

PEER REVIEW HISTORY

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ARTICLE DETAILS

TITLE (PROVISIONAL)	Use of information and communication technologies (ICTs) in cancer multidisciplinary team meetings: An explorative study based on EU healthcare professionals
AUTHORS	Prades, Joan; Coll-Ortega, Cristina; Dal Lago, Lissandra; Goffin, Karolien; Javor, Eugen; Lombardo, Claudio; de Munter, Johan; Ponce, Jordi; Regge, Daniele; Salazar, Ramón; Valentini, Vincenzo; Borras, Josep

VERSION 1 – REVIEW

REVIEWER	Nicole Ernstmann University Hospital of Bonn, Center for Health Communication and Health Services Research, Department for Psychosomatic Medicine and Psychotherapy
REVIEW RETURNED	03-May-2021

GENERAL COMMENTS	<p>Dear authors,</p> <p>Thank you very much for the opportunity to read and comment on your manuscript. This is an interesting topic addressing a relevant health care issue within multiprofessional cancer care. However, I have some concerns mainly in terms of study methodology which will be addressed below.</p> <p>1) Abstract: The aim "... to explore the use of these tools in multidisciplinary team meetings (MTMs) and to identify the critical challenges posed by their adoption" should be revised by adding the chosen perspective of representatives of European scientific societies as key informants.</p> <p>2) Abstract: The results section should start with a description of sample characteristics, including the sample size.</p> <p>3) Methods section, selection of informants and sampling strategy: When using the key informants approach, you should define the institution/profession/country/health care system/scientific society for which the expert is a key informant. Which role or perspective do they have, does a participant answer as a oncologist or as a representative of a specific country or health care setting? Can you clearly distinguish your approach from an expert interview or focus group?</p> <p>4) Methods section, selection of informants and sampling strategy: "initially envisaged 10 participants". What was the rationale for this sample size? Please explain. What was the rationale for the purposeful sampled societies/countries? Please explain.</p> <p>5) Methods section: Please provide information on the professional background of the interviewers and researchers analysing the data in the main text.</p> <p>6) Results: Please describe sample characteristics (N, age, sex,</p>
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	<p>health care profession, years of professional experience ...).</p> <p>7) Results: Can you provide a description of the coding tree or categories and subcategories?</p> <p>8) Discussion: The study has been conducted in 2019. Please refer to the fundamental changes in MTM processes due to the COVID-19 pandemic in many cancer centers and the implications for your results and implications for future MTMs in different healthcare settings.</p>
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REVIEWER	Cinzia Brunelli Fondazione IRCCS Istituto Nazionale Tumori Milan
REVIEW RETURNED	12-Jun-2021

GENERAL COMMENTS	<p>Thank you for giving me the opportunity to revise this interesting paper aimed at exploring the use of ICT and HIS functionalities in multidisciplinary team meetings and at identifying the critical challenges posed by their adoption. I have the following considerations mainly regarding the method and the result presentation.</p> <p>ABSTRACT/INTRODUCTION The aims are differently stated in the title, abstract and in the end of the introduction. I understand that the aim is "... to explore the use of these tools in multidisciplinary team meetings (MTMs) and to identify the critical challenges posed by their adoption from the perspective of health professionals representatives of European scientific societies ". I suggest to be consistent in study aim presentation the in title, abstract and introduction. In addition, I suggest to consider to add the word cancer in the title.</p> <p>METHODS Throughout the manuscript it is never stated whether the nine participants in the seminar/focus group are actually nine of the authors of the manuscript (which would imply they are part of the research team). I had this doubt in reading the COREQ Checklist. If true, this should be clearly stated in the methods section and, most important, its potential impact on reflexivity and researcher bias should be extensively discussed in methods and discussion sections. It would also be of help to add methodological references discussing the implications of such an overlapping of being both "participant" and "member of the research team". Please justify the choice of having data encoded by one researcher only. Generally, there are at least two researchers who carry out this operation, in parallel or together, in order to guarantee an agreement on the resulting categories.</p> <p>On page 6 authors state "Preliminary results were discussed amongst the research team and validated by workshop participants". Could you please clarify how this "validation" took place?</p> <p>Table 3 please clarify each of the following items: Are non-cancer related data captured? How? (clarify which data) Is the case presentation structured? Is it electronically linked? (clarify structured) Are big data/real-world data generated and evaluated? If so, how? (what do you mean by "Are big data generated (from MDT)?") Types: high-volume hospital and low-volume hospital; HVH and LVH) (unclear)</p>
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	<p>Table 2 is reported in the methods section. Actually this should be part of the results (see my first comment on the results). As they are not contextualized, some of them are difficult to comprehend (i.e. last in section a, last in section b). Finally, I would replace "verbatim used" with "verbatim examples for each category".</p> <p>RESULTS The verbalizations of the participants are completely missing from the results. This way the results section looks like a personal re-elaboration of the researchers who conducted the meeting and drafted the manuscript, rather than a piece of rigorous research. All statements in the results section should be based on quotations from the seminar/focus group.</p> <p>The results section starts with an "interpretation" ("...were found to impact..."). That should be better placed in the discussion. The opening of the results section should instead introduce to which data is going to be reported. I also suggest to indicate whether results schematic presentation (figure 1) was defined before or after data analysis</p> <p>Figure 1 is difficult to read also because the paragraph describing it is a bit confused (for example it mentions the "the first" transversal domain "after" domains a,b,c; in addition the last column on the right contains partially unreadable text) . I suggest to reformulate the table description and to re- organize the table, transposing it so that "medical information and IT contextual factors" is the FIRST head of 1 single column breaking then down into three other columns (a, b,c) ; ICT HIS function and care components will then be the title of the rows.</p> <p>DISCUSSION The discussion is clear and well written</p>
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VERSION 1 – AUTHOR RESPONSE

Reviewer: 1

Prof. Nicole Ernstmann, University Hospital of Bonn. Comments to the Author:

Dear authors,

Thank you very much for the opportunity to read and comment on your manuscript. This is an interesting topic addressing a relevant health care issue within multi-professional cancer care. However, I have some concerns mainly in terms of study methodology which will be addressed below.

1) Abstract: The aim "... to explore the use of these tools in multidisciplinary team meetings (MTMs) and to identify the critical challenges posed by their adoption" should be revised by adding the chosen perspective of representatives of European scientific societies as key informants.

- Done.

2) Abstract: The results section should start with a description of sample characteristics, including the sample size.

- Done.

3) Methods section, selection of informants and sampling strategy: When using the key informants approach, you should define the institution/profession/country/health care system/scientific society for which the expert is a key informant. Which role or perspective do they have, does a participant answer as a oncologist or as a representative of a specific country or health care setting? Can you clearly distinguish your approach from an expert interview or focus group?

- Thanks for the opportunity to clarify this important aspect. The workshop included a “double role” for professionals and they were fully informed about it. With the *discussion of cases*—first part of the workshop— they were encouraged to talk about their local experience, stressing the situation of their own health care setting; instead, during the *focus group session*—second part of the workshop—they incarnated the role of representatives of their own discipline, which implied rather conceptual-based discussions. Different changes haven been introduced in page 5 (first paragraph) with the purpose of clarify this distinction.

4) Methods section, selection of informants and sampling strategy: "initially envisaged 10 participants". What was the rationale for this sample size? Please explain. What was the rationale for the purposeful sampled societies/countries? Please explain.

- We cancelled the allusion to the “10 participants”. This comment obeyed to the fact that a representative from the European Society of Pathology was expected to be included (and finally not). There are many cancer-related European societies and groups (like the European Hereditary Tumour Group), but our sample was considered purposeful, above all, as it included professionals belonging to both the diagnosis and treatment worlds plus other critical areas of cancer care (such as oncogeriatrics). We understand that this criterion had to be made explicit and we introduced changes in this regard (page 5 – second paragraph).

- Additionally, we introduced another comment and a reference stressing that we restricted the number of participants to 10 in order to make the group manageable (page 5 – second paragraph). In this line, we also changed the wording of table 1 title, from professionals “interviewed” to professionals “that took part in the workshop”.

- Finally, we pointed out that “one scientific society did not found the adequate professional profile to be involved in the study” (page 16 – second paragraph)

5) Methods section: Please provide information on the professional background of the interviewers and researchers analysing the data in the main text.

- In an exercise of reflexivity, we have no problem in offering more information of the researchers within the main text. However, since we are constrained by the wording count (considering the changes made with this review), we improved the information given in the COREQ checklist (please see 5. *Experience and training*).

6) Results: Please describe sample characteristics (N, age, sex, health care profession, years of professional experience...).

- Done. Please see table 1.

7) Results: Can you provide a description of the coding tree or categories and subcategories?

- A figure has been prepared in order to show the coding tree representing the codes and categories that emerged in the study (figure 1).

8) Discussion: The study has been conducted in 2019. Please refer to the fundamental changes in MTM processes due to the COVID-19 pandemic in many cancer centers and the implications for your results and implications for future MTMs in different healthcare settings.

- We fully agree with the reviewer. A comment has been introduced in the Discussion (page 16 — third paragraph).

Reviewer: 2

Dr. Cinzia Brunelli, Fondazione IRCCS Istituto Nazionale Tumori Milan. Comments to the Author:

Thank you for giving me the opportunity to revise this interesting paper aimed at exploring the use of ICT and HIS functionalities in multidisciplinary team meetings and at identifying the critical challenges posed by their adoption. I have the following considerations mainly regarding the method and the result presentation.

ABSTRACT/INTRODUCTION

The aims are differently stated in the title, abstract and in the end of the introduction. I understand that the aim is "... to explore the use of these tools in multidisciplinary team meetings (MTMs) and to identify the critical challenges posed by their adoption from the perspective of health professionals representatives of European scientific societies ". I suggest to be consistent in study aim presentation the in title, abstract and introduction. In addition, I suggest to consider to add the word cancer in the title.

- Thanks for your comment. Changes have been made within the *Abstract* and *Introduction* (last paragraph) sections. The paper's title has been rephrased in accordance with Editor requirement and your proposal to include the word "cancer".

METHODS

Throughout the manuscript it is never stated whether the nine participants in the seminar/focus group are actually nine of the authors of the manuscript (which would imply they are part of the research team). I had this doubt in reading the COREQ Checklist. If true, this should be clearly stated in the methods section and, most important, its potential impact on reflexivity and researcher bias should be extensively discussed in methods and discussion sections. It would also be of help to add methodological references discussing the implications of such an overlapping of being both "participant" and "member of the research team".

- Thanks for this comment. We clarified that the participants in the workshop were co-authors of the paper (page 5 – second paragraph).

- With regards to the overlapping roles between "participants" and "member of the research team", we should say that it was not the case. However, we appreciate this comment as it helped to clarify the roles played by the different co-authors in the paper. For example, when we mentioned that "*Preliminary results were discussed amongst the research team*" (page 6, *Methods*) none was mentioned. By adding "(JP,CC,JMB)" we intended to improve understanding of this point.

It should be highlighted that due to the relevant contribution of healthcare professionals and their deep involvement (i.e., not just an interview, but a full-day workshop plus discussion and validation of results), they were invited to co-authorise the paper. We also felt that their inclusion reinforced the message of the paper. However, considering the reviewer's concerns, we modified the COREQ checklist in order to specify these two separate roles. The following comment was included: *Due to the relevant contribution of the participants and their deep involvement (i.e., full-day workshop plus discussion and validation of results), they were invited to co-authorise the paper. However, as detailed in the Contributions, the tasks that they took on never implied the "study conceptualisation", "writing the draft" or "management of the overall study", which were assumed exclusively by the research team (JP,CC and JMB) (please see 7. Participant knowledge of the interviewer).*

Please justify the choice of having data encoded by one researcher only. Generally, there are at least two researchers who carry out this operation, in parallel or together, in order to guarantee an agreement on the resulting categories.

- Only one researcher (JP) was knowledgeable in coding. However, as mentioned in the Methods (page 6), the “*Researchers checked for consistency between the recording and text*” and “*We read through the transcript to identify general themes and specific categories within the themes, ensuring interpreter consensus*”, which ensured correspondence between original data and results’ development. In order to increase transparency as for data coding processes, a figure showing the categories and codes was prepared (figure 1).

On page 6 authors state "Preliminary results were discussed amongst the research team and validated by workshop participants". Could you please clarify how this “validation” took place?

- We clarified it (page 6).

Table 3 please clarify each of the following items:

- We introduced the word “cancer” in the title of the table 2 (table 3 in the last version) to make clear that any information explored is restricted to the field of cancer care.

Are non-cancer related data captured? How? (clarify which data)

- The wording of the question was changed this way: *Are non-tumour specific issues (such as psychooncology or oncogeriatrics) captured? How?*

Is the case presentation structured? Is it electronically linked? (clarify structured)

- The wording of the question was changed this way: *Is the case presentation structured (e.g., on the basis of a template)? Is it electronically linked to the hospital HIS or prepared on a separate file?*

Are big data/real-world data generated and evaluated? If so, how? (what do you mean by “Are big data generated (from MDT)?”)

- The wording of the question was changed this way *Are MTM decisions and clinical outcomes (real-world data) connected to/feeding AI systems?*

Types: high-volume hospital and low-volume hospital; HVH and LVH) (unclear)

- We clarified it. The wording of the question was changed is now: *Types: “expert” and “non-expert” teams; communication between expert teams; etc.*

Table 2 is reported in the methods section. Actually this should be part of the results (see my first comment on the results).

- Done. Table 2 is now table 3. It has been referenced in the first paragraph of the Results.

As they are not contextualized, some of them are difficult to comprehend (i.e. last in section a, last in section b).

- We have reviewed both these ones (using square brackets) and the rest.

Finally, I would replace "verbatim used" with "verbatim examples for each category".

- Done.

RESULTS

The verbalizations of the participants are completely missing from the results. This way the results section looks like a personal re-elaboration of the researchers who conducted the meeting and drafted the manuscript, rather than a piece of rigorous research. All statements in the results section should be based on quotations from the seminar/focus group.

- We highly appreciate the reviewer's opinion. However, for operational and analytical reasons, we believe that it is not strictly necessary to include verbatim within the text. We would like to justify our opinion:

On the one hand, as mentioned in the methods, the study has primarily an exploratory nature. The objective is to provide an overview of the set of ICT instruments and ICT-driven care components used in MTMs, focusing on the most critical adoption aspects. Using verbatim for each of the 10 ICT

instruments would imply lengthening the text and losing the direct style that it has right now, probably exceeding the 4000 words (to which we are subject) by far. On the other, as detailed in the *Methods*, we carried out a thematic analysis and not a phenomenological one (undoubtedly, the latter would have required the use of verbatim within the text to the extent that the construction of meanings is clearly subject to lived experiences). We understand that the thematic analysis is an analytic approach that allows to strategically synthesize the patterns of meaning across a dataset and display them directly, including verbatim within the text or showing it apart.

The results section starts with an “interpretation” (“...were found to impact...”). That should be better placed in the discussion. The opening of the results section should instead introduce to which data is going to be reported. I also suggest to indicate whether results schematic presentation (figure 1) was defined before or after data analysis

- We reviewed the beginning of the *Results* section in line with this comment.

- Figure 1 (now figure 2) has been referenced at the end of the *Results* section. As required, we have nuanced that it was defined after data analysis.

Figure 1 is difficult to read also because the paragraph describing it is a bit confused (for example it mentions the “the first” transversal domain “after” domains a,b,c; in addition the last column on the right contains partially unreadable text) . I suggest to reformulate the table description and to re- organize the table, transposing it so that “medical information and IT contextual factors” is the FIRST head of 1 single column breaking then down into three other columns (a, b,c) ; ICT HIS function and care components will then be the title of the rows.

- We simplified the figure in line with these indications and wrote a *Note* to clarify it.

DISCUSSION

The discussion is clear and well written

VERSION 2 – REVIEW

REVIEWER	Cinzia Brunelli Fondazione IRCCS Istituto Nazionale Tumori Milan
REVIEW RETURNED	11-Nov-2021
GENERAL COMMENTS	All issues raised have been resolved