THE STUDY

How many elderly people are likely to require long-term care services in the next decades? How much are these services likely to cost? Will the cost to public funds prove affordable? These are the questions considered in the study summarised here.

There has in recent years been some debate, and various analyses, concerning likely future demand for long-term care for elderly people. This has been prompted by the wider policy debate about how best to finance long-term care. The policy debate has culminated in the establishment of the Royal Commission on Long-Term Care for the Elderly. Its report was expected shortly as this Bulletin went to press.

To inform debate it would be most valuable to have reliable projections of two key variables. The first is the likely level of demand for long-term care services under different scenarios about changes in life and health expectancy and in socio-economic variables. The second is the costs associated with meeting the expected demand for care and the distribution of these costs under different policies and funding mechanisms.

The study reported here aims to make projections of likely demand and expenditure on long-term care for elderly people in England to 2031. The specific aim is to make projections of the following:

- estimated numbers of elderly people with different levels of dependency;
- estimated levels of long-term care services demanded; and
- estimated expenditure by funding source.

Projections had previously been made for this country by at least three agencies: the Institute of Actuaries (Nuttall et al., 1994); London Economics and the Institute for Public Policy Research (Richards et al., 1996); and the Department of Health (House of Commons Health Committee, 1996). The Unit sought to learn from and build on these earlier studies.

The debate on how to finance long-term care has been encouraged by a range of factors. These include the projected continued growth in the numbers of very elderly people, uncertainty about future levels of family care, and more generally uncertainty about future levels of need for long-term care services.

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The study has involved the development of a computer simulation model. It has also involved literature reviews and analyses of various sources of data. The PSSRU’s recent report describes the model, discusses some of the key issues that were addressed in producing it, and outlines some illustrative projections made using the model.
KEY FINDINGS OF THE STUDY

Projected numbers of elderly people

The projected continued growth in the numbers of elderly people is one of the factors that have prompted concern about the affordability of long-term care over the next decades.

The numbers of elderly people in England (aged 65 and over) are projected by the Government Actuary’s Department to rise by almost 57% between 1995 and 2031. The numbers of very elderly people (aged 85 and over) are projected to rise more rapidly, by around 79%. Almost half the growth in overall numbers is expected to occur in the period 2020 to 2031. This is illustrated in figure 1.

Figure 1 Population projections for England

Long-term care would need to expand by around 61% between 1995 and 2031 to keep pace with the rising numbers of elderly people if no account is taken of other factors. This is in terms of home care hours, community nurse visits, residential care weeks etc. If the numbers of very elderly people (aged 85 and over) grew by 1% per year more than expected, long-term care would need to expand by 92% rather than 61%. Projections are sensitive to the projected numbers of very elderly people.

Projected numbers of dependent elderly people

There is considerable debate about whether age-specific dependency can be expected to rise or fall (Bone et al., 1995). An optimistic view is that there will be a compression of morbidity and that the expansion of life expectancy will be associated with a contraction in the average number of years with disability. A pessimistic view is that there will be an expansion of morbidity and that the expected continued increase in life expectancy will be associated with an increase in the average number of years with disability.

This study confirmed the findings of earlier studies that projections of long-term care expenditure are sensitive to assumptions about future rates of dependency among elderly people. If, on a pessimistic scenario, (age-specific) dependency rates rose by 1% per year, long-term care would need to expand by 121% rather than 61% on the optimistic scenario, (age-specific) dependency rates fell by 1% per year, long-term care would need to expand by only 18% between 1995 and 2031.

Informal care

Informal care by family and friends is included both because it is important in its own right and because it is a key determinant of receipt of formal services. Future trends in the availability of informal care are likely to have considerable implications for demand for formal care. Yet there is much uncertainty about the future supply of informal care (Allen and Perkins, 1995). The changing age structure of the population, rises in employment rates among married women and rises in divorce rates have all been cited as reasons for a potential decline in informal care supply relative to a growing number of elderly people. It is not clear, however, that these factors will actually result in a decline in informal care supply.

One of the key factors affecting receipt of informal care is household composition, with elderly people living alone less likely to receive informal help than those living with others. The study incorporates projected changes in household composition, measured in terms of marital status and household type, and therefore allows for changes in this crucial determinant of informal care supply (figure 2). The number of dependent elderly people living at home and receiving informal care is projected to rise by 56% between 1995 and 2031, assuming an unchanged relationship between receipt of informal help with domestic tasks and dependency and household type.

Projected amounts of services demanded

The study considers a range of services relevant to meeting the long-term care needs of elderly people.

Domiciliary services

Key domiciliary services covered by the model include social services, such as home care, day care and meals; health services, such as day hospital care, community nursing and chiropody; and private domestic help.

The probability of receipt of each of these services was estimated, through multivariate analysis of data from the 1994/95 General Household Survey. The analysis was by age, dependency, household type, housing tenure, and receipt of informal help with domestic tasks. Intensity of service receipt, the number of hours or visits received,
was also taken into account. The numbers of people receiving home care are projected to rise by around 62% and the numbers receiving community nursing by around 61% between 1995 and 2031, on the basis of an unchanged relationship between receipt of services and the factors mentioned above (figure 3).

