

## PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form (<http://bmjopen.bmj.com/site/about/resources/checklist.pdf>) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

This paper was submitted to a another journal from BMJ but declined for publication following peer review. The authors addressed the reviewers' comments and submitted the revised paper to BMJ Open. The paper was subsequently accepted for publication at BMJ Open.

(This paper received three reviews from its previous journal but only two reviewers agreed to published their review.)

## ARTICLE DETAILS

<b>TITLE (PROVISIONAL)</b>	IMPLEMENTING ONLINE EVIDENCE-BASED CARE PATHWAYS: A MIXED METHODS STUDY ACROSS PRIMARY AND SECONDARY CARE
<b>AUTHORS</b>	Akehurst, Joy; Sattar, Zeibeda; Gordon, Isabel; Ling, Jonathan

## VERSION 1 – REVIEW

<b>REVIEWER</b>	Fiona Shand Black Dog Institute, UNSW, Australia
<b>REVIEW RETURNED</b>	08-Apr-2018

<b>GENERAL COMMENTS</b>	<p>Overall: It's encouraging to see research starting to examine how we improve uptake, implementation, and adherence of technology-focused interventions. This paper makes a useful contribution to this literature.</p> <p>Overall - The punctuation needs to be carefully checked. A number of sentences are missing full stops, and the placement of commas makes some sentences ambiguous.</p> <p>Abstract: What is it about variance from agreed pathways needs to be researched? Reasons for and/or extent of variance?</p> <p>Introduction: Can you include a brief description of how clinicians use HPs? An example might be useful. These are a relatively new concept and it would help readers to understand what they are and how they are used.</p> <p>Method: Could the semi-structured interview guides and focus group questions be made available in an online appendix?</p> <p>A brief description of quantitative analysis should be included. You could consider testing if the increase in sessions and page views across time is significant, for example using chi-square tests.</p>
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	<p><b>Results:</b> Before discussing the number of sessions and page views, including some contextual data would be helpful. For example, you could move the information on number of GPs practicing in the area forward. Are there data on the total number of clinicians who have access to HPs?</p> <p>P3 under quantitative data heading– there is some interpretation of the data here that would be better placed in the discussion.</p> <p>Figures 1-3 are blurry and need to be replaced – I wasn't able to read the numbers on the graphs.</p> <p>P5, para 3 – first sentence is a little unclear. Are the system leaders, SMEs, and others examples of leaders to whom people in Canterbury had access? There are also two themes in this para and perhaps they would be better separated.</p> <p>Qualitative section overall – you have some great data here. I did find myself getting lost in this section though and it needs a little more thought regarding structure and presentation. It's not entirely clear how each of the terms (e.g. configuration, context) is being used, and I'm not sure that the key themes and uses arising from your work are clearly articulated. With more integration and clearer presentation, the material you have here will provide important insights into implementation of new patient care systems into primary care.</p> <p><b>Discussion:</b> Similarly I think the discussion could be restructured. At the moment the discussion of key findings is intermingled with future research and implications.</p>
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<b>REVIEWER</b>	Tove Røstad Norwegian University of Science and Technology (NTNU) and Health and Welfare Department, City of Trondheim, Norway
<b>REVIEW RETURNED</b>	07-May-2018

