Author’s response to reviews

Title: Merits, features, and desiderata to be considered when developing electronic health records with embedded clinical decision support systems in Palestinian hospitals: a consensus study

Authors:

ramzi shawahna (ramzi_shawahna@hotmail.com)

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Author’s response to reviews:

Dear EDITOR,

BMC Medical Informatics and Decision Making

Thank you very much for forwarding the comments of the reviewers on the manuscript MIDM-D-19-00203 “Important safety features to consider when developing electronic health records with embedded clinical decision support systems: a mixed method using the Delphi technique and Analytic Hierarchy Process”.

We are very delighted to learn that the manuscript should become acceptable for publication pending suitable revisions and modifications in light of the reviewers’ comments. Many thanks for providing us with the opportunity to revise our submitted manuscript. Also we would like to thank yourself and the reviewers for the constructive comments which have considerable improved the quality of the manuscript.

We believe that all comments raised are legitimate and consideration worthy. In this revision, we have addressed ALL OF THEM and the manuscript was revised accordingly. We believe that the quality of the manuscript has greatly improved.

Please find below a detailed point-by-point account of the revisions made to the manuscript in accordance with the comments raised by the reviewers. All comments were carefully considered and amendments were made as appropriate. For your convenience, the amended text was highlighted in blue font throughout the manuscript.

Reviewer reports:

Reviewer 01:

(Stephanie Medlock, DVM, PhD, Reviewer 1)

AUTHOR RESPONSE:
We would like to thank Dr. Stephanie Medlock, DVM, PhD for her high quality constructive comments. Her suggestions and recommendations have greatly improved the quality, clarity, and flow of the manuscript.

Below we are addressing her comments point-by-point:

1. Summary of the paper: The paper presents a Delphi study conducted with 76 participants, seeking to establish consensus on the potential advantages and desirable features/configuration of electronic health records and clinical decision support systems integrated into them. The main result is a list of 110 perceived advantages, features, and desiderata, sorted into 9 categories and prioritized within those categories. The paper also (partially) reports a systematic literature review and an interview study which were used to generate the initial item list given to Delphi participants.

AUTHOR RESPONSE:

Thank you very much for the nice summary which indicate that the reviewer has thoroughly read and reviewed the manuscript.

==Major remarks==

2. The most important issue with this paper is that the methods are not reported clearly, and the second important issue is that not all results are reported (or in some cases, are reported but are not clear).

AUTHOR RESPONSE:

Once again, we would like to thank the reviewer for her comments, critique, suggestions and recommendations. After addressing these comments and amending the manuscript, we believe that the quality and flow of the manuscript have greatly improved. The manuscript reads better now.

Specifically: Methods:

3. The methods for the literature review hint that a formal systematic review was performed to identify literature for input to the Delphi panel, but the methods are not reported completely. The authors have two choices: (1a) Report the literature review following the PRISMA guidelines. Specifically, the search itself should be included (in the main text or as an appendix), the number of reviewers should be reported, the inclusion/exclusion criteria should be clarified, and the authors should specify what data was extracted, if a data extraction form was used, and who did the extraction (and if more than one reviewer did any step, how discrepancies were resolved). OR (1b) Choose a more qualitative approach: State that a thorough (but not systematic) search of the literature was
performed to identify potentially important items as input for the Delphi panel. Describe the role/qualifications of the person or persons performing the search. If a systematic search of the literature was indeed performed, then option (a) is preferable.

**AUTHOR RESPONSE:**

We would agree with the reviewer that a systematic review should have been reported using PRISMA guidelines. Indeed, a systematic review of the literature was not performed because the objectives of this step were to conduct a thorough search and identify items that would serve as input for the Delphi panelists. The reasons for opting to a thorough instead of a systematic review were added to the methods section (1) objectives of the current study, 2) nature of the research question, 3) problem/population, intervention, comparison, outcome (PICO), 4) scope, and 5) number and nature of papers/materials to be included in the study). Please see the amended text Page 5 Lines 30-37. The amended text was highlighted in blue font for your convenience.

