EHLEIS Country Reports
Issue 9 – October 2015

Health Expectancy in The Netherlands

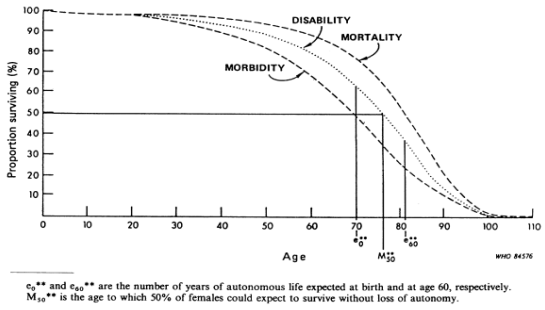
What is health expectancy?

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 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). This revision is being evaluated.

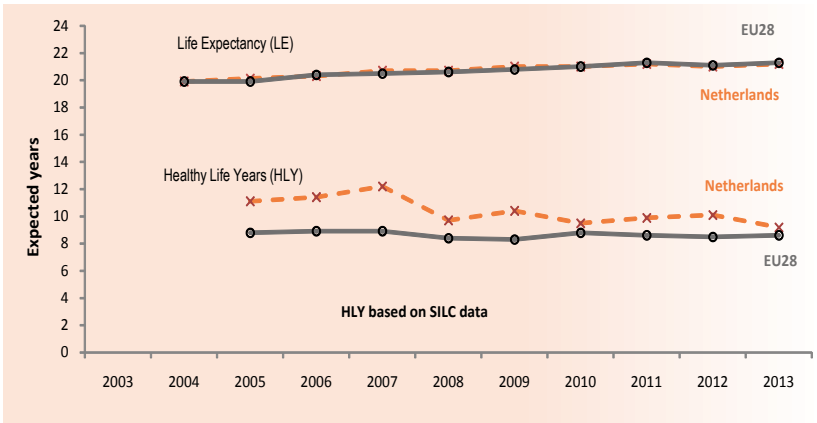
Life expectancy (LE) and Healthy Life Years (HLY) at age 65 for The Netherlands and the European Union (EU28) based on SILC (2005-2013)

Key points:

Dutch life expectancy (LE) at age 65 has increased by 1.3 years for women and 1.9 years for men over the period 2004-2013. By 2013 LE for Dutch men and women was very close to the EU28 average (21.3 for women and 17.9 for men).

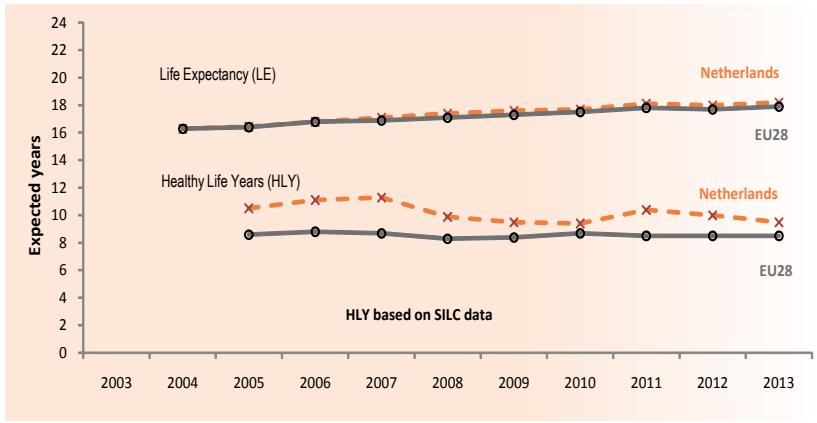
The HLY series, initiated in 2005 with the SILC data, show values for the Netherlands being in 2013 above the EU28 average (8.6 for women and 8.5 for men) by 0.6 year for women and 1.0 year for men. In 2013 women and men at age 65 can expect to spend 43% and 52% of their remaining life without *self-reported long-term activity limitations* respectively. Note that the wording of the GALI question was changed in the Netherlands in 2008 to better reflect the EU standard. This led to a clear decrease in HLY for men and women between 2007 and 2008. After a decrease of HLY for men and women between 2009 and 2010, between 2010 and 2011 HLY increased, although for women only slightly. In 2012 HLY remained stable in women but decreased slightly for men. In 2013 HLY decreased notably for women and men.

