

PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form (<http://bmjopen.bmj.com/site/about/resources/checklist.pdf>) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

ARTICLE DETAILS

TITLE (PROVISIONAL)	The COVID-19 pandemic: a qualitative study with an opportunity-centric approach from an ICU perspective in a teaching hospital – upsides worth to secure?
AUTHORS	Klein, Dorthe; Moelans, Bodine; Savelberg, Wilma; van der Horst, Iwan; Van Mook, WN; Rennenberg, Roger

VERSION 1 – REVIEW

REVIEWER	Lina Bergman Karolinska Institute
REVIEW RETURNED	27-Sep-2022

GENERAL COMMENTS	<p>Thank you for the opportunity to review the present paper. First, I would like to acknowledge the importance of your work. Indeed, numerous studies have been published acknowledging the impact of the COVID-19 pandemic for healthcare workers and patients. The present paper thus however brings a new perspective in investigating how organizations can learn and improve from the first wave of the COVID-19 pandemic. Please find my comments and suggested amendments below</p> <p>The abstract reads well and provides an overview of the study and results. Please adhere to the authors guidelines and include all appropriate headings (for example the discussion should not be presented in the abstract section)</p> <p>Please include five bullet points addressing the strengths and limitations of the present study</p> <p>The aim of the study is not clear, what do you mean by ‘worthwhile to preserve from workload reduction’? How do you define ICU structure and process?</p> <p>Page 3, line 38-41, I suggest including this information in the methods section instead</p> <p>In the method section, please review the headings and include appropriate information under each section. The study design should include information about the methodological approach applied. Also, did you really performed in- depth interviews when applying a semi-structured interview guide following the AI approach?</p> <p>Information about the study setting is rather limited. Please describe the setting in more detail to enhance transferability of the study findings. For example, was all three ICU represented among your participants? Was this dedicated COVID-19 ICU or did they also provide care for non-COVID patients? What was the staffing level? Nurse/physician: patient ratio? When you later refer to ICU staff, which personnel do you refer to?</p> <p>How was your convenience sampling performed? You state that all ICU staff employed were eligible for inclusion, how did you then selected which fifteen to include with the first invitation?</p> <p>Page 5, line 16. I would suggest including information about the</p>
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	<p>COREQ guideline under study design as this is applicable to all stages of the research process</p> <p>Page 5, line 33-45. The names of the themes are not coherent with the names present in the table and under the result section. Please review.</p> <p>I would suggest including the quotes in the main body of the manuscript instead of in a table. I think this would enhance the credibility of your themes.</p> <p>Page 8, line 14. Who do you refer to as ICU staff?</p> <p>In reading your findings it would be interesting to know if your participants were regular ICU nurses and physicians or if they worked in the ICU temporarily due to the pandemic. Also, were there registered nurses that were included, or nurses specialised in intensive care?</p> <p>Page 9, line 30. Here you introduce new temporary "ICUs", please see comment above about information on the study setting</p> <p>Page 10, line 9-11. Did the participants contribute with this 'causes' or is this an interpretation of the findings? If so, it would fit better in the discussion.</p> <p>Page 10, line 27-32. Same comment as above. In general, this could be avoided if you stated more clearly that this was the experiences of your study participants throughout the results</p> <p>Overall, the findings are interesting and summarize nurses and physician's experiences of working in the ICU during the first wave of the pandemic, but is it coherent with the study aim (i.e., evaluating which temporary changes in the ICU organisation structure and process that is worthwhile preserving)?</p> <p>Page 10, line 47-48. What do you mean by this effect was experienced to be transient? This is not clear from reading your results.</p> <p>Overall, several paragraphs in the discussion read more as results. No new findings (as the one in the comment above) should be presented here. Please review.</p> <p>Also, the discussion fails to interpret and compare the study findings in relation to other research in the area, as well as theories around the structure and process of healthcare delivery, team process etc. In my opinion, the discussion would improve greatly if it was reviewed and revised accordingly to this suggestion.</p> <p>Strength and limitations should be discussed in relation to the terms used in quality appraisal for qualitative studies such as trustworthiness, transferability, credibility, etc. For example, qualitative findings are seldom extrapolated.</p> <p>The conclusion is rather lengthy and (again) new findings are presented (see for example line 23). The content of the conclusion could be condensed and/or presented in the discussion section instead.</p> <p>Page 12, line 31-33. Debriefing might not be the only solution in handling nurses' experiences of delivering low quality ICU care. Another important aspect might be enhancing their working conditions and ensuring that minimum standards of care could be maintained (despite the extraordinary situation of a pandemic)</p>
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REVIEWER	Ellena O'Selmo British Dental Association
REVIEW RETURNED	18-Nov-2022

