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COMMISSION STAFF WORKING DOCUMENT

Report on health inequalities in the European Union

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INTRODUCTION

In 2009, the Commission adopted a communication on 'Solidarity in health: reducing health inequalities in the EU'[1]. It aims to help to reduce health inequalities by supporting action by Member States and stakeholders, and through EU policies. The Commission made clear the importance of addressing health inequalities in the EU health strategy[2] and in proposals for a public health programme in 2000[3] and in subsequent health programmes[4]. Previous reports on the health inequalities situation have been published in 2003[5] and in 2006[6]. However both of these mainly draw on data from the period prior to 2000.

The report therefore begins with an overview of the size of, and trends in, health inequalities in the EU since 2000 with a focus on recent years. It goes on to describe the main actions that the Commission has taken to implement the communication on health inequalities since 2009. Further information, including the graphs and tables referred to, are in the annex. The report draws on work carried out under contract for the European Commission that will be published separately[7].

Today the unfolding effects of the financial crisis impact on not only the economic situation but also our capacity to protect people's health and manage health systems. The 2013 Annual Growth Survey[8] recognises the need to improve the cost-effectiveness and sustainability of health systems while maintaining access to high-quality healthcare. In the context of achieving the objectives of the Europe 2020 strategy for inclusive growth[9], the Commission's communication on 'Social investment for growth and cohesion'[10] and the accompanying document on 'Investing in health'[11] highlight the need to invest in sustainable health systems which can improve cohesion and boost economic growth by reducing health inequalities, enabling people to remain active longer and in better health.

Investing in people's health helps improve the health of the population in general and improves employability, thus making active employment policies more effective, helping to secure adequate livelihoods and contributing to growth.

Investing in reducing health inequalities further contributes to social cohesion and breaks the vicious spiral of poor health that both contributes to and results from poverty and exclusion. At current levels of labour force participation and productivity, including the amount of

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1 COM(2009) 567.
2 COM(2007) 630.
3 COM(2000) 285.
4 Decision No 1786/2002/EC of the European Parliament and of the Council of 23 September 2002 adopting a programme of Community action in the field of public health (2003-2008). COM(2006) 234.
5 'The health status of the European Union: narrowing the health gap', European Commission, Office for Official Publications of the European Communities, Luxembourg, 2003 (ISBN 92-894-3802-9).
6 Mackenbach J, 'Health inequalities: Europe in profile', (Report commissioned by the UK Presidency of the EU), Erasmus Medical Centre, Rotterdam, 2006.
7 Marmot M et al., 'Report on health inequalities in the EU', European Commission Directorate-General for Health and Consumers, Luxembourg (ISBN 978-92-79-30898-7) [in press].
8 COM(2012) 750.
9 COM(2010) 2020.
10 COM(2013) 83.
11 SWD(2013) 43.

working time throughout life, the ageing of the population in the EU risks reducing overall economic output, with consequences for living standards and health. In this context, health inequalities represent loss in terms of human health with consequent losses of productivity and costs to social protection systems. The health gap between higher and lower educational groups has been estimated to represent a potential economic loss of between 1.5 % and 9.5 % of GDP[12] based on 2004 data.

SECTION 1: HEALTH INEQUALITIES IN THE EU: FACTS AND FIGURES

The communication 'Solidarity in health' pointed out that health inequalities are due to differences between population groups in a wide range of factors that affect health. These include: living conditions; health-related behaviour; education, occupation and income; health care, disease prevention and health promotion services, as well as public policies influencing the quantity, quality and distribution of these factors.

The indicators provided in this report show that sizeable gaps in health exist within and between Member States of the EU. Throughout the EU a social gradient in health status exists where people with lower education, a lower occupational class or lower income tend to die younger and have a higher incidence of most types of health problems. In recent years, the level of inequality has improved for a small number of indicators, while for others there has been no change and, for a few, a deterioration.

The gap in male life expectancy at birth between the highest and lowest values for the EU-27 Member States was 11.8 years in 2011. However this gap has narrowed since 2007 when it was 14.2 years (Figure 1)[13], an improvement of 17 %. The gap in female life expectancy at birth between the highest and lowest values among the EU-27 Member States was 7.9 years in 2011 (Figure 2) which is also below its peak of 8.2 years in 2006, an improvement of 4 %.

The Gini coefficient[14], which represents the size of inequalities taking the values for all Member States into account, not just the gap between highest and lowest values, also shows a decline in inequality for life expectancy at birth in recent years. Over the period 2000 to 2010, the Gini coefficient for differences in life expectancy at birth between EU Member States decreased by 3.5 % for males and by 10.4 % for females.

An important contribution to this improvement in inequality in life expectancy has been a large decline in inequality in infant mortality between Member States of 32 % between 2001 and 2011. However there is still more than a fourfold difference in the chance of a baby under 1 year old dying between the highest and lowest ranking Member States (Figure 3). The declines in inequality in mortality are not consistent across all age groups. For young people aged 14–25, although mortality rates have fallen, there is evidence of a rise in the Gini index for inequality in mortality between Member States since 2000[15].

Gaps between Member States are larger for the healthy life years indicator than for life expectancy. In 2011, the difference between the average number of healthy life years lived in Member States with the lowest and highest values in the EU was 19.0 years for males and

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[12] Mackenbach J, Meerding W, Kunst A, 'Economic implications of socio-economic inequalities in health in the European Union', Directorate-General for Health and Consumers, Luxembourg, 2007 (ISBN 978-92-79-06727-3).

[13] Figures and tables are in the annex.

[14] The Gini coefficient is an indicator of inequality. It is commonly used to measure income inequality, but it can also be applied to health. It can take values from 0 (perfect equality) to +1 (perfect inequality). For details on the method of calculation, see Regidor E, 'Measures of health inequalities: part 1', *Journal of Epidemiology and Community Health* 2004; 58:pp858-861.

[15] Marmot M et al., '*Report on health inequalities in the EU*', European Commission Directorate-General for Health and Consumers, Luxembourg, 2013 (ISBN 978-92-79-30898-7) [in press].

18.4 years for females (Figure 5). There is insufficient information available at present to determine clear trends in inequalities in Healthy Life Years.

The differences in life expectancy at birth are greater between EU regions than between Member States. In 2010, the largest gap between regions was 13.4 years for males and 10.6 years for females (Tables 1 and 2).

Less affluent and less well-educated people in the EU have worse average levels of health than those with a higher income and education. The levels of poor or very poor health, long-term illness and restrictions on daily living activities are typically more than twice as high (or higher) among those with basic education and those in the lowest fifth of income levels compared to those in the highest categories of income and education. And this picture does not appear to have changed much over the last 5 years (Figures 9, 10, 11, 12, 13, 14, 15 and 16).

Life expectancy is also lower in people with lower levels of education. In 2010, the gap in life expectancy (at age 30) between males with a basic or lower secondary education compared to those with university level education varied from around 3 years to 17 years in the Member States for which data were available. For females the gap was 1 to 9 years (Figure 17).

Health inequalities between places and social groups are influenced by the pattern of economic and social conditions, including factors such as the distribution of employment, quality of work, the environment and living conditions, including housing and fuel/energy poverty[16]. There is an association between the level of health at Member State and regional levels and GDP, but it is much stronger for lower levels of GDP (Figure 18).

General economic conditions are more important for the health of populations in less prosperous/wealthy regions. In contrast, higher average levels of economic activity do not inevitably result in higher levels of health because other factors such as patterns of income distribution, consumption, services and the impact of public policies on health play a relatively greater role.

Differences between educational level and income group in health behaviours related to tobacco consumption (Figure 21), obesity (Figure 22) and the harmful and hazardous use of alcohol (Figure 23) make a significant contribution to health inequalities. Health services, particularly in equity in access to healthcare for all, are also very important. Cost, distance and waiting time are some of the factors contributing to differences between populations in access to and quality of health services (Figure 24).

SECTION 2: PROGRESS IN IMPLEMENTING THE COMMUNICATION 'SOLIDARITY IN HEALTH'

The Commission communication 'Solidarity in health' addresses five important challenges that need to be addressed to strengthen action on health inequalities. These headings are used to structure this progress report, as follows:

- an equitable distribution of health as part of overall social and economic development;
- improving the data and knowledge base and mechanisms for measuring, monitoring evaluation and reporting;
- building commitment across society;
- meeting the needs of vulnerable groups;
- developing the contribution of EU policies.

[16] EPEE consortium, *Tackling fuel poverty in Europe: recommendations guide for policy makers*, EPEE, Brussels, 2009 (ISBN 978-2-35838-069-0) (http://www.fuel-poverty.org/files/WP5_D15_EN.pdf).

Overall the Commission's action aims to both support policy development in Member States and improve the contribution of EU policies in addressing health inequalities. A major vehicle for achieving this is the Joint Action on Health Inequalities 2011–2014 being carried out by 15 EU Member States plus Norway, and supported by the EU Health Programme with a total budget of EUR 3.2 million [17].

The Joint Action's main aim is to help to reduce health inequalities by supporting policy development at national and regional levels through activities which include: developing and disseminating knowledge for action on health inequalities; supporting the engagement of regions and other stakeholders; and developing tools for policymaking such as health inequality impact assessment and audit. In addition to working with the Member States that are contributing to its funding, the Joint Action is also collaborating with other Member States, and has set up a network of regional authorities, which are sharing their approaches to addressing health inequalities, as well as a process for involving stakeholders at national and European levels. It has developed a European portal to improve public access to resources on policies on health inequalities, including a wide range of information on national policies[18].

AN EQUITABLE DISTRIBUTION OF HEALTH AS PART OF OVERALL SOCIAL AND ECONOMIC DEVELOPMENT

The communication highlighted the need to achieve an equitable distribution of health as part of overall social and economic development. The Europe 2020 strategy, which aims to deliver smart, sustainable and inclusive growth with high levels of employment, productivity and social cohesion, is the main vehicle for achieving this. Europe 2020 sets targets against which the process will be measured and emphasises that a major effort is needed to reduce health inequalities to ensure that everybody can benefit from economic growth[19].

Actions to improve health are an important part of two of the seven flagship initiatives that contribute to implementing Europe 2020. These are the Innovation Union's Partnership on Active and Healthy Ageing[20] and the European Platform against Poverty and Social Exclusion[21], which are described in more detail below.

Achieving the Europe 2020 targets, particularly the target of reducing by 20 million the number of people in or at risk of poverty and social exclusion, will contribute substantially to creating a more equitable distribution of health.

Future actions on social investment for growth and cohesion are set out in the Social Investment Package adopted on 20 February 2013[22] in which the Commission notes increased inequalities in disposable income in some countries while absolute living standards of many in vulnerable positions have declined. It urges Member States to allocate cohesion policy and rural development resources to human capital development, including reducing territorial inequalities, and improving active and healthy ageing and accessibility of health services.

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17 Project 20102203 Joint action on Health Inequalities (Equity Action) (http://ec.europa.eu/eahc/projects/database.html?prjno=20102203).
18 http://www.health-inequalities.eu/
19 COM(2010) 2020.
20 COM(2012) 83.
21 COM(2010) 758.
22 COM(2013) 83; SWD(2013) 38; SWD(2013) 39; SWD(2013) 40; SWD(2013) 41; SWD(2013) 42; SWD(2013) 43; SWD(2013) 44.
See: http://ec.europa.eu/social/main.jsp?catId=1044&langId=en&moreDocuments=yes

The accompanying staff working document on 'Investing in health'[23] points out the importance of investing in public health and disease prevention measures which currently represent less than 3 % of most national health budgets. Health systems reforms and improvements in the relative allocation of resources have the potential to save up to 2 % of gross domestic product, according to an OECD estimate. Such reforms should contribute to better health outcomes and support improvements in productivity, employability, social inclusion and the cost-efficient use of public resources, as well as fiscal sustainability of health systems[24], improvements in human capital and equity in health[25].

IMPROVING THE DATA AND KNOWLEDGE BASE AND MECHANISMS FOR MEASURING, MONITORING EVALUATION AND REPORTING

The communication 'Solidarity in health' makes clear the importance of improving knowledge and measurement as a basis for effective action at EU and Member State levels. It calls on Member States to establish, in close collaboration with the Commission, a common set of indicators to monitor health inequalities in order to be able to assess the situation and put effective policies in place. Other actions include support for health inequality audits to obtain better information on the impact of policies on health inequalities, and further research supported by the EU research programme and EU agencies.

Indicators

There has been good progress in identifying useful indicators of health inequalities although some Member States are not in a position to produce them. The Social Protection Committee has identified indicators to monitor the objective of reducing inequities in access to health care and health outcomes[26]. The Network for the Analysis of EU Statistics on Income and Living Conditions (EU-SILC), has produced two working papers on the use of EU-SILC data for assessing socioeconomic determinants of health[27] [28]. And work has taken place with Member States that has improved the consistency of estimates of life expectancy by educational attainment.

These efforts have contributed to the development of methods to monitor health inequalities and to the indicators presented in this report. Despite this progress, a number of challenges remain. There are large differences between Member States in the scope and sophistication of health information systems. Some Member States have very little regular access to health data broken down by income, education or ethnic group. Furthermore, comparable information on health inequalities related to specific vulnerable groups is often lacking, as are longitudinal data sets. Information on the health of different subgroups of the population is needed to assist public authorities in identifying problems and taking effective action. Longitudinal data are important in improving understanding of underlying causes of health inequalities and monitoring trends.

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23 SWD(2013) 43.

24 Council conclusions, 3 054th Economic and Financial Affairs Council, Brussels, 7 December 2010.

25 Council conclusions on 'Common values and principles in European union health systems' (2006/C 146/01).

26 'Portfolio of Indicators for the Monitoring of the European Strategy for Social Protection and Social Inclusion — 2009, Update', European Commission Directorate-General for Employment, Equal Opportunities and Social Inclusion.

27 'Analysing the socioeconomic determinants of health in Europe: new evidence from EU-SILC', Publications Office of the European Union, Luxembourg, 2010 (ISBN 978-92-79-16752-2).

28 'Methodological issues in the analysis of the socioeconomic determinants of health using EU-SILC data', Publications Office of the European Union, Luxembourg, 2010 (ISBN 978-92-79-16753-9).

Policy audit

In order to address the need for better information on the effect of policies and actions with regard to their differential health impact on social groups and geographical areas, the communication on health inequalities identified the need for further work to develop health inequality audits, a form of *ex post* evaluation of policies, to examine to what extent they contributed to addressing health inequalities.

The development of tools such as heath inequality impact assessment and health inequality audit in order to improve the effectiveness of policy are some of the outputs of the Joint Action on Health Inequalities mentioned above.

Research

Research on various aspects of health inequality has been included in three calls for proposals under the EU's seventh framework programme for research and technological development (FP7) since 2009. The EU currently has 15 ongoing research projects totalling EUR 31.3 million, which address the knowledge gap on health inequalities in Europe and worldwide and aim to meet the needs of vulnerable groups.

Four of these projects[29] focus on methodologies to reduce inequities in the determinants of health. Another six projects address health and its social determinants in low and middle income countries[30]. One project[31] addresses the issue of equity in access to health care within a context of persistent informal patient payments in central and eastern Europe and another[32] investigates the impact of inequalities in income, wealth and education on health and health inequalities. Three projects[33] examine the needs of vulnerable groups and children in the context of health inequalities.

In addition FP7 is supporting health inequalities-related research in areas such as Roma health[34], mental health[35], vulnerable children[36], smoking[37], obesity[38] and policies on universal access to healthcare[39]. Preliminary results from these projects and wider research findings provide evidence of the mechanisms through which health inequalities are created and the possible effectiveness of policy options.

BUILDING COMMITMENT ACROSS SOCIETY

The communication included several actions to improve the involvement of and cooperation with stakeholders and regions, and to support professional training.

Activities in this area have included grants to support organisations such as the European Public Health Alliance (EPHA), EuroHealthNet and the European Social Platform, and assistance for projects involving stakeholders through the EU's Health Programme and the Progress programme.

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29 SOPHIE -278173, SILNE -278273, DRIVERS- 278350, DEMETRIQ -278511.
30 RESCAP-MED 281640, ARCADE RSDH -281930, SDH-NET -282534, INTREC -282605, HEALTH INC- 261440, MASCOT-282507.
31 ASSPRO CEE 2007- 217431.
32 GINI-244592.
33 GRADIENT- 223252, CHICOS- 241604, RICHE — 242181.
34 MIGROM12 – 319901.
35 Seyle-233091, We Stay-241542, OPSI-Europe-223138.
36 Coping – 241988, Becan – 223478.
37 SILNE – 278273, PPACTE – 223323.
38 Energy -223254, Eurithdia – 278397, Rodam – 278901.
39 UNITAS- 261349, Equitable- 223501.

The Joint Action on Health Inequalities is mapping stakeholder organisations active in health inequalities at European and national levels and is holding a number of stakeholder dialogues. A stakeholder conference on health inequalities is planned for January 2014.

Regional involvement

The need to better engage regions in tackling health inequalities is clear from the scale of the inequalities in health between and within EU regions (see Figures 6,7,8). Such involvement is particularly relevant for those public administrations at regional and sub-regional levels responsible for health. Improving resource allocation to regions can improve the ability to take action at the local level to address health inequalities. EU Structural Funds provide investment opportunities to address health inequalities at regional and sub-regional levels and these are discussed further in the section on cohesion policy.

The Committee of the Regions[40] (CoR), in its opinion on the communication, reaffirmed the interest it had previously shown in focusing on health inequalities in regional cooperation on health. Over the past 3 years, there has been increasing interest from regions in this area, partly stimulated by the Joint Action on Health Inequalities, which has worked actively with 26 regions on policies to address health inequalities.

Professional training

While most health systems in the EU aim to provide equal access for people with equal needs, a number of studies suggest that for an equivalent level of need, the better educated and those with higher incomes make greater use of health services, particularly specialised services[41]. People with disabilities may also have limitations in access to health services, for reasons unrelated to their disability[42]. The reasons for this are complex but may include difficulties experienced by less advantaged people in navigating the health system and in articulating their needs as well as a lack of accessibility of health care services. Training of health professionals is one way to address these issues by making those directly in contact with patients and those responsible for management more aware of the needs of less advantaged groups.

The 2013 work plan of the EU Health Programme[43] includes provision for training and capacity building projects for professionals in relation to ethnic and migrant health. Training in assessment and strategic planning to address health inequalities has been supported under the EU Health Programme 2008–2013[44]. The Crossing Bridges project provided training on using the 'health in all policies' approach in eight EU countries and has published an online training module[45]. The Healthequity2020 project[46] and Action for Health project[47] have provided training on using the Structural Funds to address health inequalities in 12 Member States receiving cohesion funds. For the period 2010–2015, the European Disability Strategy[48] includes an action on promoting equal access to health care systems and raise awareness

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40 'Opinion of the Committee of the Regions on Solidarity in Health: Reducing Health Inequalities in the EU', Committee of the Regions, 84th plenary session, 14 and 15 April 2010 (NAT-V-001).

41 Devaux M, de Looper M, 'Income-related inequalities in health service utilisation in 19 OECD countries 2008–2009', OECD Health Working Paper No 58, OECD, Paris, 2012.

42 World Health Organization, 'Report of the technical briefing preparing for the General Assembly high level meeting on disability and development', 66th World Health Assembly, 23 May 2013.

43 Commission implementing decision C378/6, 2012.

44 Decision No 1350/2007/EC of 23 October 2007 establishing a second programme of Community action in the field of health (2008-13).

45 Crossing Bridges 20091223.

46 Healthequity2020 20111203.

47 http://www.action-for-health.eu/

48 COM(2010) 636 and SEC(2010) 1324.

among persons with disabilities of their rights of access, and raising disability awareness and specific knowledge among health professionals.

In the period 2007–2013, an estimated 10 % of the European Social Fund (ESF) has been allocated to health-related activities in areas such as health and safety at work, long-term care and health promotion[49]. Training is one of the main areas of activity for these investments. Although the precise amount used for training in relation to health inequalities is not known, a number of countries, including Estonia, Italy and the United Kingdom, have used it for this purpose.

