

PEER REVIEW HISTORY

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ARTICLE DETAILS

TITLE (PROVISIONAL)	At the Edge of Chaos: A prospective multiple case study in Australian General Practices adapting to COVID-19
AUTHORS	Russell, Grant; Lane, Riki; Neil, Jennifer; Advocat, Jenny; Sturgiss, Elizabeth; Staunton Smith, Timothy; Alexander, Karyn; Hattle, Simon; Crabtree, Benjamin; Miller, William

VERSION 1 – REVIEW

REVIEWER	Cristian Lieneck Texas State University
REVIEW RETURNED	27-Jun-2022

GENERAL COMMENTS	<p>Thank you for the opportunity to review this paper. The research topic is relevant and part of the healthcare system struggling across the entire world.</p> <p>I have a couple recommendations to further improve upon this manuscript:</p> <ol style="list-style-type: none">1. Please describe how the clinics used in the study were chosen (prior to assessing descriptives of these organizations afterward).2. Beginning on page 10, time segments of the pandemic are named and discussed. Please introduce the reader to this approach and further discuss how/why the researchers chose to address the pandemic in this manner. Why/how to findings relate to these eras, or are results going to be general/overall assessment across the entire time period?3. What actions are recommended for the clinics had financial security been provided during the pandemic? If modifying routines and maintaining income levels also maintained patient throughput, isn't this a good thing?4. The "leading change" result/finding on page 22 is rather limited. What deeper leadership qualities and/or practices are necessary (as identified in the study to provide the readership with more vital information on this matter? <p>The researchers did a good job at gathering data from various practices. I would recommend that more results be deduced from their investigations beyond more financial support/security and better leadership. Please address these findings in much greater detail to provide the readership with better information.</p>
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REVIEWER	Tessa Copp University of Sydney Sydney Medical School, Public health
REVIEW RETURNED	29-Jul-2022

GENERAL COMMENTS	Thank you for the opportunity to review this manuscript. Whilst on an
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interesting and informative topic, the methods and results were quite difficult to follow, with the structure of the results not immediately apparent. It was also sometimes hard to tell which parts of results are the perspectives of participants, the opinions of the researchers or the findings in the literature. The results could be re-written to more clearly express the views of the participants. Specific suggestions below.

Abstract

- Please specify how the data were analysed
- Participants section: Who are practice members? Unclear if practice members were participants? Or were participants just practice healthcare workers? Perhaps it would be clearer if you define who "practice health care workers" includes e.g. receptionists etc.

Introduction

- None of the existing literature on the experiences of primary care providers in Australia is described in the introduction.
- The rationale for the study could be stronger – why did you conduct this study? What will it add? Why is this important to know?

Methods

- It would be useful for readers to provide more detail about what a 'participatory prospective qualitative case study' entails.
- The description of 'setting and participants' is somewhat difficult to follow and seems to consist mostly of a description of the authors, rather than participants. Are the four clinician educators and two clinician researchers the GP investigators? Please clarify.
- The data collection is also somewhat difficult to follow. GP investigators were only interviewed once, but participants (clinicians and administrative staff) were all interviewed at three different time points? Suggest including this longitudinal aspect when discussing the design.
- Figure 1 is not referred to in text.
- Did participants give feedback on the presentation of emerging findings? How did this shape the analysis and results?
- Public and patient involvement statement – I may be wrong, but doesn't this refer to how this study involved GP investigators in the study design/analysis, and analysis involved participant checking?
- How were participants recruited? How long did interviews last on average?
- You state that reporting followed Standards for Reporting Qualitative Research but have included the COREQ checklist as an appendix. Please describe the COREQ adequately in text.

Results

- How many participants were interviewed at each of the three time points?
- Table 1 – unclear what numbers in the GPs and nurses columns refer too – the number of GPs and Nurses interviewed? Would be useful to have a table also describing any collected participant characteristics, not just practice characteristics.
- It would be helpful to include a figure or table showing an overview of the themes and subthemes described in the results.
- For included quotes, specify what GP or R mean at first mention
- Table 2 doesn't match exactly with the themes described in text, however there is a lot of duplication. Not immediately clear what Table 2 adds above what is already described in text.