<b>GENERAL COMMENTS</b>	<p><b>GENERALLY:</b> This paper present an interesting and important topic well worth a publication as integration and collaboration across care levels is an international concern. Care pathways have been considered to be a promising tool to achieve integrated care across secondary and primary care levels. However, there are several reports that such care pathways are challenging both to develop and implement and more knowledge about this issue is needed. However, the present paper appears not quite worked through and needs a major revision before it is ready to be published as more closely explained in the following. A general feedback is that objectives and aims of the study are presented four times (abstract, article summary, introduction and discussion), but the wording is slightly different which is a bit confusing. A minor issue that has to be attended to is the use of abbreviations – these are not always explained. Pay particularly attention to tables and figures.</p> <p><b>ABSTRACT:</b> Results should present both quantitative and qualitative data. Make sure the results from qualitative data are in accordance with</p>
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	<p>results listed in table 1. The conclusion could (should) be more specific - I suggest the authors link the main conclusion(s) to the objective in the abstract / aim referred to in the article summary page 1, line 45-46 / the aim of the study page 2, line 34/35</p> <p><b>INTRODUCTION:</b></p> <p>A short, overall definition of Health Pathways would make it easier to grasp the concept of Health Pathway (HP) before this is further detailed in the introduction. What kind of tool is this? (Ex decision support?) What is the key objective for HP's?</p> <p><b>METHODS</b></p> <p>Mixed methods approach is very appropriate for this kind of study. However, the presentation of the methods needs to be revised, and I suggest the quantitative and qualitative methods to be presented under separate headlines.</p> <p>The sampling and recruitment is not clear. Only recruitment of the GP practices is explained and participation of hospital consultants is not mentioned in the Methods section (but in the abstract (!) and in the Results section). A table presenting the participants would have given a better overview. I also miss a closer presentation of the focus groups. How many participants? Where the groups mixed with participants from different professions, and why / why not? How comes that both individual and focus group interviews were chosen? Etc etc.</p> <p>The realist evaluation approach is presented in the introduction and only slightly in the Methods section. I suggest the main presentation to take place in the Method section as the authors seem to use this approach as a framework for the qualitative analyses.</p> <p><b>REFERENCES</b></p> <p>The reference list is not accurate and authors must revise it carefully. Some examples: Reference no 3 and 25 refers to websites that are not available, 17, 28 and 29 have no title or the title is "meaningless", 23 is not found in the text (but one of the 22's in the text is supposed to be reference 23). Reference 24 refers to a website, but this is only the sales page for the book and should not be shown. There are almost as many references to different websites / grey literature as to scientific papers. I miss more references to scientific work papers.</p> <p><b>PRESENTATION OF RESULTS:</b></p> <p>Generally: There is a tendency of discussing the meaning and the implications of the findings in the Results section. This should (mainly) be left for the Discussion section, cf. Scuire guidelines.</p> <p><b>Quantitative data:</b></p> <p>The presentation of the numbers is difficult to understand and the figures are almost not readable.</p> <p><b>Qualitative data:</b></p> <p>Table 1 is not clear. Not all abbreviations are explained. More considerations should be made to assess whether the different themes logically belongs to the context, mechanism and outcome groups. The themes under the different headlines are not always logical, like presenting "Strategy" and "Decision making and referrals" in the context group. Those concepts sound more like mechanisms. Furthermore, in configuration 1, leadership is clearly a mechanism, but not logically also an outcome etc, etc.</p>
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	<p><b>Configuration 1</b>  The text reflects that participants understood the intentions of HP differently which had implications on their attitudes towards it. This was due to where they worked (primary care vs. hospital care) or whether they had been involved in the development process / attended the launch.  In light of this - how is “strategy” a context? And what is the strategy? Task transfer from hospital care to primary care and from GPs to nurses?  Furthermore, the text does not reflect how governance /leadership is a mechanism to obtain sustainability.  The text on page 5 lines 54-56 is more logically a part of configuration 4.  Could this chapter rather be included in the other configurations?  There is considerable overlap and the text does not logically reflect the headline.</p> <p><b>Configuration 2</b>  This is a more logic chapter, but also here there is a mismatch between the headline and the text. Ex CDHB input, paunch event, education sessions.</p> <p><b>Configuration 3</b>  Figure 4 page 7 is a table, not a figure.  In lines 16-17 it is described that care pathways were prioritized for development according to “which HP users identified as useful” with reference to figure 4. This is a bit illogical as those pathways presented in the table are already chosen.  Page 7, lines 42-43 “Further research and improved data collection systems would enable a greater understanding of the ways in which pathways are used and would help with the development of future pathways”. This is not a result – should rather be part of the discussion section.</p> <p><b>Configuration 5</b>  Page 8 lines 52, remove “but”</p> <p><b>Configuration 6</b>  This chapter is missing quotes to support the text.</p> <p><b>DISCUSSION AND CONCLUSION:</b>  The aim of the study (cf. article summary) was to “inform further development, potential for sustainability and learning for other sites”.  In the discussion / conclusion I would therefore expect to read how the results can inform further development, what is the potential for sustainability (anything that has to be changed?) and what can other sites learn? What is the main message?  In the results section it seems to be confusion as to what HP is supposed to be – a decision support tool or tool for task transfer– and this is also a bit unclear in the introduction of this paper.  These two purposes are principally very different and may have different implementation challenges. I would have wished to see this discussed in further detail. Furthermore, I do not see how“ evidence was emerging ( in this study) that HP was beginning to facilitate task transfer from secondary to primary care, and from medical to nurse staff” p 10 line 30-31. This also needs to be explained / discussed in further detail.  Finally, I miss a clear presentation of the strengths and limitations of the study, cf, Squire guidelines.</p>
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## VERSION 1 – AUTHOR RESPONSE

