

### 3. Increasing healthy life expectancy and reducing longevity gaps between European countries

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#### Summary

The number of Healthy Life Years (HLY) lived by the inhabitants of the European Union (EU) at 25 (without Bulgaria and Romania) reached 60.8 years for men and 62.1 years for women in 2005 (EHEMU calculation). These years represent 80.1 % and 75.8 % of the total life expectancy at birth for men and women, respectively. For survivors at age 50, the number of remaining HLY still reaches 17.3 years for men and 18.1 years for women.

Although in 2005 the EU life expectancy at birth ranks amongst the highest in the world, at almost 76 years for men and 82 years for women (EU25), for its 461 million inhabitants, too many years are still lived with activity limitations, close to 15 years for men and 20 years for women, including 5 to 6.5 years with severe limitations.

European women live on average 6 years longer than men but most of these additional years are lived with moderate or severe activity limitations. Therefore the HLY gender gap in favour of women appears to be much smaller, less than 2 years, than the total longevity gap. European men tend to spend a greater proportion of their shorter life expectancy free of activity limitation.

Over the 10 year period 1995-2005 life expectancy at birth steadily increased in the EU, by 3 years for men and by 2 years for women. Monitoring that this significant lengthening of

the duration of life is not increasing the number of years lived with activity limitations is an important issue for the Union, as such limitations dramatically increase the risk of becoming dependent for everyday tasks.

Trends in HLY are not yet available at the European level because the European Health Survey System (EHSS) is relatively new. However a feasibility study, using survey data coming from the European Community Household Panel (ECHP) run in the EU15, suggested a very slow increase over time in the number of years lived without disability in Europe (Robine J-M, Jagger C, group Euro-REVES (2003)).

At the Member States level, the national values of life expectancy at birth in 2005 range between 65.3 and 78.5 years (13.2 years gap) for men and between 76.5 and 84.0 years (7.5 years gap) for women. The corresponding HLY values range respectively from 48.0 years to 68.5 years (20.5 years gap) for men and from 52.2 years to 70.2 years (18.0 years gap) for women. Moreover, at age 50, the HLY values range respectively from 9.1 years to 23.6 years (14.5 years gap) for men and from 10.4 years to 24.1 years (13.7 years gap) for women, underlying that the employment rate for older workers cannot be expected to be the same throughout Europe. Equivalent gaps are also evident at age 65, though these are more relevant for long-term care services than employment rates.

Understanding and reducing gaps between quantity and quality of life, between men and women and between Member States is a necessary condition for ensuring sustainable economic growth and greater social cohesion in Europe.



## 3.1 Introduction

In this chapter we present the first HLY estimates for the EU25 using the Statistics of Income and Living Conditions (SILC 2005). We also review the trends in life expectancy at birth and at age 65 in the EU27 since 1995. Trends in HLY for the EU27 are not yet available and thus we only show trends in HLY for the EU15 using the European Community Household Panel (ECHP) study run between 1995 and 2001. The ECHP formed the basis of the feasibility study for the adoption of HLY as a Structural Indicator. In all cases we look at the differences between genders and the interrelationships between life expectancy and HLY as the preliminary means of determining whether longer life also means better health. However the significant gaps and diverging trends in longevity observed across the EU and between genders justifies the importance that is attached to continued inclusion of life expectancy at birth (and at age 50 and 65) as key health indicators in Europe in addition to the new HLY. Moreover, essential information in term of quality of life is provided by the ratio HLY to life expectancy which measures the proportion of the life expectancy lived in good health.

## 3.2 Information Sources

Activity limitation data come from the new longitudinal survey, Statistics of Income and Living Conditions (SILC), whose health module is part of the European Health Survey System (Bonte J, Jagger C, Robine J-M, 2003). SILC includes a global question on activity limitation, known as the GALI (Van Oyen et al, 2006), which has been especially designed for estimating the HLY (Robine, Jagger and Euro-REVES, 2003)<sup>12</sup>. The question explores whether the surveyed individuals are limited in activities people usually do, for at least the last 6 months, because of a health problem with responses: Yes, strongly limited; Yes, limited; No, not limited. All data (death counts, population estimates and activity limitation), are for the years 2005 and were collected or estimated to ensure maximum harmonization for all Member States in 2005.

The data used for the feasibility study for the adoption of HLY as a Structural Indicator come from the European Community Household Panel (ECHP). The questions used explore whether the surveyed individuals have any chronic physical or mental health problem, illness or disability and if it is the case whether they are hampered in their daily activities by these physical or mental health problems, illnesses or disabilities. Possible responses are: Yes, severely; Yes, to some extent; No.

All health expectancy calculations were made following the Sullivan approach as described in section 1.5 of the Introduction. Details on the HLY, Structural Indicators and the Lisbon Strategy can be found on the DG SANCO<sup>13</sup> and Eurostat<sup>14</sup> websites. Methodological reports on health expectancies can be found on the EHEMU<sup>15</sup> website.

## 3.3 Data Presentation

Table 1 shows estimates for 2005 at the European level (EU25) by gender: life expectancy (LE), Healthy Life Years (HLY), the expected number of remaining years with moderate activity limitations (LEwML), the expected number of remaining years with severe activity limitations (LEwSM) and the ratio of the Healthy Life Years to life expectancy expressed a percentage (HLY/LE), at birth, at age 50 and at age 65. It also shows the difference in these quantities between men and women, the gender gaps.

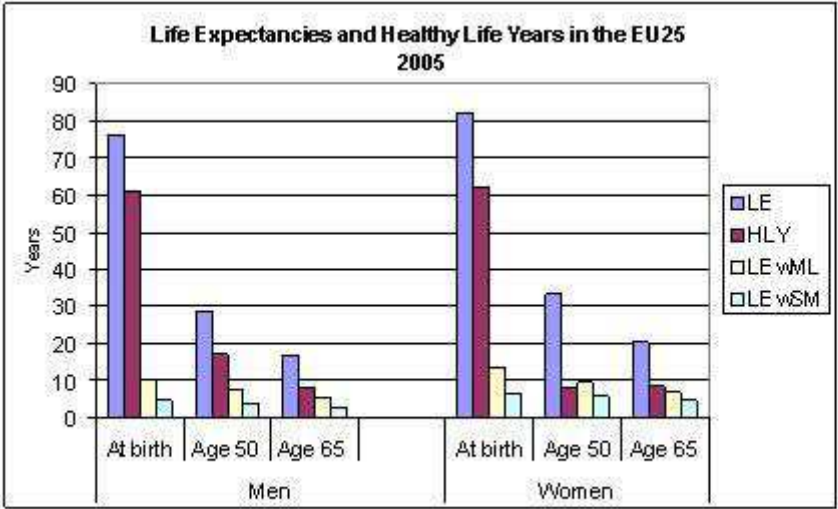
<sup>12</sup> [http://ec.europa.eu/health/ph\\_information/dissemination/reporting/ehss\\_04\\_en.htm#top](http://ec.europa.eu/health/ph_information/dissemination/reporting/ehss_04_en.htm#top)

<sup>13</sup> [http://ec.europa.eu/health/ph\\_information/indicators/lifeyears\\_en.htm](http://ec.europa.eu/health/ph_information/indicators/lifeyears_en.htm)

<sup>14</sup> [http://epp.eurostat.ec.europa.eu/portal/page?\\_pageid=1090,30070682,1090\\_33076576&\\_dad=portal&\\_schema=PORTAL](http://epp.eurostat.ec.europa.eu/portal/page?_pageid=1090,30070682,1090_33076576&_dad=portal&_schema=PORTAL)

<sup>15</sup> <http://www.ehemu.eu/>

Graph 1: Life expectancy (LE) and Healthy Life Years (HLY) at birth, at age 50 and at age 65, in the European Union (EU25), in 2005, by gender



**See Annex 4 for original data**

Source: Eurostat for death and population data (<http://epp.eurostat.ec.europa.eu>), Eurostat SILC for activity limitation data, and EHEMU for calculations ([www.ehemu.eu](http://www.ehemu.eu))

Where LE indicates Life Expectancy, HLY indicates Healthy Life Years, LEwML indicates Life Expectancy with moderate activity limitations and LEwSM indicates Life Expectancy with severe activity limitations.

