PEER REVIEW HISTORY

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ARTICLE DETAILS

TITLE (PROVISIONAL)	Perspectives on involvement in the peer review process: surveys of patient and public reviewers at two journals
AUTHORS	Schroter, Sara; Price, Amy; Flemyng, Ella; Demaine, Andrew; Elliot, Jim; Harmston, Rebecca; Richards, Tessa; Staniszewska, Sophie; Stephens, Richard

VERSION 1 – REVIEW

REVIEWER	Benjamin Isaak Gross Jacksonville State University, United States of America
REVIEW RETURNED	30-Jun-2018

GENERAL COMMENTS	The structure of this review is divided into three parts. First, I provide a short summary of the manuscript. This highlights the research questions, methodology, and findings of the manuscript. This summary is a form of "active listening" to ensure to the authors and the *BMJ Open* editorial team that the manuscript is communicating what is intended to be communicated. Second, I review the strengths of this manuscript. These strengths include examining an area that lacks research, capturing a sample of those that have completed and declined reviewing, and providing future areas of research. Third, I provide constructive criticism for how to improve this manuscript. Both suggestions include producing three different subset of reviewers to examine the research question of reviewer motivation in greater depth. I suggest that the authors create a subset that contains those that have always agreed to review, always declined to review, and declined & accepted to review. My first suggestion is that the authors examine these three subsets using survey question 4 (and perhaps survey question 2) to better understand the motivations behind those who are and are not engaging in the review process. My second suggestion is that the authors examine these three subsets with regards to survey question 1 to provide a stronger analysis regarding the motivations of reviewers. This second suggestion, however, would take greater effort. As such, I am willing to yield on this suggestion if the authors think it is not proper to include in this manuscript. Finally, in a subsection of the third part, I provide potential ideas for how to engage with this research moving forward. It must

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be stated clearly to the editorial team and the authors that this final subsection is not meant to be addressed in this current manuscript and, therefore, should not influence any decisions about the merits of this manuscript. These potential ideas are only included to provide additional feedback for future projects, which the authors or other researchers might find helpful.

Part 1 – Summary

This manuscript asks five research questions, which are stated on lines 4 through 7 on page 4. These five research questions are:

1. What motivates patients and carers to review research articles;
2. What is the confidence of patients and carers to review research articles;
3. What is the satisfaction of patients and carers with the review process;
4. How would patients and carers like to be acknowledge for their service;
5. How do patients and carers think the review process could be improved?

To investigate these questions, the authors invited patients and carers that were invited to

review at least once for *The BMJ* or *Research Involvement and Engagement* (*RIE*) between January 2015 and May 2017. The authors divided this sample into two groups. Group A are those who had completed a review. Group B are those who had not completed a review. The survey was administered through SurveyMonkey producing an overall response rate of 69% in Group A and 31% in Group B (note, I think line 6 on page 6 needs to be updated, as the 31% for Group B of *RIE* appears to be a typo; it should be 19%).

From these data, the authors examine five possible motivations. They find the opportunity to add the patient or carer perspective is the most highly rated factor.

With regards to the second research question, the authors find about 73% of their respondents are moderately, very, or extremely confident in their first review. This increases to about 92% for respondents when reflecting upon their last review, if they have completed more than one review.

Investigating reviewer satisfaction, the authors find 81% of Group A would recommend being a reviewer to other patients and carers. An overwhelming majority of this sample, 92%, also thinks more journals should adopt this process. Most reviewers that were part of the revise and respond process agree or strongly agree that

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	authors address their comments, which supports satisfaction in the process. Furthermore, members of Group A find the instructions they receive from *BMJ* or *RIE* to generally be helpful. Examining the fourth research question, the authors find these reviewers are satisfied with having subscriptions to the journal they review for. No summary statistics, however, are provided for this finding. The authors also share findings regarding *RIE*'s Article Processing Charge (APC) waiver. These findings, however, seem limited as only three reviewers commented on the APC waiver. The authors also share some findings regarding monetary incentives and public acknowledgement of service. Again, like the other findings, summary statistics are not provided. Finally, the authors list 13 suggestions provided by their sample concerning how to improve the review experience. This list comes prior to their examination of research question 4 and lacks summary statistics. In addition to examining the five research questions, the authors also examine the reasons for patients and carers to decline to review (page 6) and their perceptions of the open review process (page 7). These are related topics to the five research questions page 4, but they are separated into their own sections. The manuscript concludes that this first evaluation of patients' and carers' experience in the peer review process finds that they have motivating factors that correspond to academic reviewers. Furthermore, the authors find these types of reviewers are like academic reviewers in their reasons for declining to review and satisfaction in being given access to the content of the journal for their service. The authors, therefore, conclude that it is feasible to introduce patient reviewers along academic reviewers of research articles, while being open to possible improvements to the process suggested by their sample. Part 2 – Strengths of the manuscript This manuscript provides an initial investigation into an area that is lacking scholarship. It provides a necessary addition, therefore, to the literature. I fully admit, I am not an expert in this substantive matter. Being trained in political science, I used the provided keywords by the author and performed multiple searches of the literature. I could not find another article that conducted a survey analysis of patients and carers that were invited to peer review manuscripts. Thus, to my knowledge, this manuscript presents a novel study. Not only is the manuscript novel, but it provides important information to understand who is engaging in the peer review process, the limitations of the recruitment of these reviewers, and possible suggestions to improve these limitations.