GENERAL COMMENTS	<p>This is an interesting study that illustrates the effects of the pandemic on intensive care unit (ICU) staff and provides some evidence for ways in which ICU services could be improved.</p> <p>The paper was an enjoyable read and well-constructed. In addition to some general English corrections the manuscript could benefit</p>
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	<p>from minor amendments:</p> <p>Objectives</p> <p>Page 3 Lines 16 – 20: Given the subject of this sentence and the mention in the Results of temporary “ICUs” (page 9 line 30) it would be beneficial for the reader if temporary “ICUs”, and their purpose, were mentioned here. This would allow for the reader to gain a deeper insight into the seriousness, and scale, of the situation, and the working conditions and pressures, faced by ICU staff during this period.</p> <p>Page 3 Line 28: It is unclear what “these” refers to. The reader could benefit from this being stated.</p> <p>Results</p> <p>Page 5 lines 27-30: It would be beneficial for the reader to, space and word count permitting, have information covering the gender of the study population. Gender is raised in the Discussion (page 11 lines 48-50) and having this information would allow the reader to gain a more complete picture of the study population.</p> <p>Page 5 lines 27-30: The authors mention the years of experience held by the study participants. Are they able to include the years of ICU experience?</p> <p>Page 8 line 8: Could the authors clarify what intensivists did not work longer work shifts than?</p> <p>Page 9 line 40: Could the authors clarify what “upscaling plans” were for?</p> <p>Page 9 line 41: Could the authors clarify what is being referred to when “the reality” is being used?</p> <p>Discussion</p> <p>Page 10 line 57: Are the authors able to state/expand on who the ICU was telling what needed to be done?</p> <p>Page 11 lines 6 – 7: The authors state appreciation was felt by ICU personnel for the help received from those from other medical centre departments. Are the authors able to provide any information as to the effect this had on other departments within the medical centre? While the manuscript focus is ICU the ICU is not isolated from other areas of healthcare and it would provide a greater understanding of the topic covered and the potential effects on healthcare should any effects experienced by the ICU staff during the period covered be carried forward.</p> <p>Page 11 line 15: Who was the “highest impact” on?</p> <p>Page 11 lines 27-28: The authors mention the emphasis interviewees placed on unfavourable experiences and issues that did not go well. This is not apparent from reading the results and amending/rephrasing to reflect this would allow the reader to gain a more complete understanding of the opinions and experiences of the respondents in this study.</p> <p>Page 11 lines 33-34: Reference is made to differences between nurses and intensivists. This could be could be emphasised more clearly in the results. While it is clear in the results which population (nurses or intensivists) are being referred to the difference in findings could be highlighted.</p> <p>Page 12 general: The stated objective of the study was to investigate the effects ICU staff experienced that were considered of value to be permanently implemented. The reader would benefit for any effects judged to valuable enough to be permanently implemented to be cleared stated and, if possible, the effect this could possibly have on those working within healthcare/the health centre and the services they provide as well as the patients receiving, or waiting to receive, care. The objective has become somewhat lost in the Discussion.</p> <p>Page 12 line 3: Could the authors clarify who the “positivity” was</p>
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	<p>towards? Table Should the authors have this information would it be possible for further demographic information, i.e., gender and years of experience to be included for each quote? This would allow the reader to gain a better understanding and context of the findings. Checklist: Item 4: Gender of the researchers is listed on the checklist as reported on page 1. I cannot see this information. Item 8: Interviewer characteristics are noted as reported on page 4. I could not find this information.</p>
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VERSION 1 – AUTHOR RESPONSE

REVIEWER 1

Dr. Lina Bergman, Karolinska Institute

Comments to the Author:

Thank you for the opportunity to review the present paper. First, I would like to acknowledge the importance of your work. Indeed, numerous studies have been published acknowledging the impact of the COVID-19 pandemic for healthcare workers and patients. The present paper thus however brings a new perspective in investigating how organizations can learn and improve from the first wave of the COVID-19 pandemic. Please find my comments and suggested amendments below The abstract reads well and provides an overview of the study and results.

Please adhere to the authors guidelines and include all appropriate headings (for example the discussion should not be presented in the abstract section) Please include five bullet points addressing the strengths and limitations of the present study

We have added the requested bullet points which addresses the strengths and limitations of the study.

The aim of the study is not clear, what do you mean by ‘worthwhile to preserve from workload reduction’?

We understand this last part of the sentence has not been entirely clear, therefore we have removed “from workload reduction”. Hopefully this has improved the understanding of our study’s aim.

How do you define ICU structure and process?

With ICU structure we mean the different staff members (intensivists, nurses) and the beds and equipment present on the ICU. Process we have used as an acronym for work as done.

Page 3, line 38-41, I suggest including this information in the methods section instead In the method section, please review the headings and include appropriate information under each section. The study design should include information about the methodological approach applied.

We have reviewed the headings in the method section and have added more information regarding the methodological approach in the study design.

Also, did you really performed in- depth interviews when applying a semi-structured interview guide following the AI approach?

We agree with the reviewer that the use of a semi-structured interview doesn’t go together with an in-depth interview. This has now been removed.

Information about the study setting is rather limited. Please describe the setting in more detail to enhance transferability of the study findings. For example, was all three ICU represented among your participants? Was this dedicated COVID-19 ICU or did they also provide care for

non-COVID patients? What was the staffing level? Nurse/physician: patient ratio? When you later refer to ICU staff, which personnel do you refer to?

We thank the reviewer for this request, we have added this information in our paper.

How was your convenience sampling performed? You state that all ICU staff employed were eligible for inclusion, how did you then selected which fifteen to include with the first invitation? Indeed this section was not entirely clear and has therefore been adapted.

Page 5, line 16. I would suggest including information about the COREQ guideline under study design as this is applicable to all stages of the research process

We have added the information regarding the COREQ guidelines under the study design.

Page 5, line 33-45. The names of the themes are not coherent with the names present in the table and under the result section. Please review.

We have reviewed the names of the themes and adapted them accordingly.

I would suggest including the quotes in the main body of the manuscript instead of in a table. I think this would enhance the credibility of your themes.

We thank the reviewer for this suggestions and we have added the quotes in the main body of the manuscript.

Page 8, line 14. Who do you refer to as ICU staff?

With ICU staff we refer to the total included ICU personnel which includes both intensivists and nurses, to make this more clear we have added this information on page 6 (line 9-10)

In reading you findings it would be interesting to know if your participants were regular ICU nurses and physicians or if the worked in the ICU temporarily due to the pandemic. Also, was it registered nurses that were included, or nurses specialised in intensive care?

All participants we have included in our study were regular ICU staff, the nurses were all specialized in intensive care. We have added information regarding their ICU experience in table 1.

Page 9, line 30. Here you introduce new temporary “ICUs”, please see comment above about information on the study setting

Information regarding these temporary ICUs have been added in the method section.

Page 10, line 9-11. Did the participants contribute with this ‘causes’ or is this an interpretation of the findings? If so, it would fit better in the discussion.

To make more clear that this information was derived straight from the interviews and was not an interpretation, we have added “according to the interviewees” to this sentence.

Page, 10, line 27-32. Same comment as above. In general, this could be avoided if you stated more clearly that this was the experiences of your study participants throughout the results Again, to make this more clear we have added information on this throughout the results.

Overall, the findings are interesting and summarizes nurses and physician’s experiences of working in the ICU during the first wave of the pandemic, but is it coherent with the study aim (i.e., evaluating which temporary changes in the ICU organisation structure and process that is worthwhile preserving)?

By rephrasing the results we aimed to make it more clear that the findings do match with the study aim.

Page 10, line 47-48. What do you mean by this effect was experienced to be transient? This is not clear from reading your results.

By this effect was experienced to be transient we meant that the effect only lasted temporary. In the results we have mentioned in the third section (collaboration) that the benevolence of other departments diminished and bureaucracy returned. Also in the first section (burden and benefit of working during COVID-19) we mentioned that this support diminished as the national restrictions (lockdown) continued.

Overall, several paragraphs in the discussion reads more as result. No new findings (as the one in the comment above) should be presented here. Please review.

We have reviewed the discussion and have adapted this accordingly.

Also, the discussion fails to interpretate and compare the study findings in relation to other research in the area, as well as theories around the structure and process of healthcare delivery, team process etc. In my opinion, the discussion would improve greatly if it was reviewed and revised accordingly to this suggestion.

We have rearranged the discussion so hopefully the comparison with other research in the area becomes more apparent. Also, we have added literature on team processes.

Strength and limitations should be discussed in relation to the terms used in quality appraisal for qualitative studies such as trustworthiness, transferability, credibility, etc. For example, qualitative findings are seldom extrapolated.

We have adapted the discussion, so it now includes terms used in quality appraisal for qualitative studies.

The conclusion is rather lengthy and (again) new findings is presented (see for example line 23). The content of the conclusion could be condensed and/or presented in the discussion section instead. Page 12, line 31-33. Debriefing might not be the only solution in handling nurse's experiences of delivering low quality ICU care. Another important aspect might be enhancing their working condition and ensuring that minimum standards of care could be maintained (despite the extraordinary situation of a pandemic)

We have reviewed the conclusion with this feedback in mind.

