

## 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.

This paper was submitted to a another journal from BMJ but declined for publication following peer review. The authors addressed the reviewers' comments and submitted the revised paper to BMJ Open. The paper was subsequently accepted for publication at BMJ Open.

(This paper received three reviews from its previous journal but only two reviewers agreed to published their review.)

### ARTICLE DETAILS

<b>TITLE (PROVISIONAL)</b>	Protocol of a scoping review assessing injury rates and their determinants among healthcare workers in Western countries
<b>AUTHORS</b>	Bragazzi, Nicola Luigi; Dini, Guglielmo; Parodi, Valentina; Blasi, Carlo; Linares, Roberta; Mortara, Virginia; Toletone, Alessandra; Bersi, Francesca Maria; D'Amico, Beatrice; Massa, Emanuela; Montecucco, Alfredo; Debarbieri, Nicoletta; Durando, Paolo

### VERSION 1 – REVIEW

<b>REVIEWER</b>	Lena Griebel Friedrich Alexander University Erlangen-Nürnberg, Germany
<b>REVIEW RETURNED</b>	16-Apr-2018

<b>GENERAL COMMENTS</b>	Your scoping review plan is well thought through and will probably lead to the results you want to achieve. The topic of injury rates and injury determinants of healthcare professionals is relevant and thus, your results will gain attention. I am looking forward to reading your scoping review.
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<b>REVIEWER</b>	Anastasia Mallidou University of Victoria, British Columbia, Canada
<b>REVIEW RETURNED</b>	13-Aug-2018

<b>GENERAL COMMENTS</b>	<p>Thank you for the opportunity to review this protocol of a scoping review. The topic of this study is always interesting in healthcare professionals. The authors have described a protocol of a scoping review based on the methodological framework proposed by Arksey &amp; O'Malley (2005). However, it is confusing how they will apply these methodological steps. The following comments/suggestions are intended only to improve the manuscript.</p> <p><b>Abstract</b></p> <p>1. The PICO framework (and acronym) stands for:</p> <ul style="list-style-type: none"><li>• P – patient, problem or population</li><li>• I – intervention</li><li>• C – comparison, control or comparator</li><li>• Outcomes – depending on the study.</li></ul> <p>In Abstract, the "I" component has been referred/written as "E" (exposure to injuries).</p>
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2. The acronym INAIL has not been explained adequately in Abstract or the full-text.

#### **Strengths and limitations of the study**

1. Since this manuscript describes a protocol of a scoping review, outcomes such as “it is the most comprehensive and broadest review, of studies performed in Western Countries, existing in the literature” cannot be written yet.
2. Generalization of the proposed study results should not be discussed, because a knowledge synthesis study, by definition, includes primary studies from the existing literature.

#### **Background**

1. The definition of healthcare workers (HCWs) should not include cleaners and porters administrative personnel or students, because the first two groups have not direct contact with patients and the latter (students) are not yet “professionals”.
2. References – Most of the references that support the statements in the Background are missing (e.g., p.6, lines 29-30; p.7, lines 40-51; p.8, lines 18-22) or refer to the literature in Italy. The arguments might be strengthen if they would have supported by the international literature.
3. Language – It is obvious that English language is not the authors’ first language. Assistance from a native speaker would clarify the manuscript.

#### **Methods**

1. Study design – Throughout the paper, the authors describe the study design as a scoping review. However, at the end of page 9 (lines 32-35), the authors refer to the scoping review as “the first step” that will be followed by “further developed by in-depth systematic reviews and/or meta-analysis”. This statement needs clarification.
2. Research questions need to precede study objectives (p. 9).
3. Inclusion/exclusion criteria are usually pre-determined in both scoping and systematic reviews. A preliminary literature search on the topic of interest assists authors to clarify their inclusion/exclusion criteria (p.10, lines 48-56).
4. Study screening and selection – Usually a pair of reviewers independently screens each potentially relevant publications. It is confusing that seven (7) reviewers will screen the publications and an eighth one will be involved for the final decision in case of disagreement (p.10, lines 9-13).
5. Kappa ( $\kappa$ ) statistic is used for interrater reliability; not for assessing disagreements (p. 11, lines 12-15).
6. Appraisal of study quality – The main difference between systematic and scoping reviews is the lack/absence of quality assessment in the latter (p.11, lines 31-39). The paragraph between lines 39-42 is unclear; further elaboration may help to clarify it. Also, the paragraph between lines 44-51) need clarification. Who are these VM and PD referees? Why are they needed to resolve disagreements among seven reviewers?
7. Statistical analysis (on p.11, lines 53-57 and p.12, lines 3-11) – This section is completely confusing. A scoping review cannot be followed by systematic review and/or meta-analysis; at least not within the same study.

