

## PEER REVIEW HISTORY

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### ARTICLE DETAILS

<b>TITLE (PROVISIONAL)</b>	Preventing avoidable incidents leading to a presentation to the emergency department (ED) by older adults with cognitive impairment: Protocol for a scoping review
<b>AUTHORS</b>	Provencher, Véronique; Généreux, Mélissa; Gagnon-Roy, Mireille; Veillette, Nathalie; Egan, Mary; Sirois, Marie-Josée; Lacasse, Francis; Rose, Kathy; Stocco, Stéphanie

### VERSION 1 - REVIEW

<b>REVIEWER</b>	Anne Laybourne City University London, UK
<b>REVIEW RETURNED</b>	22-Sep-2015

<b>GENERAL COMMENTS</b>	<p>1. Is the research question or study objective clearly defined? Yes. The authors state that the aim of the study is to synthesise knowledge on avoidable incidents that lead to an ED visit by older people, the circumstances of the incident, and prevention strategies that promote safe and healthy environments and behaviours in older people. Four research questions are outlined. It is unclear how the second research question is to be answered. I personally think it is a bit of a meaningless question – who is ‘we’? Against what criteria is more or less frequent going to be measured – nationally? Is more accuracy possible about what an ED visit means? For example, do the authors mean ED admission or visits of more than 4 hours/similar national-level marker of ED presentation? From the UK perspective, “presentation to ED” would be more acceptable terminology than ED visit.</p> <p>2. Is the abstract accurate, balanced and complete? I feel what is lacking from the abstract introduction is a better definition of avoidable incidents – who is defining this incidents as avoidable? Self-report? Health care professional? This is a problem for me for the article itself and so the abstract reflects this. Given that avoidable incidents are the primary focus of this review, I think a definition and not just examples in parentheses is needed. I do recognise that word count is a challenge in an abstract but if the introduction was little more focused, an expansion around what avoidable incidents means might be accommodated. There is a spelling mistake in the introduction section (‘synthesize’ should read ‘synthesise’ presumably). I would like to see key words reported and inclusion criteria in the methods section of the abstract – there are no findings to report so the key information here is telling the reader what you intend to do. In the discussion/dissemination is where I most feel a rather unbalanced feel comes into it. I think it is over-claiming that this scoping review will be used by public health stakeholders (given what we know about healthcare professionals’ use of evidence) to implement interventions promoting safe and healthy environments</p>
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	<p>and behaviours. I agree with the strengths reported in the abstract. I feel the first limitation point is a little meaningless – do the authors not have a sense of the literature? What is meant by “an efficient research process”? Do you mean too few or too many articles to allow the protocol to be followed? Or to be able to make any kind of statement from the findings? This needs made clearer. Furthermore, the main limitation (to my mind) is the availability of data to answer the questions posed by this study – this needs mentioned.</p> <p>3. Is the study design appropriate to answer the research question?  I need convinced that a scoping review of the literature is the right study design to meet the study aim. A deeper justification of the review method would be helpful, including discussion around the type of review chosen as opposed to a systematic, realist or narrative review method.  More importantly, a convincing argument is lacking that the data needed to answer the study’s research questions will be found in the literature. The preliminary work reported in the appendix does not seem to address this – more, this shows interesting studies but does not convince me that data on visit circumstance (in bathroom) for example are routinely reported in scientific studies of older peoples’ ED presentation – in the UK, ED data are problematic.  In fact, primary data collection or audit data seem to me more appropriate to answer the research questions. What are the authors’ thoughts? I realise this is already a funded study but the published protocol has to make me think that this is the correct methodology! Again, the point about the data being available (ie collected and reported adequately) needs to be discussed in terms of the review design selected to answer the research questions.</p> <p>4. Are the methods described sufficiently to allow the study to be repeated?  This is a particular strength of this study protocol. Although I am not convinced by the selected study design, the review method that has been chosen has been described well and could be repeated. In particular, the search strategy is well presented.  Presumably the research questions are already decided because this is the protocol of an already-funded study? Therefore, the section “stage 1: identifying the research question” is redundant. What this section could do is describe the process that was taken to develop the research questions are they are stated here – unless authors already feel the introduction makes the case enough.  