

PEER REVIEW HISTORY

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ARTICLE DETAILS

TITLE (PROVISIONAL)	How Do Health-Care Providers' Construe Patient Complexity? A Qualitative Study of Multimorbidity in HIV Outpatient Clinical Practice
AUTHORS	Ben-Menahem, Shiko; Sialm, Anastassja; Hachfeld, Anna; Rauch, Andri; von Krogh, Georg; Furrer, Hansjakob

VERSION 1 – REVIEW

REVIEWER	Ludlow, Kristiana Macquarie University, Australian Institute of Health Innovation
REVIEW RETURNED	25-Aug-2021

GENERAL COMMENTS	<p>Thank you for the opportunity to review this manuscript. You have provided a strong rationale for the study that highlights the importance of the research and the practical implications of your findings. My feedback is as follows:</p> <ol style="list-style-type: none">1. Your abstract is informative and summarises the study nicely. However, the objective is long and contains several “ands” which makes it a bit confusing. I recommend re-phrasing or breaking into two sentences. It is not clearer where the “and unpacking ...” links to. Is it lined to “perceptions ... of unpacking” or “a framework ... unpacking”?2. Please include “HIV” in the study setting of the abstract.3. The first introduction paragraph provides good context and makes a fantastic point about the broader set of contributing factors to complexity.4. Page 4, lines 40: Please summarise the key findings from this review – you have summarised the authors’ conclusions but not what led them to these conclusions.5. Is there other literature you could include in the introduction? For example, other studies on perceptions, definitions or conceptualisations of complexity. Are you building upon the findings of previous studies?6. Page 5, line 26. The section starting “to elaborate our understanding ...” and ending with “different levels of experience” starts to read like an overview of methods and did not flow from the introductory paragraphs above. I suggest adding a heading labelled “study design” or “study overview” to capture this information.7. The next paragraph, page 5, line 49, starting “drawing on our findings ...” and ending with “into care complexity” reads more like the discussion rather than the introduction, I suggest rephrasing or removing.
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8. Page 7, line 29: “17 nurses, eight junior physicians and six senior physicians” – were the nurses junior or senior?
9. Page 7, line 50 states “we developed our interview guide in two stages” with the first stage consisting of “conducting exploratory interviews” – how were the questions for the initial exploratory interviews developed?
10. Please provide an interview guide with questions as an appendix.
11. I suggest creating a new heading called “study materials” before “data collection” and include the development of the interview guide as this doesn’t seem to be about collecting data.
12. Please provide more information about the round-table discussions – what was the purpose of these discussions and what topics were covered?
13. Page 8, lines 43-46: A coding “frame” is mentioned but then a coding “scheme” is referred to – what is this difference between the two?
14. Page 8, line 43: “we then used to code all transcripts.” How was coding completed between the two researchers? Were transcripts divided between the two or was double blinded coding conducted?
15. Apart from the few questions I have above, the qualitative analysis is described really well – sometimes authors simply state that they did “thematic analysis”, but by providing the steps and processes of your analysis you have demonstrated rigour and enhanced reproducibility of the study.
16. Line 9, page 11: Please explain how the perspectives of the three participants were incorporated.
17. Please clarify what “data selection” refers to on page 9, line 24.
18. Please provide a demographic summary for participants, e.g., years of experience, gender etc.
19. You have a lot of concepts and terms in this paper, so Figure 1 is a great addition that helps the reader understand the connections between concepts.
20. For some quotes it is not specified whether they came from a nurse or physician and whether they were junior or senior. Please ensure this information is available for every quote.
21. Your results contain rich, informative and interesting data.
22. Page 19, line 53+, starting “the findings show” ... to “patients are necessary” – please remove from here as this is about implications of the results which belongs in the discussion, not in the results section.
23. Please clarify what (in collaboration) refers to in Table 1.
24. Table 1 - Please explain how “high”, “medium” and “low” was defined and categorised. This information should go in the methods.
25. Please explain what “weak signals” refers to as signals are mentioned only once elsewhere in the manuscript but are never explained.
26. Page 21, line 46+, starting “more specifically” to “levels of seniority” – please remove from here as this is about what the results suggest which belongs in the discussion, not in the results section.

