ARTICLE DETAILS

<table>
<thead>
<tr>
<th>TITLE (PROVISIONAL)</th>
<th>The postoperative handover: a focus group interview study with nurse anaesthetists, anaesthesiologists, and PACU nurses</th>
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<tr>
<td>AUTHORS</td>
<td>Randmaa, Maria; Engström, Maria; Leo Swenne, Christine; Mårtensson, Gunilla</td>
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VERSION 1 - REVIEW

<table>
<thead>
<tr>
<th>REVIEWER</th>
<th>Pro Maggie Mort</th>
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<td></td>
<td>Lancaster University, UK</td>
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<tr>
<td>REVIEW RETURNED</td>
<td>18-Dec-2016</td>
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GENERAL COMMENTS

This is an interesting paper on a topic of high importance for quality and safety in anaesthesia and post operative care. It uncovers a number of new insights into key differences in perspective between groups of practitioners which have implications for patient care.

There are a number of issues which need clarifying in my view in the paper before it is publishable.

Overall, given the importance of some of the findings I think there could be a stronger conclusion – just what ARE the implications for patient safety in the view of the authors? You say for example: ‘….handover as a threat to the patient's integrity as well as frequent interruptions could be disturbing….’; this is potentially very important and needs further analysis for the reader. Also: ‘…having different perspectives on the transfer of responsibility…’could have major implications. There is one place where an interesting finding seems to be indicated: ‘…Electronic record not helpful…’ but this is left without explanation.

Methodologically I do not have concerns apart from some confusion in the writing between focus group methods and interview methods. In some places only ‘interviews’ are mentioned, but focus groups are a different approach, so we need to understand more about what was the benefit of having collective discussions between the different groups.

There are a number of places where the use of English (translated material) results in confusion or insufficiently clarity, e.g.: ‘The anaesthesiologists reflected on the insecurity concerning the receivers’ focus during handover.’ The use of ‘the’ here is problematic – the respondents are identifying a sense of insecurity, which is very important. But the use of the definite article shifts the sense away from this. The term ‘described’ is used heavily, but is not always appropriate, where you mean e.g. ‘reported’ or even ‘said’. Again, ‘….carrying out handovers close to the patient, as this provided control over the patient's medical condition, on the other hand it might threaten the patient's integrity…..’; what is meant by integrity here – is this ‘dignity’ or some other point?

Ambiguities understandably arise from translations and it would be...
advisable to have a professional proof read the paper on final revision.

**REVIEWER**

Bernice Redley  
Deakin University  
Australia

**REVIEW RETURNED**

20-Dec-2016

**GENERAL COMMENTS**

Thank you for the opportunity to review this manuscript. The paper addresses high risk interdisciplinary clinical handovers in the post anesthetic care unit which has important implications for patient safety. Overall the paper is well written and the study design is sound. There are a number of opportunities to improve the quality of the paper as described below.

**Abstract**  
The first line in the results section would be better placed in the design (methods) section. Further, the addition of a section to articulate the primary outcome would improve reader understanding of the paper. In addition, I would suggest revising the conclusions to reconsider the statement about further studies needed to reach shared understanding; I would suggest it is interventions that are now needed as the gap between clinician understanding of handovers is well established in the literature and further supported by this study. I would also advise the author to revise the grammar and language used to ensure academic quality of the writing: e.g. Dot points about the strengths and limitations of the study; first sentence of the introduction.

**Introduction**  
This section could be improved by highlighting the significance or the 'so what' of the research and the contribution of the outcomes of this research. The authors should clearly identify the gap in current knowledge and why this gap is important to address.

**Methods**  
Please add a statement about participant consent for the research. Page 7, line 19 revise the expression in this line for academic style. The data analysis section is difficult to follow. I suggest you revise for clarity.

**Results**  
the data tables and use of illustrative quotes from the transcripts support the interpretation of findings.

**Discussion**  
This section could be improved by increasing the emphasis of the key overall message derived from the research- this relates to the 'so what' factor raised in the introductory paragraphs and is important to demonstrate and differentiate the unique contribution of this research. Also in this section there is limited reference to how the research findings fit with the existing research (referred to in the introductory chapters) and how the current study contributes new knowledge or understanding. A comment on directions for future research would also improve the end of the discussion.

