

# Quality improvement

## Case management reduced hospital admission in caregivers of people with Alzheimer's disease

Shelton P, Schraeder C, Dworak D, et al. *Caregivers' utilization of health services: results from the Medicare Alzheimer's Disease Demonstration, Illinois Site. J Am Geriatr Soc* 2001 Dec;49:1600–5.

**QUESTION:** In caregivers of people with Alzheimer's disease (AD), does case management with added community care benefits reduce healthcare resource use and Medicare payments?

### Design

Subgroup analysis of a randomised (allocation concealed\*)†, unblinded\*, controlled trial with up to 3 years of follow up (Medicare Alzheimer's Disease Demonstration and Evaluation [MADDE]).

### Setting

Illinois, USA.

### Patients

412 caregivers (mean age 75 y, 64% women) who were eligible for Medicare Part A and B, cared for a person who was enrolled in the MADDE study for ≥30 days before placement in a nursing home, and were not enrolled in a health maintenance organisation. All patients were included in the analysis.

### Intervention

Caregivers (and clients with AD) were allocated to case management (n=210) or usual care (n=202). Case management consisted of comprehensive, in home, clinical assessments that were updated every 6 months. Nurse case managers identified client and caregiver medical and psychosocial problems and service needs; a care plan was developed with the agreement of the caregiver and client. The plan specified interventions to be done by the case manager, caregiver, healthcare providers, and informal resources. Nurse case managers had caseloads of approximately 100 caregivers and clients with AD. Caregivers in the usual care group were provided with information about available local supportive services.

### Main outcome measures

Hospital and emergency department (ED) visits and total expenses for Medicare Part A services in US dollars were obtained from Medicare claims files.

### Main results

Results were adjusted for baseline variables. Fewer caregivers in the treatment group than in the control group were admitted to hospital (p=0.037) (table). The groups did not differ for ED visits or Medicare payments (table).

### Conclusion

In caregivers of people with Alzheimer's disease, case management reduced hospital admission but did not differ from usual care for emergency department visits or Medicare payments.

\*See glossary.

†Information provided by author.

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### COMMENTARY

The results of the study by Shelton *et al* are important because health services utilisation by caregivers of patients with dementia is rarely studied. Contrary to expectations, a caregiver's risk of hospital admission was not related to the severity of the care recipient's dementia, functional problems, or behavioural problems. Rather, the caregiver's age coupled with the presence of a chronic illness predicted the risk of hospital admission. Similarly, caregiver stress and burden were not associated with the rate of hospital admission. Although the authors suggest that the lack of association between caregiver emotional factors (stress and burden) and hospital admission was due to the experimental intervention, they provided no data to support this claim. Moreover, the cost of the intervention was included in the cost analysis, yet the service provided by the case managers (professional nurses) and other healthcare providers, including the primary care physician, would add considerably to the overall costs. Are these costs offset by the lower rate of hospital admission in the experimental group?

This study shows the importance of providing community based services for caregivers of patients with chronic illnesses. Typically, caregiver contributions to maintaining the patient in the community are not factored into the health service delivery system. Yet plenty of evidence exists to show that caregivers become ill when overburdened with the responsibilities of care giving, resulting in premature institutionalisation of the patient. Furthermore, family caregivers save the healthcare system millions of dollars annually, yet their contribution is neither acknowledged nor reimbursed. The study findings provide data for supporting changes in health policy for delivery of services to chronically ill patients and their caregivers who should be viewed as part of the overall healthcare delivery system.

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Case management v usual care for caregivers of people with Alzheimer's disease‡.

Outcomes at up to 3 years	Case management	Usual care	Adjusted RRR (95% CI)§	NNT (CI)
Hospital admission	19%	31%	33% (2.1 to 56)	10 (6 to 156)
Emergency department visit	24%	36%	26% (-5.4 to 51)	Not significant
<b>Mean difference (CI)</b>				
Medicare payments	\$1123	\$1804	\$681 (-1766 to 1380)	

‡Abbreviations defined in glossary; RRR, NNT, mean difference, and CI calculated from data in article. §Relative risk is adjusted for baseline variables.