In this review we have stated that the review was a thorough (but not systematic) search of the literature. Please see Page 5 Line 30. Although we opted for a more qualitative approach in reporting this step, whenever possible, PRISMA guidelines were followed. Please see Page 5 Lines 35-37. Adherence to guidelines is now shown in Appendix 1 in the supplementary materials. Please see Additional file 1.

The roles and qualifications of the persons who conducted the literature search were added. Please see Page 6 Lines 16-19. The amended text was highlighted in blue font for your convenience. Please see also Additional file 1.

More details on the search strategy and extraction of items were added to the revised manuscript. Please see the new details under the sections Literature search (Page 5-6) and Extraction of items (Page 6). The amended text was highlighted in blue font for your convenience.

4. The methods for the interviews are not complete. Please use the COREQ checklist as a reporting guide. Specifically, the authors need to add: How were subjects chosen/recruited for the interviews? How was the number of subjects determined? How was the interview guide developed? What questions were asked? Was it structured, semi-structured, or open? Who conducted the interviews? How was the interview data collected and processed? Were any steps taken to reduce the risk of bias (e.g. member checking)? Please also indicate the scope of participants who were invited. (Are they all Palestinian? All from hospitals, or also regional clinics? All from academic hospitals? All from one hospital?) See also the comment related to this in the Results section.

**AUTHOR RESPONSE:**

We would like to thank the reviewer for suggestion these revisions. We believe that the new amendments to the manuscript have greatly improved its clarity, quality, and value.
We have included ALL items suggested by the reviewer in the revised text under the subheading “The first Delphi round: interviews with key contact experts”. Please see Page 6 Lines 31-44 and Page 6 Lines 1-18. The amended text was highlighted in blue font for your convenience.

We have also added additional file reporting adherence to the COREQ checklist. Please see Additional file 2 for detailed adherence to all items.

Suggestions provided by the reviewer were considered as below:

1. How were subjects chosen/recruited for the interviews?

AUTHOR RESPONSE:

The process was detailed in Page 6 Lines 35-41. The amended text was highlighted in blue font for your convenience.

2. How was the number of subjects determined?

AUTHOR RESPONSE:

Details are provided in Page 6 Lines 38-39. The amended text was highlighted in blue font for your convenience.

3. How was the interview guide developed?

AUTHOR RESPONSE:

Details are provided in Page 7 Lines 5-10. The amended text was highlighted in blue font for your convenience.

4. What questions were asked?

AUTHOR RESPONSE:

Details are provided in Page 7 Lines 5-13. The amended text was highlighted in blue font for your convenience.

5. Was it structured, semi-structured, or open?

AUTHOR RESPONSE:
Details are provided in Page 7 Lines 8-10. The amended text was highlighted in blue font for your convenience.

6. Who conducted the interviews?

AUTHOR RESPONSE:

Details are provided in Page 6 Line 44. The amended text was highlighted in blue font for your convenience.

7. How was the interview data collected and processed?

AUTHOR RESPONSE:

Details are provided in Page 7 Lines 11-17. The amended text was highlighted in blue font for your convenience.

8. Were any steps taken to reduce the risk of bias (e.g. member checking)?

AUTHOR RESPONSE:

Details are provided in Page 7 Lines 15-17. The amended text was highlighted in blue font for your convenience.

9. Please also indicate the scope of participants who were invited. (Are they all Palestinian? All from hospitals, or also regional clinics? All from academic hospitals? All from one hospital?)

AUTHOR RESPONSE:

Details are provided in Page 7 Lines 16-17. The amended text was highlighted in blue font for your convenience.

5. The section "Responding to the questionnaire in the first Delphi round" can be deleted. However, the authors should add information on how the questionnaire was distributed (paper or digital), and whether reminders were sent.

AUTHOR RESPONSE:

Based on comments from both reviewers, the "Responding to the questionnaire in the first Delphi round" was deleted in this revision.
Information on how the questionnaire was distributed was added to this revision as the reviewer suggested. Details are provided in Page 7 Lines 41-42. The amended text was highlighted in blue font for your convenience.