Women



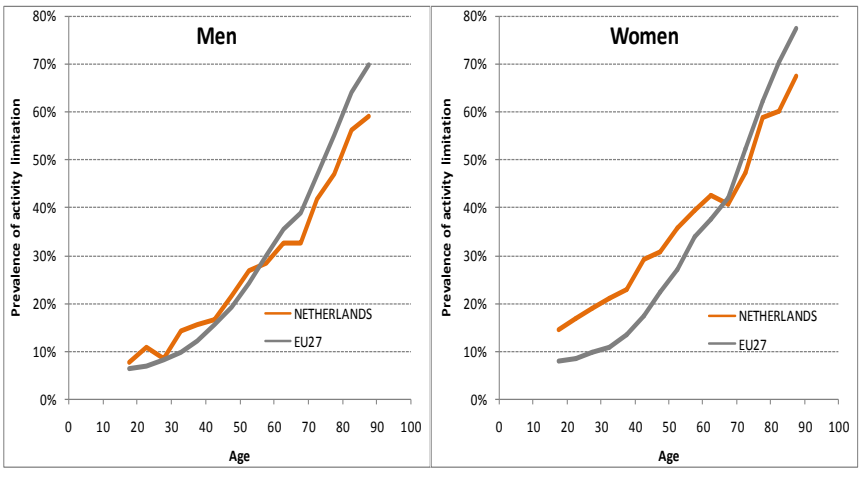
Netherlands	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
LE	-	19.9	20.1	20.3	20.7	20.7	21.0	21.0	21.2	21.0	21.2
HLY	-	-	11.1	11.4	12.2	9.7	10.4	9.5	9.9	10.1	9.2
% HLY/LE	-	-	55%	56%	59%	47%	50%	45%	47%	48%	43%

Men



Netherlands	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
LE	-	16.3	16.4	16.8	17.1	17.4	17.6	17.7	18.1	18.0	18.2
HLY	-	-	10.5	11.1	11.3	9.9	9.5	9.4	10.4	10.0	9.5
% HLY/LE	-	-	64%	66%	66%	57%	54%	53%	57%	56%	52%

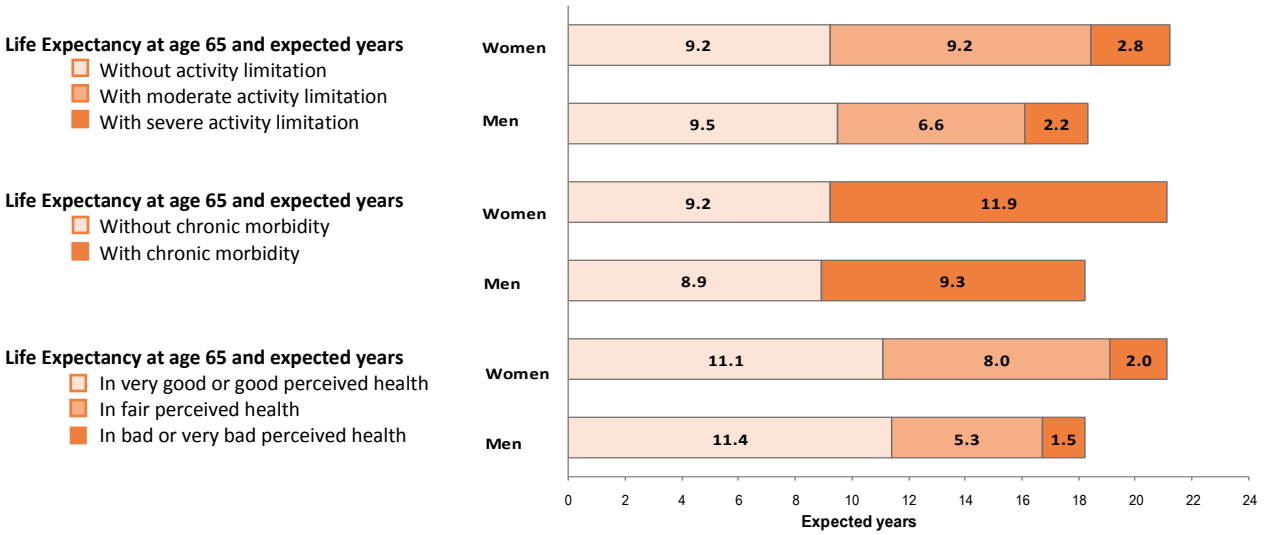
Prevalence of activity limitation in the Netherlands and in the European Union (EU27) based on the GALI question, by sex and age group (SILC, Mean 2011-2013)



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), the Netherlands tends to display similar prevalence rate of activity limitation for men before the age of 55 years but lower after this age and for women higher prevalence rate before the age of 65 years but lower after this age.