Meeting the needs of vulnerable groups

Under this heading, the communication makes clear that to address health inequalities effectively requires policies which include both actions to address the gradient in health across the whole of society and actions targeted to the most vulnerable. Particular attention needs to be given to early intervention and prevention, the needs of people experiencing poverty, disadvantaged migrants including undocumented migrants, disadvantaged ethnic minority groups, people with disabilities, homeless people children and the elderly.

Migrant health

Since 2009, the EU has extended the right of migrants to equal treatment in social security, including health care, to all third-country nationals who apply to reside in or have been admitted to a Member State for the purpose of work, or who have been admitted for other purposes but are allowed to work and hold a residence permit[50]. The Commission has also updated and extended the legal framework on access to health care for asylum seekers and beneficiaries of international protection. In addition activities have been funded to improve access to health care for migrants. Examples include ‘Healthy and Wealthy Together’, a thematic exchange network of public and private local actors working with or for migrants on the issue of health and poverty[51], research on primary care[52], collaboration with the International Organisation for Migration on the exchange of good practice, indicators and information for migrants and specific activities on immunisation[53].

Roma health

The second European Summit on Roma Inclusion in April 2010 highlighted significant inequalities in health between the Roma and the general population. In April 2011, the Commission adopted an EU framework for national Roma integration strategies which includes as one of its four goals improved access to healthcare to reduce the gap in health status between the Roma and the rest of the population[54]. Member States have developed national Roma integration strategies to take forward the objectives of this communication[55]. The Commission is monitoring progress and carrying out activities to assist Member States in implementing these[56], including possible support from the Structural Funds, the exchange of

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49 ‘The European Social Fund and Health’, European Commission, 2010.

50 Council Directive 2011/98/EU.

51 http://www.qec-eran.org/projects/healthywealthy/healtywealthyindex.htm

52 RESTORE: REsearch into implementation STrategies to support patients of different ORigins and language background in a variety of European primary care settings, FP7 57258.

53 EQUITY HEALTH: Fostering health provision for migrants, the Roma, and other vulnerable groups; PROMOVAX: Promote vaccinations among Migrant Populations in Europe EU HEP SCREEN, Screening for Hepatitis B and C among migrants in the European Union.

54 COM(2011) 173.

55 Except Malta which did not adopt a National Roma Integration Strategy as there is no significant Roma population on its territory.

56 COM(2012) 226 and COM(2013) 454.

information and good practice and dialogue between the Commission services and national authorities[57]. In this context, the European Union Agency for Fundamental Rights (FRA) has set up an ad hoc working party of experts to pool knowledge on indicator development, data collection and monitoring and statistical analysis on Roma issues, including health matters. In addition, in June 2013, the Commission adopted a proposal for a Council recommendation on effective Roma integration measures in the Member States[58]. This recommendation is a non-binding legal instrument aiming to provide guidance to Member States and support them in turning their commitments into reality. Article 2.6 of this proposal gives specific details on what measures Member States are recommended to take in order to improve the access of Roma to healthcare.

Addressing health inequality through early intervention in childhood

In implementing the commitments of the Europe 2020 strategy, the Commission has worked closely with Member States to give impetus to addressing child poverty and breaking the cycle of disadvantage. A number of Member States have set specific targets or sub-targets relating to child poverty and social exclusion, and many have mentioned child poverty as an important challenge in their national reform programmes (NRPs). EU financial instruments, namely the European Social Fund and European Regional Development Fund, have been used to support initiatives that range from research projects on tackling health gradients in childhood (GRADIENT project supported by FP7) to the construction of health centres and integrated family and health support projects in early childhood.

Building on this consensus, the recommendation on ‘Investing in children: breaking the cycle of disadvantage’[59], adopted on 20 February 2013, invites Member States to focus on successful social investment in children, through an integrated approach. One of its recommendations calls on health systems to improve their responsiveness to the needs of disadvantaged children. The recommendation will be implemented and monitored in particular through the European Semester and the open method of coordination, as well as by mobilising EU financial instruments.

The elderly/healthy ageing

Actions to improve healthy ageing can also make a major contribution to reducing health inequalities by addressing the underlying social and economic causes of inequalities across the life course.

A European Innovation Partnership on Active and Healthy Ageing has been established with the aim of extending the average healthy life years (HLY) of an EU citizen by 2 years between 2010 and 2020. This will be achieved by means of three objectives: better health and quality of life of EU citizens; more sustainable social and health care systems; and greater competitiveness and growth opportunities for EU companies that respond to the ageing challenge[60]. The partnership involves participants from all EU Member States, involving over 1 000 regions and municipalities. Actions carried out under the partnership cover 4 million European citizens directly and generate the critical mass to bring about real reform to the way older citizens receive health and social care in Europe and how EU Member States provide health and social care services.

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[57] COM(2012) 226, SWD(2012) 133.

[58] COM(2013) 460.

[59] Commission recommendation of 20 February 2013 'Investing in children: breaking the cycle of disadvantage', (2013/112/EU).

[60] ‘Strategic implementation plan for the European Innovation Partnership on Active and Healthy Ageing’, 17 November 2011.

Actions within the partnership contribute to bridging health inequalities by: empowering older people by targeting health literacy and information and technology skills so that they can better manage their health; facilitating access to care by integrating health and social care services; making living environments more age-friendly; enhancing older citizens' ability to remain independent for longer; promoting social inclusion and active civic participation of older citizens; and ensuring older citizens are central to policy and practice[61].A total of 36 regions, including cities and local authorities from 12 Member States, are currently in the process of presenting and sharing their 'good practices' by demonstrating existing innovative solutions for active and healthy ageing used in their regions and being able to replicate them in other regions across the EU. This exchange of knowledge between regions supports capacity building and can help to bridge the geographic gap in health inequalities between EU regions.

Healthy ageing was also one of the themes of the 2012 European Year on Active Ageing and Solidarity between Generations[62], which raised awareness and galvanised commitment to healthy ageing across the social gradient.

DEVELOPING THE CONTRIBUTION OF EU POLICIES

Following the adoption of the communication, work has taken place to create a more cohesive approach to addressing health inequalities across relevant EU policy areas involving cooperation on health, social affairs, research, education, energy, agriculture, development and regional policies.

EU health policy

Equity in health is one of the fundamental values of the EU health strategy[63] which contributes to reducing health inequalities through activities to strengthen health systems, disease prevention and health promotion, combating health threats and contributing to other EU policies which impact on health with the aim of ensuring that they contribute to a high level of health protection for everyone.

Health systems

The right of access to preventive health care and the right to benefit from medical treatment, under the conditions established by national laws and practices are enshrined in Article 35 of the Charter of Fundamental Rights of the European Union. This serves as a basis for the overarching principle that everyone should have access to healthcare and preventive, diagnostic and curative treatment, regardless of financial means or circumstances. Moreover the UN Convention on the Rights of Persons with Disabilities, ratified by the EU in December 2010 as well as by 25 Member States, recognises the right of persons with disabilities to the enjoyment of the highest attainable standard of health without discrimination on the basis of disability.

The directive on patients' rights in cross-border healthcare[64] has established rules to facilitate access to safe and high-quality cross-border healthcare in the EU and to promote cooperation on healthcare between Member States. In addition, this directive supports the continued development of European reference networks of healthcare providers and centres of expertise

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[61] 'Action plans of the European Innovation Partnership on Active and Healthy Ageing', 6 November 2012.

[62] http://europa.eu/ey2012/

[63] COM(2007) 630.

[64] Directive 2011/24/EU of the European Parliament and of the Council of 9 March 2011 on the application of patients' rights in cross-border healthcare.

in the Member States. These networks can improve access to the diagnosis and provision of high-quality healthcare to all patients who have conditions requiring a particular concentration of resources or expertise, and can also be focal points for medical training and research, information dissemination and evaluation.

In May 2013, the Member States, the European Parliament and the Commission found an agreement on the 'Decision on serious cross-border threats to health'[65]. Once formally adopted by the Council and the European Parliament (expected in October 2013) this decision will ensure that European citizens are equally protected from serious cross border health threats stemming from bio-toxins, chemicals or environmental events as they are currently from communicable diseases. The Decision will further make it possible for Member States to purchase together the vaccines or other medicines they need to fight an outbreak. This voluntary joint procurement arrangement aims to ensure that all Member States, big and small, rich and poor are able to secure vaccines for their people and under better conditions than in the past. As such, this Decision will contribute to bridging inequalities between Member States in access to medicines in case of an outbreak, building on the lessons learned with H1N1.

Progress on improving health and providing better access to healthcare for all cannot be made without an adequately skilled workforce of sufficient capacity and skills, including abilities to address health inequalities and the underlying causes of ill health. Actions have been developed to promote a sustainable workforce for health in the EU[66] and an EU Joint Action on Health Workforce Planning was launched in April 2013. The general objective of the Joint Action is to establish a platform for collaboration between Member States to better prepare the future of the health workforce and to exchange best practice.

Finally equity in health is one of the core elements outlined in the document 'Investing in health' and is indirectly addressed in the framework of the European Semester of economic coordination[67], where the 2013 Annual Growth Survey[68] recommended reforming health systems to ensure their cost-effectiveness and sustainability and assessing their performance against the twin aims of providing access to high-quality healthcare and using public resources more efficiently. Some of the health inequalities are related to major differences that exist in the quality and effectiveness of health services across the EU.

Within the European Semester process, reforms of health systems are under development in those Member States where evidence indicates concerns about the fiscal sustainability of health expenditure or the attainment of key health outcomes, including in relation to patient access issues. Strengthening primary care, ambulatory practices and care coordination have been identified as possible policy reforms which can contribute to efficiency gains and greater cost-effectiveness in the health sector[69] and according to the available evidence this would also contribute to improve equity[70].

[65] COM(2011) 866

[66] COM(2012) 173.

[67] http://ec.europa.eu/europe2020/making-it-happen/

[68] COM(2012) 750.

[69] Joint Report on Health System, European Economy Occasional Paper 74, 2010. '*The Quality of Public Expenditures in the EU*', European Economy Occasional Paper 125, 2012.

[70] Joint Report on Health System, European Economy Occasional Paper 74, 2010. Joumard et al., Health Care Systems: Efficiency and Policy Settings, OECD, Paris, 2010.

EU action on chronic diseases

The Commission communication on action against cancer[71] aims to reduce inequalities in cancer mortality amenable to healthcare by 70% by 2020. This objective is being taken forward by a partnership on cancer and through the development of guidelines for models of best practice in cancer-related care.

The European Pact for Mental Health and Well-being[72] addresses health inequalities through actions to destigmatise mental health issues, provide better health services to people with mental health problems, promote mental health and prevent mental disorders at workplaces and in schools, and promote social inclusion. Council conclusions on the European Pact for Mental Health and Well-being (2011)[73] expressed support for this approach.

Action on mental health is particularly important in addressing inequalities because people from less advantaged socioeconomic groups are more vulnerable to mental health problems, and mental health problems may themselves be a reason for weak performance at work or in school, or for social exclusion.

A Joint Action on Mental Health and Well-being was launched in February 2013 involving 24 Member States and three associated countries. Its work focuses on issues to improve health inequalities: action against depression using eHealth solutions; promoting community-based and socially inclusive mental health services; cooperation between the health sector and workplaces and schools; and mental health in all policies. The Joint Action will identify good practices, issue recommendations and develop a common framework of action on mental health and well-being.

The Commission communication on combating HIV/AIDS in the European Union and neighbouring countries 2009–2013[74] makes clear that 'equal treatment and solidarity are key assets of tolerant and open societies. Any form of HIV/AIDS related discrimination and stigmatisation is unacceptable'. The communication aims to ensure respect for everyone's human rights irrespective of health status, sexual orientation, lifestyle or national and social origin. The EU Health Programme has supported a number of initiatives addressing health inequality issues in the HIV/AIDS field. These include: support for a European Network on Social Inclusion and Health[75]; work with the World Health Organisation on the development of strategies on harm reduction[76]; health promotion for young prisoners[77]; and improving access to HIV testing for marginal groups[78].

Promotion of good health and prevention of diseases

Differences in the prevalence of smoking between advantaged and disadvantaged groups are responsible for a significant proportion of the differences in death and disease rates between these groups (Figure 21)[79]. Reasons for these differences in smoking rates are poorly understood but in many countries there is a clear association between levels of smoking and

[71] COM(2009) 291.

[72] http://ec.europa.eu/health/mental_health/policy/index_en.htm

[73] Council conclusions on the 'European pact for mental health and well-being: results and future action', 6 June 2011 (http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/lsa/122389.pdf).

[74] COM(2009) 569.

[75] Correlation II, 20081201.

[76] Scaling up harm reduction to prevent transmission of infectious disease, 20085202,.

[77] HPYP, Health Promotion for Young Prisoners, 20091212 (http://hpyp.eu/about.php).

[78] IMPACT, Improving Access to HIV/TB testing for marginalised groups, 20091201 (http://www.projectimpact.eu/).

[79] Mackenbach J et al., 'Economic implications of socio-economic inequalities in health in the European Union', European Commission Directorate-General for Health and Consumers, Luxembourg, 2007 (ISBN 978-92-79-06727-3).

lower levels of income and educational attainment. Such groups may be more susceptible to factors leading to the take-up of smoking in the first place and also may find it more difficult to give up smoking. Furthermore the prevalence of smoking varies widely among EU Member States and makes an important contribution to geographical health inequalities[80].

Regulation to make tobacco products less attractive, advertising bans, pricing policy and smoke-free areas are therefore important in addressing social inequalities in tobacco use.

The Commission adopted a proposal to revise the Tobacco Products Directive (2001/37/EC) in December 2012. While the main objective of this proposal is to facilitate the internal market of the concerned products, while ensuring a high level of health protection, one of its measures is to provide information about what tobacco does to health and to make tobacco products less attractive, as a means of discouraging smoking. In addition, the Commission is supporting Member States in their efforts on smoke-free environments. In February 2013, it presented a report on Member States' action to implement a 2009 Council recommendation which calls upon Member States to adopt smoke-free environments by 2012. The report shows that, while there is progress, much remains to be done to protect citizens against second-hand smoke in public places.

Obesity is another major driver of diseases with a social gradient. A report carried out for the Commission on obesity and socioeconomic groups in Europe estimated that over 20 % of the obesity found in men in Europe, and over 40 % of obesity in women, was due to social factors, with much higher rates of obesity in poorer and less well educated groups[81]. The 'Strategy for Europe on nutrition, overweight and obesity-related health issues' identifies children and low socioeconomics groups among the main vulnerable groups[82]. A partnership approach has been taken to take forward the priorities set out in the strategy with a particular focus on vulnerable groups. It is being implemented through Commission initiatives as well as cooperation among Member States in the High Level Group on Nutrition and Physical Activity, and through voluntary initiatives taken by multi-sectoral stakeholders in the EU Platform for Action on Diet, Physical Activity and Health.

Two pilot projects launched in 2011 and 2012 are testing different methods to increase and sustain the consumption of fresh fruit and vegetables by children, elderly people and pregnant women in local communities in EU NUTS2[83] regions where primary household income is below 50 % of the EU-27 average.

The harmful and hazardous use of alcohol and other substances is a key factor in the development of social and health inequalities in Europe. Rates of hazardous drinking tend to be more significant in lower than in higher socioeconomic groups, particularly among men. Inequalities in alcohol-related mortality are estimated to account for around 11 % of the difference in mortality in men between different socioeconomic groups and 6 % of that in women[84]. There is also substantial variation in the geographical distribution of death rates attributable to alcohol in the EU. These factors are recognised in the EU strategy to support Member States in reducing alcohol-related harm[85]. Actions to reduce alcohol-related health

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[80] Kunst A, Giskes K, Mackenbach J, 'Socio-economic inequalities in smoking in the European Union', Erasmus Medical Centre, Rotterdam, 2004.

[81] Robertson A, Lobstein T, Knai C, *Obesity and socio-economic groups in Europe: evidence review and implications for action*, European Commission Directorate General for Health and Consumers, 2007. (http://ec.europa.eu/health/ph_determinants/life_style/nutrition/documents/ev20081028_rep_en.pdf).

[82] COM(2007) 279.

[83] NUTS is the nomenclature of territorial units for statistics.

[84] Mackenbach J et al., 'Socioeconomic inequalities in health in 22 European countries', *New England Journal of Medicine,* 2008; 358: pp2468–2481.

[85] COM(2006) 625.

inequalities are being taken by the European Alcohol and Health Forum, a platform set up under the EU alcohol strategy to step up voluntary action by stakeholders. So far the members of the forum have committed to more than 250 actions, a number of which have a particular focus on disadvantaged groups. The Manchester Resettlement Project is one example. It is a commitment to support men and women with drink and drug problems after release from prison. Other commitments include developing and implementing self-regulation on alcohol marketing, and actions to prevent drink driving and reduce underage drinking. Research on the interaction of sociocultural, economic and demographic determinants in the effectiveness of alcohol policy is also being supported as part of the AMPHORA project under the framework programme for research[86].

Employment and social policy

Unemployment and poverty are major social determinants of health inequalities. By addressing the differentiated exposure to unemployment of different groups in the work force the employment package of April 2012[87] and the youth package of December 2012[88] and its follow-up in the June 2013 Youth Employment Initiative including the Youth Guarantee are also contributing to mitigating the conditions leading to health inequalities. Poverty tends to impact negatively on people's health status within a rather short time frame. Europe's ability to reduce health inequalities therefore also depends on Member State efforts to deliver on the Europe 2020 headline target[89] of reducing the number of people exposed to poverty and Europe's contribution through the flagship initiative of the European Platform against Poverty and Social Exclusion[90] and the annual poverty convention[91].

Social protection including access to essential services mitigates the adverse effects on health of social problems. In its White Paper on pensions[92] and its contributions to the Pension Adequacy Report[93] the Commission highlighted the importance of maintaining the ability of old age income provision to prevent and mitigate poverty risks and suggested ways of achieving this. The active inclusion strategy[94], aimed at helping those furthest from the labour market, is well placed to shield people from or enable them to overcome adverse effects of their situation.

Several specific activities on health inequalities are being supported by the EU under the Progress programme with the aim of: improving knowledge of health inequalities in the most vulnerable; developing innovative strategies to reduce health inequalities; supporting the involvement of Member States and regional authorities; and improving the connection between health and the social dimension, when addressing health inequalities.

Six projects were funded following a 2010 call for proposals (with a total EU contribution of EUR 2 million) addressing aspects such as: the role of work; health equity for ethnic minority women; the role of regions; labour integration of people with (moderate) mental health problems; and the reduction of health inequalities in the elderly[95]. Besides addressing the

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86 AMPHORA (http://www.amphoraproject.net/).
87 COM(2012) 173.
88 COM(2012) 727.
89 COM(2010) 2020.
90 COM(2010) 758.
91 Held in 2011 and 2012 (http://ec.europa.eu/social/main.jsp?langId=en&catId=88&eventsId=804).
92 COM(2012) 55.
93 *Pension adequacy in the European Union*, Directorate-General for Employment, Social Affairs and Inclusion and the Social Protection Committee, Brussels, 2012.
94 SWD(2013) 039.
95 Community programme for employment and social solidarity (Progress). List of beneficiaries established as a result of the open call for proposals VP/2010/006 'Support to PROGRESS participating

human and social dimension of health inequality, these projects have demonstrated that fighting this problem can pay off for society and the economy[96]. Other work has shown the importance of work and working conditions[97], unemployment and social protection as social determinants of health inequalities[98].

EU cohesion policy and Structural Funds

The Commission has supported Member States, within the framework of shared management, to make better use of EU cohesion policy and Structural Funds to support activities to reduce health inequalities between the regions and different socioeconomic groups.

