

# Ageing Times

Mortality and Ageing Unit ONSCD  
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Welcome to **Ageing Times** launched to coincide with UK Older People's Day on October 1<sup>st</sup> 2009. The newsletter will provide information and updates on ONS ageing related research and outputs, sign-post users to sources for further information and provide a vehicle for feedback.

Each edition will showcase a particular area of either ONS or external ageing related work. In this edition we highlight the English Longitudinal Study of Ageing (ELSA) with an article written by Elizabeth Breeze from University College London.

For further information or any comment or content suggestions please contact [ageing@ons.gov.uk](mailto:ageing@ons.gov.uk)

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## Key Facts of an Ageing Population

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### The population of the UK is increasingly growing older

- Over the last 25 years the percentage of the population aged 65 and over has increased from 15 per cent in 1983 to 16 per cent in 2008, an increase of 1.5 million people
- The fastest population increase has been in the number of those aged 85 and over, the 'oldest old', with their numbers more than doubling since 1983, to reach 1.3 million in 2008
- By 2033 the number of people aged 85 and over is projected to more than double again to reach 3.2 million, and to account for 5 per cent of the total population
- As a result of these increases in the number of older people, the median age of the UK population is increasing- from 35 years in 1983 to 39 in 2008. It is projected to continue to increase over the next 25 years rising to 40 by 2033.

**Population ageing is a global phenomenon:** The recent US Census Bureau report 'An Ageing World: 2008' reported that the number of older people is growing in virtually all nations and included the following headline statistics:

- The global older population (aged 65 and over) was estimated to be 506 million at mid-year 2008, about 7 per cent of the world's population
- By 2040, the world is projected to have 1.3 billion older people accounting for 14 per cent of the world total population
- The world's older population grew by an average of 870,000 people each month during 2008
- In less than 10 years it is projected that people aged 65 and over will outnumber children for the first time in history
- Although industrialised nations have higher percentages of older people than do most developing countries, 62 per cent of all people aged 65 and over now live in the developing countries.

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## The English Longitudinal Study of Ageing (ELSA)

Elizabeth Breeze, University College London

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One of the main aims of ELSA is to demonstrate the variety of life after age 50 years. This longitudinal study, half funded by a consortium of UK Government departments and half by the US National Institute for Ageing, is undertaken jointly by University College London, the National Centre for Social Research, and the Institute for Fiscal Studies. A key condition of its funding is that ELSA provides a data resource for academics, governments and others who have an interest in the circumstances and wellbeing of older people.

ELSA follows cohorts of older people with interviews taking place every two years; at the time of their first ELSA interview they have to be living in the private households in England and to be aged 50 or over. It aims to retain them in the sample until they die or emigrate, i.e. follow them into long-term residential care if possible. They are selected from participating households in the Health Survey for England (HSE). The technical details of the sample can be found in ELSA technical reports (available at: <http://www.esds.ac.uk/longitudinal/access/elsa/5050.asp>).

In essence it is a study of ageing that incorporates all of the key elements of quality of life among older people. The design assumed

that there are connections between our health and functioning, our social networks, our economic position, and our perceptions of wellbeing. Age 50 onwards is a time when much can happen in our lives: stopping paid work, children leaving home, grandchildren being born, enjoyment of more leisure, adjustment to less physical strength, onset of chronic disease, losses of loved ones, drawing on savings.

Each wave (round) of fieldwork includes an interview and self-completion module. These cover: demographic circumstances; self-perceived health and functioning; self-reported health behaviours; some direct measures of functioning; employment; income; wealth; housing; social and cultural activity; quality of life; psychosocial measures such as loneliness, perceptions of ageing, demands in life, rewards. At even-numbered waves there is also a nurse visit in which body measurements are taken as well as various biological markers and a range of physical tests. Most of the participants have also had a life-history interview that gives some handle on the timing and sequence of experiences in employment, family formation and composition; it also includes some indicators of major health events and traumas experienced during their lives.

ELSA thus provides a rich data source for further understanding of many aspects of older people's lives including their social and economic circumstances, physical and mental functioning, health and wellbeing.

For health policy ELSA can assess the drivers of change and factors that lead to both positive and negative outcomes. A core part of the rationale of ELSA is to further understanding of socioeconomic inequalities in health and health care. Tackling health inequalities has been one of the top priorities for the NHS for several years. However, there has been less attention on inequalities within the older groups than among those of working age and ELSA can rectify this. Several papers and report chapters from ELSA have concerned health inequalities. These are available on the IFS ELSA website (<http://www.ifs.org.uk/elsa/>) together with many other examples of findings from ELSA data which inform important policy issues, such as the extension of working lives and the timing of retirement.

By way of illustration of the versatility of the data source, a couple of examples of how ELSA has been used to examine wellbeing of older people are included below.

### **Well being and cognitive functioning**

Wellbeing can be defined in many ways. One of the main measures ELSA uses is the CASP19 quality of life score, CASP 19 being an acronym for Control, Autonomy, Self-realisation and Pleasure [1]. The beauty of this measure is that it is derived from aspects of life that people in their 50s and 60s reported as important to them in qualitative studies and, unlike health-related measures of quality of life, conceptualises quality of life as distinct from the factors that influence it.

Without good cognitive function many everyday demands on us become more challenging. Research undertaken by Llewellyn et al [2] showed a clear relationship between psychological well-being and cognitive

functioning. Psychological well-being was measured using CASP 19. Cognitive functioning was assessed using neuropsychological tests of time orientation, memory, verbal fluency, numerical ability, cognitive speed and attention. It was found that higher levels of psychological well-being were associated with better cognitive functioning. At present the chronological sequence of events has not been explored but this will be possible using ELSA. One theory put forward by the authors is that "psychological well-being may make socializing, intellectual and physical activities more likely, which may in turn influence neural efficiency and levels of cognitive functioning.

### **Wellbeing and body size**

Obesity is an important issue not only for its health implications but also for quality of life. Research conducted by Blane et al [3] suggested that Body Mass Index (BMI) influences CASP score partly through functional limitations (one or more of 10 mobility and strength limitations) and functional limitations in turn appear to influence quality of life via depressive symptoms. Zaninotto et al [4] looked at change in quality of life between waves 1 and 3 relative to BMI and waist circumference at the time of their HSE interview. There was a tendency for the obese and those with high waist circumference, (102 centimetres or more for men; 88 centimetres or more for women), to have lower quality of life than others at any of the first three ELSA waves. However among men but not women, various demographic and health factors explained away an association between waist circumference at HSE and quality of life at Wave 3, suggesting something more deeply psychological for women.

In summary, ELSA is a rich source of data on many aspects of our lives as we age. Readers are strongly encouraged to have a look at the publications and to consider how they could make use of this important data source in their own work.

**Data available from the Economic and Social Data Archive, University of Essex**  
See <http://www.esds.ac.uk/longitudinal/access/elsa/I5050.asp>

**Websites:** [www.ifs.org.uk/elsa](http://www.ifs.org.uk/elsa)  
[www.natcen.ac.uk/elsa](http://www.natcen.ac.uk/elsa)

## References

1. Hyde M, Wiggins R, Higgs P, Blane D. A measure of quality of life in early old age: the theory, development and properties of a needs satisfaction model (CASP-19), *Aging and Mental Health* 2003; 7: 186–194.
2. Llewellyn DJ, Lang IA, Langa KM, Huppert FA. Cognitive function and psychological well-being: findings from a population-based cohort. *Age Ageing*. 2008. 37 (6): 685-689.
3. Blane D, Netuveli G, Montgomery SM. Quality of life, health and physiological status and change at older ages. *Soc Sci Med* 2008; 66(7): 1579-1587
4. Zaninotto P, de Oliveira C, Kumari M. Anthropometric measures and health. In Banks et al (eds) 2008. *Living in the 21<sup>st</sup> century: older people in England: The 2006 English Longitudinal Study of Ageing (Wave 3)*. Institute for Fiscal Studies. London, pp 222-252.

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### Ageing in the UK: Launch of mapping tool

Population age structures differ by local area. In the UK, the majority of local areas are ageing but a small number are becoming less aged. Information on changes in the size and composition of the older population in local areas is of increasing importance to local government as this group are more likely to be in receipt of health and social services.

‘Ageing in the UK’ [1] is an interactive mapping tool which allows you to analyse the age structure of the population at the Local Authority (LA) level more easily. You can see how the population has aged over time and is projected to continue to age by selecting from a list of indicators of population ageing, such as median age, and animating the map. Data can be extracted from the tool by selecting an LA.

The indicators in the tool include median age and percentage of the population by different

age breakdowns such as 65 and over and 85 and over. These indicators have been calculated using Mid-year Population Estimates for 1992 to 2008 [2] and 2006-based Subnational Population Projections for 2009 to 2031 [3].

This is the first release of this tool; it is still being developed to include more indicators and an LA search facility. It will be updated on a yearly basis to coincide with the release of the UK mid-year population estimates. The next release is due in June 2010, by which time we will be able to include subnational population estimates for 2009 and 2008-based subnational population projections for 2010 onwards.

