Reviewer’s report

Title: “The views of physicians and nurses on the potentials of an electronic assessment system for recognizing the needs of patients in palliative care”

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Reviewer: Monika Pilch

Reviewer's report:

This manuscript attempts to explore the attitudes, expectations and wishes of physicians and nursing staff of various palliative settings with regards to the planned electronic screening system. The inquiry is guided by the following question: What possibilities and difficulties do physicians and nurses expect for the electronic assessment of PROs in various palliative settings? Nineteen participants (10 doctors, nine nurses) of different professions (physician, doctor, nurse, general practitioner) and from diverse healthcare settings (inpatient and outpatient care) were recruited. Data was collected with the use of qualitative interviews and the study used qualitative content analysis (QCA) as an analytical approach.

The manuscript is of importance and, given its focus on innovation in healthcare, it is timely. The authors describe the problem and highlight its significance. Appropriate methodological approach has been adopted. Though the manuscript is of importance and potentially makes a good contribution to the field (both clinically and in terms of policy), there are points that, if addressed, could improve the quality of the manuscript. Methodological clarity and specificity, as well as the provision of more evidence and support for the various points that are raised in the results section is required. Overall, I see potential in the reviewed report. Providing that the authors sufficiently address the feedback, I support this paper's publication. Best of luck to the authors in revising this manuscript.

1. Conceptualization, operationalization and coherence of the report. Although the overall goal of the study is clear, the research question could be more specific. The authors indicate that the aim of the study was to explore "attitudes", "expectations" and "wishes" of relevant groups of participants with regards to the introduction of the novel system and in various settings. However, conceptual and operational definitions of these theoretically distinct terms are not provided. The research question (in the current form) captures only one aspect of the specified goal ("expectations"). This lack of specificity influences the flow, focus and coherence of the report as it is difficult to make a link between the research question (as it is formulated now) and the research findings. Moreover, the authors indicate (in the abstract) that the aim of the study
was to explore "occupational routines". They also state (in the method section) that participants were asked about "current assessment of patients' needs and demands" before they were asked about "their expectations of the system". These two aspects were not reflected in the research question. The lack of an interview guide (and/or its description) does not allow to evaluate the full quality of the report. Furthermore, although the research question specifies that the focus was on "various palliative settings", it is not clear whether participates were asked to share their views with regards to "various palliative settings" or only to share their views with regards to their unique settings. I encourage authors to address these limitations by ensuring coherence between the title, aims, research question(s), methods, interview questions and findings. Specific terminology (consistent with conceptual and operational definitions) could be used across all sections of the report. The two aspects (assessment of current occupational routines and expectations about the future) could also be reflected in the explicitly stated research questions. An interview guide and/or its detailed description should be included in the report (please see my later comment).

2. Structure of the Report and Specificity. The structure of the report could be improved. Although the authors' report that SRQR guidelines were applied (p. 5), the reporting of key items and elements of the qualitative research process is incomplete. The use of SRQR is appropriate in this context, however these guidelines include items of broad relevance as they incorporate wide range of qualitative approaches. I encourage authors to additionally identify and refer to QCA method specific guidelines, which should also help the authors to use language consistent with the employed method. Moreover, to increase clarity and coherence, the authors could use more appropriate subheadings. The use of "objectives" and "survey" subheadings in the background section, as well as the order of subheadings in the discussion section, are not clear. In the method section, the following subheadings could be used: Design, Paradigm, Sample and Participants, Intervention, Context, Materials & Tools, Methods of Data Collection, Procedure, Analytical Approach, Reflexivity. Although this is a suggested list of subheadings, the consideration of this structure could ensure a more systematic report of relevant details. Reporting of relevant items, falling under these subheadings, would increase transparency and allow critical evaluation of the qualitative research process. It would facilitate an understanding on how the authors implemented the research techniques in their study (as opposed to simply mentioning it). Methodological choices could also be justified further (please see my later comments).