EU support has been provided to develop know-how and raise awareness of the opportunities that the Structural Funds provide to address health inequalities. Within the reflection process on sustainable health systems, a group of Member States is analysing and proposing guidance on success factors for the effective use of Structural Funds to invest in health. The Joint Action on Health Inequalities has produced guidelines on 'How health systems can address health inequities through improved use of Structural Funds'[99]. And the EU-funded 'Health Gain'[100] project has developed a guide for decision makers on how Structural Fund investment in areas such as social and economic development, employment, education, training, transport and environment can generate health gains.

About 1.5 % of the total budget (EUR 5 billion) has been spent on health infrastructure in the current programming period[101]. In addition, health projects have also been conducted as part of spending on active ageing and IT services and infrastructure (including eHealth projects). The relatively low share of health investment in Structural Funds partly reflects prioritisation by Member States, but can also reflect lack of capacity to undertake the analysis and planning needed to develop effective investment to address health inequalities.

Commission proposals for the next programming period for the European Structural and Investment Funds (ESIF) aim to deliver the Europe 2020 objectives of smart, sustainable and inclusive growth and to bring about progress on economic and social cohesion. Reducing inequalities in health status is included in the proposed investment priorities for the use of the European Regional Development Fund[102]. The territorial dimension of health inequalities, which is closely linked to the distribution of poverty, can be indicated by a new instrument called poverty mapping, which identifies the areas most affected by poverty (NUTS 3 level or lower). Member States may include poverty mapping in the programming of their ESIF activities to assist in prioritising areas for investment.

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countries' strategies on health inequalities'. (http://ec.europa.eu/social/BlobServlet?docId=6325&langId=en.).

96 Reducing health inequalities: increasing the number of people with mental health issues (mild to moderate) who stay in employment during treatment (http://goodwork.neweconomymanchester.com/english/individuals/job_workplace.html).

97 Reinhardt JD, Wahrendork M, Siegrist J, 'Socioeconomic position, psychosocial work environment and disability in an ageing workforce: a longitudinal analysis of SHARE data from 11 Europe countries', *Occupational and Environmental Medicine* 2013;70(3) pp156-63.

98 Working for equity in health consortium. *Working for equity in health, the role of work, worklessness and social protection in health inequalities.* The Scottish Government, Edinburgh 2012. (http://www.hapi.org.uk/what-we-do/working-for-equity-in-health/publications/).

99 Equity Action — Joint Action on Health Inequalities, 'Structural funds guidance tool for health equity' (http://fundsforhealth.eu/).

100 http://www.healthgain.eu/

101 SEC(2013) 129.

102 COM(2011) 614.

Agriculture and rural development

Some rural areas of the EU are experiencing high levels of deprivation, remoteness and lack of basic services which are contributing to heath inequalities through difficulties in accessing services, social isolation and lower quality of living conditions. The Commission proposal for the future European Agricultural Fund for Rural Development (EAFRD) for the 2014–2020 period includes possibilities for investing in 'basic services and village renewal in rural areas'[103]. Support under this measure includes 'investments in the setting up, improvement or expansion of local basic services for the rural population and the related infrastructure'. As in the current period, the extent to which health-related investment would be supported depends on the needs analysis and strategy proposed by the Member State/region and approved by the Commission. However this measure has the potential to be used to support activities to improve health in rural areas.

The EU's school fruit programme, school milk programme and 'Food for most deprived persons' schemes also provide support which can contribute to improving health and reducing health inequalities. The current EU school fruit scheme, which has an annual budget of EUR 90 million, not only provides fruit and vegetables to school children but also requires participating Member States to set up educational measures to teach the importance of healthy eating. In the reformed common agricultural policy post 2013 it has been agreed to increase the EU annual budget to EUR 150 million, to increase the EU co-financing rate and to include educational accompanying measures in the costs eligible for the EU aid. Less developed regions in particular could benefit from these measures, especially in countries where the scheme is regionally implemented, by making use of it at a lower cost. In line with the principle of subsidiarity, Member States and regions will also have the possibility to specifically focus their schemes on lower income areas or vulnerable groups.

The communication on the multiannual financial framework (MFF) 2014–2020[104] provides for food aid for the most deprived to be integrated into cohesion policy, thus contributing to meeting the poverty reduction target of the Europe 2020 strategy.

Education and training

The information and analysis in the first section of this document and the annex highlight the link between low educational attainment and poor health. Early years provision is particularly important because experiences in early childhood lay the foundations for the entire life course[105]. EU education policy supports a wide range of activities, aimed at reducing educational disparities across Europe and improving educational outcomes amongst the most vulnerable, which have the potential also to contribute to narrowing health gaps.

The Commission communication 'Rethinking education: Investing in skills for better socioeconomic outcomes'[106] stresses that one priority for more efficient use of public funds in education should be the earlier stages of education, to prevent early educational failure and its consequences in adulthood, such as poor health.

Initiatives to reduce early school leaving, develop healthy schools, prevent bullying and promote social and emotional learning are being supported by the Lifelong Learning Programme/Comenius.

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[103] COM(2011) 627.

[104] COM(2011) 500.

[105] Commission on Social Determinants of Health, 'Closing the gap in a generation', World Health Organisation, Geneva, 2008.

[106] COM(2012) 669.

Global health and social protection in development cooperation

The 2010 policy framework on the EU's role in global health outlines EU actions to support third countries in providing universal coverage of basic quality health services based on the fundamental EU values of solidarity and equity. It underlines the importance of policy coherence in all internal and external EU policies, in particular in the five priority areas of trade and financing, migration, security, food security and climate change. The staff working document 'Contributing to universal coverage of health services through development policy'[107] accompanying the communication on the EU role in global health[108] raised the issue of health inequities and urged that consideration be given to distributional aspects and universal health coverage in EU external aid.

The goal of EU development cooperation in supporting social protection is to improve equity and efficiency in health provision as the cornerstone of inclusive, sustainable growth and poverty reduction, while supporting social inclusion and cohesion. An increasing number of third countries are interested in the long-standing experiences of the EU as regards sustainable social protection systems.

POLICY COORDINATION AND EXCHANGE WITH MEMBER STATES

Council

The Council has considered health inequalities on several occasions since 2009. In June 2010, it adopted conclusions on 'Equity and health in all policies: Solidarity in health'[109]. The Council expressed its concern 'at the wide and persistent differences in health status between EU Member States across all the social gradient; that vulnerable and socially excluded groups such as the unemployed or those on low incomes, the homeless, people with mental health problems, people with disabilities and people from some migrant or ethnic minority backgrounds such as Roma population experience particularly poor average levels of health'. It noted that reasons for poor health could include**,** apart from structural conditions (socioeconomic and political context, governance, macroeconomic, social and health policy and cultural and societal norms and values), less favourable levels of income, education, housing and economic well-being than the mainstream population, as well as social discrimination, related stigmatisation and uneven access to health and other services.

The Council supported implementation of the communication and highlighted a number of issues of importance including the need to: assess the health impact of policies among different social groups; enhance public health capacities; and consider how policies aimed at equity in health might contribute to sustainable economic development.

In December 2011, the Council adopted conclusions on 'Closing the health gap within the EU through concerted action on unhealthy lifestyle behaviours'[110], in which it recognises that the size of the health gaps in the EU is inconsistent with EU core values such as solidarity, equity and universality. The conclusions call on Member States to implement the Council recommendation on smoke-free environments and on the Commission and Member States to promote tobacco control in accordance with the WHO Framework Convention on Tobacco Control and its guidelines, and to consider strengthening it. In addition there are calls for the

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[107] SEC(2010) 382.

[108] COM(2010) 128.

[109] Council conclusions on 'Equity and health in all policies: Solidarity in health', 3 019th Employment, Social Policy, Health and Consumer Affairs Council, Brussels, 8 June 2010.

[110] Council conclusions on 'Closing health gaps within the EU through concerted action to promote healthy lifestyle behaviours', 3 131st Employment, Social Policy, Health and Consumer Affairs Council, Brussels, 1 and 2 December 2011.

reformulation of food to reduce total fat content, saturated fats, trans fats, salt, sugars and/or energy value, and for the implementation of the WHO recommendations on the marketing of foods and non-alcoholic beverages to children and adults.

The Social Protection Committee has stepped up its work on health inequalities. Following its opinion on the Commission's health inequalities communication, it defined a series of follow-up activities including: further work on the definition of indicators and improvement of data collection; consideration of special actions for the most vulnerable and for specific age groups; peer reviews; and exchange of best practices.

The EU Expert Group on Social Determinants and Health Inequalities, to which all EU Member States are invited to nominate members and which also includes experts from WHO, the Organisation for Economic Cooperation and Development and the Council of Europe, has exchanged information on regional and national health inequalities policies. It has contributed to the review of health inequalities in the EU, which was an important input to this report, as well as to a review carried out by WHO on the European Health Divide.

Actions by Member States

All EU Member States have policies aimed at improving the health of people identified as being particularly vulnerable, and many have made a specific commitment to reducing health inequalities between social groups and between areas of their countries. Relatively few Member States have developed integrated policies that include actions covering the range of social, economic, environmental, behavioural and service factors which contribute to health inequalities. Further information on the activities of Member States is included in a review on the EU health inequalities situation[111] which is being published separately.

SECTION 3: CONCLUSIONS

EU actions have gone some way to addressing health inequalities as set out in this report. These actions include: the overall objectives of Europe 2020 to create a more inclusive and more cohesive Europe with smart, sustainable and inclusive growth; an equity focus in key health initiatives to support Member States develop sustainable and effective health systems; initiatives in areas such as tobacco, alcohol, diet and physical activity, cancer and mental health; and the Joint Action by the EU and Member States aimed at supporting effective policy development to bridge health inequalities. The objective of reducing health inequalities is also now an integral part of the EU's activities on Roma integration and the proposed objectives for use of the Structural Funds from 2014–2020. Several major EU research projects have been launched to improve understanding in this area and there have been significant improvements in health information available to assess the situation and monitor progress.

For a few key health indicators, such as overall life expectancy at birth and infant mortality, there has been both an overall improvement and a small narrowing of inequalities between Member States over the last decade, although the level of these inequalities remains unacceptably high. But health inequalities between social groups, between rich and poor, between the university educated and those with lower education and between the general population and certain groups including Roma remain high and persistent, and the economic situation in some places poses additional challenges for the future.

It is clear that a great deal more remains to be done across the EU to address the issue of health inequalities. More action is needed to reduce poverty, close economic gaps, promote

[111] Marmot M et al., 'Report on health inequalities in the EU', European Commission Directorate-General for Health and Consumers, Luxembourg (ISBN 978-92-79-30898-7) [in press].

social inclusion and increase cohesion in line with the Europe 2020 strategy. More action is needed on health-related behaviours such as tobacco use, harmful and hazardous alcohol consumption, poor diet and lack of physical activity, which are more prevalent in less advantaged populations as well as on the prevention and care of communicable and non-communicable diseases.

Particular attention should be given to children and young people because poor health, social or cognitive development at an early age can damage their life chances. Policy action on all factors affecting health needs to take account of the distribution by social group and should aim to ensure that those most in need benefit most from policies. In its strategy for equality between women and men, the Commission has also made it clear that gender-based inequalities are present in healthcare and long-term care as well as in health outcomes. Women and men are confronted with gender-specific health risks and diseases that need to be adequately addressed in medical research and by health services. There is a need to ensure that social and health services continue to improve their adaptation to the specific needs of women and men respectively[112].

The Commission has made clear its intention to implement a range of policies under the Europe 2020 strategy that will contribute to addressing health inequalities in the years to come. Achieving the goals of Europe 2020 for inclusive growth such as increased employment and education, reductions in poverty and greater economic and social cohesion are fundamental to addressing health inequalities.

It has also become increasingly clear that, in addition to addressing social, economic and behavioural factors, major action is also needed to improve the sustainability and effectiveness of health systems to ensure access to high-quality healthcare to all citizens. Some health inequalities are related to differences that exist in the quality and effectiveness of health services across the EU. Although improvements in health services cannot by themselves reverse health effects caused by underlying social, economic and behavioural factors, public expenditure on health can act progressively on income distribution and contribute to reducing poverty and the socioeconomic gradient in health inequalities[113]. In many cases, especially in those parts of the EU with the most challenging economic difficulties, reform of health and long-term care policies is needed to support health throughout the life course, ensuring that the health of people in a vulnerable situation is protected and that these policies benefit social groups and populations in areas with the greatest needs.

The Commission is currently working with the Member States in a reflection process on chronic diseases. It has also adopted a proposal to strengthen the regulation of tobacco products and is currently evaluating its initiatives on alcohol, nutrition and physical activity to assess the effectiveness and results of current strategies in this area. The proposal for the future health programme will strengthen cooperation with Member States on health systems and disease prevention. EU level action to address chronic diseases and its main causes – tobacco smoking and obesity in particular, which as this report shows, have a social gradient – will help to reduce inequalities in this area.

Under Horizon 2020 (2014–2020) research on the evolution of health inequalities, on their interplay with other economic and social inequalities and on the effectiveness of policies aiming to reduce them in Europe and beyond will also continue to be supported.

[112] COM(2010) 491.

[113] Aaberge R, Langørgen A and Lindgren P, 'The distributional impact of public services in European countries', Publications Office of the European Union, Luxembourg, 2013.

‘Solidarity in health’ aims to help to reduce health inequalities through support for action by Member States and stakeholders and through the contribution of EU policies. The actions described in this report indicate that some progress has been made but it is clear that more action is needed at local, national and EU levels. EU policies provide opportunities that Member States and stakeholders need to fully embrace to achieve better health, and greater cohesion in health, for all in the future.

Annex

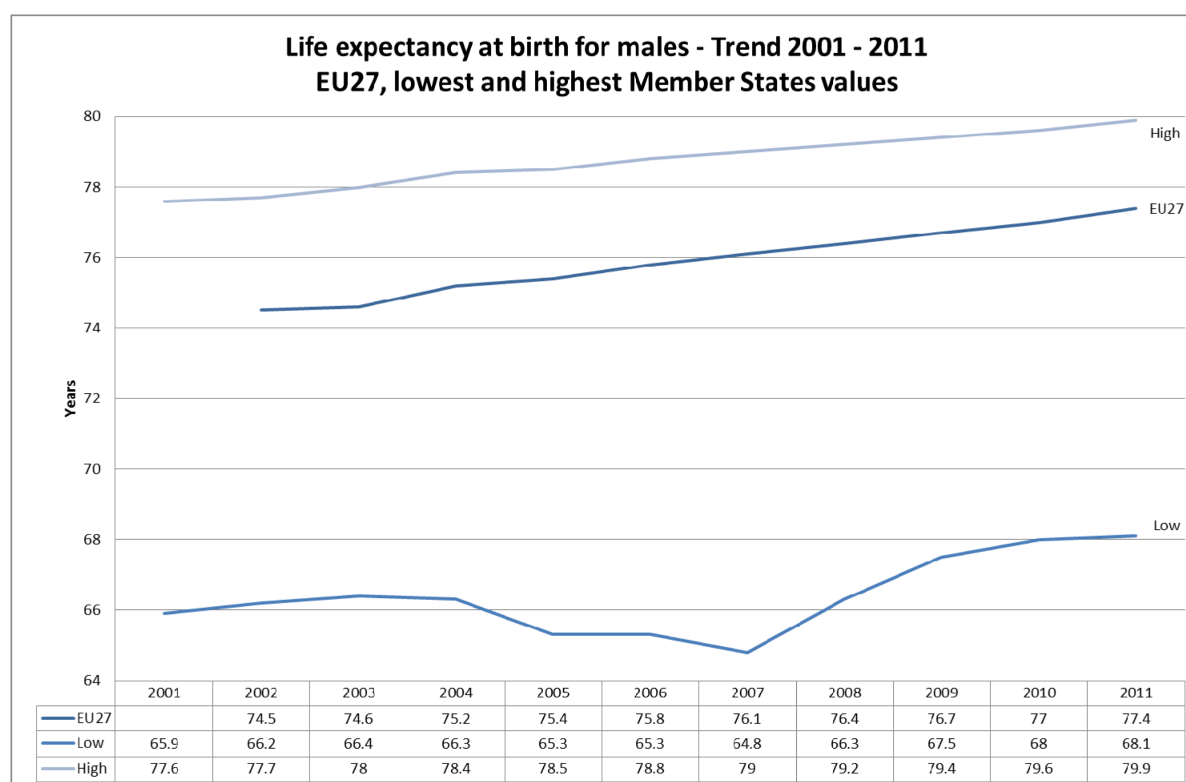
This annex provides more detailed information on health inequalities in the EU. A report commissioned by the EU Health Programme provided important input to this document[114]. Additional information was provided by the Commission's services, including data collected by Eurostat.

1.1 Inequalities in health between Member States

Life expectancy at birth

Figures 1 and 2 show life expectancy at birth for males and females respectively for the EU-27 Member States — the highest and lowest values as well as the EU average — from 2001 to 2011.

Figure 1: Life expectancy (in years) at birth for males, 2001–2011, lowest and highest Member State values and EU average

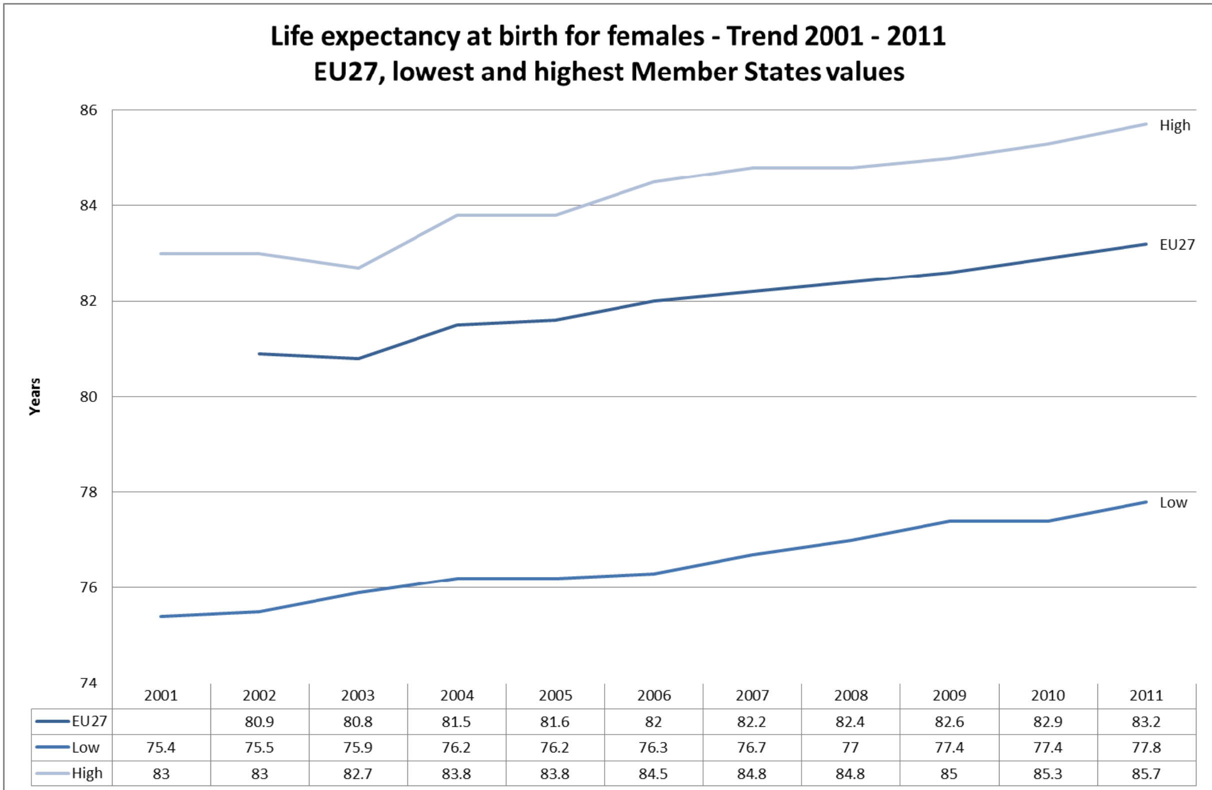


	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
EU27		74.5	74.6	75.2	75.4	75.8	76.1	76.4	76.7	77	77.4
Low	65.9	66.2	66.4	66.3	65.3	65.3	64.8	66.3	67.5	68	68.1
High	77.6	77.7	78	78.4	78.5	78.8	79	79.2	79.4	79.6	79.9

Data from Eurobase, extracted on 29.4.2013.