	<p>- Was online appointment booking paused for all 6 practices? There is no sense throughout the results of how uniform described changes and challenges were.</p> <p>- Page 16: Did participants specify why some staff and clinicians asked to take annual leave or reduce working hours? This seems in contrast to the start of the sentence saying staff vacancies weren't being filled.</p> <p>- The results could more clearly express the views of the participants e.g. "Understanding the change" – did participants describe these concepts? There are very few included quotes in the participants' own words. If not, these explanations and links to policy etc seem better suited to the discussion.</p> <p>- What does "CDM" stand for? (page 18)</p> <p>Discussion</p> <p>- Suggest including a reflexivity statement to discuss how the authors (GP investigators) were also participants, and how this may have influenced the analysis? Specifically, could the GP investigators and authors reflect on how, during analysis, their own experiences did not override the collective experience of all participants interviewed?</p>
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VERSION 1 – AUTHOR RESPONSE

Section Reviewer	Suggestion	Response to reviewer
Introductory comments	<p>Reviewer: 1 Cristian Lieneck , Texas State University</p> <p>Comments to the Author: Thank you for the opportunity to review this paper. The research topic is relevant and part of the healthcare system struggling across the entire world.</p>	
	<p>Reviewer: 2 Dr. Tessa Copp, University of Sydney Sydney Medical School</p> <p>Comments to the Author: Thank you for the opportunity to review this manuscript. Whilst on an interesting and informative topic, the methods and results were quite difficult to follow, with the structure of the results not immediately apparent.</p> <p>It was also sometimes hard to tell which parts of results are the perspectives of participants, the opinions of the researchers or the findings in the literature.</p>	<p>Thank you. The detailed protocol for our study has been published and contains much additional detail on the methodology. Nevertheless we recognise that report of research should be understandable in and of itself. Given that case study research is not as widely used as interview based qualitative studies. We have added several referenced sentences to further explain the methodology in the background and introduction.</p>

	The results could be re-written to more clearly express the views of the participants.	We appreciate and understand the point behind this suggestion – however it is important to understand that the unit of analysis for our study was the practice. Our intent was to capture practice individual and organisational routine changes. While interviews were valuable to our overall understanding of the data, they were complemented by practice descriptions, participant investigator diaries, document analysis, and participant feedback on interim findings. A sentence has been added to clarify.
Abstract	Please specify how the data were analysed	The data analysis section has been expanded, and we have reminded readers that further detail exists in the protocol paper.
Introduction	None of the existing literature on the experiences of primary care providers in Australia is described in the introduction.	Several articles on the primary care pandemic experience in Australia have been published since our paper was submitted in early 2022. We have included references to several Australian papers in the discussion of the results.
	The rationale for the study could be stronger – why did you conduct this study? What will it add? Why is this important to know?	Our justification for the study is summarised in the background section. We have added an additional sentence and a reference between the second last and the last para of the introduction, and have highlighted how the results act to generate an understanding of the adaptivity and robustness of the Australian primary care system.
Methods	I have a couple recommendations to further improve upon this manuscript: 1. Please describe how the clinics used in the study were chosen (prior to assessing descriptives of these organizations afterward).	Thank you for highlighting our lack of detail on the recruitment of the clinics. This is comprehensively covered in the protocol paper, however we have added a summary to the revised version of the paper.
Methods	It would be useful for readers to provide more detail about what a 'participatory prospective qualitative	As above