	<p><b>Discussion</b></p> <p>A scoping review is not a secondary data analysis (p.13, lines 3-6); it is a stand-alone study.</p> <p>Overall, the protocol is well written.</p>
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<b>REVIEWER</b>	Kim Jonas South African Medical Research Council, South Africa
<b>REVIEW RETURNED</b>	31-Aug-2018

<b>GENERAL COMMENTS</b>	<p>I read this protocol with much interest, healthcare workers are faced with a lot of injuries on a daily basis and their health and well-being is not always prioritised. This scoping review should be a very important review to put the magnitude of healthcare workers injuries into perspective and draw attention to the health systems to protect/prevent and put measures to minimise the injury rates. I have a few questions for the reviewers though:</p> <ol style="list-style-type: none"> <li>1. I see you have no language restriction, does that mean you have the full complement of Western languages amongst you? if not, how you planning on going about the languages you have limitations on??</li> <li>2. in you abstract you say PROSPERO does not accept registration of scoping reviews, but on page 10 you say the protocol has been submitted to PROSPERO...? that is confusing, I guess you can state that currently there is not "registry" for scoping review protocols as PROSPERO does not accept them.. just a suggestion.</li> <li>3. page 7, line 29: its should read "...at least one time..." line 55: it is post-traumatic stress disorder (PTSD)</li> <li>4. you need to mention your review questions quite sooner in your manuscript. under your methods (page 8, line 38) you refer to the research questions, but you have not stipulated them yet, so as a reader, I immediately which research questions????</li> <li>5. I think you have misspelled "extant".. are you not referring to the "extent" of literature...?</li> <li>6. page 9, line 55: please insert "by" before carrying out...</li> <li>7. it s worth noting that perhaps the grammar needs to be checked!</li> <li>8. your main broad review question is too long!!!</li> <li>9. please double check that you used the right pronoun in your review questions. E.g, it should read: "what is the incidence/prevalence rate..." instead of which... in fact, all the "which" used in your review questions dont seem appropriate- "what" would be a better choice!</li> </ol>
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### VERSION 1 – AUTHOR RESPONSE

#### Reviewer(s)' Comments to Author:

##### **Reviewer: 1**

Reviewer Name: Lena Griebel

Institution and Country: Friedrich Alexander University Erlangen-Nürnberg, Germany

Please state any competing interests or state 'None declared': None

Please leave your comments for the authors below

Your scoping review plan is well thought through and will probably lead to the results you want to achieve. The topic of injury rates and injury determinants of healthcare professionals is relevant and thus, your results will gain attention. I am looking forward to reading your scoping review.

**We thank the expert reviewer for the appreciation of our manuscript.**

**Reviewer: 2**

Reviewer Name: Anastasia Mallidou

Institution and Country: University of Victoria, British Columbia, Canada

Please state any competing interests or state 'None declared': None declared

Please leave your comments for the authors below

Please see the attached document.

Thank you for the opportunity to review this protocol of a scoping review. The topic of this study is always interesting in healthcare professionals. The authors have described a protocol of a scoping review based on the methodological framework proposed by Arksey & O'Malley (2005).

**We thank the expert reviewer for the appreciation of our manuscript.**

However, it is confusing how they will apply these methodological steps. The following comments/suggestions are intended only to improve the manuscript.

**We thank the expert reviewer for these suggestions/comments, which have been addressed and incorporated in the revised manuscript.**

Abstract

1. The PICO framework (and acronym) stands for:

- P – patient, problem or population
- I – intervention
- C – comparison, control or comparator
- Outcomes – depending on the study.

In Abstract, the “I” component has been referred/written as “E” (exposure to injuries).