**Residential care home, nursing home and long-stay hospital care**

Institutional care is also included in the model. Department of Health data and data from recent PSSRU surveys of residential care and nursing homes were used in the model (Bebbington et al., 1996; Netten et al., 1998). Institutionalisation in the model is treated as a function of age, gender and (previous) household type.

The numbers of people in residential care homes are projected to rise by 64%, the numbers in nursing homes by 64% and the numbers in long-stay hospital care by 62% between 1995 and 2031 (figure 4). This is on the basis of an unchanged relationship between receipt of these services and age, gender and whether or not living alone.

**Projected aggregate expenditure**

The model considers aggregate health and social services expenditure and private expenditure. It does not attempt to put a value on informal care. Information on the unit costs of care, for example on the cost of an hour’s home care, was drawn from the PSSRU study of the unit costs of key community services (Netten and Dennett, 1996).

Financial projections over a substantial period of time are highly sensitive to assumptions about changes in the real unit costs of services. These will be affected by a range of factors including changes in input prices, especially real wages in the caring sector, changing technical efficiency of service provision, and any changes in the quality of services and expected outcomes.

The study takes as a base case an assumption that social care costs will rise by 1% per year and health care costs by 1.5% per year in real terms. On this basis long-term care expenditure would need to rise by 153% between 1995 and 2031. This projection needs to be compared with expected rises in economic output. If Gross Domestic Product (GDP) rose by 2.25% per year, this would constitute a rise of 123% over the period 1995 to 2031.

**Projected breakdown of expenditure between funders**

A key topic of interest is how much of projected expenditure is likely to be met from public expenditure and how much by elderly people and their families. Elderly people may in future be more able to contribute to the costs of their care through rising housing equity. The study considers the potential effect of rising owner-occupation on the proportion of elderly people paying for residential care privately.

On the basis of the current funding system, total NHS long-term care expenditure is projected to rise by 174% between 1995 and 2031, social services net expenditure by 123% and private expenditure by 173%. These projections, which are shown in figure 5, should be regarded as illustrative only. They are particularly sensitive to the projected rate of growth of the very elderly population, to trends in age-specific dependency rates, and to assumptions about real rises in the unit costs of care. The breakdown between sources of funding is also sensitive to the extent of the likely rise in the proportion of residents of care homes who do not qualify for public funding because of their housing assets.
Illustrative projections

The report sets out different projections obtained using the long-term care financing model. These are compared to a base case. The base case assumptions are outlined in Table 1.

It was important to develop a clear base case for the purposes of the sensitivity analyses. It seemed sensible to start with current patterns of care. This enables the effects of changes in the level and quality of care to be clearly distinguished from the effects of demographic and social change. It does, however, mean that the base case itself does not take into account the potential impact of rising expectations.

The base case assumptions are varied in a series of sensitivity analyses that are described in the report. Under the base case, expenditure would grow by 153% from £0.4 billion to around £23.7 billion (in constant 1995/96 prices) between 1995 and 2031. If unit costs grew by 1% more than in the base case, for example, total expenditure would rise by 260% in the same period. If, to take another example, age-specific dependency rates and institutionalisation rates fell by 1% per year, total expenditure would rise by only 85% between 1995 and 2031. The report explores the implications of many different scenarios.

Conclusions

The results of the model are sensitive to a wide range of assumptions, especially those concerning trends in dependency and in real unit costs of care. It would be helpful if further analyses could reduce the degree of uncertainty but that seems unlikely. It is more valuable to consider ways in which the model can be used to help inform policy and planning. Projections using the model have already been provided to the Royal Commission on Long-Term Care. The Unit plans to continue work to develop the model and to use it to inform policy.

References


Table 1 Assumptions under the base case of the model

- Population numbers will change in line with official 1996 based population projections.
- Age/gender specific rates of institutionalisation and dependency will remain unchanged.
- Age/gender specific marital status rates change according to the Government Actuary’s Department marital status projections.
- Age/household type specific housing tenure rates change broadly in line with the Anchor Housing Trust projections.
- Dependency/household type rates of receiving informal help with domestic tasks remain unchanged.
- Rates of receiving formal community care services remain an unchanged function of age, dependency, household type, housing tenure and receipt of informal care.
- Dependency specific quantities of formal services per recipient week remain constant.
- The rate of recovery of gross costs of social care in user charges will remain by 1% per year and of health care by 1.5% per year.
- The ratio of privately funded residents of care homes to publicly funded residents will rise in line with the ratio of elderly owner-occupiers living alone to the rest of the elderly household population.
- Dependency/household type rates of receiving informal help with domestic tasks remain constant.
- The rate of recovery of gross costs of social care in user charges will remain constant.
- The division of funding responsibilities among agencies will not be changed.

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