Reviewer: 1

Reviewer Name: Fiona Shand

Institution and Country: Black Dog Institute, UNSW, Australia

Competing Interests: None declared

Overall:

- It's encouraging to see research starting to examine how we improve uptake, implementation, and adherence of technology-focused interventions. This paper makes a useful contribution to this literature.

Response: Thank you for this comment.

- Overall - The punctuation needs to be carefully checked. A number of sentences are missing full stops, and the placement of commas makes some sentences ambiguous.

Response: We have checked the punctuation and rewritten some sentences to be less ambiguous.

- Abstract:

What is it about variance from agreed pathways needs to be researched? Reasons for and/or extent of variance?

Response: Quantitative data variance in pathway use was not available, however other studies (as cited in the paper) have attempted to study variance in terms of the extent and reasons for it.

Participants in our study also reported their observations in relation to variance. Examining variance in future work would help further refine the pathways.

Introduction:

- Can you include a brief description of how clinicians use HPs? An example might be useful. These are a relatively new concept and it would help readers to understand what they are and how they are used.

Response: We have added an example of the 'cognitive impairment' pathway.

Method:

- Could the semi-structured interview guides and focus group questions be made available in an online appendix?

Response: We have added the focus group and interview topic guides as appendices to the paper.

- A brief description of quantitative analysis should be included. You could consider testing if the increase in sessions and page views across time is significant, for example using chi-square tests.

Response: Thanks for this useful suggestion. We have analysed the correlation between page views and time and reported this in the paper.

Results:

- Before discussing the number of sessions and page views, including some contextual data would be helpful. For example, you could move the information on number of GPs practicing in the area forward. Are there data on the total number of clinicians who have access to HPs?

Response: We have clarified that 130 GPs are practising in the area and that all have access.

- P3 under quantitative data heading– there is some interpretation of the data here that would be better placed in the discussion

Response: This has now been moved to the discussion.

- Figures 1-3 are blurry and need to be replaced – I wasn't able to read the numbers on the graphs.  
Response: We have replaced all Figures with high resolution (300 DPI) versions.

- P5, para 3 – first sentence is a little unclear. Are the system leaders, SMEs, and others examples of leaders to whom people in Canterbury had access?  
Response: Yes, they are; we have now clarified this in the text.

- There are also two themes in this para and perhaps they would be better separated  
Response: These themes are now separated.

- Qualitative section overall – you have some great data here. I did find myself getting lost in this section though and it needs a little more thought regarding structure and presentation. It's not entirely clear how each of the terms (e.g. configuration, context) is being used,  
Response: There is now an explanation in red at the beginning of the section

- I'm not sure that the key themes and uses arising from your work are clearly articulated  
Response: The key themes summarised in the table are now highlighted in bold red in the revised narrative analysis.

- With more integration and clearer presentation, the material you have here will provide important insights into implementation of new patient care systems into primary care.  
Response: A number of other changes to the qualitative section have been made which hopefully make the implementations for this clearer.

- Discussion:  
Similarly I think the discussion could be restructured. At the moment the discussion of key findings is intermingled with future research and implications.  
Response: There has been a major re-write of the discussion section (this was also a comment from Reviewer 2).