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 the Netherlands comprised 5397 women and 4713 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 The Netherlands (Health data from SILC 2013)



Key points:

In 2013 LE at age 65 in the Netherlands was 21.2 years for women and 18.2 years for men.

Based on the SILC 2013 at age 65, women spent 9.2 years (43% of their remaining life) without activity limitation (corresponding to Healthy Life Years (HLY)), 9.2 years (43%) with moderate activity limitation and 2.8 years (13%) with severe activity limitation.*

Men of the same age spent 9.5 years (52% of their remaining life) without activity limitation compared to 6.6 years (36%) with moderate activity limitation and 2.2 years (12%) with severe activity limitation.*

Although the total number of years lived by men were less than those for women, for all health expectancies, the years of life spent in positive health were similar for men and women. Therefore, compared to men, women spent a larger proportion of their life in ill health.

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

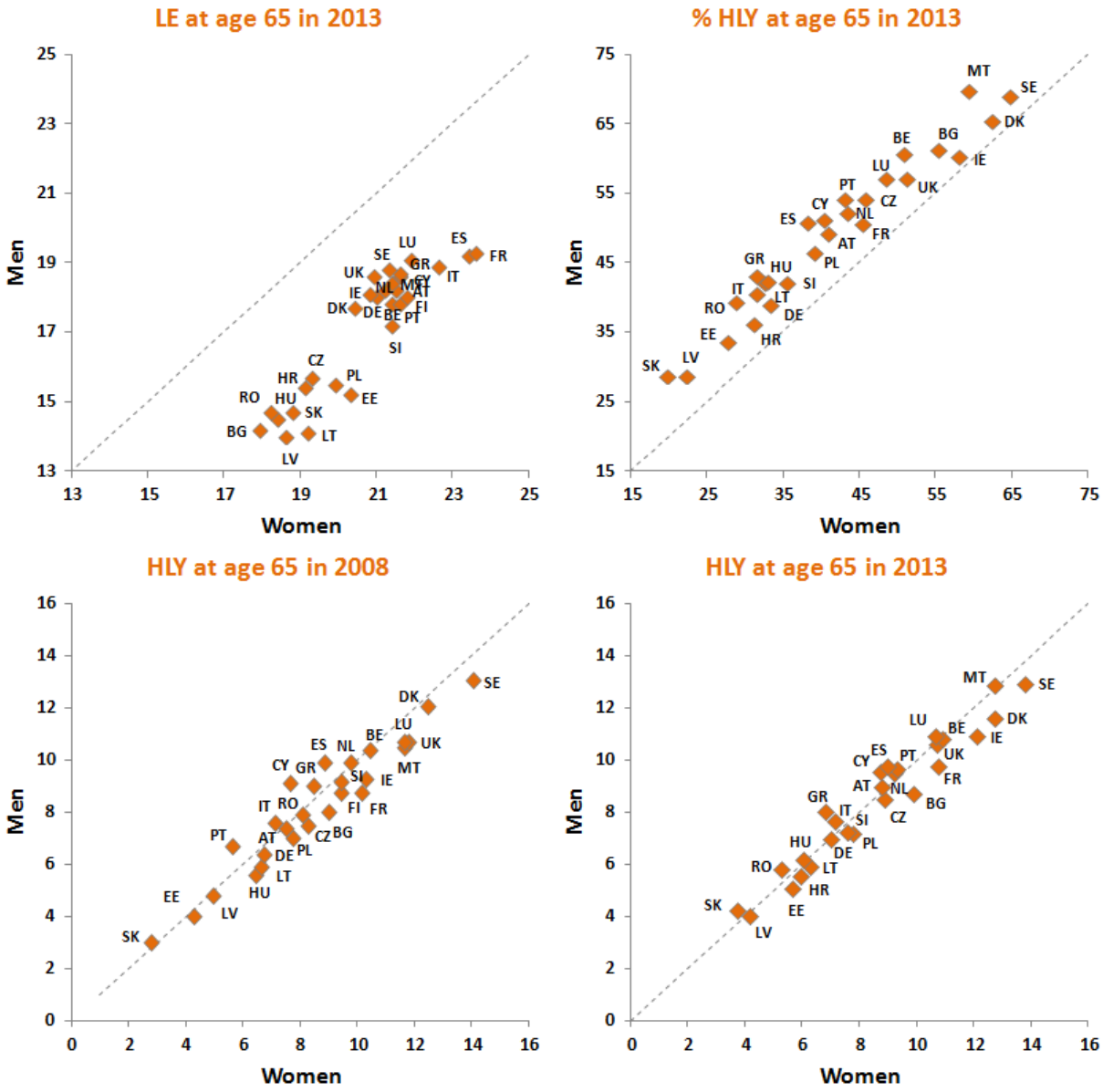
* *These may not sum to Life Expectancy due to rounding*

