Case finding for urinary incontinence and falls in older adults at community pharmacies

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Introduction

In Canada, the number of older adults aged 65 years and over is growing more rapidly than other age groups.¹ This is partly explained by increases in life expectancy due to improvements in health care.² However, it is debatable whether extended life expectancy is always associated with improved quality of life.

Older adults are prone to various geriatric syndromes that lead to a decline in quality of life and an increase in social isolation.³ Common geriatric syndromes include falls and urinary incontinence (UI).³ Nearly a quarter of older Canadians fall each year, often because of a medical condition, medication or behavioural or environmental factor.⁴ The consequences of falls can be severe, and falls are the leading cause of injury-related hospitalization among seniors.⁵ Likewise, more than half of Canadian seniors experience 1 or more lower urinary tract symptoms (LUTS), with 29% of Canadian women and 5% of men reporting urinary incontinence.⁶ Both falls and UI are associated with impaired physical, social and emotional well-being; add significant costs to personal care expenses; and also have an impact on families, friends and care providers.^{7,8} For example, there are interventions defined as caregiver-dependent approaches, which include toileting assistance or cueing.⁸

Although prevalent, these geriatric syndromes are generally underrecognized and undertreated.⁹ Studies on LUTS indicate as few

as 8% of those affected seek medical attention.¹⁰

Falls occur in approximately 30% of seniors in the community, yet only 5% to 10% experience an injury that triggers the patient to seek medical attention.¹¹ There is a need for innovative approaches to help older adults and their families both avoid and manage falls, as well as manage UI.^{5,9} An essential part of that process includes identification of those at risk. Community pharmacists are frontline health care professionals who frequently see individuals with chronic diseases.¹² As such, they may be able to identify older adults with geriatric syndromes and screen for those at high risk. Guidelines for falls in older adults, as well as the management of UI, support case finding to identify individuals at risk and can play a vital role in promoting public health and safety.^{13,14} The term *screening* generally applies at a population level and leads to the expectation that every patient will be tested/assessed for the condition of concern. Case finding is more focused, searching for at-risk patients, because of a patient report or as identified by the health professional, and further assessment is initiated.¹⁵ Successful case finding can lead to further assessment and intervention that can address these important health issues. The present case-finding study was undertaken to identify the prevalence of falls and UI in community-dwelling seniors accessing pharmacy services and evaluate the extent to which health care professional consultation was sought

regarding these geriatric syndromes. Given the accessibility and expertise of pharmacists, as well as the prevalence of these geriatric syndromes, we anticipate that pharmacists will be able to identify individuals with these conditions.

Methods

Older adults using community pharmacies across Alberta for routine care (i.e., selecting products within the pharmacy area, asking questions at the dispensary or obtaining medications from the dispensary) were identified by pharmacy and medical students as potential participants. The students received a mandatory orientation and training session about patient recruitment and data collection, as well as regular email communication from the study team for updated information. The entire fourth-year class of pharmacy students at the University of Alberta, 124 students, was included in the orientation prior to their clerkships in the community, representing 62 unique pharmacies in Alberta. Three additional summer students were hired—2 pharmacy and 1 medical student—and they worked primarily at 2 different pharmacies to gather more subjects. People were eligible for inclusion if they were >65 years of age, were willing to participate, and could communicate in written and spoken English or a language the student could speak fluently.

The student explained the study to eligible participants and, following provision of informed written consent, administered a questionnaire (Appendix 1, available at www.cpjjournal.ca) adapted from validated questionnaires including sections on demographics, falls and urinary incontinence.¹⁶⁻¹⁸ The questions were abstracted directly from the Elderly Fall Screening Test, Bladder Self-Assessment Questionnaire and the International Consultation on Incontinence Questionnaire (ICIQ), without any changes to wording.¹⁶⁻¹⁸ For the purposes of this study, falls were defined as “suddenly finding yourself on the ground, without intending to get there, after you were in either a lying, sitting or standing position,”¹⁸ and UI was introduced as “leaking urine,” terminology used in the 3-IQ assessment instrument.¹⁹ For the purposes of our study, we considered falls within the previous year, based on the American Geriatrics Society/British Geriatrics Society (AGS/BGS) guideline that recommends this.¹³ UI questions

related to the past 4 weeks were based on ICIQ questionnaire format.¹⁶ Participants were offered self-care handouts developed by the National Institute of Aging (<https://order.nia.nih.gov/view-all-publications>) or the Canadian Finding Balance website (<http://findingbalancealberta.ca/>) regarding these syndromes after completing the questionnaire.