27. Page 22, line 15: Suggest removing “e.g., general internal medicine and geriatrics”, as this implies that this was the study setting, and change to HIV outpatient clinic.
28. Page 22, line 37: Please explain what you mean by “differences between care providers” – differences in what? E.g., perspectives, level of experience etc.?
29. Page 23, line 17: Please explain how your study adds detail to the previous study you mention as it seems to support it but it’s not explicit what novel information your study provides.
30. Page 23, line 17: You state that your study reinforced other studies (plural) but only references one – are there other studies it supports?
31. Table 2 provides a good resource for healthcare professionals and students.
32. You have done a good job at outlining the limitations of your study.

Below are minor comments regarding grammar, punctuation, and errors:

33. Health care vs health care vs health-care needs to be made consistent throughout.
34. Page 4, line 47: “providers perceptions” is missing an apostrophe.
35. Page 6, line 27: Please rephrase “with varying levels of experience and across medical professions” for clarity.
36. Page 7, line 48: Please clarify what “patients in general” refers to.
37. Page 7, line 54: Comma needed after (A.S.).
38. Page 9, line 36: Suggest rephrasing “his or her” to “their” to avoid binary classification of gender, under gender data was collected through demographics. If so, please report demographic findings.
39. Page 14, line 13: Change “physician explain” to “physician explained”.
40. Page 15, line 11 +: Please format this quote similar to other quotes.
41. Page 21, line 44: “factors constitute an important driver” should be “factors constitute important drivers” (plural).
42. Page 21, line 46: Should “perceived patient complexity in less experienced ...” be “by less experienced” not “in”?
43. Page 22, line 22: It is not clear what “advances” the “expansion” means.
44. Page 22, line 33+: Consider rephrasing or breaking down the sentence starting “whereas previous ...” as this is a four-line sentence as its length makes it difficult to follow.
45. Page 22, line 45: suggest adding “that” before “prior studies”.
46. Page 23, line 11: “medical aspects of complexity ... emerged as potential drivers of perceived complexity” is a bit confusing. Consider rephrasing so that complexity isn’t emerging as complexity.
47. Page 23, line 31: Suggest removing “also” or “not only” in the one sentence.
48. Page 24, line 24: Redundant dash before “education”.
49. Page 24, line 36: Suggest adding “other” to the sentence “highly complex settings” > “other highly complex settings”.

50. Page 26, line 22: Suggest moving “It is likely that these ...” to immediately after “third” > “Third, it is likely that setting-specific characteristics influenced our findings. Our study included both nurses and physician informants and it should” As the way it reads it sounds like including nurses and physicians is the limitation.

51. Page 26, line 23: Change “nurses and physicians informants” to “nurse and physician informants”.

VERSION 1 – AUTHOR RESPONSE

Reviewer: 1	
Dr. Kristiana Ludlow, Macquarie University	
Comments to the Author:	Author's response to Reviewer 1's comments:
1. Your abstract is informative and summarises the study nicely. However, the objective is long and contains several “ands” which makes it a bit confusing. I recommend re-phrasing or breaking into two sentences. It is not clearer where the “and unpacking ...” links to. Is it lined to “perceptions ... of unpacking” or “a framework ... unpacking”?	We have fixed this sentence for clarity.
2. Please include “HIV” in the study setting of the abstract.	We now include HIV in the setting of the abstract.
3. The first introduction paragraph provides good context and makes a fantastic point about the broader set of contributing factors to complexity.	Thank you for this comment.
4. Page 4, lines 40: Please summarise the key findings from this review – you have summarised the authors’ conclusions but not what led them to these conclusions.	We now summarise the key findings from the review in question.
5. Is there other literature you could include in the introduction? For example, other studies on perceptions, definitions or conceptualisations of complexity. Are you building upon the findings of previous studies?	We have made adjustments to the introduction to better bring out how we build on the findings of prior studies.
6. Page 5, line 26. The section starting “to elaborate our understanding ...” and ending with “different levels of experience” starts to read like an overview of methods and did not flow from the introductory paragraphs above. I suggest adding a heading labelled “study design” or “study overview” to capture this information.	We have implemented your suggestion.
7. The next paragraph, page 5, line 49, starting “drawing on our findings ...” and ending with “into care complexity” reads more like the discussion rather than the introduction, I suggest rephrasing or removing.	Thank you for this suggestion. We have implemented it accordingly.
8. Page 7, line 29: “17 nurses, eight junior physicians and six senior physicians” – were the nurses junior or senior?	We now specify that our sample includes seven senior nurses and ten junior nurses.
9. Page 7, line 50 states “we developed our interview guide in two stages” with the first stage consisting of “conducting exploratory interviews” – how were the	We now specify (p.7-8) that “[t]he questions in this exploratory round were based on our review of the literature on coordination of care for multimorbid

