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Feature Article

An intervention to maximize medication management by caregivers of persons with memory loss: Intervention overview and two-month outcomes



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ABSTRACT

Overseeing medication-taking is a critical aspect of dementia caregiving. This trial examined a tailored, problem-solving intervention designed to maximize medication management practices among caregivers of persons with memory loss. Eighty-three community-dwelling dyads (patient + informal caregiver) with a baseline average of 3 medication deficiencies participated. Home- and telephone-based sessions were delivered by nurse or social worker interventionists and addressed basics of managing medications, plus tailored problem solving for specific challenges. The outcome of medication management practices was assessed using the Medication Management Instrument for Deficiencies in the Elderly (MedMaIDE) and an investigator-developed Medication Deficiency Checklist (MDC). Linear mixed modeling showed both the intervention and usual care groups had fewer medication management problems as measured by the MedMaIDE ($F = 6.91, p < .01$) and MDC ($F = 9.72, p < .01$) at 2 months post-intervention. Reduced medication deficiencies in both groups suggests that when nurses or social workers merely raise awareness of the importance of medication adherence, there may be benefit.

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Introduction

Reducing medication errors and promoting medication adherence are well-recognized patient care priorities that are increasingly important for nurses in home care and other community-based geriatric care settings. Community-dwelling

older adults with impaired cognition are at particular risk for medication errors and for experiencing more general problems with medication adherence.^{1–3} Barriers to medication adherence among such individuals have been documented to include patients' cognitive symptoms (difficulty understanding new directions), behavioral problems (uncooperativeness), and functional deficits (e.g., scheduling medications into a routine). In addition to these illness-related barriers, recent studies suggest that prescriber factors, such as the total daily pill burden, and environmental factors, like living alone, can also contribute to medication nonadherence in cognitively impaired older adults.^{4–7}

As compared to other populations, studies of interventions to improve medication adherence among cognitively impaired older adults are limited and reveal mixed results. For example, findings from one published pilot study indicate that patient reminder

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systems may have a smaller magnitude of effect for cognitively impaired persons relative to other older adults.⁸ A pilot study by Ownby and colleagues showed that providing either automated reminders or tailored information may be beneficial for improving medication adherence in patients with memory loss.⁹ Similarly, another small study of 36 cognitively impaired Veterans with heart failure found pictorial medication sheets to improve adherence.¹⁰ While the interventions in these studies targeted patients, in practice, direct assistance by family and other informal caregivers remains the first line approach to ensuring that those with impaired cognition take medications in accordance with their prescriptions.^{11,12} A related line of research showing that dementia caregivers are slow to assume responsibility for administering patients' medications and often wait until safety issues are overt^{11,13} underscores the need for medication management interventions that target caregivers.¹⁴ While at least one study showed that the involvement of family caregiver is associated with better medication adherence, qualitative research on this topic indicates that assuming responsibility for medication management can be a major source of stress for dementia family caregivers.^{12,15} Caregivers in two qualitative studies described frustration with working to avoid conflict and to address uncooperativeness with care recipients during medication administration, with caregivers in the study by While and colleagues poignantly emphasizing that these challenges persist despite the caregiver having adequate knowledge of the medication regimen.¹² This suggests that the problems faced by family caregivers of those with cognitive impairment are complex and unlikely to be addressed by standard nursing interventions like medication education or the use of reminder systems. The objective of this study, therefore, was to develop and examine the efficacy of a tailored, problem-solving intervention on

informal caregivers' management of medications for community-dwelling persons with memory loss.

Material and methods

Study design and setting

This was an unblinded, randomized controlled trial of a tailored medication management intervention targeting informal caregivers of community-dwelling persons with memory loss. An unblinded design was necessary because it was not feasible to blind participating caregivers to their group assignment. For example, the consent form specified that the number of study visits would vary by group assignment. Thus, caregivers had knowledge of their group assignment by virtue of the study visitation schedule.

Caregivers were recruited from the community through mass mailings; mailings to family members of participants in the local Alzheimer Disease Research Center (NIA grant# P50 AG05133); brochures in pharmacies, clinics, adult day care centers; and support groups; and by advertising in other community venues (e.g., libraries, Meals on Wheels) (see Fig. 1, CONSORT diagram). The setting for intervention delivery and study assessments was the participants' homes. The University of Pittsburgh Institutional Review Board approved this research.

Study population

Persons with memory loss and their informal caregivers were recruited in pairs, or dyads. Patient participants were included if they had self- or caregiver-reported memory loss necessitating help

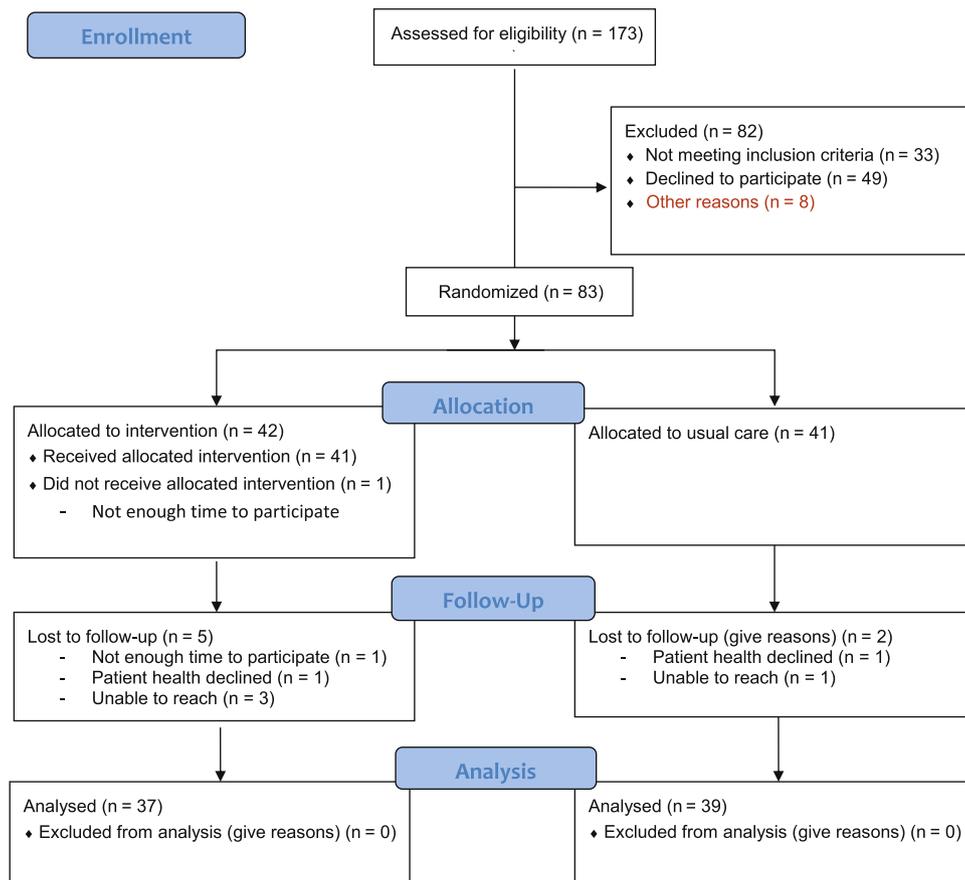


Fig. 1. CONSORT diagram.

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