Thirty-Five 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 is a topical issue, especially in view of demographic trends. A number of key questions arise. How many older people are likely to require long-term care services in thirty or forty 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. This paper presents projections of demand and associated future expenditure in England up to 2041. The projections are produced using an updated and expanded version of the long-term care projections model developed by the Personal Social Services Research Unit (PSSRU).

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, in the context of expected trends in the housing wealth and pension and other incomes of older people?

THE PSSRU MODEL

The PSSRU model has provided projections for the Royal Commission on Long Term Care, the Department of Health, the Alzheimer's Research Trust, the European Commission, the National Assembly for Wales, the Joseph Rowntree Foundation and individual local authorities. The model is regularly expanded and updated to provide new projections for the Department of Health.

The model aims to make projections of four key variables:

- the future numbers of disabled older people by age, gender and household composition
- the likely level of demand for long-term care services and disability benefits required for older people
- the costs associated with meeting this demand, by source of funding
- the social care workforce caring for older people.

The model includes unpaid informal care and a range of formal health and social services, covering residential, day care and home-based services. The version used here has a base year of 2002, with 2004-based population projections incorporated.

Projected numbers of older people

Disability more than age influences need for care. Individuals are grouped in the model into six levels of functional disability based on measures of their ability to perform activities of daily living (ADLs) and instrumental activities of daily living (IADLs). In 2002 there were around two million disabled older people in the community and around one-third of a million in care homes.

There is continuing debate about the future affordability of long-term care for older people. This summary presents a range of projections of future expenditure on long-term care, as a contribution to the debate.

Adelina Comas-Herrera, Derek King, Juliette Malley, Linda Pickard and Raphael Wittenberg from the PSSRU, LSE Health and Social Care at the London School of Economics and Political Science, 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 that projections of future expenditure were sensitive to assumptions about trends in mortality, disability, informal care and unit costs of care.*

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

The Research Team

The PSSRU staff who conducted this study were Adelina Comas-Herrera, Derek King, Juliette Malley, Linda Pickard and Raphael Wittenberg from the PSSRU at the London School of Economics and Political Science, and Robin Darton from the PSSRU at the University of Kent.

Household type and informal care are also key factors in receipt of long-term care. Household type is combined in the model with informal care in an eight-point classification, which takes into account de facto marital status (single or married/cohabiting); whether living alone, with children, with partner or with others; and receipt of informal care.

Housing tenure can be regarded as a proxy for socio-economic group, and the model divides people living in private households between those in owner-occupied tenure and those in rented accommodation. In the case of older people living alone, tenure is relevant in terms of those who fund their own residential or nursing home care and those who are funded by local authorities. Older home-owners living alone generally need to fund their care privately while older tenants and older home-owners living with their spouses are often eligible for public funding.

Projected level of demand

The model then projects the volume of services demanded. The probability of receiving home care, day care, community nursing and other non-residential services by age, functional disability, marital status, household composition/informal care and housing tenure was estimated using data from the 2001/2 General Household Survey (GHS). 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, by age, gender, household type and housing tenure (prior to admission to a care home).

Linked to the projections of demand for long-term care services are projections of demand for and expenditure on disability benefits. The PSSRU model has been expanded to include Attendance Allowance (AA) and Disability Living Allowance (DLA), care and mobility components. Official data, together with data from the GHS, were used to estimate the probability of receipt of disability benefits by age, gender and disability.

Expenditure and funding sources

The model projects total expenditure on formal services, using Laing & Buisson and PSSRU data on the unit costs of different services and social security benefit rates for disability benefits. It then breaks down this projected aggregate expenditure by funding source: NHS, social services, social security 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. The costs of disability benefits are assigned to the social security system.

Box 1. Key assumptions used by the PSSRU model

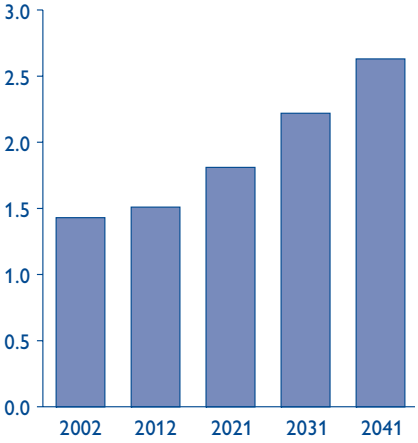
- The number of people by age, gender and marital status changes in line with the Government Actuary's Department 2004-based population projections and 2003-based marital status projections (GAD, 2005).
- The ratio of single people living alone to single people living with their children or with others, and of married people living with partner only to married people living with partner and others, remains constant.
- Rates of functional disability by age and gender remain unchanged, as reported in the 2001 General Household Survey (GHS) for Great Britain.
- Home-ownership rates change in line with projections produced by the University of Essex.
- The proportions of older people receiving informal care, formal community care services, residential care services and disability benefits remain constant for each sub-group by age, functional disability and other needs-related characteristics.
- Health and social care unit costs rise by 2 percent per year in real terms (but non-staff revenue costs are assumed to remain constant in real terms). Real Gross Domestic Product rises in line with HM Treasury assumptions.
- The supply of formal care will adjust to match demand, and demand will be no more constrained by supply in the future than in 2002, the base year.