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This leads to the second strength of this manuscript; the authors collected a sample of those that have completed and declined to review for two journals. By comparing those who accept and those who decline, the authors have data that allows for a more comprehensive examination of their main research questions. They are able to explore the opinions of those that complete the review process and what factors/motivations keep an individual from engaging in this process. As such, the authors produce data that allows to examine if there are any important biases regarding whom composes the reviewer pool patients and carers. This is a strength that can be built upon, as discussed in the next section.

Finally, thorough collecting data regarding motivation, confidence, satisfaction, acknowledgment, and improvements to the peer review process, the authors are able to provide the literature with insights about how to improve the process moving forward. As recognized by the authors, "…it is important to survey patient reviewers again as we make changes to the guidance and seek to provide them with more support" (page 11). By having initial data, this study allows us to track how changes within the peer review process influence these areas of the review process. Thus, this manuscript provides fertile ground for future areas of research, as it will serve as a cornerstone for all of those that engaging in this subject matter.

Part 3 – Constructive criticism

I want to be clear to the editorial team of *BMJ Open* that I think this manuscript is worthwhile pursuing. It is a novel addition to the literature that examines an area that we know very little about. As any initial study, there are areas where this manuscript can be improved and areas that are unaddressed by the manuscript. This manuscript, however, provides the foundation for future studies in this area to build off of. As such, I think the editorial team at *BMJ Open* should move forward with this manuscript.

To improve this manuscript, I think the editors should evaluate the constructive criticism I provide to determine what parts they agree with. My intent is to provide areas that I think the authors can examine to improve this manuscript and that can be achieved without significantly changing the manuscript. My goal is not to inform the authors how I would have engaged in this research. Instead, my goal is to inform the authors given their research how can I make suggestions to work with them to improve it.

As such, I provide an explanation of how I would make these updates to the manuscript. It is easy to give criticism. I want to provide constructive criticism/feedback, which can be useful for the authors in their research. Seeing that I come from political science, however, I am unfamiliar with the norms of this substantive area. Thus, it is my hope that the editorial team exercises its best judgement in determining if any of my feedback is worthwhile for the

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	authors to pursue. It appears to me, through the manuscript's discussion section, the most important of the five research questions asked by the authors concerns the motivation for a patient or carer to engage in the peer review process. I think, given the data already collected by the authors, this research question can be further examined. The authors have two subsets of their sample. Group A are those that have completed at least one review. Group B are those that have not completed at least one review. This, however, does not mean that Group A are those who have always accepted review invitations and Group B are those that have always declined review invitations. In fact, Group B has an n of 67, while the authors report their overall sample for those who have declined a request to review has an n of 101 (line 38, page 6). This indicates there must be a subset of reviewers that have both completed a review and declined a review. Furthermore, it appears that some of those in Group B did not decline to review. Instead, they had not submitted their review prior to the end of data collection. Thus, the subsets of Group A and B are useful, but may not be the best subsets to study the motivations behind those who accept, decline, or engage in both behaviors when asked to review. I think the authors can examine three subsets of their sample to provide the discipline with a more detailed analysis regarding reviewer motivation. To better understand the motivations of those accepting and declining to review, it seems important to compare those who have always accepted to review, those who have only declined to review, and those that have accepted and declined to review. Do these subsets share the same characteristics or are they different? Do these subsets have the same motivations for accepting/declining reviews or are they different? I think the most interesting findings can be drawn by comparing those who always accept or decline reviews to those that have done both. Do these subsets share the same reasons for accepting/declining to review or do they have different reasons for accepting/declining to review? Comparing those that always accept to those that have accepted and declined (and those who always decline to those that have accepted and decline) is important to ensure there are no substantive/theoretically important biases existing between those populating in these subsets. For example, if the reasons for declining to review are different for those that have only declined as to those that have accepted and declined, then it would suggest there might be some important factor that could create a bias in the reviewer pool. I think the authors can providing insight into this area by comparing survey question 4 for two of these three subsets. I am assuming that only the subsets of those that have always declined to review and those that have accepted and declined to review answered question 4. This is because those that have always

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	accepted could not respond about the last research manuscript they declined to review. Thus, survey question 4 only allows us to compare two of the three subsets. Still, comparing survey question 4 for those that have always declined to those that have accepted and declined can provide insight into if those that never join the reviewer pool do so due to the same reasons as those that sometimes join the reviewer pool or if there are different reasons for these behaviors. To further investigate this area, it would be helpful to compare these three subsets with regards to their answers for survey question 2. This is because if we want to understand why someone accepts or declines an invitation to review, it would be important to know if those accepting invitations see any of these factors as more important than those declining. In other words, survey question 4 did not ask if those declining find "the opportunity to learn something new from the paper?" as not an important reason to review. It might be that those that accept to review find parts of survey question 2 very important or extremely important (as presented by the manuscript), while those that decline to review find parts of survey question 2 as not at all important or slightly important. Without being able to compare those that have reviewed to those that have not reviewed, we cannot determine if they have different motivations in accepting a review. Given the data, however, we can shed some initial light on this topic. Like survey question 4, it appears we can only examine if there is a difference between those that always accepted to review to those that have accepted and declined to review. While preforming these analyses with regards to survey questions 2 and 4 could be helpful, we might also lack enough observations in these three subsets to provide any meaningful statistical analyses. Thus, these analyses would only give us some initial insights into these areas. These initial insights, however, could be helpful and provide a fertile ground for future research to build off of. My second suggestion, which builds on the first suggestion, is to examine how these three subsets responded to survey question 1. By examining survey question 1 for these three subsets, we can investigate if there are different reasons/motivations driving those to accept, decline, and engage in both behaviors. I understand, however, that this suggestion is far more labor intensive than the previous suggestion. The first suggestion requires that the authors create three new subsets. A subset that has only accepted to review, only declined to review, and accepted and declined to review. Upon creating these subsets, the authors should be able to compare their answers with regards to survey questions 2 and 4 without much effort. This is because survey questions 2 and 4 are closed-ended questions with a response set that appears to have already been coded.

