Author’s response to reviews

Title: Hospital-based interventions: a systematic review of staff-reported barriers and facilitators to implementation processes.

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Author’s response to reviews:

Reviewer: Under the category of 'not original research' the authors have included conference abstracts. These are unpublished but are likely to be original research. It looks from this and Table 1 as though there is an additional criteria of 'original studies published in journals'. The limitations of excluding grey literature should be discussed in the paper.

Response: We thank the reviewer for raising this relevant point, and have changed the terminology of this criterion as suggested on p6 of the Methods section, Table 2 and Additional File 2 as follows:

“A study was eligible for inclusion if: 1) it was an original research study published in full…”

We have also added further clarification to the methods as follows:

“studies that could not be accessed in full (such as conference abstracts) were excluded, as there was insufficient detail to determine whether they met the additional exclusion criteria”

Finally, we have noted the limitations of excluding grey literature on p24 of the discussion (citing the meta-analysis by Hopewell et al) as follows:

“Finally, in choosing to include only original research published in full, it is possible that we were unable to include some of the newest emerging research in the field (e.g. conference abstracts). There is significant debate about the exclusion of grey literature and unpublished
research in systematic reviews, and it is noted that in choosing to exclude this research, there is a risk of publication bias in findings presented [64].”

Reviewer: Under the intervention-types it is stated that interventions should be focused on improving patient outcomes. I think the authors mean here that the interventions implemented should involve direct patient care and so they have excluded interventions on hospital systems. Presumably interventions such as changes in rotas or management structure often (although not always) have as their long-term goal a focus on patient care. I would suggest the authors rephrase this criteria.

Response: We agree with this point and have changed the terminology for this criterion accordingly on p6 of the methods and in Table 2 as follows:

“the intervention involved direct patient care”

Reviewer: I also still find the wording regarding 'formal implementation data collected' unclear as an inclusion criteria, it looks from the Appendix as though the authors only included studies which were focused on asking staff about the implementation strategy (as per STARI definitions) e.g. not costs of the implementation process or fidelity to the intervention. However, in the Results e.g. p14 first paragraph, the authors discuss fidelity/attitudes to the intervention itself rather than barriers to the implementation strategy. Presumably this data should be omitted based on the inclusion/exclusion criteria.

Response: We appreciate this useful feedback, and have changed our wording to reflect that we only collected data on staff views of barriers and facilitators to the implementation process. Therefore criterion 5 now reads as follows:

“A study was eligible for inclusion if: … 5) it included formal collection of data from participating staff about barriers and facilitators to the implementation process.”

The reviewer is also correct that we did not include papers that only collected data about the effectiveness of the intervention. However, we did include papers that collected data about barriers to the implementation process as reported by staff, and in some cases staff reported that their attitudes toward the intervention served as barriers to the implementation process (e.g. by causing them to disengage from the implementation, or opt not to follow through with implementation strategies). Therefore, only in these cases where these attitudes were cited as having a direct impact on the implementation process were such data presented.
To clarify this, we have made changes to the Results section of the paper, eg Results p14 first paragraph as follows:

“Staff level barriers and facilitators

1. Staff commitment and attitudes

While system domains focused on the overall structure and culture, staff domains were more focused on the individual, and the experiences, motivations and beliefs of those staff directly involved with carrying out the intervention. Commitment and motivation was identified as the first staff-level barrier, and this was clearly influenced by staff attitudes regarding the proposed intervention, which directly impacted their engagement with the implementation process. In some instances, participants questioned intervention validity; for example, whether patients would respond honestly to screening [31], and whether the intervention would have any real effect on behavioural change [43]. Lack of belief in the intervention was associated with variability in adherence to intervention guidelines, causing a barrier to successful implementation [34]. Equally, if staff felt they were already equipped to address the issue targeted by the intervention, they were less likely to adopt the changes required to achieve full implementation [45].”

Reviewer: In their response the authors state 'we included only studies that had a high quality of evidence regarding implementation factors' which suggests some screening for quality which is not mentioned (I think this might be an error however looking at the paper). PRISMA itself does not suggest screening out poor quality studies.

Response: The reviewer is correct, as our quality assessment was carried out only after study selection. We did not screen out papers on the basis of poor quality. We did require formal data collection (rather than author opinion) and this was an inclusion criterion. We have clarified this terminology in text as discussed in the point above.

Reviewer: If my understanding of the inclusion/exclusion criteria is correct, I think the wording of the title of the paper and abstract (and in other places) is rather overgeneral. The authors should consider changing the framing of the paper to reflect that it is a systematic review of staff views of barriers and facilitators of implementation strategies rather than a general review of implementation barriers/facilitators.

Response: We appreciate this feedback and made changes to the title, abstract and introduction to indicate the focus on staff views and implementation processes.

For example, the new title is as follows:
"Hospital-based interventions: a systematic review of staff-reported barriers and facilitators to implementation processes"