

Thirty Years On: Future Demand for Long-Term Care in England

PSSRU

RESEARCH SUMMARY

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BACKGROUND

The financing of long-term care for older people raises a great many questions. How many older people are likely to require long-term care services in thirty years' time? How much are these services likely to cost? Will the cost to public funds prove affordable? Who should pay? How should costs be divided between public expenditure and private sources of finance?

Reliable projections of future demand and of future spending on long-term care are needed in order to address these issues. Using an updated and expanded version of the long-term care projections model developed by the Personal Social Services Research Unit (PSSRU), this paper presents projections of demand and associated future expenditure in England up to 2031.

The PSSRU model was constructed as part of a project on long-term care finance funded by the Department of Health. This project is concerned with two related policy issues on funding long-term care for older people. First, will expenditure — and specifically public expenditure — on long-term care remain sustainable in coming decades, despite demographic pressures and rising expectations? Second, what balance should there be between public and private financing?

THE PSSRU MODEL

The PSSRU model has provided projections for the Royal Commission on Long Term Care, HM Treasury's Health Trends Review, the Institute of Public Policy Research, the Alzheimer's Research Trust, the European Commission and the National Assembly for Wales. The model is regularly

expanded and updated to provide new projections for the Department of Health.

The model aims to make projections of three key variables: the future numbers of dependent older people; the likely level of demand for long-term care services for older people; and the costs associated with meeting this demand. The version used here has a base year of 2001, and incorporates the interim population projections from that year.

The model is cell-based and takes the form of a spreadsheet. It estimates: first, the numbers of older people with different levels of dependency by age group, gender, household type and housing tenure; second, the levels of long-term care services required; and third, total health and social services expenditure. In the fourth part, total expenditure is allocated to the various funding sources.

Projected numbers of older people

Dependency influences need for care more than age. The model uses four dependency groups, based on measures of the ability to perform activities of daily living (ADLs) and instrumental activities of daily living (IADLs).

Household type is another key factor in receiving long-term care, and informal care, with which it is closely related, is combined with household composition in a five-point classification: living alone without informal help; living alone with informal help; de facto single, living with others; married/cohabiting couples; and married/cohabiting couples living with others.

Housing tenure can be regarded as a proxy for socio-economic group, and the model divides people living in

Demand for long-term care is sometimes referred to as a demographic 'time-bomb' and perceived as an impending financial crisis, but how far do such pessimistic views correspond with reality in future policy terms?

Adelina Comas-Herrera, Linda Pickard and Raphael Wittenberg from the PSSRU, LSE Health and Social Care at the London School of Economics, and Bleddyn Davies and Robin Darton from the PSSRU, University of Kent, used a long-term care projections model to examine a range of different scenarios and found a more complex picture with some grounds for optimism.

The discussion paper summarised here is part of a wider project, funded by the Department of Health, that is investigating long-term care finance.

private households between those in owner-occupied tenure and those living in rented accommodation. In the case of older people living alone, this is relevant in terms of those who fund their own residential or nursing home care and those who are funded by local

The Research Team

The PSSRU staff who conducted this study were Adelina Comas-Herrera, Linda Pickard and Raphael Wittenberg from the PSSRU, LSE Health and Social Care at the London School of Economics, and Bleddyn Davies and Robin Darton from the PSSRU, University of Kent. This summary was edited by Annabelle May.

authorities. Older home-owners living alone generally need to fund their care privately while older tenants and older home-owners living with spouses are often eligible for public funding.

Projected level of demand

The model then projects the volume of services demanded. Using the independent variables of age, gender, dependency, marital status, household type/informal care and housing tenure allowed an estimate of the probability of receipt of non-residential services. Separate analyses were undertaken for dependent and non-dependent older people; few of the latter received services other than private domestic help and chiropody.

A combination of official national statistics and data from previous PSSRU studies was used to estimate the probability of receiving residential and nursing home care. Hospital Episode Statistics data on numbers of older patients by age and gender with stays over 55 days were used to estimate the numbers in long-stay hospital care.

Projected expenditure and funding sources

The third part of the model projects total expenditure on formal services, covering costs to the health service, social services and service users. The fourth part breaks down this projected aggregate expenditure by funding source: NHS, social services and service users. The costs of health services are assigned to the NHS, while the costs of social services are divided between users and personal social services. People in residential care and nursing homes are divided into privately and publicly funded residents on the basis of current data.

