reviewer #2, that the aim of the study was not clearly formulated in the previous version of our manuscript. The rephrased first aim now states that we developed an exploratory typology of ICPs based on the perceived degree of integration of stakeholders at the professional, organisational and system levels. The second aim of this study describes how we used the types of integration to study the differences in changes of collaboration processes over time and final perceived effectiveness (lines 146-150). In addition, within the revised research question regarding the perceived effectiveness we also describe that effectiveness is defined as rated success by professionals, managers and policy-makers (line 155). Finally, within out title we changed ‘perceived integration effectiveness’ into ‘perceived effectiveness of integrated care projects’, to describe the perceived effectiveness more precisely and avoid further misinterpretation (lines 1-2).

2. Research questions number 3) is also unclear. Effectiveness of what? Currently, it comes also impression that it means effectiveness of implementation process of the ICPs or effectively achieved integrated care through ICPs or effectively developed integrated care through improvement of collaboration processes which were developed help with the ICPs. But it has not been clearly stated in the manuscript.

Response: See also response #1. Within the rephrased research question we now explain that effectiveness is defined as the final rated success of the ICPs by professionals, managers and policy-makers (lines 154-155). In addition, we also revised the title of the manuscript (see also response #1).

3. The interviews did include open-ended questions. There were not clearly described how the answers of those questions were analyzed and are those findings presented in the results. Authors should give example of the qualitative analysis. If the coding were used also on answers of those questions, it remain unclear.

Response: We agree with reviewer #2, that is was not clearly described in the previous version of the manuscript. We revised the data collection procedure paragraph for the system level, to describe the analysis procedure more precisely. See also our response # 18 for reviewer #1. First, we describe that a step-by-step thematic analysis procedure was followed to enable an overall quantitative analysis for the system level (lines 199-201). Second, we explain that the data was transcribed in a priori developed qualitative template using excel processing software (lines 204-206). We describe that the qualitative data was coded using the coding structure derived from the process evaluation interviews conducted at the start of the program (lines 206-208). Third, we describe that a structured case report for each ICP was written consisting of a narrative summary of all information obtained (lines 209-210).
Finally, we explain how a standardised coding scheme was used to quantitatively rate the degree of system integration and final success of the ICP using the content of the case reports (lines 212-215). However, we feel it is beyond the scope of this manuscript to provide (detailed) examples of the qualitative analysis, since the primary objective of the overall thematic analysis was to enable an overall quantitative analysis for the system level measures. We therefore described the procedure followed in detail within the method sections as well as the additional files.

4. There were used questionnaire in the data collection process in organizational level and professional level. Start (T0) in the organizational level the questionnaire based on the model of Bell et al. were used or the questionnaire developed by the authors based in model Bell et al? That remain unclear. It was also unclear that were questionnaire in the end (T1) the same questionnaire but modified version (line 221-224)? It is unclear how authors modified questionnaire and were permission asked from Bell et al or was the questionnaire developed by the authors based in model Bell et al. It is also unclear were questionnaire in professional level same questionnaire that in organizational level. Why on professional level measurement was conducted only at the end (T1)?

Response: Within the revised and measures paragraph, we now describe that we developed and validated a questionnaire based on the Model of Bell et al in a previous study (lines 255-257). Within the revised data collection procedure paragraph we state that a modified questionnaire was used at T1, to also measure the degree of organisational integration (e.g specific items were added) (lines 225-229). No permission was needed from Bell, since the questionnaire was developed and validated by us. A different questionnaire was used at the professional level to measure the degree of professional integration (lines 278-280). To describe this more clearly we added table 1 which provides a summary of the data collection methods, processing and variables at all different levels (as suggested by reviewer #2) (lines 802-803). The degree of professional integration could not be measured at T0 because the necessary data were unavailable, see also the added table no. 1.

5. It remain unclear why the Rainbow Model of Integrated Care (RMIC) were used only partly. The model include also clinical or service integration. Although, there was “strengths and weakness of this study” –section explained why the patient’s perspective were missing and highlighted the importance of that perspective. It should be discussed in “Discussion” – section how that should take into account in the interpreting the results.

