Health Expectancy in Croatia

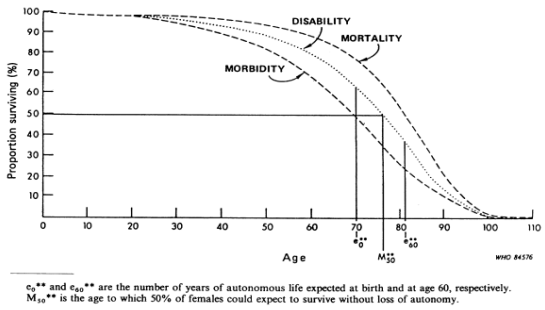
What is health expectancy?

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 2004 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 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;
- Life expectancy and HLY at age 65 in the member states of European Union in 2008 and 2013, by gender.

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

Robine J.-M., Jagger C., Mathers C.D., Crimmins E.M., Suzman R.M., Eds. *Determining health expectancies*. Chichester UK: Wiley, 2003.

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).The revision is being evaluated.

Life expectancy (LE) and Healthy Life Years (HLY) at age 65 for Croatia and the European Union (EU28) based on SILC (2004-2013)

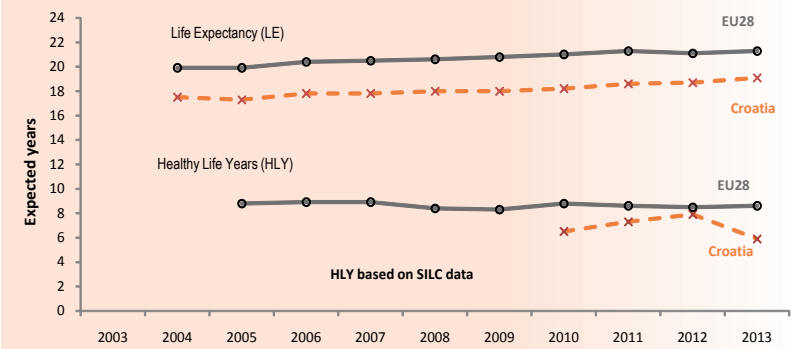
Key points:

Between 2004-2013 Croatian life expectancy (LE) at age 65 increased by 1.6 years for women and 1.5 years for men. This indicator value was below the EU28 average in 2013 (21.3 years for women and 17.9 for men).

The new HLY series on the basis of SILC data shows this indicator value for Croatian women being 2.7 year below the EU28 average of 8.6 in 2013, and Croatian men can expect 5.5 years HLYs which is also below the EU28 average of 8.5.

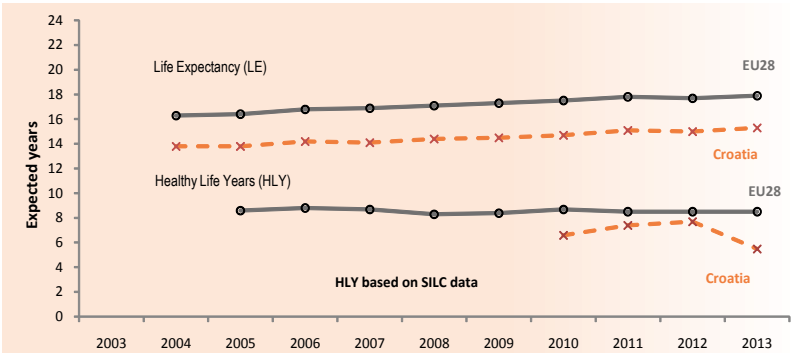
Thus in 2013 women and men at age 65 can expect to spend 31% and 36% respectively of their remaining life without *self-reported long-term activity limitations*. Between 2012 and 2013 HLY strongly decreased for men by 2.2 and for women by 2.0 years.

Women



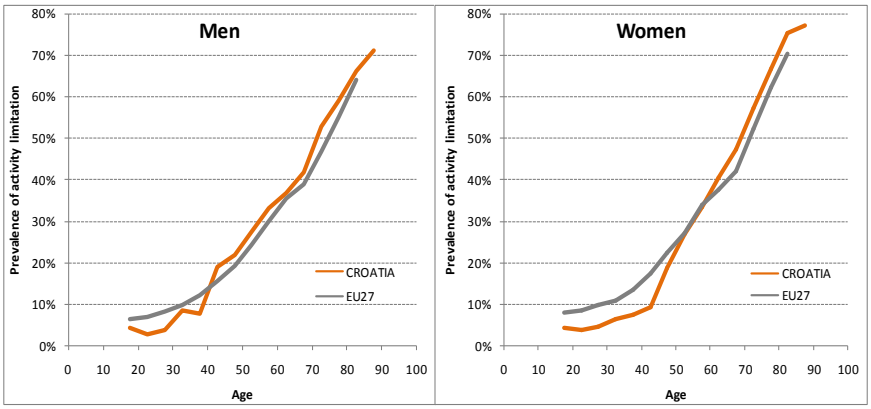
Croatia	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
LE	-	17.5	17.3	17.8	17.8	18.0	18.0	18.2	18.6	18.7	19.1
HLY	-	-	-	-	-	-	-	6.5	7.3	7.9	5.9
% HLY/LE	-	-	-	-	-	-	-	36%	39%	42%	31%