**Strengths and weaknesses of the study**  
This section could be improved by including statements to address each of the issues relevant to rigor of your qualitative research, particularly reflexivity, credibility, fittingness, triangulation, auditability, confirmability, transferrability and triangulation (see Patton 2002). the final statement in the conclusion is vague and non specific- this
M Randmaa and colleagues present their qualitative descriptive study of perceptions of nurse anesthetists, anesthesiologists, and PACU nurses around post-operative handovers. The study is clearly written and summarizes their findings well.

Generally, understanding the potential barriers around handoffs is an important topic, and these authors use a novel technique to investigate these factors. The main limitations in this study are (a) the small sample size in 2 similar centers, and (b) the potential impact (or lack thereof) of the findings. (e.g. I don’t know that we need a study to tell us that anesthetists will focus on what happened prior to the handover, while the PACU nurses will focus on that point forward.)

Specific comments:
1. While post-operative handoffs are ubiquitous in hospitals, the culture around these handoffs may vary greatly from hospital to hospital. As such, more details around the standard handoff practices in these hospitals: e.g. who is typically present, is there a standard script, what data sources are used for the handover and subsequently available to providers, etc. Such data will greatly affect the external validity of this study.
2. The authors describe the use of SBAR as a 'memory aid', when this is not the purpose of SBAR; SBAR provides a method of efficient information transfer, but does not provide the memory aid of a handover checklist.

Response to Reviewer Professor Maggie Mort
This is an interesting paper on a topic of high importance for quality and safety in anaesthesia and post operative care. It uncovers a number of new insights into key differences in perspective between groups of practitioners which have implications for patient care.
- Thank you for your comments.

Overall, given the importance of some of the findings I think there could be a stronger conclusion – just what ARE the implications for patient safety in the view of the authors? You say for example: ‘….handover as a threat to the patient's integrity as well as frequent interruptions could be disturbing….’; this is potentially very important and needs further analysis for the reader. Also: ‘….having different perspectives on the transfer of responsibility…’ could have major implications.
- Changes have been made in the conclusion.

There is one place where an interesting finding seems to be indicated: ‘…Electronic record not helpful…’ but this is left without explanation
- Clarification has been made in the result, section “Striving to ensure quality of the handover”.

Methodologically I do not have concerns apart from some confusion in the writing between focus group methods and interview methods. In some places only 'interviews' are mentioned, but focus groups are a different approach, so we need to understand more about what was the benefit of having collective discussions between the different groups.
In order to be consistent, “focus group interviews” is now used throughout the manuscript. The advantage of focus group interviews is clarified in the section “Data collection”. There are a number of places where the use of English (translated material) results in confusion or insufficiently clarity, e.g.: ‘The anaesthesiologists reflected on the insecurity concerning the receivers’ focus during handover.’ The use of ‘the’ here is problematic – the respondents are identifying a sense of insecurity, which is very important. But the use of the definite article shifts the sense away from this.

- Changes have been made.

The term ‘described’ is used heavily, but is not always appropriate, where you mean e.g. ‘reported’ or even ‘said’.

- Changes have been made.

Again, ‘….carrying out handovers close to the patient, as this provided control over the patient’s medical condition, on the other hand it might threaten the patient’s integrity…..’; what is meant by integrity here – is this ‘dignity’ or some other point?

- We meant that a handover might threaten the patient’s integrity because other patients might hear the report. This has been clarified.

Ambiguities understandably arise from translations and it would be advisable to have a professional proof read the paper on final revision.

- Thank you for your advice. Once again, we will have a professional proof read.

Response to Reviewer Associate Professor Bernice Redley
Thank you for the opportunity to review this manuscript. The paper addresses high risk interdisciplinary clinical handovers in the post anesthetic care unit which has important implications for patient safety. Overall the paper is well written and the study design is sound.

- Thank you for your comments.

Abstract
The first line in the results section would be better placed in the design (methods) section.

- Part of the first line has been placed in the design section.

Further, the addition of a section to articulate the primary outcome would improve reader understanding of the paper.

- In BMJ open, qualitative studies hardly ever have a section for primary outcome.

In addition, I would suggest revising the conclusions to reconsider the statement about further studies needed to reach shared understanding; I would suggest it is interventions that are now needed as the gap between clinician understanding of handovers is well established in the literature and further supported by this study.

- The conclusion has been revised.

I would also advise the author to revise the grammar and language used to ensure academic quality of the writing : e.g. Dot points about the strengths and limitations of the study; first sentence of the introduction.

- Thank you for your advice. Once again, we will have a professional proof read.