KEY ASSUMPTIONS ABOUT FUTURE TRENDS

The PSSRU model does not forecast future policies or future patterns of care, but makes projections based on specific assumptions about future trends in key factors influencing demand for care. These assumptions are summarised in box 1. Figure 1 shows projected expenditure by funding source on the basis of these assumptions.

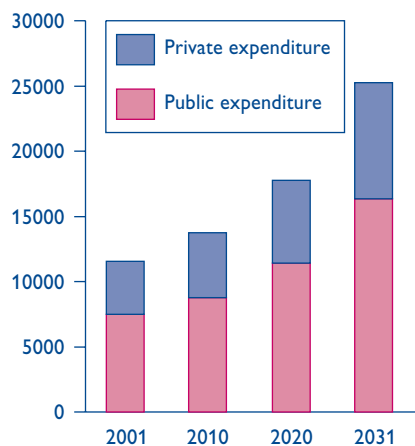
WHAT IF KEY ASSUMPTIONS CHANGE?

This section examines the model's

Box 1. Key assumptions used by the PSSRU model

- The number of people by age and gender changes in line with the latest Government Actuary's Department 2001-based population projections (GAD, 2003).
- Marital status changes in line with GAD 1996-based marital status and cohabitation projections.
- The ratio of single people living alone to single people living with others, and of married people living with partner only to married people living with partner and others, remains constant.
- Rates of dependency by age and gender remain unchanged, as reported in the 1998/9 General Household Survey (GHS) for Great Britain.
- Home-ownership rates, as reported in the 1998/9 GHS, rise in line with the Anchor Housing Trust projections (Forrest et al., 1996).
- All dependent older people living with others receive informal care.
- The proportions of older people receiving informal care, formal community care services and residential and nursing home care services remain constant for each sub-group by age, dependency and other needs-related characteristics.
- Social care unit costs rise by 1 per cent per year and health care unit costs by 1.5 per cent per year in real terms. Real Gross Domestic Product rises by 2.25 per cent per year.
- The supply of formal care will adjust to match demand, and demand will be no more constrained by supply in the future than in 2001, the base year.

Figure 1. Projected expenditure (£m) by source of funding in England, 2001–2031, using the assumptions listed in box 1



sensitivity to any changes in the key assumptions, with particular regard to changes relating to life expectancy, dependency rates, the availability of informal care, patterns of formal care and the unit costs of care.

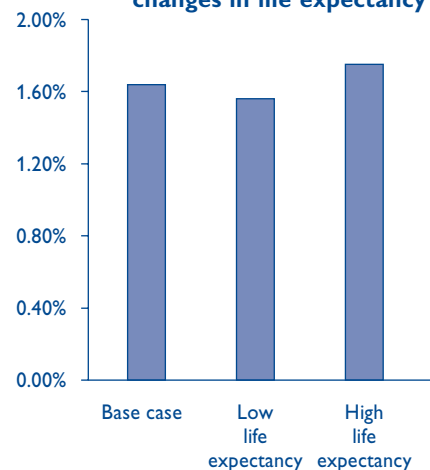
Life expectancy

The GAD population projections for England produce a rise of 54 per cent in numbers of people aged 65 or more between 2001 and 2031, while numbers of those over 85 will rise by 81 per cent.

Mortality rates in old age are the key factor affecting the projected number of older people. As the proportion of older people with dependency rises sharply with age, the model's projections are very sensitive to the

assumptions about the numbers of very elderly people. Figure 2 shows projected expenditure in 2031 as a percentage of GDP under alternative assumptions.

Figure 2. Projected expenditure as per cent of GDP, England, 2031, under alternative assumptions about changes in life expectancy



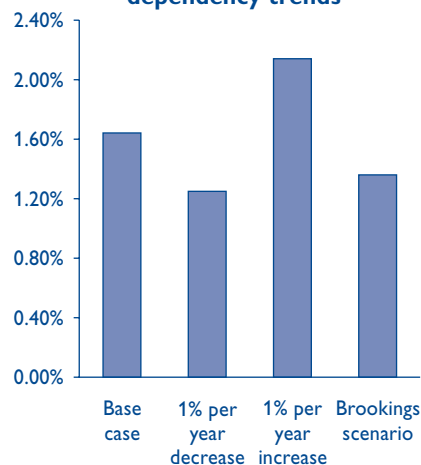
Dependency

If falling mortality rates were accompanied by falling rates of dependency, this would (at least partially) offset the impact of demographic pressures on demand. Constant dependency rates could be regarded as a pessimistic assumption. The 'Brookings scenario' is a less pessimistic assumption that moves the age-specific dependency rate up by one year for each one-year increase in life expectancy.