	case study' entails.	
Abstract	Participants section: Who are practice members? Unclear if practice members were participants? Or were participants just practice healthcare workers? Perhaps it would be clearer if you define who "practice health care workers" includes e.g. receptionists etc.	While detail on the participants have been outlined in the protocol paper we agree that more clarity would be beneficial to the reader's understanding. Participants included both practice staff and participant investigators We have clarified the descriptions of the participant investigators and the participants within each practice (ie GPs, nurses and reception/administrative staff).
setting and participants'	The description of 'setting and participants' is somewhat difficult to follow and seems to consist mostly of a description of the authors, rather than participants. Are the four clinician educators and two clinician researchers the GP investigators? Please clarify.	As per the comment above, we have added clarity on the setting and participants in both the abstract and the body of the paper.
data collection	The data collection is also somewhat difficult to follow. GP investigators were only interviewed once, but participants (clinicians and administrative staff) were all interviewed at three different time points? Suggest including this longitudinal aspect when discussing the design.	We have made clarifications throughout the methods to address Reviewer 2s concerns about clarity.
Figure 1	Figure 1 is not referred to in text.	Figure 1 has been referred to in the data collection section.
Analysis	Did participants give feedback on the presentation of emerging findings? How did this shape the analysis and results?	As mentioned at the end of the data collection section (and justified in the methods paper) participants provided insights and clarifications concerning our interpretations of the data at the practice level. Our involvement of participant investigators made this an essential aspect of data analysis.
Public and patient involvement statement –	I may be wrong, but doesn't this refer to how this study involved GP investigators in the study design/analysis, and analysis involved participant checking?	We have clarified this section to reflect patient and public involvement.

	How were participants recruited?	
	You state that reporting followed Standards for Reporting Qualitative Research but have included the COREQ checklist as an appendix. Please describe the COREQ adequately in text.	Thank you, we referred to Tong's paper, but the description in the text was confusing. This has been corrected. The COREQ form is included.
	4. The "leading change" result/finding on page 22 is rather limited. What deeper leadership qualities and/or practices are necessary (as identified in the study) to provide the readership with more vital information on this matter?	<p>We agree that the theme is not described comprehensively in this paper – our intent of the paper was to address the 2 research questions and draw insights into key implications uncovered by the system strain within Australian primary care. Leadership was a uncovered as a key influence of the ability of practices to negotiate the change. The dimension of leadership is being more deeply examined in one of two further articles on this data set. The other will explore the burden of the pandemic on staff seen through the lens of Karasek's Job-Control-Demand model of work related stress.</p> <p>A sentence has been added to data analysis mentioning this secondary analysis.</p>
	2. Beginning on page 10, time segments of the pandemic are named and discussed. Please introduce the reader to this approach and further discuss how/why the researchers chose to address the pandemic in this manner. Why/how to findings relate to these eras, or are results going to be general/overall assessment across the entire time period?	<p>Thank you. We have clarified the process through which we developed the stages of the pandemic.</p> <p><i>"Our team reflected on the time passage of the pandemic in its first year. We felt that the data would be more easy to understand if it were contextualised by stages. The names were approved by consensus, and are intended to provide context through which to understand the broad study findings."</i></p>
Results	How many participants were interviewed at each of the three time points? How long did interviews last on average?	<p>We understand the reviewer's request for more specific information about the interviews – the numbers of participants at varied time points, the duration and the varied characteristics. However, we think that outlining the practices and staff is sufficient.</p> <p>Given our case study design with data collected at the level of the practice, we</p>