The study activities took place in the private counselling area of the pharmacies or in a private area at the pharmacy dispensary. Ethics approval was obtained from the Health Research Ethics Board of the University of Alberta. Collected data were managed through REDCap and analyzed using SAS 9.4. Demographic, falls and UI data were analyzed using descriptive statistics; mean (standard deviation) for continuous variables and *n* (percentage) were used for categorical variables.

Results

A total of 190 older adults were enrolled from 25 pharmacies across Alberta; 116 of the participants (61.7%) were female and the mean (SD) age was 75.1 (9.2) years.

More than one-third of the participants (37.4%) reported falling in the previous year (Figure 1). Of those, more than half (37, 52.1%) reported sustaining an injury and around two-thirds (43, 60.6%) reported falling more than once. About half of those who fell (37, 52.1%) reported consulting a health care professional about it. Physicians were most commonly contacted (36, 97.3%), followed by homecare workers (9, 24.3%), pharmacists (7, 18.9%) and nurses (7, 18.9%). Sixteen (8.4%) participants contacted more than 1 health professional.

Just over half of all participants (105, 55.3%) reported leaking urine in the previous 4 weeks, with 58 (55.5%) reporting leaking 2 or more times a week (Figure 2). Of those who leaked urine, 61 (58.1%) reported leaking before reaching the toilet, 50 (47.6%) when coughing or sneezing, 17 (16.2%) when physically active or exercising, 16 (15.2%) after finishing urinating and 16 (15.2%) while asleep. Twenty participants (19%) were unable to identify a cause for the leaking episode and 3 (2.9%) described constant leakage. When asked about how much the urine leakage bothered them, 28 (26.7%) participants responded “not at all,” 43 (41.0%) “a little,” 24 (22.9%) “moderately” and 10 (9.5%) “a great deal.”

FIGURE 1 Prevalence of falls in seniors and frequency of health care professional consultations regarding them

FIGURE 2 Prevalence of urinary incontinence in seniors and frequency of health care professional consultations regarding it

About a third of the participants who had experienced LUTS ($n = 36$, 34.3%) reported discussing their bladder problems with a health care professional. Physicians were the most

commonly contacted (35, 97.8%), followed by pharmacists (5, 13.0%), then homecare workers (2, 4.3%) and nurses (1, 2.2%). Seven participants contacted more than 1 health professional.

Discussion

The results of our study demonstrate that geriatric syndromes, including falls and LUTS, are common in community-dwelling older adults accessing pharmacy services. Many older adults (37%) reported falls in the previous year, and over 55% reported UI in the previous 4 weeks. In terms of consequences, 52% of those who fell had an injury from the fall, and 73.3% reported that their UI had a negative impact on quality of life. Despite the impact these syndromes had on their lives, only about half of those experiencing falls, and a third of those with incontinence, reported consulting a health care provider about these issues. To our knowledge, this is the first study to systematically screen for self-reported falls and UI in community-dwelling seniors through community pharmacies and the first to engage community pharmacists in case finding for these geriatric syndromes.

