

## Health Dynamics and Disability

Judith Shapiro and Andrew Bebbington

Research on the dynamics of individual health and institutionalisation has been undertaken in a year-long project, part of a major EU Framework VI project 'AHEAD': Ageing, Health Status and Determinants of Health Expenditure, with 19 teams and nearly as many countries. PSSRU's contribution was to a central research question: as we are living longer, will the years of disability and dependency be longer or shorter? Analysis drew on the European Community Household Panel (ECHP), a 130,000 person longitudinal panel, which ran in the old member states from 1994 to 2001, and was designed to have an internationally harmonised framework.

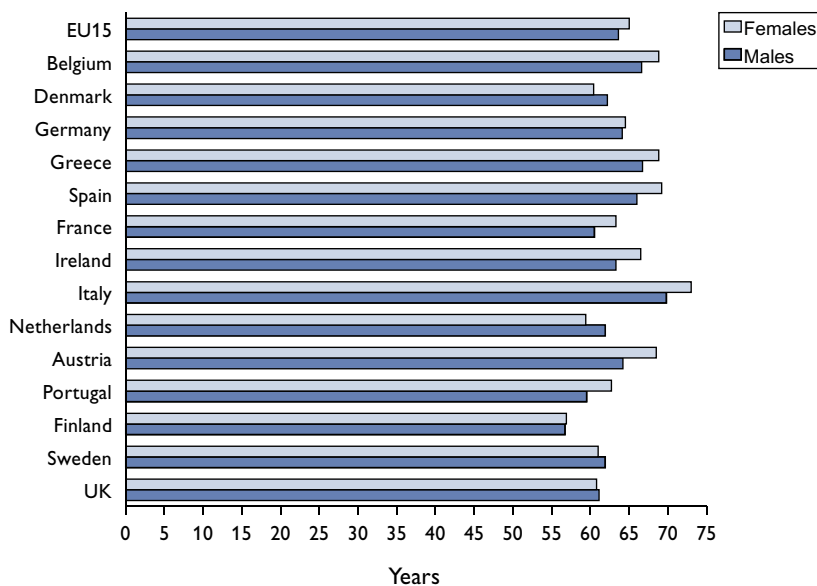
Virtually all estimates of healthy life expectancy are based on 'Sullivan's method' in which data on prevalence of disability by age, gender or social group are used along with life expectancy data. Figure 1 shows estimates of

disability-free life expectancy for males and females in each of the old 15 member states, drawn from the ECHP.

The UK and France have quite low healthy life expectancy, and Finland the very lowest.

However, there are good reasons why estimates based on Sullivan's method might be misleading if health situations are changing rapidly. The prevalence of disability today often reflects past situations such as wars, or the absence of polio vaccines, which are no longer relevant. We simply do not know if these estimates are biased (probably towards being too pessimistic). Thus we want instead to know the incidence of health change, the probabilities of transitions of individuals from one health state to another, including permanent institutional residence and death.

**Figure 1 Disability-free life expectancy**



The principal aim of PSSRU's work was to provide the foundation for a dynamic modelling of disability-free (or healthy) life expectancy.

Unfortunately the data demands for this are much more rigorous. We identified that few countries recorded deaths well in ECHP, and did even less well with institutionalisation. The extreme case was the Netherlands: no one in the panel was recorded as dying or moving to an institution over seven years. However, with effort and a great deal of additional information, probit equations predicting health transitions, and in some countries where the data permitted, institutional transitions, have been produced (Bebbington and Shapiro, 2005). Teams from Vienna's Institute for Advanced Studies and the UK National Institute for Economic and Social Research will now continue the estimation process.

### Reference

Bebbington, A. and Shapiro, J. (2005) Health transitions in Europe: Results from the European Community Household Panel Survey and institutional data, PSSRU Discussion Paper 2219.