[114] Marmot M et al., 'Report on health inequalities in the EU', European Commission Directorate-General for Health and Consumers, Luxembourg (ISBN 978-92-79-30898-7) [in press].

Figure 2: Life expectancy at birth for females, 2001–2011, lowest and highest Member State values and EU average



Data from Eurobase, extracted on 29.4.2013.

The gap in male life expectancy at birth between the highest and lowest values for the EU-27 Member States was 11.8 years in 2011. There has been a marked improvement in this gap since 2007, when it was 14.2 years.

The gap in female life expectancy at birth between the highest and lowest values for the EU-27 Member States was 7.9 years in 2011. This gap has remained reasonably constant over the period 2001-2011 with a low of 7.6 years in 2009 and a maximum of 8.2 years in 2006.

Using the Gini coefficient to assess the overall level of health inequalities for this indicator shows that, for both males and females, there has been a small decline in inequality for life expectancy at birth between EU Member States of minus 3.5 % for males and minus 10.4 % for females over the period 2000–2010[115]. An important question is whether this improvement is the result of greater equality in life expectancy at all ages or whether there are differences between age groups such as infants, working-age people and older people. This aspect is examined in the previously mentioned (pending) report[116].

Infant mortality

Infant mortality is the death rate under the age of 1 year per 1 000 live births. Figure 3 shows infant mortality for the EU-27 in 2001 and 2011.

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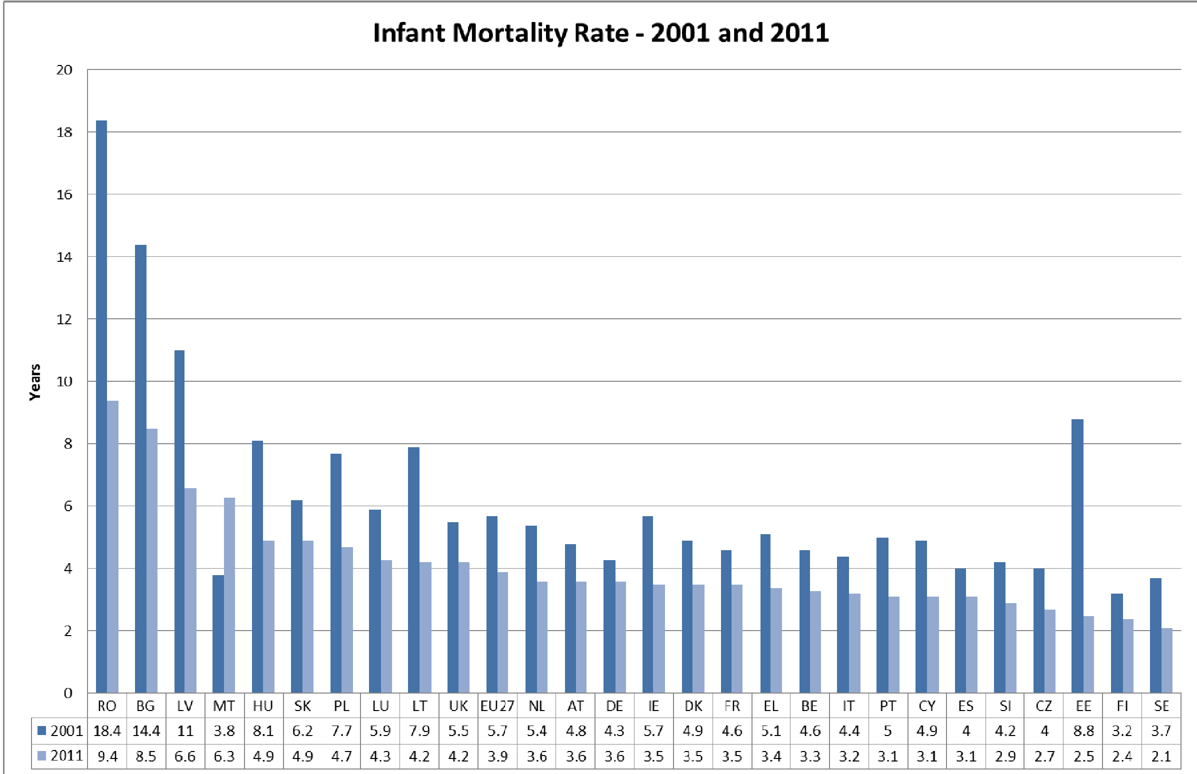
115 The Gini coefficient is an indicator of inequality. It is commonly used to measure income inequality, but it can also be applied to health. It can take values from 0 (perfect equality) to +1 (perfect inequality). For details on the method of calculation see Regidor E, 'Measures of health inequalities: Part 1', J Epidemiol Community Health, 2004, **58**:858-861.

116 Marmot M et al., 'Report on health inequalities in the EU', European Commission Directorate-General for Health and Consumers, Luxembourg (ISBN 978-92-79-30898-7) [in press].

Figure 3: Infant mortality rate, 2001 and 2011



Data from Eurobase, extracted on 29.4.2013.Ranking based on 2011.

Infant mortality has declined over this period from an average of 5.7 infant deaths per 1 000 live births in 2001 to 3.9 infant deaths per 1 000 live births in 2011.

The largest percentage declines have been in Estonia (71.6 % reduction in infant mortality between 2001 and 2011) and Romania (48.9 % reduction).

The gap between the highest and lowest values for EU-27 Member States has declined appreciably over this time. In 2001, the highest value was 18.4/1 000 and the lowest was 3.2/1 000 (with an EU-27 average of 5.7) — a gap of 15.2 deaths per 1 000 births. In 2011, the highest value for Member States was 9.4/1 000 and the lowest was 2.1/1 000 — a gap of 7.3 deaths per 1 000 births.

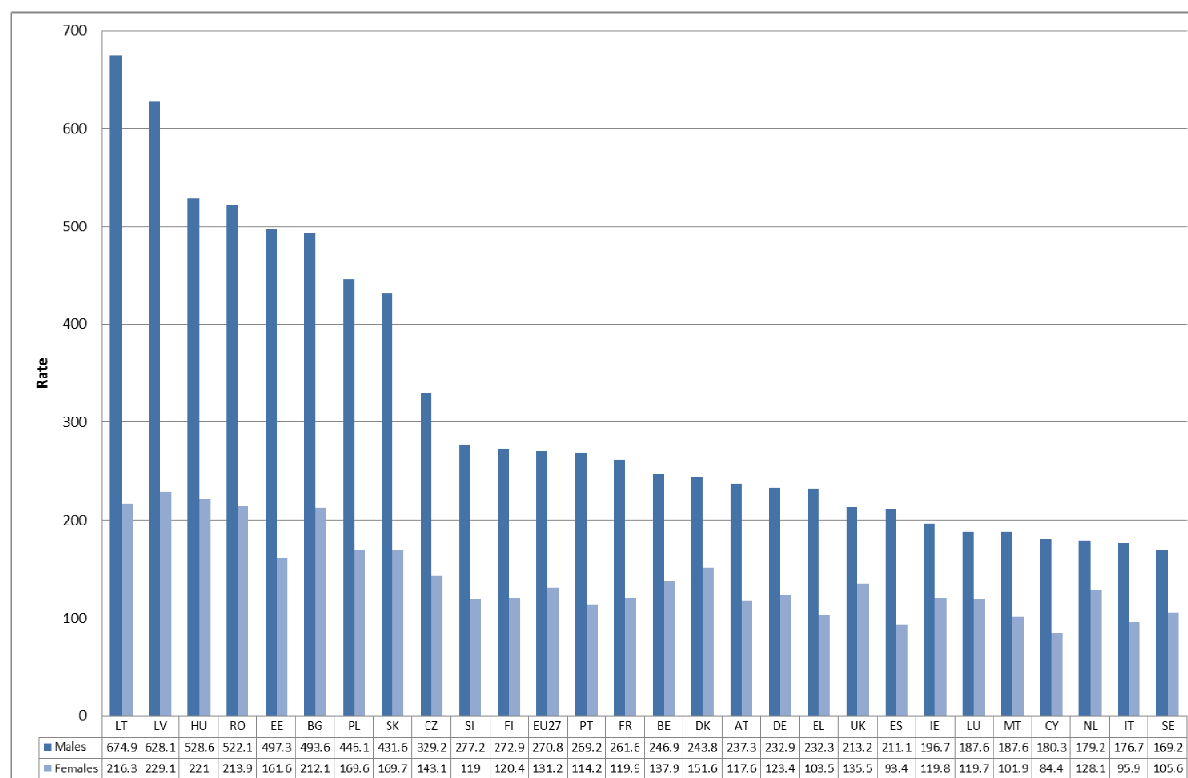
In 2001, the risk of a child dying under the age of 1 year was more than 5 times greater in the Member State with the highest infant mortality than in that with the lowest, while in 2011 the risk had fallen to just over 4 times.

Substantial inequalities remain despite the decline in inequalities in infant mortality between EU Member States. If the 10 Member States which currently have an infant mortality rate (IMR) above the EU-27 average (3.9) could achieve this average, over 2 000 more infants would survive each year than is currently the case. If all Member States achieved the best EU IMR of 2.1 per 1 000 births, over 9 000 infant lives could be saved each year.

Mortality under age 65 years

There are very large differences between Member States in the probability of dying under the age of 65 years (Figure 4).

Figure 4: Death rate under age 65 years by sex, 2011, all causes of death standardised



	LT	LV	HU	RO	EE	BG	PL	SK	CZ	SI	FI	EU27	PT	FR
Males	674.9	628.1	528.6	522.1	497.3	493.6	446.1	431.6	329.2	277.2	272.9	270.8	269.2	261.6
Females	216.3	229.1	221	213.9	161.6	212.1	169.6	169.7	143.1	119	120.4	131.2	114.2	119.9

	BE	DK	AT	DE	EL	UK	ES	IE	LU	MT	CY	NL	IT	SE
Males	246.9	243.8	237.3	232.9	232.3	213.2	211.1	196.7	187.6	187.6	180.3	179.2	176.7	169.2
Females	137.9	151.6	117.6	123.4	103.5	135.5	93.4	119.8	119.7	101.9	84.4	128.1	95.9	105.6

Data from Eurobase, extracted on 29.4.2013. Ranking based on data for males.

After standardising for differences in the age of the population, there were 4 times as many premature male deaths in the Member State with the highest value as in that with the lowest (an estimated 674.9 deaths per 100 000 of the male population in Lithuania in 2010 compared to 169.2 deaths per 100 000 males in Sweden).

There was also a large difference between Member States in premature deaths under 65 years for females. In the Member State with the highest under-65 year mortality for females in 2010 (Latvia, with 229.1 deaths per 100 000), there were more than 2.7 times more deaths than in the Member State with the lowest value (Cyprus, with 84.4 deaths per 100 000).

Healthy life years[117]

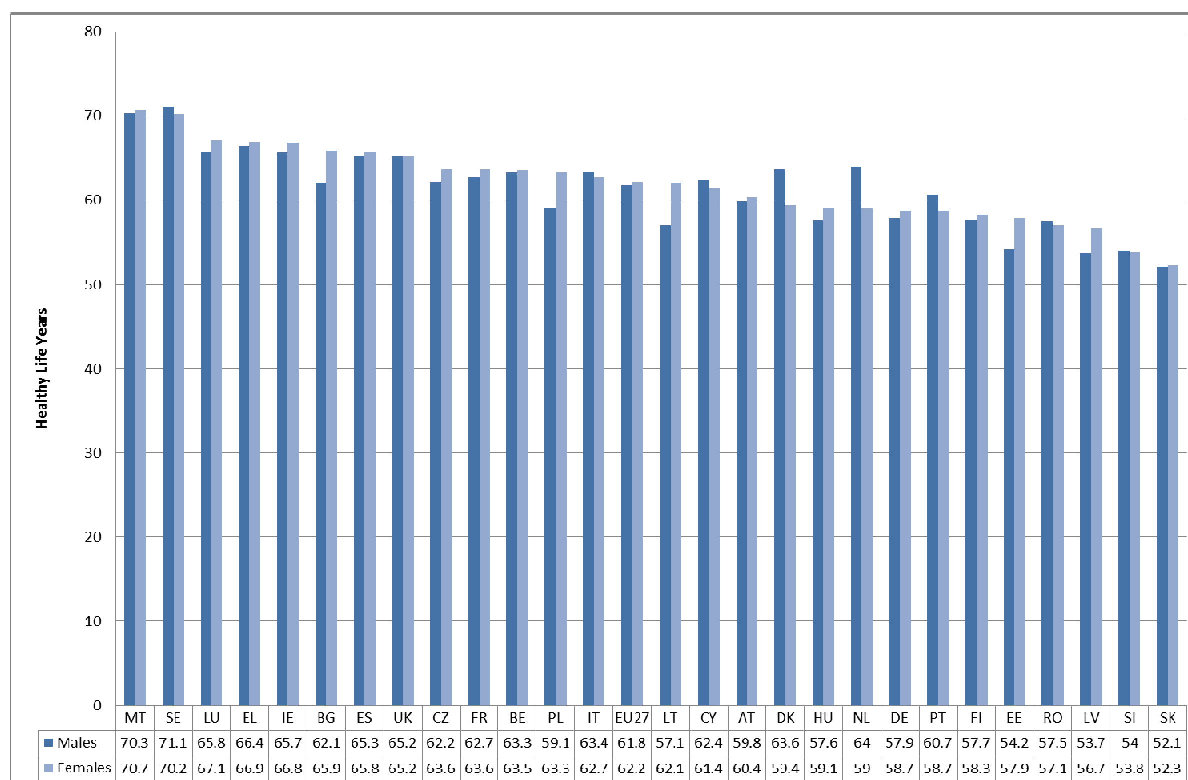
For males there was a difference of 19.0 years in 2011 between the average number of healthy life years lived in Member States with the lowest and highest values in the EU (Figure 5). These ranged from 52.1 years (Slovakia) to 71.1 years (Sweden) with an EU average of 61.8 years. The difference between Member States for this indicator is slightly higher than in 2008 when the gap was 17.6 years and similar to 2007 (19.4 years). The EU average for the estimated healthy life years for males has remained fairly constant since it was first estimated in 2005, when it was 61.1 years.

The average number of healthy life years for females in the EU in 2011 was estimated to be 62.2 years — a slight difference compared with men (Figure 5). There was a difference of

[117] The indicator of healthy life years (HLY), which may also be called disability-free life expectancy, is a composite indicator that combines mortality data with health status data. It indicates the number of remaining years that an average person of a particular age is expected to live without any severe or moderate health problems. The prevalence of health problems is estimated by means of a question on long-term limitations on usual activities in the annual EU-SILC survey.

18.4 years between the EU Member States with the lowest (Slovakia, 52.3 years) and highest (Malta, 70.7 years) values for female healthy life years in 2011, slightly higher than in 2007 when the gap was 19.8 years.

Figure 5: Healthy life years at birth by sex, 2011



	MT	SE	LU	EL	IE	BG	ES	UK	CZ	FR	BE	PL	IT	EU27	LT	CY	AT	DK	HU	NL	DE	PT	FI	EE	RO	LV	SI	SK
Males	70.3	71.1	65.8	66.4	65.7	62.1	65.3	65.2	62.2	62.7	63.3	59.1	63.4	61.8	57.1	62.4	59.8	63.6	57.6	64	57.9	60.7	57.7	54.2	57.5	53.7	54	52.1
Females	70.7	70.2	67.1	66.9	66.8	65.9	65.8	65.2	63.6	63.6	63.5	63.3	62.7	62.2	62.1	61.4	60.4	59.4	59.1	59	58.7	58.7	58.3	57.9	57.1	56.7	53.8	52.3

Data from Eurobase, extracted on 14.3.2013. Ranking based on data for females.

Comparisons between Member States for self-perceived health and restrictions on activities of daily living are included in a later section of this document on differences in health by social group.

1.2 Inequalities in health between EU regions

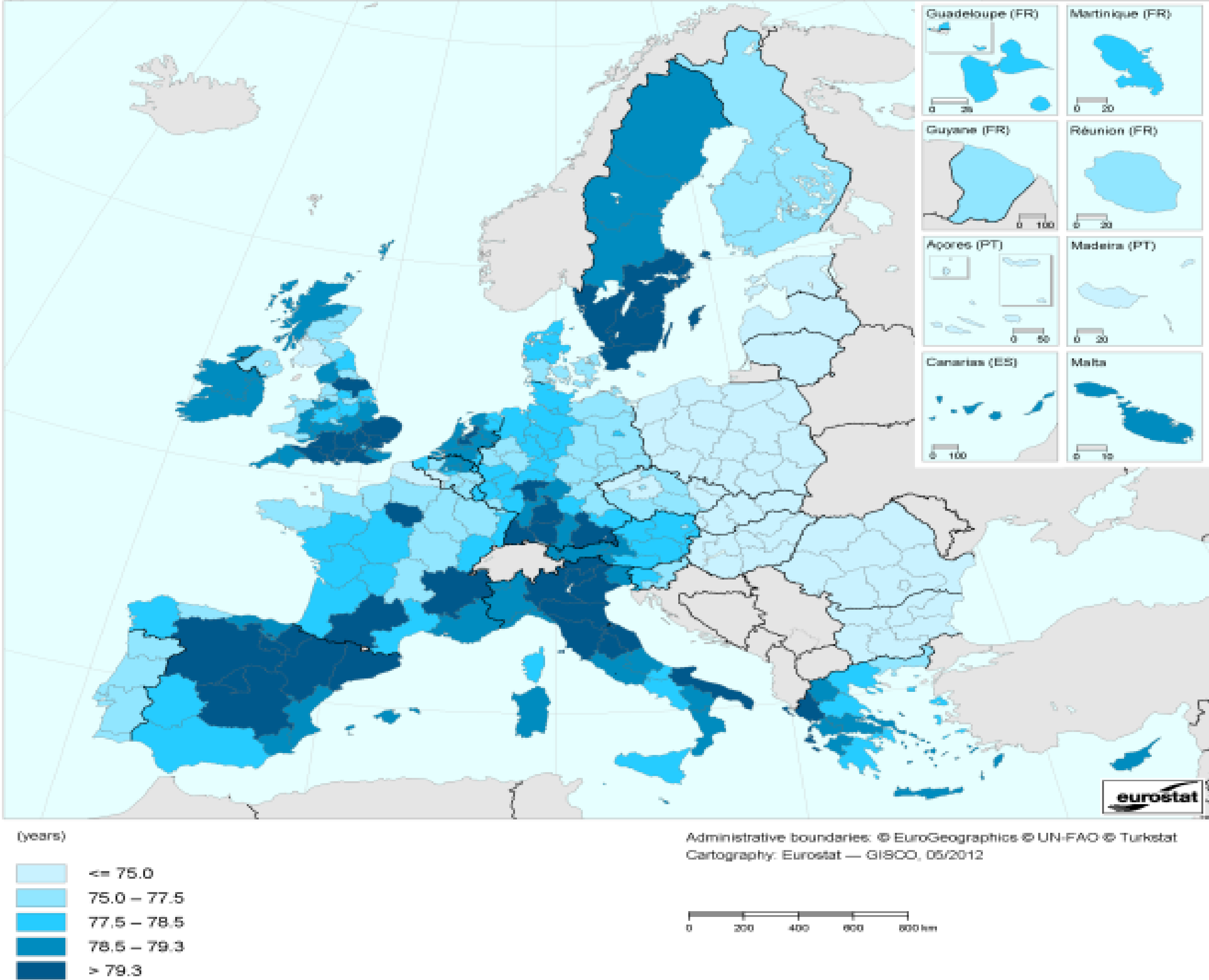
Indicators available at regional level provide a more detailed picture of the inequalities in health that exist between different parts of the EU. This section uses data available at the second level of the nomenclature of territorial units for statistics (NUTS 2)[118]. The NUTS 2 regions do not necessarily correspond with administrative boundaries. For smaller EU Member States, NUTS 2 data are the same as the national level.