The process of including/excluding studies is less clear. The inclusion criteria, “visiting the ED as a result of an avoidable incident” – who is defining whether or not the incident was avoidable? The original study being reviewed? Do the current study authors have criteria for what makes an incident avoidable? The circumstances of an incident may have been avoidable for one person may not for another on account of personal attributes, social determinants etc.  It would be helpful to have a separate analysis section, mapped onto the type of data, beyond the mention in table 2. Table 2 could be more detailed and have some example data inputted to demonstrate methods. Will researchers write “falls” if this is detected in the reviewed studies? Do researchers expect raw data to be reported in studies to be reviewed?</p> <p>5. Are research ethics addressed appropriately?</p>
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	<p>Not applicable to a scoping review.</p> <p>6. Are the outcomes clearly defined? The outcomes of this scoping review are not clearly described in the article. It would be helpful because I am still unclear about what your outcomes and outputs will look like. And how will outcomes match the research questions?</p> <p>7. If statistics are used are they appropriate and described fully? The description of the methods for content analysis needs expanded. I am not convinced from what is written here that there is full understanding of content analysis. I think that a reviewer experienced in content analysis should also review this protocol. I am not qualified to comment on the methods described here. To my mind, the methods have been well described and clearly the team have two experts (librarians) engaged with this work. But I cannot comment on the accuracy of the review methods.</p> <p>8. Are the references up to date and appropriate? To my knowledge, they are appropriate. They are up-to-date and complete in the text.</p> <p>9. Do the results address the research question or objective? Although results are not quoted here, the proposed methods to meet each research question are not well described. For example, my issue with research question 2. And also research question 4 – how do the authors propose to assess whether or not an incident resulting in an older person presenting to the ED could have been avoided by “safe and healthy environments or behaviours”?</p> <p>10. Are the results presented clearly? Not applicable to this protocol paper. But the tools by which some of the findings will be captured are included, for example table 2, the charting table. Although not clear in the paper, and it should be made clear, I deduce from table 2 that research question 1 will be answered using frequency analysis, research question 2 will be answered using a combination of frequency and narrative content analysis, and research question 3 will be answered using narrative content analysis. There is inadequate description of proposed analysis methods.</p> <p>11. Are the discussion and conclusions justified by the results? There is a good discussion of the skill mix of the research team for this study. I think the dissemination claims are a little extreme for a scoping review – in particular clinicians using the knowledge generated from this review when at the same time, there is a claim made that a systematic review might be required following this review. Further, no comment is made on knowledge being used by clinicians or indeed any of the other stakeholders. This review proposes to provide some synthesised knowledge on the incidents causing ED visitation by older people with cognitive impairment and circumstances surrounding the incident. It is a big leap to make between these data and changing clinical practice!</p> <p>12. Are the study limitation discussed adequately? I think that saying a limitation may be too many or too few results is a limitation of the study is a little meaningless. Is it not standard practice that the search strategy would evolve depending on the results? How would changes be justified to make this a feasible review if the hits are too many? I would think the research team</p>
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	<p>should have a reasonably refined idea of whether they are going to get lots of hits or not. I suspect that data will not be available. This limitation is not discussed at all. I need convincing that data are routinely reported in the scientific literature that can be captured by this review.</p> <p>13. Is the supplementary reporting complete? N/A</p> <p>14. To the best of your knowledge, is the paper free from concerns over publication ethics? Yes.</p> <p>15. Is the standard of written English acceptable for publication? Yes</p>
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<b>REVIEWER</b>	Jane E. Mahoney, MD Department of Medicine, University of Wisconsin School of Medicine and Public Health, Madison, WI US
<b>REVIEW RETURNED</b>	23-Sep-2015