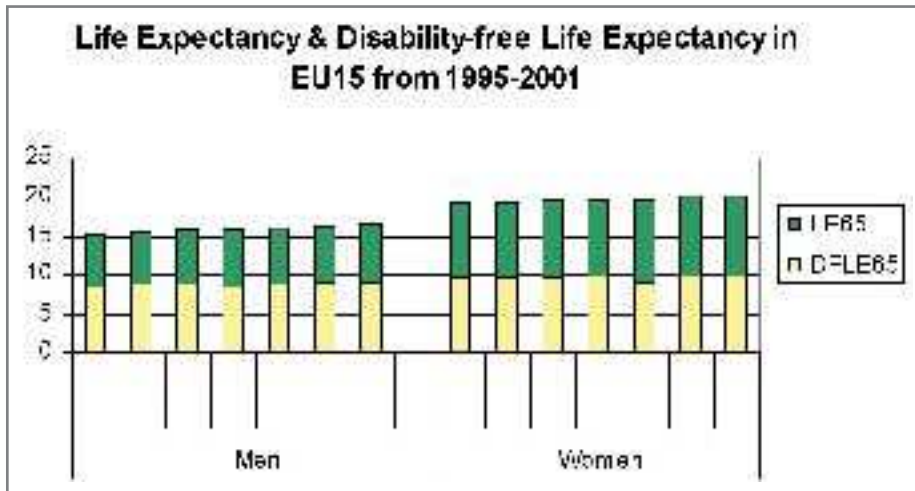
The number of Healthy Life Years (HLY) lived in 2005 by the inhabitants of the European Union (EU25) reached 60.8 years for men and 62.1 years for women. These years represent 80.1 % and 75.8% of the total life expectancy at birth for men and women, respectively (Table 1). Although in 2005 the EU life expectancy at birth ranks amongst the highest in the world, at almost 76 years for men and 82 years for women (EU25), for its 461 million inhabitants, too many years are still lived with activity limitations, close to 15 years for men and 20 years for women including 5 to 6 years with severe limitations. Women live on average 6 years longer than men but most of these additional years correspond to years with reported moderate or severe activity limitations. Therefore the HLY gender gap in favour of women appears to be much smaller, less than 2 years, than the total longevity gap.

The number of remaining HLY at age 50 is 17.3 years for men and 18.1 years for women representing 60.4 % and 53.9 % of total life expectancy respectively. This provides a good indication of the number of year with good functioning which may be available for work and hence is crucial for monitoring progress

towards the EU target of increasing the employment rate of the older workers. Above the age of 50 years, women live longer than men, 4.9 years on average, but more than three-quarters of these additional years correspond to years lived with activity limitations. Therefore the HLY gender gap in favour of women at age 50 is much smaller, 0.8 years, than the total longevity gap. By age 65, the number of remaining HLY still reaches 8.4 years for men and 8.7 years for women representing 50.4 % and 43.2% of the total life expectancy for men and women respectively. Men in Europe spend a greater proportion of their shorter life expectancy free of activity limitations. At age 50, as well as at age 65, the gender gaps in the number of expected years with activity limitations are quite substantial in Europe. For both genders, activity limitations dramatically increase the risk of becoming dependent for everyday tasks and relying on formal or informal care for daily survival.

Trends in HLY are not yet available at the European level because the European Health Survey System (EHSS) is relatively new. However the feasibility study for the adoption of the Healthy Life Years (HLY) indicator (also called disability-free life expectancy, DFLE) as a Structural Indicator, using survey data coming from the ECHP and run in EU15, gave an idea of likely trends in Europe. Table 2 gives estimates of life expectancy (LE65) and disability-free life expectancy (DFLE65) at age 65 as well as the ratio LE65/DFLE65 computed from 1995 to 2001 with the ECHP survey.

Graph 2: Life expectancy at age 65 (LE65) and Disability-free life expectancy (DFLE65), in the European Union (EU15), from 1995 to 2001, by gender



See Annex 4 for original data

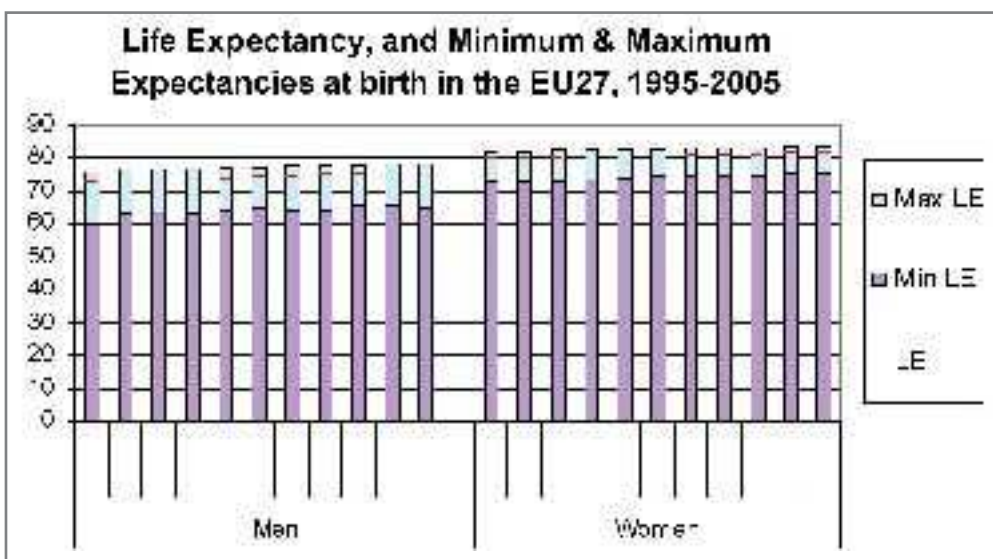
Where LE65 indicates the total life expectancy at age 65 for a given sex recorded in the given year, and DFLE65 indicates the number of LE65 years expected to be disability-free.

In summary, the study suggested a slightly slower increase in the number of years without disability than in total life expectancy, resulting in a slight decrease in the proportion of life free of disability in the EU15. However there is no obvious single trend at the MS level. Roughly one third of the countries showed a slight compression of disability over the seven years of the study (i.e. the

increase of years without disability is larger than the increase of the total life expectancy), one third a slight expansion of disability and one third a kind of status quo known as dynamic equilibrium (Manton, 1982). Details can be found in Annex 1.

Table 3 shows 10-year trends in life expectancy at birth (LE0) in the European Union by gender, including the new members, Bulgaria and Romania, entering in 2007 (EU27). The table also displays the maximum, minimum and range of values estimated each year at the MS level within EU27.

Graph 3: Life expectancy at birth (LE0), in the European Union (EU27), from 1995 to 2005, by gender



See Annex 4 for original data

Source: Eurostat for death and population data (<http://epp.eurostat.ec.europa.eu>) and EHEMU for calculations ([www.ehemu.eu](http://www.ehemu.eu))

Where LE indicates the Life Expectancy, Min LE indicates the minimum Life Expectancy and Max LE indicates the maximum Life expectancy at birth for members of the EU27 for the year range 1995-2005.

Over the 10 year period 1995-2005, life expectancy at birth steadily increased in the European Union, by three years for men and by two years for women, thereby reducing the longevity gender gap by one year (Table 3). Monitoring that this significant lengthening of the duration of life is not increasing the number of years lived with functional limitations is an important issue for the Union.

Graph 4: Minimum and maximum values of life expectancy (LE) and Healthy Life Years (HLY), at birth, at age 50 and at age 65, among the Member States of the European Union (EU25), in 2005, by gender



See Annex 4 for original data

Source: Eurostat for death and population data (<http://epp.eurostat.ec.europa.eu>), Eurostat SILC for activity limitation data, and EHEMU for calculations ([www.ehemu.eu](http://www.ehemu.eu))

Where Max LE and Min LE indicate the maximum and minimum Life Expectancies respectively for members of the EU25 in 2005.