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	The second suggestion is not as easy to complete. While the creation of the subsets (those that only accept, only decline, and accept & decline) should not require any new work, survey question 1 is an open-ended question. Performing an analysis of these responses would require far greater effort if the open-ended responses have not previously been coded into some numerical value. Thus, I am willing to yield on my second suggestion if the authors and/or editorial team thinks it is too much work. If this is the case, perhaps the authors could address why such an analysis would be important in their discussion to alert future readers to this potential analysis. Prior to presenting my last sub-section of comments, I have a few small points of feedback that I think will improve this manuscript: I think the research questions and results should be presented in the same order. If the authors want to maintain the order of the research questions (page 4), the order of the results should be concerning motivation, confidence, satisfaction, acknowledgement, and improvement. Currently, acknowledgement and improvement are out of order on pages 8 and 9. The authors could also resolve this by changing the order of the research questions on page 4; The results contains two areas that are not part of the research questions. These areas are reasons for declining to review and perceptions of open review process. I think it would be beneficial to either add these as research questions or explain why they are subsets of the five current research questions; As stated earlier, the percentage for Group B from *RIE* should be 19% instead of 31% in line 5 of page 6; The authors do not provide any summary statistics with regards to sections of "How to improve the experience" and "How to acknowledge patient reviewers' help". I do not think the authors need to add summary statistics. I do think, however, it would be helpful for the authors in the "Discussion" section to discuss these research questions. It would be helpful for the authors to alert us to what they think are the most important findings regarding these research questions. Currently, the first paragraph of the "Discussion" provides a good summary of the findings. What do

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	the authors, however, think with regards to these findings? In general, I think the discussion needs to do a bit more to indicate what are the suggestion of the authors moving forward with regards to the five (possibly seven) research questions. Part 3 – Subsection 1 – Future Research I would like to be clear to the editorial team and the authors that nothing in this subsection is intended for the current manuscript (bmjopen-2018-023357). The suggestions in this subsection are to provide potential future research projects for the authors and those reading this review. As such, please do not use these comments to judge the merits of this manuscript. That this manuscript opens up potential future research projects is actually a sign of the strength of the submission. The manuscript does a good job of laying out the groundwork regarding the motivations of patients and carers that engage in the peer review process. The manuscript, however, never discusses how patients and carers are recruited/invited into this process. I wonder how *The BMJ* and *RIE* editorial teams recruited these reviewers. I ask this question coming from editorial experience with the *American Political Science Review* (*APSR*). In finding reviewers for manuscripts, our editorial team used a number of methods. The intent behind these methods was to find qualified researchers across the world to add more diversity to the review pool. By diversity, I do not mean race, ethnicity, or some other demographics often associated with this word. What I mean is that we wanted to ensure that the reviewer pool did not contain only the "usual suspects." While these individuals were part of the reviewer pool, and did review for the *APSR*, we also included other qualified researchers to ensure that research the journal was reviewing spoke to the entire field instead of a subset of researchers within the discipline. I think future work should investigate the process of recruiting patients and carers as reviewers. Are these recruitment methods drawing from a random sample of qualified individuals, the "usual suspects" of qualified individuals, or something else? Are there ways to improve the recruitment method of patients and carers into the peer review process? Do the recruitment methods that are used to recruit potential reviewers produce a reviewer pool that reflects to the population of potential reviewers, or is it skewed in any way? There are more questions that I can ask. I think these questions, however, demonstrate well enough why future research should take a step back from this current manuscript to examine the process of recruiting reviewers. By studying how reviewers are recruited, we will be able to gain insight regarding if reviewers are similar to the general population of reviewers or if the methods of recruitment are producing biases in the reviewer pool.