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. A set of base case projections take account of expected changes in factors external to long-term care policy, such as demographic trends, but hold constant policy-related factors, such as patterns of care and the funding system. The base case is used as a point of comparison when the assumptions of the model are subsequently varied in scenarios.

The base case assumptions are summarised in Box 1. The model projects that the number of disabled older people will increase by around 70% between 2002 and 2031 and by around 98% between 2002 and 2041 under those assumptions. Total expenditure on services is projected to rise from 1.4% of Gross Domestic Product (GDP) in 2002 to 2.2% in 2031 and 2.6% in 2041 (see Figure 1).

Figure 1. Current and projected expenditure as per cent of GDP, England, 2002 to 2041



WHAT IF KEY ASSUMPTIONS CHANGE?

Life expectancy

The Government Actuary's Department (GAD) projects that the number of people aged 65 or more will rise by 79% between 2002 and 2041, while the number of those over 85 will rise by 190%. Mortality rates in old age are the key factor affecting the projected number of older people. As the proportion of older people with functional disability rises sharply with age, the projections are sensitive to assumptions about the numbers of very elderly people. Long-term care expenditure is projected to rise from around 1.4% of GDP in 2002 to around 2.4% in 2041 under the GAD low life expectancy variant population projection and 3.0% under the high life expectancy variant, compared to 2.6% under the base case.

Functional disability

If falling mortality rates were accompanied by falling rates of functional disability, this could (at least partially) offset the impact of demographic pressures on demand. Constant disability rates could be regarded as a slightly pessimistic assumption, but, as there is no conclusive evidence as to future patterns of disability, this remains as

our base case assumption.

The 'Brookings' scenario is a less pessimistic assumption that moves the age-specific disability rate to people one year older for each one-year increase in life expectancy. The 'double-Brookings' scenario assumes that, for one-year increases in life expectancy, disability rates would shift to people two years older. The 'half-Brookings' scenario assumes that, for one-year increases in life expectancy, disability rates would shift to people half a year older.

Figure 2 shows projected expenditure in 2041 as a percentage of GDP under the base case, 'Brookings', 'double-Brookings', and 'half-Brookings' scenarios. While there are differing views about whether age-specific rates of functional disability can be expected to rise, fall or remain much the same, it can be seen that projections of demand for long-term care are highly sensitive to assumptions about trends in disability.

Figure 2. Projected expenditure as a percent of GDP, England, 2041, under alternative assumptions about changes in functional disability

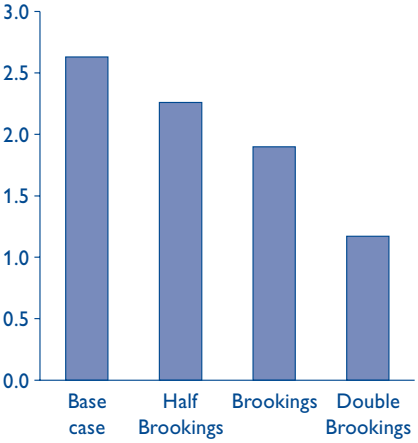
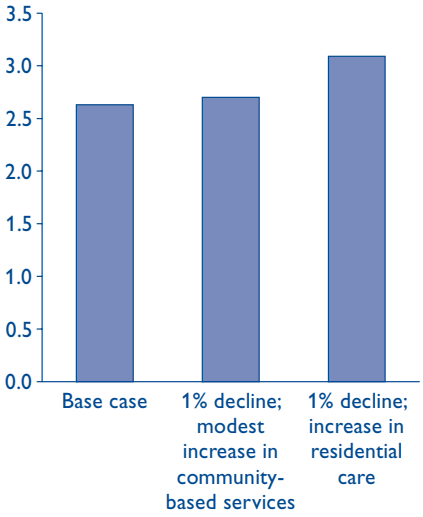


Figure 3. Projected expenditure as a percent of GDP, England, 2041, under alternative assumptions about decline in receipt of informal care by disabled older people



Availability of informal care

The GAD marital status projections show an increase in numbers of married/cohabiting older people to 2032, and the model, in turn, projects a substantial rise in 'spouse carers' of disabled older people in future years.

Although not projected to increase as fast as married/cohabiting people, the numbers of single older people are also projected to rise. Single disabled older people rely particularly on their adult children for care, and the model projects that care by children will need to rise by over 80% over the next thirty-five years, if the proportion of disabled older people (by age and marital status) receiving care from their children is to remain the same as today.

It is not clear, however, that the supply of informal care of older people will rise to meet this demand. There is concern that informal care may indeed decline in future, as a result of such factors as women's rising participation in the labour market.

