

Health Expectancy in Slovakia

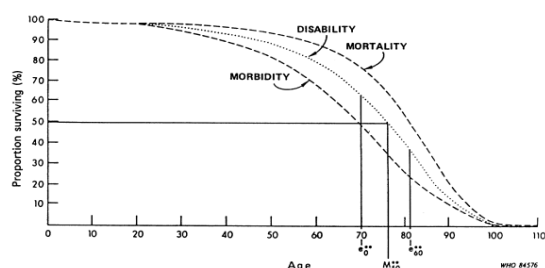
What is health expectancy?

Health expectancies were first developed to address whether or not longer life is being accompanied by an increase in the time lived in good health (the compression of morbidity scenario) or in bad health (expansion of morbidity). So health expectancies divide life expectancy into life spent in different states of health, from say good to bad health. In this way they add a dimension of quality to the quantity of life lived.

How is the effect of longer life measured?

The general model of health transitions (WHO, 1984) shows the differences between life spent in different states: total survival, disability-free survival and survival without chronic disease. This leads naturally to life expectancy (the area under the 'mortality' curve), disability-free life expectancy (the area under the 'disability' curve) and life expectancy without chronic disease (the area under the 'morbidity' curve).

The general model of health transition (WHO, 1984): observed mortality and hypothetical morbidity and disability survival curves for females, USA, 1980.



e_0^{**} and e_{60}^{**} are the number of years of autonomous life expected at birth and at age 60, respectively.
 M_{50}^{**} is the age to which 50% of females could expect to survive without loss of autonomy.

There are in fact as many health expectancies as concepts of health. The commonest health expectancies are those based on self-perceived health, activities of daily living and on chronic morbidity.

How do we compare health expectancies?

Health expectancies are independent of the size of populations and of their age structure and so they allow direct comparison of different population sub-groups: e.g. sexes, socio-professional categories, as well as countries within Europe (Robine et al., 2003).

Health expectancies are most often calculated by the Sullivan method (Sullivan, 1971). However to make valid comparisons, the underlying health measure should be truly comparable.

To address this, the European Union has decided to include a small set of health expectancies among its European Core Health Indicators (ECHI) to provide summary measures of disability (i.e., activity limitation), chronic morbidity and perceived health. Therefore the Minimum European Health Module (MEHM), composed of 3 general questions covering these dimensions, has been introduced into the Statistics on Income and Living Conditions (SILC) to improve the comparability of health expectancies between countries.* In addition life expectancy without long term activity limitation, based on the disability question, was selected in 2004 to be one of the structural indicators for assessing the EU strategic goals (Lisbon strategy) under the name of "Healthy Life Years" (HLY).

Further details on the MEHM, the European surveys and health expectancy calculation and interpretation can be found on www.eurohex.eu.

What is in this report?

This report is produced by the European Health and Life Expectancy Information System (EHLEIS) as part of a country series. In each report we present:

- Life expectancies and Healthy Life Years (HLY) at age 65 for the country of interest and for the overall 28 European Union member states (EU28), using the SILC question on long term health related disability, known as the GALI (Global Activity Limitation Indicator), from 2005 to 2013. The wording of the question has been revised in 2008;
- Prevalence of activity limitation in the country of interest and in the European Union (EU27) based on the GALI question by sex and age group;
- Health expectancies based on the two additional dimensions of health (chronic morbidity and self-perceived health) for the country of interest, based on SILC 2013;

References

Jagger C., Gillies C., Moscone F., Cambois E., Van Oyen H., Nusselder W., Robine J.-M., EHLEIS Team. Inequalities in healthy life years in the 25 countries of the European Union in 2005: a cross-national meta-regression analysis. *The Lancet*. 2008;372(9656) 2124-2131
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Sullivan D.F. *A single index of mortality and morbidity*. HSMHA Health Reports 1971;86:347-354.
World Health Organization. *The uses of epidemiology in the study of the elderly: Report of a WHO Scientific Group on the Epidemiology of Aging*. Geneva: WHO, 1984 (Technical Report Series 706).