6. The definition of consensus is a bit unclear: "...when the median score was within the range of 1-3 and the IQR was less or equal 2 of at least 75% of the panelists, the item was not considered as important..." If responses are between 7 and 9 then the IQR for those responses will (by definition) be <=2, so I think you mean "when the median score was within the range of 1-3 for 75% of the panelists, and the IQR for all responses was <= 2". Please clarify this definition.

AUTHOR RESPONSE:

In this revision, the definition was made clearer. We would like to thank the reviewer for their suggestion. Please see Page 9 Lines 13-19. The amended text was highlighted in blue font for your convenience.

7. 2nd Delphi round: who summarized the qualitative comments? Were any steps taken to reduce potential bias in this step? The results appear to contain a summary of qualitative comments, thus this step should be clarified.

AUTHOR RESPONSE:

Information on the qualitative comments in this section was added as the reviewer suggested. We would like to thank the reviewer for this constructive comment. Please see Page 9 Lines 4-6. The amended text was highlighted in blue font for your convenience.

8. After reading the Results it is clear that there were not just two sub-rounds in the 2nd Delphi round, but an iterative process in which items which were equivocal in the previous iteration are included in the subsequent iteration. It appears this was continued for 3 iterations. Please add this information to the methods, including why three iterations was chosen (rather than 2, 4, "until consensus was reached", etc.).

AUTHOR RESPONSE:

The reviewer is correct, there was an iterative process. This was clarified in the methods section as the reviewer suggested. For clarity, the interviews now represent the first Delphi round, rounds 1 and 2 in the previous version are now rounds 2 and 3. This has been revised in the methods, results, discussion, and the tables. Please see these amendments in the revised Tables 3 and 4. The new section Iterative Delphi process Page 8 Lines 36-42. The iterative Delphi rounds in the results section Page 12 Lines 31-42. The amended text was highlighted in blue font for your convenience.
The reason for not conducting further Delphi rounds was mentioned Page 9 Lines 30-32. The amended text was highlighted in blue font for your convenience.

9. How were the participants for the Analytical Hierarchy Process chosen? This section also mentions that the items were grouped into categories - who made this grouping, and at what step in the Methods?

AUTHOR RESPONSE:

Information on recruiting participants in the Analytic Hierarchy Process was added to the methods section as the reviewer suggested. Please see the revised section “Ranking of items in order of their importance” Page 9 Lines 36 and onward. The amended text was highlighted in blue font for your convenience.

Details on how participants were recruited were added in Page 10 Lines 3-5. The amended text was highlighted in blue font for your convenience.

Details on how the items were grouped are provided on Page 9 Lines 33-35. The amended text was highlighted in blue font for your convenience.

10. I'm not sure that ANOVA is the right choice of statistical test. I'm not sure that it's wrong, either, but I cannot find any other examples of analyzing Analytical Hierarchy Process data that use ANOVA in this way. Please check that this is the correct analysis to use. If it is, then no changes need to be made. If it is not, then consider omitting this analysis, as it is not critical to interpretation of the results.

AUTHOR RESPONSE:

Based on comments from both reviewers, the statistical analysis of the AHP was removed. This should be clearer to the readers as the analysis was not critical to interpretation of the results. Although, ANOVA is the right choice of analysis.

ANOVA was previous used in analyzing scores of the Analytic Hierarchy Process. Examples can be found in (Banuelas & Antony * 2004, Shawahna 2018).

Results:

11. I expect a Results section for each of the Methods outlined above. Thus I expect results of the literature review and interviews as well as the Delphi panel itself. Please use the PRISMA and COREQ checklists to guide what results need to be reported for each. A brief description of the results with an appendix giving more complete results would be fine. (For example: In the main text, report the PRISMA diagram and number of items identified from the literature for the literature review, and the response rate and number
of items identified from the interviews for the interviews. Put the rest of the results as recommended by PRISMA and COREQ in an appendix.) For each item in Table 2, 3, and 4, report whether the item came from the literature, interviews, or both. If you do not remove the ANOVA analysis from your Methods, then the results of the ANOVA should also be added to your Results (p-values), and add a section to the Discussion explaining why you chose ANOVA and what information this analysis adds to the interpretation of your results.