The future supply of informal care has been examined through stylised scenarios allowing for a decline in receipt of informal care by disabled older people. The first scenario shows an annual 1% decline in the numbers of disabled people receiving informal care accompanied by a modest increase in community-based services. The second scenario shows an annual 1% decline in the numbers of severely disabled people receiving informal care, accompanied by an increase in residential care. Projected expenditure is substantially higher under the second scenario (Figure 3) despite the smaller numbers involved. This illustrates that the impact of a decline in informal care depends greatly on the intensity of the formal care required to replace informal care.

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 functionally disabled older people in England are projected to grow from approximately 2.3 million in 2002 to approximately 4.6 million in 2041, an increase of 98%.
- To keep pace with demographic pressures over the next 40 years, assuming unchanged rates of functional disability, residential and nursing home places would need to expand by around 115% and numbers of hours of home care by around 100%.
- The numbers of staff working in social care for older people would need to increase by around 110% between 2002 and 2041 to provide this increased level of services.
- Long-term care expenditure would need to rise by around 325% in real terms between 2002 and 2041 to meet demographic pressures and allow for real rises in care costs of 2% per year for both social care and health care.
- Long-term care expenditure would need to increase from 1.4% of GDP in 2002 to 2.6% of GDP in 2041 to meet demographic pressures, assuming annual increases in GDP in line with HM Treasury assumptions.
- Future long-term care demand is sensitive to the projected numbers of older people: under variant GAD population projections projected expenditure would be between 0.3% of GDP above or 0.3% of GDP below the base case projection for 2041.
- Future demand is also sensitive to trends in rates of functional disability: under a compression of morbidity scenario projected expenditure would be 1.9% of GDP in 2041, compared with 2.6% under constant rates of functional disability.
- Future long-term care expenditure is highly sensitive to assumed rises in unit costs of care: if unit costs rise at an annual rate 0.5% above the rate used in the base case (ie. 2.5%) projected expenditure would be 3.2% of GDP in 2041. If unit costs rise at an annual rate 0.5% below that used in the base case (i.e. 1.5%) projected expenditure would be 2.2% of GDP in 2041.
- GAD marital status projections to 2031 suggest that there is likely to be an increase in 'spouse carers' of disabled older people in future years, as the proportion of older people married or cohabiting is projected to rise.
- 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.

future unit costs. Residential care, home care and day care are all highly labour intensive. To reflect this, the base case assumption is that real unit costs will rise in line with average earnings by 2 percent a year, except that non-staff revenue costs are assumed to remain constant in real terms. GDP is assumed to rise in line with HM Treasury assumptions, which is also 2% per year in real terms over the long-term.

Alternative scenarios investigate the impact of a 0.5 percent change in future unit costs in either direction around the base case, that is a rise of 2.5% per year in unit costs and a rise of 1.5% per year in unit costs. The model projects that a rise of 1.5% in unit costs would lead to expenditure on long-term care of approximately £46 billion in 2041 as against £56 billion under the base case. Under the scenario of annual 2.5% rises in unit costs, long-term care expenditure in 2041 would be approximately £67 billion.

FINDINGS AND DISCUSSION

The study found that, on a specific set of base case assumptions, long-term care services for older people will need roughly to double by 2041 to keep pace with demographic pressures; and expenditure on these services would need to increase from 1.4% of GDP in 2002 to 2.6% of GDP in 2041. While the base case set of assumptions seems plausible, it is clear that these projections do not represent the only possible scenario and cannot be regarded as forecasts of the future. Projected future demand for long-term care for older people is sensitive to assumptions about future numbers of older people, trends in prevalence of functional disability, the future availability of informal care, and future rises in the real unit costs of care.

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. Research is planned to

- incorporate new policy developments, such as the introduction of individual budgets and the expansion of direct payments
- examine the impact of changes in the balance of care, such as changes in the balance between residential care and home-based care, including extra care housing
- model the future supply of informal care by children, and a potential link between the supply of informal care and the supply of staff to provide formal care
- investigate in more detail the workforce implications of the model's projections.

Key Messages

- Policy-makers need to plan for uncertainty in future demand for long-term care for older people. Future life expectancy, disability rates and rises in unit costs are all uncertain, but they will all have substantial implications for demand and associated expenditure.
- Unless current rates of functional disability decline, the numbers of disabled older people will rise significantly over the next 35 years. But if improved health care or other measures could reduce functional disability this would partially offset the demographic pressures. Hence there is a need to promote measures that support healthy ageing and reduce disability in old age.
- As informal carers currently provide much of the care for disabled 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.
- 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, such as 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 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.

Wittenberg, R., Comas-Herrera, A., King, D., Malley, J., Pickard, L. and Darton, R. (2006) Future demand for long-term care, 2002 to 2041: Projections of demand for older people in England, PSSRU Discussion Paper 2330.

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 in 1974, and from 1996 it has operated from three branches:

University of Kent at Canterbury, Cornwallis Building, Canterbury, Kent, CT2 7NF
London School of Economics, Houghton Street, London, WC2A 2AE
University of Manchester, First Floor, New Wing, Dover Street Building, Oxford Road, Manchester, M13 9PL

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