3. Theoretical Frameworks. The conceptual frameworks used in the study are not clear. The authors indicate that the study is not a part of a pilot or a feasibility study. My understanding is that the electronic system has not been developed as yet. Will (and to what extent) the research findings inform the design of the "planned" system? If yes, what theoretical framework has been
employed to facilitate the research process? It seems that the researchers are interested in exploring "routines and knowledge cultures" for the purposes of implementation. What innovation implementation framework has informed the design of the study (if any)? The quality of the report could be significantly enhanced if the overarching theoretical framework(s) are specified. I encourage authors to explicitly state the theoretical framework(s).

4. Context. As meaning is constructed and needs to be described within specific contexts, the reader needs to understand the nature and influence of the context surrounding the reported events. In the abstract, the authors indicate that participants from "various palliative care settings in Southern Germany" were involved. They later specify that the study was competed in "various palliative care settings in Baden-Württemberg (Germany)". Given the nature of qualitative methodologies, the authors need to provide an international reader with more information regarding this specific context. What is unique about this context? What is unique about this particular health care setting? I encourage authors to address these limitations by describing the setting/sites and to explicitly state the salient contextual factors. I also note that heterogeneity was an explicit methodological aim in this study (both in terms of the sample characteristics and the settings). I invite the authors to capture this heterogeneity in the description of the context.

5. Intervention: I understand that it is not possible to provide a description of a system that is at the development stage. However, the authors could include a description of the vision, aims and goals of the intervention (e.g., in a sub-section in the method section). Preferably, the description should reflect the one presented to the participants during the interview process. I encourage authors to specify what evidence has been used/will be used to inform the design of the system/innovation? I also encourage authors to use consistent terminology when making a reference to the innovation throughout the report.

6. Paradigm & rationale: The qualitative approach and the guiding theory seem to be appropriate. However, the research paradigm and the underlying rationale could be specified further. The inclusion of more detailed and specific information could highlight the logic behind the methodological choices. I invite authors to specify what ontological and epistemological assumption have been made, e.g. about the method, participants, data, etc.?

7. Reflexivity. In the context of qualitative research, members of the research team often form relationships with participants and analytic processes are highly interpretive in most qualitative research. Therefore, reviewers and readers must understand how these relationships
and the researchers' perspectives and assumptions influenced data collection and interpretation. Although the authors have indicated who the researchers/interviewers were, a more elaborate reflection on characteristics, personalities and roles that might have influenced the research process is required.

8. Sample, participants & sampling strategy. More clarity is needed with regards to how many experts, of what specialty, and within what specific healthcare settings, have been recruited. The relevant characteristics of participants included in the study are not clear, hence more information is required. It seems that there are multiple subgroups and it is not clear at the moment how many participants were recruited from each subgroup. The process of participants selection could also be more explicitly described. To increase transparency, I encourage the authors to provide specific inclusion criteria that had guided the recruitment and selection processes. Finally, it is not clear how the authors define the term "interview partners". Could the authors provide clarification/definition or a reference to relevant literature? Why not call them "participants"/"interviewees"?

9. Heterogeneity and Saturation. The authors do not comment on the sample size and refer to the concept of saturation instead. First, I invite the authors to provide references to the literature/recommendations that guided the need for the "heterogeneity" and specify what was the rationale behind the aimed heterogeneity. Then, I encourage authors to comment on how they defined saturation and describe how it was recognized in the context of their study. Given the heterogeneity of the sample; hence different expertise, experiences and perspectives among the participants, I encourage authors to comment on the extent to which the heterogeneity of the experience among the participants posed a challenge in achieving saturation.

10. Data Collection Methods and Interview Guide. More details of data collection procedures could be provided. Data collection instruments and technologies should be described. More detail regarding questions that were included in the interview guide is required. Additionally, to increase transparency, an interview guide could be included in an appendix/supplement material.

11. Data processing. The report of the methods for processing data prior to and during analysis (transcription, data entry, data management and security, verification of data integrity, data coding, anonymization/identification of excerpts) in not clear at the moment and could be enhanced. The authors could also describe how the indicated software was used in the process of data processing.
12. Data Analysis. Although a reference to specific paradigm has been made, the clear rationale for this specific choice is not included. The reporting style and the language used in the manuscript should reflect the analytical approach (qualitative content analysis as recommended by Schreier). I note that the term "coding" or "coding frame" has not been used once in the manuscript. Moreover, the authors could provide more information on who analysed the data and describe in more detail the various stages of the analysis. What was the process by which categories (and sub-categories) were identified and developed? I invite the authors to specify whether a pre-defined systems of steps was employed. If yes, what core steps were taken? In the revision process, I also encourage the authors to consider these questions: How have the authors arrived at the coding frame? How was the coding frame used? How were category definitions generated? How was material segmented into coding units? How was the coding frame evaluated (in terms of reliability and validity)? How was the pilot phase separated from the main phase of analysis?

