Author’s response to reviews

Title: Delirium in older hospitalized patients—signs and actions. A retrospective patient record review

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The authors' response letter has also been included as a supplementary file.

Reviewer 1:

Could you define some acronyms. For instance, KAD catheter (p.15, L. 339), Bubble PEP (p.14, L. 311), BMI (P.18, L.413)?

- Authors response: We now have changed the acronyms from “KAD” to “Urinary catheter” (p.14, L.324), and from “BMI” to “Body Mass Index (BMI)” (p.18, L.396). “Bubble PEP” (p.13, L.296) is still in the text, but is added in the list of abbreviations: “Bubble PEP = Bubble Positive Expiratory Pressure. Breathing technique that is used to increase airway pressure and improve pulmonary function. The technique involves blowing bubbles through water.” (p.26, L.607-609).

You specified that delirium "is commonly due to underlying causes" (p.2). In the discussion, it will be wonderful if you could precise that the evaluation for research of causes is rare or not systematic. This precision could be in the section relative to safety of patients (p.23).

- Authors response: We have added the following sentences: Additionally, a systematic evaluation of underlying causes to delirium was rare, even though delirium is commonly due to underlying causes [2]. There is a risk that several patients in the study had treatable conditions that were not treated” (p.23, L.523-526).

I'm not sure that the list of abbreviations is necessary (p.26, L.613), because these are defined in the text.
Authors response: In the list of abbreviations (p.26, L. 607-609), we have now deleted the abbreviations that are defined in the text; NCD (p.3, L.58), DSM-5 (p.3, L.79), ADL (p.16, L.355).

Reviewer 2:

Note on cover sheet it mentions the N was 268 - in the body of the manuscript it states the N as 286. Important to confirm was it 268 or 286.

Authors response: We thank the reviewer for noticing this clerical error; this is now corrected to 286 in the cover sheet.

Page 4: Lines 91 and 103 - line 93 mentions that a patient record review happened at one county hospital; but in line 103 it is stated that the sample size is representative of all county hospitals. This sentence needs more a qualifier for me. I looked at the citations (one was not in English) and I am uncertain how this statement is grounded (or true) based on these citations. This sentence is not part of the methods, so may want to delete the sentence or state more directly why this sentence is important and why it is included in the methods.

Authors response: That the sample size is representative of all county hospitals is stated in the citation nr 22, that is in Swedish (SKL handbok) - the sentence is now deleted (p.4, L.102).

Page 4, Line 101 - add 'ly' to random - so it is randomly.

Authors response: That is now corrected to “randomly” (p.4, L.101).

Page 5, Lines 113-115: as both types of delirium were introduced in the literature review (hypo and hyper) it seems important to state in this section of the methods that both types of delirium symptoms were considered.

Authors response: This is now clarified, and the sentence is: “Signs of delirium: Descriptions of signs of both hyperactive, hypoactive and mixed delirium in patient records were reviewed using…” (p.5, L.111).

Page 5, Line 122-123: This sentence should be the first sentence of the results section. It is not a method- it is the result of the methods of looking through 480 patient records.

Authors response: The sentences have been moved from the “Method” to the “Results” (p.6, L.148-151), and we have added the subhead Sample characteristics (p.6, L.148). We have also moved Table 1 to that section (p.7, L.155-157).

Page 5-6, Lines 126-137: using the header "Sample Characteristics" was confusing to me. If this paragraph is stating the reason for the hospitalizations for the 78 who were identified with symptoms of delirium then this should be in the results. If this paragraph applies to all 480 pt records reviewed then it needs to be made more clear how this applies to the methods. Were the
reasons for hospitalization one of the determinants to review the pt chart? Regardless of where this paragraph is included, my suggestion would be to rename the sub header: "Reasons for Hospitalization" or Hospitalization Characteristics. This paragraph is not focused on the "sample" per se, but more so on the reason for being hospitalized.

- Authors response: This section has been moved to the “Results”, and the subhead is changed from “Sample characteristics” to “Hospitalization characteristics” (p.8, L.162-173). We have also added that this section applies to the 78 patients in the sample (p.8, L.163).

