

Enhancing Medication Safety Among Community-Dwelling Frail Seniors

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BACKGROUND

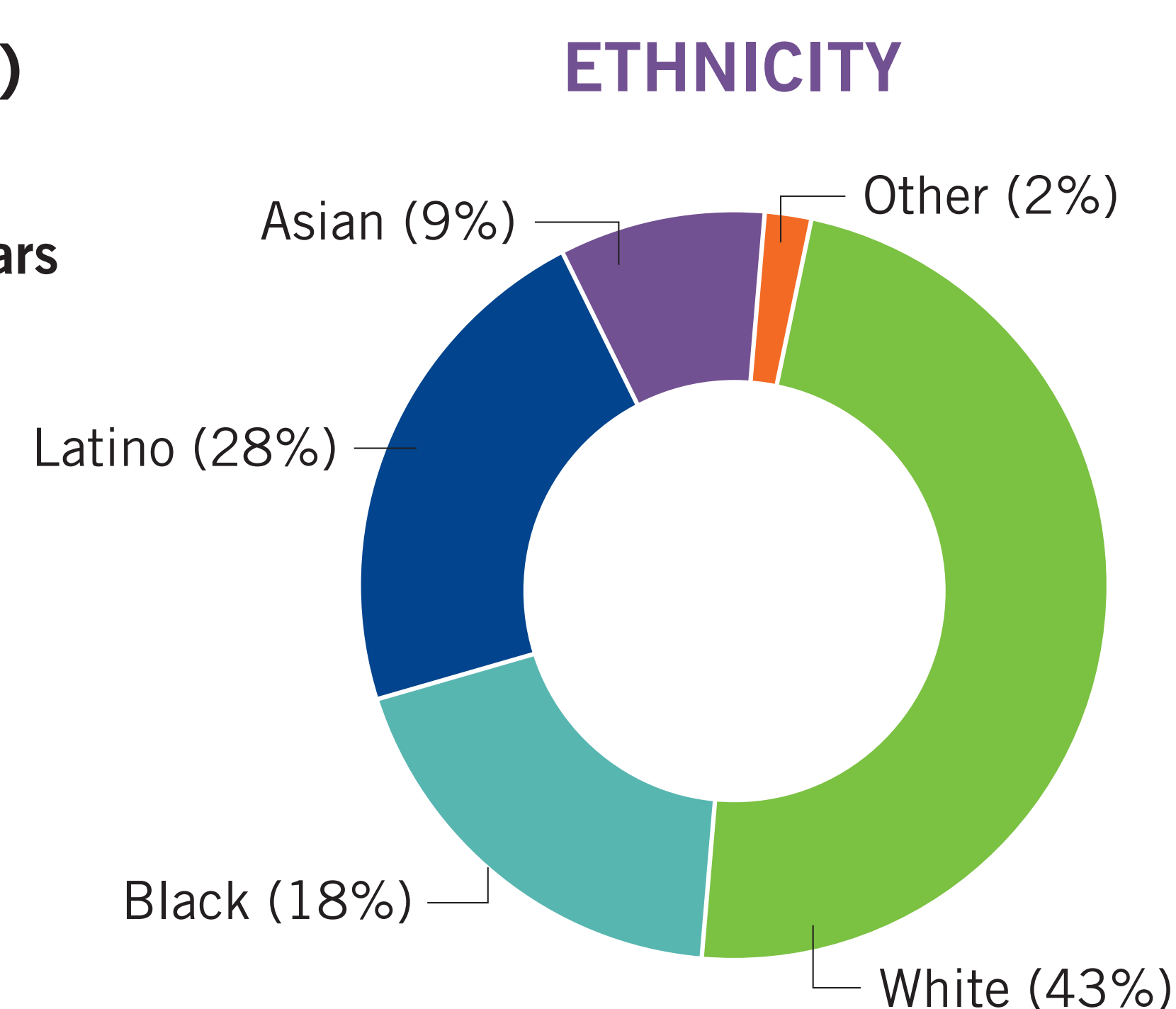
- As adults age, the number of medications taken increases annually; 75 percent of those aged 50 to 64 fill an average of 13 prescription medications and 87 percent of those aged 65 to 79 fill 20 medications on average.¹
- Challenges Faced by Seniors:**
 - Inadequate literacy skills²
 - Lack of caregiver 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**
- Live alone: **47%**
- Gender: **67% female**
- Last six months:
 - 43% had a fall**
 - 53% unplanned ER/hospital admit**
- Average no. of health conditions: **5.3 ± 2.3**



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
- Delivered at no cost in the home by a team of geriatric experts (pharmacists, nurses and technicians) in English and Spanish
- Supplements, not supplants, existing medication services/resources
- Uses validated tools, individualized medication care plans and protocols

C-MEDS PROGRAM GOALS

- Identify and resolve barriers to safe medication use
- Increase self-efficacy and skills in medication management by older adults and their caregivers
- Decrease potential medication-related problems
- Increase medication adherence
- Increase coordination of care between prescribers and pharmacists
- Increase access to medications