Reviewer: 2

Reviewer Name: Tove Røsstad

Institution and Country: Norwegian University of Science and Technology (NTNU) and Health and Welfare Department, City of Trondheim, Norway

Competing Interests: None declared

#### GENERALLY:

This paper present an interesting and important topic well worth a publication as integration and collaboration across care levels is an international concern. Care pathways have been considered to be a promising tool to achieve integrated care across secondary and primary care levels. However, there are several reports that such care pathways are challenging both to develop and implement and more knowledge about this issue is needed. However, the present paper appears not quite worked through and needs a major revision before it is ready to be published as more closely explained in the following.

- A general feedback is that objectives and aims of the study are presented four times (abstract, article summary, introduction and discussion), but the wording is slightly different which is a bit confusing.

Response: The objectives and aims throughout the paper have now been revised/aligned

- A minor issue that has to be attended to is the use of abbreviations – these are not always explained. Pay particularly attention to tables and figures.

Response: All abbreviations have been checked and written in full. Where certain abbreviations are used throughout the paper eg HP for HealthPathways, the abbreviation is used after the first mention of HealthPathways in accordance with the convention for abbreviations. This can be changed to HealthPathways throughout if preferred. We have also removed abbreviations from the tables.

#### ABSTRACT:

- Results should present both quantitative and qualitative data. Make sure the results from qualitative data are in accordance with results listed in table 1.

Response: The narrative about the results is now more closely aligned to Table 1. Reference to the quantitative findings has now been added.

- The conclusion could (should) be more specific - I suggest the authors link the main conclusion(s) to the objective in the abstract / aim referred to in the article summary page 1, line 45-46 / the aim of the study page 2, line 34/35

Response: The conclusion has been revised as suggested.

#### INTRODUCTION:

- A short, overall definition of Health Pathways would make it easier to grasp the concept of Health Pathway (HP) before this is further detailed in the introduction. What kind of tool is this? (Ex decision support?) What is the key objective for HP's?

Response: We have added this information to the introduction in red and given an example of a pathway.

#### METHODS

- Mixed methods approach is very appropriate for this kind of study. However, the presentation of the methods needs to be revised, and I suggest the quantitative and qualitative methods to be presented under separate headlines.

Response: The results are now presented under separate headings.

- The sampling and recruitment is not clear.

Response: We have added more detail and clarified sampling.

- Only recruitment of the GP practices is explained and participation of hospital consultants is not mentioned in the Methods section (but in the abstract (!) and in the Results section)

Response: This has been added.

- A table presenting the participants would have given a better overview.

Response: This would be difficult as some participants are 'system leaders' and GPs or consultants.

- I also miss a closer presentation of the focus groups. How many participants? Where the groups mixed with participants from different professions, and why / why not? How comes that both individual and focus group interviews were chosen? Etc etc.

Response: We have added more detail about the focus groups and provided an explanation for conducting both interviews and focus groups.

- The realist evaluation approach is presented in the introduction and only slightly in the Methods section. I suggest the main presentation to take place in the Method section as the authors seem to use this approach as a framework for the qualitative analyses.

Response: This has been revised as suggested.



## REFERENCES

- The reference list is not accurate and authors must revise it carefully. Some examples: Reference no 3 and 25 refers to websites that are not available, 17, 28 and 29 have no title or the title is "meaningless", 23 is not found in the text (but one of the 22's in the text is supposed to be reference 23). Reference 24 refers to a website, but this is only the sales page for the book and should not be shown. There are almost as many references to different websites / grey literature as to scientific papers. I miss more references to scientific work papers.

Response: The references have been reviewed and the amendments made as suggested. Additional papers from the original literature review have also been added and the references reformatted.

## PRESENTATION OF RESULTS:

- Generally: There is a tendency of discussing the meaning and the implications of the findings in the Results section. This should (mainly) be left for the Discussion section, cf. Scuire guidelines.

Response: This has been amended and the Discussion section rewritten.

## Quantitative data:

- The presentation of the numbers is difficult to understand and the figures are almost not readable.

Response: The charts have been revised in the correct resolution

## Qualitative data:

- Table 1 is not clear.

Response: This has been simplified (in red).