The subhead “Signs and actions” is added to the section that starts with “Firstly, the inductive content analysis….” (p.8, L.175).

Page 9, RESULTS: As I went through the results what I had hoped to see was what type of health professional each quote was attributed to. For instance (pg 11: Line 240- “The patient replies happily…. Totally incomprehensible.”) My suggestion would be to add in parentheses the HC provider position that made the comment in the pt records such as: (Physician). I realize this is not a study comparing which HC profession is better trained, but it does provide some insight into the HPs assessments when they write these notes in the pt charts. It could make a case for a future study or focus on a particular HP training in delirium. Food for thought.

- Authors response: HC provider position now has been added in parentheses to each quotation in the results of patient signs of delirium, e.g. "The patient replies happily…. Totally incomprehensible." (Physician), (p.10, L. 224-225); “Somewhat anxious in the evening, … … and oxygen tubes” (RN), (p.10-11, L.226-227).

The abbreviations for each Healthcare professional are explained the first time they are mentioned (p.5, L.118-119).

Page 10, Lines 216 and thereafter.

For EACH Sub-header: I think it would be really helpful to the reader to identify/link the sub-headers with Table 2. My suggestion is to write: Main Category: Reduced ability to participate….

- Authors response: The subhead is now changed to “Main category: Reduced ability to participate in their own care and to keep themselves free from harm” as recommended (p.9, L.199-200).

Page 10, Line 224: Generic Category 1: Difficulty Describing….

- Authors response: “Generic category:” is now added as recommended (p.10, L.207), but we have not used numbers in the subheadings of the result. Using numbers in the result might be to deviate from the reporting of qualitative content analysis and the method we used (Elo & Kyngäs 2008) where commonly only letters are used in the headers and sub-headers.

Page 11, Line 248: Generic Category 2: Difficulty taking care….
Authors response: “Generic category:” is now added to “Difficulty taking …“ as recommended (p.11, L.232).

Page 13, Line 283: Generic Category 3: Difficulty Interpreting…

- Authors response: “Generic category:” is now added to “Difficulty interpreting…” as recommended (p.12, L.268)

Page 13, Line 285: suggest replace "locate themselves" with "identify being in…” the hospital wards.

- Authors response: This is now replaced as recommended, and the sentence is: “They could not identify being in the hospital wards” (p.12, L.270).

Page 14, Line 320: Generic Category 4: Difficulty handling….

- Authors response: “Generic category:” is now added to “Difficulty handling…” as recommended (p.14, L.305).

Page 16, Line 356: Maine Category: Variation in Actions

- Authors response: The subhead is now changed to “Main category: Variation in Actions” as recommended (p.15, L.339).

Page 16, Line 362: Generic Category 1: Adapted Care

- Authors response:

“Generic category:” is now added to “Adapted care” as recommended (p.16, L.345).

Page 18, Line 401: Generic Category 2: Deficient Care

- Authors response: “Generic category:” is now added to “Deficient care” as recommended (p.17, L.384).


- Authors response:“Generic category:” is now added to “Beyond usual care” as recommended (p.19, L.421).

Page 19, FIGURE 1: This figure is not clear to me. It states in Line 471 on this page that results reveal a variation in actions taken by healthcare professionals and that the figure shows the relationship between actions and signs of delirium. Either please explain or make more explicit how Figure 1 addresses this (as of now all actions appear to be linked with all signs of delirium) or show the variations of actions possibly taken by each health profession (OT, Physician, etc).
My sincere apology for not getting the point here, but it is so important that tables and figures are self explanatory. I am quite sure I missed what the authors were trying to convey.

- Authors response: Yes, all actions are linked with all signs of delirium, and we agree that this can be better described. We have tried to make the section more comprehensive and have completed the section with the sentences “The care was not systematic and consistent. To each sign of delirium both adapted care, deficient care and care beyond usual care could be given.” (p.20, L.456-458).

Reviewer 3:

Please include all comments for the authors in this box rather than uploading your report as an attachment. Please only upload as attachments annotated versions of manuscripts, graphs, supporting materials or other aspects of your report which cannot be included in a text format.

Please overwrite this text when adding your comments to the authors.

- Authors response: Our response is written in the box, and we also attach this document with the same comments.