REVIEWER 2

Dr. Ellena O'Selmo, British Dental Association

Comments to the Author:

This is an interesting study that illustrates the effects of the pandemic on intensive care unit (ICU) staff and provides some evidence for ways in which ICU services could be improved.

The paper was an enjoyable read and well-constructed. In addition to some general English corrections the manuscript could benefit from minor amendments:

Objectives

Page 3 Lines 16 – 20: Given the subject of this sentence and the mention in the Results of temporary “ICUs” (page 9 line 30) it would be beneficial for the reader if temporary “ICUs”, and their purpose, were mentioned here. This would allow for the reader to gain a deeper insight into the seriousness, and scale, of the situation, and the working conditions and pressures, faced by ICU staff during this period.

We thank the reviewer for this feedback and we have added information on these temporary ICUs.

Page 3 Line 28: It is unclear what “these” refers to. The reader could benefit from this being stated.

We have adapted this sentence to make it more understandable.

Results

Page 5 lines 27-30: It would be beneficial for the reader to, space and word count permitting, have information covering the gender of the study population. Gender is raised in the Discussion (page 11 lines 48-50) and having this information would allow the reader to gain a more complete picture of the study population.

We have added a table to the results section to include this insightful information.

Page 5 lines 27-30: The authors mention the years of experience held by the study participants. Are they able to include the years of ICU experience?

We have added this information in the aforementioned table.

Page 8 line 8: Could the authors clarify what intensivists did not work longer work shifts than?

We have added information regarding the usual length of the shifts.

Page 9 line 40: Could the authors clarify what “upscaling plans” were for?

We have added information to clarify the aim of these upscaling plans.

Page 9 line 41: Could the authors clarify what is being referred to when “the reality” is being used?

To clarify this we have adapted this sentence.

Discussion

Page 10 line 57: Are the authors able to state/expand on who the ICU was telling what needed to be done?

This information has been added.

Page 11 lines 6 – 7: The authors state appreciation was felt by ICU personnel for the help received from those from other medical centre departments. Are the authors able to provide any information as to the effect this had on other departments within the medical centre? While the manuscript focus is ICU the ICU is not isolated from other areas of healthcare and it would provide a greater understanding of the topic covered and the potential effects on healthcare should any effects experienced by the ICU staff during the period covered be carried forward.

This aspect would have been interesting to add to the study but unfortunately this goes beyond the scope of this current study. Also, we didn't include other staff members from within the hospital who could have given their perspective on the impact this had on other departments. We can imagine that it indeed had an impact, but the size of this impact is difficult to assess with the information we have gathered in this study.

Page 11 line 15: Who was the “highest impact” on?

We have changed this sentence so this is hopefully now more clear.

Page 11 lines 27-28: The authors mention the emphasis interviewees placed on unfavourable experiences and issues that did not go well. This is not apparent from reading the results and amending/rephrasing to reflect this would allow the reader to gain a more complete understanding of the opinions and experiences of the respondents in this study.

We have rephrased throughout the manuscript to make this more clear.

Page 11 lines 33-34: Reference is made to differences between nurses and intensivists. This could be could be emphasised more clearly in the results. While it is clear in the results which population (nurses or intensivists) are being referred to the difference in findings could be highlighted.

Again, we have rephrased throughout the manuscript to make this difference between the nurses and intensivists more clear.

Page 12 general: The stated objective of the study was to investigate the effects ICU staff experienced that were considered of value to be permanently implemented. The reader would benefit for any effects judged to valuable enough to be permanently implemented to be cleared stated and, if possible, the effect this could possibly have on those working within healthcare/the health centre and the services they provide as well as the patients receiving, or waiting to receive, care. The objective has become somewhat lost in the Discussion.

We agree with the reviewer that our objective had become somewhat lost, therefore we have rewritten this section in the discussion.

Page 12 line 3: Could the authors clarify who the “positivity” was towards?

We have changed this sentence to clarify.

Table

Should the authors have this information would it be possible for further demographic information, i.e., gender and years of experience to be included for each quote? This would allow the reader to gain a better understanding and context of the findings.

We have added both a table within the results section with this information and we have added this for each quote separately. .

Checklist:

Item 4: Gender of the researchers is listed on the checklist as reported on page 1. I cannot see this information.

We have added this information in the method section on page 5 (line 9).

Item 8: Interviewer characteristics are noted as reported on page 4. I could not find this information.

We have added this information in the method section on page 4 and in the discussion (page 11 line 29-31).

VERSION 2 – REVIEW

REVIEWER	Lina Bergman Karolinska Institute
REVIEW RETURNED	01-Mar-2023
GENERAL COMMENTS	The authors have made requested amendment and the manuscript has greatly improved. I have no further comments.