

# LONGITUDINAL STUDY OF ELDERLY PEOPLE ADMITTED TO RESIDENTIAL AND NURSING HOMES: 42 MONTHS ON

Andrew Bebbington, Robin Darton and Ann Netten  
 Personal Social Services Research Unit, University of Kent at Canterbury

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## BACKGROUND

As part of a wider investigation of residential and nursing home care, the Department of Health has funded a longitudinal survey which has followed 2,540 people from 18 local authorities who were admitted to homes between October 1995 and January 1996. All of the admissions were intended to be long-term (that is, with no set discharge date) and were at least partially publicly funded. On admission, data were collected from social workers about the circumstances of the admission and level of dependency of the elderly person. Information was collected directly from homes about mortality, changes in location, and levels of dependency, six, 18, 30 and 42 months after admission. At each stage, social workers were contacted for information about those people who were no longer in residential or nursing home care. Following the 42 month follow-up, dates of death were obtained from the Office for National Statistics for individuals whose actual date of death had not been reported, and for those who had died but for whom follow-up information was missing.

## LENGTH OF STAY AND MORTALITY

At 42 months, the situation was known for 93% of the original sample. Twenty-one per cent of those for whom information was available were still in residential or nursing home care and 78% had died (see figure 1). Eight per cent of the original sample had left residential or nursing home care at some time during the 42 months following admission, of whom approximately 30% were still alive. Just under half of these individuals were living in private households; the rest had returned to residential or nursing home care or were in hospital.

Those who were originally admitted to nursing home beds (46% of all admissions) were, in general, more dependent on admission than those going into residential care. As a result, survival rates differed considerably between the two types of care (see figure 2). The median survival (the time at which one half of the original entrants were still alive, after allowing for those who were lost to the study) was 12 months for those admitted to nursing home beds, compared with 27 months for those admitted to residential beds. Death rates were particularly high in the first few months among those in nursing home beds, with 30% dying in the first three months. These rates levelled out at about 3% per month after six months for the combined group, though with some evidence of seasonal variations.

Figure 1. Destination at 42 months by type of bed to which originally admitted

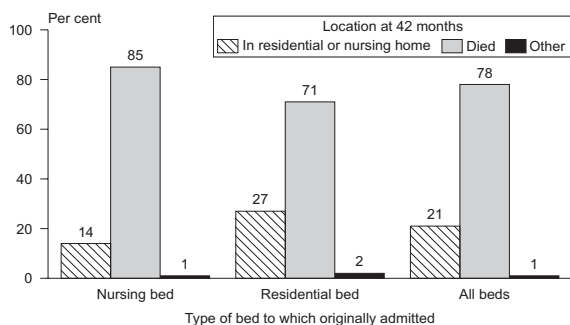
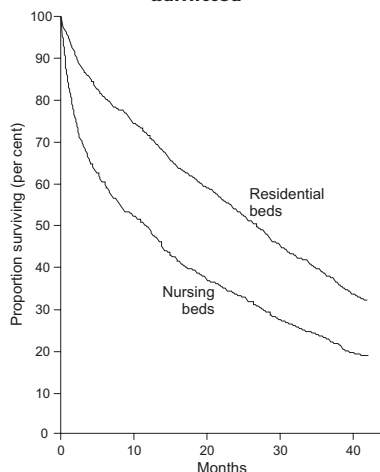


Figure 2. Proportion surviving by type of bed to which originally admitted



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A number of other factors at the time of admission affected subsequent mortality. These were, in order of the size of their effect: being diagnosed with cancer; being highly dependent (measured on the Barthel scale); being older; being a man; being admitted to a nursing home bed; being admitted from a hospital rather than a private residence; having a respiratory illness; and being cognitively impaired. However, being diagnosed with dementia, depression or cardiovascular disease, having had a stroke, or being incontinent at the time of admission had little impact on subsequent survival, after other factors were taken into account. Nor were there any differences according to the area in which the person formerly lived.

Unsurprisingly, people who moved to a different home or type of bed were more likely to have survived to the 42 month follow-up than those who remained in the same home or type of bed. However, movers tended to have had slightly lower dependency on admission.

## MOVERS

Approximately 10% of the sample moved to a different home and 7% moved to a different type of bed during the 42 months following admission. Individuals admitted to a residential bed were more likely to have moved than those admitted to a nursing bed, while those admitted to dual registered homes were less likely to have moved to another home, but were more likely to have moved to a different type of bed. Twelve per cent of those admitted to a residential bed moved to a different home, compared with 7% of those admitted to a nursing bed. Ten per cent moved from a residential to a nursing bed, compared with 5% who moved from a nursing to a residential bed. Including those who were admitted to a nursing bed from a residential home, approximately one-fifth of those admitted to a residential bed subsequently moved to a nursing bed.