<b>GENERAL COMMENTS</b>	<p>The proposed scoping review described in the article will be of value to the field. The methodology is sound but in some important areas lacks specificity.</p> <p>1. Introduction, line 15: There are many fall prevention programs. I would delete reference to a specific program given the plethora of programs. Line 25: "Must" should be changed to "should" The introduction should specify that the scope of work pertains to community-dwelling seniors.</p> <p>2. Methodology and Analysis: Page 5: The target group of older adults should be specified right up front in Stage 1 (i.e. target group is community-dwelling older adults) Page 5: Incident and avoidable incident are well defined. It should be noted that avoidable incidents definition leaves out crucially important and possibly dementia-related incidents like hypo or hyperglycemia, electrolyte disorder, and medication adverse event related to inadvertent overdose (such as too much digoxin, too much warfarin). If not being included in the review, this should be mentioned as a limitation in the limitation section. Page 7: Stage 3, selecting the studies: Please define "intermediate resource" and "care homes" as these are not universal names. Please address how you will handle information from sources that do not specify living situation (community vs assisted living vs nursing home). US ER data does not specify living location prior to ER visit. Similarly, please address how you will handle sources if they do not categorize cognition.</p> <p>Stage 4, charting the data: The paper needs further explanation regarding how data will be collected regarding preventive measures which may be implemented. This seems very subjective. How will know if a</p>
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	<p>preventive measure is not charted in a medical record that it was not done, versus just not charted.</p> <p>Line 45. The authors state measures of study quality are not needed given the method and the purpose of this project. Please explain.</p> <p>Lines 52-60. The methodology for the first 5-10 included articles is described. What will be done after the first 5-10?</p> <p>Page 8</p> <p>If data is available on whether or not a person lived alone, that would be valuable to include in abstraction.</p> <p>3. Limitations, Page 12:  Lines 37-40: The sentence beginning "In order to facilitate data analysis..." is unclear. Do you mean the research team will only include articles that have a clear definition that meets the definition conceptualized by the research team?  Please see comments for #2, Methodology, above, for additional potential limitations that should be added to the limitations section. (eg dementia-related incidents that may not be covered by the authors' definition of avoidable incidents; ambiguity of data regarding living location prior to ER visit; incomplete data regarding cognitive status of ER patients; poor data quality regarding "preventative measures which may be implemented".</p>
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### VERSION 1 – AUTHOR RESPONSE

Reviewer Name: Jane E. Mahoney, MD

#### 1. Introduction

Line 15: There are many fall prevention programs. I would delete reference to a specific program given the plethora of programs.

RESPONSE: Reference to specific prevention programs has been deleted in the text (page 4, line 21)  
Line 25: "Must" should be changed to "should". The introduction should specify that the scope of work pertains to community-dwelling seniors.

RESPONSE: "Must" has been changed to "should" (page 4, line 28). Changes have been made to the abstract (page 2, line 39-40) and the introduction (page 4, line 22) to specify the population (community-dwelling elders).

#### 2. Methodology and Analysis:

Page 5: The target group of older adults should be specified right up front in Stage 1 (i.e. target group is community-dwelling older adults)

RESPONSE: Changes have been made to the research question in order to specify the target group (page 5, line 51-52).

Page 5: Incident and avoidable incident are well defined. It should be noted that avoidable incidents definition leaves out crucially important and possibly dementia-related incidents like hypo or hyperglycemia, electrolyte disorder, and medication adverse event related to inadvertent overdose (such as too much digoxin, too much warfarin). If not being included in the review, this should be mentioned as a limitation in the limitation section.

RESPONSE: Some details have been added to "avoidable incidents", as the WHO international classification disease (ICD-10) includes inadvertent overdose of medication (page 6, line 33-34).

Exclusion of some incidents has been added to the limitations and strength of the article (page 3, line

37-39 and page 14, lines 13-19):

“ Third, some possibly dementia-related incidents (such as hypoglycaemia/hyperglycaemia) may have been excluded from the scoping review as they are not included in the definition of “avoidable” incidents, based on the classification retained, even if they may be problematic with a cognitively impaired population. “

Page 7: Stage 3, selecting the studies: Please define "intermediate resource" and "care homes" as these are not universal names. Please address how you will handle information from sources that do not specify living situation (community vs assisted living vs nursing home). US ER data does not specify living location prior to ER visit.

