Enhancing Medication Safety Among Community-Dwelling Frail Seniors

M ARSHA MEYER, PharmD, BCACP
Independence at Home

DENISE LIKAR, MSW
Independence at Home

ROMILLA BATRA, MD, MBA
SCAN Health Plan

SUSAN ENGUIDANOS, PhD, MPH
University of Southern California, Leonard Davis School of Gerontology

The research reported on this poster was supported by SCAN Health Plan. The investigators retained full independence in the conduct of this research.

BACKGROUND

- As adults age, the number of medications taken increases annually; 75 percent of those aged 50 to 64 fill an average of 13 prescription medications and 87 percent of those aged 65 to 79 fill 20 medications on average.1

- Challenges Faced by Seniors:
  - Inadequate literacy skills2
  - Lack of caregiver or caregiver with low medication management education3
  - Cognitive and physical challenges, including loss of sight and hearing
  - Few programs exist to assist community-dwelling older adults in managing their medications; even fewer are home-based.

- Study Aim: To determine the effectiveness of the Community Medication Education, Data & Safety (C-MEDS) program for older adults experiencing medication safety problems.

METHODS

- Design: Pre-/post-pilot study

- Eligibility: Community-dwelling adults aged 55 and older with medication problems. Must be cognitively intact or have a cognitively intact caregiver who is willing to help with medication management.

- Measures: (1) Number of medication-related problems/barriers to safe use, (2) self-efficacy in medication knowledge and administration (measured by the MUSE), (3) medication adherence (measured by pill count and MedAdhIR-ST), (4) resolution of patient-centered goals, (5) access to medications and (6) client satisfaction

- Analyses: Descriptive statistics

SAMPLE (n=104)

- Age: 72 years ± 8.5 years
- Gender: 67% female
- Last six months: 43% had a fall, 53% unplanned ER/hospital admit
- Average no. of health conditions: 5.3 ± 2.3

ETHNICITY

- Asian (9%)
- Latino (28%)
- Black (18%)
- White (43%)
- Other (2%)

WHAT IS THE C-MEDS PROGRAM?

- Pilot program to identify barriers to safe medication use and provide brief, patient-centered medication management interventions to older adults and their caregivers
- Supplements, not suppliants, existing medication services/resources
- Medicated use and improved outcomes.

C-MEDS PROGRAM GOALS

- Identify and resolve barriers to safe medication use
- Decrease potential medication-related problems
- Increase coordination of care between prescribers and pharmacists
- Increase access to medications

MEDICATION & HEALTH PROBLEMS

<table>
<thead>
<tr>
<th>No. routine Rx medications</th>
<th>8.7 ± 4.2</th>
<th>% low cognition, literacy and numeracy (&lt;8 on Medi-Cog)</th>
<th>46.7%</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. routine Rx doses/day</td>
<td>15.6 ± 8.2</td>
<td>% vision impaired</td>
<td>88.6%</td>
</tr>
<tr>
<td>Medication adherence rate</td>
<td>0% 100%</td>
<td>% hearing impaired</td>
<td>29.5%</td>
</tr>
<tr>
<td>Older adult MUSE (highest possible score: 32)</td>
<td>23.8 ± 4.7</td>
<td>Caregiver MUSE (highest possible score: 32)</td>
<td>28.6 ± 3.9</td>
</tr>
</tbody>
</table>

RESULTS

Despite relatively high rates of healthcare use, this sample of community-dwelling older adults demonstrated significant challenges in medication management, with 58 percent reporting some level of problems with medication adherence.

Older adult client challenges included low health literacy, cognition, vision and hearing difficulties, with approximately 47 percent requiring the services of a caregiver in medication management to overcome these deficits.

Most interventions were delivered successfully; challenges encountered were related to:

- (1) patient reluctance to accept their need for assistance with medication management and
- (2) caregiver lack of engagement.

DISCUSSION

- There is a dearth of community-based, in-home medication management programs. This pilot study provides preliminary information on (1) an approach for addressing medication-related problems in the home and (2) problems identified and interventions undertaken to address these problems.

- Literacy, knowledge and cognition related to medications are significant problems.

- Early findings demonstrate diverse, older community-dwelling individuals have significant medication-related problems that require pharmacist intervention.

- Interventions are most successful when patients and caregivers are receptive to receiving help and instruction in medication management.

LIMITATIONS: This is a pilot study of a community-based program and does not include a control or comparison group.

IMPLICATIONS: Community-based medication programs may fill a critical gap in identifying and resolving barriers to safe medication use and improved outcomes.

1 https://www.pparesearch.nih.gov/psnp/ckindergarten/home.html