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	Second, I think future work should investigate what is gained by including patients and carers into the review process. The authors state the strength of including these reviewers is, "in addressing the relevance and importance of the research to patients and carers and whether the treatment or intervention studied, or guidance given is practicable and acceptable to patients" (page 3, lines 38-40). This paragraph continues with other reasons why including patients and carers as reviewers is important in the peer review process. While I can find logic to support the authors' arguments, there are no citations in this paragraph. This, to me, screams future research. How effective are patients and carers in evaluating if a study is acceptable? I wonder if patients reading about the initial studies of chemotherapy, with its relations to mustard gas, would have found these studies to be acceptable. Future research needs to investigate if the contributions of patients and carers bring to published work is not only internal but external. For example, we know there are segments of the population and research areas where the U.S. population have doubts about modern science (sources: http://www.pewinternet.org/2015/07/01/americans-politics-and-science-issues/ http://www.pewinternet.org/2017/12/08/mixed-messages-about-public-trust-in-science/). Does including patients and carers in the peer review process affect their trust in modern science? By examining these two areas of questions (the internal effects and external effects of including patients and carers into the peer review process), future research will be able to inform us if there are benefits to including these groups into the peer review process and, if so, what these benefits are.

REVIEWER	Nyna Williams Mathematica Policy Research, USA
REVIEW RETURNED	20-Jul-2018

GENERAL COMMENTS	This is an interesting and well-written paper, on an important topic. Following are my comments by section. <u>Abstract</u> The phrase "information behind subscription controls" isn't intuitive to readers not in the publication industry. <u>Introduction</u> This paper is focused on including the views of patients in the peer review process. However, in the second paragraph, you also raise the criticism that peer review has traditionally been a closed process, but then you say no more about that. Maybe say something there about how your two journals have had an open review process for X amount of time, and briefly define open review. <u>Methods</u>

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	Not clear why there would be patients in the tracking system who have previously asked not to be contacted, that is, how they got in the system in the first place, if they don't want to be contacted. In the questionnaire, Q11 asks if the journal shared reviewer comments with you, but the Q12 follow-up asks not about comments, but rather, about author responses to reviewer comments. In the questionnaire, Q23 asks about "patient involvement and engagement activities". Was that term operationalized elsewhere for respondents? The terms "pre-test" and "pilot" are generally used interchangeably, but would be good to be consistent within the paper and choose one or the other. The acronym NIHR should be spelled out the first time. Need to briefly explain what the GRIPP2 checklist is. Reference #18 is a published article, not a poster/presentation. Results Throughout, need to clarify which results are based on responses to closed-ended versus open-ended questions. For example, the list of other reasons for declining to review means something very different if closed-ended versus generated by respondents. The references to group A/B and survey A/B are confusing. Not clear whether "group" and "survey" are the same thing or two different things. The numbers in Figure 1 are very small in current format, so I could be wrong, but the mean for "contribution to the subject area" looks like 3.6 in the figure versus 3.8 in the text. Under "perceptions of the open review process", need to provide an example of what constitutes a generic concern and an example of what constitutes a patient-specific concern. It's also not clear whether the list of "these" concerns (embarrassment, confidentiality, etc.) represents only one of these two types or a combination of both types. You report on the number/percent of reviewers who "indicated that they had reviewed a paper which the editors asked to revise and respond to reviewer comments (and subsequently shared with reviewers), but it's not clear where this number comes from, given that Q11 asks only about comments, not responses. Regarding the concern that patient reviewer comments were possibly not being considered, that patient review is just a "tick box exercise", I wonder if an unintended consequence of open review is that it could intensify this concern. If reviews are anonymous, reviewer comments can't be disregarded based on reviewer characteristics. Just a thought.

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	Under “perceptions of authors and other reviewers”, you report on the number/percent who indicated that they “couldn’t remember or felt it was difficult to judge”, but it’s not clear what they couldn’t remember or what they felt was difficult to judge. Regarding free-text comments suggesting lack of compensation may be a deterrent to patient reviewers, the comment that “no evidence was offered for this view” sounds too strong and potentially dismissive. One wouldn’t expect anyone to provide “evidence” in a free-text comment. <u>Discussion</u> You note that responses from patient reviewers were similar for the two journals, but there were no comparisons between the two sets of reviewers reported in the results. Would be good to provide a summary of implications for improvement/revisions to the patient review process. That is, a brief list of improvements/revisions informed by the results of this study.

VERSION 1 – AUTHOR RESPONSE

General response to reviewer 1

We really appreciate the considerable thought and time reviewer 1 has spent articulating ideas about the sampling. There are a lot of comments about this woven throughout the review which we have considered carefully. We would like to give some context to explain to the reviewer why we think the approach we have taken is the most appropriate for the specific research question of this study.

The purpose of our study was not to study the motivations behind those who accept and decline but to capture the experience of all those who have engaged with the review process. This includes those who have actually reviewed and can comment on their experience of all aspects of the process (Group A) and those who have been invited to review but have not yet reviewed, i.e. they have declined, been unavailable at the time of invitation or been "uninvited"(Group B). (If reviewers do not reply in a timely way to our invitation or other reviewers who were invited accept faster, then invitations to review are automatically rescinded via the software on our manuscript tracking system)

The reviewer is right to say that some of those in Group A had not accepted every invitation to review, which is why they are included in the analysis of responses about declining to review. We couldn’t ask Group B about their experience of reviewing as they hadn’t reviewed but we could ask them to contribute to our understanding of why reviewers decline to review. It is for this reason that we report on the reasons for declining across the two groups. We were interested in capturing the experience from as many patient and public reviewers who had engaged with us as possible. We did this to help us uncover any aspects of the process that might be difficult or off putting for patient and public reviewers. It also enabled us to ask about potential concerns of open review across both groups and capture general perspectives about the initiative.