Our findings for fall prevalence are slightly higher than reports in the literature. The Canadian Community Health Survey–Healthy Aging conducted by Statistics Canada reported that 20% of community-dwelling seniors fall each year, with 58.8 fall-related injuries per 1000 seniors,^{20,21} while a study in Quebec found that 29% of subjects fell during a 48-week follow-up and 17.9% experienced falls with injuries.²² This may be explained by the recruitment site, since patients visiting pharmacies are likely to have health conditions requiring pharmacological treatments, or it may be due to recruitment bias, as those who have experienced falls are more likely to participate in a study relating to this syndrome.²³ Chronic health conditions and medications have been associated with falls in the geriatric population, and it is often these seniors, with chronic conditions and use of medications, who frequent the pharmacy.^{24,25}

Our findings also demonstrate that more than half of older adults experienced at least one episode of UI in the previous 4 weeks, with symptomatic urgency and stress UI being most common. This is comparable to reports from Herschorn et al.,⁶ who studied LUTS and urinary incontinence prevalence in Canada via telephone survey, and found that 43% of men and 57% of women reported LUTS. However, Herschorn and colleagues had a longer questionnaire with variations on the questions we used, because they were attempting to also determine the type of urinary incontinence experienced by the subjects.

Many older adults who suffered from falls and/or UI did not report these conditions to a health care professional. Falls may be more frequently talked about, as perhaps they are less stigmatizing than incontinence, regardless of associated bother extent, or because there are provincial public health initiatives on falls and local programs (e.g., exercise and balance classes) to prevent falls. For both falls and UI, physicians were contacted more frequently than other health care professionals.

Currently, falls and UI are not being adequately addressed in clinical practice. Falls are an underrecognized and preventable risk factor for fractures²⁶ and remain the most common cause of hospitalization in older adults.⁵ Similarly, urinary incontinence is underdiagnosed and undertreated.²⁷ The problem may be 2-fold; health care professionals do not ask, while patients are deterred from discussing their problems due to stigma surrounding the syndromes or concern about being institutionalized.^{28,29} Older adults also often consider UI as a normal part of aging and do not see it as a medical problem requiring treatment, despite the existence of effective therapies.³⁰ On the other hand, older adults often do not discuss falls because they underestimate their risk of falling or injury.²⁸ It may be that with both geriatric syndromes, patients believe they can manage symptoms themselves and do not require treatment. This should be investigated in future studies.

The study suggests that community pharmacies could be a suitable venue to case find for falls and UI. Pharmacies are equipped with private counselling areas and seniors do not require appointments, and case finding could be done routinely in conjunction with prescription filling. Community pharmacists are well positioned to identify patients with such conditions and help manage them by recommending, initiating and/or adjusting treatment.^{31,32} Pharmacists can also connect with local seniors' exercise and education programs, fall prevention initiatives, physiotherapy clinics or geriatric assessment clinics. A recent review by Smith and Shah³³ emphasized that screening for geriatric syndromes can be accomplished by asking simple questions during routine visits. A number of validated questionnaires from references and guidelines are quick and simple to administer. These include ICIQ for urinary symptoms (www.iciq.net/index.html) or the Stopping Elderly Accidents,

Deaths, and Injuries (STEADI) algorithm for falls (<https://www.cdc.gov/steady/index.html>). Available questionnaires do not specify a health professional group that should be responsible for case finding, and therefore this role should be incorporated into the practices of all health professionals who care for older adults.

While case finding is important, the next step for community pharmacists addresses the evidence gap to support intervention. A pilot study was conducted in a community pharmacy setting in Alberta, demonstrating that pharmacists can provide guidance on LUTS, including behavioural and lifestyle interventions, in addition to pharmacologic modifications.³⁴ Further research is required to support the optimal role that pharmacists can play in addressing these important geriatric syndromes in the community.

We note that this study has a number of strengths, including a province-wide scope achieved by engaging students at various community pharmacy locations, the inclusion of 2 geriatric syndromes and use of validated questions from assessments used for these syndromes. Limitations of our study include the lack of a denominator regarding the number of seniors in the pharmacies during the study, the potential volunteer bias and no information regarding more in-depth demographics, such as education or living situation.

Conclusion

Falls and UI are common geriatric syndromes that older adults may not report to health care professionals. Community pharmacies may serve as convenient and high-yield sites for identifying these syndromes in the older population. ■

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