Introduction
This section could be improved by highlighting the significance or the ‘so what’ of the research and the contribution of the outcomes of this research. The authors should clearly identify the gap in current knowledge and why this gap is important to address.

- Changes have been made in the introduction section.

Methods
Please add a statement about participant consent for the research.

- Changes have been made in the “Method” section.

Page 7, line 19 revise the expression in this line for academic style.

- The line has been revised.

The data analysis section is difficult to follow. I suggest you revise for clarity.

- The data analysis section is revised.
Results
the data tables and use of illustrative quotes from the transcripts support the interpretation of findings.
- Thank you for your comment.

Discussion
This section could be improved by increasing the emphasis of the key overall message derived from
the research- this relates to the 'so what' factor raised in the introductory paragraphs and is important
to demonstrate and differentiate the unique contribution of this research.
- We have made several changes in the discussion section.
Also in this section there is limited reference to how the research findings fit with the existing research
(referred to in the introductory chapters) and how the current study contributes new knowledge or
understanding.
- We have added some new references.
A comment on directions for future research would also improve the end of the discussion.
- We have added a comment for future research.

Strengths and weaknesses of the study
This section could be improved by including statements to address each of the issues relevant to rigor
of your qualitative research, particularly reflexivity, credibility, fittingness, triangulation, auditability,
confirmability, transferrability and triangulation (see Patton 2002).
- We have tried to clarify our efforts to achieve the criteria for trustworthiness (credibility,
dependability, confirmability and transferability) and used the terms from the latest version of Polit and
Beck.
The final statement in the conclusion is vague and non specific- this could be strengthened by
identifying specific foci for future research.
- We have added a comment for future research.

Response to Reviewer Associate Professor Kyle Rehder
M Randmaa and colleagues present their qualitative descriptive study of perceptions of nurse
anesthetists, anesthesiologists, and PACU nurses around post-operative handovers. The study is
clearly written and summarizes their findings well.
- Thank you for your comment.
Generally, understanding the potential barriers around handoffs is an important topic, and these
authors use a novel technique to investigate these factors. The main limitations in this study are (a)
the small sample size in 2 similar centers
- Yes, the sample size was quite small. However, Kreuger and Casey recommended that a group with
fewer participants is preferable when the purpose is to understand an issue or behaviour, when the
topic is complex, and when the participants’ level of experience is high. Furthermore, the focus group
interviews gave data that were rich in content.
- Yes, the study was carried out in two similar centers. We have now further described the context so
that the reader can determine the transferability.
(b) the potential impact (or lack thereof) of the findings. (e.g. I don’t know that we need a study to tell
us that anesthetists will focus on what happened prior to the handover, while the PACU nurses will
focus on that point forward.)
- b) The aim of the study was to investigate different professionals’ descriptions of and reflections on
the postoperative handover. One of the results of the data analysis was that the professional groups
reported having a different temporal focus during handover. The different focus may have an impact
on handover, as e.g. nurse anaesthetists focused mostly on what they had done, but the focus should
reasonably be on the continued care. This knowledge can be of importance when planning
interventions aimed at improving postoperative handover and patient safety.
Specific comments:
1. While post-operative handoffs are ubiquitous in hospitals, the culture around these handoffs may
vary greatly from hospital to hospital. As such, more details around the standard handoff practices in
these hospitals: e.g. who is typically present, is there a standard script, what data sources are used
for the handover and subsequently available to providers, etc. Such data will greatly affect the external validity of this study.

1. Thank you for your comment. In the “Setting” section, we have now further explained the context.
3. The authors describe the use of SBAR as a ‘memory aid’, when this is not the purpose of SBAR; SBAR provides a method of efficient information transfer, but does not provide the memory aid of a handover checklist.

SBAR is thought to make communication effective and consistent through the use of a predictable structure in a brief and concise manner. However, the anaesthesiologists and nurse anaesthetists mentioned that they used a structure to aid memory.

**VERSION 2 – REVIEW**

<table>
<thead>
<tr>
<th>REVIEWER</th>
<th>Prof Maggie Mort</th>
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<tr>
<td>Lancaster University, UK</td>
<td></td>
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<tr>
<td>REVIEW RETURNED</td>
<td>20-Feb-2017</td>
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</table>

**GENERAL COMMENTS**

Many thanks for this revision. The paper is improved and comments largely addressed. There are few remaining places where the English is unclear. Two places in particular need scrutiny for clarity in English:

1) P4 line 56:……handover. Thus, to identify whether there are potential gaps between different professionals that can affect patient safety”.
   Please clarify gaps in what??