* Before the revision of 2008, the translations of the module used in some countries were not optimum (See Eurostat-EU Task Force on Health Expectancies common statement about the SILC data quality). This revision is being evaluated.

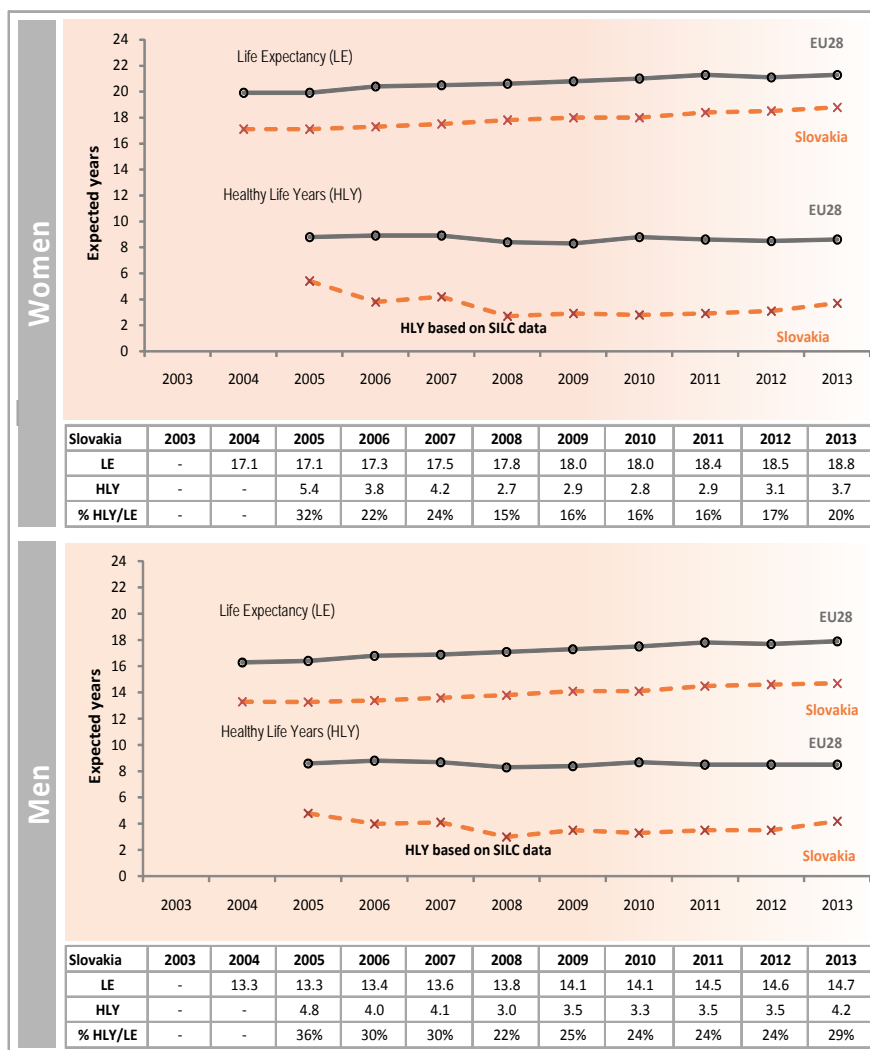
Life expectancy (LE) and Healthy Life Years (HLY) at age 65 for Slovakia and the European Union (EU28) based on SILC (2005-2013)

Key points:

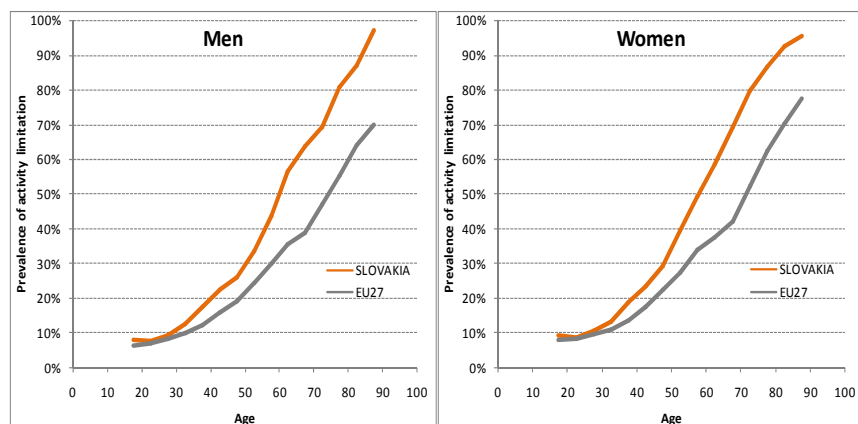
Slovak life expectancy (LE) at age 65 has increased by 1.7 years for women and 1.4 years for men over the period 2004-2013. LE was below the EU28 average (21.3 for women and 17.9 for men) by 3.2 years for men and 2.5 years for women in 2013.

The HLY series, initiated in 2005 with the SILC data, shows that in 2013 women and men at age 65 can expect to spend respectively 20% and 29% of their life without *self-reported long-term activity limitations*. In 2013 the HLY values for Slovakia are below the EU28 average (8.6 for women and 8.5 for men) by 4.9 years and 4.3 years for women and men respectively. Note that the wording of the GALI question was changed in 2008 to better reflect the EU standard. This led to a clear decrease in HLY for men and women between 2007 and 2008.

Then from 2008 to 2010 HLY remained almost stable for women and men and slightly increased in 2011, continue to increase in 2012, and increased notably in 2013.



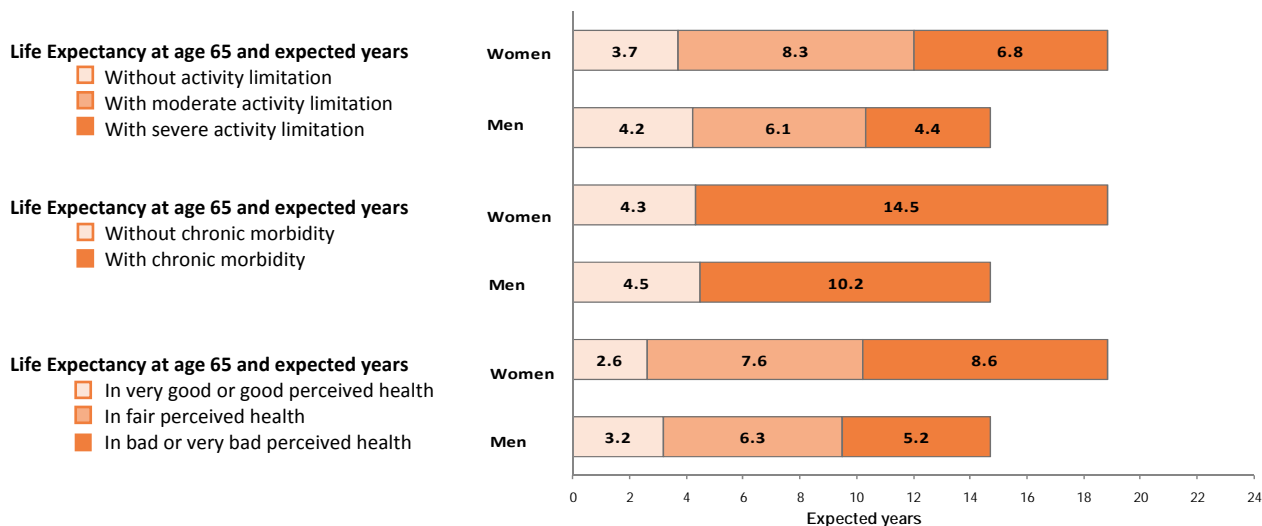
Prevalence of activity limitation in Slovakia and in the European Union (EU27) based on the GALI question, by sex and age group (SILC, Mean 2011-2013)



Reports of limitation in usual activities strongly increase with age in the European Union and women systematically report slightly more activity limitation than men. Compared to the mean trajectory by age observed in the European Union in the 3 years 2011-2013, Slovakia tends to display higher prevalence rate of activity limitation after the age of 35 years for women and men, this prevalence reaching almost 100% at age 85 for men.