Response: Within the revised methods section we now explicitly describe why we were unable to include patient data within our study (lines 181-185). Within the revised discussion section we describe that the lack of patient perspective (e.g. selection and response bias) is likely to have influenced the construction of the ICPs typology. In addition, we highlight that further studies should include patient data, since they tend to have different preferences compared to other stakeholder groups (e.g. professionals and managers) (lines 543-545 and 772-778).

6. “Ethics” –section did not explain the information about asking verbal and written the voluntary informed consent from the interviews, could the participants withdraw from the study at any stage, were participants anonymity protected (if there were qualitative analysis from the open-ended questions) and how the data were stored.
Response: We revised the ethics section, and added a sentence that all study participants were asked informed consent verbally or in writing to participate in all sub studies (e.g. interviews, surveys). Further information on how all data were stored is beyond the scope of this manuscript. For your information: data are stored in accordance to Dutch legislation and as stipulated in the WMO.

7. There should be mention that purposive sampling were used.

Response: Within the revised data collection procedure paragraph we now state that a purposive sampling strategy was used to include two additional stakeholders per ICP at the system level (lines 189-191).

8. It would be clearer if the abstract included clarification that the study is about the integration of health and social services, and included also time frame from the data collection.

Response: Within the revised abstract we describe that this study is about the integration of local health and social services (lines 33-34). In addition, within the revised aims of the study as well as the method sub section we describe that the final degree of integration and perceived effectiveness is studied (lines 36-40 and 45). We believe this provides the reader more information about the data collection time points of the study.

9. Main findings and the relevance to clinical practice is unclear. Currently, it comes impression that this study findings suggest that optimal implementation of integrated care need ICPs with multifocal perspectives and collaborative processes. But is has not been clearly stated in the manuscript.

Response: We agree with reviewer #2, that is was not clearly described in the previous version of the manuscript. We therefore revised the discussion section of the manuscript (lines 582-590) to highlight the practical relevance of the present study. We have now described more precisely how the typology of ICPs can be used as a framework and potential diagnostic tool for professionals, managers, commissioners, and policymakers.

10. I would revise to have Table from participants, data collection, measures and analysis. That could include the subgroups, measurement levels, characteristics of the participants (which is not described clearly), sample size, data collection methods, data analysis methods, measuring points, etc. Currently, the reader have to search those in different parts of the manuscript and it confuses the reader.

Response: We highly appreciate this valuable suggestions made by reviewer #2. We included a table (Table 1) which provides a summary of the data collection methods, data processing and variables at all different levels (lines 802-803).

11. In discussion section (line 465-466) is mention of “theory of action” which seems to be missing from background section. It remain unclear what authors meant with that.

Response: See also response # 20 to reviewer #1. We agree with Reviewer #2, that this description caused confusion within the previous version of our manuscript. We therefore revised ‘theory of action’ into ‘recent theories from the literature’ (line 471).
12. It remain unclear why the results of the measurements were discussed based on trust-based and control-based collaboration mechanism and why the results were not discussed based on the Rainbow Model of Integrated Care (RMIC) which were used to define the concept of the integrated care and the model of Bell, Kaats and Opheij which were used to describe the collaboration processes over time.

Response: Here we cannot agree with the reviewer. We believe that in the discussion the results are discussed both in relation to the RMIC at to the model of Bell et al. First, the subgroups are discussed in light of the levels of integration of the RMIC (lines 471-490). In line with other literature, we focused on the gaps between the levels of integration (e.g. professional versus organisational integration). Subsequently, we used the concepts of relational ‘trust-based’ and transactional ‘control-based’ collaboration to explain how these collaboration mechanisms serve as a means to develop integrated care (lines 496-521). In the revised manuscript we added the terms relational and transactional. Both transactional control-based (organisational dynamics and process management) and relational trust-based (shared ambition, mutual gains and relationship dynamics) collaboration mechanisms are enclosed in the model of Bell et all.