Similarly, please address how you will handle sources if they do not categorize cognition.

RESPONSE: Changes have been made to the Methodology and analysis (Stage 3) to clarify examples of community-based seniors' living environments (page 8, lines 21-24):

“ 2) living in the community (domicile, private residence, senior housing or other structured environments offering, through community-based services, more or less support to older adults to perform their daily life activities.”

A limitation has been added about the possibility that sources do not specify living environment or cognitive status, and information has been added about how it will be handle (page 13, lines 43-47):  
“Second, some information about inclusion criteria may be lacking, such as whether older adults lived in the community or are cognitively impaired. These sources of data may be retained if they are perceived as relevant by all evaluators, but the missing information will be taken into account in the analysis performed. “

Stage 4, charting the data: The paper needs further explanation regarding how data will be collected regarding preventive measures which may be implemented. This seems very subjective. How will know if a preventive measure is not charted in a medical record that it was not done, versus just not charted.

RESPONSE: Changes have been made to the Methodology and analysis (Stage 4) (page 8, lines 47-52) and in the table 2 (page 10, lines 11-15) in order to specify the scope of this study concerning the preventive measures:

“3) Preventive measures which may be implemented, based on evidence about formal programs or interventions designed to prevent avoidable injuries and relevant for the older adults with cognitive impairment. In this study, data pertaining to preventive measures are included in an exploratory perspective since the study aims to recognize potential preventive measures to be implemented with this specific population. “

Line 45. The authors state measures of study quality are not needed given the method and the purpose of this project. Please explain.

RESPONSE: One explanation (and references) has been added to the Methodology and analysis in order to specify that measures of study quality is not necessary in scoping reviews (page 5, lines 34-37):

“ This methodology differs from other reviews as it may include a large variety of study designs and does not require assessment of the study quality [14, 15]. ”

Lines 52-60. The methodology for the first 5-10 included articles is described. What will be done after the first 5-10?

RESPONSE: Information has been added to the Methodology and analysis (page 9, line 23) to specify how it will be done after the first articles:

“ This process will ensure high interrater reliability throughout data charting by one of the research assistant (MGR).”

Page 8: If data is available on whether or not a person lived alone, that would be valuable to include in abstraction.

RESPONSE: Based on the review’s recommendations, changes have been made to the Methodology and analysis (page 9, lines 10-12) and table 2 (page 9, lines 39-41) to add to characteristics of the study population “living status” to the data charting form. Articles that discuss older adults living alone will thus be listed.

“Data pertaining to the selected sources (year of publication, sample, country, types/research design) and the study population (type of housing, living arrangement, cognitive status, etc.) will be charted (see table 2).”

### 3. Limitations:

Page 12: Lines 37-40: The sentence beginning "In order to facilitate data analysis..." is unclear. Do you mean the research team will only include articles that have a clear definition that meets the definition conceptualized by the research team?

RESPONSE: Changes have been made the Limitations (page 14, lines 23-24) in order to clarify the process:

“ In order to facilitate data analysis, the way each study defines or measures “cognitive impairment” will be well detailed when collating data. ”

Please see comments for #2, Methodology, above, for additional potential limitations that should be added to the limitations section. (e.g. dementia-related incidents that may not be covered by the authors' definition of avoidable incidents; ambiguity of data regarding living location prior to ER visit; incomplete data regarding cognitive status of ER patients; poor data quality regarding "preventative measures which may be implemented".