AUTHOR RESPONSE:

The results section was amended to incorporate information suggested by the reviewer. Appendices were also added on adherence to PRISMA (additional file 1) and adherence to COREQ checklist (additional file 2).

Number of records identified is shown in the results section Page 11 Lines 3-4. The amended text was highlighted in blue font for your convenience.

Response rates were added to the results section, please see Page 11 Lines 7-11, Page 11 Lines 16-17, and Page 11 Lines 26-27. The amended text was highlighted in blue font for your convenience.

Sources of each item were added to the tables 2, 3, and 4 as the reviewer suggested. Please see the revised tables. The amended text was highlighted in blue font for your convenience.

The p-values were added to the results as the reviewer suggested. Please see the subsections added under “Items included in the core list with their weights of importance”, Page 13-14. The amended text was highlighted in blue font for your convenience.

12. The results should also indicate response rate (how many participants were invited and how many accepted or declined) for both the Delphi panel and the Analytical Hierarchy Process step. This information is given in the Discussion for the Delphi panel; it belongs in the Results. Also, indicate whether the participants that you got reflect the range of participants who were invited (for example, if you invited people from all relevant professions but only nurses and IT people participated, the reader needs to know this).

AUTHOR RESPONSE:

The response rates were added to the results as the reviewer suggested. Please see Page 11 Lines 7-10, Page 11 Lines 16-17, and Page 11 Lines 26-27. The amended text was highlighted in blue font for your convenience.

Respondents belonged to all specialties that were purposively invited in the study. This was added to the results Page 11 Line 12. The amended text was highlighted in blue font for your convenience.
13. The results contain a nice summary of the information from Table 2 (page 10 line 9 through page 11 line 8), but the bulk of the results (Tables 3 and 4) are only reported very briefly, on page 11 lines 11-22. I would like to see a better balance between these two sections, and specifically I'd like to see a bit more detail on the results from Tables 2 and 3. The format used for describing the information from Table 2 is good; you can use this for Table 3 and 4 as well.

AUTHOR RESPONSE:

Description of Tables 3 and 4 was extended as the reviewer suggested. Please see the new description in the results section Pages 12-14. The amended text was highlighted in blue font for your convenience.

Discussion:

14. When the methods are clarified, I expect some additional limitations will need to be reported as well: If the literature review was done by one researcher, then this is a limitation. Ideally this should be done by two people and agreement checked. If the interviews were conducted and analyzed by one researcher, then this is a limitation. Again, it is better if more than one person does this analysis. If the interviews were not recorded (or notes taken independently by two researchers), then this is also a limitation. If no member checking or other methods were employed to reduce bias, then this is also a limitation.

AUTHOR RESPONSE:

The limitations were amended to include those suggested by the reviewer. Please see the revised limitations Page 16 Lines 26-45. The amended text was highlighted in blue font for your convenience.

==Minor remarks==

15. The section on the Delphi technique could be moved to the introduction, but it is not really needed. The Delphi method is widely accepted as a method for establishing consensus, which is the goal of this study.

AUTHOR RESPONSE:

We would like to thank the reviewer for this suggestion. Description of the Delphi technique was removed from this revision.

16. The authors need not argue why this study was not designed as an RCT. However, the introduction could provide a stronger argument for why a Delphi study is required. The authors mention later in the paper that the evidence for the benefits and desirable features
of EHRs and CDSS is limited and contradictory. There are some expert opinions, but no real guidelines for EHR and CDSS implementers. This is correct, and is a good reason to do this study.

AUTHOR RESPONSE:

The sentence “However, the use of randomized and other probability sampling techniques is neither suitable nor practically feasible for studies seeking consensus” was removed from this revision as the reviewer suggested.

Rationale for the Delphi technique was revised in the introduction section. Please see Page 3 Lines 43-44 and Page 4 Lines 1-4. The amended text was highlighted in blue font for your convenience.

17. The choice to describe participants as "67.1% physicians and IT/programming specialists" is a bit odd, since these are two very different groups in my mind. I assume what you mean is "The largest groups of participants were physicians (42%) or IT/programming specialists (25%)."