Table 4 underlines the significant LE and HLY gaps observed between the Member States in 2005. At the Member State level, values of life expectancy at birth in 2005 range from 65.3 years to 78.5 years (13.2 years gap) for men and from 76.5 years to 84.0 years (7.5 years gap) for women. The corresponding HLY values range respectively from 48.0 years to 68.5 years (20.5 years gap) for men and from 52.2 years to 70.2 years (18.0 years gap) for women. Estimates shown in Table 3 for life expectancy only suggest a very slow reduction in the longevity gaps between the Member States since 1995. Detailed values for the Member States are displayed in Annexes 2 and 3. Table 4 provides additional information on the life expectancy and HLY gaps observed between the Member States in 2005 at ages 50 and 65. Moreover, at

age 50, the HLY values range respectively from 9.1 years to 23.6 years (14.5 years gap) for men and from 10.4 years to 24.1 years (13.7 years gap) for women, underlying that the employment rate for older workers cannot be expected to be the same throughout Europe.



### 3.4 Data Discussion

The calculation of HLY at the European level and for all Member States, spurred on by the Lisbon Strategy, has disclosed striking gaps in the quantity and quality of life (i.e. between total longevity and years lived free of disability), between men and women and between Member States. Understanding and reducing these gaps will be required for ensuring sustainable economic growth, full employment and greater social cohesion in Europe.

In short, residents of the European Union (based on HLY calculations for the 25 EU Member States of 2005) can expect to live slightly more than 60 years in good health, as estimated by the HLY. Around 20 % (17 % for men and 21 % for women) of the life expectancy at birth are lived with some reported activity limitations. Under the current conditions observed in Europe, women at birth are expected to live 6 years more than men. They will also live 4.7 years more with activity limitations, including over 1.7 year more with severe limitations. Severe activity limitations dramatically increase the risk of losing independence and requiring long term care. For survivors at age 50, the number of remaining HLY still reaches 17.3 years for men and 18.1 years for women, providing possibilities for increasing the employment rate of the older workers. In 2005 the gaps between the MS with the highest and lowest life expectancies at birth is over 13 years for men and over 7 years for women. Reduction of this longevity gap between MS appears to have been extremely slow during the 1995-2005 period. Gaps in HLY between MS are even wider: over 20 years for men and 18 years for women in total. At age 50 the HLY gaps reach 14.5 years for men and 13.7 years for women, underlying that the labor force participation of older workers cannot be expected to be uniform throughout Europe. Equivalent gaps are evident at age 65 but they point more towards long term care services than to employment rates.

Longevity gaps in Europe are much more complex than a simple comparison between western and eastern countries. A specific analysis made by EHEMU showed that European countries experienced a marked convergence in their life expectancy values in the aftermath of the Second World War from a different but generally increasing trend in life expectancy<sup>16</sup>. However during the 1960s European life expectancies began to diverge. In one group of countries (Sweden, Switzerland, France, Italy and Spain for women and Sweden, Switzerland and Italy for men), the growth in life expectancy hardly slowed during the 1960s, and continued to converge towards higher values. These are high convergence countries. A second group (England and Wales, Belgium and Finland for women and France for men), where growth in life expectancy slowed more in the late 1950s and early 1960s, converged to a level of around two years from the highest European values<sup>17</sup>. These are low convergence countries. The third group includes those European countries that at some time ceased to follow the trend of the highest European values. These are divergent countries. It is in this third group that the Baltic and Eastern Europe countries are found as their life expectancies ceased to follow the trend of the highest European values from the 1960s onwards. Denmark is also included though its life expectancy trend varied from the mid-1970s, whilst trends in Norway and the Netherlands diverged from the mid-1980s onwards. These divergences coincided with health crises in Europe but their impact varied tremendously from one country to the next.

If the HLY indicator does not yet permit direct comparison with United States of America (USA) and Japan, life expectancy does. Thus Table 5 presents the values of life expectancy at birth in the EU27, USA and Japan in 1995 and in 2005 and by gender. The US data come from the National Center for Health Statistics (Anderson, Kochanek and Murphy, 1997; Kung et al, 2007)<sup>18</sup> and the Japanese data from the Ministry of Health and Welfare for Japan (Ministry of Health and Welfare, 2006)<sup>19</sup>.

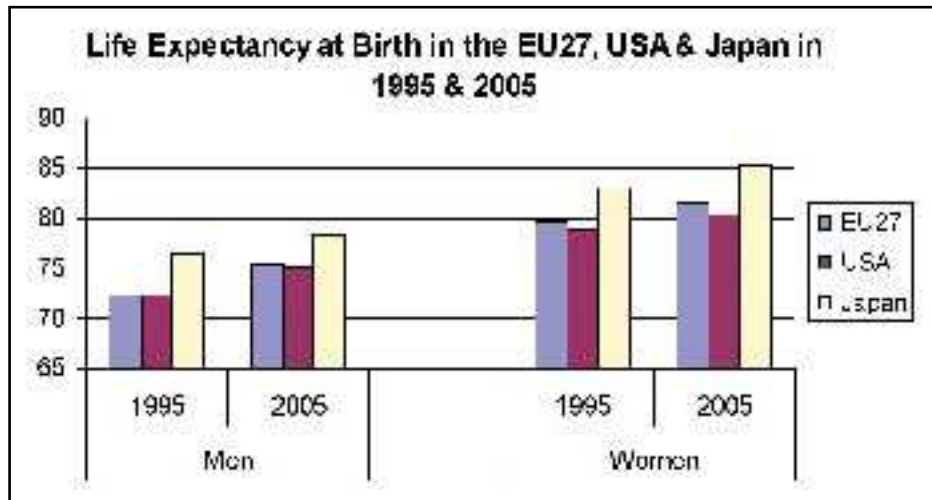
<sup>16</sup> [http://ec.europa.eu/health/ph\\_information/reporting/community\\_en.htm](http://ec.europa.eu/health/ph_information/reporting/community_en.htm)

<sup>17</sup> These are called divergent countries and the group comprises the Eastern European and Baltic countries (Hungary, Bulgaria, Czech Republic, Latvia and Lithuania) where the divergent phase began in the 1960s, Denmark where divergence began in the mid-1970s and Norway and the Netherlands divergent since the mid-1980s. It should be noted that, for men, Spain also began a divergent phase in the mid-1980s, but there pattern was a very different in Norway and the Netherlands. These divergences coincide with health crises in Europe, the Eastern crisis and in the Baltic states firstly, but also health crises in some Northern European countries (Denmark, Netherlands and Norway).

<sup>18</sup> <http://www.cdc.gov/nchs>

<sup>19</sup> <http://www.mhlw.go.jp/english/index.html>

Graph 5: Life expectancy at birth (LE0) in the European Union (EU27), in the United States of America (USA) and in Japan in 1995 and 2005, by gender



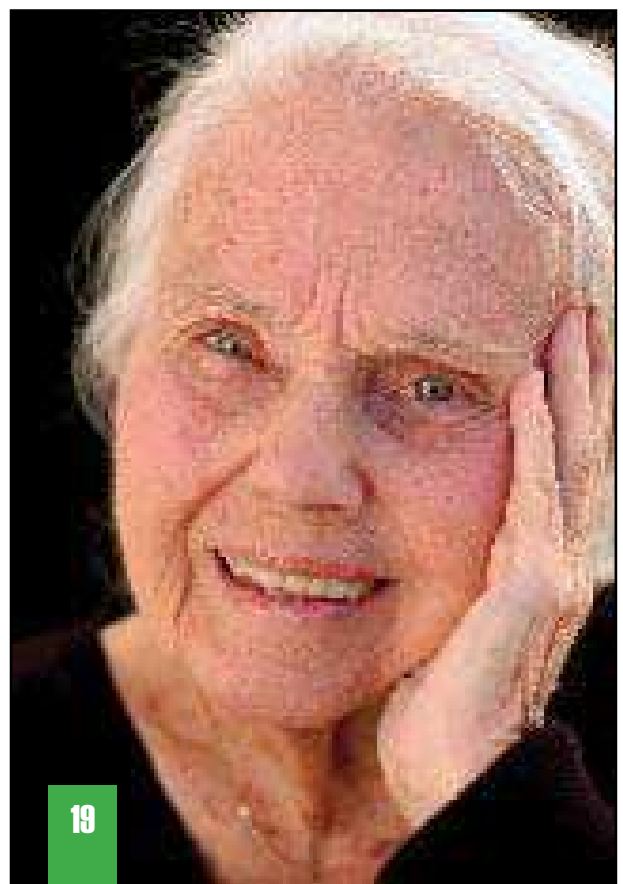
See Annex 4 for original data

Source: EHEMU for the European Union ([www.ehemu.eu](http://www.ehemu.eu)), National Center for Health Statistics for the USA (<http://www.cdc.gov/nchs>) and Ministry of Health and Welfare for Japan (<http://www.mhlw.go.jp/english/index.html>)