These results should be interpreted with caution as samples sizes in the SILC survey vary remarkably; for instance in 2013 they ranged from 5429 in Denmark to 38039 in Italy. In 2013, the sample size for Slovakia comprised 7301 women and 5985 men aged 16 years and over.

Life and health expectancies at age 65 based on activity limitation (Healthy Life Years), chronic morbidity and perceived health for Slovakia (Health data from SILC 2013)



Key points:

In 2013 LE at age 65 in Slovakia was 18.8 years for women and 14.7 years for men.

Based on the SILC 2013, at age 65, women spent 3.7 years (20% of their remaining life) without activity limitation (corresponding to Healthy Life Years (HLY)), 8.3 years (44%) with moderate activity limitation and 6.8 years (36%) with severe activity limitation.*

Men of the same age spent 4.2 years (29% of their remaining life) without activity limitation compared to 6.1 years (41%) with moderate activity limitation and 4.4 years (30%) with severe activity limitation.*

Although total years lived by men were less than those for women, for all the health expectancies the number of years of life spent in positive health were greater for men than women. Therefore compared to men, women spent a larger proportion of their life in ill health and these years of ill health were more likely to be years with severe health problems.

These results should be interpreted cautiously given the lack of the institutional population, such as people living in nursing homes.

* These may not sum to Life Expectancy due to rounding

Publications and reports on health expectancies for Slovakia

- Meszaros J. Ako dlho žije populácia Slovenskej republiky v zdraví? [For how long the population of the Slovak Republic live in health?]. *Slovenská štatistika a demografia*. 2007(1-2): 133-140.
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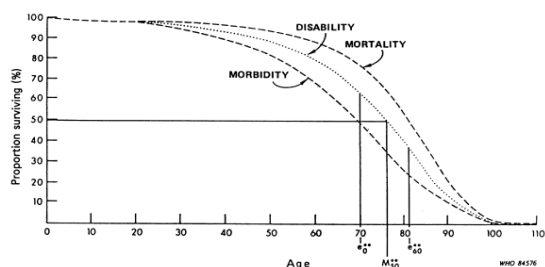
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- Life expectancies and Healthy Life Years (HLY) at age 65 for the country of interest and for the overall 25 European Union member states (EU25), using the SILC question on long term health related disability, known as the GALI (Global Activity Limitation Indicator), from 2005 to 2012. The wording of the question has been revised in 2008;
- Prevalence of activity limitation in the country of interest and in the European Union (EU27) based on the GALI question by sex and age group;
- Health expectancies based on the two additional dimensions of health (chronic morbidity and self-perceived health) for the country of interest, based on SILC 2012;
- Trends in total life expectancy (LE) and life expectancy without activity limitation (HLY) at age 65 in the European Union (EU25), distinguishing between Western Europe (EU15) and new members (EU10).