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At *The BMJ* we make it clear that reviewers are free to decline to review at any time or indicate they are unavailable without this influencing future opportunities to review. We are committed to providing a fast review process for our authors so as outlined in the paragraph above, some of the reviewers in Group B may not have actively declined a request to review, rather they may have been invited and then uninvited. This is conceptually different from actively declining. We appreciate that this uninviting process may be baffling to reviewers and based on feedback in the survey we now explain our processes more clearly in the general guidance they receive.

As *The BMJ* is a general medical journal it receives lots of papers on general topics of medicine e.g. preventive medicine, genetics, sexual and reproductive health, health policy and service delivery, to name a few. However, many patient and public reviewers have chronic diseases and have indicated that they want to review papers about these diseases/conditions. To ensure that we have a patient and public reviewer for as many relevant papers as possible, we ask our patient and public reviewers when they register with us to indicate if they are willing to also review more general topics. If reviewers have indicated their willingness to do this, they may on occasions be asked to review a paper that they don't feel able to comment on. We therefore encourage reviewers to decline invitations where they feel the papers are too far removed from their own experience or they simply don't want to do the review.

The reviewer states "Thus, the subsets of Group A and B are useful, but may not be the best subsets to study the motivations behind those who accept, decline, or engage in both behaviors when asked to review." However, our research question was not to compare motivations between these groups but simply to report on the experience of reviewers if they had or had not reviewed. If our purpose was to compare motivations of the groups we may have asked different questions and gathered more information about the reviewers and their characteristics. The subgroup analysis suggested by the reviewer was not planned and given the context above, we do not feel that it would add to the paper.

We have made the overarching research question clearer in the objectives on page 4 (see point #5). We have also made some clarifications throughout the paper that we hope will make the sampling clearer to readers (see below).

Specific responses to reviewers' comments

	Comment	**Response**	**Description of the location and wording of all revisions that have been made (clean version)**
	Reviewer 1		
1	P1-Third, I provide constructive criticism for how to improve this manuscript. Both suggestions include producing three different subset of reviewers to examine the research question of reviewer motivation in greater	See general above comments about sampling.	[p5] We changed the sampling description to: "The reviewer pool was split into two samples based on review history; those who had already completed a review and those who had been invited but not yet completed a review (by April

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	depth. I suggest that the authors create a subset that contains those that have always agreed to review, always declined to review, and declined & accepted to review. My first suggestion is that the authors examine these three subsets using survey question 4 (and perhaps survey question 2) to better understand the motivations behind those who are and are not engaging in the review process. My second suggestion is that the authors examine these three subsets with regards to survey question 1 to provide a stronger analysis regarding the motivations of reviewers. This second suggestion, however, would take greater effort. As such, I am willing to yield on this suggestion if the authors think it is not proper to include in this manuscript.		2017). This was so that questions which were not relevant to those who had not yet reviewed could be excluded." [p7] We changed this to "Patient and public reviewers **who had already reviewed** described **in free text comments** how they are motivated to review by the opportunity to include the patient voice". [p7] We have changed this to: **"Across both samples**, 101 reviewers reported that they had declined a request to review at some stage."
	Part 1		
2	P2- Examining the fourth research question, the authors find these reviewers are satisfied with having subscriptions to the journal they review for. No summary statistics, however, are provided for this finding. The authors also share findings regarding *RIE*'s Article Processing Charge (APC) waiver. These findings, however, seem limited as only three reviewers commented on the APC waiver. The authors also share some findings regarding	No summary statistics are provided as here we report responses to open questions and it is not appropriate to provide a summary statistic. We have made this clearer in the text. The findings regarding the APC are limited but we have reported this transparently by including the number of responses. We already indicate in the text on page 9 that the responses were free text: "The majority of free-text comments did not focus on monetary incentives but some reviewers did suggest honorariums, payment, gift	[p8] We changed this to: "Patient and public reviewers at both journals are acknowledged annually on the journal websites and **analysis of the free text comments** about how reviewers should be acknowledged showed this was well received by participants."

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	monetary incentives and public acknowledgement of service. Again, like the other findings, summary statistics are not provided.	vouchers, a prize draw and donations to charity after accruing reviews."	
3	P2-Finally, the authors list 13 suggestions provided by their sample concerning how to improve the review experience. This list comes prior to their examination of research question 4 and lacks summary statistics.	No summary statistics are provided as these were responses to open questions and it is not appropriate to provide a summary statistic. We have moved the section on how to improve the experience to the end.	[p9] We have moved the section on how to improve the experience to the end.
4	Part 2	The reviewer hasn't suggested any changes in this section.	
	Part 3		
5	P5-Prior to presenting my last sub-section of comments, I have a few small points of feedback that I think will improve this manuscript: □ I think the research questions and results should be presented in the same order. If the authors want to maintain the order of the research questions (page 4), the order of the results should be concerning motivation, confidence, satisfaction, acknowledgement, and improvement. Currently, acknowledgement and improvement are out of order on pages 8 and 9. The authors could also resolve this by changing the order of the research questions on page 4;	We have revised this.	[p4] We have changed this to: "In this collaborative survey carried out by *The BMJ* and *RIE*, with embedded patient involvement, we explore the early experiences of our patient and public reviewers. Reviewers were asked what motivates them to review research articles, if and why they have declined to review, their confidence in reviewing, their perceptions of open review, their satisfaction with the process, how they would like to be acknowledged for their contributions and their views on how the process could be improved. This knowledge will be used to inform evidence-based guidance for patient and public reviewers." [p9] We have moved the section on how to improve