Table 5 shows firstly that by 2005 life expectancy at birth is almost identical for men in the USA and in the EU, but that life expectancy in Japan is four years higher than both. Women's LE at birth is almost one year higher in the EU compared to the USA but 3 years lower than Japan. Secondly, the table shows that gender gaps range from 5.2 years in the USA to 7 years in Japan, suggesting that the size of the longevity gender gap is mainly determined by women's longevity. Finally the EU had the largest increase in male life expectancy over the 10-year period 1995-2005 and the second largest (to Japan) for female life expectancy.

The USA have developed a nationwide health promotion and disease prevention agenda, known as Healthy People 2010, in which the two overarching national health goals are to increase the quality and years of healthy life and eliminate health disparities. In this framework, the US National Center for Health Statistics (NCHS) developed three summary measures similar to the HLY for monitoring progress toward the goals of Healthy People 2010. They are: expected years in good health, expected years free of activity limitation, and expected years free of selected chronic diseases. Data have been analyzed for the period 1999-2002 and findings were mixed with continued improvements in life expectancy and a slight increase in expected years free of activity limitation (Department of Health and Human Service 2006; Molla et al

2001 and 2003; Wagener et al 2001). However, the expected years free of activity limitation computed by the US administration are not directly comparable to the number of HLY as the surveys used to collect the necessary information on activity limitations are not harmonized between the EU and the USA. The Commission is working to improve this comparability in cooperation with the US authorities, including through the OECD.



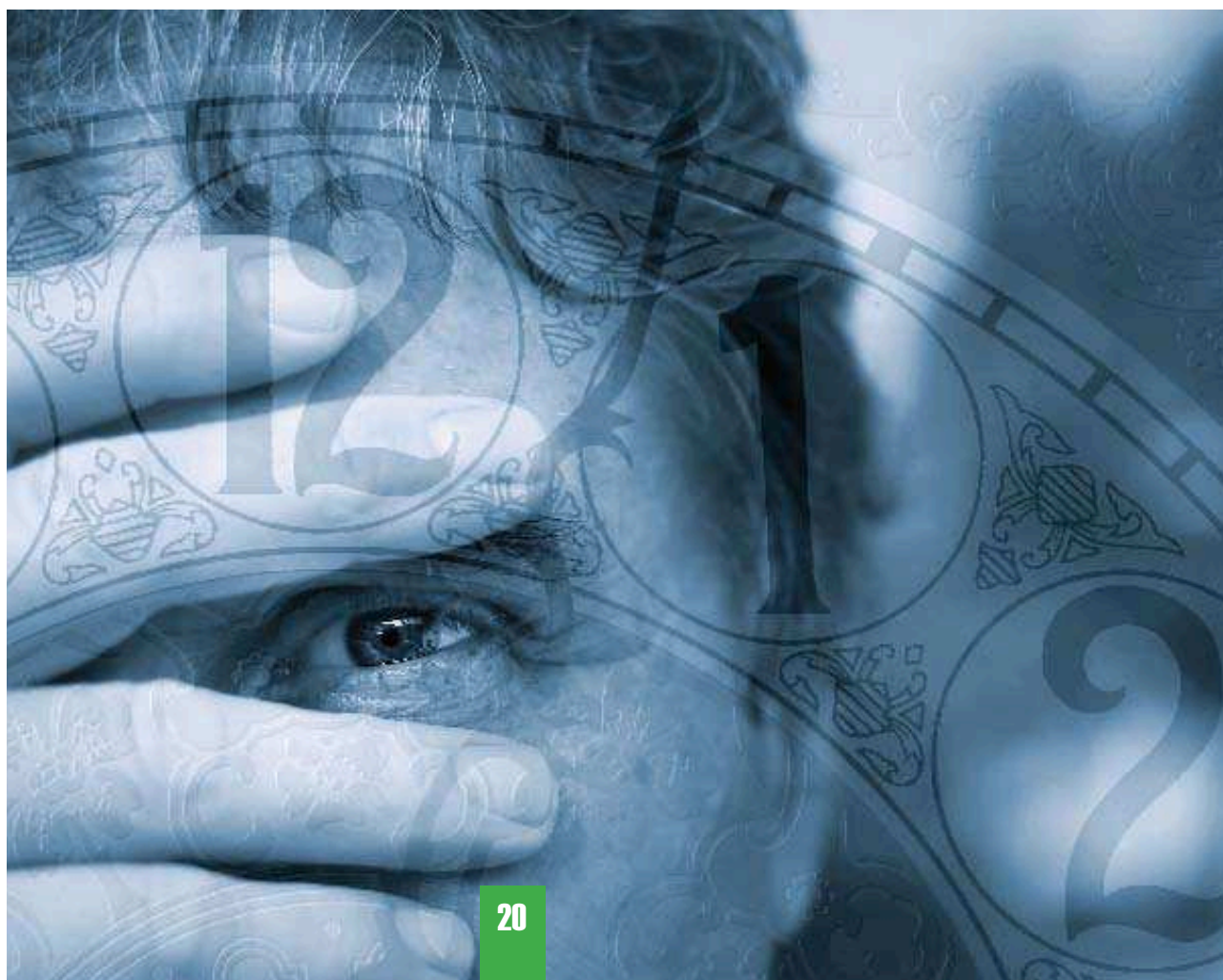
### 3.5 Policy Tools

In the first assessment to become a Structural Indicator, HLY was awarded a grade B. The two main issues were shortcomings with regard to comparability between Member States/Candidate Countries/US and Japan (including the lack of data), and a break in the series hampering comparison over time. Indeed the ECHP ended in 2001 and no European data was available for 2002 or 2003. However the new survey, the Statistics of Income and Living Conditions (SILC) began in 2004 in several Member States, from 2005 in the then 25 Member States and 2006 in the current 27 EU Member States.

Although not a health survey, SILC contains the Minimum European Health Module (MEHM) which was devised by the Euro-REVES group (Robine, Jagger and Euro-REVES, 2003) and is to be a subset of the health module in the European Health Interview Survey (EHIS). The MEHM includes measures of chronic morbidity, perceived health and disability, the latter by means of the GALI (Van Oyen et al, 2006). The HLY is based on the disability measure: limitation in activities people usually do, for at least the last 6 months, because of

health problems. A major drawback with the ECHP was that the questions did not fully distinguish the different facets of health according to current views on the disablement process and health measurement (Verbrugge and Jette, 1994; Robine, Jagger and Euro-REVES, 2003). These issues are resolved in the health questions in SILC (and further in the EHIS) and a more rigorous translation process to the underlying health concept will minimise cultural differences in the comprehension of the questions. Thus SILC (annually) and EHIS (every 5 years) will provide the required harmonized disability data for the HLY, thus addressing the shortcoming on data availability across all Member States (Robine and Jagger, 2007).