More information on the subnational patterns of population ageing can be found in the Population Trends report ‘Subnational patterns of population ageing’ [4].

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### Transitions, choices and health at older ages

Led by Professor David Blane, Imperial College, ‘*Transitions, Choices and Health: a lifecourse study in later life*’ is a two-year study that is using the ONS Longitudinal Study to examine change in the relationship between labour force position and health in later life.

The most remarkable finding to emerge from the research has been the relative stability of labour force position and health, despite large changes in the distribution of labour force positions around the State Pension age.

Now in the final phase of the study, the project team have increased their activity to disseminate findings.

David Blane presented findings on the relationship between labour force position and health at the Natcen/LSE joint event, ‘Informing public policy: new agendas for social research’, in April, and at a BSPS day meeting on health and mortality using record linkage data in May.

At the British Society of Gerontology annual conference in September, Bola Akinwale presented findings from a workstream examining the relationship between informal caring, paid employment and health. Professor Dick Wiggins will also present on labour force position and health at the Gerontological

Society of America Annual Meeting in November.

The research team are also collaborating with colleagues working on the Turin Longitudinal Study, the Finnish linked registers and the Scottish Longitudinal Study to undertake comparative work on labour force position and mortality around retirement age in England and Wales, Finland and Italy. Professor Pekka Martikainen, University of Helsinki, hosted a

meeting in Helsinki in June, to discuss detailed plans for analysis. A second meeting, to finalise results will be held in Turin in October.

The project is funded by the New Dynamics of Ageing cross-council research programme and involves the collaboration of ONS colleagues. The team are especially grateful to Kevin Lynch from ONS for his support and insights throughout the project.

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## Supercentenarians

The term 'supercentenarian' is often applied to anyone who has lived for 110 years or more. The oldest person in the world whose age has been verified was Jeanne Calment, who died on 4 August 1997 in France aged 122 years and 164 days. The oldest female whose age has been verified in England and Wales is Charlotte Hughes, who died on 17 March 1993 aged 115 years and 228 days; the oldest man was Henry Allingham, who died on 18 July 2009 aged 113 years and 42 days. There may be people currently alive who are older than this.

Whilst it is not possible to give a definitive number, it is estimated that in England and Wales there were fewer than 5

supercentenarians in any year during the 1980s. This number is estimated to have risen slowly in recent years to an estimated 7 supercentenarians alive in mid 2009. However, it is projected that there will be about 100 supercentenarians alive in 25 years' time. The main drivers for this increase are the current age distribution of the population, as the survivors of those born in the baby boom after the First World War reach 110 together with past and projected improvements in mortality rates at older ages. Although in the past there have been few male supercentenarians, it is projected that nearly 30 per cent of supercentenarians in 2034 will be male.

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## In Brief: Update on ONS work in progress on Ageing related topics

An article written by Ann Langford & Brian Johnson from ONS health inequalities team is to be published in the 'Health Statistics Quarterly' in late November 2009. The article shows the results of a longitudinal analysis carried out on respondents who were aged 65 and over when they were interviewed in the 1994-1995 General Household Survey. It investigates the associations between the probability of survival of people during a ten year period, and various personal characteristics as established at the outset of the study. Factors investigated were socio-economic indicators (occupation based and otherwise), smoking and alcohol consumption, marital status and geographical region of residence. The results will shed light on the relative importance of these various factors for survival to older ages and will add to the

evidence provided by ELSA (the English Longitudinal Study of Ageing) and other studies.

Short summary reports of about 400 words on ageing called "nuggets" are published on the ONS website on the "Focus on Older People page [5]. Topics covered include health and social care; living arrangements and quality of life of older people. The nuggets have recently been updated using latest available data.

An article on 'Subnational patterns of population ageing in the UK' [4] was published in the June 2009 edition of the ONS journal 'Population Trends'; and articles on 'International Migration at older ages' [6] and 'Older workers in the UK'[7] have been published in the latest edition of 'Population Trends' published at the end of September.

The ageing seminar held in March earlier this year identified older workers and retirement, and the effect of population ageing on family

and household structures as priority areas for research. In line with this, work has commenced on the second stage of the older workers project to quantify the factors that influence the decision to work in later life; and work plans are in place for research into older people's living arrangements and family structures.

Work is also continuing on analysis of ONS Longitudinal Study data to support the 'New Dynamics of Ageing' project led by David Blane at Imperial College.

For further information email [ageing@ons.uk](mailto:ageing@ons.uk)

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## ONS ageing related outputs

- 1 'Ageing in the UK': mapping tool  
[www.statistics.gov.uk/ageingintheuk/default.htm](http://www.statistics.gov.uk/ageingintheuk/default.htm)
2. Office for National Statistics (2009) Mid-year population estimates for the UK; England & Wales and L.A.s  
<http://www.statistics.gov.uk/StatBase/Product.asp?vlnk=15106>
3. Office for National Statistics (2009) 2006-based national population projections.  
<http://www.statistics.gov.uk/statbase/Product.asp?vlnk=8519>  
(Note: ONS NPP 2008 based will be published on 21 October 2009)
4. Office for National Statistics (2009) Subnational patterns of population ageing. *Population Trends* 136.  
[www.statistics.gov.uk/ci/article.asp?id=2244](http://www.statistics.gov.uk/ci/article.asp?id=2244)
5. Focus on Older People  
<http://www.statistics.gov.uk/focuson/olderpeople/>
6. Office for National Statistics (2009) International migration at older ages. *Population Trends* 137.  
<http://www.statistics.gov.uk/ci/article.asp?ID=2291&Pos=1&ColRank=1&Rank=1>
7. Office for National Statistics (2009) Older workers in the UK. *Population Trends* 137.  
<http://www.statistics.gov.uk/ci/article.asp?ID=2293&Pos=1&ColRank=1&Rank=1>
8. Office for National Statistics (2009) Employment of the Older Generation. *Economic & Labour Market Review*/Vol3/No.4/April 2009  
<http://www.statistics.gov.uk/ci/article.asp?id=2167>
9. Office for National Statistics (2009) Ageing and Mortality in the UK. National Statistician's annual article on the population. *Population Trends* 134.  
<http://www.statistics.gov.uk/ci/article.asp?ID=2079>
10. 'Pension Trends' provides a statistical backdrop for the debate on pensions. It looks at changes in pension provision over time in the context of social and economic developments and changes in the policy environment. It includes chapters on pensions legislation and reforms; the ageing population and the transition from work to retirement.  
[Http://www.statistics.gov.uk/pensiontrends](http://www.statistics.gov.uk/pensiontrends)
11. Life expectancy in the UK  
<http://www.statistics.gov.uk/StatBase/Product.asp?vlnk=14459>
12. Healthy life expectancy and disability free life expectancy  
<http://www.statistics.gov.uk/StatBase/Product.asp?vlnk=12964>
13. Information on centenarians  
<http://www.statistics.gov.uk/StatBase/Product.asp?vlnk=15003>
14. Monthly Labour Force Survey estimates of employment, unemployment and inactivity by age group  
<http://www.statistics.gov.uk/StatBase/Product.asp?vlnk=1944>
15. Income and expenditure of retired households, Office for National Statistics 2009 (part of a wider article entitled 'Effects of taxes and benefits on household income 2007/2008'. *Economic & Labour Market Review*, Vol 3/ no8/ pp56-66 /August 2009  
<http://www.statistics.gov.uk/ci/article.asp?ID=2265&Pos=1&ColRank=1&Rank=1>

## Other news

### Ageing User Group

We are keen to work closely with those working on ageing both across and outside of government. As part of this, we are setting up an Ageing user group (to include policy makers, practitioners and academics) to act as a sounding board for ideas and to facilitate wider engagement. Those who have already expressed an interest in being part of the group will be contacted this Autumn to arrange the first meeting. If you would like to be part of the group please email us to express your interest at [ageing@ons.gov.uk](mailto:ageing@ons.gov.uk)

### Regional Trends

Older people and the ageing population will be the subject of next year's lead article in Regional Trends. Regional Trends is an annual report painting a statistical picture of areas within the UK, to assist in understanding the complex relationships between locations and the people who live there. The articles are likely to be of interest to policy makers in central and local government, academics and students, the media and the general public

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## Forthcoming Ageing Events:

**Independent Healthy Ageing, Tuesday 3 November 2009 George Hotel, Edinburgh**, an event hosted by the General Register Office for Scotland and the Scottish Government to showcase existing research relating to independent healthy ageing, to inform the development and delivery of public policy. <http://www.gro-scotland.gov.uk/statistics/user-consultation-groups-seminars/seminars/enabling-independent-healthy-ageing/index.html>

**Ageing Population Conference 2010, Thursday 25th February 2010, QEII Conference Centre London.**

<http://www.govnet.co.uk/ageing>

**Understanding ageing: Health, wealth and wellbeing at fifty and beyond, 14th - 16th April 2010, St Catherine's College, University of Oxford**

<http://www.cls.ioe.ac.uk/events.asp?section=000100010004&item=866>

We would welcome any feedback you would like to give us. Please email [ageing@ons.gov.uk](mailto:ageing@ons.gov.uk)