While there are differing views about whether age-specific dependency rates

can be expected to rise, fall or remain much the same, projections of demand for long-term care are highly sensitive to assumptions about dependency. Figure 3 shows projected expenditure in 2031 as a percentage of GDP using a range of assumptions.

Figure 3. Projected expenditure as per cent of GDP, England, 2031, under alternative assumptions about dependency trends



Availability of informal care

The GAD marital status projections imply that there is likely to be an increase in spouse carers of dependent older people, at least until 2020. The PSSRU model base case takes this into account, but does not take into account other possible changes in the availability of informal care.

The proportion of older people living with an adult child declined from 42 per cent in 1962 to 14 per cent in 1986, and has subsequently declined still further. If by 2031 fewer older people receive informal care from children living in the same household, it could be assumed that more people may move into residential homes. In addition, it is possible that more older married couples may also require admission to residential care, if there is a decline in informal care by children.

Various scenarios were developed to test the impact on the model's projections for formal services of a decline in informal care. Their effects depended on the size of the decline in informal care and on the extent to which such care is substituted by residential care or by moderate packages of domiciliary services.

Future patterns of care

The model can be used to explore the impact of changes in the patterns of services. The scenarios explored

assume a shift in the balance of care from institutional to domiciliary, a change in the eligibility criteria for home care and an increase in support for informal carers.

The first scenario considered here assumes that projected numbers in nursing and residential homes would by 2020 be 10 per cent lower than the base case, and that people 'diverted' from nursing homes would receive an average of eight hours' home care and 1.5 community nurse visits a week while those 'diverted' from residential homes would receive eight hours' home care. This follows a similar scenario in the National Beds Inquiry for England.

The second scenario investigated the potential impact of introducing a national entitlement to free formal care for all older people with moderate to severe dependency (two or more ADLs) whether or not they were receiving informal care. (This scenario mirrors, to a certain extent, the entitlement to long-term care in Germany). This scenario assumes 5.75 hours of formal home care a week and 100 per cent take-up.

The GAD marital status projections suggested that in future there was likely to be an increase in spouse carers of dependent older people. However, many spouse carers are elderly and in need of support themselves. The third scenario looked at providing support to the most heavily burdened carers (defined as those providing personal care to older people living in the same household) and explores the implications of making the same services available to those living with others as those living alone: the 'carer-blind' approach.

In the first scenario, projected public spending was lower than in the base case as the packages of domiciliary care were less costly than institutional care. The national entitlement scenario, however, had substantial cost implications with numbers of those using home help nearly doubling. Under the 'carer-blind' scenario projected long-term care expenditure would also be higher than under the base case.

Unit costs and economic growth

Spending on long-term care is highly sensitive to relatively small changes in

Box 2. Main findings

- The numbers of dependent older people in England are projected to grow from approximately 2.5 million in 2001 to just over 4 million in 2031, an increase of 57 per cent.
- To keep pace with demographic pressures over the next 30 years, assuming unchanged dependency rates, residential and nursing home places would need to expand by around 58 per cent and numbers of hours of home care by around 57 per cent.
- Long-term care expenditure would need to rise by around 118 per cent in real terms between 2001 and 2031 to meet demographic pressures and allow for real rises in care costs of 1 per cent per year for social care and 1.5 per cent per year for health care.
- Long-term care expenditure would need to increase from about 1.46 per cent of GDP in 2001 to around 1.64 per cent of GDP in 2031 to meet demographic pressures, assuming a real increase of 2.25 per cent a year in GDP.
- Future long-term care demand is sensitive to the projected numbers of older people: under variant GAD population projections projected expenditure would be around 0.1 per cent of GDP above or below the base case projection for 2031.
- Future demand is also sensitive to trends in dependency rates: under a compression of morbidity scenario projected expenditure would be 1.36 per cent of GDP in 2031, compared with 1.64 per cent under constant dependency rates.
- Future long-term care expenditure is highly sensitive to assumed rises in unit costs of care: under a variant based on Treasury's long-term assumptions on rises in productivity and GDP, projected expenditure would be 2.23 per cent of GDP in 2031.
- GAD marital status projections to 2020 suggest that there is likely to be an increase in 'spouse carers' of dependent older people in future years.
- A decline in the availability of informal care could have a substantial impact on demand for formal services, depending on the size of the decline and the extent to which residential care was required to substitute for informal care.
- A policy of increasing support to the most heavily burdened carers by providing domiciliary services on a 'carer-blind' basis would have substantial financial consequences.
- A policy of providing an entitlement to a non-means-tested average package of home care to all severely dependent older people would also have substantial financial consequences.

future unit costs. The base case of the model assumes that real unit costs will rise in line with historical trends in input pay and prices: one per cent per year for social care and 1.5 per cent a year for health care. GDP is assumed to rise by 2.25 per cent a year.