2) P13
   The nurse anaesthetists reported using a structure such as SBAR to aid memory when they reported essential information. The anaesthesiologists reported using a structure for their own memory during handover, and they wanted information to be communicated with a structure to serve as a reminder during handover. The PACU nurses said that they expected to receive the information with a structure.

There is much repetition in this paragraph. Please review it for sense and clarity.

<table>
<thead>
<tr>
<th>REVIEWER</th>
<th>Bernice Redley</th>
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<tr>
<td>Deakin University, Australia</td>
<td></td>
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<td>REVIEW RETURNED</td>
<td>22-Feb-2017</td>
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**GENERAL COMMENTS**

The authors have addressed the concerns raised by my previous review. The paper reports a well designed study and provides important findings useful for the readership. There are still a number of issues to be addressed.

P. 4-5, lines 56-3. This sentence is unclear. There appears to be a word missing- I presume the author refer to the perceptions of health professionals.

There is no need to reference the same paper at the beginning and end of a sentence- remove on (see. p. 4 line 22; p. 19, lines 16-22).
Please revise the statement about the study design on p. 5 to more accurately reflect the design as qualitative descriptive; and the
method used for data collection was focus groups. Focus group is not a design.

p. 5, lines 56-57. Please revise this sentence to improve clarity; it appears incomplete. I would also suggest removing the e.g. from with the text and using this in parentheses.

p. 6, line 6. Please revise the expression and grammar in the sentence that commences on this line to improve clarity and correct use of grammar.

P. 6, Lines 14-19. This sentence also needs revision to improve expression and clarity. It is not clear why a citation is needed when describing the study setting. Again, removing the e.g. from within the sentence will improve the expression.

p. 7, line 29. Please provide additional detail of the key topics and examples of the questions used to collect the data.

p. 8 lines 42. Revise the frequent use of thereafter.

p. 9, line 24. The last sentence in this paragraph should be revised to improve clarity.

p. 11 line 6. The first sentence is grammatically incorrect- I suggest plural for foci rather than focus

p. 11 line 17. The comment about disinterest is highly judgmental and should be supported with a quote- it is not clear if this was in the data from the participants or an interpretation of the data by the authors.

p. 12, line 10. please revise grammar

p. 12, line 46, as per a comment above- it is not clear if the reflection is by the participants or is an interpretation by the authors. this should be stated more clearly to ensure the source of the judgement is clearly understood.

p. 14 line 52. Please revise this sentence to improve clarity: it is not clear what is meant by "threaten the patients integrity" do you mean privacy?

p. 16, line 25. A friendly atmosphere is a judgement statement and should be supported by data or additional detail.

p. 16, line 47. The first line of the discussion is clumsy and unclear; it should be revised to improve clarity.

p. 17, lines 5-12. the reporting of findings here appears judgmental: it is not clear that these comments are well supported by the data. I suggest this is a problem with expression providing mixed message rather than an error in reporting.

p. 18, lines 15-23. this section is unclear and should be revised to improve clarity. there are also errors with superscript of text.

p. 19, line 27. please revise to improve clarity and expression.

In the limitation section the authors should recognize that member checking was not performed and this is a threat to data credibility and data saturation was unlikely due to the small and diverse nature of the study sample

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VERSION 2 – AUTHOR RESPONSE

Reviewer Professor Maggie Mort

Many thanks for this revision. The paper is improved and comments largely addressed. There are few remaining places where the English is unclear. Two places in particular need scrutiny for clarity in English:

- Thank you for your comments. A native English speaker has proofread the manuscript, and typos/grammatical errors have been corrected.

1) P4 line 56:……handover. Thus, to identify whether there are potential gaps between different
professionals that can affect patient safety”. Please clarify gaps in what??
- We mean gaps between different health professional perceptions of postoperative handover. The sentence has been changed.

2) P13 The nurse anaesthetists reported using a structure such as SBAR to aid memory when they reported essential information. The anaesthesiologists reported using a structure for their own memory during handover, and they wanted information to be communicated with a structure to serve as a reminder during handover. The PACU nurses said that they expected to receive the information with a structure. There is much repetition in this paragraph. Please review it for sense and clarity.
- The paragraph has been revised.

Reviewer Associate Professor Bernice Redley
The authors have addressed the concerns raised by my previous review. The paper reports a well designed study and provides important findings useful for the readership. There are a still a number of issues to be addressed.
- Thank you for your comments.