**We thank the expert reviewer for this comment. We have amended the “I” component of the PICO criteria in the abstract as well as in the main text. Now the sentence reads “Studies will be selected according the following PECO criteria: P (HCWs), E (exposure to injuries), C (different types of HCWs) and O (prevalence and determinants of injuries)”.**

2. The acronym INAIL has not been explained adequately in Abstract or the full-text.

**We thank the expert reviewer for this comment. We have added the full explanation of the term, both in the abstract and in full-text, as well as in the “strengths and limitations” bullet points (INAIL, “Istituto nazionale per l'assicurazione contro gli infortuni sul lavoro”). Now the abstract paragraph reads as “Time filter has been set considering literature between 2000 and 2018 to enable a direct comparison of the findings with the epidemiological figures available at national and local “Istituto Nazionale per l'Assicurazione contro gli Infortuni sul Lavoro” (National Institution for Insurance Against Accidents at Work, INAIL) centers in Italy”.**

## Strengths and limitations of the study

1. Since this manuscript describes a protocol of a scoping review, outcomes such as “it is the most comprehensive and broadest review, of studies performed in Western Countries, existing in the literature” cannot be written yet.

**We thank the expert reviewer for this comment. We have replaced this point with this “In the existing scholarly literature, there is not a comprehensive and broad scoping review of studies performed in Western Countries concerning injuries among healthcare workers”.**

2. Generalization of the proposed study results should not be discussed, because a knowledge synthesis study, by definition, includes primary studies from the existing literature.

**We thank the expert reviewer for this comment. We have replaced this point with this “A major limitation of the study could be given by the paucity of found results, especially those concerning some kinds of injuries.”.**

## Background

1. The definition of healthcare workers (HCWs) should not include cleaners and porters, administrative personnel or students, because the first two groups have not direct contact with patients and the latter (students) are not yet “professionals”.

**We thank the expert reviewer for this comment. We have amended the definition of healthcare workers (HCWs) correspondingly. Now the paragraph reads as “Healthcare workers (HCWs) is an umbrella term, which includes "all people engaged in the promotion, protection or improvement of the health of the population", that is to say a variety of different figures, ranging from medical doctors (like specialists, pediatricians, general practitioners), to midwives and nurses, other health allied professionals, central supply workers and technicians, as well as residents.[2-4]”.**

2. References – Most of the references that support the statements in the Background are missing (e.g., p.6, lines 29-30; p.7, lines 40-51; p.8, lines 18-22) or refer to the literature in Italy. The arguments might be strengthened if they would have supported by the international literature.

**We thank the expert reviewer for this observation. We have strengthened the arguments and statements made in the Background section adding references, with a special focus on the international literature.**

3. Language – It is obvious that English language is not the authors’ first language. Assistance from a native speaker would clarify the manuscript.

**We thank the expert reviewer for this comment. We have been assisted by a native speaker in order to clarify the manuscript.**

## Methods

1. Study design – Throughout the paper, the authors describe the study design as a scoping review. However, at the end of page 9 (lines 32-35), the authors refer to the scoping review as “the first step” that will be followed by “further developed by in-depth systematic reviews and/or meta-analysis”. This statement needs clarification.

**We thank the expert reviewer for this comment. We have clarified as requested. We have added this paragraph “The study aim will be to map the extant literature concerning injury rate among HCWs in Western countries and their determinants. As such, the main “end product ... [will be] ... a narrative presentation, with minimal or limited statistical information”.<sup>43</sup> Secondary**

**objective will be to verify the feasibility of performing systematic review(s) and meta-analysis". Furthermore, a scoping review "can be undertaken as stand-alone projects in their own right, especially where an area is complex or has not been reviewed comprehensively before"<sup>42</sup> or can be "the first step in a larger endeavor".**

2. Research questions need to precede study objectives (p. 9).

**We thank the expert reviewer for this comment. We have moved research questions before study objectives, as requested.**

3. Inclusion/exclusion criteria are usually pre-determined in both scoping and systematic reviews. A preliminary literature search on the topic of interest assists authors to clarify their inclusion/exclusion criteria (p.10, lines 48-56).

**We thank the expert reviewer for this comment. We have better clarified this point. We have added the following sentence "We have carried out a preliminary literature search on the topic of interest in order to clarify inclusion/exclusion criteria".**

4. Study screening and selection – Usually a pair of reviewers independently screens each potentially relevant publications. It is confusing that seven (7) reviewers will screen the publications and an eighth one will be involved for the final decision in case of disagreement (p.10, lines 9-13).

**We agree with the expert reviewer. We have modified accordingly.**

5. Kappa ( $\kappa$ ) statistic is used for inter-rater reliability; not for assessing disagreements (p. 11, lines 12-15).

**We thank the expert reviewer for this comment. We have amended accordingly. Now the sentence reads "The inter-rater agreement will be assessed using  $\kappa$  statistics and will be resolved through discussion".**

6. Appraisal of study quality – The main difference between systematic and scoping reviews is the lack/absence of quality assessment in the latter (p.11, lines 31-39).

