

Mortality in the elderly during respite hospital care

P M McCaffrey, D H Gilmore, T R O Beringer

Accepted 17 July 1989.

SUMMARY

This study examined the mortality in the elderly during 243 respite hospital admissions. Sixty-four dependent elderly patients entered a regular respite care scheme and were admitted to hospital for a period of 4 weeks out of every 12 weeks. The mortality rate in hospital was one death per 976 days, in comparison to one death per 1296 days at home. This small increase in mortality should not deprive patients and their carers from access to respite care.

INTRODUCTION

Increasing numbers of disabled elderly patients are cared for in the community. Hospital respite admissions to provide these carers with a break are an important and long established source of support.¹ Some authors have reported that admission of frail elderly people to hospital is associated with dangers,² including an increased morbidity and mortality, and should therefore be discouraged,³ whilst others disagree.^{4, 5}

This geriatric medical unit runs a respite care scheme whereby dependent elderly patients cared for at home are admitted to hospital for a period of 4 weeks out of every 12 weeks. Such patients would otherwise be deemed to require long-term hospital care if they did not have a carer at home. The purpose of this study was to ascertain if respite admissions to hospital are associated with an increased mortality rate by comparing the mortality rate during respite admissions with that at home. As each patient experienced care at home and hospital, such a comparison may have increased validity.

METHOD

The medical records of all patients included in the scheme between September 1981 and June 1988 were analysed. Patients were referred for inclusion in the scheme after a full multi-disciplinary assessment. Patients considered fit for residential care were referred to social services, and confused but physically fit ambulant patients referred for psychogeriatric care. Therefore, those entering the scheme were physically dependent, unable to walk unaided and requiring assistance with activities of daily living. The cause and date of death were obtained from death certification or hospital records.

Geriatric Medical Unit, Royal Victoria Hospital, Belfast BT12 6BA.

P M McCaffrey, MD, MRCP, Senior Registrar.

D H Gilmore, MB, MRCP, Consultant Physician.

T R O Beringer, MD, MRCP, MRCPI, Consultant Physician.

Correspondence to Dr T R O Beringer.

RESULTS

A total of 64 patients (17 male, 47 female) participated in the scheme between September 1981 and June 1988, and 243 respite admissions occurred. Their mean age was 81 (SD \pm 7) years with a mean time in the scheme of 11 \pm 9 months. Of these, eight died during relief admissions, five died at home and seven died after acute admission to hospital from home. The mean time in hospital for all participants was 122 (88) days and the mean time at home was 243 (190) days. Therefore, for all participants, one death occurred per 976 days in hospital and one death per 1296 days at home. Alternatively, 40% (8 out of 20) deaths occurred at home compared with the 33% expected, had the death rate been identical at home and in hospital. However, 95% confidence limits for the true proportion dying at home were 19% and 64%. These limits are wide, so although the 40% does not differ significantly from the expected figure of 33%, there is some possibility of an important difference being overlooked (ie a type II error). Details of all patients who died while participating in the scheme are given in the Table.

TABLE
Details of patients who died

	<i>Hospital</i>	<i>Home</i>
Number of patients	8 (13%)	12 (19%)
Sex (F, M)	6 : 2	9 : 3
Mean age in years \pm SD	79 \pm 6	80 \pm 8
Mean time in scheme in months \pm SD	11 \pm 8	13 \pm 13
Diagnosis		
Cerebrovascular disease	3	7
Dementia	3	3
Multiple sclerosis	–	1
Paget's disease of bone	–	1
Osteoarthritis	1	–
Normal pressure hydrocephalus	1	–
Cause of death		
Bronchopneumonia	3	7
Cerebrovascular accident	2	4
Myocardial infarction	2	0
Cardiac failure	–	1
Renal failure	1	–

Hospital = Patients who died during hospital relief admissions.

Home = Patients who died at home or during acute hospital admission from home.

DISCUSSION

The patients accepted for this scheme were deemed to require social admission for respite for their carers as a consequence of established illness and disability. Although the death rate in hospital of one death per 976 days was higher than the death rate at home of one death per 1296 days, it was not statistically significantly

greater. The patients who died in hospital during respite admissions did not differ from those who died at home or after acute admission to hospital in terms of age, mean time in scheme, female to male ratio, diagnosis or cause of death. The increased mortality and morbidity following relocation of the elderly have been highlighted previously⁶ and appear greatest in the very elderly, confused and incontinent.² The causes of the increased risks are uncertain, but are likely to include exposure to multi-antibiotic resistant hospital bacteria, and to the social and psychological effects of a change in environment⁶ and patterns of care. Our findings do not support the view that admitting elderly people for respite care should be discouraged because of very high mortality rates in hospital. This is in contrast to the study of Rai et al³ who reported that 13% of patients admitted to hospital for holiday relief and 35% of patients admitted for social reasons died, and therefore concluded that admission should be discouraged because of the very high mortality. This latter group did not provide evidence of expected mortality for these patients if they had remained at home, and it is likely that their high mortality in part reflected medical factors rather than social factors alone precipitating need for hospital admission. It is in our judgement often difficult to separate the intertwined medical and social factors contributing to the need for hospital admission, and deteriorating physical independence may be mistakenly interpreted as a need for relief admission rather than active appropriate medical intervention.

The patients accepted for the Royal Victoria Hospital scheme were severely physically disabled. Their mortality of approximately 30% per annum is much higher than the estimated overall mortality of 80-year-olds which is approximately 4% per annum (Registrar General's Report, Northern Ireland) but is in keeping with the 37% per annum reported for elderly patients with similar disabilities.⁵ Our results indicate that the elderly dependent patients represented in this study have a high overall mortality whether at home or in hospital. The small increase in mortality which occurs following admission to hospital should not deprive informed patients and carers of their access to respite, if alternate support in the community is inadequate or unforthcoming.

We gratefully acknowledge the help of nursing, paramedical and social work staff of the geriatric units situated in the Belvoir Park, Musgrave Park, Royal Victoria and Throne Hospitals. We acknowledge the foresight of Dr T J Ryan and Mrs June Gordon in establishing this scheme, and thank Dr C C Patterson for statistical advice.

REFERENCES

1. Delargy J. Six weeks in: six weeks out. *Lancet* 1957; 1: 418-9.
2. Isacs B, Thompson J. Holiday admissions to a geriatric unit. *Lancet* 1960; i: 969-71.
3. Rai GS, Bielawska C, Murphy PJ, Wright G. Hazards for elderly people admitted for respite ("holiday admissions") and social care ("social admissions"). *Br Med J* 1986; 292: 240.
4. Power MJP, McConnell G, Taylor I. Hazards for elderly people admitted for respite and social care. *Br Med J* 1986; 292: 482.
5. Harper N, McDowell DK, Turner JJ, Sharma AK. Planned short-stay admission to a geriatric unit: one aspect of respite care. *Age and Ageing* 1988; 17: 199-204.
6. Aldrich CK, Mendkoff E. Relocation of the aged and disabled: a mortality study. *J Amer Geriatr Soc* 1963; 11: 185-94.