RESPONSE: Changes have been made to the limitations to add those proposed above (page 13-14):

“Second, some information about inclusion criteria may be lacking, such as whether older adults lived in the community or are cognitively impaired. These sources of data may be retained if they are perceived as relevant by all evaluators, but the missing information will be taken into account in the analysis performed.” (page 13, lines 42-47)

“Third, some possibly dementia-related incidents (such as hypoglycaemia/hyperglycaemia ) may have been excluded from the scoping review as they are not included in the definition of “avoidable” incidents, based on the classification retained, even if they may be problematic with a cognitively impaired population.”(page 14, lines 13-19)

“ Fourth, the definition of main concepts may vary (e.g. cognitive impairment). These variations could affect the comparison between the different sources, as one concept may not have the exact same meaning for each source. In order to facilitate data analysis, the way each study defines or measures “cognitive impairment” will be well detailed when collating data. “ (page 14, lines 19-24).

Reviewer: Anne Laybourne

#### 1. Is the research question or study objective clearly defined?

It is unclear how the second research question is to be answered. I personally think it is a bit of a meaningless question – who is ‘we’? Against what criteria is more or less frequent going to be

measured – nationally?

RESPONSE : Changes have been made to the second question (page 6, lines 19-20):

“Are they more or less frequent and serious compared to seniors without cognitive impairment (based on Canadian data sources)?”

Focus on Canadian data sources have also be added in the stage 2 section (page 6-7, lines 48-51 and 9):

“Grey literature (theses, memoirs, acts of congress, governmental or academic publications, and official statistics published by the Canadian Institute for Health Information, the National Ambulatory Care Reporting System and the Canadian Community Health Survey) will also be searched with the main focus on Canadian data sources.”

Is more accuracy possible about what an ED visit means? For example, do the authors mean ED admission or visits of more than 4 hours/similar national-level marker of ED presentation? From the UK perspective, “presentation to ED” would be more acceptable terminology than ED visit.

RESPONSE : We agree with the reviewer’s suggestion. “ED visit” has been changed for “Presentation to the ED” in the text.

2. Is the abstract accurate, balanced and complete?

I feel what is lacking from the abstract introduction is a better definition of avoidable incidents – who is defining this incidents as avoidable? Self-report? Health care professional? This is a problem for me for the article itself and so the abstract reflects this. Given that avoidable incidents are the primary focus of this review, I think a definition and not just examples in parentheses is needed. I do recognise that word count is a challenge in an abstract but if the introduction was little more focused, an expansion around what avoidable incidents means might be accommodated.

RESPONSE : “Avoidable incidents” has been more clearly defined in the abstract, based on the WHO international classification disease (<http://apps.who.int/classifications/icd10/browse/2008/fr>). This information has been added on page 2 (lines 23-24). Research assistants will thus consider “avoidable incidents” the one included in this classification.

“This study aims to synthetise the actual knowledge related to “avoidable” incidents (i.e. traumatic injuries, poisoning and other external causes) (WHO, 2016) leading to ED presentations in older people with cognitive impairment.”

There is a spelling mistake in the introduction section (‘synthetize’ should read ‘synthesise’ presumably).

RESPONSE : The mistake has been corrected.

I would like to see key words reported and inclusion criteria in the methods section of the abstract – there are no findings to report so the key information here is telling the reader what you intend to do.

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RESPONSE : Inclusion criteria have been added to be the abstract (page 2, lines 32-33). However, due to the very large number of keywords used (see table 2), we reported the 4 concepts that guide the search. Due to words constraints, some modifications have been made to the abstracts to shorten sentences.

In the discussion/dissemination is where I most feel a rather unbalanced feel comes into it. I think it is over-claiming that this scoping review will be used by public health stakeholders (given what we know about healthcare professionals’ use of evidence) to implement interventions promoting safe and healthy environments and behaviours.

RESPONSE : The following changes have been made based to the discussion/conclusion based on the review's comment:

"This scoping review will provide a picture of the actual knowledge on the subject and identify knowledge gaps in existing literature to be filled by future primary researches. Findings will help stakeholders to develop programs in order to promote safe and healthy environments and behaviors aimed at reducing avoidable incidents in seniors, especially those with cognitive impairment." Please note that the public health stakeholder is part of the team (second author).

I agree with the strengths reported in the abstract. I feel the first limitation point is a little meaningless – do the authors not have a sense of the literature? What is meant by "an efficient research process"? Do you mean too few or too many articles to allow the protocol to be followed? Or to be able to make any kind of statement from the findings? This needs made clearer. Furthermore, the main limitation (to my mind) is the availability of data to answer the questions posed by this study – this needs mentioned.