**We thank the expert reviewer for this comment. We have clarified this difference between systematic and scoping review. We have added that "In the drafting of the scoping review, we will not critically appraise the methodological quality or risk of bias of included articles, whereas this will be done in the next steps, once verified the feasibility of performing systematic review(s) and meta-analysis".**

The paragraph between lines 39-42 is unclear; further elaboration may help to clarify it.

**We thank the expert reviewer for this comment. We have further elaborated on it and clarified it.**

Also, the paragraph between lines 44-51) need clarification. Who are these VM and PD referees? Why are they needed to resolve disagreements among seven reviewers?

**We thank the expert reviewer for this observation. We have better clarified this point and amended the text accordingly, as requested. Now the paragraph reads "Two reviewers are contents experts (GD, AT) and one reviewer (NLB) is an experienced biostatistician/epidemiologist. The contents experts will only assess potential publications with respect to the appropriateness of the research questions tested. The biostatistician will only evaluate the appropriateness of methods employed. Disagreements will be resolved by consensus or involving VM and PD (mentors and supervisors of the scientific research project), who will act as final referees".**

7. Statistical analysis (on p.11, lines 53-57 and p.12, lines 3-11) – This section is completely confusing. A scoping review cannot be followed by systematic review and/or meta-analysis; at least not within the same study.

**We thank the expert reviewer for this comment. We have further elaborated on it and clarified it, specifying that once verified the feasibility and the cost of performing a systematic review and meta-analysis.**

Discussion A scoping review is not a secondary data analysis (p.13, lines 3-6); it is a stand-alone study.

**We thank the expert reviewer for this comment. We acknowledge that the word secondary may be misleading and we have replaced it, as requested. Concerning the “stand-alone study”, as stated by different scholars, a scoping review can be a stand-alone work or can be a step within a broader effort.**

Overall, the protocol is well written.

**We thanks the expert reviewer for the appreciation of our manuscript.**

**Reviewer: 3**

Reviewer Name: Kim Jonas

Institution and Country: South African Medical Research Council, South Africa

Please state any competing interests or state ‘None declared’: None declared

Please leave your comments for the authors below

I read this protocol with much interest, healthcare workers are faced with a lot of injuries on a daily basis and their health and well-being is not always prioritised. This scoping review should be a very important review to put the magnitude of healthcare workers injuries into perspective and draw attention to the health systems to protect/prevent and put measures to minimise the injury rates.

**We thanks the expert reviewer for the appreciation of our manuscript.**

I have a few questions for the reviewers though:

1. I see you have no language restriction, does that mean you have the full complement of Western languages amongst you? if not, how you planning on going about the languages you have limitations on??

**We confirm that we planned our scoping review without language restriction, i.e. having the full complement of Western languages. We have better clarified and discussed this issue in the article.**

2. in you abstract you say PROSPERO does not accept registration of scoping reviews, but on page 10 you say the protocol has been submitted to PROSPERO...? that is confusing, i guess you can state that currently there is not "registry" for scoping review protocols as PROSPERO does not accept them.. just a suggestion.

**We thank the expert reviewer for this comment. We have amended accordingly. Now the sentence reads “However, despite the recommendation of these guidelines, it was not possible to register the scoping review protocol in the International Prospective Register of Systematic Reviews (PROSPERO),<sup>48</sup> in that it, currently, does not accept scoping review protocols”.**

3. page 7, line 29: it should read "...at least one time..."

**We thank the expert reviewer for this comment. We have amended accordingly.**

line 55: it is post-traumatic stress disorder (PTSD)

**We thank the expert reviewer for this comment. We have corrected “post-traumatic disorder stress” in “post-traumatic stress disorder (PTSD)” and amended accordingly.**

4. You need to mention your review questions quite sooner in your manuscript. under your methods (page 8, line 38) you refer to the research questions, but you have not stipulated them yet, so as a reader, i immediately which research questions????

**We have amended as requested.**

5. i think you have misspelled "extant".. are you not referring to the "extent" of literature...?

**We thank the expert reviewer for this observation. We have replaced accordingly with “existing”, as requested.**

6. page 9, line 55: please insert "by" before carrying out...

**We thank the expert reviewer for this comment. We have inserted “by” before “carrying out” as requested.**

7. it s worth noting that perhaps the grammar needs to be checked!

**We thank the expert reviewer for this comment. We have checked the grammar throughout the text.**

8. your main broad review question is too long!!!