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			the experience to the end.
6	P5-The results contains two areas that are not part of the research questions. These areas are reasons for declining to review and perceptions of open review process. I think it would be beneficial to either add these as research questions or explain why they are subsets of the five current research questions;	The subheadings are not research questions but topics and the reporting of results under these reflect conceptual decisions. For example, satisfaction as a concept is often indicated through willingness to recommend a service or product. We have refined the objectives of the survey on p4 to better reflect the content of the survey as suggested by the reviewer.	[p4] We have changed this to: "In this collaborative survey carried out by *The BMJ* and *RIE*, with embedded patient involvement, the aim was to find out what motivates patients and carers to review research articles, why they decline to review, their confidence in reviewing, their perceptions of open review, their satisfaction with the process, how they would like to be acknowledged for their contributions and their views on how the process could be improved."
7	P5- As stated earlier, the percentage for Group B from *RIE* should be 19% instead of 31% in line 5 of page 6;	We have amended this typo.	[p6] We have changed this to: "and 16 (19%) of the 84 *RIE* reviewers who had not yet reviewed responded"
8	P5-The authors do not provide any summary statistics with regards to sections of "How to improve the experience" and "How to acknowledge patient reviewers' help". I do not think the authors need to add summary statistics. I do think, however, it would be helpful for the authors in the "Discussion" section to discuss these research questions. It would be helpful for the authors to alert us to what they think are the most important findings regarding these research questions. Currently, the first paragraph of the "Discussion" provides a good summary of the findings. What do the authors, however, think with regards to these findings? In	We agree that summary statistics would not be appropriate here. We are pleased to hear that the reviewer thinks we have provided a good summary of the findings in the first paragraph of the Discussion. Whilst the reviewer is urging us to include our own opinions about what we think are the most important findings, we do not feel this is appropriate. This might be a discipline related point (as the reviewer is from political science) as it is not common practice in biomedical journals to include opinion in a discussion of an original research study. BMJ Open has explicit instructions for what to include in a Discussion section and we have followed this	No change.

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	general, I think the discussion needs to do a bit more to indicate what are the suggestion of the authors moving forward with regards to the five (possibly seven) research questions.	advice. No longer than 5 paragraphs and follows this overall structure (you do not need to use these as subheadings): a statement of the principal findings; strengths and weaknesses of the study; strengths and weaknesses in relation to other studies, discussing important differences in results; the meaning of the study: possible explanations and implications for clinicians and policymakers; and unanswered questions and future research.	
9	P5-The manuscript does a good job of laying out the groundwork regarding the motivations of patients and carers that engage in the peer review process. The manuscript, however, never discusses how patients and carers are recruited/invited into this process. I wonder how *The BMJ* and *RIE* editorial teams recruited these reviewers. I ask this question coming from editorial experience with the *American Political Science Review* (*APSR*). In finding reviewers for manuscripts, our editorial team used a number of methods. The intent behind these methods was to find qualified researchers across the world to add more diversity to the review pool. By diversity, I do not mean race, ethnicity, or some other demographics often associated with this word. What I mean is that we wanted to ensure that the reviewer pool did not contain only the "usual suspects." While these	We appreciate the reviewers' concern but it is very difficult to ascertain if a reviewer pool contains the "usual suspects"! *The BMJ* has an open invitation with a view to reaching out to all patients and carers: "If you're a patient living with disease or have experienced a significant illness or medical condition, a carer of a patient, a patient advocate acting on behalf of a patient group, or you play a leading part in advocating for patient participation and partnership in healthcare we'd like to invite you to take part in a unique initiative." *The BMJ* recruits in multiple ways: eg through emails to patient organisations, editorials on our patient partnership, presentations to pertinent groups, through social media, and by asking our submitting clinical authors and our international patient advisory group to reach out to their patient communities. Reviewers are also free to spread the word. So far we have recruited around 800 patient and carers from a number of countries with experience of a large range of conditions. We do not expect any prior reviewing or research experience or have any inclusion criteria so we have as	No change.

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	individuals were part of the reviewer pool, and did review for the *APSR*, we also included other qualified researchers to ensure that research the journal was reviewing spoke to the entire field instead of a subset of researchers within the discipline.	broad a range of reviewers as possible. We are always seeking more patient and public reviewers. RIE takes a different approach to recruitment. As we describe in the text on pags10-11 “many of the patient and public reviewers for RIE have been recruited from groups already working in research, such as the National Cancer Research Institute (NCRI) Consumer Forum in the UK or are European Patients' Academy (EUPATI) Fellows, and thus likely to have experience and expertise in critical appraisal of protocols and research studies (especially on the patient-related aspects of the research).”	
10	P5-I think future work should investigate the process of recruiting patients and carers as reviewers. Are these recruitment methods drawing from a random sample of qualified individuals, the “usual suspects” of qualified individuals, or something else? Are there ways to improve the recruitment method of patients and carers into the peer review process? Do the recruitment methods that are used to recruit potential reviewers produce a reviewer pool that reflects to the population of potential reviewers, or is it skewed in any way? There are more questions that I can ask. I think these questions, however, demonstrate well enough why future research should take a step back from this current	This is a valid point but beyond the remit of this survey. The journals continue to seek a diverse group of patient and public reviewers.	No change.