		feel that interview statistics over time don't add to the understanding of the data, especially when considering the multiple additional data sources (including documents, investigator diaries, participant investigator reflections and practice structure and function documentation).
Table 1 –	It is unclear what numbers in the GPs and nurses columns refer too – the number of GPs and Nurses interviewed? Would be useful to have a table also describing any collected participant characteristics, not just practice characteristics.	Table heading altered to clarify. One of the key ethical considerations of this work has been a protection of the identity of practices and members of staff. Not reporting practice participant details was an issue of reassurance for the participant investigators and their practices.
Additional material	It would be helpful to include a figure or table showing an overview of the themes and subthemes described in the results.	Thank you for the suggestion. We have considered this, but feel that the information provided in Table 2 is sufficient for the reader – and fits with our overall desire to examine a system under strain.
Findings	For included quotes, specify what GP or R mean at first mention	Thank you for the comment. All characteristics were described at the beginning of the results section, and are included in the Table of abbreviations. We don't feel that it is necessary to redefine within quotes.
Table 2	Table 2 doesn't match exactly with the themes described in text, however there is a lot of duplication. Not immediately clear what Table 2 adds above what is already described in text.	We have reviewed Table 2 and think it does add to the text.
Findings	Was online appointment booking paused for all 6 practices? There is no sense throughout the results of how uniform described changes and challenges were.	Amended to say Online appointment booking was paused or amended at all practices
Findings Page 16:	Did participants specify why some staff and clinicians asked to take annual leave or reduce working hours? This seems in contrast to the start of the sentence saying staff vacancies weren't being filled.	Thank you for highlighting this issue We have added text to demonstrate that these changes followed falling practice income. <i>As the lockdown continued, financial pressures from decreased practice income increased in most of the practices. New</i>

		<i>staff vacancies were unfilled, and some staff and clinicians were asked to take annual leave or reduce working hours.</i>
Findings	The results could more clearly express the views of the participants e.g. "Understanding the change" – did participants describe these concepts? There are very few included quotes in the participants' own words. If not, these explanations and links to policy etc seem better suited to the discussion.	While we understand this concern, our findings are designed to firstly highlight the stages of the pandemic then represent how the cases evolved in relationship to the context and seen through the lens of the relationship centred model. As highlighted previously, this fits within case study analysis.
Findings p 18	What does "CDM" stand for? (page 18)	CDM is defined at first usage on page 14
	3. What actions are recommended for the clinics had financial security been provided during the pandemic? If modifying routines and maintaining income levels also maintained patient throughput, isn't this a good thing?	We are a little unclear as to the intent of the suggestion, however wish to stress that while the modified routines and introduction of telehealth helped practices in terms of financial security, decreased practice income was widespread and was closely linked with decreased patient presentations (and hence loss of fee for service income) in most of the practices. but the stress was significant..
	<p>The researchers did a good job at gathering data from various practices.</p> <p>I would recommend that more results be deduced from their investigations beyond more financial support/security and better leadership. Please address these findings in much greater detail to provide the readership with better information.</p> <p>AND</p> <p>The "leading change" result/finding on page 22 is rather limited. What deeper leadership qualities and/or practices are necessary (as identified in the study to provide the readership with more vital information on this matter?</p>	<p>Thank you for highlighting the multi-faceted potential of the data that we have collected.</p> <p>We agree that the theme is not described comprehensively in this paper – our intent of the paper was to address the 2 research questions and draw insights into key implications uncovered by the system strain within Australian primary care. Leadership was a uncovered as a key influence of the ability of practices to negotiate the change.</p> <p>We have planned two additional papers to represent the work – the first is one on leadership (seen through the lens of existing models of leadership in reforming practices) and another on the burden of the pandemic on staff (conceptualised using Karasek's Job Strain, Control, Demand theory).</p>
Discussion	Suggest including a reflexivity statement to discuss how the authors	Thank you for highlighting the importance

	(GP investigators) were also participants, and how this may have influenced the analysis? Specifically, could the GP investigators and authors reflect on how, during analysis, their own experiences did not override the collective experience of all participants interviewed?	of reflexivity in this paper. We have incorporated reflexivity as an issue in terms of the description of the limitations of the paper.
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VERSION 2 – REVIEW

REVIEWER	Tessa Copp University of Sydney Sydney Medical School, Public health
REVIEW RETURNED	04-Oct-2022