Men



Croatia	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
LE	-	13.8	13.8	14.2	14.1	14.4	14.5	14.7	15.1	15.0	15.3
HLY	-	-	-	-	-	-	-	6.6	7.4	7.7	5.5
% HLY/LE	-	-	-	-	-	-	-	45%	49%	51%	36%

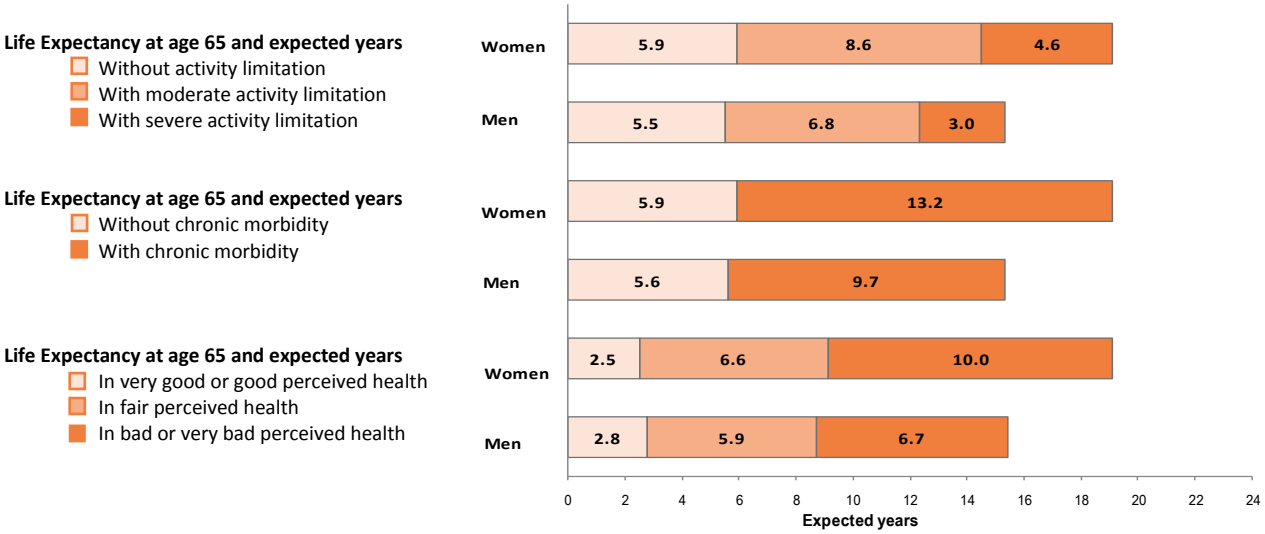
Prevalence of activity limitation in Croatia and in the European Union (EU27) based on the GALI question, by sex and age group (SILC, Mean 2011-2013)



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), Croatia tends to display slightly lower prevalence rates of activity limitation before the age of 40 years for men and 50 years for women and similar after these ages.

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 Croatia comprised 6506 women and 5712 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 Croatia (Health data from SILC 2013)



Key points:

In 2013, LE at age 65 in Croatia was 19.1 years for women and 15.3 years for men.

Based on SILC 2013 data, women at age 65 spent 5.9 years (31% of their remaining life) without activity limitation (corresponding to Healthy Life Years (HLY)), 8.6 years (45%) with moderate activity limitation and 4.6 years (24%) with severe activity limitation.*

Men of the same age spent 5.5 years (36% of their remaining life) without activity limitation compared to 6.8 years (44%) with moderate activity limitation and 3.0 years (20%) with severe activity limitation.*

Although the total number of years lived by men were less than those for women, the number of HLY (and with regard to chronic morbidity and perceived health) were similar for men and 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 with caution as health states of people living in institutions or nursing home are not surveyed.