Maps showing life expectancies for NUTS 2 regions in 2010 for males and females are shown in Figures 6 and 7.

[118] Data given in this section follow the NUTS 2006 classification.

Figure 6: Male life expectancy (in years) at birth by NUTS 2 region, 2010

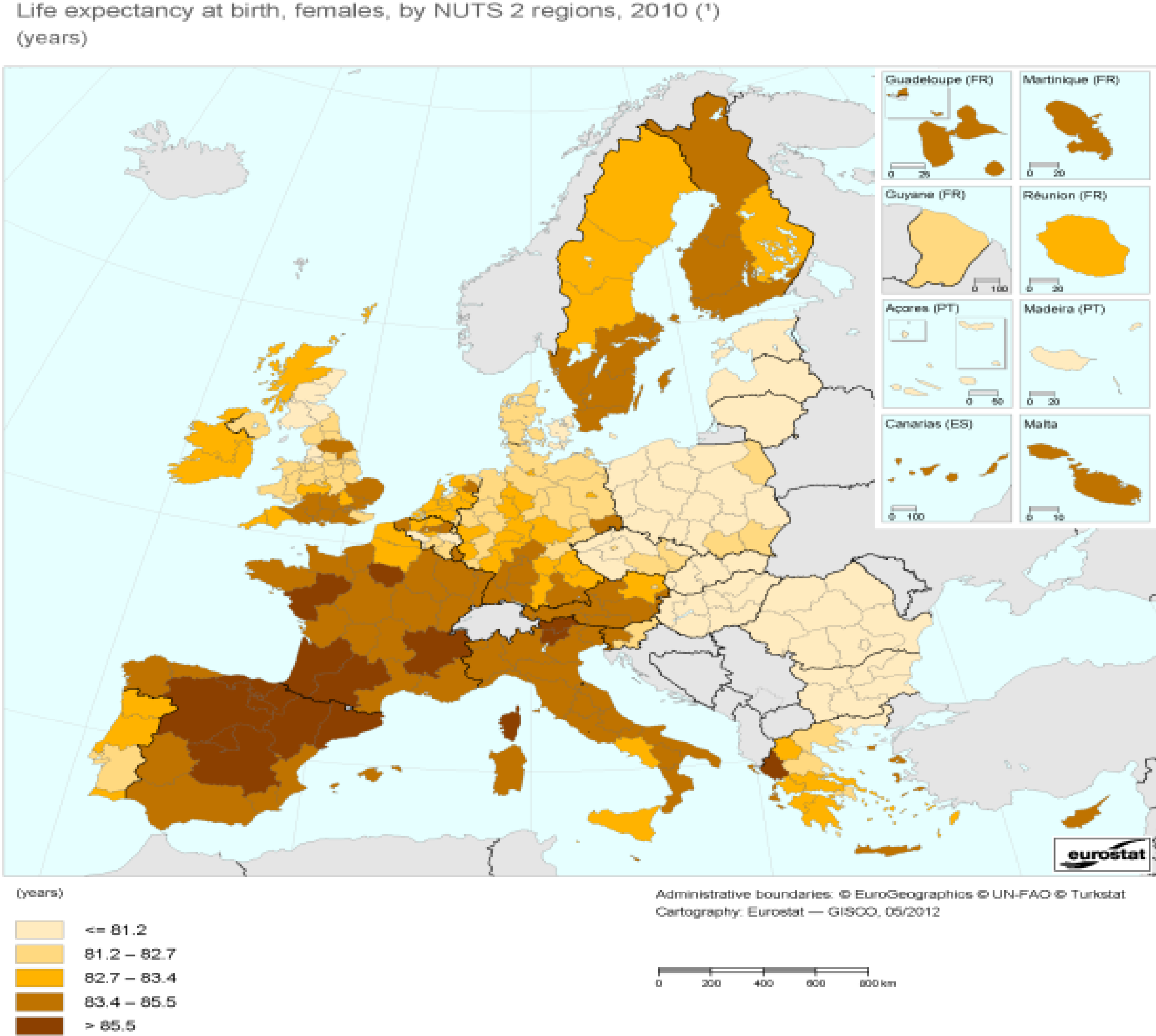
Life expectancy at birth, males, by NUTS 2 regions, 2010 (¹)
(years)



(¹) 2009 data for BE, DED2 (Dresden), FR (except FR93, Guyane, 2008 and FR91 Guadeloupe 2007), CY, UK; 2008 data for IT.
EE, CY, LV, LT, LU and MT, national level.
Source: Eurostat (online data code: demo_r_mlifexp)

Data from Eurobase, extracted on 6.2.2013.

Figure 7: Female life expectancy (in years) at birth by NUTS 2 region, 2010



(¹) 2009 data for BE, DED2 (Dresden), FR (except FR93, Guyane, 2008 and FR91 Guadeloupe 2007), CY, UK; 2008 data for IT. EE, CY, LV, LT, LU and MT, national level.
Source: Eurostat (online data code: demo_r_mlifexp)

Data from Eurobase, extracted on 6.2.2013.

There is marked heterogeneity across the EU regions and within several Member States for life expectancy at birth. Some Member States include regions from both the top and bottom EU quintile for life expectancy at birth.

Table 1 shows the 10 NUTS 2 regions with the highest and lowest estimated male life expectancy at birth in 2010. The largest gap between regions was 13.4 years for life expectancy at birth for males and 10.6 years for females (Table 2**).**

Table 1: Male life expectancy (in years) at birth in EU NUTS 2 regions, 2010, highest and lowest

Region code	Region name	Years	Region code	Region name	Years
LT00	Lietuva	67.8	FI20	Åland	81.2
LV00	Latvija	68.3	ITE3	Marche	81.1
HU31	Észak-Magyarország	68.9	ES22	Comunidad Foral de Navarra	81.0
BG34	Yugoiztochen	69.2	ITD1	Provincia Autonoma Bolzano/Bozen	80.9
RO22	Sud-Est	69.5	EL22	Ionia Nisia	80.8
BG31	Severozapaden	69.6	ES30	Comunidad de Madrid	80.7
RO21	Nord-Est	69.6	ITE1	Toscana	80.5
BG33	Severoiztochen	69.7	ES23	La Rioja	80.4
RO31	Sud — Muntenia	69.7	ITD2	Provincia Autonoma Trento	80.4
HU32	Észak-Alföld	69.8	ITD5	Emilia-Romagna	80.4

Data from Eurobase, extracted on 6.2.2013.

Table 2: Female life expectancy (in years) at birth in EU NUTS 2 regions, 2010, highest and lowest

Region code	Region name	Years	Region code	Region name	Years
BG31	Severozapaden	76.4	ES22	Comunidad Foral de Navarra	87.0
BG34	Yugoiztochen	76.5	ES30	Comunidad de Madrid	86.6
BG33	Severoiztochen	76.5	ES41	Castilla y León	86.5
RO42	Vest	76.9	FR10	Île de France	86.3
RO21	Nord-Est	77.2	ITE3	Marche	86.3
BG32	Severen tsentralen	77.2	FR51	Pays de la Loire	86.2
RO11	Nord-Vest	77.2	FR71	Rhône-Alpes	86.1
RO41	Sud-Vest Oltenia	77.3	ITD1	Provincia Autonoma Bolzano/Bozen	86.1

Data from Eurobase, extracted on 6.2.2013.

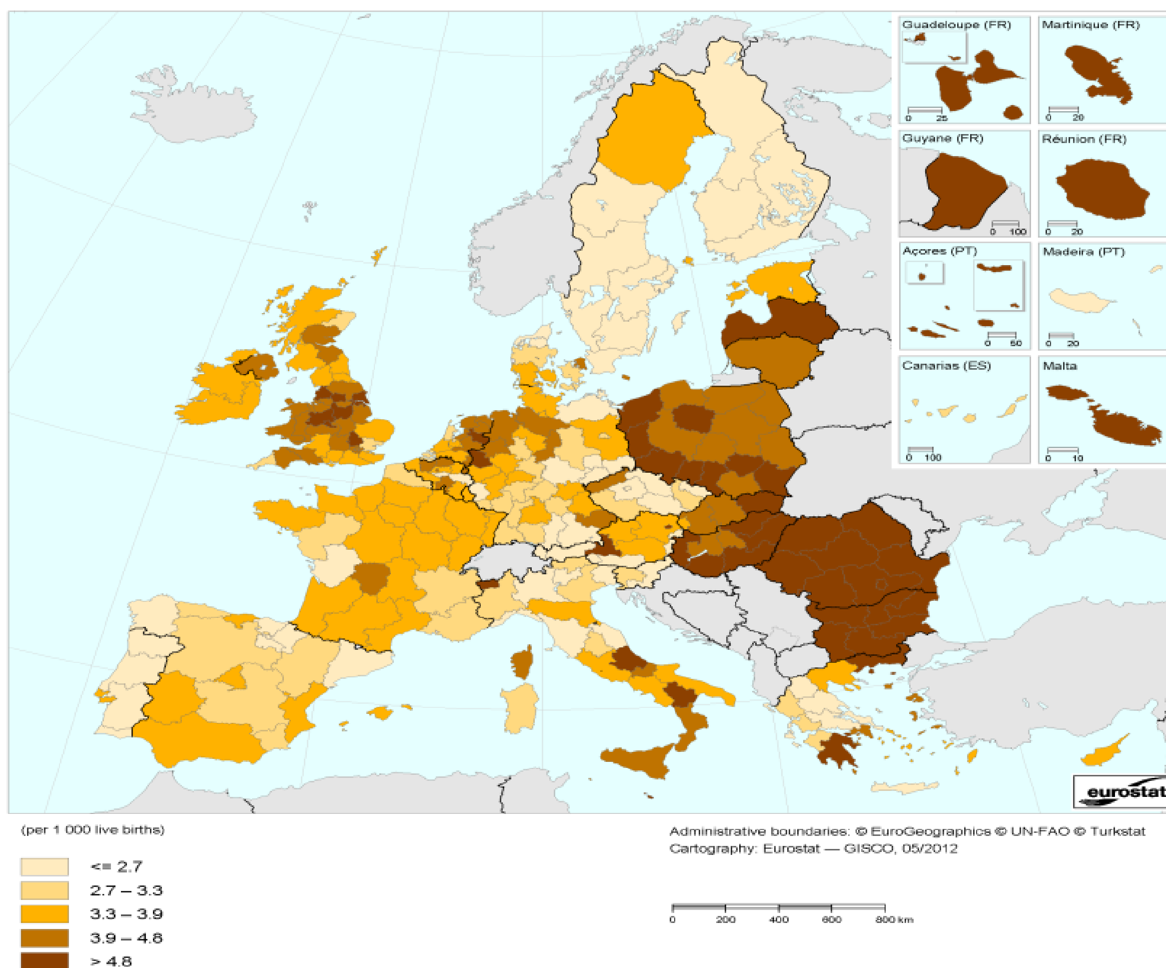
Infant mortality differences between NUTS 2 regions

Figure 8 shows infant mortality in NUTS 2 regions in 2010. The vast majority of NUTS 2 regions had infant mortality rates between 2.0 and 4.0 per 1 000 live births. There have been substantial improvements in infant mortality in many less well-performing regions over the last decade. These improvements have been accompanied by a decline in inequalities between EU regions, with a 13.2 % reduction in the Gini coefficient for the differences between NUTS 2 regions in infant mortality between 2000 and 2010.

Nevertheless significant inequalities remain. In 2010, there were seven EU regions with infant mortality rates greater than 10 per 1 000 live births, which was more than 2.5 times the EU average of 4.1/1 000 (Table 3).

Figure 8: Infant mortality in EU NUTS 2 regions, 2010

Infant mortality rate, by NUTS 2 regions, 2010 (¹)
(per 1 000 live births)



(¹) 2008 data for BE, IT; 2009 data for CY, ES64 (Ciudad Autónoma de Melilla), UK.
EE, CY, LV, LT, LU and MT, national level.
Source: Eurostat (online data code: demo_r_d2infmo)

Data from Eurobase, extracted on 6.2.2013.

Table 3: Infant mortality rate per 1 000 live births in EU NUTS 2 regions, 2010, highest and lowest regions

Region code	Region name	Rate	Region code	Region name	Rate
BG34	Yugoiztochen	15,8	ES64	Ciudad Autónoma de Melilla	0,0
BG33	Severoiztochen	12,4	UKD1	Cumbria	1,6
RO22	Sud-Est	12,0	AT21	Kärnten	1,7
RO21	Nord-Est	11,2	CZ06	Jihovýchod	1,8
FR93	Guyane	10,9	DK05	Nordjylland	1,8
RO31	Sud - Muntenia	10,9	ES22	Comunidad Foral de Navarra	1,8
RO42	Vest	10,4	ES23	La Rioja	1,8
BG31	Severozapaden	9,4	DEB2	Trier	1,9
RO41	Sud-Vest Oltenia	9,3	PT15	Algarve	1,9
SK04	Východné Slovensko	9,0	PT16	Centro	1,9

Data from Eurobase, extracted on 6.2.2013.

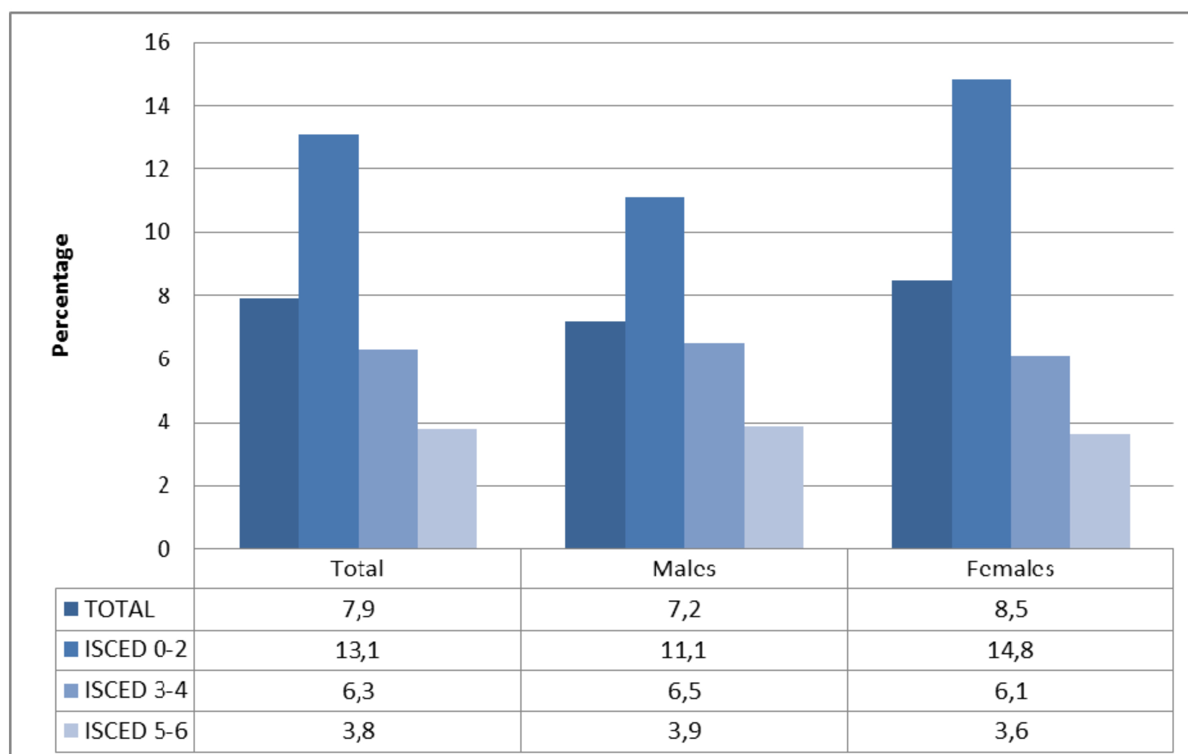
1.3 Inequalities in health between social groups

The Commission communication on health inequalities noted that a social gradient in health status exists throughout the EU, where people with lower education, a lower occupational class or lower income tend to die younger and have a higher prevalence of most types of health problems[119].

The EU Survey on Income and Living Conditions (EU-SILC), which is carried out annually, provides some information on health inequalities between social groups. It is based on a total sample of over 400 000 adults living in households and provides a mixture of cross-sectional and longitudinal data from all EU Member States. The sample does not include people living in care homes or other institutions. The survey includes questions, enabling an assessment to be made of income, educational level, material deprivation, self-perceived health and self-perceived limitations in daily activities.

For EU adults as a whole, 7.9 % of people report their activities as being severely hampered for at least the last 6 months. The figure is less than 4 % for those with a tertiary education such as a degree from a university. It is 13.1 %, more than 3 times as high, for people with a lower secondary education or below (Figure 9).

Figure 9: Self-perceived limitations in daily activities as 'severely hampered' (percentage) by sex and educational level in the EU-27, 2011 (estimates)



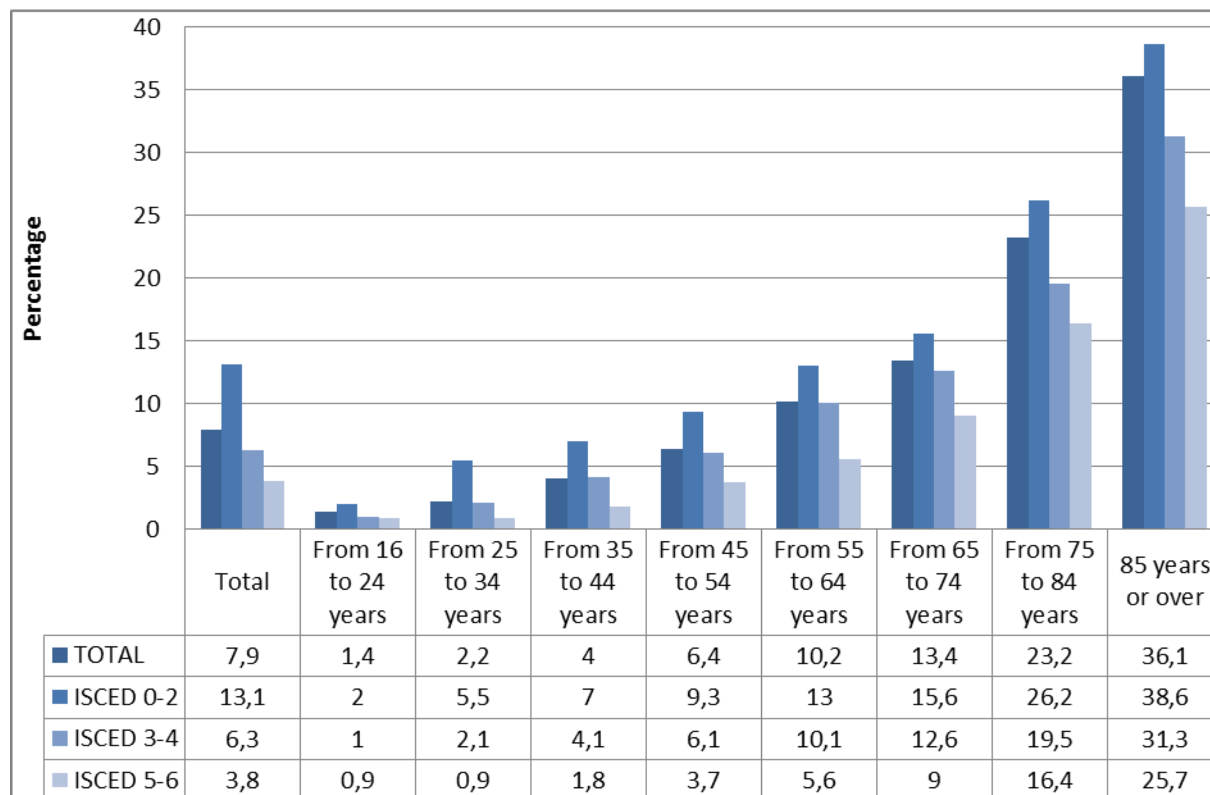
	Total	Males	Females
TOTAL	7,9	7,2	8,5
ISCED 0-2	13,1	11,1	14,8
ISCED 3-4	6,3	6,5	6,1
ISCED 5-6	3,8	3,9	3,6

Data from Eurobase, extracted on 6.2.2013. Educational levels are defined by the International Standard Classification of Education (ISCED) as follows: ISCED 0 Pre-primary education, ISCED 1 Primary education or first stage of basic education, ISCED 2 Lower secondary or second stage of basic education, ISCED 3 Upper secondary education, ISCED 4 Post-secondary non-tertiary education, ISCED 5 First stage of tertiary education not leading directly to an advanced research qualification, ISCED 6 Second stage of tertiary education leading to an advanced research qualification.

[119] Mackenbach J, 'Health inequalities: Europe in profile', (Report commissioned by the UK Presidency of the EU), Erasmus Medical Centre, Rotterdam, 2006.

Figure 10 shows that the relationship between restrictions on daily activities and educational level exists for all age groups.

Figure 10: Self-perceived limitations in daily activities as 'severely hampered' percentage) by age and educational level in the EU-27, 2011 (estimates)

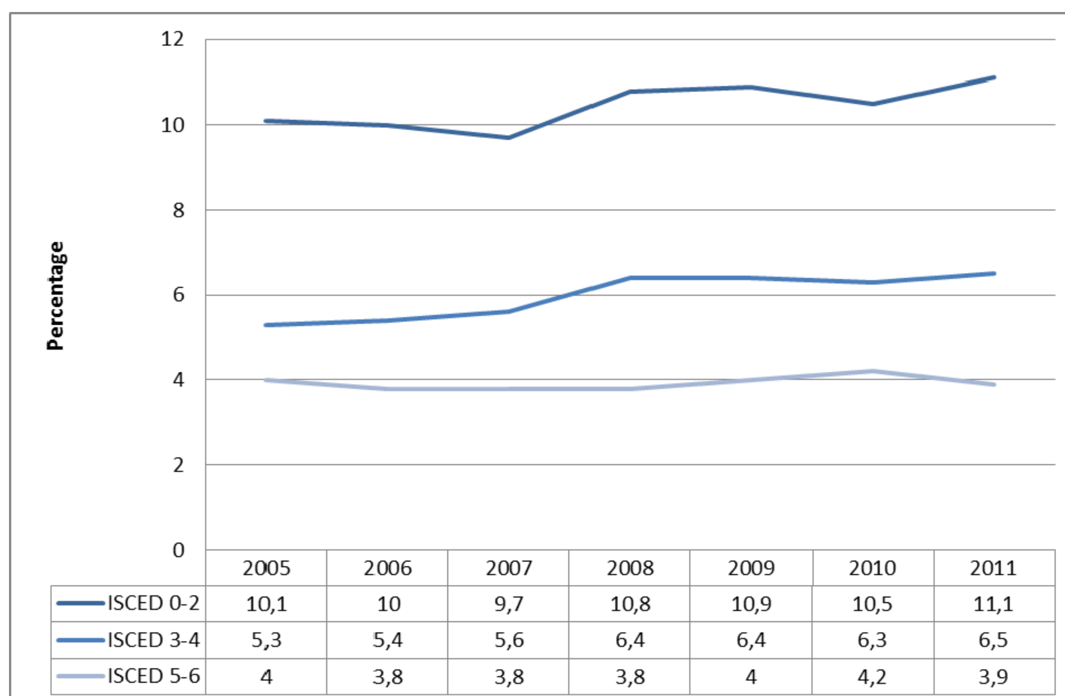


	Total	From 16 to 24 years	From 25 to 34 years	From 35 to 44 years	From 45 to 54 years	From 55 to 64 years	From 65 to 74 years	From 75 to 84 years	85 years or over
TOTAL	7,9	1,4	2,2	4	6,4	10,2	13,4	23,2	36,1
ISCED 0-2	13,1	2	5,5	7	9,3	13	15,6	26,2	38,6
ISCED 3-4	6,3	1	2,1	4,1	6,1	10,1	12,6	19,5	31,3
ISCED 5-6	3,8	0,9	0,9	1,8	3,7	5,6	9	16,4	25,7

Data from Eurobase, extracted on 6.2.2013. Educational levels are defined by the International Standard Classification of Education (ISCED) as follows: ISCED 0 Pre-primary education, ISCED 1 Primary education or first stage of basic education, ISCED 2 Lower secondary or second stage of basic education, ISCED 3 Upper secondary education, ISCED 4 Post-secondary non-tertiary education, ISCED 5 First stage of tertiary education not leading directly to an advanced research qualification, ISCED 6 Second stage of tertiary education leading to an advanced research qualification.

Since 2004, the risk of having severe restrictions on daily living activities for those with lower secondary or primary education compared to those with university education has been around 3 to 5 times higher for males and around 4 to 6 times higher for females. There has not been a consistent trend in the relative gap between educational groups for this indicator over this period (see Figures 11 and 12).

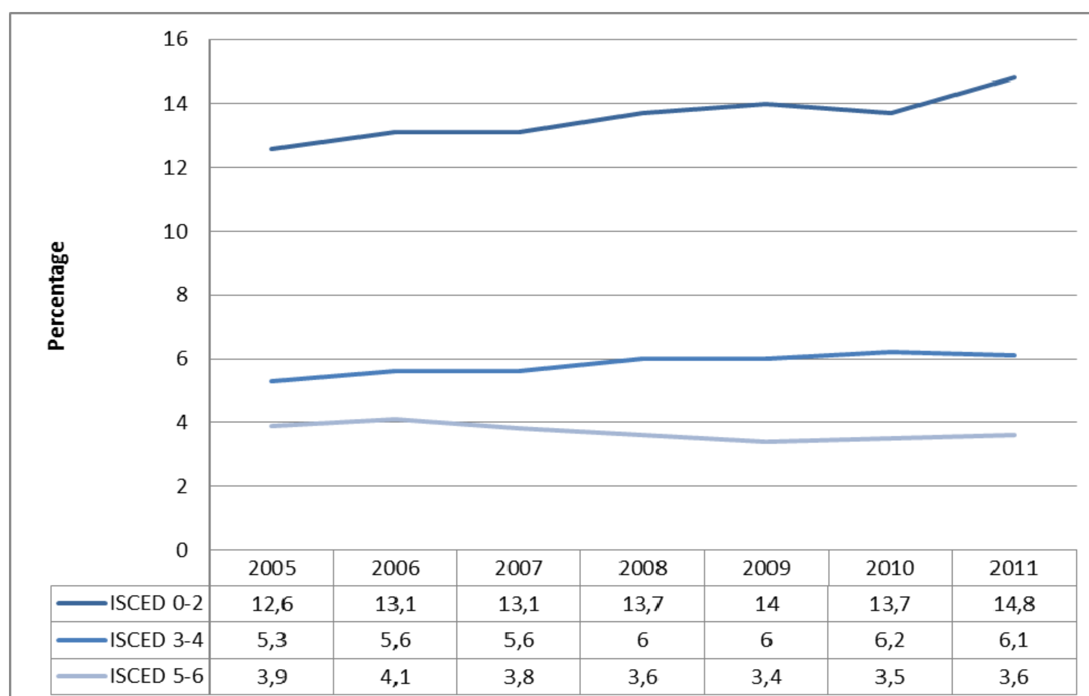
Figure 11: Self-perceived limitations in daily activities as 'severely hampered' (percentage) by educational level, males, 2004–2011, in the EU



	2005	2006	2007	2008	2009	2010	2011
ISCED 0-2	10,1	10	9,7	10,8	10,9	10,5	11,1
ISCED 3-4	5,3	5,4	5,6	6,4	6,4	6,3	6,5
ISCED 5-6	4	3,8	3,8	3,8	4	4,2	3,9

Data from Eurobase, extracted on 6.2.2013. EU means EU-15 for 2004, EU-25 for 2005 and 2006 and EU-27 from 2007 onwards. Percentage reporting usual activities as 'severely hampered' with activity limitation for at least the past 6 months. Educational levels are defined by the International Standard Classification of Education (ISCED) as follows: ISCED 0 Pre-primary education, ISCED 1 Primary education or first stage of basic education, ISCED 2 Lower secondary or second stage of basic education, ISCED 3 Upper secondary education, ISCED 4 Post-secondary non-tertiary education, ISCED 5 First stage of tertiary education not leading directly to an advanced research qualification, ISCED 6 Second stage of tertiary education leading to an advanced research qualification.

Figure 12: Self-perceived limitations in daily activities as 'severely hampered' (percentage) by educational level, females, 2004–2011, in the EU

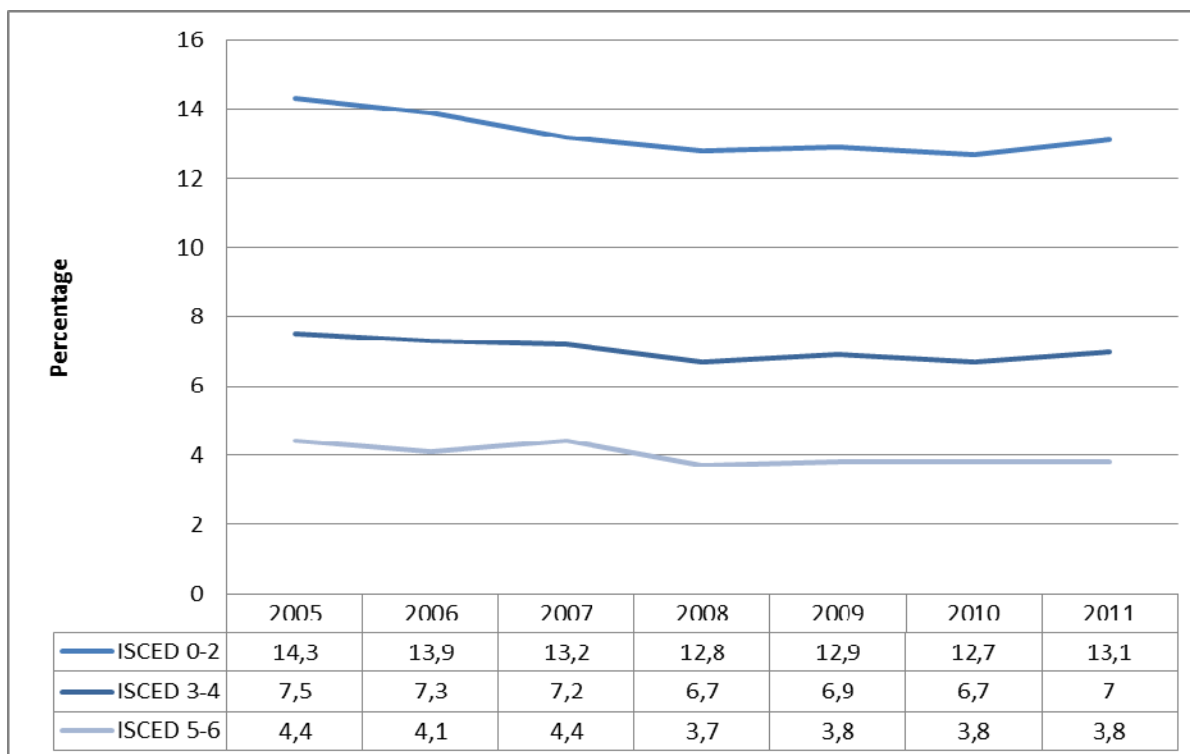


	2005	2006	2007	2008	2009	2010	2011
ISCED 0-2	12,6	13,1	13,1	13,7	14	13,7	14,8
ISCED 3-4	5,3	5,6	5,6	6	6	6,2	6,1
ISCED 5-6	3,9	4,1	3,8	3,6	3,4	3,5	3,6

Data from Eurobase, extracted on 22.8.2012. EU means EU-15 for 2004, EU-25 for 2005 and 2006 and EU-27 from 2007 onwards. Percentage reporting usual activities as 'severely hampered' with activity limitation for at least the past 6 months. Educational levels are defined by the International Standard Classification of Education (ISCED) as follows: ISCED 0 Pre-primary education, ISCED 1 Primary education or first stage of basic education, ISCED 2 Lower secondary or second stage of basic education, ISCED 3 Upper secondary education, ISCED 4 Post-secondary non-tertiary education, ISCED 5 First stage of tertiary education not leading directly to an advanced research qualification, ISCED 6 Second stage of tertiary education leading to an advanced research qualification.

There are also large differences in self-perceived health by educational level (Figures 13 and 14). In 2011, the chance of those with basic or lower secondary education reporting their health as 'bad' or 'very bad' compared to those with a university education was more than 5 times greater for females and more than 3 times greater for males.

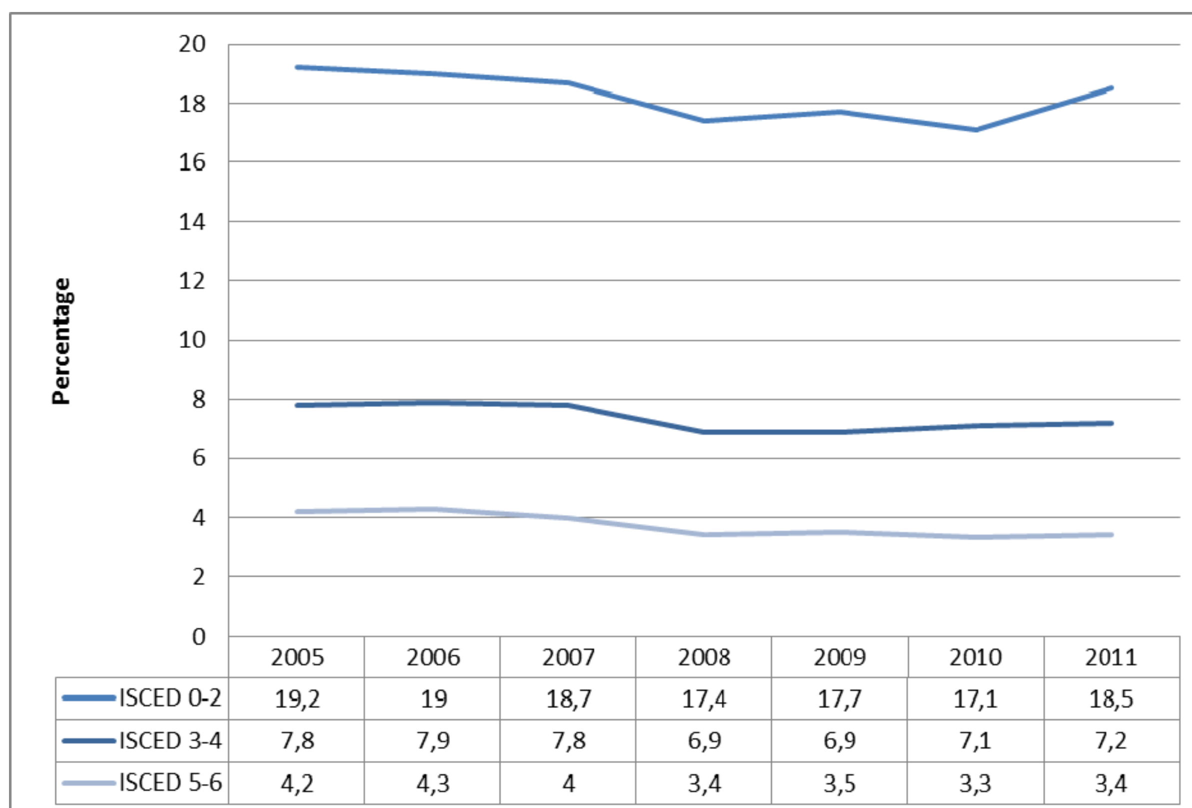
Figure 13: Self-perceived health 'bad' or 'very bad' (percentage) by educational level, males, 2004–2011, in the EU



	2005	2006	2007	2008	2009	2010	2011
ISCED 0-2	14,3	13,9	13,2	12,8	12,9	12,7	13,1
ISCED 3-4	7,5	7,3	7,2	6,7	6,9	6,7	7
ISCED 5-6	4,4	4,1	4,4	3,7	3,8	3,8	3,8

Data from Eurobase, extracted on 6.2.2013. EU means EU-15 for 2004, EU-25 for 2005 and 2006 and EU-27 from 2007 onwards. Percentage reporting health as 'bad' or 'very bad'. Educational levels are defined by the International Standard Classification of Education (ISCED) as follows: ISCED 0 Pre-primary education, ISCED 1 Primary education or first stage of basic education, ISCED 2 Lower secondary or second stage of basic education, ISCED 3 Upper secondary education, ISCED 4 Post-secondary non-tertiary education, ISCED 5 First stage of tertiary education not leading directly to an advanced research qualification, ISCED 6 Second stage of tertiary education leading to an advanced research qualification.

Figure 14: Self-perceived health 'bad' or 'very bad' (percentage) by educational level, females, 2004–2011, in the EU

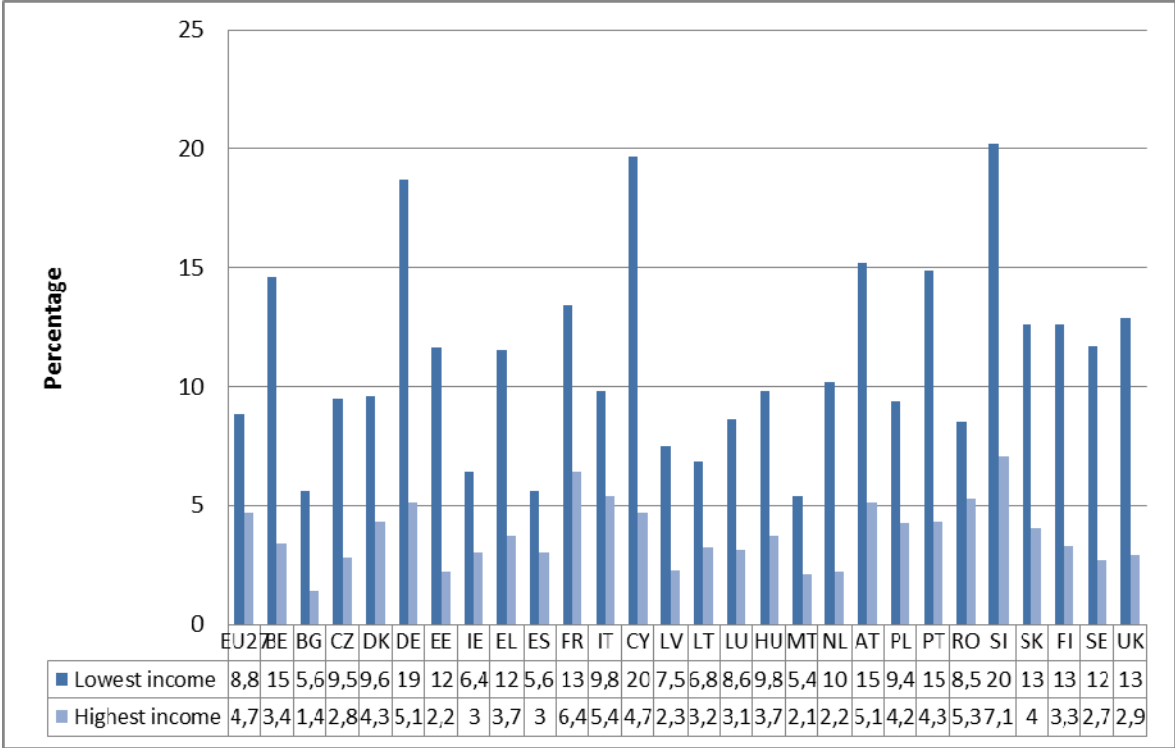


	2005	2006	2007	2008	2009	2010	2011
ISCED 0-2	19,2	19	18,7	17,4	17,7	17,1	18,5
ISCED 3-4	7,8	7,9	7,8	6,9	6,9	7,1	7,2
ISCED 5-6	4,2	4,3	4	3,4	3,5	3,3	3,4

Data from Eurobase, extracted on 22.8.2012. EU means EU-15 for 2004, EU-25 for 2005 and 2006 and EU-27 from 2007 onwards. Percentage reporting health as 'bad' or 'very bad'. Educational levels are defined by the International Standard Classification of Education (ISCED) as follows: ISCED 0 Pre-primary education, ISCED 1 Primary education or first stage of basic education, ISCED 2 Lower secondary or second stage of basic education, ISCED 3 Upper secondary education, ISCED 4 Post-secondary non-tertiary education, ISCED 5 First stage of tertiary education not leading directly to an advanced research qualification, ISCED 6 Second stage of tertiary education leading to an advanced research qualification.