- Not all abbreviations are explained

Response: We have removed abbreviations from the table, replacing them with full text.

- More considerations should be made to assess whether the different themes logically belongs to the context, mechanism and outcome groups. The themes under the different headlines are not always logical, like presenting "Strategy" and "Decision making and referrals" in the context group. Those concepts sound more like mechanisms. Furthermore, in configuration 1, leadership is clearly a mechanism, but not logically also an outcome etc, etc.

Response: These debates are apparent within the current literature and we have inserted an explanation to this effect in the revised Discussion section with supporting references. Unfortunately, the challenge of word count means that it is difficult to take each configuration and analyse in detail.

## Configuration 1

- The text reflects that participants understood the intentions of HP differently which had implications on their attitudes towards it. This was due to where they worked (primary care vs. hospital care) or whether they had been involved in the development process / attended the launch.

In light of this - how is "strategy" a context? And what is the strategy? Task transfer from hospital care to primary care and from GPs to nurses?

Response: The strategy for the NHS is to make care more efficient (financially, and for patients and staff) through less hospital care. This is in effect the 'context' or background of this implementation.

- Furthermore, the text does not reflect how governance /leadership is a mechanism to obtain sustainability.

Response: We have added examples of governance/leadership to clarify this issue.

- The text on page 5 lines 54-56 is more logically a part of configuration 4.

Could this chapter rather be included in the other configurations? There is considerable overlap and the text does not logically reflect the headline.

Response: The challenges of 'overlap' are now discussed in the Discussion section.



#### Configuration 2

- This is a more logic chapter, but also here there is a mismatch between the headline and the text. Ex CDHB input, paunch event, education sessions.

Response: The mechanisms here are all linked to the previous relationships established over several years (another contextual feature).

#### Configuration 3

- Figure 4 page 7 is a table, not a figure.

Response: Corrected.

- In lines 16-17 it is described that care pathways were prioritized for development according to “which HP users identified as useful” with reference to figure 4. This is a bit illogical as those pathways presented in the table are already chosen.

Response: The wording has now been changed.

- Page 7, lines 42-43 “Further research and improved data collection systems would enable a greater understanding of the ways in which pathways are used and would help with the development of future pathways”. This is not a result – should rather be part of the discussion section.

Response: Corrected.

#### Configuration 5

- Page 8 lines 52, remove “but”

Response: Amendment made.

#### Configuration 6

- This chapter is missing quotes to support the text.

Response: We have added quotes to support the narrative.

#### DISCUSSION AND CONCLUSION:

The aim of the study (cf. article summary) was to “inform further development, potential for sustainability and learning for other sites”.

- In the discussion / conclusion I would therefore expect to read how the results can inform further development, what is the potential for sustainability (anything that has to be changed?) and what can other sites learn? What is the main message?

Response: This section has been re-written (in red) to reflect the comments of both reviewers. The findings/configurations are ‘pragmatic’ for future sites to consider as part of any planned deployments.

- In the results section it seems to be confusion as to what HP is supposed to be – a decision support tool or tool for task transfer– and this is also a bit unclear in the introduction of this paper. These two purposes are principally very different and may have different implementation challenges. I would have wished to see this discussed in further detail.

Response: HP is both a decision support and a tool for task transfer as pathways are agreed as a whole system, with clinicians and others making agreements on clinical treatments, referrals and who does what in the health and social care system. We have amended the narrative to clarify this.

- Furthermore, I do not see how“ evidence was emerging ( in this study) that HP was beginning to facilitate task transfer from secondary to primary care, and from medical to nurse staff” p 10 line 30-31. This also needs to be explained / discussed in further detail.

Response: This study was conducted early on in the deployment of HP and as discussed in the paper there were no data on variance of pathways available. Our findings were what participants reported

as part of the qualitative data and recollection of patient stories. This is one of the limitations of the study we identify.

- Finally, I miss a clear presentation of the strengths and limitations of the study, cf, Squire guidelines.  
Response: The strengths and limitations have been made clearer in line with SQUIRE guidelines.