P. 4-5, lines 56-3. This sentence is unclear. there appears to be a word missing- I presume the author refer to the perceptions of health professionals.
- The sentence has been revised.

There is no need to reference the same paper at the beginning and end of a sentence- remove on (see. p. 4 line 22; p. 19, lines 16-22).
- The references have been revised.

Please revise the statement about the study design on p. 5 to more accurately reflect the design as qualitative descriptive; and the method used for data collection was focus groups. Focus group is not a design.
- The sentence about the study design has been revised.

p. 5, lines 56-57. Please revise this sentence to improve clarity; it appears incomplete. I would also suggest removing the e.g. from with the text and using this in parentheses.
- The sentence has been revised.

p. 6, line 6. please revise the expression and grammar in the sentence that commences on this line to improve clarity and correct use of grammar.
- The sentence has been changed.

P. 6, Lines 14-19. This sentence also needs revision to improve expression and clarity. it is not clear why a citation is needed when describing the study setting.
Again, removing the e.g. from within the sentence will improve the expression.
- The postoperative handover in this setting is described in the observational study.[6] We have clarified the sentence. The “e.g.” has been removed.

p. 7, line 29. Please provide additional detail of the key topics and examples of the questions used to collect the data.
- This section has been revised. As key topics we meant the transfer of information during handover, the transfer of responsibility and/or accountability and in the context of teams and their work environment. In focus group interviews key questions is usually used. We have now removed the words key topics because it seems more confusing than clarifying.

p. 8 lines 42. Revise the frequent use of thereafter.
- The word thereafter is now deleted

p. 9, line 24. The last sentence in this paragraph should be revised to improve clarity.
- We have tried to clarify how the quotations are presented.

p. 11 line 6. The first sentence is grammatically incorrect- I suggest plural for foci rather than focus
- Thank you for your comment. We have changed the word focus.

p. 11 line 17. The comment about disinterest is highly judgmental and should be supported with a quote- it is not clear if this was in the data from the participants or an interpretation of the data by the authors.
- The comment about disinterest was in the data from the participants. The comment is now supported with quotes.

p. 12, line 10. please revise grammar
- We have revised the grammar.

p. 12, line 46, as per a comment above- it is not clear if the reflection is by the participants or is an interpretation by the authors. this should be stated more clearly to ensure the source of the judgement is clearly understood.
- The comment about insecurity of receiver knowledge is a reflection made by the participants and not an interpretation by the authors. The result is now supported with a quote.

p. 14 line 52. Please revise this sentence to improve clarity: it is not clear what is meant by 'threaten the patients integrity" do you mean privacy?
- We have replaced the word integrity with the word privacy.

p. 16, line 25. A friendly atmosphere is a judgement statement and should be supported by data or additional detail.
- The atmosphere was judged by the assistant moderator based on how they were listened to and communicated with each other in the group.

p. 16, line 47. The first line of the discussion is clumsy and unclear; it should be revised to improve clarity.
- We have revised the first line.

p. 17, lines 5-12. the reporting of findings here appears judgmental: it is not clear that these comments are well supported by the data. I suggest this is a problem with expression providing mixed message rather than an error in reporting.
- We have revised the section to more clearly relate our results to earlier findings. Our results are now supported by quotes.

p. 18, lines 15-23. this section is unclear and should be revised to improve clarity. there are also errors with superscript of text.
- One sentence has been removed and a sentence has been revised. The superscripts have been deleted.

p. 19, line 27. please revise to improve clarity and expression.
- The line has been revised.

In the limitation section the authors should recognize that member checking was not performed and this is a threat to data credibility and data saturation was unlikely due to the small and diverse nature
of the study sample
- The section has been revised.

**VERSION 3 – REVIEW**

| REVIEWER         | Bernice Redley  
|------------------|------------------|
|                  | Deakin University  
|                  | Australia  
| REVIEW RETURNED  | 25-Apr-2017  

**GENERAL COMMENTS**

Thank you for the opportunity to review this paper again. I am satisfied that the authors have addressed all the concerns identified in previous reviews.
The postoperative handover: a focus group interview study with nurse anaesthetists, anaesthesiologists and PACU nurses

Maria Randmaa, Maria Engström, Christine Leo Swenne and Gunilla Mårtensson

BMJ Open 2017 7:
doi: 10.1136/bmjopen-2016-015038