A similar picture emerges for the difference in self-perceived limitations in daily activities by income. Figures 15 and 16 compare adults in the highest income quintile to those in the lowest income quintile according to the proportion reporting their daily activities as 'severely hampered' for at least 6 months. In all EU Member States the proportion is much higher for the poorest than the richest.

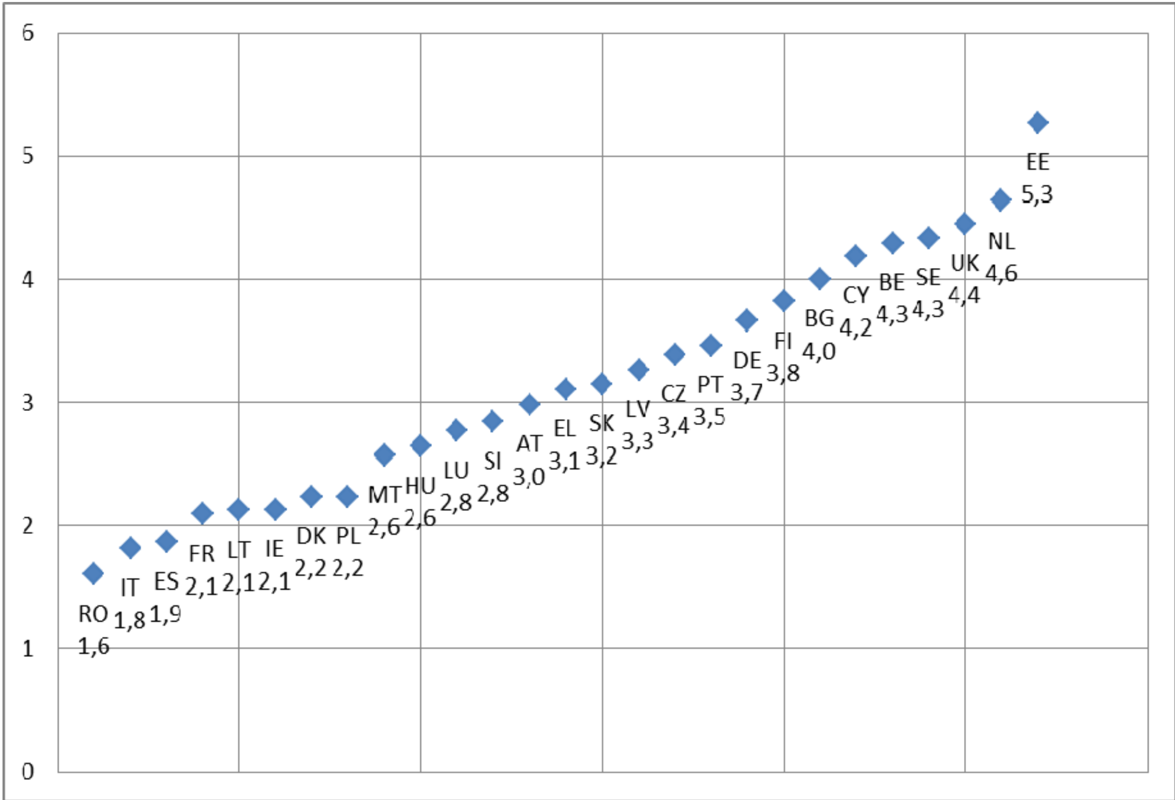
Figure 15: Self-perceived limitations in daily activities as 'severely hampered' (percentage) for top and bottom income quintiles in the EU, 2011



	EU27	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK
Lowest income	8,8	15	5,6	9,5	9,6	19	12	6,4	12	5,6	13	9,8	20	7,5	6,8	8,6	9,8	5,4	10	15	9,4	15	8,5	20	13	13	12	13
Highest income	4,7	3,4	1,4	2,8	4,3	5,1	2,2	3	3,7	3	6,4	5,4	4,7	2,3	3,2	3,1	3,7	2,1	2,2	5,1	4,2	4,3	5,3	7,1	4	3,3	2,7	2,9

Data from Eurobase, extracted on 6.2.2013; data are flagged 'break in series' for IT, RO, SI and 'unreliable' for CZ.

Figure 16: Self-perceived limitations in daily activities as 'severely hampered', ratio of lowest income group to highest income group in 2011 in the EU

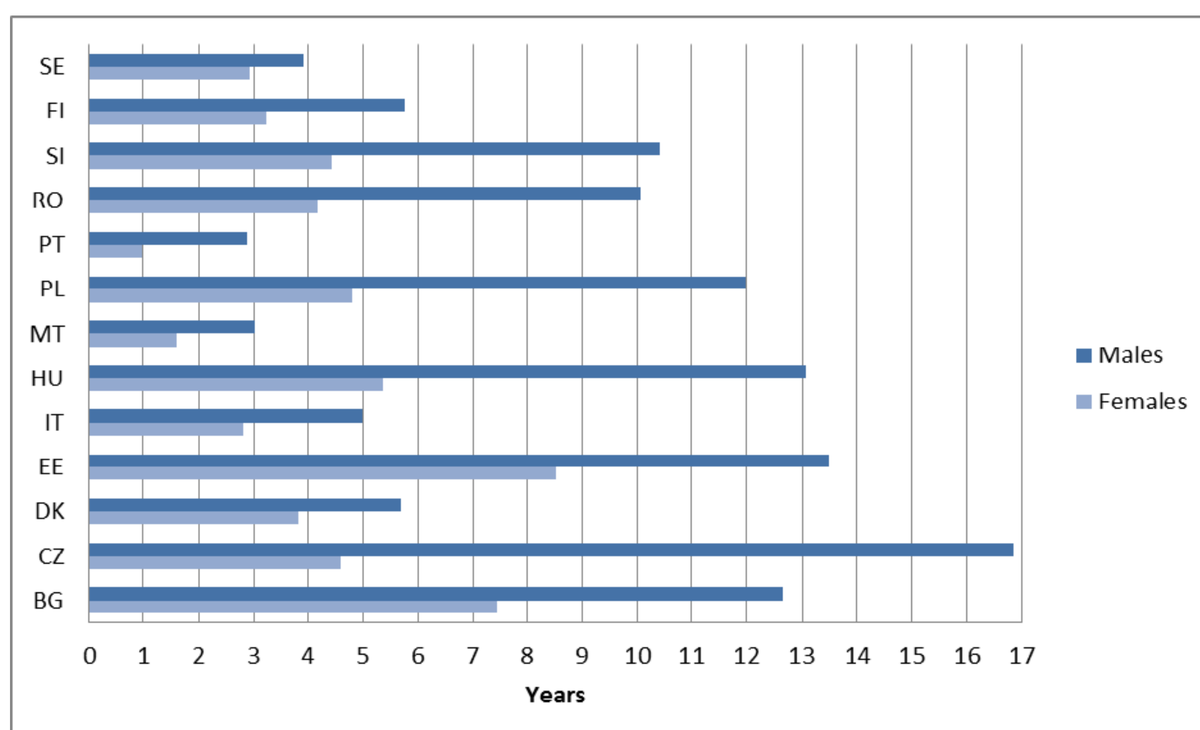


Life expectancy by educational level

A limited number of EU Member States currently make estimates of life expectancy by educational level and supply these to Eurostat. As the methods for calculating this indicator vary between countries the results are not strictly comparable. However they do provide a picture of the scale of health inequalities between social groups.

In 2010, the estimated gap in life expectancy at age 30 for males between the lowest education levels (ISCED 0–2) and highest educational levels (ISCED 5–6) varied from around 3 years up to 17 years in different Member States. The gap was slightly smaller for females, varying from 1 to 9 years between the Member States concerned (Figure 17).

Figure 17: Difference in life expectancy (years) at age 30 between lowest and highest educational levels, males and females, 2010



Data from Eurobase, extracted on 3.8.2012; 2009 data for IT and RO; 2008 data for MT. Educational levels are defined by the International Standard Classification of Education of 1997 (ISCED97) as follows: Pre-primary education (level 0), Primary education or first stage of basic education (level 1), Lower secondary or second stage of basic education (level 2), Upper secondary education (level 3), Post-secondary non-tertiary education (level 4), First stage of tertiary education not leading directly to an advanced research qualification (level 5), Second stage of tertiary education leading to an advanced research qualification (level 6). Low-level attainment means levels 0, 1 and 2; high-level attainment means levels 5 and 6.

2. Causes of health inequalities

Social and economic differences between groups of people result in health inequalities because of their impact on factors that affect health including living and working conditions, health-related behaviours and access to and quality of health care. In reality these factors tend to be closely linked.

Health inequalities start at birth and can persist throughout the lifespan. Inequalities experienced in earlier life in accessing education, employment and health care, as well as those based on gender and race, can have a critical bearing on the health status of people throughout their lives. The combination of poverty with other vulnerabilities, such as

childhood or old age, disability or minority background, increases the health risks yet further[120].

Some areas of the EU still lack basic amenities such as adequate water and sanitation. Cultural factors, which affect lifestyle and health behaviour, also differ markedly between regions and population groups. Some authorities are struggling to provide health services to their populations. Barriers to accessing health care can include lack of insurance, the high cost of care, lack of information about the services provided, discrimination and language and cultural barriers. Some research has suggested that poorer social groups use health care less for equivalent levels of medical need than more affluent groups. Some vulnerable migrants including EU nationals living in an EU country other than their own may have particular difficulties accessing quality healthcare.

Examples given in the previous section show that a relative disadvantage in health is often not only a feature of the most vulnerable groups. In many instances there is a gradient in health across social or educational groups, where the health of those in the middle is poorer than those at the top and better than those at the bottom. Furthermore the size of the health gaps between groups — or between people living in different regions — can vary widely from place to place. In some places lower income or education is not particularly disadvantageous from a health point of view, while in others it appears to be very disadvantageous.

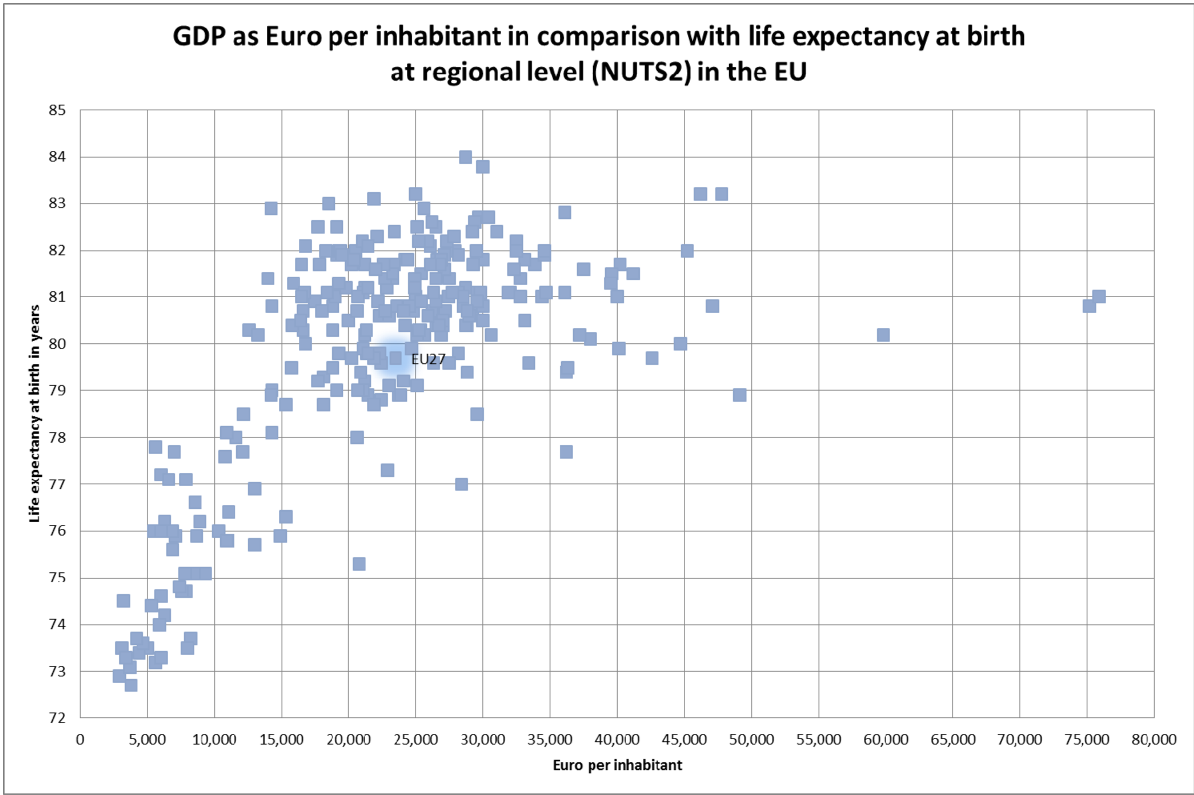
It is clear that public policy in areas such as social protection, public health, equal opportunities, environment and regional development can play an important role in reducing the tendency for poorer health to be associated with lower social status. But the size of the gaps is also associated with other factors less amenable to intervention, such as cultural and historical legacies that may continue to have an impact on health for decades.

2.1 Economic performance

The association between health and the economic conditions of groups of individuals has been described earlier. At both Member State and regional level, there are also associations between key health indices, such as life expectancy, and indicators of economic wellbeing, such as gross domestic product (GDP). However the relationship is not linear. At lower levels of GDP the association appears quite clear, but at higher levels of GDP the association is much less marked. This observation is consistent with the view that general economic conditions are more important for health for populations with lower levels of economic activity. For higher levels of economic activity other factors — such as patterns of consumption and the focus of public policies impacting on health — play a greater role. Further analysis is needed to try to understand better why some populations with relatively low levels of GDP manage to achieve high levels of health and vice versa.

[120] Joint report on social protection and social inclusion 2008', Office for Official Publications of the European Communities, Luxembourg, 2008 (ISBN 978-92-79-08820-9).

Figure 18: Scatter diagram of relationship between life expectancy at birth and GDP for EU regions



2.2 Health and the economic crisis

The current economic crisis could have a significant influence on Europeans' health and well-being. Economic hardship, unemployment, job insecurity and the lack of a regular living wage all have important effects on health and the demand for health care. Increased unemployment, job insecurity, households in high debt, increased poverty, social exclusion and inequality can have an adverse impact on the health status of the population.[121]

Times of economic instability cause psychological stress, which is linked to both the onset and course of mental and physical illnesses. Unwelcome changes in life circumstances, such as unemployment, are associated with depression, anxiety disorders and suicide, as well as cardiovascular disease and cancer in a number of studies. Company closures are associated with significantly increased risks of death from all causes amongst workers during the closure period and the following 3 years[122][123]. By contrast positive effects on some health indicators have been observed in previous and current economic downturns, such as decreases in road accident mortality[124] and improvements in some health behaviours, including harmful alcohol

[121] World Health Organisation Regional Office for Europe, 'Health in times of global economic crises: implications for the WHO European region', Regional Committee for Europe 59th session (EUR/RC59/7).

[122] Sullivan, D, von Wachter, T, 'Job displacement and mortality: an analysis using administrative data', *Quarterly Journal of Economics;* 2009; 124 (3), pp 1265–1306.

[123] Browning M, Heinsen E, 'Effects of job loss due to plant closure on mortality and hospitalisation', *Journal of Health Economics* 2012;31 pp 599-616.

[124] Stuckler D, Basu S, Suhrcke M, Coutts A, McKee M., 'The public health effect of economic crises and alternative policy responses in Europe: an empirical analysis', *Lancet* 2009;374(9686) pp315-323.

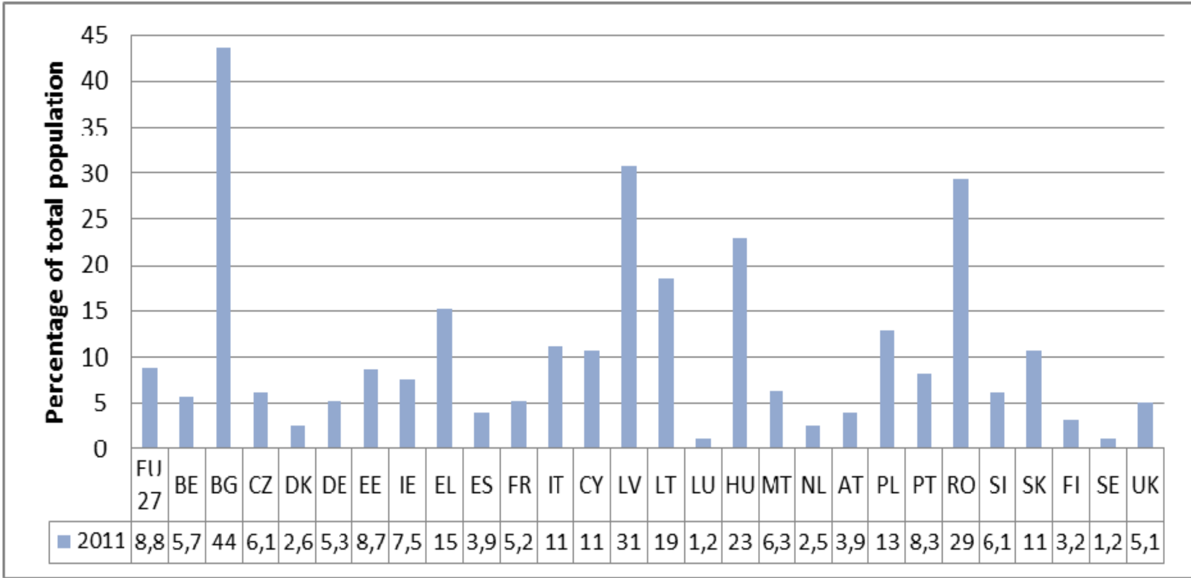
use, possibly due to a reduction in affordability[125]. Nevertheless there is a tendency for the most vulnerable to be worst affected by economic difficulties.

Social protection policies providing not only adequate welfare benefits in the case of unemployment, but also helping to assist into employment those most affected by the economic slowdown in line with the flexicurity approach, can be crucial in mitigating the impact of the crisis. Other effective measures include family support programmes, increasing alcohol prices and restricting alcohol availability[126].

2.3 Living conditions

Differences in the quality of living conditions are strongly associated with levels of health. One marker is the level of material deprivation as assessed by the EU Survey on Income and Living Conditions (EU-SILC), which is shown in Figure 19. In the EU as a whole, around 8.8 % of the population can be described as severely materially deprived on the basis of having four or more deprivation items in the EU-SILC survey[127]. In 2010, there was a 5 times higher risk of this group of people reporting their health as poor or very poor compared to those with zero deprivation items[128].