questions for the initial exploratory interviews developed?	patients and two days of observations of the clinical setting.”
10. Please provide an interview guide with questions as an appendix.	Please see the supplement file.
11. I suggest creating a new heading called “study materials” before “data collection” and include the development of the interview guide as this doesn’t seem to be about collecting data.	We have implemented your suggestion.
12. Please provide more information about the round-table discussions – what was the purpose of these discussions and what topics were covered?	We now specify that “[d]uring this session which we (1) asked participants to broadly reflect on their perceptions of patient complexity and its contributing factors in the context of HIV clinical practice and (2) sense-tested our initial set of questions for clarity. The purpose of this session was to refine our interview guide and ensure questions were relevant to the research context.” (p.8)
13. Page 8, lines 43-46: A coding “frame” is mentioned but then a coding “scheme” is referred to – what is this difference between the two?	Thank you for pointing out this inconsistency. Frame and scheme referred to the same thing. We now use “coding scheme” consistently throughout the text.
14. Page 8, line 43: “we then used to code all transcripts.” How was coding completed between the two researchers? Were transcripts divided between the two or was double blinded coding conducted?	We rewrote the data analysis section to clarify.
15. Apart from the few questions I have above, the qualitative analysis is described really well – sometimes authors simply state that they did “thematic analysis”, but by providing the steps and processes of your analysis you have demonstrated rigour and enhanced reproducibility of the study.	Thank you.
16. Line 9, page 11: Please explain how the perspectives of the three participants were incorporated.	We now explain how the perspectives of the three participants was incorporated in more detail (p.9-10).
17. Please clarify what “data selection” refers to on page 9, line 24.	This sentence referred to the selection of data for presentation in the final manuscript. Upon further reflection we don't deem this statement necessary and have removed it from the revised manuscript.
18. Please provide a demographic summary for participants, e.g., years of experience, gender etc.	We have implemented this request.
***Comment from the Editor: Please note that, as a general rule, we allow a maximum of two indirect identifiers in qualitative manuscripts (e.g., age and sex) so as to not compromise the anonymity of the participants. Please consider this in mind when responding to the reviewer’s comment.	Noted and implemented accordingly.
19. You have a lot of concepts and terms in this paper, so Figure 1 is a great addition that helps the reader understand the connections between concepts.	Thank you.
20. For some quotes it is not specified whether they came from a nurse or physician and whether they were junior or senior. Please ensure this information is available for every quote.	We have completed the missing information accordingly. Thank you for pointing this out.
21. Your results contain rich, informative and interesting data.	Thank you.

