

PEER REVIEW HISTORY

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ARTICLE DETAILS

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| TITLE (PROVISIONAL) | Preventing emergency department (ED) visits and hospitalizations of older adults with cognitive impairment compared to the general senior population: what do we know about avoidable incidents? Results from a scoping review |
| AUTHORS | Gagnon-Roy, Mireille; hami, benyahia; Généreux, Mélissa; Veillette, Nathalie; Sirois, Marie-Josée; Egan, Mary; Provencher, Véronique |

VERSION 1 – REVIEW

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| REVIEWER | Debra Sheets University of Victoria, Victoria, BC, Canada |
| REVIEW RETURNED | 02-Nov-2017 |

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| GENERAL COMMENTS | <p>Overall: This scoping review is rigorous in methodology and identifies the need for primary research on older adults with cognitive impairment presenting to the ED with preventable injuries. The studies does identify the 3 top causes of ED presentation for older adults with cognitive impairment and compares that to the general population although it is limited in what it can say about context due to limitations in the research on this topic.</p> <p>Consider revising the title to reflect that the scoping review involves a comparison of older adults with dementia to the general population and also considers hospitalizations along with ED visits.</p> <p>Findings: It is surprising to find that the difference between older adults with and without impairment in terms of ED visit is not significant (p. 16) although the cognitively impaired fell more often and sustained more severe injuries. Reasons this might be the case should be addressed in the discussion.</p> <p>It was also surprising to learn that “those with cognitive impairment were significantly less hospitalized than those without” (p. 16) in regards to transport accidents. Why would this be?</p> <p>Knowing that scalding was the most common cause of burns and occurred most often while bathing points to the potential for prevention.</p> <p>Findings on preventative measures point to the limitations of a scoping review based on analysis of the literature. Some of the preventive measures in the literature review do not reflect current technologies. For example, scalding injuries in bathing are quite</p> |
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| | <p>preventable with temperature controls and yet this preventive strategy is not reflected in the research reviewed.</p> <p>Details: Vancouver style requires that the text citation come before the period or comma—e.g., “is inaccurate (4,5).” or polymedication [76]. Please revise throughout the manuscript to make this follow the correct format.</p> <p>Poly-medication (p. 17) should be spelled polymedication</p> <p>The subheadings should not have a colon after them.</p> |
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| REVIEWER | Casalino E Assistance Publique Hôpitaux de Paris Hopital Bichat Paris France |
| REVIEW RETURNED | 27-Nov-2017 |

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| GENERAL COMMENTS | <p>Thank you for the opportunity to review your work.</p> <p>Abstract I propose you to delete the guimados you use in the abstract for "avoidable". They suggest that this definition is not valid or recognized. Avoidable incidents must be defined very early and not in the results. The conclusion seems to me too light. It must take the points identified.</p> <p>Strengths and limitations I propose you to delete the guimados. You have no limitations. There are (always): the quality of the articles, the biases of the studies, ...</p> <p>Introduction Introduction Why do you limit the scope of your work to the Quebec health authorities? this review is of interest to emergency, geriatrics and some other clinicians, as well as health managers.</p> <p>Methodology I understand the importance of describing the method, but three pages is a bit too long. To facilitate the reading and understanding of the article, I suggest you reduce this section by at least 50%. Same comment, delete guimas.</p> <p>References 21 and 23 are the same. I do not quite understand page 7 line 51, why contextualize to the local health care system. Does this mean that your conclusions are not relevant to another care system? This would greatly reduce the interest of an international publication (vs a report dedicated solely to local health authorities).</p> <p>Results Table 1 is very long, I am not sure that this information is major in the overall understanding of your work. You have already presented the details of these data in the text. Wath means "older adults" in this table? Tables 2a and 2b provide important information regarding interventions. This is a major point.</p> |
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| | <p>Discussion I find your discussion very clear and it helps to clarify the important points of your work. What part of these conclusions is specific to Quebec and which part can be extrapolated to other countries?</p> <p>Conclusion Which negative outcomes could be reduced? the number of avoidable events? their gravity? emergency room visits? hospitalizations? these outcomes are not well specified in the results. A central point, I do not understand why the title states that it is the emergency room visits that must be reduced, and the articles studied, most of them, were not made in emergencies, and in the conclusion you speak of outcomes without specifying which?</p> |
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VERSION 1 – AUTHOR RESPONSE

Thank you for the opportunity to revise our manuscript.

Reviewer 1:

Overall: This scoping review is rigorous in methodology and identifies the need for primary research on older adults with cognitive impairment presenting to the ED with preventable injuries. The study does identify the 3 top causes of ED presentation for older adults with cognitive impairment and compares that to the general population although it is limited in what it can say about context due to limitations in the research on this topic.

Consider revising the title to reflect that the scoping review involves a comparison of older adults with dementia to the general population and considers hospitalizations along with ED visits.

We agree with these suggestions. The title has been changed for: “Preventing emergency department (ED) visits and hospitalizations of older adults with cognitive impairment compared to the general senior population: what do we know about avoidable incidents? Results from a scoping review.” Some changes have also been made to the text to be coherent with the title, including in the discussion: Furthermore, as incidents occurring in seniors with cognitive impairment were rarely discussed in literature, the research questions were extended to other hospital settings (e.g., hospitalization) when too few sources focused on ED visits. (p.12, lines 13-16)

Findings: It is surprising to find that the difference between older adults with and without impairment in terms of ED visit is not significant (p. 16) although the cognitively impaired fell more often and sustained more severe injuries. Reasons this might be the case should be addressed in the discussion.