13. Rigor: Standards for methodological rigor in qualitative research are important. At the moment, techniques to enhance trustworthiness are not explicitly stated in the main body of the report. Although the authors make a reference to team meetings, these measures could be referred to by using relevant and methodologically appropriate terminology.

14. Overview of Findings. The authors should provide an overview of the findings in the first paragraph of the results section. This bird’s-eye overview could increase clarity. It is not clear at the moment how many categories (and related sub-categories) were identified. For example, for the first category, the authors seem to specific three sub-categories. However, the authors only describe and provide some limited evidence for the two of these sub-categories. A more systematic approach to the reporting of findings need to be adopted. I encourage authors to consider the research questions (along with the feedback provided earlier) and structure the results section accordingly (please see earlier comments in relation to coherence and the link between research question, methodology and findings).

15. Evidence. The authors state that categories were "brought into a hierarchical order". The inclusion of a diagram illustrating the hierarchy of categories and sub-categories could enhance the understanding of the process. Furthermore, as heterogeneity was an explicit methodological goal in this study, the heterogeneity of the experiences and perspectives need to be reflected in the report (supported by sufficient and relevant quotations). The sample includes the sub-groups of physician, doctor, nurse, general practitioner. It also incorporated various settings: inpatient
care, outpatient care, general practice, specialized home care, hospice. When the authors start a statement with "For some palliative care specialists (…)") it’s not clear who is included in the group of "some". The report (in its current form) leaves the reader wonder about the extent to which the "heterogeneous group" of participants, located within multiple contexts, spoke with "one voice"? It is possible that this point could be addressed by increasing the transparency and specificity of reporting in the method section. However, the richness of perspectives needs to be reflected in the results.

16. Structure and content of the discussion. Discussion should start with a brief summary of findings. Limitations & trustworthiness should be discussed at a later stage in the report. It should occur after a reader has a better understanding of the scope of application and the unique contributions have been identified/explicitly stated. Judgments regarding transferability are currently limited by the lack of specific description of the context in which research took place (please see the earlier comment in relation to the context).

17. Discrepancies. I encourage authors to watch for discrepancies and either make corrections or explain/justify. For example, the authors state that "A broad selection of interview partners was aimed for and implemented" (p. 4). They later indicate the limitations of the study and specify that "A broad selection of interview partners from outpatient care could not be reached despite efforts" (p. 9) How do authors explain this apparent discrepancy?

18. Conclusions. Due to the issues raised with regards to the lack of sufficient evidence in the results section, it is not clear at the moment whether conclusions are supported by evidence. This point can only be evaluated when the earlier feedback (in relation to findings/results section) is addressed.

19. Implications. Clinical, policy and research implications should be clearly and explicitly stated. Specific context should be taken into account in this process (please see the earlier comment in relation to context). The reader should be provided with sufficient information to develop a good understanding on how the findings will be used. How the findings will be possibly translated to, e.g., further research, clinical practice, design of the intervention, system implementation plan, etc.
20. Clarity and economy of language. I encourage authors to proof read the whole manuscript and ensure simplicity and clarity of expression. For example, the sentence "Barriers to the integration of PROs exist if the benefits of PROs assessments are not seen, the queries are too long, incomprehensible or inappropriate for the patients, and/or the physicians are not trained in the use and interpretation of the outcomes" (p. 3) could be re-written, e.g.: "Not recognizing the benefits of the PROs assessment; the length, appropriateness and comprehensiveness of the queries; and lack of training in the use and interpretation of the outcome are among the key barriers to PROs integration." (it’s only one suggestion).

Best of luck in revising this important manuscript.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Unable to assess

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Unable to assess

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
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Not relevant to this manuscript

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