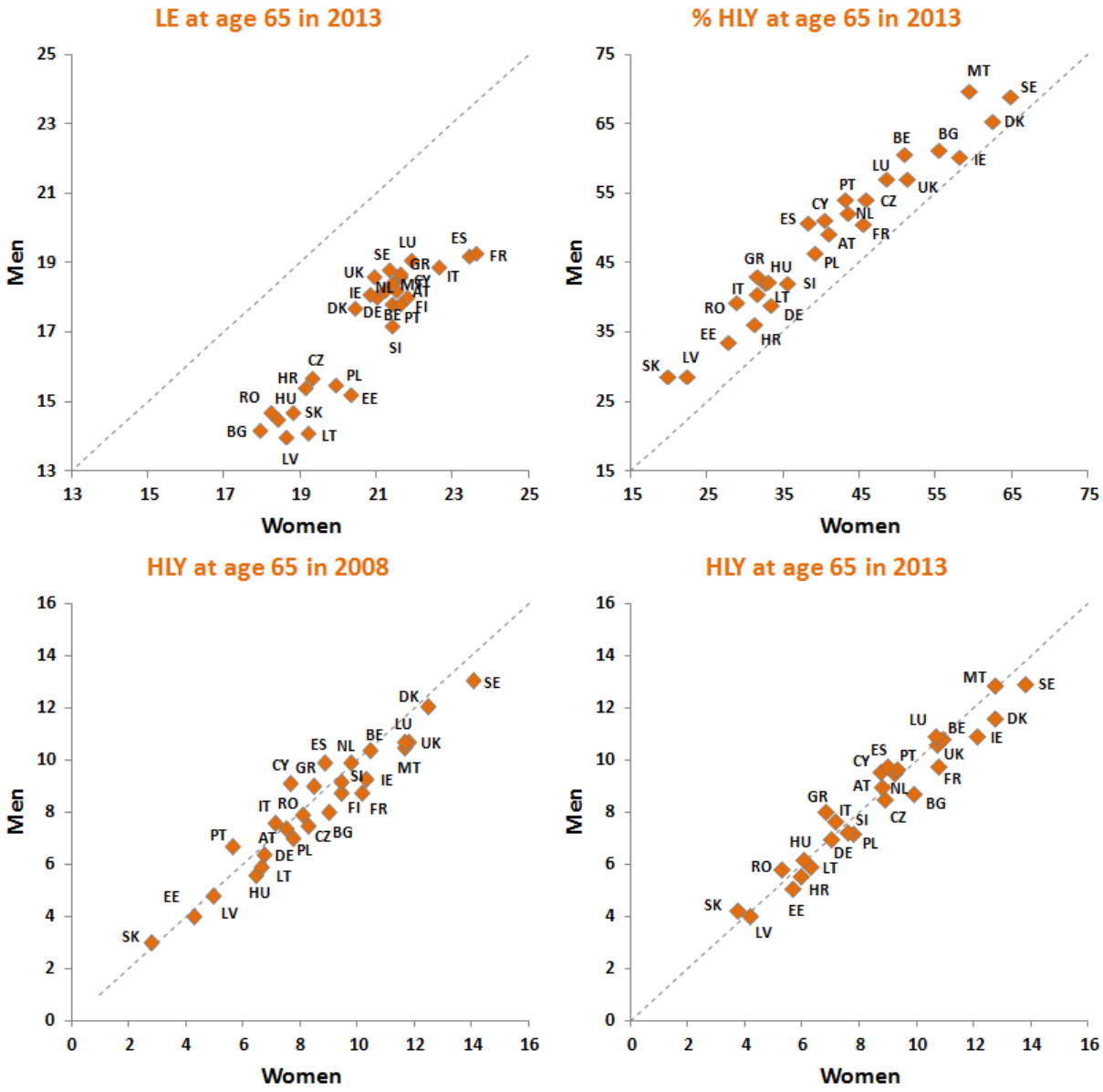
* *These may not sum to Life Expectancy due to rounding*

Publications and reports on health expectancies for Croatia

- Jagger C., Robine J.-M., Van Oyen H., Cambois E. *Life expectancy with chronic morbidity*. In: European Commission, editor. *Major and chronic diseases - report 2007*. Luxembourg: European Communities; 2008. p. 291-304.
- Jagger C., Gillies C., Mascone F., Cambois E., Van Oyen H., Nusselder W.J., 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.

Life expectancy (LE) and healthy life years (HLY) at age 65 in the member states (MS) of the European Union (EU) in 2008 and 2013: Correlation between genders (Health data from SILC 2008 and 2013)

In 2013, LE at age 65 varies by 9,7years in the EU from 13.9 years for men in Latvia to 23.6 years for women in France. In each MS, LE for women is always higher than for men – around 3.4 years on average.
The proportion of LE free of activity limitation (corresponding to HLY) varies by country from 19.8% to 68.9%. Even ignoring potential outliers there still appears to be considerable cross-national variation.
Men and women live about the same amount of time without activity limitations. Next to the 7 MS where the number of HLY was already slightly larger for men than for women in 2008, a slightly larger HLY in men is observed in an additional 5 MS in 2013.



BRIDGE-Health (Bridging Information and Data Generation for Evidence-based Health Policy and Research)

The **European Health and Life Expectancy Information System** (EHLEIS) is part of **BRIDGE-Health** 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).