Several services of the Commission (the Health and Consumers Directorate-General and Eurostat) have been working together with the Member States to improve the reliability of the HLY through a Task Force on Health Expectancies and through the EHEMU projects (see [www.tf-he.eu](http://www.tf-he.eu) and [www.ehemu.eu](http://www.ehemu.eu)). The Task Force on Health Expectancies has prepared a 3-year strategic plan to meet all the Structural Indicators criteria (Robine and Jagger, 2007).







### 3.6 The future perspective

Significant progress has been made during the last few years in developing sustainable summary measures of population health to meet the EU political agenda alongside similar efforts in North America. Indeed after almost 20 years of research on health expectancies (Robine et al, 2003), on both sides of the North Atlantic governmental authorities request these simple and robust indicators to monitor the quality of life and support active ageing and employment in the context of lengthening of life. International comparability needs further improvement as the US and the EU are still not using the same survey design or instruments, and comparability with Japan has still to be developed.

Further political demands about the quality of life of populations will come in the near future and policy makers will have more experience and higher expectations of such indicators. To be ready to meet these, the European Commission considers that the scientific community should work on second generation summary measures, true period indicators (using incidence in place of prevalence), less

subjective (using measured in place of self-reported activity limitation) and covering the whole population (rather than excluding those living in institutions such as long-term care establishments). Such efforts should be strongly supported by relevant research bodies: the Research Directorate-General of the European Commission in the EU, the National Institutes of Health (NIH) in the US and relevant administrations in Japan. Eurostat has already established a Task Force to explore the possibility to compute comparable life expectancy tables by socio-economic status between Member States. This is a necessary step for computing HLY by socio-economic status.

A few years ago, the World Health Organization underlined that increased longevity has no value as such, if it is not accompanied by a healthy and active life, allowing a true economic and social participation of the older citizens (World Health Organization, 1997). The HLY offers the means to monitor that reducing the longevity gaps in Europe and increasing life expectancy will be accompanied by better functional health and better quality of life.

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## Feasibility study for the adoption of the Healthy Life Years (HLY) as European Structural Indicator

Prior to acceptance as EU Structural Indicator, HLY underwent a rigorous process of evaluation coordinated by Eurostat and carried out by EHEMU, conforming to a set of criteria concerning historical and future data methodology and accuracy and harmonization both within the EU and wider. Specifically structural indicators should cover all the EU Member States plus Iceland, Norway, the United States of America and Japan, and data sets should cover a 10-year period, beginning in the 1990s, up to the year for which the most recent data is available.

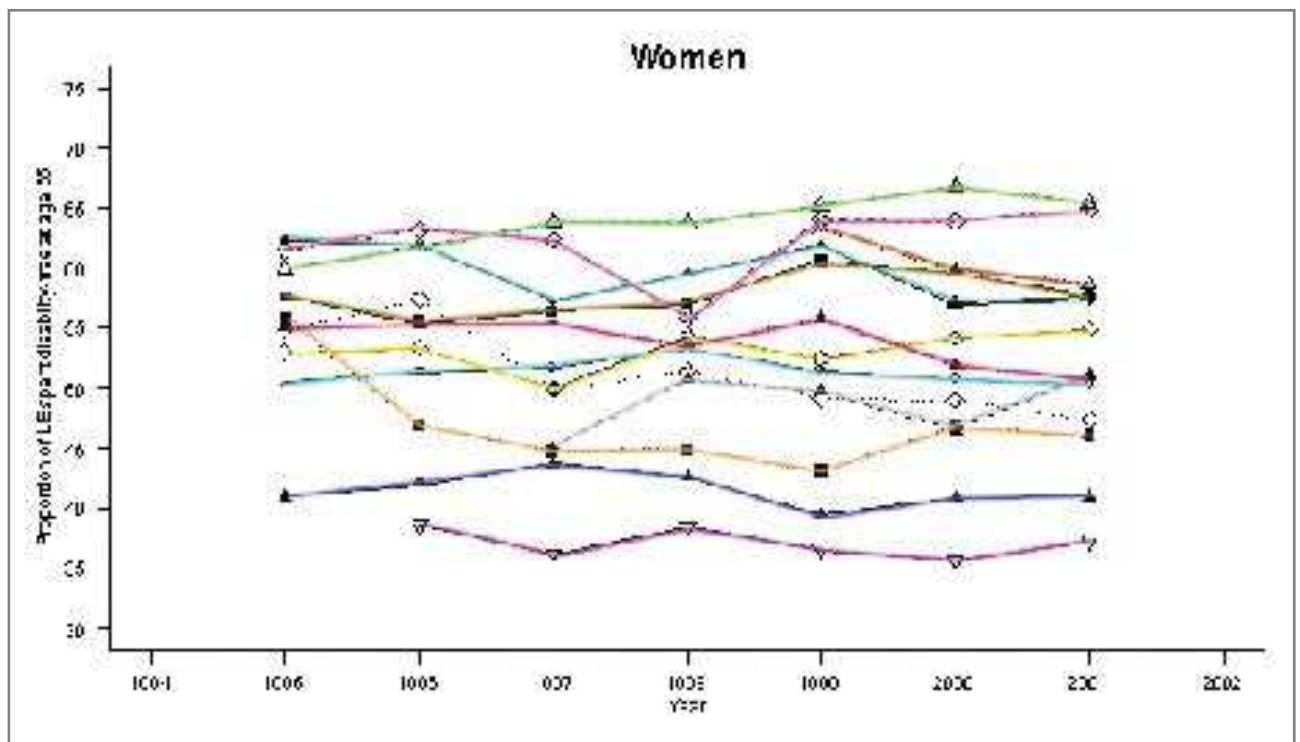
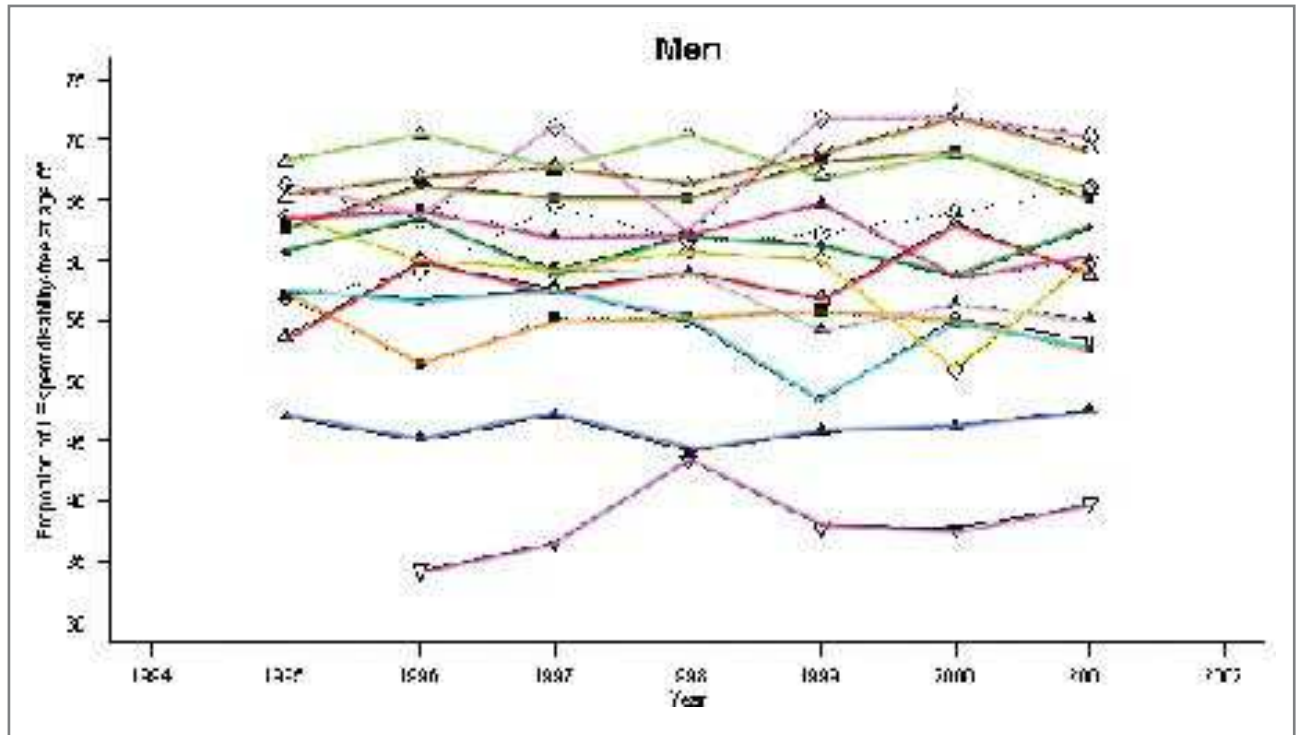
The feasibility study for HLY used the European Community Household Panel survey (ECHP) (Robine, Jagger and Cambois, 2002; Robine, Jagger and Romieu, 2001). This survey, conducted from 1994 to 2001 on the 15 first Member States, allowed EHEMU to demonstrate both the wide range of variability in HLY/DFLE across EU Member States and the differing trends over time (Jagger and EHEMU 2005).