Changes have been made to discuss the non-significant difference between both populations: On the other hand, most studies in the ED were based on medical files analysis, which lacked a systematic review of cognitive status. As a result, the number of older adults with cognitive impairment or dementia may have been underestimated and reduce the difference between both sub-population in terms of ED presentations following a fall.

It was also surprising to learn that “those with cognitive impairment were significantly less hospitalized than those without” (p. 16) regarding transport accidents. Why would this be?

Changes have been made in the text to discuss this conclusion (see p. 12): Differences regarding hospitalizations following traffic accidents could be explained by a significantly lower number of cognitively impaired drivers compared to older drivers without such impairment [86,87], as the dementia diagnosis was strongly associated with driving cessation [86,87]. Nonetheless, when driving, cognitively impaired adults were at increased risk of experiencing an incident (whether or not associated with an ED presentation or hospitalization) than those without such an impairment [43,63,75] and may be less fit for driving [88,89].

Knowing that scalding was the most common cause of burns and occurred most often while bathing points to the potential for prevention. Findings on preventative measures point to the limitations of a scoping review based on analysis of the literature. Some of the preventive measures in the literature review do not reflect current technologies. For example, scalding injuries in bathing are quite preventable with temperature controls and yet this preventive strategy is not reflected in the research reviewed.

Changes have been made to reflect the possibility to prevent scalding with this population. For this study, using current technologies such as temperature controls was integrated in home modifications (See p. 9, lines 43-44, and p.13 lines 45-47 for the example).

Details: Vancouver style requires that the text citation come before the period or comma—e.g., “is inaccurate (4,5).” or polymedication [76]. Please revise throughout the manuscript to make this follow the correct format.

Changes have been made throughout the text to follow Vancouver style.

Poly-medication (p. 17) should be spelled polymedication.
The mistake has been corrected (p.9).

The subheadings should not have a colon after them.
Colons following a subheading have been removed in the text.

Reviewer 2:

Thank you for the opportunity to review your work. Tables 2a and 2b provide important information regarding interventions. This is a major point.

I propose you to delete the guimados you use for "avoidable". They suggest that this definition is not valid or recognized.

Quotation marks used for “avoidable” were deleted throughout the text.

Avoidable incidents must be defined very early and not in the results.

A succinct definition is presented at the beginning of the second paragraph of the introduction (p.4, lines 22-24). Avoidable incidents are also defined in the methodology, more precisely at the page 5 (lines 33-37).

Strengths and limitations: You have no limitations. There are (always): the quality of the articles, the biases of the studies, ...

According to your comment, we added a sentence to help recognize our limits: The study has however some limitations. As previously mentioned... (p.14-15, lines 327-342). According to your suggestion, we also added other limitations to the discussion: In accordance with the selected design, the quality of the studies was also not assessed [21], and some pertinent studies may not have been included in this scoping review. Consequently, our conclusion may have been affected by the biases of the included studies (p.15)

Introduction: Why do you limit the scope of your work to the Quebec health authorities? This review is of interest to emergency, geriatrics and some other clinicians, as well as health managers. I do not quite understand page 7 line 51, why contextualize to the local health care system. Does this mean that your conclusions are not relevant to another care system? This would greatly reduce the interest of an international publication (vs a report dedicated solely to local health authorities). Discussion: I find your discussion very clear and it helps to clarify the important points of your work. What part of these conclusions is specific to Quebec and which part can be extrapolated to other countries? According to your comment, we decided to remove any limitations to the Quebec health authorities. This review was completed at first for the Quebec health care system, but the conclusions can be extrapolated to other countries, as included studies were not limited to the Quebec health care system.

Methodology: I understand the importance of describing the method, but three pages is a bit too long. To facilitate the reading and understanding of the article, I suggest you reduce this section by at least 50%.

Thank you for your suggestion. Accordingly, we reduced our methodology to less than two pages and referred to the published protocol. Modifications to the methodology compared to the protocol were however kept in the final version to facilitate the understanding of the article.

References 21 and 23 are the same.

The mistake has been corrected (p.5).

Results: Table 1 is very long, I am not sure that this information is major in the overall understanding of your work. You have already presented the details of these data in the text. According to your suggestion, we decided to put the table 1 in supplementary files.

What means "older adults" in this table?

Modifications were made to the table 1 in supplementary files to precise the age of participants for each study.

Tables 2a and 2b provide important information regarding interventions. This is a major point.

The conclusion seems to me too light. It must take the points identified. Conclusion: Which negative outcomes could be reduced? The number of avoidable events? Their gravity? emergency room visits? Hospitalizations? These outcomes are not well specified in the results.

Changes have been made to the conclusion to take in account your comment (See p.15, lines 30-49). Furthermore, outcomes have been specified in the text (see p. 13, lines 41-43, 49-50; p.15, lines 45-49).

A central point, I do not understand is why the title states that it is the emergency room visits that must be reduced, and the articles studied, most of them, were not made in emergencies, and in the conclusion, you speak of outcomes without specifying which?

Thank you for your comment. The title has been changed for: "Preventing emergency department (ED) visits and hospitalizations of older adults with cognitive impairment compared to the general senior population: what do we know about avoidable incidents? Results from a scoping review." Some changes have also been made to the text to be coherent with the title, including in the discussion: Furthermore, as incidents occurring in seniors with cognitive impairment were rarely discussed in literature, the research questions were extended to other hospital settings (e.g., hospitalization) when too few sources focused on ED visits. (p.12, lines 13-16)

VERSION 2 – REVIEW

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| REVIEWER | Casalino E Hopital Bichat Emergency Department Paris-France |
| REVIEW RETURNED | 29-Jan-2018 |
| GENERAL COMMENTS | Thank you for this new version of your work. I find it much easier to read and understand, so your strong messages come off more easily. |