References

Jagger C., Gillies C., Moscone F., Cambois E., Van Oyen H., Nusselder W., Robine J.-M., EHLEIS Team. Inequalities in healthy life years in the 25 countries of the European Union in 2005: a cross-national meta-regression analysis. *The Lancet*. 2008;372(9656) 2124-2131
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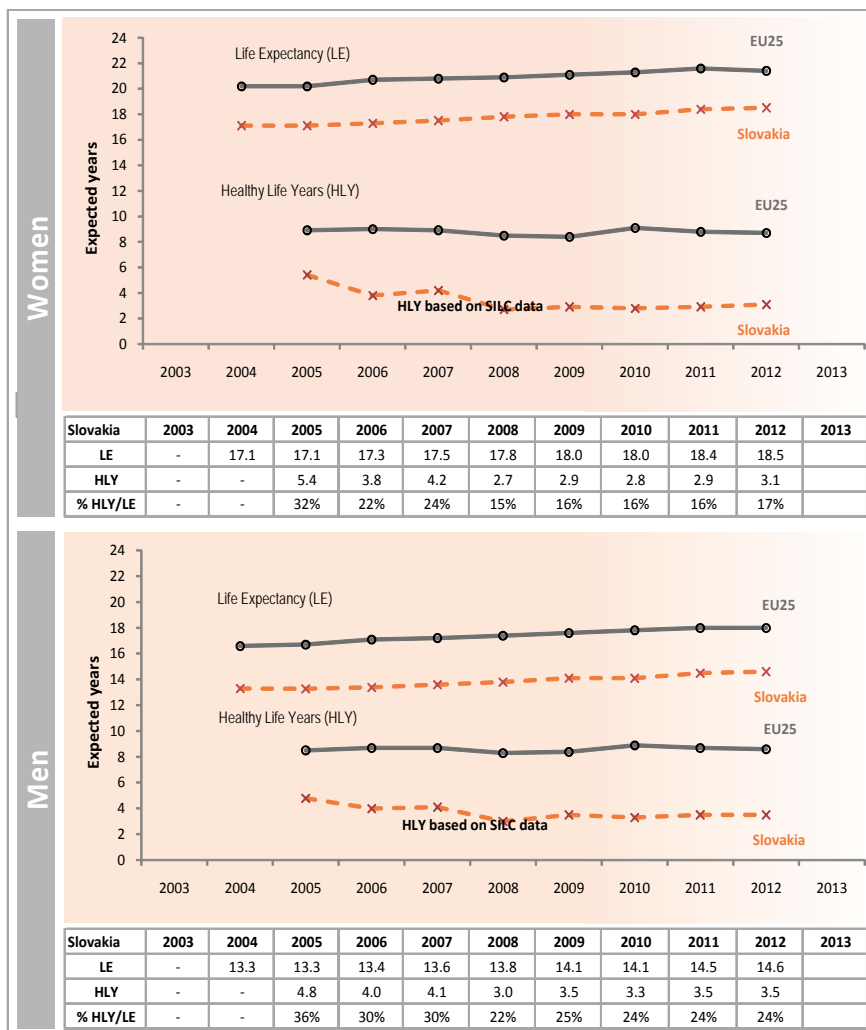
Life expectancy (LE) and Healthy Life Years (HLY) at age 65 for Slovakia and the European Union (EU25) based on SILC (2005-2012)

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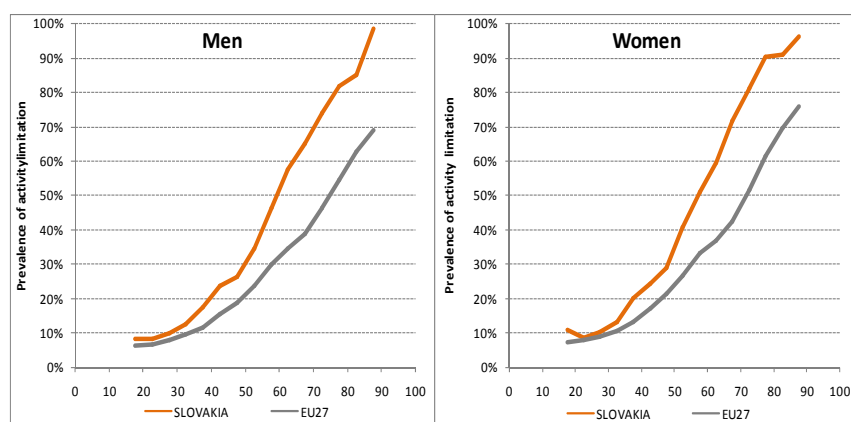
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The HLY series, initiated in 2005 with the SILC data, shows that in 2012 women and men at age 65 can expect to spend respectively 17% and 24% of their life without *self-reported long-term activity limitations*. In 2012 the HLY values for Slovakia are below the EU25 average (8.7 for women and 8.6 for men) by 5.6 years and 5.1 years for women and men respectively. Note that the wording of the GALI question was changed in 2008 to better reflect the EU standard. This led to a clear decrease in HLY for men and women between 2007 and 2008.

Then from 2008 to 2010 HLY remained almost stable for women and men and slightly increased in 2011 and continue to increase in 2012.