Compression and expansion of disability are determined through the relationships over time of life expectancy (LE) and HLY (also called DFLE) or indeed in the proportion of remaining life expectancy spent free of disability (the ratio of DFLE to LE). Thus if this ratio is increasing then DFLE is increasing faster than life expectancy and a compression of disability is occurring. Conversely if the ratio is reducing then DFLE is increasing (or indeed decreasing) at a slower rate than life expectancy and an expansion of disability is occurring. Figure A.1 shows the trend in the proportion of life at age 65 spent healthy (DFLE/LE) for 14 Member States (excluding Luxembourg) having participated to the ECHP between 1995 and 2001 and for men and women respectively.

There is no obvious single trend of compression or morbidity between all countries for men and women. If we consider a gain of 5% between 1995 and 2001 to signify compression and a loss of 5% to signify expansion then for men Austria, Belgium, Finland, Germany and Italy appeared to experience a compression of disability, and Denmark, the Netherlands, Sweden and the United Kingdom an expansion. For women at age 65 Belgium, Italy and Sweden appeared to experience a compression of disability whilst Germany, Ireland, the Netherlands and Portugal experienced an expansion. Although there is some consistency between the genders with Italy and Belgium showing compression for men and women and the Netherlands and Portugal showing expansion for both, there is considerable heterogeneity between the genders. These gender differences may be a result of differential reporting of disability or the omission of the institutionalized population (which will adversely affect older women more than older men). However if real, they may reflect different stages of health transitions as populations age as suggested by Robine and Michel (2004).

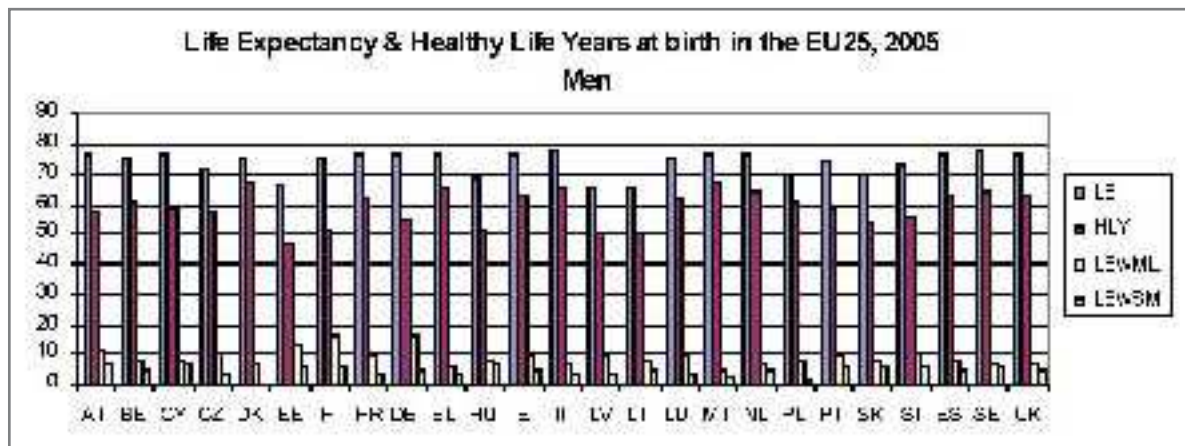
In the first assessment to be a structural indicator, HLY was awarded a grade B. The two main issues were shortcomings with regard to comparability between Member States, candidate countries and the US and Japan (including the lack of data), and a break in the series which hampers comparison over time. The ECHP ended in 2001 and no European data was available for 2002 or 2003. However, a new survey, the Statistics of Income and Living Conditions (SILC) began in 2004 in several Member States and from 2005 in the EU25 and 2006 in the EU27 (Robine and Jagger, in press).

Annex 1: Trend in the proportion of life spent disability-free at age 65 years for 14 Member States of EU15, 1995-2001 by gender



Source: Eurostat for death and population data (<http://epp.eurostat.ec.europa.eu>), Eurostat ECHP for disability data, and EHEMU for calculations ([www.ehemu.eu](http://www.ehemu.eu))

Annex 2: Life expectancy at birth (LE0) and Healthy Life Years (HLY0) in the Member States of the European Union in 2005 (EU25), for men (first estimation by EHEMU)



See Annex 4 for original data

Source: Eurostat for death and population data (<http://epp.eurostat.ec.europa.eu>), Eurostat SILC for disability data, and EHEMU for indicators calculations ([www.ehemu.eu](http://www.ehemu.eu))

eProvisional values computed by EHEMU

LEwML is the expected number of remaining years with moderate activity limitation

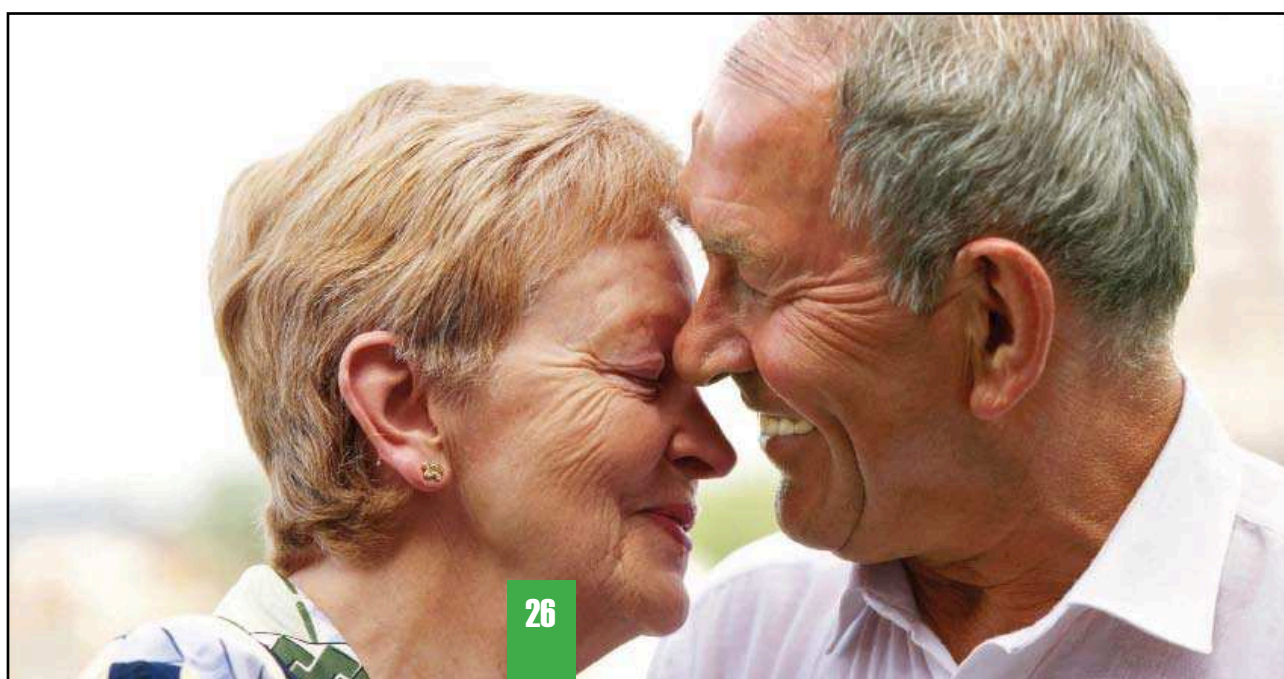
LEwSM is the expected number of remaining years with severe activity limitations

