**16 February 2016**

**Journal of Epidemiology & Community Health Press Release**

**Wide and stubborn variations in longevity across Europe over past 20 years**

*Ripe old age in northern Spain and Italy, south and western France, but not in Netherlands, Scandinavia, and UK*

Wide and stubborn variations in longevity have persisted across Europe over the past 20 years, indicates research published online in the ***Journal of Epidemiology & Community Health.***

People can expect to live to a ripe old age in northern Spain, north eastern Italy, and in southern and western France, but not so much in parts of The Netherlands, Scandinavia, and the UK, the figures show.

And the UK has one of the highest proportions of the population living in areas of low old age survival.

An increase in old age survival contributes to overall life expectancy, and is particularly important, give the rising proportion of older people in the populations of high income countries, say the study authors.

In a bid to analyse patterns of old age survival across Europe, the researchers studied the 10 year survival rate among those aged 75-84 to see if they reached 85-94 years of age in 4404 small areas from 18 countries in Europe.

Survival rates for a total of 313, 296,725 people were measured across two periods: 1991-2001; and 2001-2011.

Greece, Cyprus, Germany, Ireland, and recent eastern European member states were excluded from the analysis due to insufficient data on the proportions of older age groups in their populations.

But Norway, Switzerland, Andorra, Lichtenstein and San Marino were included as they border European Union countries.

On average, in 2001, the proportion of 75-84 year old men who had survived to 85-94 was 27%; the comparable figure for women was 40%.

By 2011, survival rates had significantly increased to 34% among men, and to 47% among women.

But there were wide geographical variations in old age survival rates in both time periods.

In 2001, there were 27 geographical areas of high male survival (above 34%) and 31 areas where the opposite was true (below 21%).

Areas of high old age male survival were mainly located in Madrid and Salamanca in Spain; Andorra; and Geneva in Switzerland. Areas of low old age male survival were mostly clustered in Glasgow, Manchester, Liverpool and London in the UK; and the northern mining and industrial regions in France, and Brittany.

By 2011, there were 49 areas of high old age male survival (above 41%) and 24 areas at the opposite end of the spectrum (below 27%).

The same areas of high survival remained, but included southern and western France. Similarly, the same areas of low survival persisted in the industrial areas of the UK and London,

plus the France-Belgium border, Amsterdam and South Limburg in The Netherlands, and Copenhagen in Denmark.

Among women, there were 45 areas of high old age survival (above 48%) and 35 of low old age survival (below 32%).

The geographical distribution resembled that of the men, with high survival additionally in north eastern Italy (Emiglia-Romagna and Veneto) and low survival additionally in southern Spain and Naples and Sicily in Italy.

By 2011, areas of high female survival (above 56%) numbered 102 while those of low survival (below 39%) numbered 50.

The geographical distribution followed the pattern for men, except that areas of high old age survival in north eastern Italy were greatly reduced.

The UK does not fare particularly well in terms of the overall proportion of the population living in areas of low old age survival, because it has a large number of areas falling into this category. In 2011, 18% of the female population and almost 7% of the male population were living in these areas.

These patterns arise from spatial differentials in the chances of dying after the age of 85—mainly caused by cardiovascular disease which accounts for more than four in every 10 deaths in Europe, say the researchers. Many different factors influence old age survival, including socioeconomic circumstances, genes, lifestyle, pollution, and access to healthcare, they add.

“In summary, it is most likely that the observed patterns arise from a combination of two kinds of health determinants: poverty, which explains the low longevity found in areas like Portugal, southern Spain, southern Italy and post-industrial areas; and unhealthy lifestyles (eg tobacco, diet), which might explain the presence of areas of low survival in affluent areas of Scandinavia or the Netherlands,” they conclude.

[Ends]

**Notes for editors: Research:** Where do people live longer and shorter lives? An ecological study of old age survival across 4404 small areas from 18 European countries http://jech.bmj.com/lookup/doi/10.1136/jech-2015-206827

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