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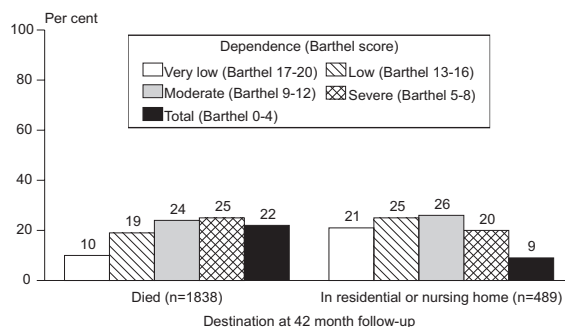
A total of 196 people (8% of all admissions) had left residential or nursing home care during the 42 months following admission. Of these, 103 went into hospital and 93 returned to a private household. At 42 months, 70% of those discharged had died, 11% were living in a private household, 10% had returned to a residential or nursing home and 5% were in hospital, while for 4% the location was unknown. Death rates were 82% of those who had been admitted to hospital, and 57% of those who had returned to a private household.

## DEPENDENCY AND COGNITIVE IMPAIRMENT

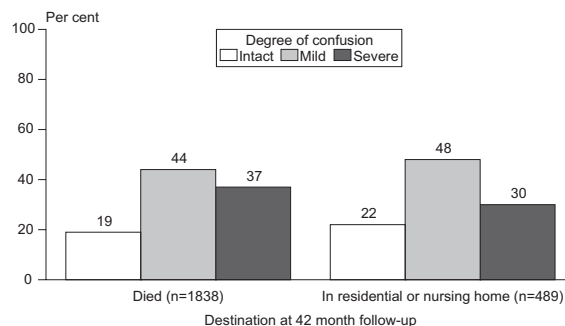
Health on admission affects outcome. Dependency in this survey was measured using the well-known Barthel scale, in which low scores indicate high dependency. Cognitive impairment was measured by the MDS Cognitive Performance Scale. Figures 3 and 4 show how survivors were, on average, more healthy at the time of admission than those who died, though some very dependent people did survive.

The study investigated changes in these measures. During the first six months, as many people improved in their dependency as declined, but thereafter recovery was uncommon. Some recovery from cognitive impairment continued throughout, particularly between severe and mild states, but after six months the probability of declining was much greater than of improving.

**Figure 3. Dependency of individuals on admission by destination at 42 month follow-up**



**Figure 4. Cognitive impairment on admission by destination at 42 month follow-up**



Among survivors, physical dependency had increased more among those admitted to a residential bed than among those admitted to a nursing bed, while the opposite was true for cognitive impairment. The improvement by six months was most marked in those activities of daily living that might relate to being in a better controlled environment, rather than any real indication that people had recovered in a way that might have made them more fit to return to private households.

People who were comparatively independent at the time of admission, with specific health diagnoses, were the ones most likely to improve, and those admitted from private households rather than hospital were more likely to improve in terms of dependency. This suggests that most missed opportunities for possible rehabilitation may arise for people admitted from private households with chronic diseases, rather than for those prematurely discharged from hospital.

The project established expectation of life at different states of health, which differs considerably depending on health at the outset. A person with very severe dependency on admission is likely to spend most of their remaining life in that state. A person with low dependency on admission will live perhaps four times as long, and half their remaining life will be at low dependency. Though some people seemed quite independent and mentally alert at each stage of the survey, only 1% of all those admitted were in this condition at every wave of the survey. So there were very few for whom placement in a care home was clearly inappropriate.

## LIFETIME COSTS WITHIN A CARE HOME

The average gross lifetime cost to social services of a placement is £32,000 for a nursing bed and £38,000 for a residential bed (1996 prices). There is tremendous variation in lifetime costs and about 10% will cost more than £100,000. These estimates do depend on survival beyond 42 months, but are likely to be within 5% of the true figure.

The study provides a method of estimating lifetime costs. Those factors which raise weekly costs, for example by leading to nursing rather than residential care, are precisely those that lower expected survival. The consequence is that while lifetime costs may be predicted from people's circumstances at the outset, the great variation means such estimates cannot be expected to be accurate in individual cases.

We are most grateful to the staff in the local authorities which agreed to take part in the survey and to the staff of residential and nursing homes for providing the information for the survey. The main data collection for the survey was undertaken by Research Services Limited (now IPSOS-RSL Ltd). For further details about the survey, please contact Lesley Banks at the PSSRU in Canterbury, telephone 01227 823963, email L.A.Banks@ukc.ac.uk.

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