Figure 19: Percentage of the population with severe material deprivation in the EU, 2011



[125] Ásgeirsdóttir TL et al., 'Are recessions good for your health behaviours? Impacts of the economic crisis in Iceland', Working Paper 18233, National Bureau of Economic Research, Washington, 2012.

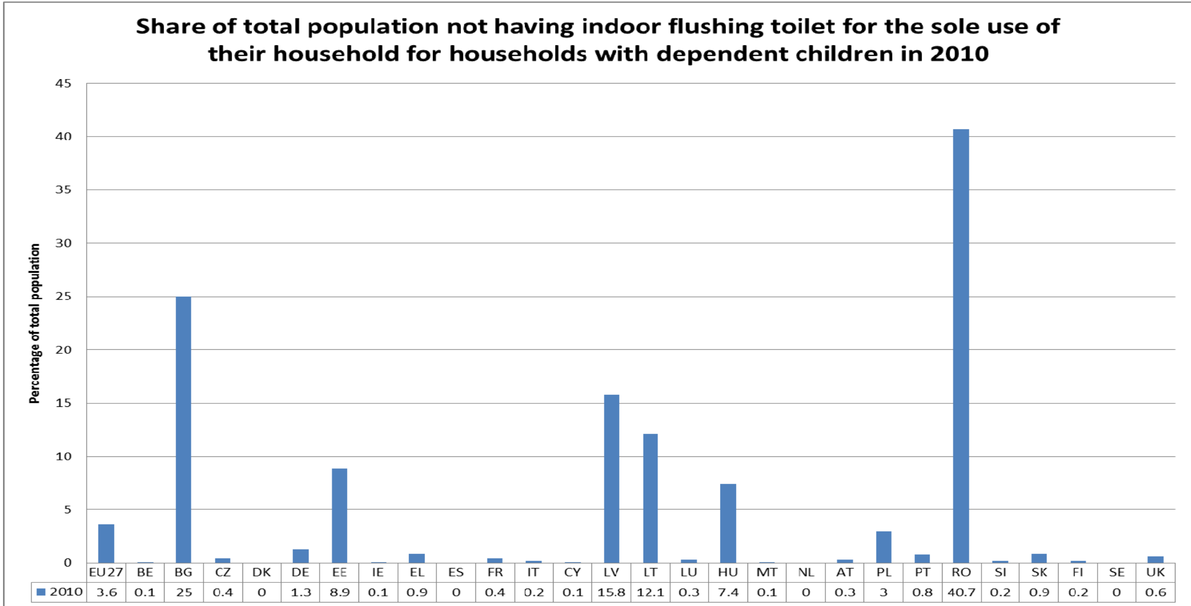
[126] World Health Organisation Regional Office for Europe, 'Impact of economic crises on mental health', WHO Copenhagen, 2011.

[127] Severe material deprivation is defined as persons whose living conditions are constrained by a lack of resources and experience at least four out of nine of the following deprivation items: they cannot afford (1) to pay rent/mortgage or utility bills on time, (2) to keep home adequately warm, (3) to face unexpected expenses, (4) to eat meat, fish or a protein equivalent every second day, (5) a 1-week holiday away from home, (6) a car, (7) a washing machine, (8) a colour TV or (9) a telephone (including mobile phone).

[128] Marmot M et al., 'Report on health inequalities in the EU', European Commission Directorate-General for Health and Consumers, Luxembourg (ISBN 978-92-79-30898-7) [in press]. The proportion of people over 25 years reporting poor or very poor health amongst those with four deprivation items or more was 21.7 % for males and 23 % for females. For those with zero deprivation items the corresponding figures were 4.2 % for males and 4.6 % for females. Calculation from EU-SILC microdata.

Lack of access to a sufficiently high standard of water and sanitation — for example lack of piped water and shared toilets — are important risks to health in a number of particular EU Member States (Figure 20).

Figure 20: Percentage of population without an indoor flushing toilet for the sole use of their household, households with dependent children, 2010



Exposure to air pollution can also contribute to health inequalities. The European Environment Agency estimates that 18–21 % of the European population are exposed to levels of small particulate matter (PM10) above those set out in EU legislation, and that 0–29 % of the European population are exposed to harmful levels of Benz(a)pyrene. These and other air pollutants contribute to an average loss of healthy life of 8 months per person, and up to 2 years in the worst affected areas[129].

2.4 Health-related behaviours

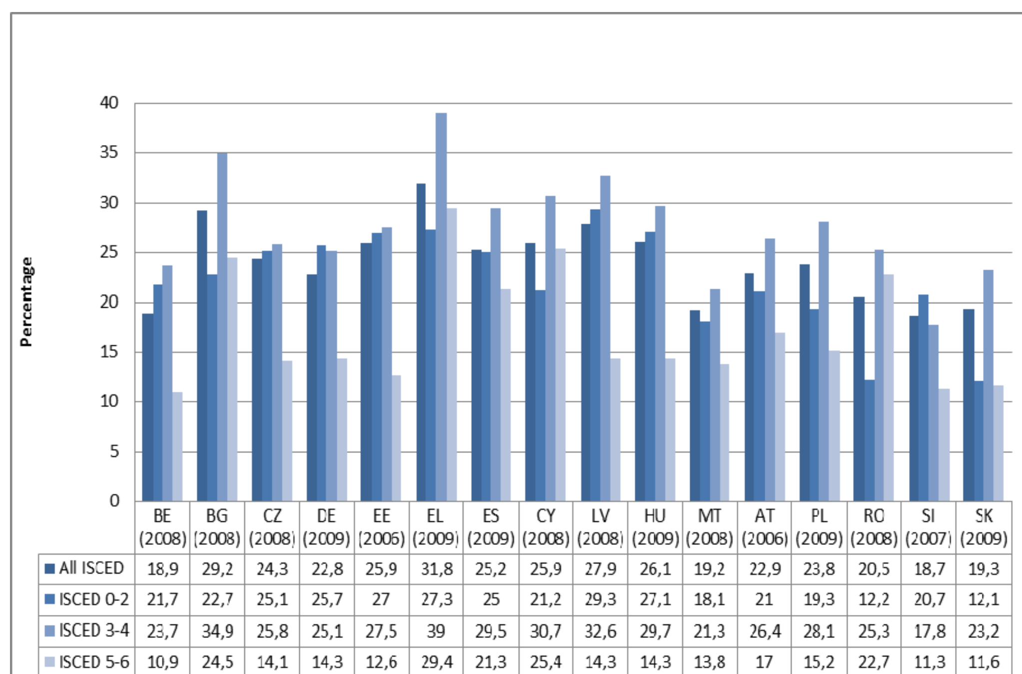
Smoking

In most Member States differences in smoking rates by social group account for a substantial part of health inequalities by social group. Figure 21 shows reported smoking by educational level in selected Member States participating in the first round of the European Health Interview Survey. With a few exceptions (Bulgaria, Cyprus, Greece, Romania) smoking rates for those with a university education (ISCED 5–6) are lower than for those with secondary or primary education. A Eurobarometer survey carried out in 2012 found the highest proportion of smokers in respondents with a lower socioeconomic status, i.e. those who position themselves low on the social scale and who have difficulties in paying their bills. Among respondents that were currently working, manual workers were the most likely to report that they were exposed to tobacco smoke at work[130].

[129] European Environment Agency, 'Air quality in Europe: Report 2012', Publications Office of the European Union, Luxembourg, 2012 (ISBN 978-92-9213-328-3).

[130] 'Attitude of Europeans towards tobacco', Eurobarometer 385, 2012.

Figure 21: Daily smokers by educational level in selected EU Member States



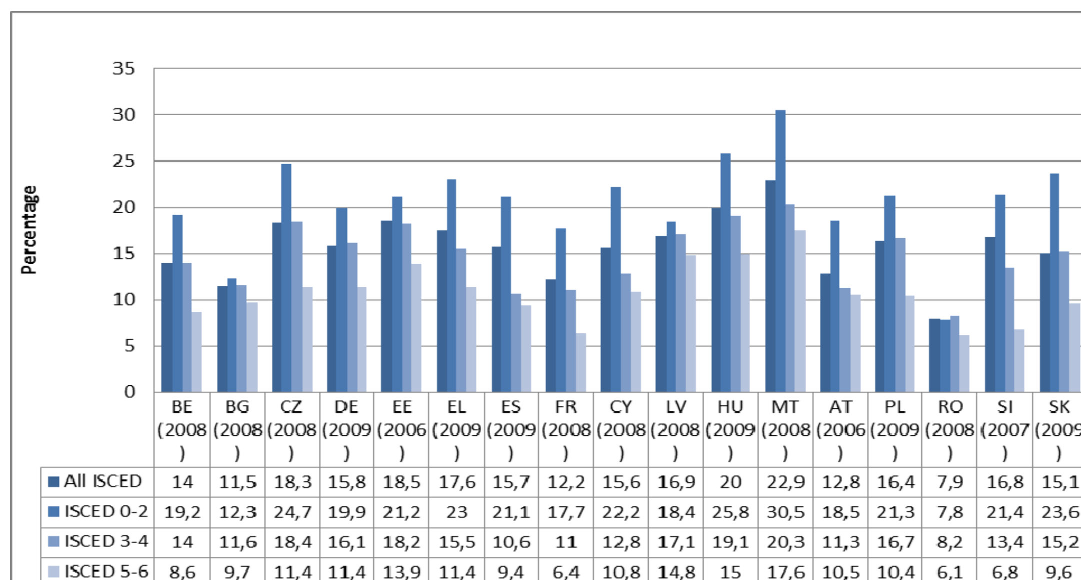
	BE (2008)	BG (2008)	CZ (2008)	DE (2009)	EE (2006)	EL (2009)	ES (2009)	CY (2008)	LV (2008)	HU (2009)	MT (2008)	AT (2006)	PL (2009)	RO (2008)	SI (2007)	SK (2009)
All ISCED	18,9	29,2	24,3	22,8	25,9	31,8	25,2	25,9	27,9	26,1	19,2	22,9	23,8	20,5	18,7	19,3
ISCED 0-2	21,7	22,7	25,1	25,7	27	27,3	25	21,2	29,3	27,1	18,1	21	19,3	12,2	20,7	12,1
ISCED 3-4	23,7	34,9	25,8	25,1	27,5	39	29,5	30,7	32,6	29,7	21,3	26,4	28,1	25,3	17,8	23,2
ISCED 5-6	10,9	24,5	14,1	14,3	12,6	29,4	21,3	25,4	14,3	14,3	13,8	17	15,2	22,7	11,3	11,6

Source: Eurostat.

Obesity

Differences in diet are also important factors that contribute to health inequalities both between social groups and between people living in different parts of the EU. The relationship between education and level of obesity is illustrated in Figure 22. Higher levels of obesity are found in less well-educated groups.

Figure 22: Obesity by educational level in selected Member States



	BE (2008)	BG (2008)	CZ (2008)	DE (2009)	EE (2006)	EL (2009)	ES (2009)	FR (2008)	CY (2008)	LV (2008)	HU (2009)	MT (2008)	AT (2006)	PL (2009)	RO (2008)	SI (2007)	SK (2009)
All ISCED	14	11,5	18,3	15,8	18,5	17,6	15,7	12,2	15,6	16,9	20	22,9	12,8	16,4	7,9	16,8	15,1
ISCED 0-2	19,2	12,3	24,7	19,9	21,2	23	21,1	17,7	22,2	18,4	25,8	30,5	18,5	21,3	7,8	21,4	23,6
ISCED 3-4	14	11,6	18,4	16,1	18,2	15,5	10,6	11	12,8	17,1	19,1	20,3	11,3	16,7	8,2	13,4	15,2
ISCED 5-6	8,6	9,7	11,4	11,4	13,9	11,4	9,4	6,4	10,8	14,8	15	17,6	10,5	10,4	6,1	6,8	9,6

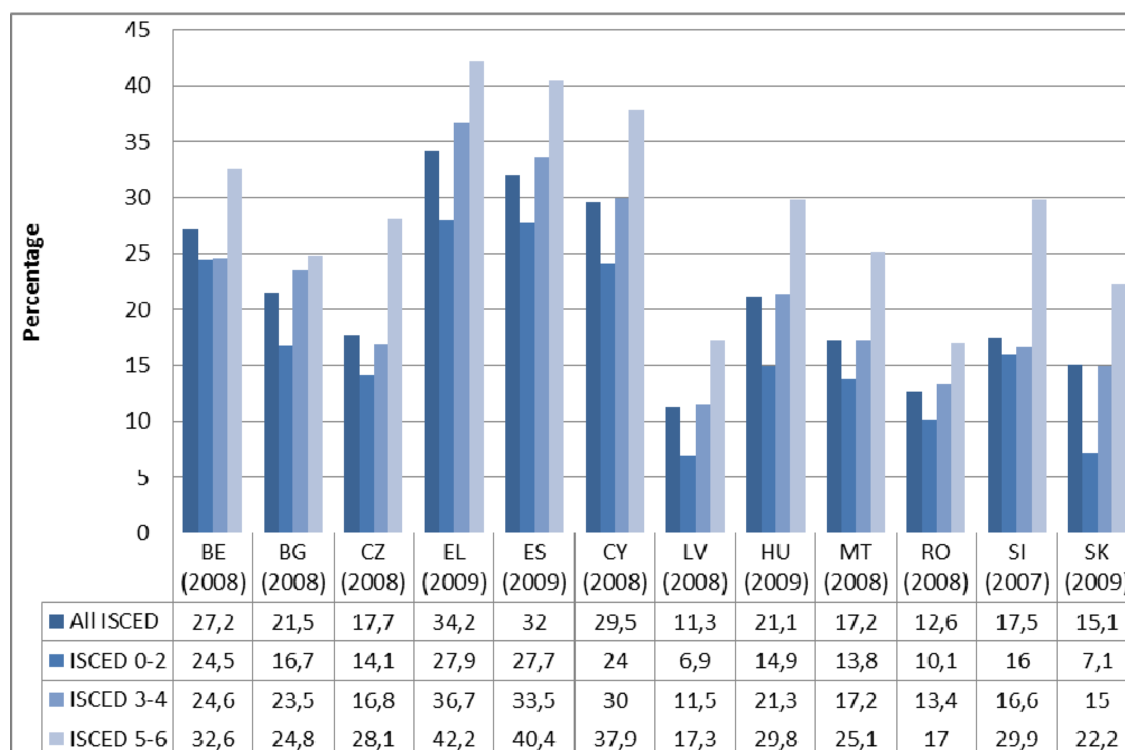
Data from Eurobase, extracted on 3.8.2012. Educational levels are defined by the International Standard Classification of Education of 1997 (ISCED97) as follows: Pre-primary education (level 0), Primary education or first stage of basic education (level 1), Lower secondary or second stage of basic education (level 2), Upper secondary education (level 3), Post-secondary non-tertiary education (level 4), First stage of tertiary education not leading directly to an advanced research qualification (level 5), Second stage of tertiary education leading to

an advanced research qualification (level 6). Low-level attainment means levels 0, 1 and 2; high-level attainment means levels 5 and 6.

Alcohol

The association between social group and alcohol intake is less clear for alcohol consumption — with more affluent groups in several countries having higher levels of consumption. Binge drinking on the other hand, which is more harmful to health than regular excess consumption, is much less common among those with higher levels of educational attainment in many Member States (Figure 26). Overall therefore harmful levels of consumption of alcohol make an important contribution to inequalities in health.

Figure 23: 'No binge drinking' by educational level in selected EU Member States



	BE (2008)	BG (2008)	CZ (2008)	EL (2009)	ES (2009)	CY (2008)	LV (2008)	HU (2009)	MT (2008)	RO (2008)	SI (2007)	SK (2009)
All ISCED	27,2	21,5	17,7	34,2	32	29,5	11,3	21,1	17,2	12,6	17,5	15,1
ISCED 0-2	24,5	16,7	14,1	27,9	27,7	24	6,9	14,9	13,8	10,1	16	7,1
ISCED 3-4	24,6	23,5	16,8	36,7	33,5	30	11,5	21,3	17,2	13,4	16,6	15
ISCED 5-6	32,6	24,8	28,1	42,2	40,4	37,9	17,3	29,8	25,1	17	29,9	22,2

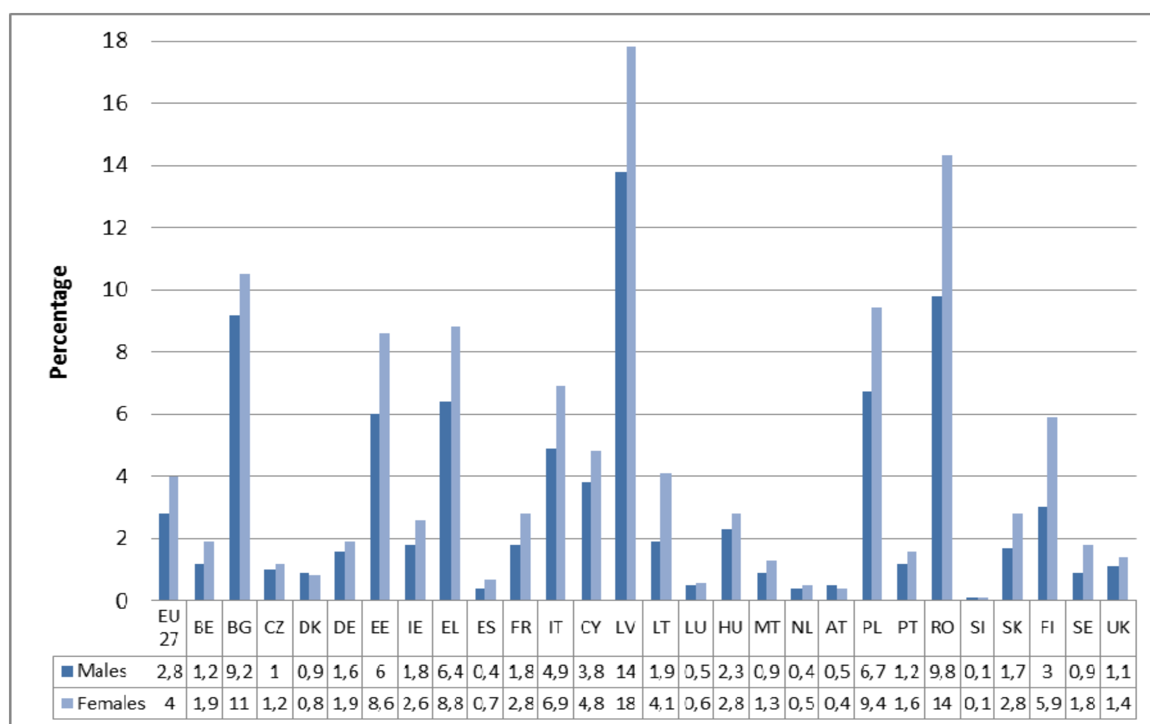
Source: Eurostat.

2.5 Access to and quality of health services

Barriers to accessing health services include cost, distance, waiting time, lack of cultural sensitivities and discrimination. Language can be a particular barrier to accessing services for non-native speakers, as can poor understanding or lack of knowledge of the rights and of the rules of the health system.

The need for patients to pay for health services at the time of use can reduce access to quality health services, in particular for vulnerable groups. Such payments may include financial contributions required from patients to use health services, or 'informal payments', such as bribes and other unrecorded transfers of money and gifts to doctors and other staff, which are common in several EU countries. Responses to the EU-SILC survey show that overall around 3–4 % of the population decided not to seek medical attention for reasons of expense, travelling distance or waiting list in the last year. The rate tends to be higher for females than for males and varies widely between Member States (Figure 24).

Figure 24: Self-reported unmet needs for medical examination for reasons of barriers of access (too expensive, too far to travel or waiting list) by sex, 2011



Source: EU-SILC. Data extracted 6.2.2013.