Where LE indicates Life Expectancy, HLY indicates Healthy Life Years, LEwML indicates Life Expectancy with moderate

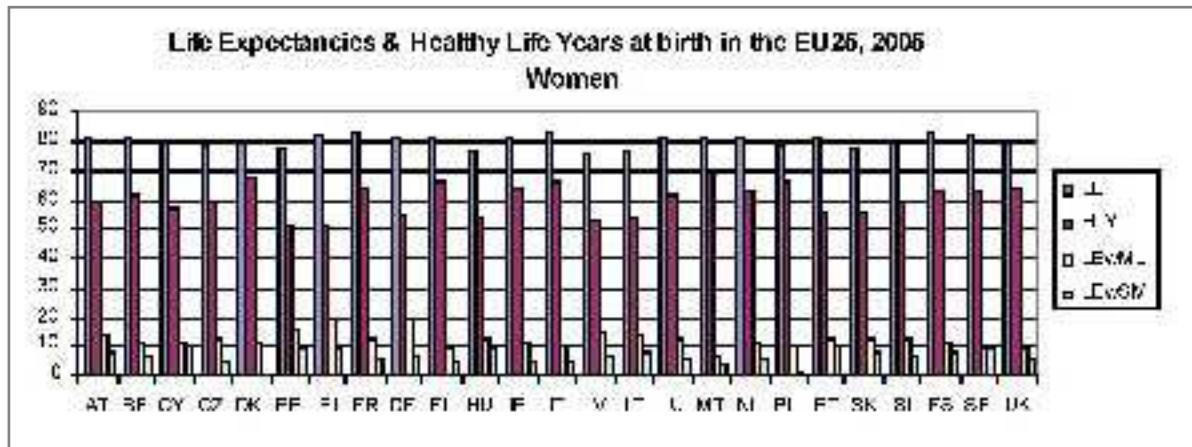
activity limitations and LEwSM indicates Life Expectancy with severe activity limitations.

Country abbreviations are given by their two-letter ISO codes:

Austria	AT	Greece	EL	Poland	PL
Belgium	BE	Hungary	HU	Portugal	PT
Cyprus	CY	Ireland	IE	Slovakia	SK
Czech Republic	CZ	Italy	IT	Slovenia	SI
Denmark	DK	Latvia	LV	Spain	ES
Estonia	EE	Lithuania	LT	Sweden	SE
Finland	FI	Luxembourg	LU	United Kingdom	UK
France	FR	Malta	MT		
Germany	DE	Netherlands	NL		



Annex 3: Life expectancy at birth (LE0) and Healthy Life Years (HLY) in the Member States of the European Union in 2005 (EU25), for women (first estimation by EHEMU)



See Annex 4 for original data

Source: Eurostat for death and population data (<http://epp.eurostat.ec.europa.eu>), Eurostat SILC for disability data, and EHEMU for calculations ([www.ehemu.eu](http://www.ehemu.eu))

eProvisional values computed by EHEMU

Where LE indicates Life Expectancy, HLY indicates Healthy Life Years, LEwML indicates Life Expectancy with moderate

activity limitations and LEwSV indicates Life Expectancy with severe activity limitations.

Country abbreviations are given by their two-letter ISO codes:

Austria	AT	Greece	EL	Poland	PL
Belgium	BE	Hungary	HU	Portugal	PT
Cyprus	CY	Ireland	IE	Slovakia	SK
Czech Republic	CZ	Italy	IT	Slovenia	SI
Denmark	DK	Latvia	LV	Spain	ES
Estonia	EE	Lithuania	LT	Sweden	SE
Finland	FI	Luxembourg	LU	United Kingdom	UK
France	FR	Malta	MT		
Germany	DE	Netherlands	NL		



Annex 4:

Data for Graph 1: Life expectancy (LE) and Healthy Life Years (HLY) at birth, at age 50 and at age 65, in the European Union (EU25), in 2005, by gender.

<b>EU25</b>	<b>LE</b>	<b>HLY</b>	<b>LEwML</b>	<b>LEwSM</b>	<b>HLY/LE</b>
	<b>(in years)</b>	<b>(in years)</b>	<b>(in years)</b>	<b>(in years)</b>	<b>(in %)</b>
<b>At birth</b>					
<b>Men</b>	75.9	60.8	10.3	4.8	80.1
<b>Women</b>	82.0	62.1	13.3	6.6	75.8
<b>Difference</b>	6.1	1.3	3.0	1.7	-4.3
<b>At age 50</b>					
<b>Men</b>	28.6	17.3	7.4	3.9	60.4
<b>Women</b>	33.5	18.1	9.8	5.7	53.9
<b>Difference</b>	4.9	0.8	2.4	1.7	-6.4
<b>At age 65</b>					
<b>Men</b>	16.7	8.4	5.3	3.0	50.4
<b>Women</b>	20.3	8.7	6.9	4.6	43.2
<b>Difference</b>	3.6	0.3	1.6	1.6	-7.2

Source: Eurostat for death and population data (<http://epp.eurostat.ec.europa.eu>), Eurostat SILC for activity limitation data, and EHEMU for calculations ([www.ehemu.eu](http://www.ehemu.eu))

Data for Graph 2: Life expectancy at age 65 (LE65) and Disability-free life expectancy (DFLE65), in the European Union (EU15), from 1995 to 2001, by gender

	<b>men</b>			<b>women</b>		
	<b>LE<sub>65</sub></b>	<b>DFLE<sub>65</sub></b>	<b>DFLE<sub>65</sub>/LE<sub>65</sub></b>	<b>LE<sub>65</sub></b>	<b>DFLE<sub>65</sub></b>	<b>DFLE<sub>65</sub>/LE<sub>65</sub></b>
<b>1995</b>	15.3	8.6	55.9	19.3	9.5	49.0
<b>1996</b>	15.4	8.7	56.5	19.4	9.5	48.9
<b>1997</b>	15.7	8.8	55.9	19.6	9.5	48.4
<b>1998</b>	15.7	8.6	54.9	19.7	9.7	49.2
<b>1999</b>	15.9	8.7	54.7	19.7	9.1	46.2
<b>2000</b>	16.2	9.1	56.2	20.0	9.9	49.5
<b>2001</b>	16.4	9.1	55.4	20.2	9.7	48.3

Source: Eurostat for death and population data (<http://epp.eurostat.ec.europa.eu>), Eurostat ECHP for disability data, and EHEMU for LE65 and other calculations ([www.ehemu.eu](http://www.ehemu.eu))



Data for Graph 1: Life expectancy (LE) and Healthy Life Years (HLY) at birth, at age 50 and at age 65, in the European Union (EU25), in 2005, by gender.