Publications and reports on health expectancies for The Netherlands

- Klijs B, Nusselder WJ, Looman CW, Mackenbach JP. Educational disparities in the burden of disability: contributions of disease prevalence and disabling impact. Am J Public Health. 2014 Aug;104(8):e141-8.
- "Langer leven, maar meer jaren met lichte lichamelijke beperkingen", www.cbs.nl, 29-09-2014: http://www.cbs.nl/nl-NL/menu/themas/gezondheid-welzijn/publicaties/artikelen/archief/2014/2014-4135-wm.htm
- Duin, C. van en L. Stoeldraijer (2014). Projecties van gezonde levensverwachting tot 2030. Bevolkingstrends 2014, Centraal Bureau voor de Statistiek. http://www.cbs.nl/NR/rdonlyres/9D3FDBF6-B162-4EA7-AAD6-121F8704B525/0/20140206b15artpdf.pdf
- Hoeymans N., van Loon A.J.M., van den Berg M., Harbers M.M., Hilderink H.B.M., van Oers J.A.M., Schoemaker C.G. A healthier Netherlands: Key findings from the Dutch 2014 Public Health Status and Foresight Report. Bilthoven, Netherlands: National Institute for Public Health and the Environment (RIVM), 2014.
- Majer IM, Stevens R, Nusselder WJ, Mackenbach JP, van Baal PH. Modeling and forecasting health expectancy: theoretical framework and application. Demography. 2013 Apr;50(2):673-97.
- Majer IM, Nusselder WJ, Mackenbach JP, Kunst AE. Socioeconomic inequalities in life and health expectancies around official retirement age in 10 Western-European countries. J Epidemiol Community Health. 2011 Nov;65(11):972-9.
- Majer IM, Nusselder WJ, Mackenbach JP, Kunst AE. Life expectancy and life expectancy with disability of normal weight, overweight, and obese smokers and nonsmokers in Europe. Obesity (Silver Spring). 2011 Jul;19(7):1451-9.
- Bruggink J.-W. Levensverwachting zonder chronische ziektes. *Bevolkingstrends.* 2011; 59(1):44-50.
- Bruggink J.-W. Towards a better health expectancy. Statistics Netherlands, The Hague/Heerlen, 2011.
- Klijs B, Mackenbach JP, Kunst AE.Obesity, smoking, alcohol consumption and years lived with disability: a Sullivan life table approach. *BMC Public Health*. 2011;11:378.
- Bruggink J.-W. De verschillende dimensies van de levensverwachting zonder lichamelijke beperkingen. *Bevolkingstrends* 2010; 58(3):36-42.
- Bruggink J.-W. Langer leven, maar ook langer gezond? *Demos* 2010; 26(1): 2-5.
- Brakel M. van den, Knoops K. Gezonde levensverwachting korter bij lage inkomens. *Bevolkingstrends* 2010; 58(3):29-35.
- Knoops K., Brakel M. van den. Rijke mensen leven lang en gezond. *Tijdschrift voor gezondheidswetenschappen* 2010; 88(1):17-24.

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).

BRIDGEHEALTH
BRidging Information and Data Generation for Evidence-based Health Policy and Research