22. Page 19, line 53+, starting “the findings show” ... to “patients are necessary” – please remove from here as this is about implications of the results which belongs in the discussion, not in the results section.	We have moved this section to the discussion section.
23. Please clarify what (in collaboration) refers to in Table 1.	This referred to the perceived controllability in collaboration with mental health professionals. We agree that this was confusing and have removed it from the table.
24. Table 1 - Please explain how “high”, “medium” and “low” was defined and categorised. This information should go in the methods.	We now include an explanation on these categories in the revised Methods section under Data Analysis.
25. Please explain what “weak signals” refers to as signals are mentioned only once elsewhere in the manuscript but are never explained.	We have changed this to “weak indicators” which refers to those signs of complexity that are less obvious but still expressed. See p.18.
26. Page 21, line 46+, starting “more specifically” to “levels of seniority” – please remove from here as this is about what the results suggest which belongs in the discussion, not in the results section.	We have moved this to the discussion.
27. Page 22, line 15: Suggest removing “e.g., general internal medicine and geriatrics”, as this implies that this was the study setting, and change to HIV outpatient clinic.	Thank you for this comment. We have implemented it as suggested.
28. Page 22, line 37: Please explain what you mean by “differences between care providers” – differences in what? E.g., perspectives, level of experience etc.?	We clarified that Doessing and Bureau refer to the lack of understanding of the different roles that health care professionals have in providing care for complex patients.
29. Page 23, line 17: Please explain how your study adds detail to the previous study you mention as it seems to support it but it’s not explicit what novel information your study provides.	We agree this paragraph was lacking in clarity. We have made several adjustments in the discussion section to address the reviewer’s comment and bring out the contributions of our work more effectively.
30. Page 23, line 17: You state that your study reinforced other studies (plural) but only references one – are there other studies it supports?	We agree this paragraph was lacking in clarity. We have made several adjustments in the discussion section to address the reviewer’s comment and bring out the contributions of our work more effectively.
31. Table 2 provides a good resource for healthcare professionals and students.	Thank you
32. You have done a good job at outlining the limitations of your study.	Thank you
Below are minor comments regarding grammar, punctuation, and errors:	Thank you for your detailed feedback and these excellent comments!
33. Health care vs health care vs health-care needs to be made consistent throughout.	fixed
34. Page 4, line 47: “providers perceptions” is missing an apostrophe.	fixed
35. Page 6, line 27: Please rephrase “with varying levels of experience and across medical professions” for clarity.	fixed
36. Page 7, line 48: Please clarify what “patients in general” refers to.	fixed
37. Page 7, line 54: Comma needed after (A.S.).	fixed

38. Page 9, line 36: Suggest rephrasing “his or her” to “their” to avoid binary classification of gender, under gender data was collected through demographics. If so, please report demographic findings.	fixed
39. Page 14, line 13: Change “physician explain” to “physician explained”.	fixed
40. Page 15, line 11 +: Please format this quote similar to other quotes.	fixed
41. Page 21, line 44: “factors constitute an important driver” should be “factors constitute important drivers” (plural).	fixed
42. Page 21, line 46: Should “perceived patient complexity in less experienced ...” be “by less experienced” not “in”?	fixed
43. Page 22, line 22: It is not clear what “advances” the “expansion” means.	changed to “clarification”
44. Page 22, line 33+: Consider rephrasing or breaking down the sentence starting “whereas previous ...” as this is a four-line sentence as its length makes it difficult to follow.	fixed
45. Page 22, line 45: suggest adding “that” before “prior studies”.	fixed
46. Page 23, line 11: “medical aspects of complexity ... emerged as potential drivers of perceived complexity” is a bit confusing. Consider rephrasing so that complexity isn’t emerging as complexity.	fixed
47. Page 23, line 31: Suggest removing “also” or “not only” in the one sentence.	fixed
48. Page 24, line24: Redundant dash before “education”.	fixed
49. Page 24, line 36: Suggest adding “other” to the sentence “highly complex settings” > “other highly complex settings”.	fixed
50. Page 26, line 22: Suggest moving “It is likely that these ...” to immediately after “third” > “Third, it is likely that setting-specific characteristics influenced our findings. Our study included both nurses and physician informants and it should” As the way it reads it sounds like including nurses and physicians is the limitation.	fixed
51. Page 26, line 23: Change “nurses and physicians informants” to “nurse and physician informants”.	fixed

VERSION 2 – REVIEW

REVIEWER	Ludlow, Kristiana
REVIEW RETURNED	Macquarie University, Australian Institute of Health Innovation 27-Oct-2021
GENERAL COMMENTS	<p>You have done a wonderful job at addressing all my feedback. It is especially great to see the added section on the implications your research has.</p> <p>When you receive your proofs I suggest a couple of minor changes:</p> <ol style="list-style-type: none">1. I'm unsure what "sense-tested" refers to and couldn't find this on Google, so maybe "piloted" instead?2. Remove the extra "and" from "experienced ability to diagnose and identify and execute treatment options "