



JAMDA

journal homepage: www.jamda.com

Review Article

Medication Use Among Nursing Home Residents With Severe Dementia: Identifying Categories of Appropriateness and Elements of a Successful Intervention



Edeltraut Kröger BPharm, MSc, PhD^{a,b,*}, Mabelle Wilchesky PhD^{c,d},
 Martine Marcotte MSc^a, Philippe Voyer PhD, RN^{a,e}, Michèle Morin MD^{a,f},
 Nathalie Champoux MD^g, Johanne Monette MD^d, Michèle Aubin MD, PhD^{a,h},
 Pierre J. Durand MD, MSc^{a,b,i}, René Verreault MD, PhD^{a,i}, Marcel Arcand MD, MSc^j

^a Centre d'excellence sur le vieillissement de Québec, CHU de Québec, Québec, Canada

^b Faculté de Pharmacie, Université Laval, Québec, Canada

^c Donald Berman Maimonides Geriatric Centre, Montreal, Quebec, Canada

^d Division of Geriatric Medicine, McGill University, Montreal, Quebec, Canada

^e Faculté des Sciences Infirmières, Université Laval, Québec

^f Département de médecine, Faculté de médecine, Université Laval, Québec, Canada

^g Institut universitaire de gériatrie de Montréal, Montréal, Québec, Canada

^h Département de Médecine Familiale, Faculté de Médecine, Université Laval, Québec, Canada

ⁱ Département de Médecine Sociale et Préventive, Faculté de médecine, Université Laval, Québec (Québec), Canada

^j Centre de recherche sur le vieillissement, Université de Sherbrooke, Sherbrooke, Québec, Canada

A B S T R A C T

Keywords:

Nursing home resident
 severe dementia
 medication use
 appropriateness
 criteria
 intervention
 interdisciplinary

Background: Seniors with severe dementia residing in nursing homes (NHs) frequently receive large numbers of medications. With disease progression, the medications' harm-benefit ratio changes and they need to be reviewed, adjusted, or discontinued. Evidence on successful interventions to optimize medication use among these residents is lacking.

Objectives: The objective of the study was to identify categories of appropriateness for medications as well as successful interventions or elements thereof to improve medication use in NH residents with severe dementia, suitable for use in Canada.

Methods: A scoping literature review was performed to identify criteria and categories of appropriateness of medications for these residents as well as elements of successful interventions to optimize medication use. A 15-member multidisciplinary Delphi panel was convened to evaluate the applicability of these findings for NHs in a Canadian province.

Results: The scoping review identified 1 study presenting categories of appropriateness specific to residents with severe dementia and 35 interventions aimed at reducing drug-drug interactions, inappropriate use of specific drug classes, inappropriate drug use overall, or polypharmacy. Regarding appropriateness, the Delphi panel agreed on the categorization of 63 medications or medication classes as "generally," "sometimes," or "rarely appropriate." The main elements of interventions successful in improving appropriate medication use in NH residents with dementia also were approved by the Delphi panel (ie, medication reviews using criteria of appropriateness, educational and training sessions, and interdisciplinary case conferences).

Conclusions: These results may be used to develop an intervention to optimize medication use in NH residents with severe dementia.

© 2015 AMDA – The Society for Post-Acute and Long-Term Care Medicine.

The authors declare no conflicts of interest.

This study received financial support from the Réseau Québécois de recherche sur le vieillissement (RQRV)/Fonds de Recherche du Québec - Santé (FRQS), the Fondation Laure Gaudreault, the Chaire de gériatrie de l'Université Laval, and the Centre d'excellence sur le vieillissement de Québec (CEVQ), Québec, Canada. The RQRV, Fondation Laure Gaudreault, Chaire de gériatrie, or CEVQ were not

involved in the study design, conduct, or analyses, or in the preparation of the manuscript.

* Address correspondence to Edeltraut Kröger, BPharm, MSc, PhD, Hôpital du St-Sacrement, 1050, Chemin Ste-Foy, local L2-28, Québec (Quebec) Canada G1S 4L8.

E-mail address: edeltraut.kroeger.cha@ssss.gouv.qc.ca (E. Kröger).

<http://dx.doi.org/10.1016/j.jamda.2015.04.002>

1525-8610/© 2015 AMDA – The Society for Post-Acute and Long-Term Care Medicine.

Medication use is considered optimal when prescribed drugs have a clear indication, based on scientific evidence, and are well tolerated. Inappropriate prescribing (ie, an unfavorable ratio of the risk for adverse drug events relative to potential benefits) frequently leads to negative health outcomes.^{1–6} Prescribing of potentially inappropriate medications to seniors is known to be highly prevalent in the United States and Europe, ranging from 12% for seniors in the community to 40% for those in nursing homes (NHs).^{7,8} In Canada in 2012, 23.9% of seniors used at least 1 inappropriate medication according to the Beers criteria.^{6,9} In addition, age-related physiological changes may result in altered pharmacokinetic and pharmacodynamic responses to medications, further reducing the tolerability of many medications in older patients.¹⁰ Finally, a number of medications present limited benefit in the face of the shortened life expectancy in severe dementia.^{11–15}

In Canada, between 57% and 65% of seniors living in a residential care facility, such as a NH or long-term care home, have a diagnosis of Alzheimer disease (AD) and/or other dementia.⁶ These progressive and terminal diseases, of which AD is the most common form, are characterized by the widespread impairment of mental function. Severe dementia, corresponding to a diagnosis of dementia with a functional assessment stage (FAST) of 6 and over,¹⁶ limits life expectancy and quality of life so that the goals of care should shift from curative or preventive to comfort care, including the revision of all medications in use.¹⁷