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	manuscript to examine the process of recruiting reviewers. By studying how reviewers are recruited, we will be able to gain insight regarding if reviewers are similar to the general population of reviewers or if the methods of recruitment are producing biases in the reviewer pool.		
11	P5-Second, I think future work should investigate what is gained by including patients and carers into the review process. The authors state the strength of including these reviewers is, "in addressing the relevance and importance of the research to patients and carers and whether the treatment or intervention studied, or guidance given is practicable and acceptable to patients" (page 3, lines 38-40). This paragraph continues with other reasons why including patients and carers as reviewers is important in the peer review process. While I can find logic to support the authors' arguments, there are no citations in this paragraph. This, to me, screams future research. How effective are patients and carers in evaluating if a study is acceptable? I wonder if patients reading about the initial studies of chemotherapy, with its relations to mustard gas, would have found these studies to be acceptable.	We absolutely agree that more research is needed. This initiative is novel and as such lacks a critical mass of research to cite and learn from. At *The BMJ* we do have plans for future research on exploring the value added by patient review and gathering the perceptions of all the "stakeholders". Indeed the patient and public reviewers themselves are asking for examples of how this all adds value.	[p11] We have added: "Further research is planned to identify where and how patient and public reviewers add value to the peer review process."
12	P5-6 Future research needs to investigate if the contributions of patients and	Thank you for these insightful ideas for further research.	None required.

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	carers bring to published work is not only internal but external. For example, we know there are segments of the population and research areas where the U.S. population have doubts about modern science (sources: http://www.pewinternet.org/2015/07/01/americans-politics-and-science-issues/7 http://www.pewinternet.org/2017/12/08/mixed-messages-about-public-trust-in-science/). Does including patients and carers in the peer review process affect their trust in modern science? By examining these two areas of questions (the internal effects and external effects of including patients and carers into the peer review process), future research will be able to inform us if there are benefits to including these groups into the peer review process and, if so, what these benefits are.		
	Reviewer 2		
1	Abstract The phrase "information behind subscription controls" isn't intuitive to readers not in the publication industry.	We have revised this.	[Abstract] Changed to: "Annual acknowledgment on the journals' websites was welcomed as was free access to journal information"
2	Introduction This paper is focused on including the views of patients in the peer review process. However, in the second paragraph, you also raise the criticism that peer review has traditionally been a closed process, but then you say no more about that. Maybe say something there about how your two journals	We have added some detail on review models.	[p3] Changed to: "Traditionally, it has been a closed process and the majority of journals still practice blinded review." [p3] Changed to: "These journals also practise open peer review where the

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	have had an open review process for X amount of time, and briefly define open review.		authors and reviewers know each other's identities and reviews of published articles are published online beside the article for readers."
3	Methods Not clear why there would be patients in the tracking system who have previously asked not to be contacted, that is, how they got in the system in the first place, if they don't want to be contacted.	BMJ has a policy of not sending surveys to people who have indicated that they do not want to be contacted for marketing. These people were excluded. We have made this clearer in the text.	[Methods, p5] Changed to: "We excluded those who were registered as reviewers but whom had not been invited to review and those who have previously asked not to be contacted by *The BMJ* for marketing purposes."
4	In the questionnaire, Q11 asks if the journal shared reviewer comments with you, but the Q12 follow-up asks not about comments, but rather, about author responses to reviewer comments.	Q11 is a filter question to identify the subset of reviewers who reviewed papers which editors subsequently asked authors to respond to (ie papers they did not just reject after peer review). As such these reviewers were in a position to comment on how well the authors responded to their comments (Q12a) and were courteous to them (Q12b).	No change.
5	In the questionnaire, Q23 asks about "patient involvement and engagement activities". Was that term operationalized elsewhere for respondents?	Q23 was "On average, approximately how many days a month do you spend on Patient Involvement and Engagement activities, other than patient reviewing?" We did not describe what these activities might involve and the question was open to individual interpretation.	No change.
6	The terms "pre-test" and "pilot" are generally used interchangeably, but would be good to be consistent within the paper and choose one or the other.	We now only refer to pre-testing and have removed reference to piloting.	[Changes made on p5].
7	The acronym NIHR should be spelled out the first time.	We have already spelt out this acronym on first mention (see page 3).	No change.