RESPONSE : We change the first limitation by the one suggested by the reviewer:  
- Potentially too few data available to answer to some of the research questions.

Even if we agree that availability of data to answer to some of the research questions may be a limitation, it is not incompatible with the aim of a scoping review.

RESPONSE : We thus add to the limitation section (page 13, line 37-43):

"First, included data may be too few to address each research question. However, this possible result is not incompatible with the objectives of conducting a scoping review, because this methodology may help to examine the breadth and depth of actual knowledge on the subject and to identify the knowledge needs to be met by future primary researches."

3. Is the study design appropriate to answer the research question?

I need convinced that a scoping review of the literature is the right study design to meet the study aim. A deeper justification of the review method would be helpful, including discussion around the type of review chosen as opposed to a systematic, realist or narrative review method. More importantly, a convincing argument is lacking that the data needed to answer the study's research questions will be found in the literature. The preliminary work reported in the appendix does not seem to address this – more, this shows interesting studies but does not convince me that data on visit circumstance (in bathroom) for example are routinely reported in scientific studies of older peoples' ED presentation – in the UK, ED data are problematic. In fact, primary data collection or audit data seem to me more appropriate to answer the research questions. What are the authors' thoughts? I realise this is already a funded study but the published protocol has to make me think that this is the correct methodology! Again, the point about the data being available (ie collected and reported adequately) needs to be discussed in terms of the review design selected to answer the research questions.

RESPONSE : To demonstrate the appropriateness of the method selected, we add the following information (page 5, lines 24-41):

"A scoping review will be performed according to the six stages described by Arksey and O'Malley and revisited by Levac et al.[14-15]. Scoping review refers to a preliminary attempt to provide an overview of evidence about a topic to: (a) examine the breadth and depth of actual knowledge on the subject, (b) determine the feasibility to conduct a systematic review (c) synthesize and disseminate research results and/or (d) identify knowledge needs to be met by future primary researches.[14, 15] This methodology differs from other reviews as it may include a large variety of study designs and does not require assessment of the study quality [14, 15]. The selection of this methodology thus appears appropriate to map the extent and range of existing knowledge emerging from various

publication types on avoidable incidents in older adults, especially those with cognitive impairments. To our knowledge, no other scoping review has been performed on this topic.”

We also demonstrate the relevance of the method selected in the discussion (page 14, lines 37-43): “First, included data may be too few to address each research question. However, this possible result is not incompatible with the objectives of conducting a scoping review, because this methodology may help to examine the breadth and depth of actual knowledge on the subject and to identify the knowledge needs to be met by future primary researches.”

Please note that two published scoping reviews with objectives similar to ours have been retrieved, which also support the relevance of the method use:

- Stathokostas, L, Theou, O, D. Little, RM, Vandervoort, AA, Raina, P. Physical Activity-Related Injuries in Older Adults: A Scoping Review. *Sports Med*, 2013; 43, 955-63.
- Masotti, P, McColl, MA, Green, M. Adverse events experienced by homecare patients: a scoping review of the literature. *International Journal for Quality in Health Care*, 2010; 22, 115-25.

We recognize that few data may be available. The scoping review is thus an appropriate method as it aims to “examine the breadth and depth of actual knowledge on the subject”. Still we expected that the following sources such as Canadian Institute for Health Information, du National Ambulatory Care Reporting System and Canadian community health survey may provide information on “circumstances” of incidents. These sources of information have been added to the text (page 6, lines 49-51). Moreover, Massoti et al. (2010) performed a scoping review on “adverse events” and could find data on causes of incidents.

4. Are the methods described sufficiently to allow the study to be repeated?

Presumably the research questions are already decided because this is the protocol of an already-funded study? Therefore, the section “stage 1: identifying the research question” is redundant. What this section could do is describe the process that was taken to develop the research questions are they are stated here – unless authors already feel the introduction makes the case enough.

