



Program



History

Medication-related problems and errors endanger the lives and well-being of a high percentage of community-dwelling elders, leaving them with poorly controlled cardiac symptoms, or at risk for falls, dizziness, confusion, or other side effects. Data show that almost 50% of nursing-home eligible Medicaid waiver clients have potential medication problems, such as taking generic and brand name versions of the same drug or falls related to psychoactive medications. HomeMeds is designed to enable community agencies to address this important safety and quality of life issue.

- 1993-2003: The Visiting Nurses Association of LA (VNA/LA; now Partners in Care Foundation) was one of the first home health agencies to employ a pharmacist to support patients and field nurses. Vanderbilt University researchers later convened a national consensus panel of experts, led by Mark Beers, MD, to formalize protocols for such pharmacist/staff collaboration. The program, originally called the Medication Management Improvement System, was developed for elders receiving home health care and proven effective in a randomized, controlled trial. (Funded by the John A. Hartford Foundation.)
- 2003-2007: Partners in Care Foundation (*Partners*) adapted HomeMeds for care management and computerized the screening tool under AoA Evidence-Based Healthy Aging Program funding.
- 2006-2010: Disseminated statewide and then nationwide in care management programs for elders. (Funded by the John A. Hartford Foundation.)

Program Description

HomeMeds is an evidence-based, technology-enabled intervention that addresses medication safety among older adults by connecting home and community-based services to health care providers. The program addresses major gaps in care that leave home-dwelling older adults at risk for adverse medication effects. HomeMeds has been implemented by social workers and nurses in a variety of programs for older adults, including care transitions, Meals on Wheels, and Medicaid waiver programs designed to help keep frail older adults safe at home.

The HomeMeds system addresses four types of medication-related problems:

1. Unnecessary therapeutic duplication (e.g., generic and brand name of same drug)
2. Falls, dizziness, or confusion possibly caused by inappropriate psychotropic drugs (e.g., tranquilizers, antipsychotics, antidepressants, sleep aids, antihistamines)
3. Cardiovascular medication problems related to high blood pressure, dizziness, low blood pressure or low pulse.
4. Inappropriate use of non-steroidal anti-inflammatory drug (NSAIDs) in those with risk factors for peptic ulcer or gastrointestinal bleeding.

HomeMeds was adapted from its original home health model to enable social workers and other non-medical personnel to implement the system, which has contributed to dissemination efforts. Service coordination staff members work with a consultant pharmacist to (1) verify the accuracy and appropriateness of the client's current medication list, (2) identify problems that warrant re-evaluation by the physician, and (3) follow through with the client and physician to resolve identified problems. A computerized risk screening and alert process, using the medication list and clinical indicators (vital signs, age, falls, dizziness and confusion) helps identify potential medication-related problems.

Program Outcomes

The original randomized, control trial, conducted in 1993 by Vanderbilt University (1), found:

- Medication use improved in 50% of the intervention patients, compared to 38% of usual-care controls ($p=.05$) when a pharmacist helped home health staff.

AoA-funded study (2) of three California Medicaid 1915(c) waiver sites found:

- Of 615 clients screened, 49 percent (N=299) had at least one potential medication problem.
- Record review and consultation with the client led the pharmacist to recommend either: (a) Continuing the medications because they were necessary for pain or symptom control; (b) Collecting additional information regarding vital signs and other clinical indicators; (c) Verifying the dose and frequency with which the client was taking the medication and revising the medication list accordingly; or (d) Changing medications or dosage.
- It was determined that 29% of waiver clients had a medication problem serious enough for the pharmacist to recommend a change in medications, including re-evaluation by the physician. For this intervention group (N=118), 61% of recommended changes for all medication problems were implemented.
 - Therapeutic Duplication 62% change
 - Psychotropic with Falls or Confusion 54.2% change
 - Cardiovascular Problems 45.8 % change
 - NSAIDs 50% change

Program References

1. Brown, N. J., Griffin, M. R., Ray, W. A., Meredith, S., Beers, M. H., Marren, J., Robles, M., Stergachis, A., Wood, A. J., & Avorn, J. (1998). *A model for improving medication use in home health care patients*. Journal of the American Pharmaceutical Association, 38 (6), 696-702.

2. Alkema GE1, Enguidanos SM, Wilber KH, Trufasiu M, Simmons WJ, Frey D. (2009) The role of consultant pharmacists in reducing medication problems among older adults receiving Medicaid waiver services. The Consultant Pharmacist, 24(2):121-33.

A summary of the HomeMeds system is posted on the *AHRQ Innovations Exchange* website with a strong evidence rating. HomeMeds is also included



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