MEDICATION & HEALTH PROBLEMS

No. routine Rx medications	8.7 ± 4.2	% low cognition, literacy and numeracy (<8 on Medi-Cog)	46.7%
No. routine Rx doses/day	15.6 ± 8.2	% vision impaired	88.6%
Medication adherence rate range	0%-100% Median: 42%	% hearing impaired	29.5%
Older adult MUSE (highest possible score: 32)	23.8 ± 4.7	Caregiver MUSE (highest possible score: 32)	28.6 ± 3.9

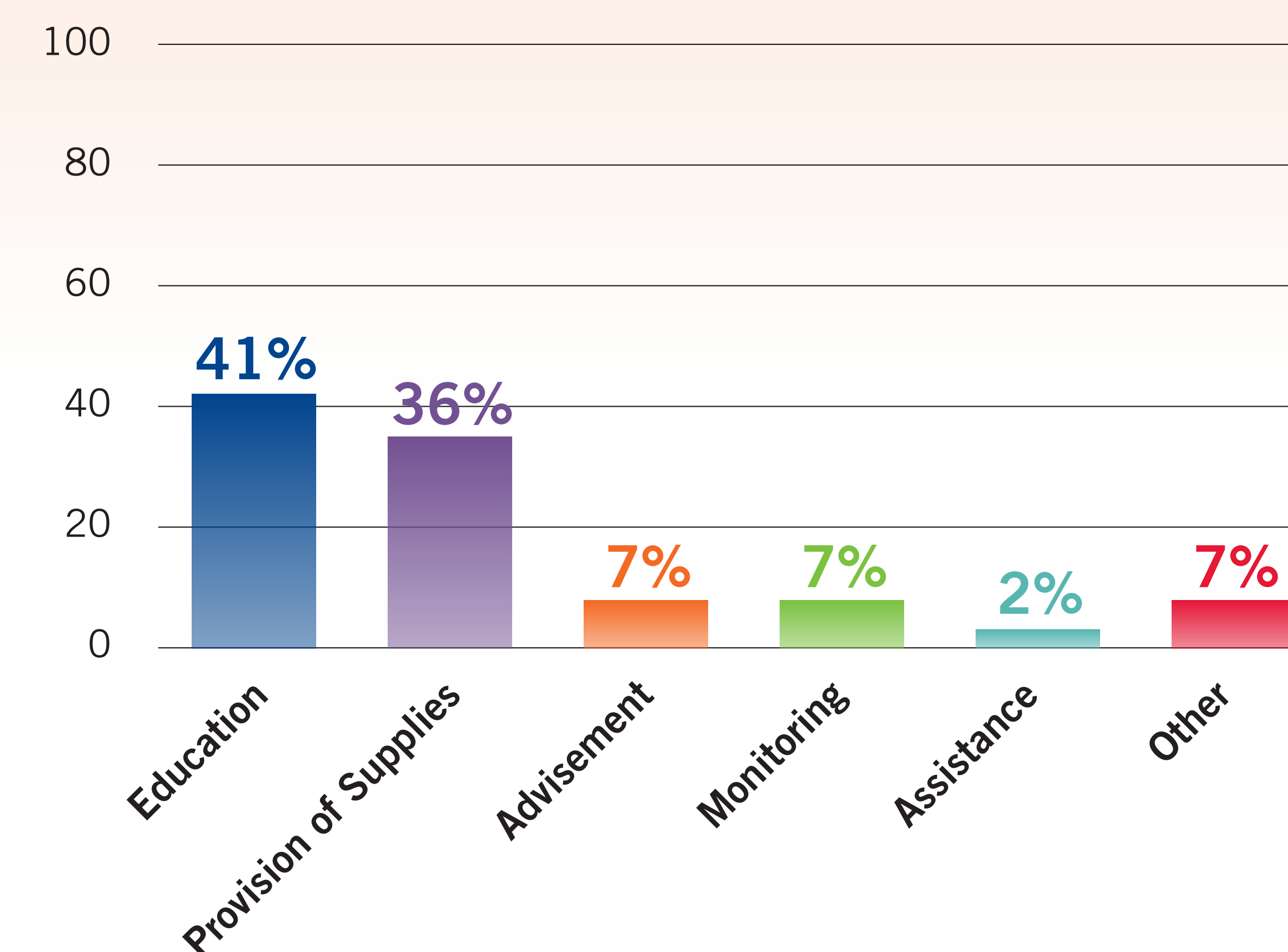
RESULTS

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.

INTERVENTIONS CONDUCTED



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://hpi.georgetown.edu/agingsociety/pubhtml/rxdrugs/rxdrugs.html>

² Kutner, M., Greenberg, E., Jin, Y. and Paulsen, C. (2006). The Health Literacy of America's Adults: Results from the 2003 National Assessment of Adult Literacy (NCES 2006-483). U.S. Department of Education, Washington, DC: National Center for Education.

³ Reinhard, SC, Levine C and Samis S. Home alone: family caregivers providing complex chronic care. Produced by the AARP Public Policy Institute and the United Hospital Fund with support from the John A. Hartford Foundation. October 2012. available at: <http://www.aarp.org/home-family/caregiving/info-10-2012/home-alone-family-caregivers-providing-complex-chronic-care.html>