## VERSION 2 – REVIEW

<b>REVIEWER</b>	Fiona Shand Black Dog Institute, University of New South Wales, Australia
<b>REVIEW RETURNED</b>	19-Jul-2018

<b>GENERAL COMMENTS</b>	<p>Overall the manuscript is improved by the author's responses. There is still a way to go before it is ready for publication. I still believe that this paper is worth publication, but my main concern is a lingering lack of clarity in the way the findings are presented (and perhaps analysed, but this could be confirmed by review from an experience qualitative researcher. Please see specific concerns below.</p> <p>Introduction, Aim of study: I prefer the objective you have in the abstract to the aim, i.e. To understand what contextual influences, mechanisms and outcomes affect the implementation and use of localised, online care pathways (HealthPathways) across health and social care OR the question you have in the Method section: to examine...the contextual factors, critical mechanisms, and initial outcomes from the implementation of HP. This would mean you don't have to restate the question in your methods section (a few lines down) and would help keep aims/questions consistent. The objectives and research questions don't reflect some of the findings, i.e. the use statistics are not reflected in the objective. The sentence under Table 1 (about a realist approach) should go into the method/analysis section, with a sentence or two describing the realist approach.</p> <p>Where did the context, mechanism and outcomes framework come from? Was this developed by the authors?</p> <p>I still find the presentation of the qualitative analysis a little confusing. I find it difficult to link the qualitative results back to the study objectives. Clearer descriptors for the configurations would help. Key messages/themes are not apparent from the current descriptors. A key benefit of this paper could be for future HP developers/implementers to learn how to improve their development and implementation processes, address context and barriers etc, but the analysis and description needs more work for this to emerge. I wonder if a third qualitative researcher could be engaged to review the analysis and presentation?</p> <p>The written expression in the manuscript needs some work. Some sentences would benefit from shortening (e.g. "Those participants who did not attend the launch, and who had not met those who had successfully implemented HP, appeared less engaged with HP, or with the bigger picture transformation opportunities for patients, and focussed on it as a tool." Could become "Those participants who did not attend the launch and who had not met those who had successfully implemented HP appeared less engaged with HP or with the bigger picture transformation opportunities. Instead, they were more inclined to focus on it as a tool."). Other sentences still contain too many commas (e.g. "Despite reported system fatigue and the, busy-ness, of practitioners, participants from both clinical and non-clinical settings..." should be "Despite reported system</p>
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	<p>fatigue and the busy-ness of practitioners, participants from both clinical and non-clinical settings...”).</p> <p>Once the findings are clearer I think the discussion will need to be edited to reflect this.</p>
<b>REVIEWER</b>	<p>Tove Garåsen Røsstad Norwegian University of Science and Technology (NTNU) and Department of Health and Welfare Services, City of Trondheim, Norway.</p>
<b>REVIEW RETURNED</b>	<p>24-Jul-2018</p>
<b>GENERAL COMMENTS</b>	<p>The paper has been greatly improved and I consider the paper ready to be published after a minor revision.</p> <p>The authors need to put some more efforts improving the language. There are sentences that seem to be missing words and sentences that are long and complicated making the paper less accessible to readers. The placements of commas still make some sentences ambiguous.</p> <p>Check e.g. sentences in lines 29-31 at page 5 lines 24-26 at page 6 line 38 at page 8 lines 41-43 page 8 line 46 page 8 line 25 page 10</p> <p>The text in the result section is more logic in this version, but I would suggest the authors to take a closer look at Configuration 1. It is difficult to see how sustainability is linked to the strategy and mechanisms in this chapter.</p> <p>There are also still a lot of findings presented making the text a bit overwhelming. Fewer, but more in-depth presented findings would have made the text easier to comprehend.</p> <p>I have checked a random sample of references which were ok.</p>

## VERSION 2 – AUTHOR RESPONSE

Reviewer: 1

Reviewer Name: Fiona Shand

Institution and Country: Black Dog Institute, University of New South Wales, Australia

Please state any competing interests or state 'None declared': None declared

Overall the manuscript is improved by the author's responses. There is still a way to go before it is ready for publication. I still believe that this paper is worth publication, but my main concern is a lingering lack of clarity in the way the findings are presented (and perhaps analysed, but this could be confirmed by review from an experience qualitative researcher).