Adverse effects from medication may be involved when people with dementia experience a range of behavioral and psychological symptoms of dementia together with other causes, including unacknowledged physical health complaints, depression, undetected pain, psychosocial factors, and physical environmental factors.¹⁸ Moreover, patients with severe dementia may develop difficulty eating and swallowing, and an inability to verbalize symptoms and adverse effects, making medication therapy more challenging and potentially more dangerous.^{19–21} The prescription regimen should therefore be regularly revised, and medications that were previously prescribed for chronic comorbidities may have to be discontinued to both reduce the risk of adverse events and improve comfort and symptom control.^{12,22,23}

Several barriers exist toward optimal medication use for patients with dementia, and particularly severe dementia, in NH seniors. First, identification of inappropriate medication use is essential. Considerable efforts have been deployed to develop criteria regarding appropriate medication use among seniors overall. Several sets of general criteria about inappropriate prescribing in older patients have been developed over the past 2 decades and they have been the object of numerous reviews^{24–26} and comparisons.^{27–30} The best known are the Beers criteria,^{9,31–33} which have been adapted for several countries or jurisdictions,^{34,35} and the Screening Tool of Older Person's Prescriptions (STOPP)— Screening Tool to Alert doctors to Right Treatment (START) consensus.³⁶ These lists provide important guidance on which medications are inappropriate for seniors but do not specifically address seniors with severe dementia who are more vulnerable and have shorter life expectancy. Although interesting review articles have been published over the recent years,^{25,26,30} our group knows of only 2 publications related to the appropriateness of medication among seniors with dementia.^{37,38} Second, health professionals may not always acknowledge severe dementia as a terminal disease,^{39,40} which may result in patients being exposed to unnecessarily aggressive treatments.

Once inappropriate medication use has been identified, the patients' medication regimen has to be adjusted, but evidence on how to achieve this goal is scarce. For example, one review on medication use improvement included only randomized controlled trials published up to April 2010,⁴¹ another was limited to pharmacy

interventions,⁴² and 2 publications focused on all patients approaching end of life.^{43,44} The present research thus aimed to (1) determine how to identify inappropriate medications for NH residents with severe dementia, (2) identify interventions or elements thereof likely to succeed in improving medication use among these seniors, and (3) adapt previous findings to the Canadian context. To this end, a scoping review of the literature was performed and an ensuing multidisciplinary Delphi panel validated the results for the Canadian province of Quebec.

Methods

The scoping review followed guidance by Arksey and O'Malley,⁴⁵ Levac et al,⁴⁶ and Colquhoun et al,⁴⁷ and examined the extent, range, and nature of research activity regarding inappropriate medication use among NH residents with severe dementia and interventions to optimize medication use in this population.

Literature Search and Eligibility Criteria

The search strategy was developed for MEDLINE and adapted as appropriate for the other searched databases (ie, MEDLINE, EMBASE, the Cochrane Library, Ageline, CINAHL, Database of promoting health effectiveness reviews, PsycINFO, and Web of Knowledge). MeSH terms and free vocabulary included the concepts of dementia, long-term care facility, drug use or inappropriate prescribing or adverse drug event, and so forth. Because preliminary tests did not provide the expected results, the term "aged" was added to include all participants aged 65 years and older. WHOLIS International, New York Academy of Medicine Grey Literature Report, National Guidelines Clearinghouse, NHS Evidence in Health and Social Care, Kings Fund, OpenSIGLE, Canada Institute for Scientific and Technical Information, Canadian Agency for Drugs and Technologies in Health (CADTH), SIGN, and Institut universitaire de gériatrie de Montréal catalogue (GERMAIN) were searched for gray literature, as were Web sites of organisms related to dementia or palliative care, including Alzheimer's Association, Alzheimer's Society, American Academy of Hospice and Palliative Medicine, and National Hospice and Palliative Care Organization. The searches were conducted in November 2011 and restricted to publications in English, French, or German with no time limit. Thereafter, reference lists of relevant articles and review articles were scanned for additional studies. Searches were updated in December 2013.

Study Selection

A broad array of study designs was included, but books, book sections/chapters, meeting abstracts, editorials, and letters to the editor were excluded, as were policy evaluations. Relevant review articles were set aside for the search of their bibliography. The review focused on NH residents. However, studies including other settings also were considered, provided NH patients were well represented. The outcomes of intervention had to include either the total number of medications prescribed or administered, or the number of unnecessary/inappropriate medications prescribed or administered. Initial eligibility was assessed independently by 2 reviewers who scanned the titles and abstracts of retrieved references (M. Marcotte and Norma Perez). Then, full texts of eligible references were reviewed independently by 2 reviewers (M. Marcotte and Matteo Peretti). Interrater disagreements were resolved by consensus. At this stage, studies listing inappropriate medications without describing how the criteria were developed, as well as subsets^{48,49} or translations⁵⁰ of previously published criteria were excluded. Intervention studies that were limited to only community-dwelling persons or acute care hospital inpatients were excluded, as were those having

Download English Version:

<https://daneshyari.com/en/article/6050047>

Download Persian Version:

<https://daneshyari.com/article/6050047>

[Daneshyari.com](https://daneshyari.com)