GENERAL COMMENTS	<p>Thank you for addressing most of the reviewer comments, however some appear unanswered in the response to reviewers. For example, how were participants were recruited? I can see this has been added to the manuscript but has not been detailed in the response. The response is also somewhat difficult to follow as it is not specifically clear what has been changed in the updated manuscript. You state that you have now cited the relevant literature in the introduction, however I can see no such additions in the updated manuscript. You also state that you have “added several referenced sentences to further explain the methodology in the background and introduction” however I cannot see any additional sentences in the intro in this regard. Please address.</p> <p>Aside from this, the methods are now more detailed and clearer. The inclusion of a reflexivity statement is a strength. Few additional suggestions from me below:</p> <ul style="list-style-type: none"> - CDM is repeated in the table of abbreviations - I disagree with the authors that a figure or table showing an overview of the themes would not be useful. If the old table 2 (now apparently Table 3) is sufficient in serving this purpose, please include a more descriptive heading for the Table so it can be understood clearly independent of the manuscript body.
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VERSION 2 – AUTHOR RESPONSE

Reviewer 2 comments	Reply
<p>Thank you for addressing most of the reviewer comments, however some appear unanswered in the response to reviewers.</p> <p>For example, how were participants were recruited? I can see this has been added to the manuscript but has not been detailed in the response.</p>	<p>Apologies for not outlining participant selection in the response. As noted by the reviewer, this text was added in Methods: Setting and participants:</p> <p><i>“GR and EAS contacted potential participant investigators from GPs who were either current academic staff or recent PhD graduates of the Department of General Practice, prioritising those working within practices of varying size and organisational model.12 Practice interview participants included GPs, nurses, practice managers and administrative staff.”</i> And <i>“the social scientists gained written consent from GP investigators for their</i></p>

	<i>reflective interviews</i> ".
The response is also somewhat difficult to follow as it is not specifically clear what has been changed in the updated manuscript.	All changes were marked up in the text.
You state that you have now cited the relevant literature in the introduction, however I can see no such additions in the updated manuscript.	<p>Apologies for any confusion. We felt that the reviewer's suggestion was sensible, however we decided that clarity would be optimised by including references to relevant Australian literature in the <i>discussion</i>, rather than in the introduction.</p> <p>Our earlier response did state that "<i>We have included references to several Australian papers in the discussion of the results.</i>" These are: 36 Scott A. (2020). 38. Kippen R, et al (2020)</p> <p>We note that one of our statements in our initial response was incorrect – rather than "<i>We have added an additional sentence and a reference between the second last and the last para of the introduction</i>" it should have read "<i>We have added an additional sentence to the last para of the introduction</i>"</p>
You also state that you have "added several referenced sentences to further explain the methodology in the background and introduction" however I cannot see any additional sentences in the intro in this regard. Please address.	Additional paragraphs were added in the Methods section, not the introduction
Aside from this, the methods are now more detailed and clearer. The inclusion of a reflexivity statement is a strength.	Thank you – we agree – the advice has been valuable in our review of the manuscript..
Duplication of the term CDM in the table of abbreviations	We removed the duplicated reference to CDM, (chronic disease management).
I disagree with the authors that a figure or table showing an overview of the themes would not be useful. If the old table 2 (now apparently Table 3) is sufficient in serving this purpose, please include a more descriptive heading for the Table so it can be understood clearly	<p>Thank you</p> <p>We do feel that a 'themes' table would not be entirely consistent with our case study methodology, and our consideration of changing context, evolving routines, and, importantly the key mechanisms underlying the expression of these routines.</p>

independent of the manuscript body.	However, we appreciate the suggestion for a more descriptive title for Table 3. It has been changed from “Modifications to workflow routines” to “Key pandemic generated modifications to safety, clinical, workflow and practice management routines.”
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VERSION 3 – REVIEW

REVIEWER	Tessa Copp University of Sydney Sydney Medical School, Public health
REVIEW RETURNED	21-Oct-2022

GENERAL COMMENTS	The authors have adequately addressed all the reviewer comments. I have no further comments. Congratulations to the authors
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