**We thank the expert reviewer for this comment. We have amended, as requested.**

9. Please double check that you used the right pronoun in your review questions. E.g, it should read: "what is the incidence/prevalence rate..." instead of which... in fact, all the "which" used in your review questions don't seem appropriate- "what" would be a better choice!

**We thank the expert reviewer for this comment. We have carefully and thoroughly revised and double-checked the grammar throughout our manuscript. We have been assisted by an English native speaker colleague.**

#### VERSION 2 – REVIEW

<b>REVIEWER</b>	Dr. Anastasia Mallidou University of Victoria, British Columbia, Canada
<b>REVIEW RETURNED</b>	29-Sep-2018

<b>GENERAL COMMENTS</b>	<b>Strength and Limitations</b> – Bullet #3: Since this is a protocol of a scoping review, the statement is in exaggeration.  <b>Methods</b> 1. Review questions (page 8, line 49-50): The first sentence is not a research question, but written as a purpose; please revise. Also, “evaluat[ion] of the epidemiology of injuries” is not among the aims of a scoping review; please revise. Actually, in this manuscript, a scoping review’s aim is described differently (see also p.9, lines 35-40).
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	<p>2. Study design –</p> <p>a. In the first paragraph, the steps of a scoping review are nicely described. I was wondering (and expecting to read as a reviewer) if the authors could analytically and briefly describe each one of them in the next sections.</p> <p>b. On page 10 (lines 11-12), again a “critical appraise” of the literature is mentioned. According to Arksey &amp; O’Malley’s (2005) article, there is not such a step in a scoping review (please see pp. 21-22 in their original article).</p> <p>3. Data sources and search strategy (p.10, lines 52-55 &amp; p.11, lines 3-5): This paragraph is confusing; it is not clear if the authors have set or not inclusion/exclusion criteria a priori/preliminary or will do so post hoc. What are the inclusion/exclusion criteria for this scoping review?</p> <p>4. Study screening and selection (p.11, lines 35-37): it is still confusing the statement “no language filter/restrain”. Do the authors mean that members of their research team are fluent in all Western languages? What are the “Western languages”? For example, is Latvian included in them, since Latvia is part of the EU now? An explanatory paragraph could answer those questions.</p> <p>5. Appraisal of study quality (pp.11-12) –</p> <p>a. In the first paragraph, it is stated “we will not critically appraise the methodological quality”. Next, the authors describe quality assessment tools and their use in a future systematic review and meta-analysis... However, this is the protocol of a scoping review! Another protocol about the systematic review and meta-analysis is needed, if they perform any in the future. I would recommend removing this section. Instead, the authors can describe all six steps of a scoping review as they are referred in the Arksey &amp; O’Malley’s (2005) article.</p> <p>b. Biostatistician/epidemiologist (p.12, lines 3-4): Do the authors need one for a scoping review? Instead, I would strongly recommend a librarian with expertise in systematic literature searches, who would be more appropriate and useful to include in their research team.</p> <p>6. Statistical analysis; Heterogeneity and sensitivity analysis; Publication bias; and Confidence in cumulative evidence: All four sections refer to a future systematic review and metaanalysis; I would recommend removing them from this protocol of a scoping review.</p> <p>7. Discussion –</p> <p>a. This section is not well developed. More information is needed on the topic of this proposed scoping review based on the literature.</p> <p>b. Implications: Wording about “planned subsequent systematic review(s) with metaanalysis” and “rigorous analytical” (p.13, lines 25-26) should be removed.</p> <p>c. Ethics and dissemination: These are two distinct areas for discussion and could be developed separately. Especially dissemination needs to be well-developed about the authors’ future plan to disseminate this scoping review findings. Also, wording about planned systematic review(s) with meta-analysis should be removed.</p> <p>d. Limitations and strengths of the proposed study need to be described.</p>
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## VERSION 2 – AUTHOR RESPONSE

### Reviewer: 2

Reviewer Name: Dr. Anastasia Mallidou

Institution and Country: University of Victoria, British Columbia, Canada

Please state any competing interests or state 'None declared': None declared

Please see feedback in the attached document. Please find next some suggestions for further improving the manuscript.

**We thank the expert reviewer for the precious feedbacks on our manuscript.**

Strength and Limitations – Bullet #3: Since this is a protocol of a scoping review, the statement is in exaggeration.

**We have revised the bullet point, as requested. We have replaced bullet #3 with “A further strength is the lack of any language filter”.**

Methods

1. Review questions (page 8, line 49-50): The first sentence is not a research question, but written as a purpose; please revise. Also, “evaluat[ion] of the epidemiology of injuries” is not among the aims of a scoping review; please revise. Actually, in this manuscript, a scoping review’s aim is described differently (see also p.9, lines 35-40).

**We thank the expert reviewer for this comment. We have carefully revised as requested. More in detail we have rephrased the purpose as review question, as recommended: “The review questions are: i) What is the incidence/prevalence rate of injuries among HCWs in Western countries? ii) What are the determinants of injuries among HCWs in Western countries? iii) What is the type of injury most commonly occurring among HCWs in Western countries? iv) Among the different professional figures within the umbrella term of HCWs, which one(s) is/are the most affected by injuries in Western countries? v) What is the burden imposed by injuries among HCWs in terms of related disabilities, residual working capability, absence from work and generated direct/indirect costs? vi) What are the state-of-art preventive measures that can be adopted in order to effectively reduce injuries among HCWs in Western countries?”**

2. Study design –

a. In the first paragraph, the steps of a scoping review are nicely described. I was wondering (and expecting to read as a reviewer) if the authors could analytically and briefly describe each one of them in the next sections.

**We thank the expert reviewer for this observation. We have added sections/paragraphs better describing the steps of the scoping review in a brief and analytical fashion.**

b. On page 10 (lines 11-12), again a “critical appraise” of the literature is mentioned. According to Arksey & O’Malley’s (2005) article, there is not such a step in a scoping review (please see pp. 21-22 in their original article).

**We thank the expert reviewer for this comment. The reference to a “critical appraise” of the literature has been removed, as requested.**

3. Data sources and search strategy (p.10, lines 52-55 & p.11, lines 3-5): This paragraph is confusing; it is not clear if the authors have set or not inclusion/exclusion criteria a priori/preliminary or will do so post hoc. What are the inclusion/exclusion criteria for this scoping review?

**We thank the expert reviewer for this observation. We have better specified and clarified inclusion/exclusion criteria.**

4. Study screening and selection (p.11, lines 35-37): it is still confusing the statement “no language filter/restrain”. Do the authors mean that members of their research team are fluent in all Western languages? What are the “Western languages”? For example, is Latvian included in them, since Latvia is part of the EU now? An explanatory paragraph could answer those questions.

**We thank the expert reviewer for this comment. We have better clarified this point, adding that “Included non-English articles will be acquired in full-text and translated by expert translators with expertise in the field of medicine and related health-allied disciplines”. See also reply to editorial comment. Furthermore, we would like to emphasize that Cochrane suggests “not [to] exclude research articles on the basis of the language they are published in”.**

5. Appraisal of study quality (pp.11-12) –

a. In the first paragraph, it is stated “we will not critically appraise the methodological quality”. Next, the authors describe quality assessment tools and their use in a future systematic review and meta-analysis... However, this is the protocol of a scoping review! Another protocol about the systematic review and meta-analysis is needed, if they perform any in the future. I would recommend removing this section. Instead, the authors can describe all six steps of a scoping review as they are referred in the Arksey & O'Malley's (2005) article.

**We have removed any reference to systematic review and meta-analysis, as recommended.**

b. Biostatistician/epidemiologist (p.12, lines 3-4): Do the authors need one for a scoping review? Instead, I would strongly recommend a librarian with expertise in systematic literature searches, who would be more appropriate and useful to include in their research team.

**We thank this expert reviewer for this observation. We have added, as recommended, a librarian with expertise in systematic literature searches.**

6. Statistical analysis; Heterogeneity and sensitivity analysis; Publication bias; and Confidence in cumulative evidence: All four sections refer to a future systematic review and metaanalysis; I would recommend removing them from this protocol of a scoping review.

**We agree with the expert reviewer. We have removed those sections.**

7. Discussion –

a. This section is not well developed. More information is needed on the topic of this proposed scoping review based on the literature.

**We have better developed the discussion section, as requested.**

b. Implications: Wording about “planned subsequent systematic review(s) with meta-analysis” and “rigorous analytical” (p.13, lines 25-26) should be removed.

**We agree with the expert reviewer. We have removed wording about “planned subsequent systematic review(s) with meta-analysis”.**

c. Ethics and dissemination: These are two distinct areas for discussion and could be developed separately. Especially dissemination needs to be well-developed about the authors' future plan to disseminate this scoping review findings. Also, wording about planned systematic review(s) with meta-analysis should be removed.

**We have split the section as requested. Furthermore, we have removed wording about planned systematic review(s) with meta-analysis, as recommended. Now dissemination section reads as “The findings of the scoping review will be submitted to peer-reviewed journals for potential publication(s) and will be the object of ad hoc oral/poster communications in relevant national/international scientific congresses, and conferences. Often, knowledge synthesis studies develop and provide recommendations based on the results obtained. We will not be able to provide any recommendations, since the selected studies will not be critically and formally appraised for methodological quality. However, we will able to develop recommendations for future research on injuries among HCWs, their burden and their prevention. The findings of this scoping review could be used to guide the education of HCWs (for example, to inform the development and implementation of courses for continuous medical learning). and the health policy- and decision-making process”.**

d. Limitations and strengths of the proposed study need to be described.

**We thank the expert reviewer for this insightful comment. We have added a section, better outlining and specifying limitations and strengths of the proposed study, as requested. We have specified that “However, we have to anticipate also some shortcomings. The major limitation concerns time filter, which, on the other hand, enables a direct comparison of the findings with the epidemiological figures available at national and local INAIL centers. Moreover, as the process of scoping reviews does not include a formal critical quality assessment and appraisal of included studies, reported findings may lack confidence and validity”.**

### VERSION 3 – REVIEW

<b>REVIEWER</b>	Anastasia Mallidou University of Victoria, BC Canada
<b>REVIEW RETURNED</b>	21-Oct-2018

<b>GENERAL COMMENTS</b>	<p>Abstract The study design is a scoping review. Using the PRISMA guidelines is not appropriate. The acronym PICO (not PECO) stands for Population, Intervention or phenomenon of Interest, Context, Outcome.</p> <p>Strengths and limitations of the study</p> <ul style="list-style-type: none"> <li>• What do the authors mean “a comprehensive and broad review of studies”? If there is none in Western Countries (?), is there any in any other part of the world?</li> <li>• “lack of any language filter” is not a strength.</li> <li>• What is the “time filter”? It is unclear.</li> </ul> <p>Purpose and Objectives</p> <ul style="list-style-type: none"> <li>• The purpose of a study is usually written before the Methods section.</li> <li>• The aim/purpose should be written before the objectives.</li> <li>• The quotation (p.50, lines: 21-22) does not make sense.</li> </ul> <p>Methods</p> <ol style="list-style-type: none"> <li>1. Review title is not necessary; actually, it does not provide any information.</li> </ol>
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	<p>2. On page 9, the last paragraph is not relevant to a protocol (instructive).</p> <p>3. The first sentence of the section “Drafting and registration of the study protocol (p.10) is unclear; it needs revision. The last sentence of this section refers to results; too early to describe the results of the study.</p> <p>4. The preliminary literature review should be described in more details and before the main literature review based on a certain search strategy.</p> <p>5. The role of three authors is described in the section “Study selection” (p.11); what are the roles for other included in the authorship?</p> <p>6. Inclusion/exclusion criteria for the selection of the primary studies are general and broad. Time filter is not included. The bullet that refers to “Languages” is still unclear. For example, if “all complement of Western languages available”(?), then why the “non-English articles ...acquired in full-text and translated by expert translators”?</p> <p>7. Overall, the organization of the manuscript is still confusing. The authors did not explain all the previous reviewer questions.</p> <p>Discussion</p> <p>1. This section is not well developed. More information is needed based on the literature.</p> <p>2. On page 13, recommendations are too early to be discussed.</p>
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### VERSION 3 – AUTHOR RESPONSE

Reviewer: 2

Reviewer Name: Anastasia Mallidou

Institution and Country: University of Victoria, BC Canada

Please state any competing interests or state ‘None declared’: None declared

Abstract

The study design is a scoping review. Using the PRISMA guidelines is not appropriate.

**We thank the reviewer for this expert comment. We have replaced PRISMA with PRISMA – Protocols (PRISMA – P).**

The acronym PICO (not PECO) stands for Population, Intervention or phenomenon of Interest, Context, Outcome.

**We thank the reviewer for this expert comment. We have replaced PECO with PICO, as requested.**

Strengths and limitations of the study

- What do the authors mean “a comprehensive and broad review of studies”? If there is none in Western Countries (?), is there any in any other part of the world?

**We thank the reviewer for this expert comment. We have clarified this issue and modified accordingly the text.**

- “lack of any language filter” is not a strength.

**We thank the reviewer for this valuable insight. We have removed this bullet point from the text.**

- What is the “time filter”? It is unclear.

**We thank the reviewer for this observation. We have further clarified this issue and we have added that studies published between 2000 and 2018 have been included.**

Purpose and Objectives

- The purpose of a study is usually written before the Methods section.

**We thank the reviewer for this valuable comment. We have moved the purpose section before the methods section. We have also looked at already published scoping review protocols in BMJ Open to better address this issue, properly adhering to the format of the journal.**

- The aim/purpose should be written before the objectives.

**We thank the reviewer for this observation. We have moved the aim/purpose section before the objectives section, as requested.**

- The quotation (p.50, lines: 21-22) does not make sense.

**We agree with the expert reviewer. We have removed the quotation from the text.**

Methods

1. Review title is not necessary; actually, it does not provide any information.

**We thank the expert reviewer for this comment. We have deleted this section.**

2. On page 9, the last paragraph is not relevant to a protocol (instructive).

**We thank the reviewer. We have removed the last paragraph (on page 9), as kindly requested.**

3. The first sentence of the section “Drafting and registration of the study protocol (p.10) is unclear; it needs revision. The last sentence of this section refers to results; too early to describe the results of the study.

**We thank the expert reviewer for this comment. We have revised the first sentence of the section “Drafting and registration of the study protocol” for the sake of clarity. Furthermore, we have removed the last sentence of this section, since it refers to results of the study and is too early to describe them.**

4. The preliminary literature review should be described in more details and before the main literature review based on a certain search strategy.

**We have properly moved the section referring to the preliminary literature review before the main literature review based on a certain search strategy. Furthermore, we have implemented the section concerning the preliminary literature review, providing more details related to the step approach. “The identification of relevant studies will follow the three-step process recommended by the JBI: namely, i) first step or preliminary search conducted at least on two databases, ii) preparation of a list of search terms and words to guide the subsequent process and run of the search on a larger number of databases using previously identified keywords, and iii) eventual additional searches (cross-checking/cross-referencing of reference lists of potentially eligible studies, hand-searching in target journals relevant to the topic, etc.). Preliminary literature search We have carried out a preliminary literature search on the topic of**

interest in order to preliminarily clarify inclusion/exclusion criteria. After familiarizing with the literature, we could further implement/expand and/or modify/refine the targeted search strategy, with the help of an expert and qualified research librarian. The preliminary literature search was undertaken for two widely used scholarly databases (PubMed/MEDLINE and Scopus), using “healthcare injuries” as keywords and adopting the time filter, resulting in 27,844 and 139,073 studies, respectively. In the second step, the research team has inspected titles and abstracts of potentially relevant articles and has prepared a list of pertinent words and index terms to inform the subsequent search strategy process. Structured search strategy Based on the previously prepared list of key terms, a systematic literature search will be performed in several scholarly database, including PubMed/MEDLINE (NLM), Scopus, SciVerse ScienceDirect, Science Citation Index Expanded (SCIE) and Social Sciences Citation Index (SSCI) from the ISI/Web of Science (WoS), ProQuest Research Library, ABI/INFORM, CBCA, via the UNO per TUTTI Primo Central (Ex Libris) platform databases”.

5. The role of three authors is described in the section “Study selection” (p.11); what are the roles for other included in the authorship?

**We thank the reviewer for this observation. We have detailed the role of the other members included in the authorship of the present paper.**

6. Inclusion/exclusion criteria for the selection of the primary studies are general and broad. Time filter is not included.

**We thank the reviewer for this comment. We have now included time filter and we have further specified inclusion/exclusion criteria for the selection of the primary studies.**

The bullet that refers to “Languages” is still unclear. For example, if “all complement of Western languages available”(?), then why the “non-English articles ...acquired in full-text and translated by expert translators”?

**We thank the reviewer for this insight. We have removed “all complement of Western languages available” (which sounded misleading) and we have further clarified this issue in the text, specifying that the full-text of included articles not written in English will be acquired and translated by language experts of University of Genoa.**

7. Overall, the organization of the manuscript is still confusing. The authors did not explain all the previous reviewer questions.

**We thank the reviewer for this comment. We have extensively addressed all the previous reviewer questions. We have described the different stages of the planned scoping review, as requested.**

Discussion

1. This section is not well developed. More information is needed based on the literature.

**We thank the reviewer for this comment. We have further developed and improved the discussion section, based on the literature and providing more information, as requested.**

2. On page 13, recommendations are too early to be discussed.

**We thank the reviewer for this observation. We have removed this point.**