The qualitative findings and discussion have been adapted throughout by a third qualitative researcher who has read through the transcripts, with a particular focus on how this work could improve and implement HP in future online care pathways. Further details of these revisions are given below.

Introduction, Aim of study: I prefer the objective you have in the abstract to the aim.

The aim of the study is the one specified in the abstract: “To understand what contextual influences, mechanisms and outcomes affect the implementation and use of localized, online care pathways (HealthPathways) across health and social care”. As suggested, we have used the objective presented in the abstract to reframe the paper, making changes throughout, including aligning the

results with this objective more closely (see further detail below). Text has been added to each configuration in the findings to clarify how they relate to this aim. The discussion has also been amended accordingly.

The sentence under Table 1 (about a realist approach) should go into the method/analysis section, with a sentence or two describing the realist approach.

This sentence has been moved and further detail added, with a supporting reference, to explain the realist approach.

Where did the context, mechanism and outcomes framework come from? Was this developed by the authors?

The realistic evaluation model (Pawson & Tilley, 1993) guided the organization of themes generated in analysis. More explanation of the study methodology and where the context, mechanisms and outcomes framework derive from is given in the text with references.

I still find the presentation of the qualitative analysis a little confusing.

We have reorganized, clarified and in some cases shortened the results section. Further explanation is given in relation to the presentation of the qualitative results, for example that the interrelated themes were arranged into configurations of contextual influences, mechanisms and outcomes. Further explanation for this arrangement and what context, mechanisms and outcomes refer to in this study are also given.

We further clarified and developed each of the configurations:

Configuration 1: Text explaining themes has been added at the beginning. Text has been rearranged and cut to align with themes in the configuration. The text has been reorganized so that each paragraph addresses themes in sequence of context, mechanisms and outcomes. More explanation about each theme has been provided with further supporting quotes.

Configuration 2: An introductory paragraph has been added at the beginning to clarify what the themes are and why they relate to each other. The text has been reorganized so that each paragraph addresses themes in sequence of context, mechanisms and outcomes. Some text has been added to/from Configuration 1 to minimize overlap of themes between configurations.

Configuration 3: Title themes have been reworded up and Table 1 has been adapted accordingly. Introductory paragraph has been added explaining what the configuration is about and the themes. Paragraph 2 has been divided into three separate paragraphs so that issues addressed in each are clearer. Additional quotes/explanation have been added to give a fuller picture of each point made.

Configuration 4: Has been collapsed into Configuration 3 to the section about usage of HP as it focused on users' perceptions of practical use.

Configuration 5: Now Configuration 4, with further explanation and supporting quotes.

Configuration 6: Has been deleted and merged with Configuration 3 as this related to clinical editors' time.

The written expression in the manuscript needs some work.

We have reread the paper, making changes throughout to improve the clarity and precision.

Once the findings are clearer I think the discussion will need to be edited to reflect this.

Changes have been made to the discussion based on the revised results.

Reviewer: 2

Reviewer Name: Tove Garåsen Røsstad

Institution and Country: Norwegian University of Science and Technology (NTNU) and Department of Health and Welfare Services, City of Trondheim, Norway.

Please state any competing interests or state 'None declared': None declared

The paper has been greatly improved and I consider the paper ready to be published after a minor revision.

The authors need to put some more efforts improving the language.

We have fully revised the paper in order to improve the clarity and readability (including making changes to the sentences listed).

The text in the result section is more logic in this version, but I would suggest the authors to take a closer look at Configuration 1. It is difficult to see how sustainability is linked to the strategy and mechanisms in this chapter.

Thanks for this suggestion. We have reflected on this, as well as the data we collected, and have changed this element of the configuration from sustainability to uptake which we believe better reflects the data.

There are also still a lot of findings presented making the text a bit overwhelming. Fewer, but more in-depth presented findings would have made the text easier to comprehend.

We have revised the results and reduced the number of configurations, and there are less themes explained in more depth to improve clarity. We have also tightened up the presentation, with careful attention to the language so it is clearer.