	Men				Women				Gender gap
	EU_27	Max	Min	Range	EU_27	Max	Min	Range	
1995	72.4	76.2	60.0	16.2	79.6	82.2	72.9	9.3	7.2
1996	72.7	76.6	63.0	13.6	79.7	82.3	72.7	9.6	7.0
1997	73	76.8	63.9	12.9	79.9	82.6	73.1	9.5	6.9
1998	73.2	76.9	63.5	13.4	80	82.7	73.6	9.1	6.8
1999	73.6	77.1	64.4	12.7	80.1	82.7	74.1	8.6	6.5
2000	74	77.4	64.8	12.6	80.5	83.0	74.6	8.4	6.5
2001	74.4	77.6	64.7	12.9	80.9	83.2	74.8	8.4	6.5
2002	74.5	77.7	64.7	13.0	80.9	83.4	74.7	8.7	6.4
2003	74.7	78.0	65.6	12.4	80.9	83.2	75.0	8.2	6.2
2004	75.3	78.6	65.9	12.7	81.5	83.8	75.5	8.3	6.2
2005	75.4	78.7	65.3	13.4	81.6	84.0	75.7	8.3	6.2
1995-2005	3.0	2.5	5.3	-2.8	2.0	1.8	2.8	-1.0	-1.0

Source: Eurostat for death and population data (<http://epp.eurostat.ec.europa.eu>) and EHEMU for calculations ([www.ehemu.eu](http://www.ehemu.eu))

Data for Graph 4: Minimum and maximum values of life expectancy (LE) and Healthy Life Years (HLY), at birth, at age 50 and at age 65, among the Member States of the European Union (EU25), in 2005, by gender

	Men		Women	
	LE	HLY	LE	HLY
<b>At birth</b>				
Min value	65.3	48.0	76.5	52.2
Max value	78.5	68.5	84.0	70.2
Difference	13.2	20.5	7.5	18.0
<b>At age 50</b>				
Min value	21.3	9.1	29.3	10.4
Max value	30.4	23.6	35.4	24.1
Difference	9.1	14.5	6.1	13.7
<b>At age 65</b>				
Min value	12.5	3.4	17.1	3.4
Max value	17.7	13.1	22.0	14.1
Difference	5.2	9.7	4.9	10.7

Source: Eurostat for death and population data (<http://epp.eurostat.ec.europa.eu>), Eurostat SILC for activity limitation data, and EHEMU for calculations ([www.ehemu.eu](http://www.ehemu.eu))

Data for Graph 5: Life expectancy at birth (LE0) in the European Union (EU27), in the United States of America (USA) and in Japan in 1995 and 2005, by gender

	Men			Women			Gender gap		
	EU27	USA	Japan	EU27	USA	Japan	EU27	USA	Japan
1995	72.4	72.5	76.4	79.6	78.9	82.9	7.2	6.4	6.5
2005	75.4	75.2	78.5	81.6	80.4	85.5	6.2	5.2	7.0
1995-2005	3.0	2.7	2.1	2.0	1.5	2.6	-1.0	-1.2	0.5

Source: EHEMU for the European Union ([www.ehemu.eu](http://www.ehemu.eu)), National Center for Health Statistics for the USA (<http://www.cdc.gov/nchs>) and Ministry of Health and Welfare for Japan (<http://www.mhlw.go.jp/english/index.html>)

Data for Annex 2 graph: Life expectancy at birth (LE<sub>0</sub>) and Healthy Life Years (HLY<sub>0</sub>) in the Member States of the European Union in 2005 (EU25), for men (first estimation by EHEMU)

<b>Country</b>	<b>LE<sub>0</sub></b> (in years)	<b>HLY<sub>0</sub></b> (in years)	<b>LEwML</b> (in years)	<b>LEwSM</b> (in years)	<b>HLY<sub>0</sub>/LE<sub>0</sub></b> (in %)
<b>Austria</b>	76.7	57.8	11.7	7.2	75.4
<b>Belgium</b>	76.2	61.7	9.3	5.2	81.0
<b>Cyprus</b>	76.8	59.5	9.2	8.1	77.5
<b>Czech Republic</b>	72.9	57.9	10.9	4.2	79.4
<b>Denmark</b>	76.0	68.4	7.5	0.0	90.0
<b>Estonia</b>	67.3	48.0	13.2	6.1	71.3
<b>Finland</b>	75.6	51.7	16.9	7.0	68.4
<b>France</b>	76.8 <sup>e</sup>	62.1	10.3	4.5	80.9
<b>Germany</b>	76.7	55.0	16.5	5.2	71.7
<b>Greece</b>	76.8	65.7	7.0	4.1	85.5
<b>Hungary</b>	68.7	52.0	9.1	7.6	75.7
<b>Ireland</b>	77.3	63.0	9.4	4.9	81.5
<b>Italy</b>	78.2 <sup>e</sup>	66.3	7.8	4.1	84.8
<b>Latvia</b>	65.4	50.6	10.1	4.7	77.4
<b>Lithuania</b>	65.3	51.2	9.0	5.2	78.4
<b>Luxembourg</b>	76.6	62.2	9.9	4.5	81.2
<b>Malta</b>	77.3	68.5	5.6	3.2	88.6
<b>Netherlands</b>	77.3	65.0	7.2	5.1	84.1
<b>Poland</b>	70.8	61.0	8.3	1.5	86.2
<b>Portugal</b>	74.9	58.4	9.7	6.9	78.0
<b>Slovakia</b>	70.2	54.9	9.0	6.2	78.2
<b>Slovenia</b>	73.9	56.3	11.4	6.2	76.2
<b>Spain</b>	77.0	63.2	8.3	5.5	82.1
<b>Sweden</b>	78.5	64.2	7.9	6.4	81.8
<b>United Kingdom</b>	77.1	63.2	8.0	5.9	82.0

Source: Eurostat for death and population data (<http://epp.eurostat.ec.europa.eu>), Eurostat SILC for disability data, and EHEMU for indicators calculations ([www.ehemu.eu](http://www.ehemu.eu))

<sup>e</sup>Provisional values computed by EHEMU

LEwML is the expected number of remaining years with moderate activity limitation

LEwSM is the expected number of remaining years with severe activity limitations

Data for Annex 3 graph: Life expectancy at birth (LE<sub>0</sub>) and Healthy Life Years (HLY<sub>0</sub>) in the Member States of the European Union in 2005 (EU25), for women (first estimation by EHEMU)

<b>Country</b>	<b>LE<sub>0</sub></b> (in years)	<b>HLY<sub>0</sub></b> (in years)	<b>LEwML</b> (in years)	<b>LEwSM</b> (in years)	<b>HLY<sub>0</sub>/LE<sub>0</sub></b> (in %)
<b>Austria</b>	82.3	59.6	14.2	8.5	72.4
<b>Belgium</b>	81.9	61.9	12.2	7.8	75.6
<b>Cyprus</b>	81.1	57.9	12.5	10.6	71.4
<b>Czech Republic</b>	79.3	59.9	13.7	5.7	75.5
<b>Denmark</b>	80.5	68.2	12.3	0.0	84.7
<b>Estonia</b>	78.2	52.2	16.3	9.7	66.8
<b>Finland</b>	82.5	52.4	19.9	10.3	63.5
<b>France</b>	83.8 <sup>e</sup>	64.4	13.2	6.3	76.8
<b>Germany</b>	82.0	55.1	19.8	7.2	67.2
<b>Greece</b>	81.6	67.2	9.4	5.0	82.4
<b>Hungary</b>	77.2	53.9	13.0	10.2	69.8
<b>Ireland</b>	81.7	64.1	11.8	5.9	78.5
<b>Italy</b>	84.0 <sup>e</sup>	67.4	10.8	5.8	80.2
<b>Latvia</b>	76.5	53.1	15.5	7.9	69.4
<b>Lithuania</b>	77.3	54.3	14.5	8.5	70.2
<b>Luxembourg</b>	82.2	62.1	13.5	6.7	75.5
<b>Malta</b>	81.4	70.2	7.5	3.8	86.2
<b>Netherlands</b>	81.7	63.1	12.4	6.2	77.2
<b>Poland</b>	79.3	66.6	10.8	1.9	84.0
<b>Portugal</b>	81.3	56.7	13.8	10.8	69.7
<b>Slovakia</b>	78.1	56.4	13.2	8.5	72.2
<b>Slovenia</b>	80.9	59.9	13.7	7.3	74.0
<b>Spain</b>	83.7	63.1	12.0	8.6	75.4
<b>Sweden</b>	82.9	63.1	10.2	9.6	76.1
<b>United Kingdom</b>	81.1	65.0	9.5	6.7	80.1

Source: Eurostat for death and population data (<http://epp.eurostat.ec.europa.eu>), Eurostat SILC for disability data, and EHEMU for calculations ([www.ehemu.eu](http://www.ehemu.eu))

<sup>e</sup>Provisional values computed by EHEMU