

Community Fall Awareness in Later Life: a Pharmacy-Run Outreach for Geriatric Risk Assessment and Management (Community FALL PROGRAM)

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INTRODUCTION

Falls among community-dwelling older adults result in devastating medical, social and financial consequences. Rarely are falls caused by a single factor, but more often by a combination of factors. This complicated etiology has led to multi-factorial fall risk reduction programs. However, few programs have employed a pharmacy component. Therefore very little information has been published regarding the community pharmacist's role in fall prevention. This program consisted of both an educational and a clinical intervention.

OBJECTIVE

Educational Intervention: To increase the awareness of falls among community-dwelling seniors and educate them about risk factors and fall prevention.

Clinical Intervention: To evaluate the pharmacist's ability to reduce fall risk in subjects enrolled in the Community Fall Program.

METHODS

Study Population

(Educational) Community-dwelling adults age 65 years and older were invited to participate.

(Clinical) Individuals enrolled in the Community Fall Program were invited to participate in the study.

Setting

The Community Fall Program was developed through the combined efforts of Kroger, a supermarket-based pharmacy and Plaza Professional Pharmacy, an independent, community pharmacy located within a 1000-resident retirement community.



Procedure

(Educational)

- Fall awareness seminars were held at the study sites
- Seminar attendees completed pre-surveys
- A 30-minute presentation was given detailing:
 - Causes and consequences of falling
 - Risk factors for falling
 - Fall prevention strategies
 - Community Fall Program
- Distributed fall-focused handouts
- Seminar attendees completed post-surveys

(Clinical)

- Performed individual risk evaluations:
 - General health questionnaire and PMH
 - Mini Mental State Examination (MMSE)
 - Timed Get-up and Go and balance tests
 - Vital signs and orthostatic hypotension
 - Monofilament foot exam
- Fall-focused medication review:
 - Polypharmacy
 - Medications that increase fall risk
 - Drug interactions
- Wrote individualized care plans to reduce fall risk
- Follow up phone calls (Fall Calls) at 1 and 3 months
- Performed final risk evaluation at 6 months

Measurements

(Educational)

- The surveys were analyzed to:
 - Gather demographic information
 - Determine if fall awareness increased
 - Determine if fear of falling increased

(Clinical)

- Primary outcomes will include:
 - Recommendations implemented by the subjects
 - Recommendations implemented by PCPs
 - Change in Timed Get-up-and-go
 - Change in balance
 - Number of falls for frequent fallers

RESULTS

(Educational) See Tables 1 through 3.

(Clinical) This intervention is ongoing. Data will continue to be collected at the initial visit and at 1, 3 and 6 month follow-ups. Primary outcomes will include number of falls, recommendations implemented by the subject and their physicians, and changes in Timed Get-up-and-Go.

Table 1: Baseline characteristics of subjects attending educational intervention (pre-survey)

| Characteristic | No. (and %) of subjects |
|--|-------------------------|
| | n = 133 |
| Mean age ± SD, yr (n = 131) [†] | 82 ± 7.7 |
| Female sex | 106 (79.7) |
| <i>Race</i> | |
| Caucasian | 112 (84.2) |
| African American | 5 (3.8) |
| Other | 3 (2.2) |
| No response | 13 (9.8) |
| <i>Marital status</i> | |
| Widowed | 73 (54.9) |
| Married | 34 (25.6) |
| Single | 16 (11.9) |
| Divorced | 7 (5.3) |
| No response | 3 (2.3) |
| Mean no. people in household ± SD (n = 130) [†] | 1.31 ± 0.46 |

[†] Number of subjects responding to corresponding question.

Table 2: Fall characteristics of subjects attending educational intervention (pre-survey)

| Characteristic | No. (and %) of subjects |
|---|-------------------------|
| | n = 132 |
| Subjects reporting falls within last 6 mos. | 45 (34.1) |
| Mean falls in subjects reporting falls ± SD (n = 45) [†] | 1.44 ± 0.79 |
| Frequent fallers [‡] | 16 (12.1) |
| Afraid of falling (n = 129) [†] | 91 (70.5) |
| Avoid activities due to falls (n = 114) [†] | 38 (33.3) |

[†] Number of subjects responding to corresponding question.

[‡] Frequent faller is a subject with a history of two or more falls in a 6-month period.

Table 3: Comparison of pre-and post-surveys from educational intervention

| Characteristic | No. (and %) of subjects |
|---|-------------------------|
| Question 1: Are you afraid of falling? (n=106)[†] | |
| Afraid of falling before but not afraid after | 5 (4.7) |
| Not afraid of falling before but afraid after | 12 (11) |
| Question 2: Do you have risk factors for falling? (n=84)[†] | |
| Perceived no risk of fall before but felt at risk after | 13 (15) |
| Perceived risk of fall before but not after | 6 (7.1) |
| Question 3: List 3 risk factors for falling? (n=68)[†] | |
| Listed at least 1 risk factor before and 2 or 3 after | 9 (13.2) |
| Listed at least list 2 risk factors before and 3 after | 10 (14.7) |
| Listed 3 risk factors both before and after | 40 (58.8) |

[†] Number of subjects responding to corresponding question

DISCUSSION and CONCLUSIONS

Falling continues to be an ongoing concern for this population. Analysis revealed that 36% of subjects who reported falling in the last six months had two or more falls. Nearly three out of four subjects admitted having a fear of falling and one-third reported avoiding activities due to falls.

This program demonstrated success in increasing awareness of falls. More subjects noted fear and perceived a personal risk after attending the seminar. About 1/3 of subjects were able to list more risk factors on the post-survey. After the intervention, more subjects listed medicines as a fall risk than before (29 and 6, respectively).

The clinical intervention is ongoing, five subjects have enrolled in the study thus far. We expect to make a positive impact with the pharmacists' initial recommendations.

The Community Fall Program is an opportunity to expand pharmacist-run clinical services. Community pharmacies can implement this program based on their elderly population.