

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)	Protocol for a qualitative systematic review examining surgeon views regarding the adoption of a novel surgical innovation into clinical practice
AUTHORS	Lewis, Thomas; Furness, Hugh; Miller, George; Parsons, Nicholas; Seers, Kate; Underwood, Martin; Metcalfe, Andrew

VERSION 1 – REVIEW

REVIEWER	Frances C Wright University of Toronto, Toronto, Ontario, Canada
REVIEW RETURNED	14-Nov-2017

GENERAL COMMENTS	<p>Dear Authors,</p> <p>This is a well written paper on an important topic and I look forward to the final results.</p> <p>Areas I might suggest that are included in the introduction or discussion of the final paper are the UK database of new surgical technologies that is kept and a discussion of the balance between surgical innovation and "guideline driven care" (and how guidelines can sometimes be out of date).</p> <p>I am not sure that the protocol for a systematic review warrants publication in BMJ Open.</p>
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REVIEWER	Peter McCulloch Oxford University, UK I am the Chair of the IDEAL Collaboration, whose work is extensively quoted by the article reviewed
REVIEW RETURNED	24-Nov-2017

GENERAL COMMENTS	<p>The appropriate evaluation and adoption of new surgical techniques and devices is an important topic, and the views of surgeons are amongst the most important factors which influence this, so the proposal is timely and the results likely to attract attention.</p> <p>The technical aspects of the methodology are clearly described and well thought through, at least from the point of view of a surgeon who has a self-taught grasp of qualitative research. There are a couple of key conceptual weaknesses in the proposal, and I think the actual study would be improved by addressing these at this stage.</p>
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	<p>1. The rationale for the study is actually better explained in the Discussion than in the Introduction. In the latter, it is suggested by the final sentence that surgical adoption and implementation can be planned at policy level, which is empirically untrue. The purpose of the study is more properly described (as in the Discussion) as understanding what the main influences on surgeons are in their decisions about adoption, rather than aiming to control the process. The key quote here is on p5 "Identifying and understanding surgeon's views of the factors that affect the adoption of effective novel surgical innovations may facilitate increased adoption of surgical practice with improved health provision for patients." I think this is overstating things.</p> <p>2. Related to this, there is an important sentence in the Methods which seems to reveal a surprisingly and (to my mind) inappropriately narrow focus when it comes to studying surgical views. The key quote here is on p9 "pertinent themes relating to surgeon perspectives regarding the level of evidence required to adopt novel surgical technology and/or procedures; strengths and limitations and key relevant discussion points." To me this suggests you are going to discuss evidence quality only, whereas your preamble indicates a clear undersanidng that there are many other factors which are at least as strong as the evidence quality - probably more so - when it comes to individual surgeons' decisions on adoption. Using Everett Rogers' principles, or those in the UTAUT theory as the framework for questioning strlkes me as a more sensible way to structure this rather than focusing on evidence quality.</p> <p>My only other comment is that the referencing is a bit inaccurate. Buxton is not the author of the paper which is attributed to him, Mary Dixon-Woods' work actually called into doubt the value of methods for assessing the quality of qualitative studies, and the systematic review by Grimshaw the authors rely on to support their critique of adoption practice is from 2003, and the evidence it summarises is therefore probably around 20 years old on average. I don't disagree with the authors' assertions, but they should seek better support for them.</p>
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VERSION 1 – AUTHOR RESPONSE

Reviewer: 1

Reviewer Name: Frances C Wright

Institution and Country: University of Toronto, Toronto, Ontario, Canada

Please state any competing interests: None declared

Please leave your comments for the authors below

Comment: This is a well written paper on an important topic and I look forward to the final results. Areas I might suggest that are included in the introduction or discussion of the final paper are the UK database of new surgical technologies that is kept and a discussion of the balance between surgical innovation and "guideline driven care" (and how guidelines can sometimes be out of date).

Response: Many thanks for this comment. We will bear this in mind when writing up the final manuscript

Comment: I am not sure that the protocol for a systematic review warrants publication in BMJ Open.

Response: We wish to publish our protocol as we believe peer-review and publication of study protocols is important to maintain high quality research

Reviewer: 2

Reviewer Name: Peter McCulloch

Institution and Country: Oxford University, UK

Please state any competing interests: I am the Chair of the IDEAL Collaboration, whose work is extensively quoted by the article reviewed

Please leave your comments for the authors below

Comment: The appropriate evaluation and adoption of new surgical techniques and devices is an important topic, and the views of surgeons are amongst the most important factors which influence this, so the proposal is timely and the results likely to attract attention. The technical aspects of the methodology are clearly described and well thought through, at least from the point of view of a surgeon who has a self-taught grasp of qualitative research. There are a couple of key conceptual weaknesses in the proposal, and I think the actual study would be improved by addressing these at this stage.

Response: We appreciate the thoughtful comments of the reviewer and their recognition of the importance of this area. The following responses will hopefully address the reviewers concerns about conceptual weaknesses.

1. The rationale for the study is actually better explained in the Discussion than in the Introduction. In the latter, it is suggested by the final sentence that surgical adoption and implementation can be planned at policy level, which is empirically untrue. The purpose of the study is more properly described (as in the Discussion) as understanding what the main influences on surgeons are in their decisions about adoption, rather than aiming to control the process. The key quote here is on p5 "Identifying and understanding surgeon's views of the factors that affect the adoption of effective novel surgical innovations may facilitate increased adoption of surgical practice with improved health provision for patients." I think this is overstating things.

Response: We thank the reviewer for their thoughts. We have revised the introduction to remove references to policy level implementation and the potential impact on adoption processes in clinical practice. We have also incorporated aspects of the discussion into the introduction to try improve the explanation of the rationale for this study.

2. Related to this, there is an important sentence in the Methods which seems to reveal a surprisingly and (to my mind) inappropriately narrow focus when it comes to studying surgical views. The key quote here is on p9 "pertinent themes relating to surgeon perspectives regarding the level of evidence required to adopt novel surgical technology and/or procedures; strengths and limitations and key relevant discussion points." To me this suggests you are going to discuss evidence quality only, whereas your preamble indicates a clear understanding that there are many other factors which are at least as strong as the evidence quality - probably more so - when it comes to individual surgeons' decisions on adoption. Using Everett Rogers' principles, or those in the UTAUT theory as the framework for questioning strikes me as a more sensible way to structure this rather than focusing on evidence quality.

Response: The methodology has been reworded to reflect the fact that adoption of innovations into clinical practice is a complex multifactorial process. We have adopted the suggestion to structure the themes using a framework and we will implement this based on the themes that emerge from the analysis.

3. My only other comment is that the referencing is a bit inaccurate. Buxton is not the author of the paper which is attributed to him, Mary Dixon-Woods' work actually called into doubt the value of methods for assessing the quality of qualitative studies, and the systematic review by Grimshaw the authors rely on to support their critique of adoption practice is from 2003, and the evidence it summarises is therefore probably around 20 years old on average. I don't disagree with the authors' assertions, but they should seek better support for them.

Response: We are grateful to the reviewer for highlighting the accuracy of the references. We have been through each point to ensure that we have identified the most appropriate and relevant references in the literature. We have reworded or updated the protocol with regards to the specific references noted by the reviewer.

VERSION 2 – REVIEW

REVIEWER	Peter McCulloch University of Oxford UK
REVIEW RETURNED	17-Dec-2017
GENERAL COMMENTS	I did not receive a marked-up copy of this MS and unfortunately had lost my notes from my review of the earlier version during transfer to a new computer. If I have failed to address any issues arising from changes made as a result, please bring this to my attention. I found the revised version clear and coherent. The review is clearly addressing an important topic of general interest to the medical community. The addition of a sample search strategy was very helpful. I suspect that iterative improvements to the strategy will be needed to ensure sufficient sensitivity and specificity, but as a protocol, the MS clearly sets out the intent and direction of travel, and can be used to follow how the strategy evolves. My only other comment would be that, as an amateur qualitative researcher, I am not sure how easy it is to make a valid summary of themes from a heterogeneous group of papers which were not designed to address the subject of the study (as opposed to purposeful semi-structured interviews). If there is an easy way of explaining this it might be worth mentioning.

VERSION 2 – AUTHOR RESPONSE

Reviewer: 2

Reviewer Name: Peter McCulloch

Institution and Country: University of Oxford, UK Please state any competing interests: None declared

Please leave your comments for the authors below

Comment: I did not receive a marked-up copy of this MS and unfortunately had lost my notes from my review of the earlier version during transfer to a new computer. If I have failed to address any issues arising from changes made as a result, please bring this to my attention.

I found the revised version clear and coherent. The review is clearly addressing an important topic of general interest to the medical community. The addition of a sample search strategy was very helpful. I suspect that iterative improvements to the strategy will be needed to ensure sufficient sensitivity and specificity, but as a protocol, the MS clearly sets out the intent and direction of travel, and can be used to follow how the strategy evolves.

Response: We thank the reviewer for this comment and will ensure that any change to the search strategy is clearly documented in the main review

Comment: My only other comment would be that, as an amateur qualitative researcher, I am not sure how easy it is to make a valid summary of themes from a heterogeneous group of papers which were not designed to address the subject of the study (as opposed to purposeful semi-structured interviews). If there is an easy way of explaining this it might be worth mentioning.

Response: This was also a concern of ours when designing this review. We have addressed this in a number of ways:

1) We decided to use the GRADE-CERQual framework to rate confidence in the review findings. This framework has been specifically designed for assessing how much confidence to place in specific review findings to help users judge how much emphasis they should give to these findings in their decisions. We have added a sentence clarifying what this framework does and how we can use it to assess confidence in the findings from the evidence synthesis. The manuscript now reads:

“We will also utilise and clearly document the GRADE-CERQual framework to rate confidence in the review findings[31]. This framework will consider the methodological limitations, relevance, coherence and adequacy of the data to address potential concerns regarding the validity, and confidence of each research finding.”

2) We will clearly document when limitations of design affect the validity of the findings in the main review. We have performed a scoping review prior to the commencement of this project and we are aware of papers designed to address the subject of this study using appropriate qualitative methodology eg purposeful semi-structured interviews.

3) We hope that these steps and clarifications address the reviewers comments.