AUTHOR RESPONSE:

This was revised and amended as the reviewer suggested. Please see Page 11 Lines 19-20. The amended text was highlighted in blue font for your convenience.

18. The statement "The decision as to whether to consider these items or not can be shaped by the individual needs of healthcare providers and decision makers in hospitals" appears to be the authors' opinion, and should be moved to the Discussion (it is not a Result).

AUTHOR RESPONSE:

The statement was moved to the discussion section as the reviewer suggested. Please see Page 16 Lines 24-25. The amended text was highlighted in blue font for your convenience.

19. The description of the items in your study as "safety features" is probably not the best choice of words. I think of "features" as characteristics of the software. Your study was broader than that - you looked at opinions on potential benefits of EHRs/CDSSs as well as features/configuration choices, dealing with usability and other effects on care as well as safety. I'd say "advantages, features, and desiderata" but you may choose other words that encompass the scope of your work.

AUTHOR RESPONSE:

We would like to thank the reviewer for this suggestion. The objectives were amended to encompass the broader objectives of the study. Please see the amended objectives in the abstract and introduction Page 4 Lines 5-11. The amended text was highlighted in blue font for your convenience.
20. Consider adding the scope of the study to the title, or at least the abstract; e.g. "... in Palestinian hospitals ..."

AUTHOR RESPONSE:

We would like to thank the reviewer for this suggestion to consider the scope of the study in the title. The title was revised to included “in Palestinian hospitals” as the reviewer suggested. Please see the revised title.

There are a few typos and grammatical errors, for example:

21. page 3 line 31: deliver (should be delivery) page 3 line 41 and elsewhere

AUTHOR RESPONSE:

We would like to apologize for these typos and would like to thank the reviewer for pointing them out. This was corrected. Please see Page 3 Line 22. The amended text was highlighted in blue font for your convenience.

22. HER (should be EHR: turn off autocorrect while editing any document about EHRs!) page 4 line 8 and elsewhere

AUTHOR RESPONSE:

Again, we would like to thank the reviewer for pointing out these typos. HERs were corrected to EHRs. Please see the amended text.

23. Consensual (should be consensus)

AUTHOR RESPONSE:

Consensual was revised to consensus whenever possible. When used as adjective, “consensual” was left as such.

24. The use of English in general is good, but please correct these errors and check the entire document carefully after revision.

AUTHOR RESPONSE:

We would like to thank the reviewer for highlighting the quality of English that was generally used in the manuscript. A careful revision of the manuscript was done before the final submission of this revised manuscript.

==Comments (no action is required)==
25. The choice to use Excel for the statistical calculations is a bit unusual. I would expect this to be done using R (package ahp is designed for doing the Analytical Hierarchy Process). You do not need to change anything for this study, but consider using a more conventional software package for future studies.

AUTHOR RESPONSE:
We would agree with the reviewer that other Statistical Packages would be more reliable to use. However, simple statistics like medians and IQRs can simply and conveniently be calculated using Excel.

ANOVA analysis was conducted using GraphPad Prism 6.0 for Windows (GraphPad Software). Please see Page 10 Line 14.

26. Quite a lot of additional information is needed to completely report everything you've done. If it were my study, I would have reported it in two papers: one for the systematic review (assuming the methods are sufficiently rigorous) and one for the Delphi study. A third paper (for the interviews) could even be considered, depending on how extensive the interviews were. Reporting everything in one paper is certainly fine, but it will make for a rather long paper.

AUTHOR RESPONSE:
We would like to thank the reviewer for this remark. Indeed, we preferred to report all the relevant data in one full paper. Though we would agree that it is a rather long one.

27. I would like to thank the authors for their hard work and congratulate them on this quite interesting result.

AUTHOR RESPONSE:
We would like to thank the reviewer for her constructive comment. We are deeply indebted to the reviewer for improving the quality, clarity, and flow of the manuscript.

Reviewer reports:
Reviewer 02:
Habibollah Pirnejad (Reviewer 2):
The topic is of importance and the authors conducted a comprehensive research on the topic.