RESPONSE : As suggested by the reviewer, the process taken to develop the research question has been added (page 5, lines 46-48 and page 6, lines 9-10):

“Preventing avoidable incidents in older adults by promoting safe and healthy environments and behaviours has been identified as one of the main priorities by the Public Health Directory in the province of Quebec (Canada) (...).The following specific research questions were jointly determined by regional decision-makers (MG) and researchers (VP, NV, MJS).”

The process of including/excluding studies is less clear. The inclusion criteria, “visiting the ED as a result of an avoidable incident” – who is defining whether or not the incident was avoidable? The original study being reviewed? Do the current study authors have criteria for what makes an incident avoidable? The circumstances of an incident may have been avoidable for one person may not for another on account of personal attributes social determinants etc.

RESPONSE : Definition of avoidable incident is based on the International Classification of Diseases (ICD-10) from the World Health Organization (2016). The reference has been added and is now clearly stated in the text (page 2, lines 22-26; page 4, lines 15-17; page 6, lines 32-35).

It would be helpful to have a separate analysis section, mapped onto the type of data, beyond the mention in table.

RESPONSE : Some changes have been made and details have been added to the description of proposed analysis methods to ensure adequacy and improve clarity:

“When selected, articles will be carefully analysed in order to chart the data concerning the: (1) type, frequency and severity of incidents, (2) circumstances of incidents (time of the day/year, location, activities the person was engaged in at the time the incident occurred; potential causes for the incident, if available) and (3) preventive measures which may be implemented, based on evidence about formal programs or interventions designed to prevent avoidable injuries and relevant for the older adults with cognitive impairment. In this study, data pertaining to preventive measures are included in an exploratory perspective since the study aims to recognize potential preventive measures to be implemented with this specific population. Data pertaining to the selected sources (year of publication, sample, country, types/research design) and the study population (type of housing, living arrangement, cognitive status, etc.) will be charted (see table 2).”

Table 2 could be more detailed and have some example data inputted to demonstrate methods. Will researchers write “falls” if this is detected in the reviewed studies? Do researchers expect raw data to be reported in studies to be reviewed?

Clarifications have been added to Table 2. Some relevant data on circumstances are expected to be found in grey literature, such in the following published statistics: Canadian Institute for Health Information, du National Ambulatory Care Reporting System and Canadian community health survey. This information has been added on stage 2 (page 6, line 48-51).

5. Are the outcomes clearly defined?

The outcomes of this scoping review are not clearly described in the article. It would be helpful because I am still unclear about what your outcomes and outputs will look like. And how will outcomes match the research questions?

RESPONSE : Expected outcomes have been clarified (1) at the end of the introduction (aim/objectives of the study);

“This scoping review will provide a picture of the picture of the actual knowledge on the subject and identify knowledge gaps in existing literature to be filled by future primary researches. Findings will help stakeholders to develop programs in order to promote safe and healthy environments and behaviours aimed at reducing avoidable incidents in seniors, especially those with cognitive impairment.

(2) In stage 1, in parenthesis of the research questions (page 5-6);

(3) In the table 2 (page 9-10).

6. If statistics are used are they appropriate and described fully?

The description of the methods for content analysis needs expanded. I am not convinced from what is written here that there is full understanding of content analysis. I think that a reviewer experienced in content analysis should also review this protocol. I am not qualified to comment on the methods described here. To my mind, the methods have been well described and clearly the team have two experts (librarians) engaged with this work. But I cannot comment on the accuracy of the review methods.

RESPONSE : Some changes have been made and details have been added to the description of proposed analysis methods (page 10, lines 31-34) to ensure adequacy and improve clarity:

“The content analysis will be done by the research assistant (MGR and SS), and one-third co-coded by a member of the research team (VP). All narrative data will be grouped and categorized according to predetermined themes (mentioned above) and to those that will emerge during the process. Themes will be revised by team members in order to select the relevant final ones.”

Also, a reference (17) has been added about content analysis (which was omitted in the submitted version).