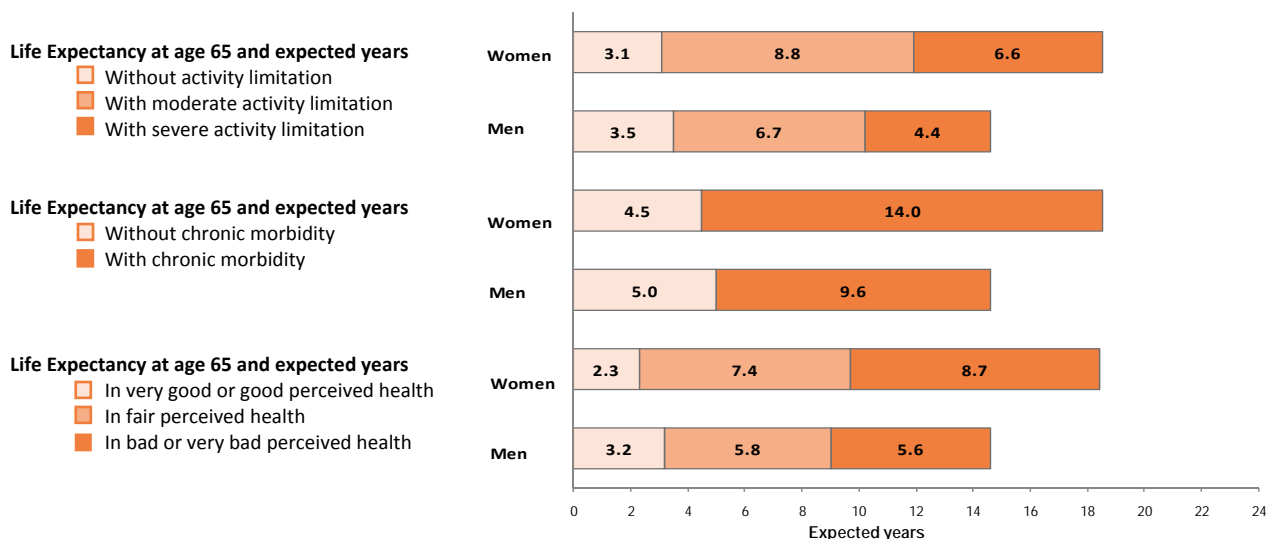
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These results should be interpreted with caution as samples sizes in the SILC survey vary remarkably; for instance in 2012 they ranged from 5342 in Denmark to 40287 in Italy. In 2012, the sample size for Slovakia comprised 7340 women and 6262 men aged 16 years and over.

Life and health expectancies at age 65 based on activity limitation (Healthy Life Years), chronic morbidity and perceived health for Slovakia (Health data from SILC 2012)



Key points:

In 2012 LE at age 65 in Slovakia was 18.5 years for women and 14.6 years for men.

Based on the SILC 2012, at age 65, women spent 3.1 years (17% of their remaining life) without activity limitation (corresponding to Healthy Life Years (HLY)), 8.8 years (48%) with moderate activity limitation and 6.6 years (36%) with severe activity limitation.*

Men of the same age spent 3.5 years (24% of their remaining life) without activity limitation compared to 6.7 years (46%) with moderate activity limitation and 4.4 years (30%) with severe activity limitation.*

Although total years lived by men were less than those for women, for all the health expectancies the number of years of life spent in positive health were greater for men than women. Therefore compared to men, women spent a larger proportion of their life in ill health and these years of ill health were more likely to be years with severe health problems.

