

# Medication Problems Among High-Risk Seniors in Community-Based Care Management Programs

Elaine Der, PharmD & Mira Trufasiu, MSG  
June Simmons, LCSW & Dennee Frey, PharmD  
Partners in Care Foundation

Gretchen Alkema, LCSW, PhD Candidate  
Kathleen Wilber, PhD  
Davis School of Gerontology ~ University of So. California

## Objectives

- Identify prevalence of medication problems in functionally-impaired older adults in Medicaid waiver care-management & evaluate intervention outcomes

## Medications Management Project Rationale

- Patient Safety.** Medication errors are:
  - Serious:** 5th leading cause of death for older adults
  - Frequent:** Up to 48% of community-dwelling elders have medication-related problems
  - Costly:** Drug-related morbidity and mortality costs exceed **\$170 billion**
  - Preventable:** About 1/4 of adverse drug events in ambulatory settings are preventable
- Olmstead Act:** Medication review mandated for SNF, ICF, ADHC, but not Medicaid waiver programs.
- MMA 2003:** Medication Therapy Management provision for high-risk seniors

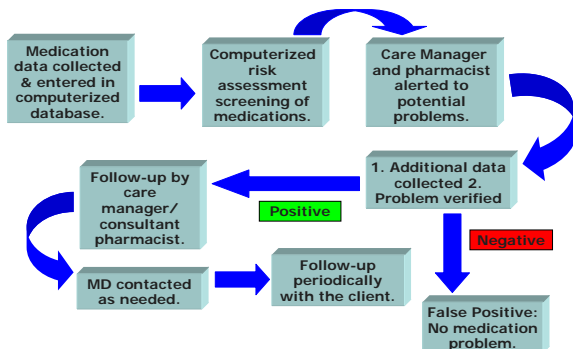
## Methods

- Data from 3 LA County Medicaid waiver program sites (MSSP- Multipurpose Senior Services Programs), serving dually eligible enrollees aged 65+ certifiable for skilled nursing home placement, choosing to live in their homes with services
- Pharmacist screened 615 clients from June 2004-January 2006 using criteria developed for home health patients (Meredith et al., 2001) addressing 4 potential problem types:
  - Unnecessary therapeutic duplication
  - Inappropriate psychotropic use with concurrent falls or confusion
  - Cardiovascular medication problems based on dizziness, continued high BP, low diastolic BP or low pulse
  - Inappropriate non-steroidal anti-inflammatory drug (NSAIDs) use with risk for peptic ulcer complaints (80+, anti-coagulant, or corticosteroid)
- Computerized medication risk assessment screening and alert process using the medication list and clinical indicators (vital signs, falls, dizziness and confusion) was developed and piloted for future use.

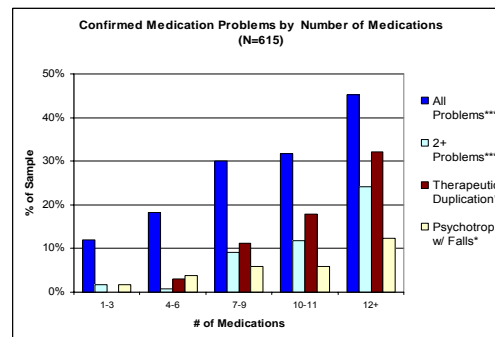
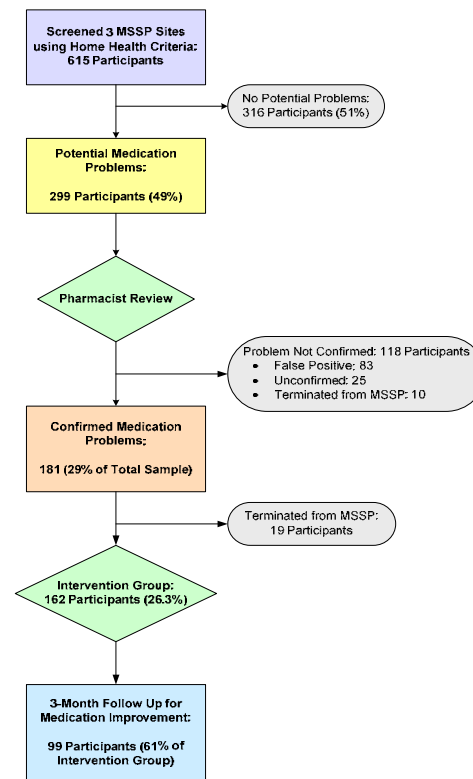
## Sample Characteristics (N=615)

- Mean age: 81 years; 80% female
- Race/ethnicity: Caucasian - 24%; Afr. American - 39%; Latino/a - 24%; A/PI - 9%
- Mean # of medications: 8.76; 12+ meds - 22%
- Hospital/ER/SNF visit in last year - 38%
- Falls in Last 3 Months - 35.8%
- Dizziness - 37.7%
- Confusion - 35.8%

## The Medication Management Model



## Flowchart of CBM Intervention Sample



## Results

- 49% had 1+ potential medication problem (N=299)
  - Therapeutic duplication - 24.2%
  - Inappropriate psychotropic meds - 14.3%
  - Cardiovascular med problems - 14.1%
  - Inappropriate NSAIDs - 12.8%
- 29% Confirmed problems (N=181)
  - Therapeutic duplication - 14.1%
  - Inappropriate psychotropic meds - 10.6%
  - Cardiovascular med problems - 4.4%
  - Inappropriate NSAIDs - 8.6%
- Most frequent predictor: # of medications
- Those w/ ER/Hospital/SNF visit in previous year - 2x risk of psychotropic med problems related to confusion
- At 3 months after intervention - 61% had medication change
  - Greatest % change - psychotropic meds related to confusion

Medication Problem	MSSP Sample Screened (N=615)		Medication Δ (N=162)	
	N	% Prevalence	N	% Δ
Any	162	26.3%	99	61.1%
Ther. Duplication	79	12.8%	49	62.0%
Psychotropic	59	9.6%	32	54.2%
Psych-Confusion	34	5.5%	23	67.6%
Psych-Falls	37	6.0%	16	43.2%
CV	24	3.9%	11	45.8%
NSAIDs	44	7.2%	22	50.0%

Any = Any of the 4 Confirmed Medication Problems  
 Ther. Duplication = Therapeutic Duplication  
 Psychotropic = Inappropriate Use of Psychotropic Medication  
 Psych-Confusion = Inappropriate Use of Psychotropic Medication with Confusion  
 Psych-Falls = Inappropriate Use of Psychotropic Medication with Fall in Last 3 Months  
 CV = Cardiovascular Medication Problems  
 NSAIDs = Inappropriate Use of Non-Steroidal Anti-Inflammatory Drugs  
 Δ = Change

## Discussion

- Dually-eligible older adults in Med-Cal waiver program had over 2x prevalence of medication problems compared to home health sample
- Greater medication problem prevalence for those at risk for institutionalization suggests need for medication review & intervention in community programs
- Those with confirmed medication problems benefited from a medication management improvement intervention that included pharmacist consulting with care managers & physicians
- Next steps: Widespread dissemination of model with additional 4 year funding from John A. Hartford Foundation.

## Research Support

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## Project Collaborators

- MSSP: Partners in Care Foundation
- Huntington Hospital Senior Care Network
- Evaluators: USC Davis School of Gerontology
- National Council on Aging

## Contact Information

Mira Trufasiu, MSG ([mtrufasiu@picf.org](mailto:mtrufasiu@picf.org) / [www.homemeds.org](http://www.homemeds.org))