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8	Need to briefly explain what the GRIPP2 checklist is.	We have now indicated that the completed GRIPP2 checklist can be found as supplementary material. We also explain what this is.	[P5] Changed to: "More details can be found in the completed GRIPP2 reporting checklist for improving the reporting of patient and public involvement in research (see supplementary material)."
9	Reference #18 is a published article, not a poster/presentation.	We have made it clearer that reference 18 is to the conference proceedings of the abstract.	[P5] Changed to: "These three patient partners co-produced an abstract and poster of the findings for the "NIHR-INVOLVE" Conference 2017[18]"
10	Results Throughout, need to clarify which results are based on responses to closed-ended versus openended questions. For example, the list of other reasons for declining to review means something very different if closed-ended versus generated by respondents.	We have checked the reporting of each question and made sure it is clear where questions were open ended/free-text versus closed. Where descriptive statistics have been reported the reader can infer that these are closed ended questions. Where we say "reviewers described" or "reviewers explained" or "reasons given", etc readers can infer that these are responses to open ended questions. We have made it clearer that the list of other reasons for declining to review were responses to an open text question: "Other reasons reviewers mentioned for declining to review included …."	[P6] Changed to: "Other reasons reviewers mentioned for declining to review included a lack of experience or interest in the topic, the irrelevance of the topic…." [P 8] Changed to: "Patient and public reviewers at both journals are acknowledged annually on the journal websites and analysis of the free text comments about how reviewers should be acknowledged showed this was well received by participants."
11	The references to group A/B and survey A/B are confusing. Not clear whether "group" and "survey" are the same thing or two different things.	We have rephrased and removed all mention of Group A/B and survey A/B	[Changes made throughout]
12	The numbers in Figure 1 are very small in current format, so I could be wrong, but the mean for "contribution to the subject area" looks like 3.6 in the figure versus 3.8 in the	This was a typo, the mean in Figure 1 should have said 3.8. We have revised this.	[Changed Figure 1]

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	text.		
13	Under “perceptions of the open review process”, need to provide an example of what constitutes a generic concern and an example of what constitutes a patient-specific concern. It’s also not clear whether the list of “these” concerns (embarrassment, confidentiality, etc.) represents only one of these two types or a combination of both types.	We agree that this section could have been much more clearly reported so we have revised it.	[p7] “At both journals, all reviewers’ named comments are published alongside the article on the journals’ websites. When asked if they had concerns about open review, 181/224 (81%) said no, 16 (5%) said yes, and 25 (7%) were unsure. Of the 16 who said yes, 15 had already reviewed a manuscript. Reported concerns included some which were generic to the concept of open review (e.g. worries about being completely critical of a paper or misunderstanding something) and some which were specific to being a patient (e.g. embarrassment or being perceived negatively by others, patient confidentiality, misuse of personal information published online, implications for future job applications and impact on receiving disability benefits).”
14	You report on the number/percent of reviewers who “indicated that they had reviewed a paper which the editors asked to revise and respond to reviewer comments (and subsequently shared with reviewers), but it’s not clear where this number comes from, given that Q11 asks only about comments, not responses.	Q11 is a filter question to identify the subset of reviewers who reviewed papers which editors subsequently asked authors to respond to (i.e. papers they did not just reject after peer review). As such this subset of reviewers were in a position to comment on how well the authors responded to their comments (Q12a) and were courteous to them (Q12b).	No change.
15	Regarding the concern that patient reviewer comments were possibly not being considered, that patient review is just a “tick box exercise”, I wonder if an unintended consequence of open review is that it could	This is an interesting comment. Some people argue that blinded peer review is less biased but there is plenty of evidence to show that reviewers often work out who the reviewer is (although this would be harder in the case of patient reviewers). Others	No change.

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	intensify this concern. If reviews are anonymous, reviewer comments can't be disregarded based on reviewer characteristics. Just a thought.	argue that open reviewing makes reviewers and authors more accountable and dialogue constructive.	
16	Under "perceptions of authors and other reviewers", you report on the number/percent who indicated that they "couldn't remember or felt it was difficult to judge", but it's not clear what they couldn't remember or what they felt was difficult to judge.	We agree that the reporting of this section was not as clear as it should be and have revised it. We gave respondents the opportunity to say that they could not remember as some would have completed their review some time before completing the survey and may have had difficulties recalling the situation.	[p 8] "35 (22%) reviewers indicated that they had reviewed a paper for which the editors later shared the peer reviewers' comments. 29/35 (83%) "strongly agreed" or "agreed" that the authors of the paper addressed the points they had raised in their reviews and 28/35 (80%) "strongly agreed" or "agreed" that the authors were courteous when addressing their points. After having seen the peer reviewers' comments on the paper they reviewed, 22 (63%) felt they had been able to include points important to patients or carers in their own review(s) that were not raised by the peer reviewers, 10 (29%) couldn't remember or felt it was difficult to judge and only three (9%) felt that they were unable to do so."
17	Regarding free-text comments suggesting lack of compensation may be a deterrent to patient reviewers, the comment that "no evidence was offered for this view" sounds too strong and potentially dismissive. One wouldn't expect anyone to provide "evidence" in a free-text comment.	We agree and have revised.	[P9] We deleted this statement: "although no evidence was offered for this view"
18	Would be good to provide a summary of implications for improvement/revisions to the patient review process. That is, a brief list of improvements/revisions informed by the results of	There were lots of really constructive ideas for how we could improve the overall experience for patient and public reviewers. Some are actionable and others not as we are restrained within budgets and the	No change.

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	this study.	software that is in use. We have an action plan around implementable changes and are working our way through these. We are hesitant to draw out any particular ideas and not mention others as some may appear minor eg specific clarifications to our guidance yet these may significantly improve the experience for some. Whilst we like the idea of a brief list we feel that there is too much to include. The section on how to improve the experience on page 9 includes some key areas for change.	

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