AUTHOR RESPONSE:
We would like to thank Dr. Habibollah Pirnejad for his constructive comments on our manuscript. We believe that his high quality comments are legitimate and consideration worthy. We believe that addressing the points raised by the reviewer has greatly improved the manuscript.

However, there are some major concerns as well as minor ones that have to be addressed before any decision making. The comments are as follows:

1. In the abstract, result section: Please order the result based on the prevalence. We expect the most important findings presented in the result and presenting general finding as such is not very informative for a reader.

AUTHOR RESPONSE:

We would like to thank the reviewer for this suggestion. In this revision, items were presented in the order of their prevalence as the reviewer suggested. Please see the revised abstract, results section Page 12 Lines 37-42. The amended text was highlighted in blue font for your convenience.

Similarly, Table 3 was amended to reflect this order. Please see the revised Table 3. The amended text was highlighted in blue font for your convenience.

Introduction:

2. We expect explanation that tells the reader how problematic would be if safety concerns were not considered in design and implementation of information technology application in healthcare settings.

AUTHOR RESPONSE:

We would like to thank the reviewer for this suggestion. A short paragraph was added to the introduction section highlighting the potential harm associated with poorly designed EHRs. Please see Page 3 Line 24-31. The amended text was highlighted in blue font for your convenience.

3. The second paragraph of the intro is actually part of methodology. And the authors can bring it under the study context subtopic.

AUTHOR RESPONSE:

We would like to thank the reviewer for this suggestion. The second paragraph was moved to the methods section under a sub-heading “study context” as the reviewer suggested. Indeed, this suggestion has improved the flow of the manuscript. Please see Page 5 Line 2-19. The amended text was highlighted in blue font for your convenience.
4. The topic sentence of the last paragraph is not related to the remaining part of the paragraph. Please improve it.

AUTHOR RESPONSE:

The first sentence of the last paragraph was removed as the reviewer suggested. The rest of the paragraph was amended to improve the flow. Please see the revised paragraph Page 4 Lines 5-11. The amended text was highlighted in blue font for your convenience.

Methods:

5. There is a lot of wordiness in some part of the paper and paper can benefit from summarizing and removing some unnecessary parts. For example: a lot explanation presented about Delphi technique but it was not stated what the items upon which they wanted to make consensus were. I would suggest first to shorten this section and then bring the literature review part before the Delphi section.

AUTHOR RESPONSE:

The literature search section was moved as the reviewer suggested. Please see Page 5 lines 29-40. The amended text was highlighted in blue font for your convenience.

Both reviewers suggested that the text explaining the Delphi technique was not necessary and might be removed from the manuscript. Whenever possible, unnecessary details were removed. However, new details were added to fully describe the different stages of the study. We understand that this paper is rather a long one.

6. This sentence was repeated too many times throughout the paper: "the objective of this study was to develop and achieve formal consensus on important items to be considered when planning for, designing, developing, implementing, piloting, evaluating, maintaining, upgrading, and/or using EHRs with CDSSs". It is recommended that it is replaced by simple statement such as "the objectives of this study" after it was made clear what the study objectives' details were.

AUTHOR RESPONSE:

The sentence was shortened in many places as the reviewer suggested. Please see the amended text. The amended text was highlighted in blue font for your convenience.

The methodology section, Literature review subsection:

7. Was the literature review systemic or non systemic? And why the authors decided to do that? In case it is systematic LR then the authors have to provide details such as search strategy, etc. This part is more general as it stands now. The authors have to present their
inclusion and exclusion criteria as well and a flowchart that shows how the process performed. How concepts from the selected literature were extracted? And so forth. Moreover, there are bunch of gray literature about the standard features that an HER should contain. International Organization for Standardization (ISO), for example, initiated efforts to address this requirement and published ISO/TS 18308.

AUTHOR RESPONSE:

We would like to thank the reviewer for suggesting this addition. Indeed, both reviewers suggested significant amendments to the methods section, especially the search strategy.

Inclusion of grey literature was highlighted in Page 6 Lines 4-6. The amended text was highlighted in blue font for your convenience.

Adherence to PRISMA statement was described Page 5 Lines 36-37 and an additional file was added. Please see additional file 1.