7. Do the results address the research question or objective?

Although results are not quoted here, the proposed methods to meet each research question are not well described. For example, my issue with research question 2. Some details have been added to the research question 2 (see Comment 1). And also research question 4 – how do the authors propose to assess whether or not an incident resulting in an older person presenting to the ED could have been avoided by “safe and healthy environments or behaviours”?

RESPONSE : The question 4 will be answered, based “on evidence about formal programs or interventions designed to prevent avoidable injuries and relevant for the older adults with cognitive impairment. In this study, data pertaining to preventive measures are included in an exploratory perspective since the study aims to recognize potential preventive measures to be implemented with this specific population.” This information has been added to the text (page 8, lines 49-51).

8. Are the results presented clearly?

Not applicable to this protocol paper. But the tools by which some of the findings will be captured are included, for example table 2, the charting table. Although not clear in the paper, and it should be made clear, I deduce from table 2 that research question 1 will be answered using frequency analysis, research question 2 will be answered using a combination of frequency and narrative content analysis, and research question 3 will be answered using narrative content analysis. There is inadequate description of proposed analysis methods.

RESPONSE : Some changes have been made and details have been added to the description of proposed analysis methods (page 10 and Table 2) to ensure adequacy and improve clarity: “The content analysis will be done by the research assistants (MGR and SS), and one-third co-coded by a member of the research team (VP). All narrative data will be grouped and categorized according to predetermined themes (mentioned above) and to those that will emerge during the process. Themes will be revised by team members in order to select the relevant final ones.” Also, a reference (17) has been added about content analysis.

9. Are the discussion and conclusions justified by the results?

There is a good discussion of the skill mix of the research team for this study. I think the dissemination claims are a little extreme for a scoping review – in particular clinicians using the knowledge generated from this review when at the same time, there is a claim made that a systematic review might be required following this review. Further, no comment is made on knowledge being used by clinicians or indeed any of the other stakeholders. This review proposes to provide some synthesised knowledge on the incidents causing ED visitation by older people with cognitive impairment and circumstances surrounding the incident. It is a big leap to make between these data and changing clinical practice!

RESPONSE : Changes have been made based to the discussion/conclusion based on the review’s comment in the conclusion (page 15, lines 27-38):

“This scoping review will synthesize current knowledge on avoidable incidents (type, frequency, severity and circumstances) leading to ED presentations by older adults with cognitive impairment, as well as upstream measures that may be implemented to prevent these incidents. This study will thus help to identify knowledge gaps in existing literature to be filled by future primary researches (e.g., through medical data bases, charting reviews). Increased knowledge about avoidable incidents may lead to the development and implantation by stakeholders (public health management), clinicians and community organizations of injury prevention programs or interventions tailored to the needs of older adults, particularly those with cognitive impairment, in order to reduce “avoidable” incidents”.

10. Are the study limitation discussed adequately?

I think that saying a limitation may be too many or too few results is a limitation of the study is a little meaningless. Is it not standard practice that the search strategy would evolve depending on the

results? How would changes be justified to make this a feasible review if the hits are too many? I would think the research team should have a reasonably refined idea of whether they are going to get lots of hits or not. I suspect that data will not be available. This limitation is not discussed at all. I need convincing that data are routinely reported in the scientific literature that can be captured by this review.

RESPONSE : Changes have been made to the limitations (1rst) based on the reviewer comments (page 13, lines 37-43): “First, included data may be too few to address each research question. However, this possible result is not incompatible with the objectives of conducting a scoping review, because this methodology may help to examine the breadth and depth of actual knowledge on the subject and to identify the knowledge needs to be met by future primary researches”.

#### VERSION 2 – REVIEW

<b>REVIEWER</b>	Anne Laybourne City University London, UK
<b>REVIEW RETURNED</b>	09-Dec-2015

<b>GENERAL COMMENTS</b>	The authors have responded well to the critique I provided. I think the conclusion and discussion could include some reference to the fact that this is Canadian-based research, with comparisons to Canadian databases and so the findings are focus on Canada.
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