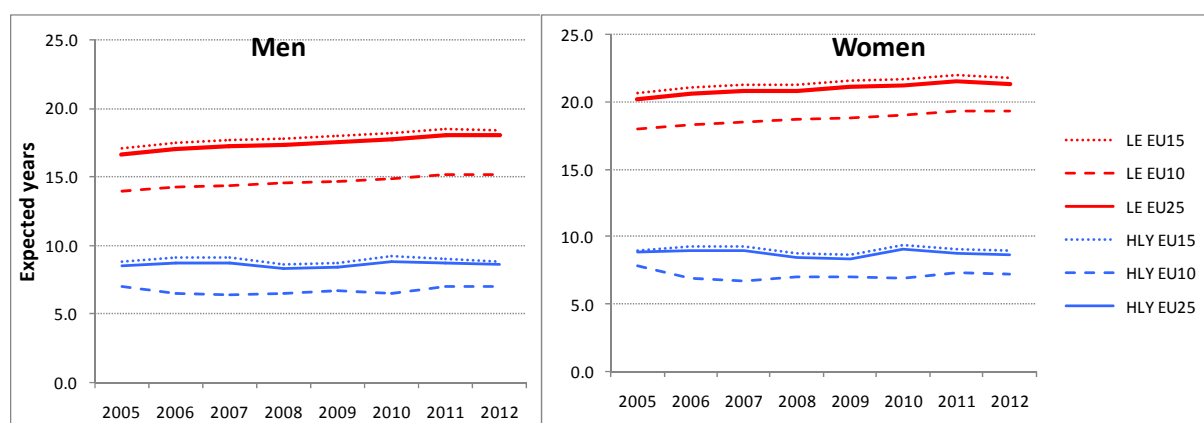
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Trends in total life expectancy (LE) and life expectancy without activity limitation (HLY) at age 65 in the European Union (EU25) from 2005 to 2012



Key points:

Over the 7 years period, since EHLEIS monitors the number of *Healthy Life Years* (HLY) in the European Union (EU), the total life expectancy at age 65 (LE₆₅) has increased by 1.34 years for men and by 1.18 years for women in the EU25, leading to a very small decrease in the gender gap (3.43 vs. 3.59 years). The change over time is quite similar for all Member States (MS) and the initial gap between the old EU15 and the new MS (EU10) hardly changed: 3.1 years in 2005 (17.1 vs. 14.0) and 3.2 years in 2012 (18.4 vs. 15.2) for men; 2.6 years in 2005 (20.6 vs. 18.0) and 2.4 years in 2012 (21.8 vs. 19.4) for women.

The evolution of the HLY is less favorable. The number of HLY did not change from 2005 to 2012. Actually the life expectancy without any reported activity limitation at age 65 (HLY₆₅), for men, increased only by 0.06 years in the EU15 and decreased by 0.02 years in the EU10 and, for women, decreased by 0.06 years in the EU15 and by 0.69 years in the EU10. There have been little changes in the observed inequality between the EU15 and the new MS. These gaps fluctuated between 1.8 and 2.8 years for men and between 1.1 and 2.6 years for women without any clear trends. In 2012, the HLY reached 8.8 and 9.0 years for men and women in EU15 and 7.0 and 7.2 years for men and women in EU10.

As a consequence of these different trends, the proportion of years lived with activity limitation after the age of 65 years increased: from 48.6% to 52.0% for men and from 56.3% to 58.8% for women in the EU15; from 50.0% to 54.1% for men and from 56.1% to 62.7% for women in the EU10. Observed trends in HLY for both males and females challenge current EU objectives on active and healthy aging.

The **European Health and Life Expectancy Information System** (EHLEIS) is part of **BRIDGE-Health** (Bridging Information and Data Generation for Evidence-based Health Policy and Research) which aims to prepare the transition towards a sustainable and integrated EU health information system within the third EU Health Programme, 2014-2020 (www.bridge-health.eu). EHLEIS comes from the EU Health Monitoring Programme with the two EURO-REVES projects (1998-2002). It was designed within the European Health Expectancy Monitoring Unit Project (EHEMU, 2004-2007) under the first EU Health Programme and has been developed by the EHLEIS Project (2007-2010) under the second EU Health Programme and then expanded by the Joint-Action on the Healthy Life Years (2011-2014). Technically, EHLEIS is maintained by the French National Institute of Health and Medical Research (INSERM) in Montpellier. See www.eurohex.eu for more information. Since its inception, EHLEIS is working with a network of correspondents throughout the EU, especially for the production of the yearly country reports *Health Expectancy in ...*

Acknowledgements

Michal Katusa (Statistical Office of the Slovak Republic) has contributed to this report and its translation.