8. The methodology section, the interview with … sub section: More explanations are required for those interviews. Were they face-to-face and one on one or in other forms? Were the interviews recorded? The interview data are not usually very organized and need to be interpreted or analyzed. The question is how the researchers draw the important safety features from the interviews without transcribing and interpreting the interview data?

AUTHOR RESPONSE:

Details of the interviews were added to the revised manuscript. Please see Page 6 Lines 30-44 and Page 7 Lines 1-20. The amended text was highlighted in blue font for your convenience.

The interviews were one-on-one. Please see Page 7 Lines 5-6. The amended text was highlighted in blue font for your convenience.

The interviews were audio recorded. Please see Page 7 Lines 11-12. The amended text was highlighted in blue font for your convenience.

Information on analysis is provided Page 7 Lines 13-16. The amended text was highlighted in blue font for your convenience.

9. What is the reason behind using 5 point likert scale in second part of the questionnaire and 9 point likert scale in the third part of the questionnaire?

AUTHOR RESPONSE:

Information regarding the use of 5 point Likert scale and 9 point Likert scale in this study is provided Page 7 Lines 29-32 and Page 7 Lines 37-39. The amended text was highlighted in blue font for your convenience.
10. The sentence on line 33 page 8 can be combined with its previous paragraph.

AUTHOR RESPONSE:

The sentence was combined with the previous paragraph as the reviewer suggested. Please see Page 9 Lines 27-28. The amended text was highlighted in blue font for your convenience.

The result section:

11. The number of the physicians, their specialty, as well as the number of IT/programming specialists should be presented. Physicians are the key informants about patient safety and their involvement is highly valued comparing to other group of participants.

AUTHOR RESPONSE:

The specialist/consultant who participated in this study were internists. This information was added to the Table 2. Please see the amended table. Other physicians were either interns or residents rotate in different wards.

12. However, other care providers such as nurses and pharmacists have also critical roles in both patient safety and using EHR in providing patient care. Why this study did not include those key role players.

AUTHOR RESPONSE:

The study included nurses and pharmacists. Please see Table 2 for details of the study participants in different stages.

13. "items were related to the patient's body characteristics" please make this statement clearer.

AUTHOR RESPONSE:

The term “patient’s body characteristics” was replaced by “demographic characteristics of the patient” for clarity as the reviewer suggested. The amended text was highlighted in blue font for your convenience. Please see the revised Table 3.

Discussion and conclusion:

14. Providing a list of characteristics for a HER with CDSS does not provide much adding value. The authors, in the context of their methodology, (especially using AHP) were expected to tell the readers what are for example top ten safety characteristics for the study objectives. They also should explain what are the adding value, their study is going
to add to the existing body of knowledge, for example to what was presented as ISO/TS 18308 standard.

AUTHOR RESPONSE:

The results section was amended as both reviewers suggested. Text explaining tables 3 and 4 was extended. Please see the revised text Page 12-14.

15. Conclusion is too general too.

AUTHOR RESPONSE:

The conclusion in the abstract and in the main text was revised. Please see the amended conclusion in both sections. The amended text was highlighted in blue font for your convenience.

References:

16. Please review the standard format and improve them based on the journal's format. For example, it is not clear what kind of literature is ref. no 9? Is it an online source? then the format has to be standard too.

17. Format of the journals' name has to be standard and consistent too. We have "Journal of the American Medical Informatics Association : JAMIA" and "J Am Med Inform Assoc" for the same journal.

AUTHOR RESPONSE:

The references were revised in accordance with the journal’s style. Please see the revised reference.

We would like to thank the reviewer for his constructive comment. We are deeply indebted to the reviewer for improving the quality, clarity, and flow of the manuscript.

Technical issues:

All sections in the Declaration section were filled as required:

Declarations

- Ethics approval and consent to participate
- Consent to publish
- Availability of data and materials
- Competing interests
- Funding
- Authors' Contributions
- Acknowledgements

Please see the revised manuscript under declaration section.

Having addressed all the comments raised by the reviewers, we are looking forward to hear from you soon.

Best regards,

The corresponding author

References:
