Peer Review File

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Reviewer A

Comment 1. the data about the validity and reliability of AIRE should be provided (or at least discussed); if it is available ONLY in Dutch language, would it be appropriate instrument in the assessment of quality in studies outside the Netherlands?

Reply 1: We thank the reviewer for this insightful comment. We have added references that demonstrate the reliability and validity of AIRE. An English translation of this tool has been created in addition to the Dutch. The English version was used because it is a tool applied in several prior studies in this field and can be compared to other settings.

Comment 2. the authors should notify that all data is from American studies. Studies outside USA in the same field should be at least discussed (see e.g. Lind et al Health Policy 2017; 121: 1194-1201; Hynninen et al. Acta Anaesthesiol Scand 2008; 52: 1081–1085; Mani et al. Ind J Crit Care Med 2012; 16: 166-181)

Reply 2: We thank the reviewer for this insightful comment. In the limitations section, we added that all studies were conducted in the US. Additionally, although guidelines for palliative care have been presented in countries other than the US, no quality indicators were developed or measured, so we mentioned that it is necessary to produce quality indicators in the future.

Changes in the text: we have modified our text as advised (see Page 17, line 10).

Comment 3. I wish to point out unified international quality criteria for palliative care generally are lacking. Several national, institutional and professional society -produced proposals and suggestions about the quality standards in palliative care have been published (e.g. Roeline et al. J Pain Symptom Manage 2009; 38: 145-156 Kamal et al. J Clin Oncol 2020; 38: 987-994; Virdun et al. BMC Supp Pall Care 2018; 8; 145-154; Lind et al. BMJ Supp Pall Care 2013; 3: 174-180; NICE standards 2013; Ontario Quality Standards for Palliative Care 2018; Baal et al. BMC Pall Care 2020; 19: 187) and should be discussed.

Reply 3: We thank you for this helpful comment. and agree that international quality standards for palliative care are lacking.

In this article, we summarized quality standards for palliative care according to the traditionally used Donabedian model. We added in the Discussion section the classification and measurement of palliative care in the new palliative care quality assessment framework proposed by Kamal et al.

Changes in the text: we have modified our text as advised (see Page 12, line 10).

Comment 4. One of the severe problems of providing high-quality palliative care in ICU is the lack of expertise among ICU staff, who is not trained predominantly for palliative care. I would like to see discussion about this matter in terms of quality of the care.

Reply 4: Thank you for providing these comments. We agree with you that one of the serious problems in providing quality palliative care in the ICU is the lack of expertise of ICU staff who are not trained for palliative care. A discussion on staff training has been added to the Discussion section.

Changes in the text: we have modified our text as advised (see Page 13, line 17).

Reviewer B

Specific recommendations:

Comment 1. I would recommend writing out the eight domains of quality palliative care listed in the National Consensus Project for Quality Palliative Care when first mentioned on page 3 to give more context to the reader.

Reply 1: Thank you for pointing this out. We have listed the 8 domains of the NCP in the Study Selection and Data Extraction section of the text.

Changes in the text: we have modified our text as advised (see Page 7, line 9).

Comment 2. I would like to know what types of institutions the 5 selected studies are coming from (large, urban, rural, level of ICU, etc.)

Reply 2: Thank you for your comments. The five studies selected were papers developed by quality indicators and were not specific to the region or ICU setting.

Comment 3. When describing the 5 articles included in the study, please include year range that articles were published (from 2003 to 2019)

Reply 3: We thank you for the suggestion. We have added to the Search Results section the range of years in which the articles were published.

Changes in the text: we have modified our text as advised (see Page 8, line 16).

Comment 4. Please discuss some of the specific findings from table 4 (especially the low values) in the discussion section

Reply 4: We appreciate the opportunity to clarify this point. The findings regarding "additional evidence, formulation, usage," from Table 4 have been added to the Discussion section.

Changes in the text: we have modified our text as advised (see Page 15, line 9).

Comment 5. In the discussion section, I would add the statement mentioned earlier about there not being many cultural or social quality indicators, and the impact of this on your perspective of currently available QIs

Response 5: We appreciate the opportunity to clarify this point.

We believe it is important to note that the QI currently provided encompasses the eight domains of the NCP. However, as you have pointed out, the lack of cultural and social quality indicators may not allow for a detailed assessment of the content. Therefore, this may require the inclusion of more detailed items such as the " Physical Aspects" and "Ethical and Legal Aspects" domains.

Changes in the text: we have modified our text as advised (see Page 11, line 6).

Comment 6. In table 3 on page 17, I would suggest moving the QI of "Adjust nursing staff and medical rotation schedules to maximize continuity of care providers for dying patients" from the Support for ICU staff sub-domain to the "Providing information on ICUs and continuity of care" sub-domain

Reply 6: We appreciate the reviewer's suggestions. We have categorized this item as "ICU staff care" because we interpreted the main point of this item to be the need to coordinate the work schedules of ICU staff who provide stressful care, rather than providing it to patients and their families.

Comment 7. The description of aspects of care that fall under "ethical and legal aspects of care" on page 6, lines 31-33, should be mentioned earlier on in the paper to provide context for readers

Reply 7: Thank you for pointing this out. In the Discussion section, we have added characteristics of ICU patients to provide the reader with a better understanding of the context. In the methodology section, we described the eight domains of the NCP and clarified the "ethical and legal aspects of care" category.

Changes in the text: we have modified our text as advised (see Page 12, line 13. Page 7, line 9).

Comment 8. page 1 line 35- use the word until not till

Reply 8: Thank you for pointing out this typographical error in the text. We have carefully checked the manuscript and corrected any typos.

Changes in the text: we have modified our text as advised (see Page 2, line 7).

Comment 9. page 2 line 37- Evidently, measuring the quality of care is important in order to maintain and improve the same (15). Specifically, "maintain and improve the same" is not clear.

Reply 9: Thank you for pointing this out. The wording was inappropriate and has been revised to clearly state the meaning here.

Changes in the text: we have modified our text as advised (see Page 4, line 11).

Comment 10. page 2 line 5- not sure what is meant by "which was the unique domain of palliative care"

Reply 10: Thank you for pointing this out. The wording was inappropriate and has been revised.

Changes in the text: we have modified our text as advised (see Page 2, line 12).

Comment 11. page 6 line 19, 20- "To develop QIs, it is necessary to propose recommendations for palliative care in the US." This is unclear.

Reply 11: We appreciate the opportunity to clarify this point. This section describes the creation of a QI; creating a QI must be based on guidelines and other preferred care recommendations. An explanation of this has been added.

Changes in the text: we have modified our text as advised (see Page 12, line 1).

Comment 12. page 8 line 9- "bearing little burden on palliative care settings" is also unclear

Reply 12: Thank you for pointing this out. To clarify the intent, an explanation has been added.

Changes in the text: we have modified our text as advised (see Page 16, line 13).

Reviewer C

Comment 1. The appears to be some inconsistency in term of the database search. In the text the MEDLINE, CINAHL, Cochrane and Medical Journal Web were searched but in the supplementary file, there was also search strategy included for PsycINFO and Ichushi-web database for Japanese literature. Please clarify which databases were being searched.

Reply 1: We thank the reviewer for the careful review of the manuscript. We used the databases listed in the Supplementary File. The text has been revised to better describe the search strategy.

Changes in the text: we have modified our text as advised (see Page 5, line 16).

Comment 2. Any particular reason why EMBASE was not searched? I think it is quite a major limitation if this database was not searched. The authors may want to list it as one of the study limitations and provide explanations for this omission.

Reply 2: We appreciate the opportunity to clarify this point. We could not use EMBASE because our research facility did not have an agreement for EMBASE use. This was added as a limitation.

Changes in the text: we have modified our text as advised (see Page 17, line 7).

Comment 3. Please indicate if there is any limitations in terms of the language of publication, ie English only or all languages.

Reply 3: Thank you for pointing this out. We did not limit our search by language. This information was added to the methodology section in the main text.

Changes in the text: we have modified our text as advised (see Page 6, line 2).

Comment 4. The discussion is too wordy. For example, statements made in the first paragraph of the discussion were reiterated in other paragraphs. Suggest tightening.

Reply 4: We appreciate your valuable comments. We tightened the text as much as possible, and proofread it again.

Reviewer D

Comment 1. Main concerns relate to the search strategy with, post deduplication, only 178 articles screened. The search strategies provided are not in a form that I am familiar with but must have been restrictive to only pull 178 – although a strength was Japanese language search. This raises concerns about how comprehensive the search strategy was noting these articles were not pulled – interested to see if they would have met inclusion criteria. While I note the other referenced palliative care systematic reviews in other settings that this search strategy was based on found ~ 1000 this seems low.

Reply 1: Thank you for providing these comments. We believe that this search strategy, developed with reference to major previous studies, is comprehensive and valid. We believe that our results reflect the few papers on this topic and the lack of Japanese-language papers on the subject.

Comment 2. Perhaps the definition in the methodology requires clarification (exclusion as those without a palliative care component) as in terms of QI – family and clinician perspectives are a relevant metric so the quality of dying and death survey seems a reasonably addition and potential QI (domain 7 plus some Qs relate to 2, 3, 5 and 6) - these are clinician/family survey assessments potentially applicable as quality metrics. Although this editorial written by the survey developers note the limitations and shortcomings

https://pubmed.ncbi.nlm.nih.gov/23381306/ it has been validated in the ICU and for nursing in ICU (see https://depts.washington.edu/eolcare/products/instruments/).

Reply 2: We thank the reviewer for this insightful comment.

In this review, eligibility criteria included studies that showed measurable QIs with numerators and denominators listed; the Quality of Dying and Death (QODD) was included in the explanation of the importance of outcome measurement and mentioned in the third of the discussion.

Changes in the text: we have modified our text as advised (see Page 14, line 18).

Comment 3.

The EDMCQ similarly focuses a lot on EOL care but also the staff aspects and 'ethical and legal aspect' are alluded too frequently in your paper (domain 8). I am the first to acknowledge that palliative care does not equal EOL care but these seem potential considerations. Further the integration of palliative care into ICUS is increasingly not restricted to consultative models so at minimum if this restrictive approach means this is not incorporated then that needs to be considered a limitation.

Ethical decision-making climate in the ICU: theoretical framework and validation of a self-assessment toolhttps://pubmed.ncbi.nlm.nih.gov/29475979/

Quality of dying and death in two medical ICUs: perceptions of family and clinicians https://pubmed.ncbi.nlm.nih.gov/15888858/

Because similar to the recent included paper, while not explicit for EOL QI, this european paper (https://jamanetwork.com/journals/jama/fullarticle/197049) describes many of the same EOL 'practices'.

Reply 3: We appreciate your valuable comments. The latest findings of the EDMCQ have been cited and added to the discussion. We believe that indicators based on the ideas of both integrated and consultation models need to be included in the future.

Changes in the text: we have modified our text as advised (see Page 14, line 6).

Comment 4. Otherwise, the article has some redundancy / repetition eg page 2, lines 37/38 and use of 'in this regard' that could improve clarity of the message that QI is critical for benchmarking (temporal and between center).

Reply 3: We appreciate your valuable comments. We tightened the text as much as possible, and proofread it again.

Comment 5. A big future direction missing is noting that only 5 studies were identified, all US based, and only 2 in the last decade. QI for palliative care and EOL is important in other ICU settings internationally including LMIC.

Reply 4: We thank the reviewer for this insightful comment. In the limitations section, we added that all studies were conducted in the US. We also mentioned the challenge of the paucity of international palliative care quality measurement indicators and that the provision of quality palliative care is an important topic in LMIC as well.

Changes in the text: we have modified our text as advised (see Page 17, line 10).