Author’s response to reviews

Title: Transition in care from paramedics to emergency department nurses: a systematic review protocol

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Version: 1 Date: 13 Oct 2017

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Comments

Revision

Reviewer #1

Introduction - Line 78 ‘Efficient and safe transitions in care are dependent on accurate communication of pertinent patient information between caregivers’ Is caregivers the correct term? Are you discussing health service providers or individuals caring for the patient?

The term caregiver has been changed to health service providers

Introduction - Line 87-88 - The authors mention 'EMS practitioners such as paramedics' Which implies there are other EMS practitioners. However, the review seems to focus on paramedics. Can you please be clearer whether there are other EMS practitioners? This needs to also be clear under the 'participants' heading who you will be including as an EMS practitioners.

Thank you for your comment. We have deleted ‘such as paramedics’.
Under the Participants heading the following edits have been made: “Studies will be eligible if they include EMS practitioners (paramedics, emergency medical technicians, registered nurses, licensed practical nurses, nurse practitioners) and/or ED nurses (registered nurses, licensed practical nurses, nurse practitioners) involved in transitions in care of EMS patients from the ambulance to the ED.”

Introduction - Please reference this statement: Line 97-99: Loss of information during transitions in care may lead to incorrect triage decisions in terms of acuity rating or prioritization of order to be examined by a physician, delayed time to treatment, or the patient being triaged to an inappropriate area of the ED.

The following references have been added to support this statement:

Croskerry P (2002)
Bost, Crilly, Patterson, & Chaboyer (2012)
Reay, Rankin & Then (2016)

‘Intervention' heading: Can you please provide a list of examples of interventions that you would include to support transitions of care. Also how will you consider whether transition of care has been completed?

The following sentences have been added under Interventions:

“Interventions may include, but will not be limited to standardized protocols for handover, checklists, mnemonics, automatic electronic data transfer, or communication skills training.”

“Transition in care will be considered complete when ED triage or bedside nurses have assumed full care of the patient and EMS practitioners are no longer considered to be responsible for patient care.”

Which outcomes will you be assessing for GRADE and CERQual?

The following information was added: “To assess confidence in the evidence in the syntheses, we will use the GRADE[27] to assess each quantitative outcome and CERQual[28] to assess each qualitative review finding.”

Reviewer #2
the scoping searches run in MEDLINE returned >3k results and it is not clear from the inclusion criteria how the team will avoid having an unmanageable amount of studies included in the review

Sensitive search strategies are routinely used in mixed systematic reviews. We anticipate a small number of included studies (<20) based on a previous related review (Wood, Crouch, Rowland, & Pope, 2014) and from the number of full-texts we are in the process of screening (n = 120).

Line 30: Would it be possible to list some indicative adverse events here, word limit allowing?

The following has been added: “such as delay in treatment for time sensitive conditions (e.g., myocardial infarction) or worsening of status (e.g., sepsis)”

Line 34: Is the 'EMS practitioner to ED nurse' the only or standard route? Are others possible? Could this be made more explicit here?

The following edits were made within the abstract and methods to indicate we are specifically examining transitions between EMS practitioners to ED nurses:

Abstract: “we aim to examine (1) factors that mitigate or improve transitions in care specifically from EMS practitioners to ED nurses,

Participants: “Other modes of transfer can occur (e.g. from accompanying transfer nurse or physician), however, the aim of our review is to specifically examine transition in care from EMS practitioners to ED nurses as this is the most common route.”

Line 41 and later: the authors state here that forward citation chasing will be used, why not backwards also?

We are using both forward (“cited bys”) and backward citation searches (“reference lists”), as identified in Information sources and search strategy.

Line 42: see later comment, but I have concerns over the inclusion of 'any design'.

We agree and acknowledge that our text does not reflect our intention. We changed the text in Study type to reflect that we are only including primary studies: “All English-language quantitative, qualitative, and mixed methods primary studies will be included, without restriction by year, publication type, geographic location, or methodological quality. Systematic reviews and other knowledge syntheses, case studies, editorials, and discussions of transitions of care will be excluded.”

Line 43: also see later, but does this include 'any' EMS patient? Or are some excluded?
We appreciate that this needs to be clarified and have done so in the main body of the manuscript. Line 159 -168.

Line 47: also later, but there is no detail around what the authors will do should multiple quantitative studies be identified with the same outcome? It does not need more than a few sentences, but would meta-analysis be conducted if appropriate and, if not, why not?

We have added the following "Should the data permit, a meta-analysis will be conducted. However, we expect considerable heterogeneity between studies; thus, meta-analysis may not be appropriate.

Line 87: Is there a way of rephrasing to avoid the word 'lenses'?

The term “lenses” has been changes to “perspectives.”

Line 133: I'm not sure the aim of 'exploring' factors does this review justice, what is proposed is exhaustive and broad so should this be reworded to read 'map' or 'assess' instead?

The sentence has been reworded to state “assess.”

Line 169: Perhaps the sentence dealing with comparators might be better phrased in the positive? Something like 'as this review is concerned with identifying transitional facilitators and barriers we will include any comparator group, or studies with no comparator.'