Residential care, home care and day care are all highly labour intensive. An alternative scenario investigates the impact of assuming that future unit costs will rise in line with projected rises in earnings. This scenario is based on the Treasury's long-term assumptions, published in the 2003 Budget, for productivity growth (as an indicator of possible future rises in care staff earnings) and for growth in GDP. In this scenario, spending on long-term care would rise to nearly £31bn compared to £25bn under the base case.

FINDINGS AND DISCUSSION

The PSSRU model produces projections of future long-term care expenditure based on a specific set of base case assumptions. While this set seems plausible, it is clear that the projections do not represent the only possible scenario and cannot be regarded as forecasts of the future. The projected future demand for long-term care services for older people is sensitive to assumptions about future numbers of older people, the prevalence of dependency, the future availability of informal care, and future rises in the real unit costs of services.

The expenditure projections do not reflect the total costs to society of long-term care. Any such figure would need to include the costs of a wider range of services to a wider range of

public agencies and service users, as well as the opportunity costs of informal care. It should also be pointed out that the model does not make allowances for any changes in public expectations concerning the quality, range or level of care.

Future developments

The PSSRU long-term care study will continue to update and improve the projections model. Further work is planned on trends in dependency rates in order to widen the range of scenarios investigated in the sensitivity analysis. This will incorporate, as far as possible, consideration of cognitive impairment as well as functional dependency.

Further research is in progress on the supply of informal care — concentrating on care by children — and on patterns of formal care, looking at changes in the balance between residential and home-based care. The implications of more cost-effective packages of care will be investigated, drawing on analyses conducted for the PSSRU Evaluation of Community Care for Older People programme.

Finally, the workforce implications of the model's projections will be investigated. A workforce module will be added to the model, so that it not only produces projections of services demanded and expenditures but also projections of the workforce required by type of staff.

Key Messages

- Policy-makers need to plan for uncertainty in future demand for long-term care for dependent older people. Future life expectancy, dependency rates and rises in unit costs are all uncertain, but they will all have substantial implications for demand and associated expenditure.
- Unless current dependency rates decline, the numbers of dependent older people will rise significantly over the next 30 years. But if improved health care or other measures could reduce dependency this would partially offset the demographic pressures. Hence there is a need to promote measures that support healthy ageing and reduce dependency in old age.
- As families and other informal carers currently provide much of the care for dependent older people living at home, a decline in the supply of informal care could have considerable financial consequences. This highlights the importance of providing services that support older people living at home and their carers.
- Leaving public expectations aside, substantial rises in formal services will be required in order to keep pace with demographic projections. As older people generally prefer to remain in their homes as long as possible, developing non-residential services like home care and day care will be particularly important.
- While the model projects that the proportion of GDP required to fund long-term care services will rise, this does not imply that there is a looming 'demographic time-bomb' or an imminent crisis of sustainability. It does suggest that promoting efficiency will be particularly important in order to limit real rises in unit costs — although the scope for this may be limited. It also suggests that improving cost-effectiveness will be important, so that better outcomes can be achieved from similar service inputs.

Further Information

The full paper on which this research summary is based is available on the PSSRU website, www.PSSRU.ac.uk.

Comas-Herrera, A., Pickard, L., Wittenberg, R., Davies, B. and Darton, R. (2003) Future demand for long-term care, 2001 to 2031: projections of demand for older people in England, PSSRU Discussion Paper 1980.

The **PERSONAL SOCIAL SERVICES RESEARCH UNIT** undertakes social and health care research, supported mainly by the Department of Health, and focusing particularly on policy research and analysis of equity and efficiency in community care, long-term care and related areas — including services for elderly people, people with mental health problems and children in care. Views expressed in PSSRU publications do not necessarily reflect those of funding organisations. The PSSRU was established at the University of Kent at Canterbury in 1974, and from 1996 it has operated from three branches:

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