The sentence has been reworded and is now phrased in the positive.

Line 172: It might increase clarity to present outcomes in a list?

While we agree that a table would help to clarify the quantitative outcomes, we are also including qualitative studies without a priori outcomes.

Line 178: The last sentence in this paragraph negates all the rest? If any outcome is included why not just state that? Or does this mean that where primary outcomes are located secondary outcomes (i.e. any that relate to transitions) will be included? There is an issue here with breadth, which I elaborate on below.

We have rephrased this sentence to the following: “We will also report on any secondary outcomes described in the studies included in this review.” Line 186 – 187.

Line 181 and later: I think the authors mean primary studies (quant/qual/MM) will be included, as well as systematic reviews (given that JBI/Cochrane are being searched)? My worry here is that, coupled with the broad outcome inclusion criteria, there will be problems with inclusion; the provisional search strategy returns 3452 hits and (aside from those not empirical in nature) it is hard to see how the authors will not end up with an unmanageable set of studies included? Is there a strategy in place for large numbers, perhaps around prioritising study types or being driven by conceptual richness similar to realist approaches? Thank you for identifying this point
of confusion. We are excluding systematic reviews (and other types of reviews) and have changed the text in the Abstract and Study type to reflect this. We further detailed which of the Cochrane databases we searched (only Cochrane Central Register of Trials) in Information sources and search strategy. JBI remains relevant as it includes more than systematic reviews.

As noted earlier, we will have a manageable number of studies. Our team is taking an aggregative approach to the synthesis, in contrast to an interpretive approach, where prioritizing or purposively sampling the literature would be more appropriate (see Gough, Thomas, & Oliver, 2012).

Line 188: reading between the lines I am sure the authors are engaging with stakeholders coherently and robustly, but I think it would be good to be explicit in the grey search sentences that this will involve consultation with clinicians.

We added “consultation with clinicians” to our grey literature search.

Line 197: I'm not clear what the statement around verifying inclusion means? Will the team include or exclude based on this meeting? Or does this mean that the group will be consulted to identify extra studies? If so, perhaps move above to clarify.

We edited the sentence to “identify any further studies for inclusion.”

Line 227: I'm not sure what the use of 'standardized' here and in the screening section means in these contexts?

We modified this statement to read “template” instead of “standardized.”

Line 229: I don't disagree, but what was the rationale behind selecting 75% agreement and later 90%? Are these located in the literature or arbitrary, perhaps worth noting that discussion will be key here as the topic is complex.

Thank you for pointing out the difference in agreement between screening and data extraction. We revised both sections.

Study selection: “Prior to screening, we will conduct training and a calibration exercise with the review team to pilot and refine the screening tool.”

Data extraction: “After the review team conducts a calibration exercise with the extraction tool, one reviewer will extract study data; a second reviewer will verify the extracted data for accuracy.”

Line 236: As indicated earlier, I think it is important to state what would be appropriate should numerous quantitative studies be identified with homogenous outcomes, would MA be undertaken where appropriate? Give the really broad inclusion criteria I don't think this is as unlikely as the authors state.
Similarly, this section lists synthesis approaches almost solely for qualitative studies, what are the approaches/methods for dealing with quantitative studies and - if they are included, which is not clear - systematic reviews?

We intend to conduct meta-analysis if appropriate. If the studies are too diverse, we will aggregate all study findings in one synthesis. We also cited Hong, Pluye, Bujold, & Wassef (2017), who recently published methodological guidance for mixed reviews that helped our team express our original intent for the synthesis:

“Should the quantitative data permit, a meta-analysis will be conducted using a random effects model in RevMan (standardized mean differences for continuous outcomes; odds ratios for categorical outcomes; 95% confidence intervals). We expect considerable heterogeneity between studies; thus, meta-analysis may not be appropriate. In this case, we will aggregate the quantitative findings with the qualitative findings using data-based convergent synthesis[26], whereby one synthesis will be conducted with all studies after we transform the quantitative findings into textual categories or themes.”

Line 267: I think it would be beneficial to be more specific around the KT strategy. Whilst it will be developed with the stakeholder group I think some indicative examples would give a feel for the approach. The team later mention a care tool which sounds fantastic, perhaps some more detail and place here?

We added additional detail about our KT plan in development, including a better detailed dissemination plan with examples.

Line 286: I agree it is likely that there will be heterogeneity of studies, but (a) this hasn't happened yet and feels odd to list so explicitly in the protocol, and (b) the breadth means that even within this heterogeneity I think there will be less constraint than the team state.

This systematic review will provide meaningful analysis regarding the existing evidence on transitions in care between EMS and ED nurses. Although, we expect heterogeneity of studies, given that over 3000 sources were identified in the scoping search, we expect to be able to identify clear and consistent outcomes. Furthermore, results from the review will enable us to identify areas for future research.

Line 290: The last sentence feels strange and I wonder if it should appear somewhere else? Unless the authors are seeking to reflect on the limitations of these points, in which case some expansion is needed on the (potential) impacts of these issues.

This sentence has been removed

I would like to thank the team again for an interesting read and what promises to be a clinically relevant and practice focussed review.

Thank you for your comments and positive feedback.